Texas Healthcare Transformation and Quality Improvement Program

REGIONAL HEALTHCARE PARTNERSHIP (RHP) PLAN

Plan Modification Request - New 3-Year Projects

December 20, 2013

RHP 3/Southeast Texas Regional Healthcare Partnership

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Section I. RHP Organization

This section to be filled out by new participating entities only (i.e. entities not already included in the table submitted with the original RHP Plan submission in December 2012). This may include entities that have joined the RHP since the December 2012 submission and now, such as a new Intergovernmental (IGT) Entity that agreed to fund a project in August 2013. *Please list the participants in your RHP by type of participant: IGT Entity or Performing Provider including the name of the organization, lead representative, and the contact information for the lead representative (address, email, phone number). The lead representative is HHSC's single point of contact regarding the entity's participation in the plan. Please provide accurate information, particularly TPI, TIN, and ownership type, otherwise there may be delays in your payments. Add additional rows as needed.*

RHP Participant Type	**Texas Provider Identifier** (TPI)	**Texas Identification Number** (TIN)	**Ownership Type** (state owned, non-state public, private)	**Organization Name**	**Lead Representative**	**Lead Representative Contact Information** (address, email, phone number)
IGT Entities *(specify type of government entity, e.g. county, hospital district)*						
Academic Organization	111810101	1760459500	Non-state public	University of Texas - Health Science Center	Andrew Casas	6410 Fannin STE 1500 Houston, Texas 77030 andrew.casas@uth.emc.edu 832-325-7325
City Health Department	0937740-08,-03,-07	27-2920745	Non-state public	Houston Dept of Health & Human Services	Dr. Deborah Banerjee	8000 N. Stadium Dr. Houston, TX 77054 Deborah.Banerjee@houstontx.gov 832-837-6348
County	NA	17604545149159	Non-state public	Harris County	Jim Robinson	1310 Prairie, Suite 500 Houston, Texas 77002 jim.robinson@bmd.hctx.net 713-555-1806

RHP Participant Type	Texas Provider Identifier (TPI)	Texas Identification Number (TIN)	Ownership Type (state owned, non-state public, private)	Organization Name	Lead Representative	Lead Representative Contact Information (address, email, phone number)
County Agency	NA	080314-01	Non-state public	Harris County Protective Services	TBD	TBD
County Health Department	2967606-01	1746001969	Non-state public	Fort Bend County Health & Human Services	Dr. Mary desvignes-Kendrick	4520 Reading Road, Suite A-100, Rosenberg, TX 77471 md.kendrick@co.fort-bend.tx.us 281-238-3589
Local Mental Health Authority	113180703	17416039505023	Non-state public	MHMRA of Harris County	Dr. Scott Strang	7011 Southwest Fwy, Houston, TX 77074 scott.strang@mhmraharris.org 713-970-7182
Local Mental Health Authority	81522701	17602532875	Non-state public	Texana Center	Amanda Darr	4910 Airport Avenue, Building D, Rosenberg, TX 77471 amanda.darr@texanacenter.com 281-239-1350
Public Hospital	20993401	20993401	Non-state public	Chambers County	Theresa Cheaney	P.O.Box 398 Anahuac, Texas 77514 tcheaney@chambershealth.org 409-267-2902
Public Hospital District	133355104	1741536936 6 324	Non-state public	Harris County Hospital District/Ben Taub Hospital/Harris Health System	Beth Cloyd	2525 Holly Hall Drive, Houston, TX 77054 beth.cloyd@harrishealth.org 713-566-6400
Public Hospital	137909111	1746003411	Non-state public	Memorial Medical Center	Jason Anglin	815 N. Virginia Street Port Lavaca, Texas 77979 janglin@mmcportlavaca.com 361-552-0222

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RHP Participant Type	Texas Provider Identifier (TPI)	Texas Identification Number (TIN)	Ownership Type (state owned, non-state public, private)	Organization Name	Lead Representative	Lead Representative Contact Information (address, email, phone number)
Public Hospital	127303903	1760339462 2 000	Non-state public	Oakbend Medical Center	Kord Quintero	22003 Southwest Fwy, Richmond, T 77469 kquintero@obmc.org 713-439-6004
State Hospital	112672402	1-746001118-6005	State Owned	The University of Texas - MD Anderson Cancer Center	Dr. Lewis Foxhall	1515 Holcombe Boulevard, Unit 1487 Houston, TX 77030-4009 lfoxhall@mdanderson.org 713-792-1066
Performing Providers *(specify type of provider, e.g. public or private hospital, children's hospital, CMHC, that will receive DSRIP payments under the RHP plan, some of which may also receive UC)*						
Academic Organization	111810101	1760459500	Non-state public	University of Texas - Health Science Center	Andrew Casas	6410 Fannin STE 1500 Houston, Texas 77030 andrew.casas@uth.emc.edu 832-325-7325
City Health Department	0937740-08,-03,-07	27-2920745	Non-state public	Houston Dept of Health & Human Services	Dr. Deborah Banerjee	8000 N. Stadium Dr. Houston, TX 77054 Deborah.Banerjee@houstontx.gov 832-837-6348
County Agency	NA	080314-01	Non-state public	Harris County Protective Services	TBD	TBD
County Health Department	158771901	17604545149159	Non-state public	Harris County Public Health & Environmental Services	Les Becker	2223 W. Loop South Houston, Texas 77027 lbecker@hcphes.org 713-439-6004
County Health Department	2967606-01	1746001969	Non-state public	Fort Bend County Health & Human Services	Dr. Mary desvignes-Kendrick	4520 Reading Road, Suite A-100, Rosenberg, TX 77471 md.kendrick@co.fort-bend.tx.us 281-238-3589
Local Mental Health Authority	113180703	17416039505023	Non-state public	MHMRA of Harris County	Dr. Scott Strang	7011 Southwest Fwy, Houston, TX 77074

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RHP Participant Type	**Texas Provider Identifier** (TPI)	**Texas Identification Number** (TIN)	**Ownership Type** (state owned, non-state public, private)	**Organization Name**	**Lead Representative**	**Lead Representative Contact Information** (address, email, phone number)
						scott.strang@mhmraharris.org 713-970-7182
Local Mental Health Authority	81522701	17602532875	Non-state public	Texana Center	Amanda Darr	4910 Airport Avenue, Building D, Rosenberg, TX 77471 amanda.darr@texanacenter.com 281-239-1350
Public Hospital	20993401	20993401	Non-state public	Chambers County	Theresa Cheaney	P.O.Box 398 Anahuac, Texas 77514 tcheaney@chambershealth.org 409-267-2902
Public Hospital District	133355104	1741536936 6 324	Non-state public	Harris County Hospital District/Ben Taub Hospital/Harris Health System	Beth Cloyd	2525 Holly Hall Drive, Houston, TX 77054 beth.cloyd@harrishealth.org 713-566-6400
Public Hospital	137909111	1746003411	Non-state public	Memorial Medical Center	Jason Anglin	815 N. Virginia Street Port Lavaca, Texas 77979 janglin@mmcportlavaca.com 361-552-0222
Public Hospital	127303903	1760339462 2 000	Non-state public	Oakbend Medical Center	Kord Quintero	22003 Southwest Fwy, Richmond, TX 77469 kquintero@obmc.org 832-760-4805
State Hospital	112672402	1-746001118-6005	State Owned	The University of Texas - MD Anderson Cancer Center	Dr. Lewis Foxhall	1515 Holcombe Boulevard, Unit 1487 Houston, TX 77030-4009 lfoxhall@mdanderson.org 713-792-1066

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Section II. Stakeholder Engagement *(As submitted on October 30, 2013 with the RHP 3 Prioritized List of New 3-Year Projects, but with updates)*

A. RHP Participants Engagement

Process for Evaluating and Selecting Projects for New 3-year Projects
In order to guide the region in selecting only the most transformative projects and to take full advantage of the opportunity to add new 3-year projects, the Anchor developed a project scoring process and template for regional stakeholders to use in scoring projects. Modified from a *National Institutes of Health* grant scoring tool, the scoring template assesses the strength of a project across four (4) domains, shown in the table below:

Domain	Weight
Alignment with Community Needs	30%
Transformational Impact	30%
Committed IGT	25%
Likelihood of Success	15%
Total	**100%**

Projects were scored on a scale of 1-9, using the guidelines in the table below:

Impact	Score	Descriptor	Additional Guidance on Strengths/Weaknesses
High	9	Exceptional	Exceptionally strong with essentially no weaknesses
	8	Outstanding	Extremely strong with negligible weaknesses.
	7	Excellent	Very strong with only minor weaknesses.
Medium	6	Very Good	Strong but with numerous minor weaknesses.
	5	Good	Strong but with at least one moderate weakness.
	4	Satisfactory	Some strengths but also some moderate weaknesses.
Low	3	Fair	Some strengths but with at least one major weakness.
	2	Marginal	A few strengths and a few major weaknesses.
	1	Poor	Very few strengths and numerous major weaknesses.

For the purposes of this scoring process and template, the Region used the following definitions from the *Guidelines for Reviewers Including Scoring Descriptors* from the Office of Extramural Research at the *National Institutes of Health*:

- **Minor Weakness:** Easily addressable weakness that does not substantially lessen impact.
- **Moderate Weakness:** Lessens impact
- **Major Weakness:** Severely limits impact.

Scoring Guidance
Alignment with Community Needs – Does the proposed project directly address one or more of the 25 identified community needs as outlined in the Regional Healthcare Partnership Plan?

Projects that address a need directly and address multiple community needs should be considered for a higher score.
Transformational Impact – How likely and to what extent is this project going to positively impact the identified community needs? Ideally, the project would yield a significant transformation. Those projects with a wider reach and/or evidence-based should be considered for a higher score
Committed IGT – Has the organization demonstrated that the project is supported by a committed IGT source? If yes, then score a 9. If no, then score a 1.
Likelihood of Success – Is the goal achievable? A stretch goal is ideal but should be realistic.

Reviewers

Reviewers were comprised of IGT entity representatives. Project Proposals were redacted to exclude Performing Provider and IGT organizational names. Additionally, the RHP 3 Anchor ensured that no reviewer was responsible for reviewing their organization's submitted project(s).

Prioritization Process

All projects were prioritized based on the composite score as described above. Projects were then prioritized by rotating IGT entities to ensure that all IGT entities were represented within each rotation.

RHP Participants Engagement

RHP Participants were fully engaged throughout the development and implementation of this scoring process. Specifically, a call for projects was issued on August 16th. Once potential Performing Providers (new and existing) were identified, the full scoring proposed scoring process and template was shared with them and their related IGT entities. Additionally, a summary of the agreed-upon process was shared with the whole Region during Monthly Regional Status and Information Calls and through the RHP3 website (www.setexasrhp.com). Throughout the development of this plan that incorporates the New 3-Year Projects, the Anchor has engaged the proposed Performing Providers and related IGT entities in discussions about the scoring process, the outcomes of the scoring process and funds distribution. Lastly, all of RHP3 was invited to participate in the required public hearing on September 20, 2013 where the scoring process was discussed.

B. Public Engagement

The Anchor for RHP3 has engaged Performing Providers, IGT Entities, community stakeholders and the general public, including consumers through the process of development, review and prioritization of the new 3-year projects.

On August 14, during the Region's Monthly Status Call, Regional stakeholders were informed of the required components of the process for adding New 3-Year Projects. Feedback on the prioritization process was requested at that time. Additionally, as follow up, an email was sent to the Region's full distribution list outlining the proposed process and requesting feedback by

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August 23rd. Documents shared include the proposed process, sample scoring template, and summary scoring process. Also discussed on this call was the timeline.

Participants in this call and on this distribution list include Performing Providers, Regional Advisory Committee Members, IGT Entities, Governmental representatives, and community stakeholders.

Also, on August 16, 2013, the Regional distribution list was used to make a Call for Projects. Projects were requested by September 3, 2013 and recipients were encouraged to share the Call for Projects with other interested parties in the region. Recipients received HHSC guidance on adding new 3-year projects, at that time.

Once projects were received and collated, the initial list of projects was published on the Region's website (www.setexasrhp.org) on September 16, 2013 in advance of the required Public Hearing. This list was also shared through the aforementioned distribution list.

The required public hearing was held at Texas Children's Hospital - West Campus in Katy on September 20, 2013. The announcement for this event was shared with the Region's distribution list, on the Region's website and through One Voice Texas' distribution list to ensure broad participation. During the public hearing, the audience was provided an update on the status of the RHP Plan, as well as, a full description of the New 3-Year projects prioritization process and list of projects. Questions were also taken during this 2 hour event.

On October 25, 2013, the fully prioritized list (with IGT rotation included) with raw scoring rankings was published on the Region's website, through the Region's distribution list and through One Voice Texas' distribution list for final review and comment prior to submission to HHSC.

The prioritized list of New 3-Year Projects submitted to HHSC on October 30, 2013, consisted of 78 projects valued at approximately $779M. Three projects were not included – two for lack of IGT commitment and one withdrawn by the provider. Since formal submission, two other projects have been withdrawn by providers.

This plan consists of 25 priority projects, and 1 project with partial funding allocated and 6 contingency projects for consideration should additional allocation become available.
Other highlights from this plan include:
11 Performing Providers – 2 new participating organizations

- 5 Hospitals
- 2 Local Mental Health Authorities
- 2 County Health Departments
- 1 City Health Department
- 1 Academic Health Science Center

13 IGT Entities – 2 new participating organizations
Please see the attached Summary of Projects (Appendix A) for an updated Prioritized List.

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Section III. DSRIP Projects

(In order as listed in the Prioritized List submitted to HHSC)

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Section III. DSRIP Projects

#1 - Project Option 2.7.4: Implement innovative evidence-based strategies to reduce low birth weight and preterm birth: Comprehensive Preconception, Maternal & Neonatal Care Program

Unique RHP Project ID: 111810101.2.100
Performing Provider Name/TPI: UTHealth, UTPhysicians / 111810101

Project Summary:
Provider: UT Physicians is the clinical practice of The University of Texas Medical School at Houston. With more than 900 physicians certified in 80 medical specialties and subspecialties, 906 residents and fellows, and 283,920 patient visits in 2011, it is the fastest growing academic practice in the nation for the last five years. In addition to our flagship location in the Texas Medical Center, UT Physicians has 4 neighborhood locations throughout the Greater Houston area, and also offers specialty clinics at several Memorial Hermann Hospital locations.

Intervention(s): UTP will implement several evidence-based interventions that will ensure that women receive quality preconception, prenatal, intrapartum, postpartum, and interconception care to manage risk factors that lead to adverse pregnancy outcomes. These interventions include: the CHOICES Plus program, home visits during pregnancy and postpartum period (Healthy Familes of America model), and nutrition and physical activity promotion programs – A Legacy of Health (*Un Legado de Salud)* and The Happy Kitchen (La Cocina Alegre®).

Need for the project: Our OB/GYN and family practice clinics serve a population of women with high rates of risk factors for adverse pregnancy outcomes, including low income status, lack of health insurance, high rates of chronic disease, and high prevalence of smoking, alcohols abuse, and obesity.

Target Population: This project targets populations with high rates of infant mortality, out-of-wedlock births, late or no prenatal care, teen pregnancies and births, and births to low-income women and minority ppulations. Patients of lower socioeconmic status (which number approximately 448,583 for the UTP clinics service areas) are known to have worse disease control due to the inability to maintain compliance in the long run, hence this project will be beneficial to the Medicaid population in the UTP clinics service areas.

Category 1 or 2 expected patient benefits:
By the end of DY5, we expect to have over **3,200** women enrolled in the innovative care program and by the end of DY5, we expect to have made approximately **51,200** patient encounters that will facilitate the mangement of pregnancy for improved outcomes.

Category 3 outcomes:
IT-8.17: Our goal is to improve, the percentage of UT Physician's patients regardless of age, who gave birth during a 12-month period who were seen for post-partum care within 8 weeks of giving birth and who received a breastfeeding evaluation and education, post-partum depression screening, post-partum glucose screening for gestational diabetes patients, and family and contraceptive planning during the measurement year.

Project Option 2.7.4. Implement innovative evidence-based strategies to reduce low birth weight and preterm birth: Comprehensive Preconception, Maternal & Neonatal Care Program

Unique RHP Project ID: 111810101.2.100
Performing Provider Name/TPI: UTHealth, UTPhysicians / 111810101

Project Description:

1 in 8 babies are born prematurely in the United States, resulting in increased risk of severe health problems and lifelong disabilities. Medicaid currently finances approximately 40% of all births in the United States. Women enrolled in Medicaid are more likely to have multiple risk factors for adverse birth outcomes, have higher rates of complications, poor outcomes, and preterm birth[1] There are several low-cost interventions that have been shown to improve women's chances of carrying their pregnancy to term, ending with the birth of a healthy baby and a healthy and happy mother. UTP will implement several evidence-based interventions that will ensure women receive quality preconception, prenatal, intrapartum, postpartum, and interconception care.

Preconception care is a critical part of reproductive planning and can improve the health of the women and pregnancy outcomes[2]. Key components of preconception care include risk assessment, health promotion, and medical and psychosocial interventions that address identified medical and psychosocial risks[3]. In particular, UTP will implement an adaptation of Project CHOICES Plus for women at-risk of alcohol- and/or tobacco-exposed pregnancies and women who are obese. The CHOICES name is based on its use of motivational interviewing and recognition that women at-risk of an alcohol-exposed pregnancy (AEP) can reduce their risk either by modifying drinking or using contraception effectively. CHOICES Plus (including tobacco cessation), bundles multiple risk factors highly likely to affect the same patients[4]. CHOICES Plus will be adapted to recognize that being overweight or obese are important and prevalent risks and that motivational interviewing could be applied to prevent obesity-exposed pregnancy (OEP) by stimulating referral to a specialized program. Trained behavioral health specialists (BHS) will conduct counseling sessions with at-risk women identified by a common intake questionnaire. Those choosing effective contraception would be served *on site* by one of the advanced care practitioners; those who plan to get pregnant will be enrolled in the appropriate program for alcohol moderation, obesity reduction or smoking cessation as necessary. Every woman receiving the CHOICES Plus intervention, also will be given a referral to other appropriate on site or off site services. Women who are not drinking at risk levels, smoking cigarettes, or obese and therefore not at risk of AEP, tobacco-exposed pregnancy (TEP), or OEP but are at risk for an unplanned pregnancy or are planning a pregnancy will receive messages and materials about preconception risks and the importance of having a reproductive plan. In addition, the program will stimulate at-risk women to take steps to reduce other risks of poor pregnancy outcomes through immunization services (e.g., Hep B and rubella, if seronegative), folic acid and/or iron supplementation, STI testing, and enrollment in care coordination programs for those with chronic conditions.

A program will be put in place to encourage early enrollment in prenatal care and improved delivery of medical services during the perinatal period. All enrolled pregnant women will have a

[1] Centers for Medicare and Medicaid Services. Strong Start Webinar 1. February 15, 2012 http://innovation.cms.gov/Files/slides/StrongStart-slides_2_15_12.pdf
[2] Berghella, V et al 2010. Chapter 6: Quality Improvement Opportunities in Prenatal Care In Toward Improving the Outcome of Pregnancy III. March of Dimes 2010. Retrieved from www2.aap.org/sections/perinatal/pdf/TIOPIIIChapter6.pdf on 05-29-13
[3] Lu M. Recommendations for Preconception Care. Am Fam Physician 2007;76:397-400
[4] Velasquez MM, von Sternberg K, Parrish DE. CHOICES: An integrated behavioral intervention to prevent alcohol-exposed pregnancies among high-risk women in community settings. Soc Work Public Health. 2013;28(3-4):224-233

comprehensive risk assessment and screening to identify various risk factors and varying levels of risk. Care will be based on levels of risk and predicted outcomes, with the focus on maternal and fetal/neonatal morbidity and mortality[5]. High-risk patients will be followed up in consultation with the appropriate specialists (e.g., obstetricians or maternal-fetal medicine specialists). Each woman will receive enhanced access to health education/information regarding her health needs, particularly during the time of gestation. This will include classes on nutrition, diet, and exercise, and smoking/alcohol cessation support. The benefits of breastfeeding will be discussed and additional support provided for those choosing to breastfeed.

Home visits by health workers during the prenatal and postpartum periods, and early in childhood have been shown to lead to reduction in maternal risk factors and improvements in birth outcomes[6]. We propose to improve infant medical and developmental outcomes and maternal pregnancy related outcomes (including postpartum depression, PPD) by implementing a comprehensive program of home visitation based on the evidence-based Healthy Families America home visitation program. Community health workers (CHWs) will be used to provide outreach, education, referral and follow-up, case management, and advocacy through home visiting services to women who are at highest risk for poor birth outcomes, particularly low-birth weight and infant mortality. The content of the visit will be tailored to the needs of the mother and infant. In addition to the home visitation, all mothers will be regularly screened for PPD at clinic visits. Mothers who are identified as having PPD will be provided counseling by a social worker or referred for more intensive mental health services.

Over the course of the prenatal and postnatal interventions, special attention will be paid to promoting healthy eating and active living among pregnant women, and women with infants (0-1year) through the implementation and integration of two evidence-based health promotion programs: 1) **A Legacy of Health (*Un Legado de Salud)*** – a group-based, bilingual CHW-led nutrition education program for pregnant women and women with infants[7] and (2) The Happy Kitchen (La Cocina Alegre®) (THK), a bilingual nationally-recognized cooking program[8] led by CHWs and Registered dietitians (RDs) and in collaboration with the UT Children's Learning Institute, UT WIC clinics, Sustainable Food Centers and the Houston Food Bank. UT Registered Dietitians, lactation consultants, and CHWs/*Promotores* will be recruited and trained to deliver culturally- and linguistically-appropriate classes.

Finally, during the interconception period women will continue to receive well-woman examinations, which will include routinely addressing her family planning needs, assessing risks, and updating her reproductive life plan. Also, intensive interventions will be provided to women who's prior pregnancy ended in adverse outcome – e.g., infant death, low birth weight or preterm birth[9]. When the woman is ready to conceive again, she will transit to full preconception care.

Goal and Relationship to Regional Goals:

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[5] Berghella,, V et al 2010. Chapter 6: "Quality Improvement Opportunities in Prenatal Care" In "Toward Improving the Outcome of Pregnancy III". March of Dimes 2010. Retrieved from www2.aap.org/sections/perinatal/pdf/TIOPIIIChapter6.pdf on 05-29-13

[6] Olds DL, Henderson CR, Tatelbaum R, and Chamberlin R. Improving the Delivery of Prenatal Care and Outcomes of Pregnancy: A Randomized Trial of Nurse Home Visitation. Pediatrics 1986;77;16-28; Kitzman H, Olds DL, Henderson Cr, et al. Effect of Prenatal and Infancy Home Visitation by Nurses on Pregnancy Outcomes, Childhood Injuries, and Repeated Childbearing: A Randomized Controlled Trial

[7] Nader et al. 2012. http://www.alegacyofhealth.org/Curriculum%20Evaluation.pdf

[8] http://www.sustainablefoodcenter.org/happy-kitchen

[9] (CDC 2006. Preconception Health and Care, 2006 retrieved from https://admin.publichealth.lacounty.gov/mch/ReproductiveHealth/PreconceptionHealth/PCHFiles/CDC%20Preconception%20Health%20and%20Care%202006.pdf on 04/15/13)

Project Goal:

To develop and implement safe motherhood and infant care interventions that will control risk factors associated with poor birth outcomes, reduce preterm and low birth weight births, and decrease costs of medical care in the first year of life.

This project addresses the following regional goal:

Develop a regional approach to health care delivery that leverages and improves on existing programs and infrastructure, is responsive to patient needs throughout the entire region, and improves health care outcomes and patient satisfaction.

Challenges:

Low income and Medicaid-eleigible women are more likely to have multiple risk factors for adverse birth outcomes and face significant barriers in accessing needed serivces in a timely manner and making healthy lifestyle choices such as consuming healthy diets and having effective means of family planning. This project will help these women overcome some of these challenge by implmenteing evidence-based interventions acros the spectrum from preconception to postnatal period. UT Health has extensive experience implementing health promotion programs in Houston by using the Diffusion of Innovations Model[10]. Diffusion of Innovation offers a structured, systematic approach to gain interest in adoption, training, and institutionalization of innovative solutions to health problems.

3-Year Expected Outcome for Provider and Clients:

We expect to deliver comprehensive preconception, prenatal, postpartum, and interconception care to over 3,200 women in Harris County, that include a total of 51,200 patient encounters, with at least 25% of those being with Medicaid/Medicaid-eligible clients (800 individuals and 12,800 patient encounters). Providing the highest level of coordinated maternal care that includes health promotion and psychosocial intervention is expected to improve birth outcomes in the area, such as reduced births to teen mothers, increased mothers receiving prenatal care in the 1st trimester, reduced low birth weight births, reduced pre-term births, and lower infant mortality rates.

Starting Point/Baseline: This is a new program, therefore our baseline is zero.

Rationale:

There are far reaching cost implications of improving birth outcomes. The net expected hospital cost savings for females who receive prenatal care is over $1,000 per delivery[11]. The annual societal economic burden associated with preterm birth in the United States was, at a minimum, $26.2 billion in 2005, or $51,600 per infant born preterm. Nearly two-thirds of this cost was for medical care, including special education services and lost productivity costs for for disabling conditions: cerebral palsy, mental retardation, vision impairment, and hearing loss. These cost implications are an understatement of the magnitude of the cost burden, as it did not include the cost of medical care beyond early childhood or caretaker costs[12]. Mothers who smoke add over $700 per mother in neonatal costs. The smoking-attributable neonatal costs in the United States represent almost $367 million in 1996 dollars. These costs are highly preventable since the adverse effects of maternal smoking occur in the short-run and can be avoided by even a temporary cessation of maternal smoking.[13]

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[10] Rogers. Diffusion of Innovations. 4th ed. New York: Free Press; 1995. p. 132.

[11] Henderson JW. The cost effectiveness of prenatal care. Health Care Finance Rev. 1994 Summer;15(4):21-32

[12] Behrman RE, Butler AS ed. Preterm birth: causes, consequences and prevention. Washington, DC: National Academies Press, 2007

[13] Adams EK, Miller VP, Ernst C, Nishimura BK. Melvin C, Merritt R. Neonatal health care costs related to smoking during pregnancy. Health Economics. April 2002;11(3): 193-206

Low-income women are more likely to enter pregnancy with unmanaged chronic health conditions that increase their pregnancy risks. Diabetes and hypertension are the most commonly reported health conditions among pregnant women[14]. Even those who become eligible for Medicaid upon conception face significant delays in obtaining early prenatal care[15]. Women who receive no prenatal care are three to four times more likely to die of pregnancy-related complications than women who do[16], while those with high-risk pregnancies are 5.3 times more likely to die if they do not receive prenatal care[17] .

The Institute of Medicine, reported last year that more than a third of normal-weight women and more than half of overweight and obese women gain more weight than is recommended during pregnancy[18]. In addition, excess weight gained during pregnancy is often difficult to lose after the baby is born, and can be a contributor to obesity later in life. Reported rates of gestational diabetes (GDM) range from 2% to 10% of pregnancies. Immediately after pregnancy, 5% to 10% of women with GDM are found to have diabetes, usually type 2, and obesity increases the risk further; in addition, women with GDM are at increased odds of GDM with subsequent pregnancies and for type 2 diabetes later in life. Women who have had GDM have a 35% to 60% chance of developing diabetes in the next 10–20 years[19].

More than 60% of pregnancies (40% of births) are unintended and the risks of delayed entry into prenatal care are high[20]. Consequently, preconception care is an important part of a woman's health care, regardless of her plans for future pregnancy. Preconception care, as defined by the CDC, is a set of interventions that aim to identify and modify biomedical, behavioral, and social risks to a woman's health or pregnancy outcome through prevention and management[21]. The main goal of preconception care is to provide health promotion, screening, and interventions for women of reproductive age to reduce risk factors that might affect future pregnancies.

In 2009, 11.9% of recent mothers in a 29-State area reported postpartum depressive symptoms since the birth of their child in the previous 2–9 months. It is the most common mental health disorder associated with childbirth. PPD has been demonstrated to result in impaired infant cognitive and emotional development, and mothers with PPD have lower breastfeeding rates[22] with greater feelings of anger and violence towards their infant[23], and screening for depression is encouraged by the American College of Obstetricians and Gynecologists both during and after pregnancy[24].

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[14] U.S. Department of Health and Human Services, Health Resources and Services Administration. Women's Health USA 2012. Rockville, Maryland: U.S. Department of Health and Human Services, 2013. Available online at http://mchb.hrsa.gov/

[15] Editorial: Maternal mortality in the United States: a human rights failure. Contraception 83 (2011) 189–193

[16] Chang J, et al. Pregnancy-related mortality surveillance–United States, 1991–1999, MMWR surveillance summaries. 2003. February 21: [1–8]. http://www.cdc.gov/mmwr/preview/mmwrhtml/ss5202a1.htm#tab3

[17] Rosenberg D, Geller SE, Studee L, Cox SM. Disparities in mortality among high risk pregnant women in Illinois: a population based dtudy. Ann Epidemiol 2006;16:26-32

[18] Institute of Medicine. 2012. http://www.iom.edu/Reports/2012/Accelerating-Progress-in-Obesity-Prevention/~/media/Files/Report%20Files/2012/APOP/IOM_HealthCare_brief_v4.pdf

[19] Centers for Disease Control and Prevention. 2011 May 23. http://www.cdc.gov/diabetes/pubs/estimates11.htm

[20] (Carol C. Korenbrot, Alycia Steinberg, Catherine Bender, and Sydne Newberry, . Preconception Care: A Systematic Review . Maternal and Child Health Journal, Vol. 6, No. 2, June 2002)

[21] Johnson K, Posner SF, Biermann J, Cordero JF, Atrash HK, Parker CS, et al. Recommendations to improve preconception health and healthcare—United States. MMWR Recomm Rep 2006;55(RR-6):1-23.

[22] Wisner, K. L., Parry, B. L., & Piontek, C. M. (2002). Postpartum Depression. New England Journal of Medicine, 347(3), 194-199. doi: doi:10.1056/NEJMcp011542

[23] Cheng, Ching-Yu, Eileen R. Fowles, and Lorraine O. Walker. "Postpartum maternal health care in the United States: a critical review." The Journal of perinatal education 15.3 (2006): 34.

[24] U.S. Department of Health and Human Services, Health Resources and Services Administration. Women's Health USA 2012. Rockville, Maryland: U.S. Department of Health and Human Services, 2013. Available online at http://mchb.hrsa.gov/

Unique community need ID numbers the project addresses:
CN.11, high rates chronic disease and inadequate access to treatment programs and services (obesity) CN.12, high rates of tobacco use and excessive alcohol use, CN.14, high rates of poor birth outcomes and low birth-weight babies, CN.20, lack of access to health promotion education, nutrition counseling, screening programs

Project Components:

a. Conduct quality improvement for project using methods such as rapid cycle improvement. Activities may include, but are not limited to, identifying project impacts, identifying "lessons learned," opportunities to scale all or part of the project to a broader patient population, and identifying key challenges associated with expansion of the project, including special considerations for safety-net populations.

Customizable Process or Improvement Milestones:
The Category 2 menu for this project option did not provide any milestones regarding designation or training of personnel. Also, for this project to be successful, population outreach must be conducted in order to capture the target population. Therefore, we have added 3 customizable process milestones. In addition, because the project is comprised of multiple components, we have added a customizable improvement milestone that allows us to measure the percentage of patients being captured by each individual component.
Milestone [P-X1.]: Designate personnel or teams to support and/or manage the project/intervention Metric 1 [P-X1.1.]: Project managers, CHWs, and other personnel assigned to teams, and team responsibilities.
Milestone [P-X2]: Train staff in implementation of program components. Metric 1 [P-X2.1.]: Train relevant staff on the elements of the program and their respective roles.
Milestone [P-X3]: Conduct community or population outreach and marketing Metric 1: [P-X3.1]
Number of women reached through the outreach and marketing campaigns
Milestone [I-X.]: Uptake of recommended evidence-based interventions Metric 1 [I-X.1a.]: Percent of women with risk of AEP, TEP, and/or OEP offered the CHOICES Plus program who attend at least 2 intervention sessions. Metric 2 [I-X.1b.]: Percent of pregnant women and young mothers (with infants) offered the healthy eating and active living program who attend at least 2 of classes. Metric 3 [I-X.1c.]: Percent of women that screen positive for postpartum depression who receive at least 15 home visits in the first 6 months of the post-partum period.

We are considering the following Category 3 Outcome Measure:
IT-8.17 Post-Partum Follow-Up and Care Coordination *(Standalone measure)*

Relationship to other Projects:
1.3 – Trained community health workers will be available to assist in bridging cultural gaps and in providing navigation services for patients.
1.5 – The 24-hr nurse triage line will provide urgent medical advise to these women at any time of any day.
1.8 - The systems engineering and user dashboards will give providers greater access to information and provide reports facilitating a continuous quality improvement process.
2.1 & 2.2 – Women will be provided with coordinated care in medical homes.
2.3 – Women that come to the hospital without a primary care physician will be navigated to a medical home and other support services as needed.

Plan for Learning Collaborative:

UTHealth will participate in a region-wide learning collaborative(s) as offered by the Anchor entity for Region 3, Harris Health System. Our participation in this collaborative with other Performing Providers within the region that have similar projects will facilitate sharing of challenges and testing of new ideas and solutions to promote continuous improvement in our Region's healthcare system.

Project Valuation

The anchor, Harris Health, facilitated a blind review process in which reviewers scored each project on 4 criteria, using a 9-point scale. The ratings for each criterion were weighted and summed for each project to arrive at a total score (value weight). All 80 projects for the region were then ranked. This project was ranked #3 of all 80 projects submitted. We used these scores/ranking in conjunction with other approved project valuations to arrive at the valuation assigned to this project. Below are the criteria and considerations for awarding project scores:

1. Aligned with Community Needs (Weight = 30%): Proposed project directly addresses one or more of the 25 identified community needs as outlined in the Regional Healthcare Partnership Plan. Projects that address a need directly and address multiple community needs were considered for a higher score.
2. Transformational Impact (Weight = 30%): How likely and to what extent is this project going to positively impact the identified community needs? The highest rating was given to projects that yield a significant transformation. Those projects with a wider reach and/or evidence-based should be considered for a higher score.
3. Committed IGT (25%): Is the project supported by a committed IGT source. All of our projects have committed IGT and were therefore assigned the highest rating of points.
4. Likelihood of Success (Weight = 15%): What is the likelihood that the goals of the project will be achieved?

#2 - Project Option 2.15.1 – Integrate Primary and Behavioral Health Services

Unique RHP Project ID: 081522701.2.15
Performing Provider Name/TPI: Texana Center / 081522701

Project Summary:

Provider:
Texana Center is the Local Authority for Behavioral Healthcare and Intellectual and Developmental Disability Services for six counties within RHP 3: Austin, Colorado, Fort Bend, Matagorda, Waller, and Wharton. Texana Center serves approximately 9,800 individuals annually (an estimated 7,000 in BH services and 3,000 in IDD services), employs 742, and has an annual operating budget of $39,211,988.

Intervention(s): This project will hire a primary care physician and other appropriate staff to provide primary care services to the Medicaid and uninsured population currently being served by Texana Center for their mental illness. By providing both services in the same building, by the same performing provider, a "warm" hand off can be made the same day as the visit to the behavioral healthcare provider. The interventions will include screenings, treatment, medication services, education services including disease management and nutrition, exercise and wellness.

Need for the Project: Currently, this population goes untreated or undertreated due to financial inability to pay for primary care services and medications, transportation issues, and numerous other reasons. Some, due to their mental illness, are simply not able to understand the importance of seeking and receiving primary care services. By having both services in the same building, providers can work together to improve care for these individuals.

Target Population: The target population includes all Medicaid and uninsured/indigent patients in the Fort Bend County Behavioral Healthcare Clinics.

Category 1 or 2 Expected Patient Benefit: The expected patient benefit of this project is to treat and stabilize chronic medical conditions primarily, high blood pressure and diabetes in the current behavioral healthcare setting. The category 2 improvement milestone and QPI selected for this project is 2.15.1: Design, implement, and evaluate projects that provide integrated primary and behavioral healthcare services. In DY4, we will serve 150 unique individuals and in DY5, we will serve 158 unique individuals for a cumulative total of 308 unique individuals.

Category 3 Measure: Texana Center has chosen OD-1 Primary Care and Chronic Disease Management, IT-1.7 Controlling high blood pressure. Since the goal of this project is to treat and control individuals with mental illness who also have a chronic medical condition (primarily, diabetes and high blood pressure), this is the category 3 measure that we will be improving. By focusing on this measure, we believe that we will improve the health of this low-income population.

Project Option 2.15.1 – Integrate Primary and Behavioral Health Services

Unique RHP Project Identification Number: 081522701.2.15
Performing Provider Name/TPI: Texana Center/081522701

Project Description:
Texana Center, the local mental health authority, proposes to integrate primary care services into the Behavioral Healthcare Clinics in Fort Bend County.

Texana Center will hire a primary care physician and other appropriate staff to provide primary care services to the Medicaid and uninsured population currently served by Texana Center for their mental illness. Many of these individuals also have a chronic disease that goes untreated or undertreated as a result of the lack of follow through with referrals made for these medical conditions. By providing both services in the same setting, a "warm" hand off can be made the same day as the visit to the behavioral healthcare provider. Typically, there is a lack of follow through with primary care providers for this population due to financial inability, transportation issues, or due to their mental illness, simply are not able to understand the importance of seeking and receiving primary care services for their chronic medical disease. Many of these individuals end up seeking out more costly treatment in hospitals when their condition has become an emergency. This is avoidable if appropriate primary care treatment is received prior to the emergency. In addition to screening and treatment/medication services, education services including disease management and nutrition, exercise and wellness will be provided.

The challenges associated with this project are the space to provide the service and the hiring of a primary care practitioner. The space issue is resolved by relocating the current Mobile Crisis Outreach Team to the Crisis Center (Texana's other DSRIP project), which frees up space in the Rosenberg Clinic for these primary care services. The other challenge of hiring the primary care practitioner will be addressed in the same way that turn-over with psychiatrists is currently handled. In addition to internal recruiting efforts, Texana works with several external recruiters. Texana will also work with the RHP's regional recruitment initiative.

The 3-year expected outcome of this project is to integrate primary care and behavioral healthcare in the same clinic setting in order to improve care and access to needed services and ultimately improve the quality of life for those served. In addition, the goal is to reduce emergency room visits and more costly treatment in hospital settings.

While the Region has many specific objectives and improvement targets based on stakeholder input and community needs assessments, the over-arching goals that have guided many of our decisions include the following which is consistent with this project's goals:

- Develop a regional approach to health care delivery that leverages and improves on existing programs and infrastructure, is responsive to patient needs throughout the entire region, and improves health care outcomes and patient satisfaction.

- Increase access to primary and specialty care services, with a focus on underserved populations, to ensure patients receive the most appropriate care for their condition, regardless of where they live or their ability to pay.

- Develop a culture of ongoing transformation and innovation that maximizes the use of technology and best-practices, facilitates regional collaboration and sharing, and engages patients, providers, and other stakeholders in the planning, implementation, and evaluation processes.

Starting Point/Baseline:
Currently, there are no primary care integrated services provided to patients in the Texana Center Behavioral Healthcare Clinics. Therefore, the starting point/baseline for this project is zero individuals served.

Quantifiable Patient Impact: The QPI selected for this project is 2.15.1: Design, implement, and evaluate projects that provide integrated primary and behavioral health care services. In DY4, we will serve 150 unique individuals and in DY5, we will serve 158 unique individuals for a cumulative total of 308 unique individuals. Due to the population currently served by Texana Center, these individuals will be 100% Medicaid or uninsured.

Rationale:
Texana Center selected this project because of the high incidence of high blood pressure, high cholesterol, obesity, diabetes, and other co-morbid and chronic medical illnesses seen in patients currently served. The patients we currently serve are frequent users of emergency rooms and are frequently referred to primary care doctors due to high blood pressure readings and abnormal lab values that are of major concern to the psychiatrists currently serving these patients. These patients don't follow through with referrals for reasons mentioned above but with the service in the same building, it will be much easier for the patients to receive treatment.

The process milestone chosen for this project for DY3 is P-5 – Develop integrated sites reflected in the number of locations and providers participating in the integration project. The metric chosen for this milestone is P-5.2 – Description and number of primary care providers newly located in behavioral health settings. This is the most difficult part of this project and will require several months to recruit and hire a primary care physician. In DY4 and DY5, the improvement milestone chosen was our QPI metric of number of individuals receiving both physical and behavioral health care in project sites. In addition, in DY4 and DY5, milestone P-10 will be utilized to incorporate continuous quality improvement into this project. Milestone P-10 requires participation in face-to-face learning (i.e. meetings or seminars) at least twice per year with other providers and the RHP to promote collaborative learning around shared or similar projects. Texana Center will evaluate and continuously improve integration of primary and behavioral health services using PDSA cycles.

The Region 3 Community Needs Assessment identified the need for expanded and integrated physical and behavioral healthcare. The four major community needs this project addresses are CN.1 – Inadequate access to primary care, CN.11 – High rates of chronic disease and inadequate access to treatment programs and services for illnesses associated with chronic disease, including, Cancer, Diabetes, Obesity, Cardiovascular Disease, Asthma, AIDS/HIV, CN.18 – Insufficient access to integrated care programs for behavioral health and physical health conditions, and CN.20 – Lack of access to programs providing health promotion education, training and support, including screenings, nutrition counseling, and patient education programs.

This project represents a new initiative for Texana Center and there is no funding received from the U.S. Department of Health and Human Services for this program.

<u>Project Core Components:</u>

Texana Center will address each of the required project core components as follows:

a) Identify sites for integrated care projects, which would have the potential to benefit a significant number of patients in the community. Examples of selection criteria could include proximity/accessibility to target population, physical plant conducive to provider interaction; ability/willingness to integrate and share data electronically; receptivity to integrated team approach. **The site has already been identified for this project within the current Texana Center Behavioral Healthcare Clinics.**

b) Develop provider agreements whereby co-scheduling and information sharing between physical health and behavioral health providers could be facilitated. **Since both physical health and behavioral health providers will be employed by Texana Center, these agreements are not necessary.**

c) Establish protocols and processes for communication, data-sharing, and referral between behavioral and physical health providers. **This will be implemented.**

d) Recruit a number of specialty providers (physical health, mental health, substance abuse, etc. to provide services in the specified locations. **Only primary care providers will be recruited. Specialists will not be recruited.**

e) Train physical and behavioral health providers in protocols, effective communication and team approach. Build a shared culture of treatment to include specific protocols and methods of information sharing that include:

   - Regular consultative meetings between physical health and behavioral health practitioners;
   - Case conferences on an individualized as-needed basis to discuss individuals served by both types of practitioners; and/or
   - Shared treatment plans co-developed by both physical health and behavioral health practitioners. **This will be implemented.**

f) Acquire data reporting, communication and collection tools (equipment) to be used in the integrated setting, which may include an integrated Electronic health record system or participation in a health information exchange – depending on the size and scope of the local project. **This will be implemented.**

g) Explore the need for and develop any necessary legal agreements that may be needed in a collaborative practice. **Since all providers are employed by Texana Center, legal agreements are not required.**

h) Arrange for utilities and building services for these settings. **This is already in place.**

i) Develop and implement data collection and reporting mechanisms and standards to track the utilization of integrated services as well as the health care outcomes of individuals treated in these integrated service settings. **This will be implemented.**

j) Conduct quality improvement for project using methods such as rapid cycle improvement. Activities may include, but are not limited to , identifying project impacts, identifying "lessons learned," opportunities to scale all or part of the project to a broader patient population, and identifying key challenges associated with expansion of the project, including special considerations for safety-net populations. **This will be implemented.**

Related Category 3 Outcome Measure(s):

Texana Center has chosen OD-1 Primary Care and Chronic Disease Management, IT-1.7 Controlling high blood pressure. Since the goal of this project is to treat and control individuals with mental illness who also have a chronic medical condition (primarily, diabetes and high blood pressure), this is the category 3 measure that we will be improving. These are the primary medical conditions that we believe we will be treating and focusing on this outcome measure will help improve the health of this low-income population.

Relationship to Other Projects (including Other Performing Provider's Projects in the RHP):

There are other providers in the region expanding behavioral health capacity and integrating behavioral health and physical health. Within Fort Bend County, there is an additional project with Fort Bend County Clinical Health Services and the FQHC to decrease hospital emergency department visits for chronic conditions and acute illness. This project will further complement the efforts of this project.

Plan for Learning Collaborative:

We are currently participating in a region-wide learning collaborative(s) as offered by the Anchor entity for Region 3, Harris Health System and will continue to do so. Our participation in this collaborative with other Performing Providers within the region that have similar projects will facilitate sharing of challenges and testing of new ideas and solutions to promote continuous improvement in our Region's healthcare system. A primary care cohort workgroup is being created as a part of this collaborative and we will participate in this cohort workgroup as well.

Project Valuation:

This project addresses a major need in the community, integration of behavioral health and physical health. The approach used for valuing this project was a combination of the significant need for those who are not receiving any service (Medicaid and uninsured populations), cost avoidance in local hospitals, and improved quality of life for those served. The need is clearly identified in the existing population served by Texana Center. It is estimated that an average emergency room visit is $1,265 and the average cost of a cardiology-related hospital stay is $16,000. It is expected that the costs associated with hospitalization of a person with mental illness and a chronic physical condition is even higher. Individuals with co-occurring mental illness and chronic disease have a lifespan of 25 years less than those who do not have a co-occurring mental illness. We expect that by treating the physical chronic illness in addition to the mental illness that more individuals will expand their lifespan and work and successfully contribute to the larger community.

#3 -- Project Option: 1.13.1 Develop and implement crisis stabilization services to address the identified gaps in the current community crisis system

Performing Provider/TPI: OakBend Medical Center (OBMC)/127303903

Unique Project ID: 127303903.1.100

- **Brief provider description, including size of the provider and the role of the provider in the healthcare delivery system in a particular RHP:** OBMC is a stand-alone hospital authority that was established in October 1947 under the original name of Polly Ryon Memorial Hospital. OBMC has grown to a hospital system, still governed by a hospital authority. It has expanded to two hospital locations, two diagnostic imaging centers, an outpatient surgical center, a free-standing Emergency Room and a Medical Group with 7 clinic locations. The Medical Group consists of Family Practice, OB/Gyn, Infectious Disease, Podiatry, Orthopedic, Cardiology and Interventional Cardiology. OakBend was able to provide more than $29,412,325 in charity care through September during FY 2012.

- **Description of the intervention:** The goal of this project is to provide OBMC's Emergency Room staff with the necessary resources and guidance to adequately treat and refer patients who present with behavioral health conditions. OBMC will hire a new behavioral health patient navigator, train team members on coordinating behavioral healthcare, and create multidisciplinary teams with the mandate for physicians to work closely with social workers, health coaches and care managers upon identifying high-risk clients presenting to the OakBend ED.

- **Need for the project:** According to the Region 3 Community Needs Assessment, Fort Bend County is a designated HPSA for mental health care providers and struggles to provide sufficient access to care. According to CountyHealthRankings.org, residents of Fort Bend County experience a higher rate of poor mental health days than the statewide average. Additionally, Fort Bend residents experience a significantly higher rate of violent crime, inadequate social support, and excessive drinking than the national benchmarks, each of which are tied to potential behavioral health issues. OBMC desires to address these limited resources by working more closely with existing resources in the community and improving the hospital's own resources.

- **Target population including the number of people that will be served by the project and percent that are expected to be Medicaid/low income uninsured individuals:** The target population includes all patients presenting to OBMC's ED who are diagnosed with behavioral health conditions. Our goal is to serve a total of 1600 patient encounters by DY5 (500 encounters in DY3, 500 encounters in DY4 and 600 patient encounters in DY5). Of the 1600 total patient encounters in DY3-DY5, approximately 30% are expected to consist of Medicaid/low income uninsured individuals.

- **Category 1 or 2 expected patient benefit:** This project will enable OBMC to provide improved access to appropriate behavioral health services for patients who increasingly rely on the ED for treatment of their behavioral health conditions. This project will enable OBMC to provide or

coordinate access to behavioral health expertise in the community. Patient health outcomes, patient satisfaction and the institutional cost of providing care are each expected to improve from this project.

- **Quantifiable Patient Impact:**

  The cumulative Quantifiable Patient Impact (QPI) goal for this project is 1600 patient encounters in DY3 – DY5, of which 480 are expected to be Medicaid/low income uninsured patients, the timing of which is broken down as follows:

  - DY4 QPI Goal: 1,000 cumulative patient encounters in DY3 - DY4, of which at least 300 are expected to be Medicaid/low income uninsured patients.

  - DY5 QPI Goal: 600 patient encounters in DY5, of which at least 180 are expected to be Medicaid/low income uninsured patients.

- **Description of the Category 3 measure(s):** IT-9.2 ED appropriate utilization - Reduce Emergency Department visits for target conditions: Behavioral Health/Substance Abuse. Our goal is to reduce the inappropriate usage of the ED by the target population. The calculation of inappropriate ED usage is the ratio of inappropriate ED utilization to total ED utilization by the targeted population, as calculated by Numerator - Level 4 and 5 ED visits for targeted population, and Denominator- Total ED visits for targeted population.

Project Option: 1.13.1 Develop and implement crisis stabilization services to address the identified gaps in the current community crisis system

Performing Provider: OakBend Medical Center (OBMC)/127303903

Unique Project ID: 127303903.1.100

Project Description:

OBMC serves a diverse population of patients with a high incidence of mental and/or behavioral disorders that are considered high risk. The goal of this project is to provide OBMC's Emergency Room staff with the necessary resources and guidance to adequately treat and refer patients who present with behavioral health conditions. OBMC will hire a new behavioral health patient navigator, train team members focused on coordinating behavioral healthcare, and create multidisciplinary teams with the mandate for physicians to work closely with social workers, health coaches and care managers upon identifying high-risk clients presenting to the OakBend ED. OBMC will maintain communications with mental health organizations in the Fort Bend area in order to coordinate timely interventions that meet the needs of these patients.

OBMC will design and continuously improve the utilization of tools to identify the target population and intervene in a manner affecting crisis stabilization for those patients. OBMC will identify partners and then implement the cooperative endeavor between those organizations. Crisis stabilization is crucial for improving patient outcomes and satisfaction, the physician and staff caring for these patients must have the appropriate resources to assess, manage and place these patients in the appropriate treatment setting. OBMC will create multidisciplinary teams to focus on evidence based approaches and strategies to handle de-escalation and placement of patients presenting with mental health or behavioral health conditions.

Starting Point/Baseline:

The baseline period is the DY2 time period starting on October 1, 2012 and ending on September 30, 2013. As of the DY2 baseline, OMBC had no formal crisis stabilization program focused on identifying high-risk behavioral health clients presenting to the OBMC ED and providing/coordinating behavioral healthcare services for these patients.

Quantifiable Patient Impact:

The Quantifiable Patient Impact metric for DY4 and DY5 is I-X.1 - Increase number of behavioral health/substance abuse patient encounters served by OMBC behavioral health patient navigators, OBMC ED clinical staff or partnering community behavioral health providers.

The cumulative QPI goal for this metric is 1600 patient encounters in DY3 – DY5, of which 480 are expected to be Medicaid/low income uninsured patients, the timing of which is broken down as follows:

- DY4 QPI Goal: 1,000 cumulative patient encounters in DY3 - DY4, of which at least 300 are expected to be Medicaid/low income uninsured patients.

- DY5 QPI Goal: 600 patient encounters in DY5, of which at least 180 are expected to be Medicaid/low income uninsured patients.

Rationale:

According to the Region 3 Community Needs Assessment, Fort Bend County is a designated HPSA for mental health care providers and struggles to provide sufficient access to care. According to CountyHealthRankings.org, residents of Fort Bend County experience a higher rate of poor mental health days than the statewide average. Additionally, Fort Bend residents experience a significantly higher rate of violent crime, inadequate social support, and excessive drinking than the national benchmarks, each of which are tied to potential behavioral health issues. OBMC desires to address these limited resources by working more closely with existing resources in the community and improving the hospital's own resources.

Specific Community Needs from Region 3's Assessment addressed through this project include: **CN.3** Inadequate access to behavioral health care; **CN.5** Inadequate access to care for veterans and active military, particularly mental health and substance abuse services; **CN.6** Inadequate access to treatment and services designed for special needs populations, including disabled, homeless, children, elderly; **CN.7** Insufficient access to care coordination practice management and integrated care treatment programs; **CN.8** High rates of inappropriate emergency department utilization; and **CN.18** Insufficient access to integrated care programs for behavioral health and physical health conditions.

Approximately 1/3 of all patients OBMC treats are Medicaid/uninsured, and OBMC suspects that the rate of ED patients presenting at the hospital with behavioral health issues may include an even higher percentage of Medicaid/uninsured patients, as many low-income patients are unable to access behavioral health services elsewhere in the community.

Project Core Components:

This project will include the following required core components:

a) OBMC will convene community stakeholders at OBMC and the Texana Center and potentially other behavioral health/substance abuse providers who can support the development of crisis stabilization services to conduct a gap analysis of the current community crisis system and develop a specific action plan that identifies specific crisis stabilization services to address identified gaps.

b) OBMC will analyze the current system of crisis stabilization services available in the community through OMBC facilities, the Texana Center and potentially other behavioral health/substance abuse providers in the community, including capacity of each service, current utilization patterns, eligibility criteria and discharge criteria for each service.

c) OBMC will assess the behavioral health needs of patients currently receiving crisis services in the OBMC ED. OBMC will determine the types and volume of services needed to resolve behavioral health crises through services at OMBC, the Texana Center or other behavioral

health/substance abuse providers in the community. OMBC will then conduct a gap analysis that will result in a data-driven plan to develop specific community-based crisis stabilization alternatives that will meet the behavioral health needs of the patients.

d) OMBC will explore potential crisis alternative service models and determine acceptable and feasible models for implementation. Specifically, OBMC plans to develop a crisis intervention program at the OBMC ER, which will allow OBMC's ER staff to access resources and guidance needed to adequately treat and refer patients who present with behavioral health conditions in coordination the Texana Center, and potentially other behavioral health/substance abuse providers in the community.

e) OMBC will review the intervention's impact on access to and quality of behavioral health crisis stabilization services and identify "lessons learned," opportunities to scale all or part of the intervention(s) to a broader patient population, and identify key challenges associated with expansion of the intervention(s), including special considerations for safety-net populations.

Customizable Process or Improvement Milestones:

We selected one customizable milestone/metric. The customizable milestone we selected is I-X - Increase Number of Behavioral Health/Substance Abuse Patient Encounters. The customizable metric we selected is I-X.1 - Increase number of behavioral health/substance abuse patient encounters by OMBC behavioral health patient navigators, or OBMC ED clinical staff or partnering community behavioral health providers. We chose a customizable metric because the DSRIP menu provides very limited options for project 1.13 and the closest option (I-12) does not sufficiently reflect the scope of this project, which is intended to reach patients through a broader spectrum of providers. Given the scope of our project, we believe the customizable metric more accurately reflects the project activities and goals.

Related Category 3 Outcome Measure(s):

IT-9.2 ED appropriate utilization - Reduce Emergency Department visits for target conditions: Behavioral Health/Substance Abuse. Our goal is to reduce the inappropriate usage of the ED by the targeted population. The calculation of inappropriate ED usage is the ratio of inappropriate ED utilization to total ED utilization by the targeted population, as calculated by Numerator - Level 4 and 5 ED visits for targeted population, and Denominator- Total ED visits for targeted population.

Relationship to other Projects (including Other Performing Providers' Projects in the RHP):

This project is related to OMBC's Patient Navigation Project (127303903.2.2), because the two projects will share some common staff and resources. This project is not directly related to any other Performing Provider's projects in the RHP.

Plan for Learning Collaborative:

We plan to participate in a region-wide learning collaborative(s) as offered by the Anchor entity for Region 3, Harris Health System. Our participation in this collaborative with other Performing Providers within the region that have similar projects will facilitate sharing of challenges and successes as well as testing of new ideas and solutions to promote continuous improvement in our Region's healthcare system.

Project Valuation:

In valuing this project, OBMC took into account the extent to which the implementation of a behavioral health crisis intervention program would potentially meet the goals of the Waiver (support the development of a coordinated care delivery system, improve outcomes while containing costs, improve the healthcare infrastructure), the extent to which it will address the specific needs of the community, the size and identity of the population served, and the time, effort and clinical resources and cost necessary to implement the project. OBMC believes that the implementation of this project will significantly improve patients' access to behavioral care services in the appropriate setting, foster the more efficient use of the community's behavioral healthcare resources, and ultimately result in the reduction of healthcare costs; and improved patient outcomes.

#4 - Project Option 1.1.1- Establish additional primary care providers for the health care needs of the under-served population in East Chambers County and West Chambers County.

Unique RHP Project ID: 020993401.1.100
Performing Provider Name/TPI: Chambers County Public Hospital District #1 / 020993401

Project Summary:

Provider:
Chambers County Public Hospital District #1 is comprised of a 14 bed critical access hospital, two federally qualified health centers and a wellness center. One of the clinics is located in mid Chambers County and the second is located in West Chambers County. Additional personnel would be hired so that we can provide additional primary care access to the underserved populations of Chambers County. Staff, including a physician, will be located in a new clinic site that will be established in Winnie, Texas and will predominantly serve the populations of both Winnie, Texas and Stowell, Texas. The poverty rate of the area (12.5%) exceeds the national average. Chambers County Public Hospital District #1 will be able to offer urgent care, primary health care, and behavioral health services to the community. In addition, a Physician's Assistant would be recruited for our current clinic in Mont Belvieu to meet the needs of the growing population in the West Chambers County area.

Volume Statistics - FY2013	**Patient Payor Mix – Organization Wide**
Patient Days – 606 Clinic visits – 25,307 Emergency visits – 2,731 Outpatient Lab services – 15,722 Outpatient Xray services – 2,809	Charity – 15.41% Self-Pay – 8.81% Medicaid – 6.33% Medicare – 17.11% Commercial – 52.34%

Intervention(s):
Chambers County Public Hospital District proposes to provide additional primary care services for the growing population in West Chambers County as well as operate a new clinic in the heart of Winnie, Texas, which will accept all payer types and which will provide full primary care services in cooperation with Bayside Community Hospital and other local providers in the greater surrounding area. This new clinic will allow residents local access to quality primary health care services.

Need for the project:
Currently, Chambers County is a rural community which has been designated as a Health Professional Shortage Area. This requires many residents to travel to Beaumont, Houston and Galveston to seek primary care services and/or to put aside their need for both primary health care services and for follow up care.

Target Population:
The primary target population includes the residents of Mont Belvieu, Winnie and Stowell but services would be provided to the following zip codes as well as the surrounding areas: 77580, 77530, 77532, 77535, 77562, 77560, 77613, 77629, 77661, 77538, 77575, 77622, 77623, and 77665.

Category 1 expected patient benefits:
Our goals are to provide access to Chambers County residents who are currently lacking the ability to have basic primary health care. Once fully established we expect to maintain over 7,000 additional encounters per year and serve the area population regardless of their ability to pay.

QPI metric(s) Description:
Our QPI metric will be number of encounters. We expect to see 4,000 additional encounters in the first full year, 6,000 in DY4, and 7,000 in DY5 for a total of 17,000 encounters during the three years of DY3 through DY5.

Our category 3 QPI metric will be the percentage decrease in the number of patients with uncontrolled diabetes. This baseline will be established once we begin seeing new patients in the East Chambers area and we will project a 5% decrease in DY4 with an additional 5% decrease in DY5.

Project Option 1.1.1- Establish additional primary care providers for the health care needs of the under-served population in East Chambers County and West Chambers County.

Unique RHP Project ID: 020993401.1.100
Performing Provider Name/TPI: Chambers County Public Hospital District #1 / 020993401

Project Description:

Chambers County Public Hospital District #1 will establish a clinic in Winnie, Texas, using a modular building which was formerly used as a clinic in Mont Belvieu, Texas, and is ready to be used in the same capacity once again. The building would be moved to an existing lot which is owned by Chambers County Public Hospital District #1 and is already equipped with a parking lot, electrical access and lighting. Chambers County Public Hospital District #1 will then recruit a Physician who will begin working with the Executive Director to hire and orient the remaining staff and begin seeing patients. In addition, Chambers County Public Hospital District #1 will hire a Physician's Assistant to provide services at our existing clinic in Mont Belvieu.

The modular building to be used is approximately 3,500 square feet and, when used in Mont Belvieu, was able to accommodate over 800 encounters per month. Both Bayside Community Hospital and Winnie Community Hospital can provide necessary inpatient, laboratory and radiology services. Walk in patients are welcome in all of the clinics operated by Chambers County Public Hospital District #1.

Goals and Relationship to Regional Goals:

The goals of this project are to:

- Increase capacity for primary health care through the establishment of a more accessible care location in East Chambers County
- Increase capacity for primary health care by hiring an additional provider in West Chambers County.
- Increase access to behavioral health services by establishing a location in East Chambers County for our existing LPC.

This project meets the following Region 3 goals:

- Increase access to primary and specialty care services, with a focus on underserved populations, to ensure patients receive the most appropriate care for their condition, regardless of where they live or their ability to pay.

Clinic services and referral services will be provided to people who have a financial need on a sliding scale based on their income.

Challenges and how to address:

East Chambers County lacks access to basic primary health care and behavioral health care. An additional clinic in East Chambers County is long overdue and low income residents need a local clinic which offers sliding scale discounts for those who are unable to pay. Rural areas face significant challenges with physician recruitment which can be overcome by utilizing a firm that specializes in recruiting physicians in rural areas.

3-Year Expected Outcome for Provider and Patients:

Over the course of the 3-Year Waiver, Chambers County Public Hospital District #1 expects to realize:

- Increased primary care capacity via a convenient and local clinic which offers primary care for treatable conditions regardless of ability to pay.
- Increased primary care capacity via an additional provider in our West Chambers location.

Starting Point/Baseline:
We expect to see 4,000 new encounters in the first full year of operations (DY3).

QPI
After the first full year of operations we expect to see 6,000 additional encounters in DY4 and 7,000 in DY5. Post project expectations are to be able to maintain a level that includes the 7,000 additional encounters.

Rationale:
Reasons for selecting the project option:
Chambers County Public Hospital District #1 is the primary provider of health care services for Chambers County and has a long standing reputation for quality care. Our clinics are federally qualified health centers which offer primary care, behavioral health, and dental services to area residents without regard for ability to pay. Clinic visits have increased and our providers are currently meeting and exceeding the industry standard of encounters per full time provider. The population of West Chambers has grown significantly in the past few years and is continuing to increase. This increase in population is quickly outgrowing the available primary health care facilities. The clinic in West Chambers accommodates walk-in visits and has seen a huge increase in the need for urgent care services. East Chambers residents have expressed a problem with their ability to find health care locally and have been forced to drive to a larger surrounding city to obtain health care.

Core Components:
Not Applicable / The project option 1.1.1 do not have components

Customizable Process or Improvement Milestones:

- Process Milestones and Metrics- P-1 (P-1.1) (P-1.2)

Unique community need identification number the project addresses:
This project addresses the following community needs according to the community needs assessment:

- CN.1- Inadequate access to primary care
- CN.8- High rates of inappropriate emergency department utilization

How the project represents a new initiative for the Performing Provider or significantly enhances an existing delivery system reform initiative:
This project significantly enhances our ability to deliver basic primary health care to all of the residents of Chambers County so residents are not forced to travel in order to receive basic services.

Related Category 3 Outcome Measure(s):
OD-1 Primary Care and Chronic Disease Management

- o

- IT 1.10 – Diabetes care: HbA1c poor control (>9.0%) – NQF 0059

Reasons/rationale for selecting the outcome measure(s):

Chambers County has a high rate of uncontrolled diabetes. Many residents are currently unable to have the routine care they need to control their diabetes. By increasing capacity for primary care visits within Chambers County, we will enhance access and be able to offer this routine care to those who currently have no help with management of their diabetes.

Relationship to other Projects:

Primary Care/Ambulatory Care clinics are a top priority to Region 3 due to the acuity of the regional patient mix, population concentration, and lack of primary care access points for our patient base. The regional approach of collaboration as well as existing patient referral pattern relationships allowed our team to properly identify the community needs based on the necessity of population, uninsured, and medically underserved patient bases. This program is consistent with our region and similar to numerous initiatives in our RHP plan sharing both concepts as well as outcome measures focused on percent improvement over baseline of patient satisfaction scores, reduction of inappropriate ED utilization, and third next available appointment status. The Region 3 Initiative Grid attached as a RHP Plan addendum reflects a grid of relationship for all initiatives.

Plan for Learning Collaborative: We plan to participate in a region-wide learning collaborative(s) as offered by the Anchor entity for Region 3, Harris Health System. Our participation in this collaborative with other Performing Providers within the region that have similar projects will facilitate sharing of challenges and testing of new ideas and solutions to promote continuous improvement in our Region's healthcare system.

Project Valuation: This project addresses one of the main objectives of the 1115 Waiver; increasing access to primary care for the underserved population of Chambers County. The value of the project is based on the clinic's capacity to provide primary care services, including laboratory point-of-care testing, along with timely referrals for specialty care, imaging and other needed services within the Chambers County Public Hospital District #1 network and partners. We expect to achieve optimum capacity and productivity by the end of DY5, ultimately resulting in 7,000 completed encounters per year. We will provide a medical home that is close to home and is operated by Chambers County Public Hospital District #1. The availability of primary health care services to all residents of Chambers County will result in fewer emergency room visits and allow for early detection, treatment and education regarding wellness and prevention will also help to prevent future downstream inpatient admissions.

#5 - Project Option – 1.8.9: The implementation or expansion of school-based sealant and/or fluoride varnish programs that provide sealant placement and/or fluoride varnish applications to otherwise un-served school-aged children by enhancing dental workforce capacity through collaborations and partnerships with dental and dental hygiene schools, local health departments (LHDs), federally qualified health centers (FQHCs), and/or local dental providers.

Unique Project ID: 158771901.1.100
Performing Provider Name/TPI: Harris County Public Health and Environmental Services/ 158771901

Provider:
Harris County Public Health & Environmental Services (HCPHES) is a comprehensive local health department serving the third most populous county in the United States. It spans over 1700 square miles, and its land area is larger than the state of Rhode Island. The HCPHES jurisdiction includes approximately 2 million people within Harris County's unincorporated areas and over 30 small municipalities located in Harris County (not including the city of Houston). For certain public health services such as vector/mosquito control, Ryan White/Title I HIV funding, and refugee health screening, the HCPHES jurisdiction encompasses the entire county including the city of Houston, therefore providing services to over 4 million people in total. Since being chartered in 1942 by Harris County Commissioners Court, HCPHES has provided leadership in a wide range of public health activities and programming including but not limited to communicable disease control; veterinary and environmental public health; and clinical preventive services. These services include strong programming in immunizations, oral health, tuberculosis prevention & treatment, and nutrition/wellness through a variety of efforts including the HCPHES Women, Infants, & Children (WIC) program.

Across this broad organizational framework, HCPHES has engaged in significant departmental strategic planning activities, including the development of the HCPHES Strategic Plan 2013-2018 which is grounded in the "Essential Public Health Services" model (e.g., assessment, policy development and education, and assurance activities). These categories allow HCPHES to engage within a variety of public health sectors including the services provided through its clinical programs. The mission statement of HCPHES is "Promoting a Healthy and Safe Community, Preventing Illness and Injury, Protecting You, HCPHES, Your Department for Life" while its clear vision is "Healthy People, Healthy Communities…a Healthy Harris County." The HCPHES staff (over 500) are public health professionals in the truest sense of the word and have a broad range of expertise in various public health program areas. HCPHES staff pride themselves in upholding the organizational values which they helped to craft: Excellence, Compassion, Flexibility, Integrity, Accountability, Professionalism, and Equity.

With a current annual operating budget of $58 million, HCPHES is organized into four offices that apply specific skills broadly across all public health activities (Health Education and Promotion, Policy and Planning, Public Health Preparedness & Response, and Public Information); four divisions that focus on specific programmatic disciplines (Disease Control & Clinical Prevention, Environmental Public Health, Mosquito Control, and Veterinary Public Health); and a state-of-the-art Operations & Finance Division that manages its business infrastructure (e.g. financial services, information technology, human resources, etc.). HCPHES is highly regarded both nationally and state-wide for its continued leadership in the field of public health and is well-positioned as a model agency for public health services in the local community.

Intervention:
The proposed project will seek to improve the oral health of indigent school-aged children through collaborations with targeted schools, school districts, Head Start Centers, and communities within Harris County to provide preventive dental screenings and fluoride varnish applications, oral health education, and navigator-assisted referrals to community dental providers, including HCPHES dental services.

Need for the Project:
Limited knowledge of preventive behaviors and restrictive barriers of access to preventive and treatment oral health services for many persons of lower socioeconomic status equate to untreated dental caries and poorer overall oral health. The performing provider seeks to intervene in targeted populations to not only educate on a range of oral health topics but also to provide the initial screenings, including fluoride varnishes, and focused referrals that direct children to more advanced preventive and treatment options.

Target Population:
This project will focus on targeted schools, school districts, and communities within Harris County that are enrolled with high proportions of low-income students. The targeted number of individuals served by this project is 14,000 with 90% expected to be Medicaid/low income uninsured individuals.

Category 1 expected patient benefits:
Benefits to the targeted population as a result of the project will include:

- Oral health education provided to 8000 individuals annually, by DY3
- Dental screenings and fluoride varnishes administered to 3840 individuals annually, by DY3
- Referrals for advanced treatment delivered to 960 individuals annually, by DY3

Quantifiable Patient Impact:
QPI: Number of unique individuals receiving dental services

Category 3 Outcome Measures:
OD-7 Oral Health
IT-7.4 Early Childhood Caries – Fluoride Applications
IT-7.3 Topical Fluoride application

Project Option – 1.8.9: The implementation or expansion of school-based sealant and/or fluoride varnish programs that provide sealant placement and/or fluoride varnish applications to otherwise un-served school-aged children by enhancing dental workforce capacity through collaborations and partnerships with dental and dental hygiene schools, local health departments (LHDs), federally qualified health centers (FQHCs), and/or local dental providers.

Unique Project ID: 158771901.1.100
Performing Provider Name/TPI: Harris County Public Health and Environmental Services/ 158771901

Project Description:
The HCPHES Disease Control & Clinical Prevention (DCCP) Division currently provides a variety of population–based and clinical preventive health services. These clinics offer Harris County residents quality, cost-effective clinical services, including dental services, especially for children. Dental preventive clinical services are provided at two of the HCPHES clinics located in the southern (Southeast) and northern (Antoine) parts of Harris County. In 2012, the HCPHES dental clinics provided 15,637 diagnostic, preventive, restorative and surgical dental procedures to its clients. HCPHES has a long history of providing quality, cost-effective dental services in the Harris County community and concentrates both on preventive clinical services through its dental clinics as well as population-based oral health activities in partnership with other Harris County agencies. This latter effort has led to dental outreach and education in16 Harris County school districts throughout Harris County. During 2012 alone this preventive education component provided assistance to 329 schools located in these 16 school districts. The children served in these schools received dental provider referral information, dental prevention education materials, audio-visual materials, toothbrushes and/or dental floss. The schools also received expert consultation on the development of their respective dental prevention education programs. This school-based dental prevention and education work has impacted over 220,000 children (and many times their family members as well) in 2012.

HCPHES proposes to expand its current oral health outreach and treatment services in a focused effort to provide preventive dental screenings and fluoride varnishes, oral health education, and navigator-assisted referrals to community dental providers, including clinic-based HCPHES dental services. HCPHES staff will cultivate relationships with target schools, school districts, and community organizations to implement a school-based dental assessment and fluoride varnish program to deliver services directly to children where they attend school or congregate. The targeted population for this project is lower income individuals and the project will use the proportion of free and/or reduced lunch students as a proxy measure to identify where project impacts will be most beneficial. The oral health prevention team will be staffed by dental hygienists, dental assistants, community health workers, and program administrators. Community Health Workers (CHW) will be an integral component of the project and will be utilized to strengthen relationships with schools and communities, assist in event planning logistics, and most importantly, provide navigation and referral services to participants to guide them to additional preventive and treatment options. The proposed project will endeavor to deliver oral health assessments and fluoride treatments twice per school year, reinforced by educational activities and client follow-up. Oral health screenings will consist of inspections for tooth decay, assessment of early periodontal disease (gingivitis), and physical and visual oral cancer screenings. During the summer months, when schools are not in session, project staff will evaluate findings, coordinate future school-based programming, and coordinate community events to larger audiences.

With the passage of HB 2483 on June 14, 2013, oral health education is also to be formally integrated into the broader health education curriculum to all Texas public school students. Thus the proposed project will also offer participating schools opportunities for expanded oral health education programming.

Goals and Relationship to Regional Goals:

Project Goals:

The project will have the overarching goals to:

1. Deliver high quality dental screenings and preventive fluoride varnish application services to school-aged children in schools, Head Start Centers, and at community-organized events
2. Deliver preventive education programming to larger populations of participating schools and community residents
3. Utilize community health workers to reinforce educational activities and navigate project participants to long-term dental homes
4. Guide project participants, their families, and other community residents to additional prevention and treatment, including HCPHES services and programming

This project meets the following regional goals:

- Increase access to primary and specialty care services, with a focus on underserved populations, to ensure patients receive the most appropriate care for their condition, regardless of where they live or their ability to pay.
- Transform health care delivery from a disease-focused model of episodic care to a patient-centered, coordinated delivery model that improves patient satisfaction and health outcomes, reduces unnecessary or duplicative services, and builds on the accomplishments of our existing health care system.
- Develop a culture of ongoing transformation and innovation that maximizes the use of technology and best-practices, facilitates regional collaboration and sharing, and engages patients, providers, and other stakeholders in the planning, implementation, and evaluation processes.

Challenges:

The proposed project is community-based and there are several challenges that are associated with the provision of mobile oral health services. First and foremost, there are logistical challenges inherent to community operations that require planning and commitment from participating entities. As the HCPHES dental team has historically worked with schools throughout Harris County, particularly with school nurses, the school-based components of the project is well positioned for implementation. Due to the scope and nature of the project however program administrators and CHW will need to devote a significant proportion of their work to developing the capacity to meet the goals of the grant with schools and host community organizations. It should be noted that many of the other proposed DSRIP projects from HCPHES will be working synergistically and as many are community-based as well, there will be significant overlap in these activities.

Another challenge to this project is related to the difficulties in the provision of health services to minors and the requirements of parental consent. Parental consent will be necessary for all services and this requirement in a school-based setting will demand additional planning and coordination between project staff, school administrators and nurses, and parents of project participants. The passage of HB 2483, as

noted previously, does incentivize collaboration between schools and project staff will work with schools to find solutions that will facilitate this process optimally.

HCPHES will also be challenged to expand its referral network to accommodate additional referral and navigation requests. Project administrators will be required to identify additional providers in project areas and cultivate formal or informal relationships to direct clients to. CHW will likewise have to update and maintain the referral network. CHW will also promote enrolment into the Texas Children's Health Insurance Program (CHIP) and this activity in itself will increase delivery options to program participants. HCPHES's two dental clinics will also be available for referral and participants will be expedited for appointments using the HCPHES patient appointment call center.

3-Year Expected Outcome for Provider and Patients:
The proposed project will have immediate impact on participants' oral health, either through direct application of fluoride varnishes or through increased knowledge of oral health topics. The project will also specifically attempt to meet the following outcomes:

- Oral health education provided to 8000 participants annually, by DY5
- Dental screenings and fluoride varnishes administered to 3840 participants annually, by DY5
- Referrals for advanced treatment delivered to 960 participants annually, by DY5

Starting Point/Baseline:
No readily available data regarding the scope of this project exists in the targeted population at this time. Baseline for fluoride application history will be determined during parental consenting procedures. Other pertinent health information (insurance coverage, etc.) will be assessed either during the consenting procedure or during participant follow-up. As this project is a new process for HCPHES participation rates will be assessed at baseline and reevaluated throughout the implementation phase.

Quantifiable Patient Impact:
DY4 QPI: Number of unique individuals receiving dental services
Goal: Deliver dental screening and fluoridation varnishes to 2880 clients; Oral health education to 6000 clients
Data Source: EHR
DY5 QPI: Number of unique individuals receiving dental services
Goal: Deliver dental screening and fluoridation varnishes to 3840 clients; Oral health education to 8000 clients
Data Source: EHR

Rationale:
Oral diseases such as tooth decay, gum disease and cancer are among the most prevalent health problems in the United States today. *Oral Health in America: A Report of the Surgeon General*, released in May 2000, identified the state of oral health in America as a "silent epidemic." The report highlighted oral health as a "mirror of general health and well- being" and cited recent studies that suggest associations between oral infections and diabetes, stroke, heart disease and pre-term low weight babies. Dental decay remains one of the most common chronic childhood diseases - 5 times as common as asthma and 7 times as common as hay fever in 5-17 year olds. A CDC report entitled *Oral Health: Preventing Cavities, Gum Disease, Tooth Loss, and Oral Cancers* asserts that tooth decay affects more than a quarter of children aged 2-5 years and half of those aged 12-19 years. Chronic gingivitis, like tooth decay, is common in children though it is preventable and treatable. However, if left untreated, it

can advance to more serious forms of periodontal disease. It is estimated that more than 51 million school hours in the U.S. are lost because of dental related illnesses.

Highlighting the challenge of dental health provision for children locally, the Texas Department of State Health Services Region 6, which includes Harris County and 15 neighboring counties, conducted a Dental Health Needs Assessment for Children in 2001. Results of the sampled children demonstrated high rates of untreated tooth decay among many grades: 52% of pre-kindergarten, 46% of second graders, 31% of seventh graders, and 27% of tenth grade children. According to the 2005 *HCPHES School Nurse Assessment Survey*, conducted among 184 primary and elementary schools in 15 Independent School Districts within Harris County, school nurses estimated that a mere 3% of their students had good oral hygiene with no cavities. Respondents estimated that 59% of students had some cavities and need for oral hygiene improvement, and 38% of students had poor oral hygiene with many cavities. Project Saving Smiles (PSS), a local initiative that provides free dental screenings, dental sealants, fluoride varnishes, and oral health education to thousands of Houston 2nd graders from low-income families since 2008, reported that 41% of participants were determined to have untreated dental caries during the 2008-2011 school years.

Fluoride varnish applications have demonstrated efficacy in the prevention of early childhood carries and carries in young children.[25] Evidence-based clinical recommendations from the American Dental Association conclude that children under 18 at moderate and high-risk for dental carries should receive fluoride varnish applications in at least six month-intervals.[26] Evidence also suggests that regularly scheduled fluoride applications for children older than 3 years of age would result in significant cost savings due to an increased onset of dental carries.[27]
Coupled with the fluoride varnish will be dental assessments that will report on current oral health status and direct patients for additional care.

CHW will follow-up with clients following each assessment to evaluate their progress and offer guidance and navigation to the next level of care, as applicable. CHW will have a demonstrated presence in this project and are well suited to interact with community partners and project participants to ensure the project is administered in a way that is culturally and linguistically appropriate to the targeted population.

The project will also be an opportunity for participating schools to address the oral health curricula requirements as promulgated by HB 2483. Participating schools will have access to oral health provider-led education programming at no additional cost.

Project Core Components:
HCPHES will utilize a stage gate approach in applying project management best practices in implementing the youth dental program specifically utilizing a phased release process over the lifecycle

[25] Weintraub, J. A., Ramos-Gomez, F., Jue, B., Shain, S., Hoover, C. I., Featherstone, J. D. B., & Gansky, S. A. (2006). Fluoride varnish efficacy in preventing early childhood caries. Journal of Dental research, 85(2), 172-176.
[26] American Dental Association Council on Scientific Affairs. Professionally applied topical fluoride: Evidence-based clinical recommendations. JADA 2006;137(8):1151-59
[27] Quiñonez RB, Stearns SC, Talekar BS, Rozier R, Downs SM. Simulating Cost-effectiveness of Fluoride Varnish During Well-Child Visits for Medicaid-Enrolled Children. Arch Pediatr Adolesc Med. 2006;160(2):164-170.

of the program. In each stage gate we will focus on continuous stakeholder feedback from various data collection points including iterative reviews of lessons learned captured from project deliverables in remediating any future challenges and/or risks. In addition, given the majority of the population we serve are Medicaid/low income uninsured individuals, our program will be tailored to overcome the unique challenges/barriers that may exist such as transportation, communication, availability, and location.

Additional components of the project include:

- Increase oral health services and education to school-based children that attend schools with high proportions of free and/or reduced lunch eligible students
- Increase oral health services and education to Head Start Centers in the target population
- Increase oral health services and education to communities that geographically reside in the service area HCPHES operates in
- Develop and sustain a robust a dental referral network that meets the needs of project participants
- Collaborate with oral health providers and community organizations to develop efficient relationships to address community health needs
- Utilize CHW to facilitate a community-based oral health intervention
- Guide project participants to other HCPHES DSRIP projects and clinical services, where appropriate

Unique community need identification numbers the project addresses:

- CN.4 Inadequate access to dental care
- CN.20 Lack of access to programs providing health promotion education, training and support, including screenings, nutrition counseling, patient education programs
- CN.21 Inadequate transportation options for individuals in rural areas and for indigent/low income populations
- CN.22 Insufficient access to services that are specifically designed to address racial, ethnic and cultural health care disparities.

How the project represents a new initiative or significantly enhances an existing delivery system reform initiative:

This project will be an innovative step for HCPHES as an expansion of community-focused intervention in oral health. Previous outreach efforts have consisted of education approaches but this project will offer additional services to the targeted population, including individualized follow-up by CHW.

Category 3 Outcome Measures:

OD-7 Oral Health
IT-7.4 Early Childhood Caries – Fluoride Applications
IT-7.3 Topical Fluoride application

Rationale for Category 3 Measures:

The youth dental project is focused on a metric based delivery system and alignment to the OD-7 domain (Oral Health) in which the associated category 3 improvement targets selected provides significant data points to demonstrate our overall progress, area population impact, effectiveness and continuous service improvement to bridge the gaps in the underserved region/population. In addition,

the fluoridation and education deliverable provides a critical protection to overall oral health in early application.

Relationship to Other Projects:

There are other DSRIP oral health projects but none of them will specifically be interacting with our targeted populations. Other projects may specifically provide sealants or fluoride varnish applications but none will be offered to our target population which has historically been segments of Harris County that are not part of the City of Houston's jurisdiction. The HCPHES jurisdiction includes approximately 2 million people within Harris County's unincorporated areas and over 30 small municipalities located in Harris County (not including the city of Houston). Thus duplication of services is likely not to be an issue for the proposed project.

Plan for Learning Collaborative:

We plan to participate in a region-wide learning collaborative(s) as offered by the Anchor entity for Region 3, Harris Health System. Our participation in this collaborative with other Performing Providers within the region that have similar projects will facilitate sharing of challenges and testing of new ideas and solutions to promote continuous improvement in our Region's healthcare system.

Project Valuation:

HCPHES reviewed relevant data summaries from a variety of sources, such as demographic and public opinion data from the Rice University Kinder Institute's Houston Area Survey, and health related data specific to Harris County from the University of Texas School of Public Health's Houston Health Survey and the Texas Department of State Health Services, Center for Health Statistics. Additionally, HCPHES considered public health mandates and community need; the data, anecdotal information and the level of service provided by region 3 participating providers to address public health issues locally were considered to determine value. Valuation is based on cost avoidance and projecting health care expenditure savings by preventing chronic oral health disease.

#6 - Project Option 1.7.3- Use telehealth to deliver specialty, psychosocial, and community-based nursing services: Remote Patient Monitoring System

Unique RHP Project ID: 133355104. 133355104.1.100
Performing Provider Name/TPI: Harris Health System / 133355104

Project Summary:

Provider:
Harris Health System is comprised of 16 community health centers, seven school-based clinics, a dental center, dialysis center, five mobile health units, one outpatient specialty services clinic, and three hospitals. With a tax base of $511.6 million, Harris Health System was able to provide more than $1.254 billion in charity care during FY 2012.

Volume Statistics - FY2013	Patient Payor Mix	Patient Demographics
Hospital discharges- 34,538 Births (babies delivered)- 6,676 Emergency visits- 173,651 Outpatient clinic visits- 1,092,197	Charity / Self Pay < 200% FPL - 50% Medicaid w/o CHIP- 22% Self Pay > 200% FPL - 14% Medicare- 9% Commercial and Other - 5% CHIP - 0.3%	Hispanic- 57% African American- 26% Caucasian- 9% Asian- 5% Other- 2% American Indian- 0.2%

Intervention(s):
Harris Health System proposes to create and implement a home monitoring program for Harris Health patients with a chronic illness such as diabetes, hypertension, asthma, or heart failure
Need for the project:
The need for this program is supported by the prevalence of chronic disease within Harris County and the population of Harris Health. Project option 1.7.3 is selected based on the need to implement a remote monitoring system that will electronically be capable of transmitting data from a patient specific to their disease process as identified and enable clinicians to provide timely intervention, advice or referral.
Target Population:
The disease registry will aid the identification of patients with chronic disease and the predictive modeling tool will aid in the prediction of risk and quantify patients who may benefit from the remote monitoring program based on acute care, emergency center and pharmacy utilization and associated increase cost of care per episode and overall.
Category 1 or 2 expected patient benefits:

- Timely intervention in the detection and treatment or referral of a patient's abnormal value.
- Electronic reporting on specific individuals will delineate patient need for case management services to promote self- management and primary care or specialty consultation and team collaboration.
- Decrease emergency center visits and readmissions for chronic illness that are ambulatory care sensitive conditions.

QPI Metric Description:
Couldn't find clear QPI information. The quantifiable metric that will be used for this project will measure the number of visits per DY. For DY3, the goal is the submission of implementation

documentation specific to the population being served. For DY4, 10% of target population to have evidence of telehealth visits. For DY 5, 20% target population to have evidence of telehealth visits.

Category 3 outcomes:

OD-1- Primary Care and Chronic Disease Management

- IT-1.11 Diabetes care: BP control (<140/80mm Hg)

Project Option 1.7.3- Use telehealth to deliver specialty, psychosocial, and community-based nursing services: Remote Patient Monitoring System

Unique RHP Project Identification Number: 133355104.1.100
Performing Provider Name/TPI: Harris Health System / 133355104

Project Description:
The purpose of the project is to create and implement a home monitoring program for Harris Health patients with a chronic illness such as diabetes, hypertension, asthma, or heart failure.

Patient data specific to their condition (i.e., blood glucose monitoring for diabetes, blood pressure for hypertension, pulse oximetry for asthma, or weight for heart failure) will be collected and relayed to a clinician, who will respond to the patient directly and intervene as necessary to treat, advise, and or refer the patient. The program will allow Harris Health System patients to receive more timely intervention and will provide patients with access to a clinician 24 hours daily, 7 days a week in the comfort of their home. In addition the continuing interaction with the patient aids in creating and maintaining awareness of the reason for the abnormal value and empowers the patient to self-manage based on the clinicians' feedback. All tele-health services will be recorded and documented in the electronic medical record. Regular audits will be completed, tracked and trended for staff educational purposes and for quality improvement purposes. The scope of the project is to deliver the services to patients identified at risk for clinical decline based on patient history of acute care utilization, non-adherence to treatment plan, pharmacy utilization, abnormal laboratory values, and frequent visits to the emergency center.

The portable devices will be assigned to the patient, and education and instruction given in the patient's healthcare language of choice. Additionally caregiver and or significant other will be additionally educated to provide optimal support. The devices will upon activation monitor specific vital signs, blood values or weight and such will be relayed electronically to a registered nurse available 24 hours a day, 7 days a week. The devices additionally will electronically provide an alert when a value previously assigned is outside of the range parameters set by the patient's physician or provider. An electronic alert will be visible to the registered nurse who will act upon the information based on physician driven evidence based protocols for intervention or referral to a specialist, The devices track attained values and such provides the registered nurse with transparency of a patient's need relative to education, resources or case management and social worker gaps that can be mitigated by immediate referral to the relevant discipline without the patient having to appear in person for a visit.

Goals and Relationship to Regional Goals:
Provide remote monitoring for Harris Health patients at risk based on chronic disease process, severity of illness and psychosocial needs.

Project goals:

1. Timely intervention in the detection and treatment or referral of a patient's abnormal value.
2. Electronic reporting on specific individuals will delineate patient need for case management services to promote self- management and primary care or specialty consultation and team collaboration.
3. Decrease emergency center visits and readmissions for chronic illness that are ambulatory care sensitive conditions.

The project meets the following regional goals:

- Transform health care delivery from a disease-focused model of episodic care to a patient-centered, coordinated delivery model that improves patient satisfaction and health outcomes, reduces unnecessary or duplicative services, and builds on the accomplishments of our existing health care system, and
- Develop a culture of ongoing transformation and innovation that maximizes the use of technology and best-practices, facilitates regional collaboration and sharing, and engages patients, providers, and other stakeholders in the planning, implementation, and evaluation processes

Challenges:

- Language barriers evidenced by a culturally diverse population to include Hispanics (57.4%) and African American (26.3%) who are predisposed to diabetes, hypertension, and obesity (Harris Health System Fact Sheet 2012)
- Inability to timely intervene clinically and educate patients relative to abnormal values
- Education of staff, providers and patients relative to the electronic system and monitoring device functionality.
- Literacy level of the patient in regards to ensuring the device is easy to use, legible, and understandable data is displayed.
- Consensus between providers to establish consistency in development of evidence based protocols for the intervention and referral relevant to specific disease process values and parameters.
- Mechanism to identify malfunctioning devices for patient safety and data accuracy and associated maintenance and replacement program.
- Clinical committee development for auditing and monitoring the effectiveness of the clinical program for interventions and a process for the revision of protocols based on new evidence.

The project will address the above challenges by the ability to capture patient data that will be transmitted from the home to the clinician without requiring patient technological capacity, and avoiding literacy concerns, language barriers, or cost. The ability to access a clinician 24 hours a day, 7 days a week enhances access to care which may not have been available other than in an emergency center or detected at all, if remote monitoring was not available. Additionally interventions are transparent via the electronic medical record across the continuum which reduces duplication of effort and cost in subsequent treatments.

Literacy concerns will be addressed as the patient education and instruction will be in their healthcare language of choice, and such will be delineated in the electronic medical record for future reference. Registered nurses who will be providing the telephonic intervention will either be bilingual or have ready access to an interpreter in the relevant language required. Today, greater than 50% of the registered nurse call center staff is bilingual. Patient educational materials will be reviewed, amended, and approved by the existing Patient Education Committee to ensure readability, and a 5th grade or lower literacy level is maintained.

A physician advisory committee will be established to perform the functions of nurse oversight and random audit of protocol driven patient interventions for accuracy and efficacy. The committee will be responsible for review of evidence based guidelines and disease specific interventions that are safe and acceptable to be administered telephonically. Protocols based on this evidence will be developed, and physician consensus on their use for the Harris Health population identified will be obtained. Clinical concerns and patient complaints will be directed to this committee for investigation, resolution and action. This physician advisory committee will be responsible and accountable for revising the

protocols as new evidence is secured or the established protocols and interventions are of concern or lack efficacy.

A program for monitoring device accuracy and appropriate functionality and any patient associated safety concerns will be developed. The program will include the stakeholders of information technology, the vendor, purchasing and biomedical departments, and quality. A plan for consistent evaluation of the devices and a program for repair and replacement will be established to include routine testing to ensure associated functionality is optimal.

Patient data received that is indicative of educational deficits relative to self-management, lack of resources (finances for medication evidenced by elevated glucose or blood pressure) will trigger a referral to a case manager, social worker and a community resource as applicable. Hence the challenge of adhering to treatment will be addressed by the device but associated to the fundamental reasons which may be psychosocial.

3-year Expected Outcome for Provider and Patients:
Patients with chronic illness will have improved health, via telephonic management Patients with diabetes specifically will have improved blood glucose and blood pressure control resulting in decreased utilization of acute care services. Adherence to treatment plans, self- management of disease process improvement and decrease overall costs for chronic disease will be evident. Quality will be improved via the proactive identification of patient need and access to same being available clinically and psychosocially, via the capacity to be referred to case management, educational and community resources. Patients will be satisfied with patient centered care, that is provided in the comfort of their home and the barriers of access and cost of transportation are mitigated.

Starting Point/Baseline:
Currently, a home-monitoring system does not exist. Therefore, the baseline is 0 for DY 2.

Quantifiable Patient Impact:
The Quantifiable Patient Impact of this project for each DY3-DY5 is:

- DY3: 0 encounters
- DY4: 3,640 encounters
- DY5: 7,280 encounters

Rationale:

Project option 1.7.3 is selected based on the need to implement a remote monitoring system that will electronically be capable of transmitting data from a patient specific to their disease process as identified and enable clinicians to provide timely intervention, advice or referral. The need for this program is supported by the prevalence of chronic disease within Harris County and the population of Harris Health. Diabetes accounts for 9% of Harris County populous[28] and an established 47, 000 within Harris Health service area alone (Harris Health fact sheet) and 693 deaths per 100,000 populous were related to diabetes in 2009[29].
Diabetes is a risk factor for hypercholesteremia and incidence of stroke and heart failure which according to DSHS (2012) in 2009 accounted for > 1100 and >4,900 deaths respectively[2]. Access to

[28] Centers for Disease Control and Prevention. (2012). National diabetes surveillance system. Available from http://apps.nccd.cdc.gov/DDTSTRS/default.aspx.

[29] Department of Health and Human Services. (2012). Health facts profile: Harris County. Retrieved from http://www.dshs.state.tx.us.chs/

care based on financial constraints is a known issue for Harris Health patients evidenced by no show rates >15% for office visits and > 28% of Harris County is uninsured[2] and >603,000 live below the poverty line[2]. Telephonic management of diabetes and its associated complications s via the timely recognition and intervention of abnormal values related to glucose and blood pressure can aid in the mitigation of micro-vascular conditions and hence decrease acute care utilization and improve overall quality of life [6](UK Prospective Diabetes Study 1998).

The American College of Physicians reported that home monitoring of blood pressure and telephonic clinical and behavioral intervention improved and sustained control of systolic blood pressure[30]. Disease self-monitoring and awareness of behaviors impacting disease improves patient adherence to medications, diet, and proactive involvement with medications from the primary care physician lowered cholesterol, systolic blood pressure, and blood glucose.[5.]

Telehealth improves access to care 24 hours a day, 7 days a week and in addition engages the patient in awareness of the reason for the abnormal value and empowers the patient to self-manage based on the clinicians' feedback. Telephonic nurse coaching enhances the patient experience and results in improved outcomes when education is tailored to the specific disease and patient's needs [4].

All telehealth services will be recorded and documented in the electronic medical record and random audits completed and tracked and trended for staff educational purposes and for quality improvement purposes. Timely intervention will reduce emergency center visits while enhancing access to care.

Project Components:
Not Applicable / Project Option 1.7.3 does not have components

Unique community need identification numbers the project addresses:
- CN.8- High rates of inappropriate emergency department utilization
- CN.9- High rates of preventable hospital readmissions
- CN.11- High rates of chronic disease and inadequate access to treatment programs and services for illnesses associated with chronic disease, including
    - Cancer
    - Diabetes
    - Obesity
    - Cardiovascular disease
    - Asthma
    - AIDS/HIV

How the project represents a new initiative or significantly enhances an existing delivery system reform initiative:

6

[30] Hayden, et al. (2009). Two self- management interventions to improve hypertension control: A randomized trial. *Annals of Internal Medicine 151* (10). Available from http://www.annals org

[4] Hibbard, J., H. Greene, J., Tusler, M. (2009). Improving the outcomes of disease management by tailoring care to the patient's level of activation. *The American Journal of Managed care 15* (6). Available from http://www.ajmc.com

5. Lin, et al. (2012). Treatment adjustment and medication adherence for complex patients with diabetes, heart disease, and depression: A randomized controlled trial. *Annals of Family Medicine 10* (6). doi: 10.1370afm.1343

6. UK Prospective Diabetes Study Group. (1998). Intensive blood –glucose control with sulphonylureas or insulin compared with conventional treatment and risk of complications in patients with type 2 diabetes. *Lancet 352* (9131 Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/9742976

The project is a new initiative for Harris Health and does not exist today in any form.

Related Category 3 Outcome Measure(s):

OD-1- Primary Care and Chronic Disease Management

- IT-1.11 Diabetes care: BP control (<140/80mm Hg)

Reasons/Rationale for selecting the outcome measure:

The telehealth remote monitoring program will align well with the other Harris Health proposed projects of predictive modeling and implementation of a disease registry. The disease registry will aid the identification of patients with chronic disease and the predictive modeling tool will aid in the prediction of risk and quantify patients who may benefit from the remote monitoring program based on acute care, emergency center and pharmacy utilization and associated increase cost of care per episode and overall.

Relationship to other Projects: This project is related to other projects that are targeted to improving patient outcomes specifically related to chronic conditions, reducing readmissions, and emergency center utilization. Additionally, we also have an additional 3-yr project related to telemedicine/telehealth.

Relationship to Other Performing Providers' Projects in the RHP:

An innovative approach to increasing access to primary care and specialty care has been created by the miracles of the internet and computer systems. Telemedicine is leading edge for those communities who cannot easily access behavioral health or specialty care due to remote locations, lack of physicians, or urgency of encounter needs. Numerous telemedicine projects have been proposed, as seen in the Region 3 Initiative grid in the addendum, and all focus to outcomes such as appropriate emergency department utilization, 30-day readmission rates, and patient satisfaction scores.

Plan for Learning Collaborative: We plan to participate in a region-wide learning collaborative(s) as offered by the Anchor entity for Region 3, Harris Health System. Our participation in this collaborative with other Performing Providers within the region that have similar projects will facilitate sharing of challenges and testing of new ideas and solutions to promote continuous improvement in our Region's healthcare system.

Project Valuation: This project will connect patients to a caregiver by utilizing remote monitoring for patients with chronic conditions, allowing for timely intervention and avoidance of costly emergency care. Patients with chronic illness will have improved health, via timely nurse intervention, patient education and case management. The cost per patient is lowered as a result of decreased utilization of acute and emergency care and the patient's quality of life is improved. The value of the project is based on the timely access to a caregiver and other needed services within the Harris Health System network. Within this framework we project to increase access by a total of 10,920 remote patient encounters by the end of DY 5. In addition, early detection, treatment and education regarding wellness and prevention will help to prevent future downstream inpatient admissions.

#7 - Project Option: 2.13 Provide an intervention for a targeted behavioral health population to prevent unnecessary use of services in a specified setting: Critical Time Intervention expansion

RHP Project Number: 113180703.2.102

Performing Provider/TPI: MHMRA Harris County/ 13180703
This project expands the existing Critical Time Intervention (CTI) program for mentally ill individuals following discharge from hospitals, shelters, prisons, and other institutions.

Provider: The Mental Health and Mental Retardation Authority (MHMRA) of Harris County is a public agency serving as the safety net provider for adults with serious mental illnesses, for children and adolescents with serious emotional disorders, for the developmentally delayed and for individuals experiencing acute psychiatric distress. MHMRA provides inpatient, residential and outpatient treatments, including psycho-therapy, case management and medication management for individuals. MHMRA serves more than 49,000 Harris County residents out of a culturally and ethnically diverse population of over 4.1 million. Of those individuals who received any agency service in FY12, 36.5% were medically indigent and 51.9% had Medicaid. Of those who received mental health services in FY12, such as those being proposed in this project, 55% were medically indigent and 34.9% had Medicaid.

Intervention(s): CTI is a nine-month case management model emphasizing developing community linkages and enhancing treatment engagement for mentally ill individuals undergoing transition.

Need for the project: Mentally ill individuals are at risk for adverse outcomes when they undergo transition from hospitals, shelters, prisons, and other institutions. Expanding the current CTI program would potentially eliminate the current waitlist for services.

Target population: Underserved mentally ill adults in Harris County.

Category 1 or 2 expected patient benefits:

- Increase linkages to mental health services
- Prevent recurrent homelessness
- Decrease mental health readmissions
- Decrease readmissions to criminal justice settings

Description of QPI metrics: Number of targeted individuals enrolled/served in the project will be a total of 126 served per DY period.

Category 3 measures: OD-6: IT-6.1: Patient Satisfaction: Improve patient satisfaction as measured by CAHPS by 3% over baseline by DY5.

OD-10: Functional Status: Improve functional status by ANSA by 3% over baseline by DY5.

2.13 Provide an intervention for a targeted behavioral health population to prevent unnecessary use of services in a specified setting: Critical Time Intervention expansion

Unique RHP Project Identification Number: 113180703.2.102

Performing Provider name/TPI: Mental Health and Mental Retardation Authority of Harris County/113180703

Project Description:
The Mental Health and Mental Retardation Authority (MHMRA) of Harris County proposes to provide an intervention for a targeted behavioral health population to prevent unnecessary use of services in a specified setting by expansion of a crises intervention response team.

The Mental Health and Mental Retardation Authority (MHMRA) of Harris County is a public agency serving as the safety net provider for adults with serious mental illnesses, for children and adolescents with serious emotional disorders, for the developmentally delayed and for individuals experiencing acute psychiatric distress. MHMRA serves more than 49,000 Harris County residents out of a culturally and ethnically diverse population of over 4.1 million. Of those who received mental health services in FY12, such as those being proposed in this project, 55% were medically indigent and 34.9% had Medicaid. In an effort to provide needed services to the most critically ill population, MHMRA proposes to increase outpatient capacity by approximately 500 individuals potentially eliminating the current wait list for services in this geographic area. In order to address this issue we will choose to focus on project option 2.13.1: Expand the number of community based settings where behavioral health services may be delivered in underserved areas.

We propose an expansion of the Critical Time Intervention (CTI), a nine-month case management model that focuses on developing community linkages and enhancing treatment engagement for mentally ill individuals following discharge from hospitals, shelters, prisons, and other institutions. The program is designed to prevent adverse outcomes in mentally ill individuals undergoing transition, CTI is a homelessness prevention intervention that is recognized in the National Registry of Evidence-Based Programs and Policies of the Substance Abuse and Mental Health Services Administration.

The goal is to prevent recurrent homelessness, recidivism and other adverse outcomes during the transitional period from the streets, homeless shelters, psychiatric hospitals or the criminal justice system into community living. This is done by creating or reestablishing relationships with community services, family and friends and by providing emotional and practical support during the critical time of transition. The case manager assists the consumer in navigating various systems of treatment and the social service system, mediates to solve problems and monitors the consumer’s progress to promote continued participation and success in treatment.

Evidence of effectiveness: CTI is an empirically-supported intervention that enhances continuity of care for mentally ill individuals following discharge from homeless shelters and psychiatric hospitals. Studies have shown that CTI reduces the number of homeless nights (Susser et al., 1997; Jones et al., 2003), prevents chronic homelessness (Lennon et al., 2005), reduces psychiatric re-hospitalization (Tomita and Herman, 2012), improves continuity of care following inpatient discharge (Dixon et al., 2009), and decreases negative psychiatric symptoms (Herman et al., 2007). Furthermore, individuals who receive CTI continue to experience improved outcomes after the nine-month intervention (Susser et al., 1997; Lennon et al, 2005).

Goals and Relationship to Regional Goals: The three year goals of this project are to expand capacity and provide CTI services to at least 42 individuals per year to prevent recurrent homelessness, recidivism and other adverse outcomes.

Challenges: The challenges include identifying appropriate ongoing service providers for linkage. This challenge will be addressed through expansion of outpatient behavioral health services for individuals with severe psychiatric conditions.

Starting Point/Baseline: Baseline will begin in DY 3 with the addition of 42 new patients.

	DY3	DY4	DY5
CTI # served	42	42	42

Rationale: The Critical Time Intervention Program (CTI) was started in 2008 and is a well-researched, evidence based practice that assists homeless individuals with mental illness. The goal is to prevent recurrent homelessness, recidivism and other adverse outcomes during the transitional period from the streets, homeless shelters, psychiatric hospitals or the criminal justice system into community living. The case manager assists the consumer in navigating various systems of treatment and the social service system.

CTI is a nine month intensive case management program with services divided into three month increments with decreasing intensity in each of three phases. CTI partners with several agencies in the community to ensure that consumers get the services they need to live independently. While CTI works hard to establish partnerships with various community providers, housing providers are especially important partners as CTI is able to provide wrap around services but only time limited housing. A partnership of housing and intensive case management increases the success of CTI consumers, especially in the area of housing retention.

Quantifiable Patient Impact:
Number of targeted individuals enrolled/served in the project will be a total of 126 served per DY period.

Project Components: The following option and core components were chosen: 2.13.1, Design, implement, and evaluate research-supported and evidence-based interventions tailored towards individuals in the target population. These components have also been imbedded in the program process and improvement milestones (See milestone and metric chart for further details).

a) Assess size, characteristics and needs of target population(s)
    - MHMRA will continue to assess individuals in crisis calls involving law enforcement.
b) Review literature / experience with populations similar to target population.
    - MHMRA will continue to review literature and evaluate ongoing experiences with individuals in crisis to determine effective community-based.
c) Develop project evaluation plan to determine outcomes.
    - MHMRA's Outcome Management department will develop project evaluation plan using qualitative and quantitative metrics to determine outcomes.
d) Design models which include community-based services and residential supports.

- MHMRA will continue to evaluate improvements on design models which include an appropriate range of community-based services and residential supports.

e) Assess interventions based on quantitative measures and qualitative analysis.
   - MHMRA will continue to assess the impact of interventions based on standardized quantitative measures and qualitative analysis relevant to the target population.

f) Community-based interventions should be comprehensive and multispecialty.
   - As mentioned above, this program is inherently multidisciplinary.

Unique community needs identification number project addresses: With additional housing being added in the Houston area in the next 2-5 years, the chronically homeless mentally ill will need assistance in obtaining and retaining this housing. CTI works to assist chronically homeless and mentally ill individuals to become stable and maintain housing. Housing providers seek to partner with programs that provide case management to assist the residents with their transition into housing and to increase the rate of housing retention.

- CN3-Inadequate access to Behavioral Health
- CN6- Inadequate access to treatment and services designed for special needs populations, including disabled, homeless, children and elderly
- CN9- High rates of preventable hospital readmissions
- CN10 High rates of preventable hospital admissions

Related Category 3 Measure(s):

OD-6: IT-6.1: Patient Satisfaction: Improve patient satisfaction as measured by CAHPS by 3% over baseline by DY5. We believe patient satisfaction that addresses involvement in shared decision making, access to providers, and communication with providers, will reduce preventable admissions and readmissions to psychiatric emergency services. If patients are dissatisfied with services or the process, they may continue to over-utilize emergency services rather than engaging in preventative care.

OD-10: Functional Status: Improve functional status by ANSA by 3% over baseline by DY5. Engaging these adolescents in treatment options prior to aging out of the foster care system can reduce factors leading to crisis. Integrating services within the foster care system would provide support and transitional services to reduce trauma, substance abuse, onset of major mental illnesses, and emergence of gender identity issues to adolescents who are expected to experience the greatest difficulty transitioning into healthy adulthood.

Relationship to other Projects: At this time there is not enough information available from the RHP to describe how this project may or may not be related to other RHP DSRIP proposals. However, the proposed project complements several MHMRA DSRIP proposals, including the expansion of the Crisis Residential Unit, Mobile Crisis Outreach Team, and Chronic Consumer Stabilization Initiative. All four proposals expand psychiatric stabilization in the community while reducing inpatient admissions.

Community needs assessments reflect an extreme need for behavioral health services to include outpatient treatment centers, crisis stabilization units, inpatient beds, and much more. The lack of funding has limited behavioral health treatments available and continues to drive cost in emergent and inpatient situations. The Crisis Stabilization Unit has a direct correlation to behavioral health programs recommended in the RHP plan and will be a focus of two of the largest Local Mental Health Authorities of our region. Both CSU's share the outcome measures of mental health admissions & readmissions,

and improvement of patient satisfaction scores. The Region 3 Initiative Grid attached in the addendum reflects the direct relationships of this initiative.

Plan for Learning Collaborative: We plan to participate in a region-wide learning collaborative(s) offered by the Anchor entity for Region 3, Harris Health System. Our participation will facilitate sharing of challenges and new ideas to promote continuous improvement in our Region's healthcare system.

Project Valuation: To value the proposed project accurately, assistance was sought from H. Shelton Brown, Ph.D. of the UT Houston School of Public Health and Thomas Bohman, Ph.D. of the UT Austin Center for Social Work Research. Their consultation was limited to the valuation section. Valuations should be based on economic evaluation principles that identify, measure, and value the relevant costs and consequences of two or more alternatives. One alternative is a new program while the second is treatment as usual. Cost-utility analysis (CUA) measures the cost of the program in dollars and the health consequences in utility-weighted units. This valuation uses quality-adjusted life-years (QALYs) analysis that combines health quality (utility) with length of time in a health state. Cost-utility analysis is a useful tool for assessing the value of new health service interventions because it provides a standard way of valuing multiple interventions. The valuation also incorporates costs averted (e.g., emergency room visits that are avoided). To make the valuations fair across different types of interventions, the outcome is the number of life-years added. The benefits of the proposed program are valued based on assigning a monetary value of $50,000 per life-year gained due to the intervention. This threshold has been a standard way of valuing life-years in terms of whether the cost of the intervention exceeds this standard. The number of life-years added is based on a review of the scientific literature.

Cost-Utility Analysis: A cost-utility analysis by Holtgrave and colleagues (2012) was based on data from the Housing and Health (H&H) study of rental assistance for homeless housed persons living with HIV in Baltimore, Chicago, and Los Angeles. They combined these outcome data with information on intervention costs to estimate the cost-per-QALY gained. They estimated that the cost-per-QALY-saved by the HIV-related housing services is $62,493. They also found that 0.0324 QALYs were gained due to improvements in perceived stress and quality of life.
For this valuation we focus on housing assistance. Assuming 100 participants in the CTI program, the total value gained from this component would be:

100	(persons served)
0.0324	(QALY gained)
× $50,000	(life year value)
= $162,000	QALY Value

We estimate that half of the CTI patients will receive Assertive Community Treatment (ACT), which is the highest intensity service intervention for persons with serious mental illness. A 2012 study reported the cost-effectiveness of assertive community treatment as part of integrated care versus standard care in patients with schizophrenia (Karow, Reimer, König, Heider, Bock & Huber 2012). Results indicated the ACT intervention yielded a QALY of 0.76, whereas the treatment as usual groups resulted in a QALY of 0.66. Since the treatment is being contrasted with wait list or not treatment, the full QALY (0.76) applies. The incremental QALY for the ACT group was 0.10. Assuming the program would serve 100 persons in a year, the following formula shows the valuation:

100	(persons served)
0.50	(proportion receiving ACT)
0.76	(QALY gained)

× $50,000	(life year value)
= $1,900,000	Level 4 QALY Value

Cost Effectiveness and Cost Savings: CTI has been shown to be cost-effective for reducing homelessness, re-hospitalizations, and emergency visits. First, in a randomized trial, Jones et al. (2003) found that individuals who received CTI experienced significantly fewer homeless nights (32 nights) compared with individuals who received usual care (90 nights) following a psychiatric program. In the nine months following CTI intervention, the CTI group averaged $1,613 less per person compared with the usual care group, which is evidence of a sustained impact from participation in the CTI program. Jones et al. (2003) theorized that this reduction in costs "may be the result of improved linkage to community services for the critical time intervention group, resulting in fewer episodes of extreme emotional duress and thus reduced reliance on acute care services." The immediate value after CTI can be estimated as follows:

100	(persons served)
× $1,613	(cost savings)
= $161,300	total cost savings

Second, in a study of chronically homeless individuals in Philadelphia, Poulin et al. (2010) found that the average annual cost for behavioral health, corrections, and homelessness services of nearly $7,500 per person per year. Since CTI has been shown to reduce the risk of homelessness from 40% to 21% (see Susser et al., 1997), the annual value (compared with usual care) can be estimated as follows:

100	(persons served)
(0.79-0.60)	(difference in non-homelessness rate)
× $7,500	(cost savings)
= $142,500	total cost savings

Third, CTI has been shown to reduce re-hospitalizations after discharge (Tomita and Herman, 2012). Using MHMRA estimates for hospitalizations and psychiatric emergency visits, we can estimate that the cost savings from CTI-related hospitalization reductions are as follows:

100	(persons served)
1.66	(average hospital bed days per person per year averted)
× $700	(cost per hospital day)
= $116,200	total cost savings

Based on the components described above, the total valuation for this project is $162,000 + $1,900,000 + $161,300 + $142,500 + $116,200 = $2,482,000

REFERENCES

Dixon, Lisa, Goldberg, R., Iannone, V., Lucksted, A., Brown, C., Kreyenbuhl, J., Fang, L. and Potts, W.

Use of a Critical Time Intervention to promote continuity of care after psychiatric inpatient hospitalization. Psychiatric Services 60, (4), 2009.

Herman, Daniel, Sarah Conover, Alan Felix, Aman Nakagawa, Danika Mills. “Critical Time Intervention: An Empirically Supported Model for Preventing Homelessness in High Risk Groups.” J Primary Prevent 28:295-312, 2007.

Herman D, Opler L, Felix A, et al: A critical time intervention with mentally ill homeless men: impact on psychiatric symptoms. Journal of Nervous and Mental Disease 188:135—140, 2000

Jones K, Colson PW, Holter MC, et al: Cost-effectiveness of critical time intervention to reduce homelessness among persons with mental illness. Psychiatric Services 54:884—890, 2003

Lennon MC, McAllister W, Kuang L, et al: Capturing intervention effects over time: reanalysis of a critical time intervention for homeless mentally ill men. American Journal of Public Health 95:1760—1766, 2005

Poulin, Stephen, Marcella Maguire, Stephen Metraux, and Dennis Culhane. 2010. “Service Use and Costs for Persons Experiencing Chronic Homelessness in Philadelphia: A Population-Based Study.” Psychiatric Services 61(11): 1093-1098.

Susser E, Valencia E, Conover S, et al: Preventing recurrent homelessness among mentally ill men: a "critical time" intervention after discharge from a shelter. American Journal of Public Health 87:256—262, 1997

Tomita, Andrew and Daniel Herman. 2012. The Impact of Critical Time Intervention in Reducing Psychiatric Rehospitalization After Hospital Discharge. Psychiatric Services 63(9).

#8 - Project Option 2.9.1 – Provide navigation services to targeted patients who are at high risk of disconnect from institutionalized health care (for example, patients with multiple chronic conditions, cognitive impairments and disabilities, Limited English Proficient patients, recent immigrants, the uninsured, those with low health literacy, frequent visitors to the ED, and others): Hispanic Lung Cancer Patient Navigation into Clinical Trials

Unique RHP Project ID: 112672402.2.100
Performing Provider Name/TPI: The University of Texas MD Anderson Cancer Center / 112672402

Project Summary:
Provider: The University of Texas MD Anderson Cancer Center is a comprehensive cancer center ranked first in cancer care by *U.S. News & World Report* and dedicated to patient care, education, research and prevention. MD Anderson is comprised of several Texas Medical Center campus locations, two research campuses in Bastrop County, Texas, four regional care centers and a number of national and international divisions and affiliates. More than 108,000 people—almost one-third of them new patients—were seen in FY2011. MD Anderson provided $215 million in uncompensated charity care to Texans in FY2011.
Intervention(s):
This project will provide clinical trial education, cancer care coordination and navigation to improve clinical trial participation rates among Hispanics in RHP3's coverage area. Participation in cancer clinical trials (CCTs) is a key measure for delivery of quality cancer care. While 20% of the adult cancer population is eligible to participate in cancer clinical trials, only 3% choose to do so, and the participation rate is even lower for minorities and individuals 65 and older. Low participation rates impact efforts to reduce disparities among racial and ethnic groups. The Research navigation program will serve to increase awareness of the clinical trials among Hispanic patients, increase access to clinical trials, guide patients through the clinical trial process, and provide management of clinical trial participation.

Research navigators will navigate cancer patients through the healthcare system. Research Navigators will ensure that patients receive coordinated, timely, site-appropriate health care services and access to clinical trials. Navigators may assist in connecting patients to patient education, clinic and community services to help reduce barriers to clinical trial participation. A clinical trial navigation team of nurses, community health workers, case managers and/or other types of health professionals needed, will be assembled to engage with patients in a culturally and linguistically appropriate manner that will be essential to guiding the patients through integrated health care delivery systems. An evidence-based manual for patient navigation programs directed towards increasing minority participation in clinical trials will be used to inform the actions development of the research navigator position and functions.

The first six months will involve developing a job description for the research navigator, implementation of the interview process and hiring, training of the research navigator as well as working with the clinic and other MD Anderson sites to incorporate navigation services.

Need for the project:
Harold Freeman, MD once stated, "Patient Navigation programs throughout the nation could help improve the disconnection between what we have discovered through research and what we can deliver to all our citizenry." This project addresses the following unique needs among vulnerable populations in the RHP3: CN.11 – High rates of chronic disease and inadequate access to treatment programs and

services for illnesses associated with chronic disease, including Cancer; CN.22 -Insufficient access services that are specifically designed to address racial, ethnic and cultural health care disparities and CN.23 – Lack of patient navigation, patient and family education and information programs.

In June 2005, the Patient Navigator, Outreach and Chronic Disease Prevention Act, was signed into federal law. This law recognizes the challenges patients face in getting the health care they need and focuses federal resources to establish patient navigation services. As Americans continue to live longer, more and more will be diagnosed with cancer. This underscores the need for patient navigation to help reduce barriers to access to quality cancer care.

Target Population: Currently, a clinical trials navigation program does not exist at MD Anderson. Our hospital offers social work, patient advocate and case management services, but not in a coordinated system to assist patients through the continuum of cancer care. This project will be piloted in selected MD Anderson clinic areas and will target Hispanic patients. It will serve to improve access for Hispanic patients, women and minorities, while improving patient demographics to reflect the demographics of women and minorities with cancer in RHP3's coverage area. One hundred patients are expected to be served by the navigation program. Based on patient registration data, 80% percent of patients are expected to be Medicaid and 20% are expected to be low income, uninsured individuals. Since the amount of Hispanic patient registrations is variable, we will make every effort to assess 100% of Hispanic patients for clinical trial eligibility.

Patient Benefit and Quantifiable Patient Impact

DY3	Number of unique individuals (from selected clinic areas) offered navigation services = 50	50 cumulative
DY3	**QPI: Number of unique individuals receiving navigation services = 10**	**10 cumulative**
DY4	Number of unique individuals (from selected clinic areas) offered navigation services = 100	150 cumulative
DY4	**QPI: Number of unique individuals receiving navigation services = 40**	**50 cumulative**
DY5	Number of unique individuals (from selected clinic areas) offered navigation services = 100	250 cumulative
DY5	**QPI: Number of unique individuals receiving navigation services = 50**	**100 cumulative**

Category 3 outcomes:

IT-6.2.a – Client Satisfaction Questionnaire (CSQ Scales):

Description: The CSQ Scales® were created in response to the need for a standard instrument to replace idiosyncratic, ad hoc, and/or untested tools. The goal was to develop a standardized measure with strong psychometric properties that could be used to assess general satisfaction across varied health and human services. The CSQ Scales® (CSQ) include a series of brief instruments.131

Project Option 2.9.1 – Provide navigation services to targeted patients who are at high risk of disconnect from institutionalized health care (for example, patients with multiple chronic conditions, cognitive impairments and disabilities, Limited English Proficient patients, recent immigrants, the uninsured, those with low health literacy, frequent visitors to the ED, and others): Hispanic Lung Cancer Patient Navigation into Clinical Trials
Unique RHP Project Identification Number: 112672402.2.100
Performing Provider Name/TPI: The University of Texas MD Anderson Cancer Center / 112672402

Project Description:
Hispanic lung cancer patient profile at MDACC
During the latest fiscal year, MD Anderson's Lung Center provided care to 604 Texas patients with lung cancer, of which 11% were Hispanic (n=66). Of Hispanic Texas patients, 9% had Medicaid or were uninsured (n=6), and 38% (n=25) listed Spanish as their primary language. These patients face the highest burden in terms of accessing and navigating medically appropriate care, including barriers to access to clinical trials.

In general, minority populations such as blacks and Asian and Pacific Islanders are poorly represented in clinical trials, despite suffering higher rates of preventable chronic illness such as diabetes and hypertension. But reaching Hispanics in the U.S. presents a unique set of challenges for researchers and physicians, ones that may include language barriers, concerns about immigration status or a different cultural view on the benefits of medical care.

While minorities make up 30 percent of enrollees in National Institutes of Health clinical trials, Hispanics make up 7.6 percent of participants, compared to 15 percent of blacks, according to NIH. And with cancer as the leading cause of death among Hispanics, Hispanic cancer patients only make up 2 percent to 5 percent of participants in cancer clinical trials in the U.S., according to the National Cancer Institute, which has more than 12,000 trials accepting participants.

The national pattern of low participation in clinical trials among Hispanics is also reflected within our Lung Center, where Hispanic patients are less likely to participate in clinical trials than African American or White patients. In cancer care, where clinical trials are often offered as viable treatment options, low participation by any subgroups can contribute to negative disparities in outcomes for that group. The goal of the Patient Navigation into Clinical Trials project is to ensure that all Hispanic patients from Texas are screened for eligibility for clinical trials, that they receive guidance to help them understand and navigate their treatment options, and that available and medically appropriate trials are linguistically accessible to them.

The project will pilot and test an existing patient navigation model to increase Hispanic patients' awareness of and participation in clinical trials, in particular patients with Medicaid or who are without insurance. The project will include the development and implementation of a systematic process to screen all Hispanic patients for eligibility for clinical trials, to provide guidance and navigation support for Hispanic patients to help them understand their treatment options, and to document and track participation rates, as well as to identify system and/or patient barriers to participation.

The project will identify tasks across the Patient Navigation Cancer Care continuum to increase accessibility to cancer care and available clinical trials.

The patient navigation model created by Dr. Harold Freeman identifies three key aspects of cancer care:

1. Outreach to expand the availability and use of screening services and education regarding cancer-preventative lifestyle choices
2. Patient navigation services to patients with suspicious findings or cancer symptoms through resolution
3. Rehabilitation which includes education/support for issues related to survivorship in conjunction with community services.

The Hispanic Lung Cancer Patient Navigation Service will provide culturally appropriate individualized assistance to patients, families and caregivers to reduce barriers to clinical trial participation. A trained research navigator will be integrated into the clinic and serve as a member of the research team. The research navigator will also work with other clinic staff as well as staff members from other departments who have patient interaction to reach clients. All Hispanic patients will be offered this service. Once patients are identified, the research navigator will greet patients at their appointments, assess patient and family needs in relation to reducing barriers to clinical trial participation, address the needs, enter data and create reports on a monthly basis, through completion of treatment.

Goal(s) and Relationship to Regional Goals(s):

Regional Goal.

This project meets the following Region 3 goal:

- Increase access to primary and specialty care services, with a focus on underserved populations, to ensure patients receive the most appropriate care for their condition, regardless of where they live or their ability to pay.
    - It will addresses the needs regarding insufficient access to services that are specifically designed to address racial, ethnic and cultural health care disparities and the lack of patient navigation, patient and family education and information programs. The patient navigation program aims to provide navigation services to patients in collaboration with clinic and patient services staff members. This project will serve individuals from all counties within the RHP3 geographic area.

Project Goals:

- Assess the number of Hispanic patients, women and minorities eligible to participate in clinical trials in the selected clinics
- Develop a patient navigation program in the selected clinics
- Establish the patient navigation program
- Increase the number of Hispanic patients who have access to clinical trials

To ensure the success of this project, the program staff manager will train the research navigator and research team on the navigation process; develop navigation materials to ensure that proper data and documentation is being collected; facilitate monthly team meetings to foster communication and to answer any questions that may arise.

Challenges:

Internal challenges: Challenges are expected anytime changes are introduced. An anticipated challenge will be to clearly outline duties specifically for the research navigator; defining clear roles for the team and the process of incorporating a new person in to the patient care team. Systems challenges and external challenges experienced by patients that might impact access and compliance to cancer care are expected. The research navigator will use existing educational materials and institutional services to increase awareness of clinical trials and help navigate the patient through the care continuum. Patient challenges such as fear, trust, getting to the medical center and protocol requirements might impact clinical trial participation. These issues will be addressed through community education sessions and service announcements to patient support group leaders.

3-Year Expected Outcome for Provider and Patients:
Based on patient registration data, 80% of patients are expected to be Medicaid and 20% are expected to be low income, uninsured individuals.

- Incorporation of a successful patient navigation program serving Hispanic patients, low income, uninsured and Medicaid eligible patients
- Favorable satisfaction among patients receiving navigation services
- Increased number of Hispanic patients from RHP3 geographic area who participate on clinical trials

DY3	Number of unique individuals (from selected clinic areas) offered navigation services = 50	50 cumulative
DY3	**QPI: Number of unique individuals receiving navigation services = 10**	**10 cumulative**
DY4	Number of unique individuals (from selected clinic areas) offered navigation services = 100	150 cumulative
DY4	**QPI: Number of unique individuals receiving navigation services = 40**	**50 cumulative**
DY5	Number of unique individuals (from selected clinic areas) offered navigation services = 100	250 cumulative
DY5	**QPI: Number of unique individuals receiving navigation services = 50**	**100 cumulative**

Starting Point/Baseline:
With the projected changes in the cancer population in Texas as indicated by US SEER Data, the rise in cancer among the aging and Hispanic populations are leading institutions to prepare to address the needs of these audiences. Currently, a patient navigation program does not exist to increase access to clinical trials. Since this is a pilot project, the baseline begins at 0 for DY3.

Rationale:
Various research articles have identified Patient navigation as a valuable strategy to help reduce the many barriers to care faced by Hispanics needed health care services and increase the chances of individuals getting timely care.

Project Components:

Required core project components:

a) **Identify frequent ED users and use navigators as part of a preventable ED reduction program.** Identifying ED users will not be a task of this project since the audience for will be patients from selected cancer treatment clinics and the goal would be to increase access to clinical trial services. We will however, train our research navigator and team in cultural competency using existing institutional print and video materials.
b) **Deploy innovative health care personnel, such as case managers/workers, community health workers and other types of health professionals as patient navigators.** A patient navigator with cancer knowledge as well as community services and experience with serving disadvantaged populations will be hired. We have identified clinic areas to implement the pilot and will identify staff members who will serve on the patient navigation team. Individuals from various departments including patient access specialists, research staff, social workers, case managers, patient educators and integrative medicine staff will be included.
c) **Connect patients to primary and preventive care.** Relationships will be established to transition patients to and from primary and preventive care services to ensure appropriate and timely care for all patients and their families. Existing data bases with community service agencies will be utilized and updated to address the needs of the patients. A clinic referral system will be set up to provide clients that will be served the research navigator. The primary goals will be to connect patients to appropriate clinical trials and ensure patient compliance with research protocols.
d) **Increase access to care management and/or chronic care management, including education in chronic disease self-management.** The research navigator will work closely with patient education staff to identify and secure care management resources. The navigator will be in frequent communication to make sure patients are comfortable with and confident enough to manage their disease.
e) **Conduct quality improvement for project using methods such as rapid cycle improvement. Activities may include, but are not limited to, identifying project impacts, identifying "lessons learned," opportunities to scale all or part of the project to a broader patient population, and identifying key challenges associated with expansion of the project, including special considerations for safety-net populations.** Rapid Cycle Improvement will be used to track how many patients are offered participation in the program and how many choose to participate. Information on why patients choose not to participate will also be collected. A reporting template will be designed and used by the research navigator to input data needed for evaluation of the service. We will hold bi-weekly and quarterly meetings with program staff to discuss opportunities for improvement and expansion. Establish relationships with navigators outside the institution will be made. Patient satisfaction calls will also be made to ensure patient needs are met.

Milestones & Metrics:

The following milestones and metrics have been chosen for the Hispanic Lung Cancer Patients Navigation to Clinical Trials project:

- Process Milestones and Metrics: P-1 (P-1.1); P-2 (P-2.1, P-2.2); P-4 (P-4.1); P-8 (P-8.1, P-8.2); P-X (P-X.1)

- Improvement Milestones and Metrics: I-X (I-X.1)

Customizable milestones and metrics, P-X (P-X.1) and I-X (I-X.1) were used to clarify specific milestones that are unique to this project's development and implementation. Existing options did not match the needs of this project.

Unique community need identification number the project addresses:
The project addresses the following unique community needs as identified in the community needs assessment:

- CN.11 – High rates of chronic disease and inadequate access to treatment programs and services for illnesses associated with chronic disease, including Cancer;
- CN.22 - Insufficient access to services that are specifically designed to address racial, ethnic and cultural health care disparities
- CN.23 – Lack of patient navigation, patient and family education and information programs.

How the project represents a new initiative for the Performing Provider or significantly enhances an existing delivery system reform initiative:
Currently, a navigation program does not exist to increase access to clinical trials in our institution. Our institution offers a variety of services, but unfortunately in a fragmented manner. The navigation program will improve access to clinical trial knowledge and assist patients in reducing barriers to participation while allowing patients who might not otherwise have access benefit from navigation services.

Related Category 3 Outcome Measure(s):
IT-6.2.a – Client Satisfaction Questionnaire (CSQ Scales):
Description: The CSQ Scales® were created in response to the need for a standard instrument to replace idiosyncratic, ad hoc, and/or untested tools. The goal was to develop a standardized measure with strong psychometric properties that could be used to assess general satisfaction across varied health and human services. The CSQ Scales® (CSQ) include a series of brief instruments.
Reasons/rationale for selecting the outcome measure(s): This outcome was chosen to measure and assess consumer satisfaction with health and human services. While this project will be implemented in a clinic setting, it does not align well with other outcome measure options. The options most commonly associated with patient navigation were geared toward navigating to primary care and our project is navigating to cancer clinical trials. Our chosen option provides an avenue for program monitoring and evaluation.

Relationship to other Projects: By offering navigation services to Hispanic patients and patients who are at high risk of disconnect from institutionalized health care, this program is in line with the RHP. This project also supports our other projects in that they all support one of the eight goals of the Comprehensive Cancer Control Program at The University of Texas MD Anderson Cancer Center. Also, in order to capture patient satisfaction across varied health care services and domains all MD Anderson waiver projects will use IT6.2.a Client Satisfaction scores as a Category 3 outcome measure.

Relationship to Other Performing Providers' Projects in the RHP:
Innovation is the key to the transformation of healthcare in our community. The consistency of innovation in our region allows for increased improvements based on research trends, patient need, and provider availability. The waiver funding allows for innovation in specific areas and all innovative projects included in the plan are similar in the fact of program redesigns for historic treatments, and

focus to chronic condition outcome measures such as central line infections. The Region 3 initiative grid in the addendum can provide a side by side comparison of all projects that directly relate to innovation. The current project is related to others in the region in its provision of navigation services (0937740-08.2.2, 0937740-08.2.3, 2967606.2.1, 133355104.2.2, 133355104.2.4 130959304.2.1, 127303903.2.2, 111810101.2.3 and 094187402.2.1).

Plan for Learning Collaborative: We plan to participate in a region-wide learning collaborative(s) as offered by the Anchor entity for RHP3, Harris Health System. Our participation in this collaborative with other Performing Providers within the region that have similar projects will facilitate sharing of challenges and testing of new ideas and solutions to promote continuous improvement in our Region's healthcare system.

Project Valuation: We have based our project valuation on California's 1115 Medicaid Waiver model. As such, we have valued our projects at 2.5 times that of the estimated costs. Basing our valuations on California's calculations we know we are well within the potential range of future cost savings when looking at the following from Prevention Institute and Trust for America's Health Issue Report entitled *Prevention for a Healthier America: Investments in Disease Prevention Yield Significant Savings, Stronger Communities (July 2008)*:

- Prevention saves money – an investment of $10 per person per year in programs to increase physical activity, improve nutrition, and prevent tobacco use could save the country more than $16 billion in annual health care costs within five years.
- Prevention can reduce end-of-life costs by increasing health during the lifespan, what researchers call the *compression of morbidity*.

There is a substantial return-on-investment in prevention – For every $1 invested in community-based prevention, the return amounts to $5.60.

#9 - Project Title: Expand Access to Psychiatric Behavioral Care for Older Adults
Project Option: 1.12.2
Performing Provider/TPI: Memorial Medical Center/137909111
RHP Project Number: 137909111.1.100

Project Summary:

Provider:
Memorial Medical Center (MMC) is located in Port Lavaca, Texas, which is located on the Gulf of Mexico between Corpus Christi and Houston. The city is in Calhoun County. Port Lavaca's population is approximately 11,500 and includes about 60% of the 21,381 county residents.[31] Memorial Medical Center is a county-owned, 25 bed Critical Access Hospital and serves as the only hospital for Calhoun County. With a tax base of $13,972,000, Memorial Medical Center was able to provide more than $8 million in charity care (includes uncompensated) during FY 2012.

Intervention:
This project is supportive of our Region's goal to expand access to behavioral health care services in an outpatient setting and provide patients with the care they need, when they need it.

Need for the project:
Studies reinforce the importance of providing behavioral health services not only for the mental health of the individual, but also for their physical wellbeing. Additionally, because the clinic is based within MMC, we are well positioned to coordinate care provided to patients discharged from the hospital. Our care teams will work closely with patients to ensure compliance with out-patient care instructions and schedule follow-up appointments. Currently, without the behavioral health services, chronic conditions go undiagnosed and untreated this can lead to an increase in an acuity of illnesses.

Target Population:
The primary population targeted for these services are individuals age 55 and older with behavioral health care needs.

Category 1 expected patient benefits:
Over the course of this project, we will have a behavioral health services clinic available to the targeted population. This is anticipated to reach about 140 patients in the first three years. Currently these patients do not have any local behavioral health services. By doing so, we will improve the health of our clients by providing more timely access to care and coordinating treatment and follow-up care that isn't currently available locally.

Quantifiable Patient Impact:
The estimated patient impact for the first year (DY3) will be 40 patients and a total of 280 annual visits. The impact in the next two years (DY4 &DY5) is an additional 50 patients per year and a total of 374 annual visits. The total for the three years is 140 patients with a total of 1,028 visits.

Category 3 outcomes:
OD-6 : Because the community we serve does not have any behavioral health services available patients are often unable to obtain help in a timely manner, the priority goal for this project is ensuring patients

[31] Texas State Data Center, Texas Population 2010.

receive care when they need it and without significant delays, which will result in improved health outcomes and patient satisfaction. With access to care locally, we anticipate a subsequent cost savings due to the decreased inappropriate utilization of the Emergency Department and the reduction of patient readmissions.

Project Title: Expand Access to Psychiatric Behavioral Care for Older Adults
Project Option: 1.12.2
Performing Provider/TPI: Memorial Medical Center/137909111
RHP Project Number: 137909111.1.100

Project Description:
The primary population targeted for these services are individuals age 55 and older with behavioral health care needs. Behavioral health disorders affect between 20 and 25 percent of the elderly population, yet depression goes untreated in 80% of aging seniors. Memorial Medical Center (MMC) intends to address this problem by developing and implementing an outpatient behavioral health program aimed at addressing disorders such as depression and anxiety in older adults. Using existing space within MMC, treatment offices will be created to implement an Intensive Outpatient Program (IOP) utilizing a group psychotherapy clinical model. Staffing will include a Psychiatrist, Social Workers, RN, and a Receptionist/Transportation Assistant who will provide administrative support and arrange patient transportation.

The goals of this project are:

- Improve access to behavioral health care services for older patients;
- Improve care coordination and communication between primary care and behavioral health care providers;
- Reduce the distance clients are currently required to travel to obtain behavioral health services;
- Increase the number of health care providers and services available to community residents;
- Reduce the number of emergency room and hospital encounters for both behavioral health care and physical health care conditions;
- Improve communication between the patient, family, caregivers and providers;
- Improve health care outcomes by providing health care services that might not otherwise be available;
- Improve patient satisfaction by providing more appropriate care in a more convenient and appropriate setting.

To ensure we achieve our goals, we propose to:

- Develop a comprehensive plan for expanding patient care;
- Reconfigure existing clinic space;
- Hire and train staff;
- Implement a marketing and outreach plan to inform consumers of the availability of behavioral health services;
- Work with primary care providers throughout the region to inform them of the new services and coordinate patient referrals to the IOP;
- Work closely with patients to obtain feedback on care experience and solicit recommendations for ongoing improvements; and
- Provide periodic training and learning opportunities for primary care and behavioral health care providers to share best practices and provide the most effective care possible.

Starting Point/Baseline:
The market analysis completed earlier this year indicates that of the 132,400 residents in the MMC service area, more than 36,000 people age 55 and over are potential clients for our proposed behavioral

health care services program. Analysis by the National Institute of Health (NIH) and the National Institute of Mental Health (NIMH) and published in the Surgeon General of the United States Report on Mental Health indicate that approximately 19.8% of the geriatric population and 14.7% of older adults have an acute mental illness requiring treatment.[32]Based on these data, an estimated 6,300 older adults living within the MMC service area will need behavioral health services in 2012.

Quantifiable Patient Impact:

- DY3 – (P.6 & P.4)The quantifiable impact with the opening of the Behavioral Clinic – the only one in Calhoun county and the second one for the same year – will be the hiring and training of the required staff. We have a potential patient base of 6,300. The estimated patient impact in DY3 is 40 patients with a total visit count of 280 annual visits.
- DY4 – (P.7) Evaluate and improve the services – after the first year of providing services with our Behavioral Clinic we will have our baseline – with this information we will be able to evaluate the services. The evaluations will show the percentage of patients who have not previously received mental health treatment. The estimated impact in DY4 is an additional 50 patients with a total visit count of 374 annual visits.
- DY5 – (P.7) Evaluate and improve services based on the second year of services – we will be able to evaluate the services. The evaluations will show the percentage of diagnosis with specific changes, with this data we can look to improving our services. The estimated impact in DY5 is an additional 50 patients with a total visits count of 374 annual visits. This is a total of 140 patients in the first 3 years and a total visit count of 1,028 visits.

Rationale:

Memorial Medical Center (MMC) is located in Port Lavaca, Texas, which is located on the Gulf of Mexico between Corpus Christi and Houston. The city is in Calhoun County. Port Lavaca's population is approximately 11,500 and includes about 60% of the 21,381 county residents.[33] Memorial Medical Center is a county-owned, 25 bed Critical Access Hospital and serves as the only hospital for Calhoun County. Port Lavaca Clinic and Coastal Medical Clinic serve as the primary providers for outpatient services.

Most relevant to this project is the fact that the entire county does not have a single psychiatrist.[34] Behavioral health services are currently provided primarily by Gulf Bend MHMR Center, which serves residents from seven counties, the majority of which (62%) live in the community of Victoria where Gulf Bend MHMR is located. While some patients may obtain a basic level of behavioral health services from their primary care provider, the region also has an insufficient number of primary care providers. Even when primary care is available, studies show that individuals with behavioral health needs are reluctant to seek treatment, and often receive only basic behavioral health treatment, such as medication.

In 2012, MMC engaged a contractor to perform a detailed market analysis to evaluate the need for an array of inpatient and outpatient behavioral health services for the population of Port Lavaca and nearby communities served by Memorial Medical Center.[35] The report provided a comprehensive population

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[3232]U.S. Department of Health and Human Services, Mental Health: A Report of the Surgeon General, National Institute of Mental Health, 1999.

[33] Texas State Data Center, Texas Population 2010.

[34] Ibid.

[35]Diamond Healthcare Corporation. *Summary Market Analysis, Behavioral Health Services. Memorial Medical Center, Port Lavaca, Texas.* August 2012.

study and analysis of current behavioral health services and future service needs. As illustrated in Tables 1 and 2 below, MMC's total service population totals approximately 132,380 people. The number of older adults age 55 and older that is the primary focus of this project is currently estimated at 36,255 and is predicted to increase by 3,965 (10.9%) to a total of 40,220 by 2017.

Table 1: 2012 Demographics by Age Cohort

Age Group	2012 Estimated Population	Percent of Total Market Population	Percent U.S. Population
Under 18 Years	34,890	26.3%	23.9%
18 to 54 Years	61,235	46.3%	50.2%
55 to 64 Years	16,965	12.8%	12.3%
65 Years and Older	19,290	14.6%	13.6%
Total	**132,380**	**100.00%**	**100.00%**

Source: Claritas Population, 2012

Using the NIH and NIMH estimates of mental illness prevalence rates for older adults and geriatric senior adults, more than 6,000 people age 55 and older are expected to need behavioral health services in 2012.[36] The number grows to nearly 7,000 by 2017, as illustrated in Table 2 below.

Table 2: 2012 Estimated and 2017 Projected Need for Behavioral Health Services

Targeted Population Age Group	2012 Population	Number Estimated to Need Behavioral Health Care	2017 Population	Number Estimated to Need Behavioral Health Care
2012 Estimate				
55 to 64 Years	16,965	2,494	19,115	2,810
65 Years or Older	19,290	3,819	21,105	4,179
Totals	**132,380**	**6,313**	**135,750**	**6,989**

Providing our patients with an ongoing, permanent clinic for behavioral health services is a critical community need and will greatly improve not just the mental health status or our clients, but also their physical health. Numerous studies show that physical and mental health are often interrelated, and patients who do not receive sufficient mental health care are more likely to also suffer from other chronic conditions. In one study, patients diagnosed with behavioral health problems were more likely to have a number of physical illnesses, including asthma, back pain, lung disease, and ulcers.[37] Two studies recently conducted by Johns Hopkins University found that people with serious mental conditions were more likely to be diagnosed with cancer, and have a significantly higher proportion of physical injuries requiring treatment in a hospital than were individuals without a serious mental illness.

[36]Mental Health, A Report of the Surgeon General.

[37]Weisbert, R, Burs S, Machan J, et.al. Nonpsychiatric illness among primary care patients with trauma histories and posttraumatic stress disorder. Psychiatric Services. 2002.

The first study found that people with serious mental health conditions are 2.6 times more likely to develop cancer, particularly lung cancer, colorectal cancer and breast cancer.[38]The second report found that seriously mental ill people were nearly twice as likely to be treated in a hospital emergency room or admitted to a hospital for an injury.[39] Over a seven year period, 23% of those with an injury had two separate incidences, 25% were treated three to five times, and 10% had at least six separate incidences that required ER treatment or admission to the hospital.

Both of these studies reinforce the importance of providing behavioral health services not only for the mental health of the individual, but also for their physical wellbeing. Additionally, because the clinic is based within MMC, we are well positioned to coordinate care provided to patients discharged from the hospital. Our care teams will work closely with patients to ensure compliance with out-patient care instructions and schedule follow-up appointments. The ability to leverage the existing infrastructure of MMC also enables us to implement this project within a relatively short time frame and provide patient services as quickly as possible.

Our plan for improving behavioral health access is anticipated to provide the following benefits to the individual patients and the community:

- Improve patient physical and mental health and wellbeing;
- Improve patient satisfaction with care and quality of life;
- Reduce utilization of hospital and emergency room services and associated costs;
- Improved coordination of physical and mental health care among providers at MMC;
- Reduce the occurrence of events that lead to arrest/incarceration of individuals with behavioral health conditions, which saves costs for both the health care system and criminal justice system, and significantly improves the patient's quality of life;
- Improve patient compliance with hospital discharge instructions; and
- Reduce the number of patient readmissions for patients receiving services at the MMC outpatient clinic.

This project is supportive of our Region's goal to expand access to behavioral health care services in an outpatient setting and provide patients with the care they need, when they need it. Every county in our region has an insufficient number of providers for behavioral health care services and struggles to meet demand that exceeds current capacity for care. Patients often go without care or seek services through the emergency room because they have no other place to turn. Providing this clinic-based program will provide a new resource for our community's population, which will reduce their reliance on providers in other areas of the Region and improve the quality of care they receive.

Key Challenges

Implementing a program of this magnitude will require careful planning and implementation. Identified challenges that will have to be addressed include:

- Attracting and retaining behavioral health care specialty providers (i.e., psychiatrist);

[38] McGinty EE, Zhang Y, Guallar E, Ford DE, Steinwachs D, et al. Cancer incidence in a sample of Maryland residents with serious mental illness. *Psychiatric Services*. 2012 July; 63(7): 714-7.

[39] McGinty EE, Baker SP, Steinwachs DM, Daimut G. Injury risk and severity in a sample of Maryland residents with serious mental illness. *Injury Prevention*. 2012 June 2.

- Educating and training patients to use the new clinic services, and not use the emergency department for non-emergency services;
- Ensuring patients needing services have a means of transportation, and show up for appointments;
- Training primary care providers to coordinate care with IOP.

To address these challenges, MMC will develop a detailed implementation plan and incorporate all appropriate staff in the planning and operation of the new services. We will work with the local medical societies and our other RHP partners to identify potential staff for the clinic. To ensure our patients are familiar with the new services, we will implement a patient outreach and education plan with information on the new services. We will work with other appropriate service providers throughout our region to inform them of the new IOP program and ensure they have information for patient referrals. The transportation needs will also be addressed; we will have a handicap accessible van available to provide patients transportation to and from their appointments.

New Initiative for Provider

MMC currently operates a hospital that provides acute care, but does not provide access to primary and specialty care services. The operation of a hospital-based outpatient clinic for behavioral health care significantly enhances our existing delivery system by allowing us to meet a critical community need for care. In addition to meeting an unmet community need for services, we also are well positioned to coordinate care provided to patients discharged from the hospital. Our care teams will work closely with patients to ensure compliance with out-patient care instructions, manage medications, and comply with follow-up appointments.

Community Needs Addressed:

- CN.1 – Inadequate access to primary care
- CN.2 – Inadequate access to specialty care
- CN.3 – Inadequate access to behavioral health care
- CN. 6 - Inadequate access to treatment and services designed for special needs populations, including disabled, homeless, children, elderly
- CN.18 – Insufficient access to integrated care programs for behavioral health

Core Components:

This project option does not have any required core components to address.

Related Category 3 Outcome Measures:

OD-6 Patient Satisfaction is the selected Category 3 Outcome Measure selected for this project. We intend to use the CG-CAHPS survey to improve our performance as measured by whether patients are (1) getting timely care, appointments and information. Obtaining patient feedback on our ability to provide the right care at the right time is critical to the success of this project and the internal operations of the clinic. This data will provide us with meaningful and objective information that will be used to determine whether our clinic has met patient expectations related to obtaining timely care and information, and will identify areas where we need to improve. Because the community we serve has no psychiatrist, and rely primarily on an insufficient number of primary care providers for behavioral health services, they often must travel long distances, or go without behavioral health services. This project is designed to meet a critical unmet need by ensuring patients have access to behavioral health care

services when they need it and without significant delays, which will result in improved health outcomes and patient satisfaction. Because this is a new service for MMC, it is important for us to measure our success in meeting the patients' needs. The CG-CAHPS survey is an effective tool for measuring our progress and will provide valuable information and feedback on our performance and areas where improvement is needed.

Relationship to Other Projects

Improving access to behavioral health care services (1.12) will support our project to Expand Primary Care Capacity (1.1 and 1.2), as well as those of other performing providers throughout our region by providing a new source of care for patients needing behavioral health services. Patients will not have to rely on primary care providers, or turn to emergency departments for services that will be available through our program. This program will improve the care our community receives and supports the Region's goals to improve primary care capacity, expand medical homes (2.1), improve the patient experience (2.4), and provide chronic care management (2.2.). It also is expected to support efforts to reduce behavioral health and substance abuse admission rates (Cat. 4, RD-1), and 30 day readmissions (Cat. A4, RD-2)

Plan for Learning Collaborative:

We plan to participate in a region-wide learning collaborative(s) as offered by the Anchor entity for Region 3, Harris Health System. Our participation in this collaborative with other Performing Providers within the region that have similar projects will facilitate sharing of challenges and testing of new ideas and solutions to promote continuous improvement in our Region's healthcare system.

Project Valuation:

In 2012 MMC had a detailed analysis performed to review the needs of behavioral health services for our local population. The conclusion was the lack of any behavioral health services in Calhoun County. Providing our patients with an ongoing, permanent clinic for behavioral health services is a critical community need and will greatly improve not just the mental health status or our clients, but also their physical health. Numerous studies show that physical and mental health are often interrelated, and patients who do not receive sufficient mental health care are more likely to also suffer from other chronic conditions. This project is supportive of our Region's goal to expand access to behavioral health care services in an outpatient setting and provide patients with the care they need, when they need it. Providing this clinic-based program will provide a new resource for our community's population, which will reduce their reliance on providers in other areas of the Region and improve the quality of care they receive.

#10 - Project Option: 2.13 Provide an intervention for a targeted behavioral health population to prevent unnecessary use of services in a specified setting: Preventative mental health care for foster youth.

RHP Project Number: 113180703.2.103

Performing Provider/TPI: MHMRA Harris County/113180703

This project will provide linkages to mental health services for adolescents aging out of the foster care system.

Provider: The Mental Health and Mental Retardation Authority (MHMRA) of Harris County is the safety net provider for adults with serious mental illnesses, for children and adolescents with serious emotional disorders, for the developmentally delayed, and for individuals experiencing acute psychiatric distress. MHMRA provides inpatient, residential and outpatient treatments, including psycho-therapy, case management, and medication management for more than 49,000 Harris County residents out of a culturally and ethnically diverse population of over 4.1 million. Of those individuals who received any agency service in FY12, 36.5% were medically indigent and 51.9% had Medicaid. Of those who received mental health services in FY12, such as those being proposed in this project, 55% were medically indigent and 34.9% had Medicaid.

Intervention(s): A team of one nurse, one mental health clinician, and one peer mentor will provide:

- Mental health reassessments to ensure correct diagnosis as many of these youth experience multiple diagnosis and multiple medications.
- "Just Do You" intervention to 84 foster system youth to facilitate service engagement and continuation, enhance motivation, and reduce stigma
- Intensive case management to 40 screened youth to ensure linkage to medication and other needed services for transitioning into healthy adulthood.

Need for the project: Adolescents in the foster care system often are involved in multiple types of care systems, have histories of severe mental illness or dual diagnoses, and are at risk for homelessness, criminal justice involvement, or psychiatric hospitalizations. Engaging these adolescents prior to aging out of the foster care system may reduce factors leading to crisis.

Target population: Underserved children and adolescents in Harris County.

Category 1 or 2 expected patient benefits:

- Improve functional status.
- Increase linkages to mental health services.
- Increase compliance with psychotropic medication.

Description of QPI metrics: Number of targeted individuals enrolled/served in the project will be a total of 184 served per DY period.

Category 3 measures: IT-6.1 Percent improvement over baseline of patient satisfaction scores.

Project Option 2.13: Provide an intervention for a targeted behavioral health population to prevent unnecessary use of services in a specified setting: Preventative mental health care for foster youth.

RHP Project Number: 113180703.2.103

Performing Provider/TPI: Mental Health and Mental Retardation Authority of Harris County/

113180703

Project Description: This project will serve adolescents who are aging out of the foster care system and who are currently receiving services at the Houston Alumni and Youth (HAY) Center, a program of Harris County Protective Services for Children and Adults (HCPS), a local governmental entity, as follows:

1) Improve the functional status of youth aging out of the foster care system who have severe mental illness and are expected to experience the greatest difficulty transitioning into a healthy adulthood by screening and providing a "Just Do You" intervention;
2) Enhance engagement with health care providers during the transition from Children's Medicaid to the Adult Medicaid programs; and
3) Increase compliance with psychotropic medication by re-assessing and developing a more appropriate treatment plan, which may include referral to the "Just Do You" intervention.

Improve Functional Status: "Just Do You" and ACT Interventions. Impulsiveness, trauma, substance abuse, onset of mental illness, and emergence of gender identity issues in adolescence may contribute to higher-risk behaviors leading to crisis. Adolescents in the foster care system are often involved in multiple types of care systems, have histories of severe mental illness or dual diagnoses, and are at risk for homelessness, criminal justice involvement, or psychiatric hospitalizations. Engaging these adolescents in treatment options prior to aging out of the foster care system may reduce factors leading to crisis. The first phase of this program consists of screenings and "Just Do You" in year one. In the second phase, the evidence-based Assertive Community Treatment (ACT) model will be added to the screening and "Just Do You" intervention.

A team of one nurse, one mental health clinician, and one peer mentor will address the needs of the youth selected for this demonstration project by providing the following:

- Mental health reassessments to ensure correct diagnosis as many of these youth experience multiple diagnosis and multiple medications.
- "Just Do You" intervention aimed at providing peer support for youth to engage in and continue services. This intervention focuses on motivational enhancement and stigma reduction and will be provided to 84 youth in this foster care system.
- Intensive case management in the second phase to ensure linkage to medication and other needed services for transitioning into a healthy adulthood. This may include ACT intervention and educational and vocational supports for 40 previously screened youth, in addition to the "Just Do You" intervention.

Youth will be eligible for participation if they meet one of the following criteria:

- Are currently diagnosed with a qualifying diagnosis for MHMRA adult services: any bipolar disorder, major depression, or a schizophrenia spectrum disorder (including schizoaffective disorder), OR
- Are currently taking more than 3 different psychiatric medications and expressed concerns by the caseworker or treatment team about the effectiveness of the current medication regimen, OR
- Have a history of multiple psychiatric placements and expressed concerns by the team about the most appropriate diagnosis and treatments, OR
- Have a history of placement instability including recent and multiple relocations, behavioral and emotional problems, and expressed concerns by the team about the most appropriate diagnosis or course of treatment

The adolescents would be referred to this program by their foster care case manager and supervisor. Priority would be given to cases with a qualifying MHMRA diagnosis. Young people who have received stable treatment over a long period of time would be less appropriate for this type of review. The first phase is where youth are evaluated by the program nurse, and then in phase two those in need of more intense services will be referred to the mental health clinician and peer mentor for further service involvement. Phase two of this program provides linkage to medication management, intensive case management, and psychotherapy.

Enhancement Engagement with Health Care Providers. This project would provide additional services to assist youth aging out of foster in the transition to adult Medicaid, including case management, assistance in enrollment, assistance in locating a primary care provider, and related services. Services may also include consultation with a mental health specialist and the youth's primary care provider to improve the integration of mental health services into primary health care and care coordination.

Increase compliance with medication regime. This project would begin with an assessment of each youth with a mental health condition or who has been or is currently prescribed one or more psychotropic medications. The youth's current prescription(s) would be adjusted as needed, and a treatment plan would be developed to serve the youth's current mental health needs. Some may be referred into the "Just Do You" intervention.

Goals and Relationship to Regional Goals:

The proposed project directly meets broad goals identified by the regional needs assessment. First, it improves and builds upon an existing program, which has shown positive gains in providing best-practices for patient-centered care. Furthermore, by providing enhanced, evidence-based services to patients the program will meet the regional goal set out above. Moreover, the program supports the regional goal of developing a culture of patient-centered care whereby the patient/consumer plays a more active role as a stakeholder.

Regional goals: It is important to note this project directly meets three broad goals identified by the region. First, it improves on existing programs and infrastructure by adding a component of treatment to existing community mental health clinics. Second, it increases access to specialty care services by providing empirically based mental health treatment to individuals who otherwise, may not be able to afford this type of intervention.

The proposed program will also complement the regional goal to develop a culture of "best practices" whereby the patient/consumer plays a more active role as a stakeholder by completing consumer satisfaction surveys. Finally, this program would provide empirically validated substance abuse treatment using national standards.

Challenges: The most daunting challenges facing the project stem from the characteristics of the target population. Most former foster youth experience periods of housing instability, lack of economic resources, and compromised social support networks. As a result of their experiences with the child welfare system, many former foster youth are reluctant to fully cooperate with what they perceive to be "just another program". Former foster youth often report they feel that they were over-medicated while in care, and attribute poor academic performance, weight gain, and other negative side effects to the medication. They expressed that they felt they had little input into their treatment options. This often makes follow-up and documentation of compliance difficult.

3-Year Expected Outcome: Year 3 – Process Milestones: Establish baseline; provide outreach to youth approaching the age of 18 years; mental health screening of patients with standardized assessment tool (CANS, ANSA, etc.); identify youth who met criteria for "Just Do You", develop survey to determine medication compliance; develop survey to measure engagement in care

Year 4 – Continue outreach to youth approaching the age of 18 years; provide transition services to youth nearing 18 years of age; increase the number of youth received specialized intervention services; increase the number of youth engaged in a health care provider; increase the number of youth who have received a new treatment plan that is consistent with their current needs; increase the number of youth who are in compliance with their drug regimen.

Year 5 – Continue outreach to youth approaching the age of 18 years; provide transition services to youth nearing 18 years of age; increase the number of youth receiving specialized intervention services, engaging with a health care provider, receiving a new treatment plan consistent with current needs, and complying with their drug regimen.

Starting Point/Baseline: There is not currently any program that addresses this population.

<u>Rationale:</u> The HAY Center's mission is to empower current and former foster care youth to become successful productive adults. The Center is a one-stop location that provides a variety of transition resources, services, and support to current and former foster care youth ages 16 through 25. The HAY Center provides Preparation for Adult Living (PAL) services and training and employment opportunities in partnership with the Texas Workforce Commission. In 2011, the Hay Center served more than 1,100 foster care youth from Harris County and the surrounding counties. Most youth in foster care are in Medicaid.

<u>Engagement in Care.</u> Youth aging out of foster care should transition from children's Medicaid to adult Medicaid after they become 21 years old, and they should receive the adult benefit package through age 27. Unfortunately, after reaching their 18th birthday, some youth do not submit the necessary paperwork or fail to reenroll in Medicaid during eligibility determinations. Frequent moves, incomplete medical records, housing instability, and a lack of resources compound the challenge of coordinating their care. This project would provide services to help these youth transition to adult Medicaid, such as case management, enrollment assistance, and assistance in locating a primary care provider. These transition services would improve care coordination.

<u>Increase compliance with medication regime.</u> According the U.S, General Accounting Office (GAO), children in foster care tend to have more mental health conditions than other children. Though treatment for these mental conditions may include psychotropic drugs, the risks to children are not well understood. The GAO found that the following prescribing practices of psychotropic medications increased risk to the children:

- 1,000s of children were prescribed doses of psychotropic medications higher than the maximum levels cited by Texas guidelines based upon FDA-approved labels, and
- 100s of children were prescribed 5 or more antipsychotic medications.

The GAO found that nearly 7 percent of all children in foster care who had been prescribed a psychotropic drug had 3 or more gaps of 7 to 29 days in drug claims. This finding raised concerns about patient's non-adherence to a drug regimen, which can pose significant health risks to the patient. The GAO concluded that more oversight of both the prescribing practices of psychotropic medication to children and compliance to drug regimen is needed.

<u>Improve functional status.</u> According to the U.S. Administration for Children and Families (ACF), 18 percent of foster children were taking psychotropic medications. ACF also reported that 30 percent of foster children who may have needed mental health services did not receive the services in the previous 12 months.

<u>Quantifiable Patient Impact:</u> Number of targeted individuals enrolled/served in the project will be a total of 184 served per DY period.

Project Components: In order to develop the proposed program the following core components (2.13) will be utilized:

- *Assess size, characteristics and needs of target population(s).*Each year approximately 200 youth exit the foster care system in this region; of these, nearly a third have a mental health diagnosis. As youth transition out of the state's custody they need services to help establish them as self-sufficient adults in the community.
- *Review literature / experience with populations similar to target population.* CPS and project collaborators have conducted a literature review as a part of developing this proposal.
- *Develop project evaluation plan using qualitative and quantitative metrics to determine outcomes.* Project evaluation measures have been explored by project collaborators to develop the attached matrix.
- *Design models which include an appropriate range of community-based services and residential supports.* CPS and community-based partners currently have an array of transitional supports in place for this project. This project would expand transition services.
- *Assess the impact of interventions based on standardized quantitative measures and qualitative analysis relevant to the target population.* Interventions proposed will assist transition-aged youth retain a continuity of care needed to address their ongoing mental health issues.
- *Community-based interventions should be comprehensive and multispecialty.* Interventions are designed to address a wide spectrum of factors impacting youth as they transition out of care. In addition to mental health objectives of this project, CPS and community-based partners aid income security, housing, and social supports.

Unique community need identification number the project addresses: In addition to the regional goal, the following community needs are addressed with the proposed program:

- CN.3: Inadequate access to behavioral health care.
- CN.6: Inadequate access to treatment and services designed for special needs populations, including disabled, homeless, children, and elderly.
- CN.8: High rates of inappropriate emergency department utilization.
- CN.9: High rates of preventable hospital admissions.
- CN.18: Insufficient access to integrated care programs for behavioral health and physical health conditions
- CN.20: Lack of access to programs providing health promotion education, training and support, including screenings, nutrition counseling, patient education programs

Related Category 3 Outcome Measure(s): OD-6: IT-6.1: Patient Satisfaction: Improve patient satisfaction as measured by CAHPS by 3% over baseline by DY5. We believe patient satisfaction that addresses involvement in shared decision making, access to providers, and communication with providers, will reduce preventable admissions and readmissions to psychiatric emergency services. If patients are dissatisfied with services or the process, they may continue to over-utilize emergency services rather than engaging in preventative care.

OD- 10: Functional Status: Improve functional status by ANSA by 3% over baseline by DY5. Engaging these adolescents in treatment options prior to aging out of the foster care system can reduce factors leading to crisis. Integrating services within the foster care system would provide support and transitional services to reduce trauma, substance abuse, onset of major mental illnesses, and emergence of gender identity issues to adolescents who are expected to experience the greatest difficulty transitioning into healthy adulthood.

Relationship to other Projects: This program would enhance other MHMRA DSRIP proposals, such as expansion of outpatient behavioral services. The behavioral health crisis in Region 3 is considerable, and the proposed initiative will only imply a small impression into the overall community need for treatment, but is a good start. The outpatient focus of many RHP Plan initiatives will help numerous facilities focus on treating patients in an ambulatory setting, with a focus to keeping patients from inpatient units.

Plan for Learning Collaborative: The project has no plans to establish a Learning Collaborative at this time but is open to doing so if another similar project is approved. Historically, MHMRA has worked with other providers in the community who are experts in substance abuse treatment, such as the Council on Drugs and Alcohol-Houston.

Project Valuation: To value the proposed project accurately, assistance was sought from H. Shelton Brown, Ph.D. of the UT Houston School of Public Health and Thomas Bohman, Ph.D. of the UT Austin Center for Social Work Research. Their consultation was limited to the valuation section. Valuations should be based on economic evaluation principles that identify, measure, and value the relevant costs and consequences of two or more alternatives. One alternative is a new program while the second is treatment as usual. Cost-utility analysis (CUA) measures the cost of the program in dollars and the health consequences in utility-weighted units. This valuation uses quality-adjusted life-years (QALYs) analysis that combines health quality (utility) with length of time in a health state. Cost-utility analysis is a useful tool for assessing the value of new health service interventions because it provides a standard

way of valuing multiple interventions. The valuation also incorporates costs averted (e.g., emergency room visits that are avoided). To make the valuations fair across different types of interventions, the outcome is the number of life-years added. The benefits of the proposed program are valued based on assigning a monetary value of $50,000 per life-year gained due to the intervention. This threshold has been a standard way of valuing life-years in terms of whether the cost of the intervention exceeds this standard. The number of life-years added is based on a review of the scientific literature.

Cost-Utility Analysis: The Texas Recommended Assessment Guidelines (Texas Department of State Health Services, 2011) established a utilization management scheme for matching patient need to service packages of varying intensities. To approximate the value of an outpatient behavioral health program, we will review studies related to each of the four service packages described below as "levels of care."

Assertive Community Treatment (ACT) for Persons with Serious Mental Illness: All consumers in this program will receive Level Four services, which is the highest intensity service intervention.

A 2012 study reported the cost-effectiveness of assertive community treatment as part of integrated care versus standard care in patients with schizophrenia (Karow, Reimer, König, Heider, Bock & Huber, 2012). Results indicated the ACT intervention yielded a QALY of 0.76, whereas the treatment as usual groups resulted in a QALY of 0.66. Since the treatment is being contrasted with wait list or not treatment, the full QALY (0.76) applies.

The incremental QALY for the ACT group was 0.10. Assuming the program will serve 25 persons in a year, the following formula shows the valuation:

25	(persons served)
0.76	(QALY gained)
× $50,000	(life year value)
=$950,000.00	Level Four QALY Value

References

Drummond, C., Coulton, S., James, D., Godfrey, C., Parrott, S., Baxter, J. & Peters, T. (2009). Effectiveness and cost-effectiveness of a stepped care intervention for alcohol use disorders in primary care: A pilot study. *British Journal of Psychiatry, 195,* 448-456.

GAO, *Foster Care: State Practices for Assessing Health Needs, Facilitating Service Delivery, and Monitoring Children's Care,* GAO-09-26 (Washington, D.C.: Feb 6, 2009).

GAO, *Children's Mental Health: Concerns Remain about Appropriate Services for Children in Medicaid and Foster Care*, GAO-13-15, Dec 10, 2012.

Hosenbocus, S. and R. Chahal, *SSRIs and SNRIs: A review of the Discontinuation Syndrome in Children and Adolescents*. J Can Acad Child Adolesc Psychiatry. 2011 Feb; 20(1): 60-7.

Karow A, Reimer J, König HH, Heider D, Bock T, Huber C, Schöttle D, Meister K, Rietschel L, Ohm G, Schulz H, Naber D, Schimmelmann BG, and Lambert M. (2012). Cost-effectiveness of 12-month therapeutic assertive community treatment as part of integrated care versus standard care in patients with schizophrenia treated with quetiapine immediate release (ACCESS trial). *J Clin Psychiatry*. 73(3):e402-8

Mangrum, L., Spence, R. & Lopez, M. (2006). Integrated versus parallel treatment of co-occurring psychiatric and substance use disorders. *Journal of Substance Abuse Treatment*, *30*, 79-84.

Office of Applied Studies (2003). *Overview of Findings from the 2003 National Survey on Drug Use and Health*. NSDUH Series H-24, DHHS Publication No. (SMA) 04-3963. Rockville, MD: Substance Abuse and Mental Health Services Administration. http://www.samhsa.gov/data/NSDUH.aspx [Accessed October 2, 2012].

Schackman, B., Leff, J., Polsky, D. Moore, B. & Fiellin, D. (2012). Cost-effectiveness of long-term outpatient Buprenorphine-Naloxone treatment for opioid dependence in primary care. *Journal of General Internal Medicine, 27,* 669-676.

Sellman, J., Sullivan, P., Dore, G., Adamson, S. & MacEwan, I. (2001) A randomized control

trial for Motivational Enhancement Therapy (MET) for mild to moderate alcohol dependence. *Journal of Studies on Alcohol, 62*, 389–396.

Texas Health and Human Services Commission (2012). *Potentially preventable readmissions in the Texas Medicaid population: Fiscal year 2010.* http://www.hhsc.state.tx.us/reports/2011/PPR-Report-011811.pdf [Accessed on October 2, 2012].

U.S. General Accounting Office. *Foster Children: HHS Guidance Could Help States Improve Oversight of Psychotropic Prescriptions*, GAO-12-27, December 1, 2011.

#11 - Project Option 2.9.1 Provide navigation services to targeted patients who are at high risk of disconnect from institutionalized health care (for example, patients with multiple chronic conditions, cognitive impairments and disabilities, Limited English Proficient patients, recent immigrants, the uninsured, those with low health literacy, frequent visitors to the ED, and others)

Unique Project ID: 0937740-08.2.100

Performing Provider Name/TPI: City of Houston Department of Health and Human Services/0937740-08

Project Summary:

Provider: The performing provider, Houston Department of Health and Human Services (HDHHS) is the public health authority for Houston, Texas, the fourth largest city in the U.S., with a population of 2.1 million in 2010. Established in 1840, HDHHS has grown to a department of 1,100 employees. HDHHS provides core public health services to all Houston residents such as air and water quality monitoring; restaurant inspections; lead paint safety; cancer screening and family planning for the uninsured; communicable disease prevention and control; disease surveillance; birth and death certificates; leadership in emergencies such as hurricanes; services to seniors; WIC programs; immunizations; and others. HDHHS operates 11 multi-service centers, 6 health centers, 14 WIC (Women, Infants and Children nutrition program) sites, the Harris County Area Agency on Aging, a comprehensive regional reference laboratory, and 44 health and human service programs. While HDHHS provides services that benefit all Houston residents, the department also takes additional steps to support those most in need, such as low income mothers and children, the elderly, and minority populations.

Intervention(s): The performing provider will conduct evidence based patient navigation, case management, case coordination, evidence based self-management, evidence based health education for the target population (N=1200/year) in DY3 and a 5% and 10% increase over DY3 in DY4 (N=1260) and DY5 (N=1320) respectively using a tiered system of service delivery.

Need for the Project: The lack of a medical home and lack of access to a primary care provider results in greater health care costs and poorer health outcomes among low-income and uninsured population. Navigators can provide services that address barriers to access and utilization of primary care, due to the complexity of the health care system, resulting in better outcomes.

Target Population: The target population will be drawn from different sources. Children 18 and under without a medical home will be referred to Health Connect Navigation through the Texas Children's Health Plan.. Adults without a medical home or who are disconnected from services will be referred to the program by Houston HHS Programs (eg: TB, Immunization, WIC and Environmental) and from Houston HHS internal partnering agencies.

Category 3 outcomes**: Tentative Choice. This will be revised once the new Cat 3 measures are approved by CMS.**

IT-9.2 ED appropriate utilization ***(Standalone measure)***
Reduce all ED visits
Numerator: Number of patients that went to ED for a primary care related condition after participating in navigation program

Denominator: Number of patients that participated in the navigation program

Project Option 2.9.1 Provide navigation services to targeted patients who are at high risk of disconnect from institutionalized health care (for example, patients with multiple chronic conditions, cognitive impairments and disabilities, Limited English Proficient patients, recent immigrants, the uninsured, those with low health literacy, frequent visitors to the ED, and others)

Unique Project ID: 0937740-08.2.100

Performing Provider Name/TPI: City of Houston Department of Health and Human Services / 0937740-08

Project Description:

Houston Health Connect will provide navigation support, case management services and evidenced based chronic disease self-management and health education programming to individuals who are uninsured, disconnected from a medical home, referred for follow-up from a health care provider, disconnected or newly connected to a medical home as a result of Affordable Care Act (ACA) Marketplace Exchange enrollment and Medicaid enrollees who are frequent users of hospital and crisis services. Houston Health Connect will utilize a tiered service delivery system based on assessment of client needs and strengths.

Background:
In the 1990's, Harold Freeman, a cancer surgeon, first designed a navigation program after identifying 5 major barriers to patients receiving care: financial, communication, medical system, psychological and personal. The more recent navigation programs are based on the Harold Freeman Institute of Patient Navigation's model. Although first used in cancer care, the Freeman patient navigation model has been adapted for use in navigating patients to primary care and chronic disease self-management.

Patient navigators not only help patients in navigating the health care system but also contribute to significant cost savings to the health care system by causing a reduction in emergency room visits, and the number of appointment no-shows.

Houston Health Connect will serve as a front end outreach and enrollment vehicle for expanded primary care access and navigation through a complex health care system. Key partners in this project include the Texas Children's Health Plan and Agencies who provide services in the Houston Department of Health and Human Services" health and multi-service centers.

HDHHS will partner with the Texas Children's Health plan to develop a collaborative that links medical services with proven public health interventions to improve health outcomes for children and reduce health care system costs. Nearly 100% percent of the children served will be on Medicaid or Medicaid eligible and half of all adults served will be uninsured or Medicaid eligible. Additionally, many will be newly enrolled in ACA and will require navigation support.

There are three primary target populations served by the project

1. Children who have been referred for follow-up conditions by a service provider and/or who do not have a medical home

2. Children referred by the Texas Children's Health Plan with preventable hospital admissions and emergency room visits primarily with a diagnosis of asthma.

3. Adults who do not have a medical home or who have chronic health conditions (diabetes, hypertension or risk for chronic disease based on a health assessment) which will benefit from self-management programs)**.**

Core service components of the project include: 1) Patient navigation 2) Case management and care coordination 3) Evidence based self-care management programming 4) Evidence based health education

The following core activities will be provided in the Houston Health Connect service delivery system:

- Assessment
- Program education
- Intake
- Assignment to a tiered service system
- Individualized service planning

The service delivery system encompasses four (4) tiers and includes group supports, as necessary. The tiered system ensures the appropriate level of intervention, thus empowering the client toward self-sufficiency, yet providing a full array of services and supports, as needed. Clients will be tiered according to level of strengths and needs and enrolled in the appropriate Health Connect program component.

The following summarizes services associated with each tier:
Tier 1 Universal Services: Navigation assistance to assist clients with medical home access, basic needs referral, education, and training.

Tier 2 Targeted Services: Care coordination to address clients with more complex needs, includes individualized in-home services.

Tier 3 Specialized Services: Care team to address more intensive needs, includes individualized in-home services.

Tier 4 Acute Care: Care team(s) to address urgent and critical needs with individuals and families, includes individualized in-home services.

Methodology and Assessment of Needs
The project will serve clients who 1) access existing HDHHS programs for services and 2) are referred by partner agencies for follow-up and prevention activities.

HDHHS personnel will do a brief health and wellness assessment for clients who are served through existing HDHHS programs (e.g. TB, STD, immunizations, community service centers, oral health, Kids Vision, Project Saving Smiles, etc.) to determine if client has a medical home, level of health and wellness. If the assessment reveals that the client does not have a medical home and/or does not routinely use the medical home based on the clinical preventive guidelines, the client will receive brief education about the benefits of the Health Connect program.

Clients who are interested in enrolling in the program, will receive a more detailed assessment by an assigned intake worker. The intake worker will determine the tier assignment for the client and contact the client to the appropriate service provider (i.e. navigator, public health nurse, etc.).
The navigator will assist clients at the tier 1 or tier 2 level of need. The primary objective for this tier will be to assure that clients are linked to a medical home.

Clients who are assessed in a tier 3 or 4 level of need will be assigned to a trained counselor or nurse case management depending on whether the need is primarily social or medical. The case manager will perform a more detailed assessment of needs for the client and develop a care plan tailored to the medical or social needs of the client. Clients will be linked to a primary care provider as needed and the case management will coordinate care with the primary care home. Clients who meet program criteria related to chronic disease will be educated and enrolled in the following education and self-care programs as part of the care plan as indicated:

- Chronic Disease Self-Management programs such as the Stanford's Diabetes Self-Management Program
- Multicomponent Environmental Interventions for management of chronic conditions in children

Patient navigation services along with ongoing case management and enhanced evidence based programming will be combined in a service delivery system that will ultimately increase the utilization of primary care services and reduce the utilization of crises systems such as emergency departments for the clients served by this project.

Target Zip Codes:
The project will be implemented city wide based on the referrals from the partnering agencies.

Goals and Relationship to Regional Goals:

Project Goals:
The overarching goals of the program are to promote health and wellness among the target population by providing primary and secondary prevention activities for clients to achieve the following objectives:

1) individuals in target population are linked to a medical home 2) individuals enrolled in the program receive care in the right setting 3) individuals enrolled in the program achieve the recommended health visits for the clients age group within a 12 month period 4) enrolled individuals can effectively manage targeted chronic health conditions through evidence based self-care management programs 5) individuals are linked to ancillary services that improve client's health and well-being

This project meets the following regional goals:

- Increase access to primary and specialty care services, with a focus on underserved populations, to ensure patients receive the most appropriate care for their condition, regardless of where they live or their ability to pay.

Challenges:

The performing provider expects to face challenges in coordinating services for patients across health care delivery systems. HDHHS will reach out to service partners to maintain effective communications that will lead to overcoming issues around coordination. Additionally, HDHHS anticipates challenges with engaging clients to actively participate in sustained navigation and follow-up activities. HDHHS will overcome these barriers by assuring that assigned staff are trained on effective engagement and motivational techniques.

3-Year Expected Outcome for Provider and Patients:
The performing provider expects decrease in costs to public systems (ER) by navigating disconnected persons to primary care. This is expected to reduce primary care related ED visits by 5% and 10% in DY4 & 5 respectively from that in DY3.

Starting Point/Baseline:

This is a new initiative. A baseline will be established in the first year of full operation (DY3).

Rationale: Patient navigators help patients and their families navigate the fragmented maze of doctors' offices, clinics, hospitals, out-patient centers, payment systems, support organizations and other components of the healthcare system. Services provided by patient navigators vary by program and the needs of the patient, but often include

Project Components:

Required core project components:

a) Identify frequent ED users and use navigators as part of a preventable ED reduction program. Train health care navigators in cultural competency.
This program will identify, track and follow up frequent ED users and utilize navigators to connect frequent ED users to appropriate primary care. All navigators will be trained in cultural competency, which is particularly important due to the changing demographics and ethnic diversity of Houston.

b) Deploy innovative health care personnel, such as case managers/workers, community health workers and other types of health professionals as patient navigators.
This program will utilize navigators with varying levels of qualifications. The navigators will use a 4 tiered system to triage patients to the right level of care.

c) Connect patients to primary and preventive care This component of navigation is the primary goal of the program. All clients will be connected by navigator or case manager to a medical home after they have been placed in a tiered system.

d) Increase access to care management and/or chronic care management, including education in chronic disease self-management. Individuals targeted by this program will be connected to self-management programs for diabetes, hypertension and other chronic conditions. In addition they will be provided access to health screenings for preventive care.

e) Conduct quality improvement for project using methods such as rapid cycle improvement. Activities may include, but are not limited to, identifying project impacts, identifying "lessons learned," opportunities to scale all or part of the project to a broader patient population, and identifying key challenges associated with expansion of the project, including special considerations for safety-net populations. A process and outcome evaluation will be developed for the project and a continuous quality improvement (CQI) process will be put in place. Detailed

notes on lessons learned and best practices will be documented and changes in program processes will be instituted based on the lessons learned.

Unique community need identification numbers the project addresses:

This project addresses the following community needs: 1) CN-20 Lack of access to programs providing health promotion education, training and support, including screenings, nutrition counseling, patient education programs 2) CN.8 High rates of inappropriate emergency department utilization 3) CN.23 Lack of patient navigation, patient and family education and information programs

How the project represents a new initiative or significantly enhances an existing delivery system reform initiative:

This navigation project will target both children and adults who do not have access to or do not utilize a medical home. In many cases, this may mean connecting both parents and children in a family to appropriate primary care. This project represents the first coordinated effort to improve primary and preventive care services beyond immunizations between the Houston Department of Health and Human Services and the Texas Children's Health Plan. Additionally, this program expands access to navigation services to adults beyond the normal scope of HDHHS' normal public health clinical services (TB, STD, immunizations, etc.).

Related Category 3 Outcome Measures: Tentative Choice

P- 3 Develop and test data systems

P- 4 Conduct Plan Do Study Act (PDSA) cycles to improve data collection and intervention activities

IT-9.2 ED appropriate utilization ***(Standalone measure) TENTATIVE***
☐Reduce all ED visits (including ACSC)271
Numerator: Number of patients that went to ED for a primary care related condition after participating in navigation program

Denominator: Number of patients that participated in the navigation program

Reasons/rational for the selecting the outcome measures:

Navigation services provided to patients using the ED as high users or for episodic care can help reduce ED usage by making PCP or medical home appointments and ensuring continuity of care.

Relationship to Other Projects:

We plan to participate in a region-wide learning collaborative(s) as offered by the Anchor entity for Region 3, Harris Health System. Our participation in this collaborative with other Performing Providers within the region that have similar projects will facilitate sharing of challenges and testing of new ideas and solutions to promote continuous improvement in our Region's healthcare system.

The need for navigation in Region 3 is considerable and the proposed navigation initiatives in our RHP plan will play a small but important role in connecting individual without a primary care physician to a medical home. The outpatient focus of many RHP Plan initiatives will help numerous facilities focus to treating the patients in an ambulatory setting as well as continued navigation of services with a focus to keeping patients from the inpatient unit. This initiative is similar to many others in terms of their focus on navigation.

The ability to properly identify and monitor specific patients with chronic conditions or frequent emergency department utilization trends will allow the region to accurately mange the very large patient base. Patient navigation includes a comprehensive list of tasks as well as unique provider types based

on the focus of the initiative and will help the focus of cost containment, emergency department utilization, and chronic disease management. The Region 3 Initiative Grid in the addendum allows for a cross reference of all initiatives proposed within this concept.

Project Valuation:

HDHHS utilized two categories to calculate value for each DSRIP project. The first category is Prioritization and the second is Public Health Impact (see attachment for HDHHS Valuation Tool). HDHHS scored the project on a scale of 1 (poor) to 9 (exceptional) for each of the six factors that comprise the Prioritization category. The Prioritization category includes the following factors: 1) Transformational Impact, 2) Population Served / Project Size, 3) Alignment with Community Needs, 4) Cost Avoidance, 5) Partnership Collaboration and 6)Sustainability. Each factor was then given a weighted score based on the score rated and a pre-determined percentage weight. The six weighted scores were added to get a composite score for the Prioritization category.
Public Health includes activities which seek to achieve the highest level of health for the greatest number of people. Public Health also focuses on preventing problems from happening or re-occurring through programs and activities that promote and protect the health of the entire community. As a public health department, HDHHS added an additional valuation category of Public Health Impact that looked at projects through a public health lens. The Public Health Impact category includes the following factors: 1) Alleviate Health Disparity, 2) Control Communicable and Chronic Disease , 3) Prevention Orientation, 4) Population Health Focus, 5) Access and Connection to Health Services and 6) Evidence Based Health Program. HDHHS scored the project on a scale of 1 (poor) to 9 (exceptional) for each of the six factors that comprise the Public Health Impact category. Each factor was then given a weighted score based on the score rated and a pre-determined percentage weight. The six weighted scores were added to get a composite score for the Public Health Impact category.
HDHHS gave the Prioritization score a weight of 25% and the Public Health Impact score a weight of 75% to determine the overall project value for the plan. The Houston Sobering Center received a composite Prioritization score of 5.35 and a Public Health Impact score of 6.

Relevant Article:

http://nursingworld.org/MainMenuCategories/ANAMarketplace/ANAPeriodicals/OJIN/TableofContents/Vol-17-2012/No2-May-2012/Transformacion-Para-Salud-Patient-Navigation-Model.html

#12 - Project Summary - Fort Bend County 296760601.2.100

Enhancement of Integrated Primary and Behavioral Health Care Services – Enhancement of integrated primary and behavioral health care services by adding a Screening, Brief Intervention and Referral to Treatment model (SBIRT) in an FQHC clinic.

Provider: Fort Bend County Clinical Health Services is a division of the Fort Bend County Health & Human Services Department (FBCHHS), the local health department for the County. Fort Bend County is located in the Houston metropolitan area of southeast Texas. It encompasses a total of 875.0 square miles (562,560 acres). The current population is estimated at almost 627,000. FBCHHS services include: Animal Services, Clinical Health Services, EMS, Environmental Health, Social Services, Veterans Services and Public Health Preparedness. Fort Bend County also has a Behavioral Health Services Program.

Intervention: AccessHealth, the local FQHC for Fort Bend County currently uses the IMPACT model for depression care to integrate behavioral health into primary care. The IMPACT model is a team approach that integrates depression care into primary care and other medical settings. The proposed project will enhance the current health care delivery system by adding a **S**creening, **B**rief **I**ntervention and **R**eferral to **T**reatment model (SBIRT) for at-risk persons and persons with substance abuse disorders in the AccessHealth FQHC clinic in Richmond, Texas. One of the barriers to establishing this model will be training and ensuring the health care providers are knowledgeable about alcohol /substance abuse guidelines and risk in order to screen and intervene with those in need. The project will provide increased access to training to all health care professionals at AccessHealth as well as hire a counselor to promote the medical home and coordinate wrap around services available throughout the community and within the FQHC.

Need for the project: According to SAMHSA, 21% or 74,032 adults between ages 18-64 abuse or are dependent upon alcohol (Alcohol Use Disorder). Five percent, or 17,627 adults between the ages of 18-64 abuse or are dependent upon illicit drugs (Substance Use Disorder)[4]. Currently, clinical providers in the primary care FQHC setting are not actively identifying patients with nondependent substance use who could benefit from early intervention prior to the need for more extensive or specialized treatment. AccessHealth currently serves 8,163 adult patients (adults 19 years and older). Based on average prevalence rates, we would project 408 of these patients to depend on substance abuse and expect 1,714 to be dependent on alcohol. In most situations substance and alcohol abuse are significantly under reported. Current available data from AccessHealth indicates that in 2012, AccessHealth reported 45 patients with IDC-9 for Alcohol-related disorders, 17 patients with other substance related disorders excluding tobacco, and 222 patients with tobacco related disorders. The discrepancy between available data and the scope of the problem in Fort Bend County suggests the need for increased attention to screening, brief intervention and referral to treatment. Data gathering systems will be put in place to monitor the successful referral and engagement of patients from the target populations. In addition, physicians and clinical staff will be trained on how to identify the target group and successfully refer them into the program.

Target Population: SBIRT's early intervention approach targets those with nondependent substance use to provide effective strategies for intervention prior to the need for more extensive or specialized treatment. This approach is in contrast with the primary focus of specialized treatment of individuals with more severe substance use, or those who have met the criteria for diagnosis of a Substance Use

Disorder. It is designed to detect current health problems related to at-risk alcohol and substance use at an early stage, before these health problems result in more serious disease or other health problems.

Category 2 Patient Benefit Milestones: The program will help identify and respond to the use of substances at the primary care level rather than trauma centers or rehab specialists. The doctor- patient relationship provides an ideal setting to educate patients about how alcohol and drug use impacts their health, or if the amounts they use are dangerous. SBIRT opens up a dialogue that can improve the patients' overall health as opposed to episodic disease care in high cost resource settings.

Quantifiable Patient Impact:
An anticipated 150 patients will be served in DY3, 225 in DY4 and 300 DY5. The cumulative quantifiable patient impact is 675.

Category 3 Outcome Measures: IT 11.8 – 10% (DY4) and 20% (DY5) Initiation and Engagement of Alcohol and Other Drug Dependence Treatment.

Project Option 2.15.1 – Design, Implement, And Evaluate Projects That Provide Integrated Primary Behavioral Health Care Services – Enhancement of Integrated Primary and Behavioral Health Care Services

Unique RHP Project Identification Number: 296760601.2.100
Performing Provider Name /TPI: Fort Bend County Clinical Health Services / 2967606-01

Project Description: Fort Bend County proposes to enhance the integration of behavioral health services into a primary care setting for the Medicaid and uninsured population. AccessHealth, the local FQHC for FB County currently uses the IMPACT model for integration of behavioral health into primary care. The proposed project will enhance the current health care delivery system by adding a **S**creening, **B**rief **I**ntervention and **R**eferral to **T**reatment model (SBIRT) in the AccessHealth FQHC clinic in Richmond, Texas. This evidence-based model includes: **Screening**: Universal screening for quickly assessing use and severity of alcohol, illicit drugs, and prescription drug abuse. **Brief Intervention**: Brief motivational and awareness-raising intervention given to risky or problematic substance users. **Referral** to **Treatment**: Referrals to specialty care for patients with substance use disorders. These enhanced substance abuse screening, intervention and referral services will be delivered by the Fort Bend Regional Council on Substance Abuse, Inc. SBIRT's early intervention approach targets those with nondependent substance use to provide effective strategies for intervention prior to the need for more extensive or specialized treatment. This approach is in contrast with the primary focus of specialized treatment of individuals with more severe substance use, or those who have met the criteria for diagnosis of a Substance Use Disorder. It is designed to detect current health problems related to at-risk alcohol and substance use at an early stage, before they result in more serious disease or other health problems. In addition, the increased awareness and intervention services will improve the likelihood of patient compliance with the chronic disease regimens, particularly for diabetes and obesity. This will be an added component to the patient-centered medical home through a team oriented approach. Physicians and the clinical team will receive training in the SBIRT evidence-based model.

Goals and Relationship to Regional Goals: The goal of this project is to enhance the delivery of integrated behavioral health services within a primary care setting (local FQHC) by adding a Screening, Brief Intervention and Referral to Treatment model (SBRIT). SBRITs early intervention approach is designed to detect current health problems related to, or exacerbated by, at-risk alcohol and substance abuse at an early stage, before they result in more serious disease or other health problems. This project will result in early detection of alcohol and substance abuse disorders and referral to appropriate services / interventions. Increased education about alcohol and substance abuse risk factors and referral to appropriate referral services are likely to improve adherence to primary and chronic care regimens.

The project meets the following regional goals:

- Develop a regional approach to health care delivery that leverages and improves on existing programs and infrastructure that is responsive to patient needs throughout the entire region, and improves health care outcomes and patient satisfaction; and
- Increase access to primary and specialty care services, with a focus on underserved populations, to ensure patients receive the most appropriate care for their condition, regardless of where they live or their ability to pay

Challenges: The populations that this project seeks to serve have established patterns of behavior that are not conducive to improved health or to cost effective use of existing medical resources. As with any intervention that seeks to change current behavior, this project will need to be patient centered and be

flexible to encourage the change in behavior that is desired. Physicians and clinical staff will need to be trained to more effectively identify these behavioral health disorders.
<u>5-year Expected Outcome for Provider and Patients:</u>
Fort Bend County expects to see decreases in use of the ED, EMS and criminal justice system for non-urgent conditions, to see improvements in early intervention practices and health status of the targeted population, improved participation with the Intervention Group, an improvement in recognition of available community resources, and coordination of wrap around services for all.
<u>Starting Point/Baseline:</u> Currently substance abuse is extremely under-reported although Fort Bend County Clinical Health Services; Fort Bend Regional Council on Substance Abuse, Inc. and the FQHC have some data points as background rationale for the project. AccessHealth does not currently provide substance abuse services, but they do document with ICD-9 codes. FBRC proposes to initially target the behavioral health patients at the clinic; this could readily be expanded to primary care based on needs of the population. Data will be gathered on past and current users of the FQHC. In 2012, AccessHealth reported 45 patients with IDC-9 for Alcohol-related disorders, 17 patients with other substance related disorders excluding tobacco, and 222 patients with tobacco related disorders. Data gathering systems will be put in place to monitor the successful referral and engagement of patients from the target populations. In addition, physicians and clinical staff will be trained on how to identify the target group and successfully refer them into the program.
<u>Rationale:</u> AccessHealth, the local FQHC for Fort Bend County currently uses the IMPACT model for integration of behavioral health into primary care. The proposed project will enhance the current health care delivery system by adding a **S**creening, **B**rief **I**ntervention and **R**eferral to **T**reatment model (SBIRT) in the AccessHealth FQHC clinic in Richmond, Texas. AccessHealth currently serves 8,163 adult patients (adults 19 years and older). Based on average prevalence rates, we would project 408 of these patients to depend on substance abuse and expect 1,714 to be dependent on alcohol. In most situations substance and alcohol abuse is significantly under-reported. Current available data from AccessHealth indicates that in 2012, AccessHealth reported 45 patients with IDC-9 for Alcohol-related disorders, 17 patients with other substance related disorders excluding tobacco, and 222 patients with tobacco related disorders. The discrepancy between available data and the scope of the problem in Fort Bend County suggests the need for increased attention to screening, brief intervention and referral to treatment. Currently, clinical providers in the primary care FQHC setting are not actively identifying patients with nondependent substance use who could benefit from early intervention prior to the need for more extensive or specialized treatment. Data gathering systems will be put in place to monitor the successful referral and engagement of patients from the target populations. In addition, physicians and clinical staff will be trained on how to identify the target group and successfully refer them into the program.

Considering the prevalence of substance abuse, under identification and early intervention, it is a sound plan for primary care practitioners rather than trauma centers or rehab specialists to be the first line of substance abuse response. In many areas, primary care practitioners are the only healthcare providers. This offers a cost effective, proven model to reduce the incidence of co-morbidity among patients in primary and behavioral health care environments. Primary care is one of the most convenient points of contact for substance use issues. Many patients are more likely to discuss this subject with their family physician than a relative, therapist, or rehab specialist. The doctor-patient relationship provides an ideal setting to educate patients about how alcohol and drug use impacts their health, or if the amounts they use are dangerous. SBIRT opens up a dialogue that can detect current health problems related to at-risk alcohol and substance use at an early stage, before these health problems result in more serious disease or other health problems, improving the patients' overall health.

Fort Bend County does not have a hospital district structure for indigent healthcare or for the uninsured and underinsured population of the County. The County participates in the state mandated Indigent Health Care Program which provides care for qualifying individuals whose income is below 22% of the Federal Poverty Level. With a population estimate of 627,000, there are more than 48,500 (8%) individuals living below the Federal Poverty Level and up to 115,140 uninsured at this time in the County[1]. For these individuals, medical care is often beyond their economic reach. Cash payment options and even sliding scale fees take lower priority than housing payments and food. The County Indigent Health Care program currently uses the IMPACT model for depression and does not have a substance abuse intervention model. Substance abuse screening is not currently a component of the intake process at the FQHC, leaving insufficient access to integrated care programs for behavioral health and physical health conditions, inadequate access to behavioral health care and under- identification of individuals who would benefit from early intervention. In addition, valuable continuing care coordination and follow-up is lost.

Quantifiable Patient Impact: It is expected that the quantifiable patient impact (QPI) of 150 patients will be served in DY3, 225 in DY4 and 300 DY5. The cumulative quantifiable patient impact is 675.

Project Components:

Required core project components: 2.15.1

a) Identify sites for integrated care projects, which would have the potential to benefit a significant number of patients in the community.
   i. This project will involve providing funding to Fort Bend Regional Council on Substance Abuse, Inc. so they may hire a SBIRT counselor to be housed in the FQHC, AccessHealth. All clinical staff at AccessHealth will be able to refer patients identified as having a substance abuse issue to the SBIRT counselor.

b) Develop provider agreements whereby co-scheduling and information sharing between physical health and behavioral health providers could be facilitated.
   i. Fort Bend Regional Council on Substance Abuse, Inc. will hire a SBIRT counselor to be housed in the FQHC, AccessHealth. Dummy codes will also be created in the EHR system so they may share information between both entities. All primary care clinical staff at AccessHealth will be able to easily refer behavioral health patients to the SBIRT counselor. The counselor will coordinate wrap around services for the patient if necessary.
   ii. A partnership of the Federally Qualified Health Center, Fort Bend Regional Council on Substance Abuse, Inc, Emergency Medical Service, and additional community partners would collaborate on a systematic method of identifying nondependent substance use to provide effective strategies for intervention prior to the need for more extensive or specialized treatment for those who are covered by Medicaid, Medicare, or the County Indigent Health Care program or who are self-pay. The identified clients would be referred into a care management program at the FQHC led by Community Health Workers. Fort Bend County Health & Human Services will subcontract with the FQHC to provide payment for clients referred by the program whose care is not covered by an insurance program and who cannot afford care. Community Health Workers will assume responsibility for contacting the referred individuals to establish a relationship, set appointments, and assist with medication compliance and encouragement for follow up visits to establish the FQHC as the medical home.

c) Establish protocols and processes for communication, data-sharing, and referral between behavioral and physical health providers.
   i. A series of meetings will be set up between Fort Bend County, AccessHealth and Fort Bend Regional Council on Substance Abuse, Inc to discuss data-sharing and communication.

d) Recruit a number of specialty providers (physical health, mental health, substance abuse, etc.) to provide services in the specified locations.
    i. A SBIRT counselor will be added to the clinic roster at AccessHealth. This will add a component to the patient-centered medical home through a team oriented approach. FBRC's Counselor will work with the front desk staff, allied health staff, nurses, behavioral and primary healthcare clinicians to collaboratively implement the SBIRT program. SBIRT is not designed as a stand-alone program and is integrated into supporting clinic systems.

e) Train physical and behavioral health providers in protocols, effective communication and team approach. Build a shared culture of treatment to include specific protocols and methods of information sharing that include:
    a. Regular consultative meetings between physical health and behavioral health practitioners;
    b. Case conferences on an individual as-needed basis to discuss individuals served by both types of practitioners; and/or
    c. Shared treatment plans co-developed by both physical health and behavioral health practitioners.
        i. A protocol will be developed, training material and training sessions will be held at AccessHealth. All clinical providers at AccessHealth will be required to attend training sessions.
        ii. Providers at AccessHealth will hold meetings as-needed to discuss patients and share information regarding the challenges and successes.

f) Acquire data reporting, communication and collection tools (equipment) to be used in the integrated setting, which may include an integrated Electronic Health Record system or participation in a health information exchange- depending on the size and scope of the local project.
    i. AccessHealth will add dummy codes to their Electronic Health Record system so that patients referred in and referred out may be tracked in the database.

g) Explore the need for and develop any necessary legal agreements that may be needed for collaborative practice.
    i. Since Fort Bend Regional Council on Substance Abuse, Inc. will hire a SBIRT counselor to be housed in the FQHC, AccessHealth, a legal agreement will be created and signed by both entities.

h) Arrange for utilities and building services for these settings.
    i. AccessHealth will be the location for this project; the SBIRT counselor will be housed here as well. All clinical staff at AccessHealth will be able to easily refer behavioral health patients to the SBIRT counselor.

i) Develop and implement data collection and reporting mechanisms and standards to track the utilization of integrated services as well as the health care outcomes of individual treated in these integrated services as well as the health care outcomes of individuals treated in these integrated service settings.
    i. AccessHealth will add dummy codes to their Electronic Health Record system so that patients referred in and referred out, etc. may be tracked in the database.

j) Conduct quality improvement for project using methods such as rapid cycle improvement. Activities may include, but are not limited to, identifying "lessons learned," opportunities to scale all or part of the project to a broader patient population, and identifying key challenges associated with expansion of the project, including special considerations for safety-net populations.
    i. We plan to participate in a region-wide learning collaborative(s) as offered by the Anchor entity for Region 3, Harris Health System.

Milestones and Metrics

<u>Process Milestones and Metrics</u>

P-3 Milestone: Develop and implement a set of standards to be used for integrated services to insure effective information sharing, proper handling of referrals of behavioral health clients to physical health providers and vice versa (Metric-3.1).
P-5 Milestone: Develop integrated sites reflected in the number of locations and providers participating in the integration project (Metric- P-5.3).
P-10 Milestone: Participate in face-to-face learning (i.e. meetings or seminars) at least twice per year with other providers and the RHP to promote collaborative learning around shared or similar projects. At each face-to-face meeting, all providers should identify and agree upon several improvements (simple initiatives that all providers can do to "raise the floor" for performance). Each participating provider should publicly commit to implementing these improvements (Metric P-10.1).
Improvement Milestones and Metrics
I-8. Milestone: Integrated services (Metric I-8.1)

Unique community need identification number the project addresses:

- CN. 3 Inadequate access to behavioral health care
- CN.7 Insufficient access to care coordination practice management and integrated care treatment programs.
- CN. 12 High rates of tobacco use and excessive alcohol use
- CN.18 Insufficient access to integrated care programs for behavioral health and physical health conditions

How the project represents a new initiative for the Performing Provider or significantly enhances an existing delivery system reform initiative.

This project is intended to enhance the current model for integration of behavioral health into primary care by adding a SBIRT model in the FQHC for Fort Bend County. The doctor-patient relationship provides an ideal setting to educate patients about how alcohol and drug use impacts their health, or if the amounts they use are dangerous. SBIRT opens up a dialogue that can improve the patients' overall health. SBIRT is a cost effective, proven model to reduce the incidence of co-morbidity among patients in primary and behavioral health care environments.

This project will involve providing funding to Fort Bend Regional Council on Substance Abuse, Inc. so they may hire a SBIRT counselor to be housed in the FQHC. This will allow patients who will be referred by FQHC staff to be able to have access to individualized therapy through the clinic's Social Worker or physicians as applicable as well as any wrap around services that may be applicable. In turn, the patient will have a go-to person who can coordinate their care. Federal funding will not be used to expand the number of staff involved in patient care related to this project.

Related Category 3 Outcome Measures:

DY 3 will focus on the process milestone necessary to establish the system prior to measuring treatment outcomes for the patients and cost avoidance for the program.

- P-1 Project Planning- Engage stakeholders, identify current capacity and need resources, determine timelines and document implementation plans
- P-2 Establish Baseline Rates

DY4 and DY 5 Outcome Improvement Target

- OD-11 Behavioral Health/ Substance Abuse Care (IT 11.8 – Initiation and Engagement of Alcohol and Other Drug Dependence Treatment)

Reasons/Rationale for selecting the outcome measures:
Substance abuse decreases the likelihood of the patient to improve their health. Identifying people with alcohol and other drug disorders is an important first step in the process of care. This outcome is to

ensure the patient will receive treatment if necessary and will set them up with any wrap around services necessary to improve health outcomes.

Relationship to other Projects: This project supports the care coordination (2967606-01.2.1), expanded hours of service (2967606-01.1.2), provides an intervention for a targeted behavioral health population (296760601.2.2), and community paramedic programs (2967606-01.2.3) proposed by the county. The intent of all projects is to decrease the burden of care on the EMS, emergency departments and the criminal justice system as well as to establish a medical home and improved coordination of care model for chronic and non-emergent conditions that will improve the health of the individuals involved, resulting in improved health and reduce the cost of care. This project will also add a component to the patient-centered medical home through a team oriented approach.

Relationship to Other Performing Providers' Projects in the RHP: Primary Care/Ambulatory Care clinics are a top priority to Region 3 due to the acuity of the regional patient mix, population concentration, and lack of primary care access points for our patient base. The regional approach of collaboration as well as existing patient referral pattern relationships allowed our team to properly identify the community needs based on the necessity of population, uninsured, and medically underserved patient bases. This program is consistent with our region and similar to numerous initiatives in our RHP plan sharing both concepts as well as outcome measures focused to percent improvement over baseline of patient satisfaction scores, reduction of inappropriate ED and/or criminal justice system utilization, and behavioral health intervention.

Plan for Learning Collaborative: We plan to participate in a region-wide learning collaborative(s) as offered by the Anchor entity for Region 3, Harris Health System. Our participation in this collaborative with other Performing Providers within the region that have similar projects will facilitate sharing of challenges and testing of new ideas and solutions to promote continuous improvement in our Region's healthcare system.

Project Valuation: This project addresses a top priority identified by the FBC 1115 Behavioral Health planning group: Enhance the integration of behavioral health services into a primary care setting for the Medicaid and uninsured population. This project aims to identify and respond to alcohol and substance use at the primary care level rather than trauma centers or rehab specialists. The doctor-patient relationship is an ideal setting to educate patients on how alcohol and drug use impacts their health, or if the amounts they use are dangerous. SBIRT opens up a dialogue that can improve the patients' overall health as opposed to episodic disease care in high cost resource settings.

Valuation is based on cost avoidance, projecting savings associated with early intervention and to detect current health problems in the target population related to at-risk alcohol and substance use at an early stage, before these health problems result in more serious disease or other health problems. In 2012, AccessHealth reported 45 patients with IDC-9 for Alcohol-related disorders, 17 patients with other substance related disorders excluding tobacco, and 222 patients with tobacco related disorders. Research shows that people who received screening and brief intervention in an emergency department, hospital or primary care office experienced 20% fewer emergency department visits, 33% fewer nonfatal injuries, 37% fewer hospitalizations, 46% fewer arrests and 50% fewer motor vehicle crashes[8] resulting in a cost saving of approximately $1,151 per patient[7].With successful early intervention, Fort Bend County will have an annual net healthcare cost savings of $947 per patient[7]. In addition, every $1 spent on SBIRT results in a savings of $4 in health care costs[9] – which can mean up to $2 billion in hospital savings every year[5]. Every man, woman, and child in America pays nearly $1,000 annually to cover the costs of unnecessary health care, extra law enforcement, motor vehicle crashes, crime, and lost productivity due to substance abuse[10].

References:

1. http://www.rgkcenter.org/sites/default/files/file/research/FB%20Report_for_posting.pdf
2. Alcohol Misuse Screening and Behavioral Counseling: Technical Report Prepared for the National. Commission on Prevention Priorities (2008), (pp. 20-22). Michael V. Maciosek, PhD*, Leif L Solberg, MD*, Nichol M. Edwards, MS*, and Dana A. McGree* under contract from the Centers for Disease. Control and Prevention (CDC) and the Agency for Healthcare Research and Quality (AHRQ).
3. Screening, Brief Intervention, and Referral to Treatment (SBIRT): toward a public health approach to the management of substance abuse. Babor TF, McRee BG, Kassebaum PA, Grimaldi PL, Ahmed K, Bray J. University of Connecticut School of Medicine, 263 Farmington Avenue, Farmington, CT 06030, USA
4. http://www.samhsa.gov/data/NSDUH/2012SummNatFindDetTables/Index.aspx
5. https://sph.uth.edu/content/uploads/2011/12/SBIRT-Booklet.pdf
6. http://www.utexas.edu/research/cswr/nida/researchProjects/sbirt.html
7. https://www.icsi.org/_asset/b5x2lt/Fact-Sheet---IMPACT-SBIRT-Reduce-Costs---FINAL.pdf
8. http://www.integration.samhsa.gov/SBIRT_Issue_Brief.pdf
9. http://www.ncmedicaljournal.com/wp-content/uploads/NCMJ/Full_Issues/ncmj_70:1.pdf#page=40
10. http://www.dronet.org/lineeguida/ligu_pdf/primcare.pdf

#13 - Project Option 1.12.2 - UT Physicians-DePelchin Children's Center Comprehensive Trauma Informed Care Screening and Intervention Project

Unique RHP Project ID: 111810101.1.100
Performing Provider Name/TPI: UTHealth, UTPhysicians / 111810101

Project Summary:

Providers: UT Physicians is the clinical practice of The University of Texas Medical School at Houston. With more than 900 physicians certified in 80 medical specialties and subspecialties, 906 residents and fellows, and 283,920 patient visits in 2011. In addition to our flagship location in the Texas Medical Center, UT Physicians has neighborhood locations throughout the Greater Houston area. DePelchin, a private, non-profit, nonsectarian United Way agency, is one of the largest providers of mental health, foster care, and adoption services within Texas, serving more than 20,000 children, youth, and families annually. DePelchin is an accredited behavioral health provider and continues to serve as a major provider of CHIP and Medicaid funded mental health services for children and youth.

Intervention(s): The program will expand capacity and access to Trauma Informed care (TIC) mental health services for children and adolescents and will conduct mental health assessments, and provide a number of interventions with a particular focus on addressing trauma in underserved children. The TIC primary intervention offered will include Trauma-Focused Cognitive Behavioral Therapy (TF-CBT), an evidence-based practice and general counseling (such as Cognitive Behavioral Therapy). In order to expand access and capacity, these interventions will be anchored in DePelchin satellite clinics in proximity to several areas of socioeconomic need and will then progressively expand to community settings such as schools and primary care clinics. Developing a telemedicine capability for children in Foster Care.

Need for the project: In 2011, Harris County Protective Services (CPS) had 5,493 confirmed cases of abuse and neglect, a likely underestimation of the total affected as up to 43% of cases go unreported. Among the most common sequelae of abuse and neglect and other trauma are post-traumatic stress disorder (PTSD) and a variety of other behavioral and emotional conditions.

Target Population: Children and adolescents, ages 3-17 years, from predominantly lower socioeconomic backgrounds. We estimate at least 40% will be from the Medicaid/uninsured population.

Category 1 or 2 expected patient benefits: We expect to deliver mental health services to at least 3,200 children by DY5, with at least 40% being Medicaid/low-income clients.

Category 3 outcomes: We are considering using the IT-11.27.e outcome measure—the Children and Adolescent Needs and Strengths Assessment (CANS)

Project Option 1.12.2 - UT Physicians-DePelchin Children's Center Comprehensive Trauma Informed Care Screening and Intervention Project

Unique RHP Project ID: 111810101.1.102
Performing Provider Name/TPI: UTHealth, UTPhysicians / 111810101

Project Description:

Given the high prevalence of psychosocial trauma among children and adolescents, especially in lower socio-economic areas of the Houston metropolitan area, we are proposing, through a partnership between University of Texas (UT) Physicians and the DePelchin Children's Center, to develop and administer a program for Trauma Informed Care (TIC) including screening, assessment, and intervention with children and adolescents who have been exposed to traumatic events, and their families. Partnering with local public, charter, and community schools, local community resources, and organizations working with children at high risk (e.g., Communities in Schools), the program will seek to reduce the disparity of mental health services for underserved communities in the Greater Houston Area, using through culturally competent services.

UT Physicians is the medical group practice of The University of Texas Medical School at Houston. We provide comprehensive multi-specialty care for adults, adolescents and children, from routine wellness exams, to care for common illnesses, to highly-specialized treatments for complex medical conditions. UT Physicians offers high-quality personalized care at its flagship in the Texas Medical Center and at health centers throughout the Houston community. An internationally-recognized team of medical experts includes more than 900 doctors certified in 80 medical specialties.

UT Physicians will partner with DePelchin Children's Center (DePelchin) for the implementation of this project. DePelchin, a private, non-profit, nonsectarian United Way agency, has served the Greater Houston area for over 120 years. DePelchin offers interventions designed to empower children, youth, their families, and their communities with the resources necessary for healthy family functioning. DePelchin is one of the largest providers of mental health, foster care, and adoption services within Texas, serving more than 20,000 children, youth, and families annually. DePelchin is an accredited behavioral health provider, offering clinical interventions, supportive services, training, education, and consultation through a range of programs DePelchin's community-based behavioral health services are provided in seven locations throughout the Metropolitan area. DePelchin continues to serve as a major provider of CHIP and Medicaid funded mental health services for children and youth.

DePelchin clinicians are trained in a variety of trauma-focused interventions, including Trauma-Focused Cognitive Behavioral Therapy (TF-CBT), Parent-Child Interaction Therapy (PCIT), Child Adult Relationship Enhancement, Psychological First Aid, Trauma Assessment Pathway, and Strengthening Family Coping Resources (SFCR). In addition to the interventions, DePelchin also utilizes validated, standardized trauma-focused assessments in order to assess the mental health needs of children who experienced trauma. Examples include, the Trauma Symptom Checklist for Children (TSCC), the Trauma Symptom Checklist for Children - Alternate (TSCC-A), the Traumatic Events Screening Inventory (TESI).

The program, a partnership between DePelchin and the UT Health-UT Physicians, will expand capacity and access to Trauma Informed care (TIC) mental health services for children and adolescents and will conduct mental health assessments, and provide a number of interventions with a particular focus on addressing trauma in underserved children. The TIC primary intervention offered will include Trauma-Focused Cognitive Behavioral Therapy (TF-CBT), an evidence-based practice. The program will also provide general counseling (such as Cognitive Behavioral Therapy, an evidence-based practice,

for children experiencing general behavioral and emotional problems such as depression and anxiety, parent management training, support groups, and case management services for families with complex needs.) In order to expand access and capacity, these interventions will be anchored in DePelchin satellite clinics in proximity to several areas of socioeconomic need and limited access to mental health services. In addition, we plan to develop our telemedicine capability to serve children in Foster Care.

Each site for the project will assist in identifying appropriate referral sources including schools (public, parochial, and charter), primary care providers (including FQHC centers), local community sites (community centers, libraries, multi-service centers) and social service agencies (e.g., CPS and DFPS). Program personnel will visit each referral source and orient their staff to the project with return visits and follow-up communications at regular intervals. Project relevant information will also be provided on the DePelchin web site, and disseminated through networks of local agencies. Printed information will also be available and distributed to the above sites.

Families of prospective patients will phone into a centralized number (DePelchin ACCESS) who will take relevant demographic and basic clinical information and schedule an assessment at the most proximate site for the family. Emergent or critical cases (crises) will be forwarded for review by the DePelchin medical director or his designate with appropriate disposition.

A master's level clinician will provide a Comprehensive Psychosocial Assessment including interviews with patient and parent/guardian in addition to review of relevant medical/mental health treatment history, school functioning (educational and behavioral questionnaires and documentation), medical history, and family functioning. Intake administration of the Category 3 outcome measure (CANS) will be completed. In addition, we screen and triage clients using the Posttraumatic Stress Disorder – Reactive Index (PTSD-RI) which assesses trauma exposure and PTSD symptoms in children age six years of age and older; and the Trauma Symptom Checklist for Children – Alternate version (TSCC-A) which assesses for posttraumatic distress and related psychological symptomatology in children age 8-16 years old. These assessments will be administered at intake, every 90 days, and at discharge. With the family, the clinician will develop a preliminary treatment plan and arrange for the appropriate level of care and intervention modalities (see below). Children and adolescents exposed to trauma will be assigned to receive TF-CBT.

TF-CBT is an evidence-based practice rated as a Model Program by the Substance Abuse and Mental Health Services Administration (SAMSHA) that addresses problems related to traumatic life experiences and has shown improvements in symptoms of traumatic stress, depression, anxiety and behavior problems. When appropriate, we will use a culturally modified (Hispanic) adaptation of the intervention, which addresses aspects of culture including spirituality, gender roles, familismo, personalismo, respeto, simpatia, and folk beliefs. TF-CBT. Each session last approximately 30-45 minutes for child and 30-45 minutes for parent. The program model also includes conjoint child-parent sessions toward the end of treatment that last approximately 30-45 minutes. Treatment lasts 12-18 sessions, although briefer protocols are being tested. A majority of existing DePelchin therapist are trained in TF-CBT. Families receiving TF-CBT may also receive parent management training, support groups, and case management services.

For patients not having significant trauma exposure, the program will also provide general counseling (such as Cognitive Behavioral Therapy, an evidence-based practice, for children experiencing general behavioral and emotional problems such as depression and anxiety, parent management training, support groups, and case management services for families with complex needs). Because of the diversity and severity of the psychopathology seen in these children and adolescents, many may have need for a psychiatric assessment and consideration of medication treatment. A child and adolescent psychiatrist will be assigned to the program and will be available at each community locality on a regular basis. The medical director for DePelchin and his designates will

be available for emergent issues. Children needing primary care will be referred to UT Physicians pediatricians and will be enrolled in primary care medical homes.

Assessment and interventions will initially be based at existing DePelchin satellite offices in West, Northwest (Spring Branch), Southwest and Southeast Houston, Baytown, and our main campus in Central North Houston. We will then progressively expand to community settings such as schools and primary care clinics. Developing a telemedicine capability will further expand our reach with families having difficulties accessing services or with compliance. The targeted communities represent areas combining two selection criteria: (1) more than 30% of the population is categorized as low-income (under 200% of the Federal Poverty Level) and (2) the density of the population not served by health centers is greater than 12,200 persons. The targeted areas and their respective zip codes are listed in the table below:

Community	Zip Codes
Baytown	77015, 77520, 77521, 77530
Central North Houston	77009, 77016, 77020, 77022, 77026, 77076, 77093
Northwest Houston (including Spring Branch)	77040, 77055, 77080, 77088, 77091, 77092
Southeast Houston	77034, 77075, 77089; 77034; 77002; 77006; 77017
Southwest Houston (including Gulfton)	77035, 77045, 77074, 77081
West Houston	77036, 77072, 77077, 77082, 77083, 77084, 77099, 77449

Target Population**.** Children and adolescents, ages 3-17 years, from predominantly lower socioeconomic backgrounds. We estimate at least 40% will be from the Medicaid/uninsured population. The targeted communities represent areas where more than 30% of the population is categorized as low-income (under 200% of the Federal Poverty Level) and the density of the population not served by health centers is greater than 12,200 persons. In addition, telemedicine-based TIC services will be delivered to Children in Foster Care; 100% of whom are covered by Medicaid.

Goal and Relationship to Regional Goals: The goals set for this Trauma Informed care (TIC) program are focused on achieving four primary mental health outcomes: (1) Increase emotional strength and resiliency children; (2) Reduce levels of traumatic stress in children with improved coping abilities and academic functioning; (3) Greater stability for families through culturally-appropriate interventions including family interventions, mental health screenings and culturally and linguistically competent services; and 4) reduction in problematic behaviors and emotional symptoms and consequent dysfunction in academic, peer, and family domains. This project addresses the following regional goal**:** Expanding TIC to children and youth in medically underserved areas relates to the regional goal of "developing a regional approach to health care delivery that leverages and improves on existing programs and infrastructure, is responsive to patient needs throughout the entire region, and improves health care outcomes and patient satisfaction".

Challenges: Given the relative short period prior to funding and the large number of youth to be served, placing appropriate numbers of trained staff may be difficult. However, DePelchin has a critical mass of TF-CBT trained staff in both its counseling and prevention programs. Additional staff should easily be hired and trained by year two when the expected contacts increase considerably. Additional challenges

include promoting referrals. DePelchin already has a substantial referral base and contacts with referral sources.

3-Year Expected Outcome for Provider and Patients: The goals set for the program are focused on achieving four primary mental health outcomes: (1) Increase emotional strength and resiliency children; (2) Reduce levels of traumatic stress in children with improved coping abilities and academic functioning; (3) Greater stability for families through culturally-appropriate interventions including family interventions, mental health screenings and culturally and linguistically competent services; and 4) reduction in problematic behaviors and emotional symptoms and consequent dysfunction in academic, peer, and family domains. Providing Trauma Informed care (TIC) to children in medically underserved communities, will increase their emotional strength and resiliency; reduce their levels of traumatic stress with improved coping abilities and academic functioning; provide greater stability for families through culturally-appropriate interventions including family interventions, mental health screenings and culturally and linguistically competent services; and reduce problematic behaviors and emotional symptoms and consequent dysfunction in academic, peer, and family domains.

Starting point/Baseline: This is a new project, so the baseline is zero.

Quantifiable Patient Impact: Our quantifiable patient impact (QPI) metric will be Milestone I-11, Metric I-11.2 for the increased number of individuals utilizing community behavioral healthcare services. Our goal has been set at 1,600 for DY4 and 1,600 for DY5.

Rationale:

According to the National Institute of Mental Health, 1 in 5 children (20%), either have, or will have a seriously debilitating mental disorder and data from the CDC's National Health and Nutrition Examination Survey showed that about 13% of children ages 8 to 15 had a “diagnosable mental disorder within the previous year,” yet in the preceeding year, only half had received treatment for their disorder. (Merikangas KR, He JP, Merikangas KR, He J, Burstein M, Swanson SA, Avenevoli S, Cui L, Benjet C, Georgiades K, Swendsen J. Lifetime prevalence of mental disorders in U.S. adolescents: Results from the National Comorbidity Study-Adolescent Supplement (NCS-A). J Am Acad Child Adolesc Psychiatry. 2010 Oct;49(10):980-989. http://www.nimh.nih.gov/statistics/1ANYDIS_CHILD.shtml) (Merikangas KR, He JP, Brody D, Fisher PW, Bourdon K, Koretz DS. Prevalence and treatment of mental disorders among US children in the 2001-2004 NHANES. Pediatrics. 2010, 125(1):75-81. http://www.nimh.nih.gov/statistics/1NHANES.shtml).

With one in five children and an estimated 15% of adolescents suffering from some type of mental illness, these groups represent a vulnerable age with only half receiving any type of treatment. With Texas' status as pending the least per capita of any state on mental illness, an estimated 14,000 youth in Houston with mental health problems attempt to gain access to a limited system of care. The need for additional treatment capacity is obvious. No area is more critical than children and adolescents exposed to trauma. Many of these trauma-exposed youth are those having been abused or neglected. In 2011, Harris County Protective Services (CPS) had 5,493 confirmed cases of abuse and neglect, a likely underestimation of the total affected as up to 43% of cases go unreported. Among the most common sequelae of abuse and neglect and other trauma are post-traumatic stress disorder (PTSD) and a variety of other behavioral and emotional conditions.

Project Components: Through the TIC Program, we propose to meet the below required project component listed below.

a) Expand the number of community based settings where behavioral health services may be delivered in underserved areas.

Unique community need identification numbers the project addresses:
CN.3 Inadequate access to behavioral health care, CN.6 Inadequate access to treatment and services designed for special needs populations, CN.7 Insufficient access to care coordination practice management and integrated care treatment programs, CN.8 High rates of inappropriate emergency department utilization, CN.12 High rates of tobacco use and excessive alcohol use, CN.13 High teen birth rates, CN.17 High rate of sexually transmitted diseases, CN.21 Inadequate transportation options or individuals in rural areas and for indigent/low income populations, CN.22 Insufficient access to services that are specifically designed to address racial, ethnic and cultural health care disparities.

Customizable Process or Improvement Milestones: None

Category 3 Outcome Measure: IT-11.27.e CANS Children and Adolescent Needs and Strengths Assessment (CANS-MH)
Description: The CANS- MH is designed to be used either as a prospective assessment tool for decision support during the process of planning services or as a retrospective assessment tool based on the review of existing information for use in the design of high quality services

Relationship to other Projects (including Other Performing Providers' Projects in the RHP):

1.6 - The nurse triage line will provide 24/7 access to care for patients receiving both behavioral and physical health care.
1.1, 1.6, 1.7, 1.9, 1.10, and 1.100 - The expansion of primary care and specialty care services in the community will help to ensure that patients seen for behavioral health needs will also have ready access to primary care providers.
2.1, 2.2, and 2.101 – Patients navigated from via this behavioral health project will have access to medical homes, coordinated care, and special medical homes for post-detention teens and teens at risk.
2.8 - Another UT Physician-DePelchin partnership involving an integrated care model (DePelchin therapists at UT satellite primary care centers) has already begun. Both this and the proposed project share a community base. Therapists in each program will share training, assessment, and intervention protocols as well as centralized oversight.

Plan for Learning Collaborative. UTHealth and DePelchin will participate in the region-wide learning collaborative as offered by the Anchor entity for Region 3, Harris Health System. Our participation in this collaborative with other Performing Providers within the region that have similar projects will facilitate sharing of challenges and testing of new ideas and solutions to promote continuous improvement in our Region's healthcare system.

Project Valuation: The RHP3 anchor facilitated a blind review process in which reviewers scored each project on 4 criteria, using a 9-point scale. The ratings for each criterion were weighted and summed for each project to arrive at a total score (value weight). All 80 projects for the region were then ranked. This projects was ranked #2 of all 80 projects submitted. We used these scores/ranking in conjunction

with other approved project valuations to arrive at the valuation assigned to this project. Below are the criteria and considerations for awarding project scores:

1. Aligned with Community Needs (Weight = 30%): Points were awarded based on judgment of whether the proposed project directly addresses one or more of the 25 identified community needs as outlined in the Regional Healthcare Partnership Plan. Projects that address a need directly and address multiple community needs were considered for a higher score.
2. Transformational Impact (Weight = 30%): Points were awarded for projects that meet the community benefit criteria, based on the following question: How likely and to what extent is this project going to positively impact the identified community needs? The highest rating was given to projects that yield a significant transformation. Those projects with a wider reach and/or evidence-based should be considered for a higher score.
3. Committed IGT (25%): Points based on ability to demonstrate that the project is supported by a committed IGT source. All of our projects have committed IGT and were therefore assigned the highest rating of points.
4. Likelihood of Success (Weight = 15%): Points based on determination of whether the goals of the project were achievable.

#14 - Project Option: 1.13 PROVIDE AN INTERVENTION FOR A TARGETED BEHAVIORAL HEALTH POPULATION TO PREVENT UNNECESSARY USE OF SERVICES IN A SPECIFIED SETTING: Expansion of Co-Occurring Disorders program

Project Number: 113180703.1.100
Performing Provider/TPI: MHMRA Harris County/113180703
Provide an intervention for a targeted behavioral health population to prevent unnecessary use of services in a specified setting: **Expansion of Co-Occurring Disorders program**

Provider: The Mental Health and Mental Retardation Authority (MHMRA) of Harris County is a public agency serving as the safety net provider for adults with serious mental illnesses, for children and adolescents with serious emotional disorders, for the developmentally delayed and for individuals experiencing acute psychiatric distress. MHMRA provides inpatient, residential and outpatient treatments, including psycho-therapy, case management and medication management for individuals. MHMRA serves more than 49,000 Harris County residents out of a culturally and ethnically diverse population of over 4.1 million. Of those individuals who received any agency service in FY12, 36.5% were medically indigent and 51.9% had Medicaid. Of those who received mental health services in FY12, such as those being proposed in this project, 55% were medically indigent and 34.9% had Medicaid.

Intervention(s): MHMRA will expand its current co-occurring disorders program from a 30 bed to an ultimate 60 bed capacity. In this program, MHMRA partners with licensed chemical dependency residential treatment providers to offer up to 90 days of integrated co-occurring disorders care. Current research indicates this is a best practice and requires a wide range of collaboration between substance-use and mental health arenas. Integrated treatment providers have a broad knowledge base and are equipped to treat individuals with co-occurring disorders.

Need for the project: When the Co-Occurring Disorders program was initiated in the Comprehensive Psychiatric Emergency Program 5 years ago it had a 40-bed capacity which filled quickly as an indication of the level of need. It has maintained a wait-list over the years of operation. Since bed capacity was reduced to 30 in the 2013 budget year, the beds have been full with a substantial wait list.

Target population: This program serves individuals who have frequently accessed expensive emergency and other hospital services and jails due to the acuity associated with their co-occurring serious mental illness and substance use.

Category 1 or 2 expected patient benefits:

- Reduction in admission/readmission to HCPC
- Reduction in PES admissions/readmissions
- Individuals receive crisis stabilization services

Description of QPI metrics: 170 individuals will receive services through this expansion program

Category 3 measures: MHMRA expects to increase one domain of patient satisfaction (TBD) by 10% from baseline by DY5.

Project Option: 1.13 Development of Behavioral Health Crisis Stabilization Services as Alternatives to Hospitalization: Co-occurring disorder

Unique RHP Project Identification Number: 113180703.1.100

Performing Provider Name/TPI: Mental Health and Mental Retardation Authority of Harris County/113180703

PROJECT DESCRIPTION

The Mental Health and Mental Retardation Authority (MHMRA) of Harris County proposes to Develop a behavioral health crisis stabilization service as an alternative to Hospitalization.

The Mental Health and Mental Retardation Authority (MHMRA) of Harris County is a public agency serving as the safety net provider for adults with serious mental illnesses, for children and adolescents with serious emotional disorders, for the developmentally delayed and for individuals experiencing acute psychiatric distress. MHMRA serves more than 49,000 Harris County residents out of a culturally and ethnically diverse population of over 4.1 million. Of those who received mental health services in FY12, such as those being proposed in this project, 55% were medically indigent and 34.9% had Medicaid.

For this project, MHMRA seeks expand its current co-occurring disorders program from a 30 bed to an ultimate 60 bed capacity. In this program, MHMRA partners with licensed chemical dependency residential treatment providers to offer up to 90 days of integrated co-occurring disorders care. This program serves individuals who have frequently accessed expensive emergency and other hospital services and jails due to the acuity associated with their co-occurring serious mental illness and substance use. Current research indicates this is a best practice and requires a wide range of collaboration between substance-use and mental health arenas. Integrated treatment providers have a broad knowledge base and are equipped to treat individuals with co-occurring disorders.

Goals and Relationship to Regional Goals: The goal of the program is to assist clients in developing skills to avoid future psychiatric crises. The program will be group-driven and will provide at least two individual therapy sessions per week. The program will utilize cognitive behavioral therapy (an evidence-based practice) as the focal intervention. Symptom management, problem solving, and coping skills will be central to the model; peer support groups will also be offered.

The three-year expected outcome(s): The three-year expected outcome is a reduction in the need to expand inpatient hospital capacity and consistent linkage of those served into ongoing outpatient treatment programs. We expect that we will be fully operational to serve 321 patients in DY4 and DY5.

Expected Number of Patients Served

DY 3	DY 4	DY 5
50	60	60

Rationale: While MHMRA has implemented several crisis alternatives, there still exists a need to address individuals who may no longer be acutely ill, but are still very fragile and/or have a history of frequent hospital readmissions. A step-down residential program of intensive psychosocial treatment coupled with peer supports and after-care options is expected to help those individuals transition more successfully into ongoing treatment options.

Baseline: MHMRA does not currently have enough beds in the existing DD RTC to provide the proposed intervention; therefore, the first priority is to establish a new facility location. The bed capacity at the new location will be 24 beds, with the expectation that the program will be able to serve approximately 320 individuals per year.

Quantifiable Patient Impact:
170 individuals will receive services through this expansion program

Anticipated challenges: Challenges to implementation include locating and/or renovating appropriate program space and establishing appropriate linkage to ongoing service providers. These challenges will be addressed through stakeholder meetings including supportive housing providers, and through expansion of outpatient behavioral health services for adults with severe psychiatric conditions.

Regional goals: Approximately six out of ten individuals with substance use disorders also suffer from another mental health diagnosis. Substance use complicates the care of individuals with mental health disorders and is associated with higher usage of expensive emergency services. In addition, a large number of individuals with psychiatric diagnoses are admitted to the forensic system for substance-related offenses. There are no residential treatment programs in the Harris County catchment area that provide integrated mental health and substance use treatment. The Co-Occurring Disorders program is the only one of its kind in this county. Approximately 60% of the individuals entering the existing Co-Occurring Disorders program successfully complete 90-day treatment programs. With only 30 beds available, the current wait-list is formidable and many individuals waiting for treatment relapse and cannot be engaged again. Additional funding would meet a small volume of the individuals in Harris County who are in need of co-occurring treatment.

Community Need Identification numbers:
- CN2 Insufficient Access to Behavioral Health
- CN5 Integrated Care for Behavioral Health
- CN12 Improved Access to Patient Education
- CN13 Services for Homeless
- CN14
- Reduction of ER Services

This project directly meets broad goals identified by the regional needs assessment. First, it improves on existing programs and infrastructure by developing a COD specific to patients who would benefit from an intensive step-down program. Second, it increases access to specialty care services by providing treatment in a second location in the Houston area. This program is also an inherently patient-centered approach that provides transitional housing and residential care while linking patients to supportive community resources. The proposed program will also complement the regional need to develop a culture of "best practices" whereby the patient/consumer plays a more active role as a stakeholder by completing consumer satisfaction surveys.

This project was chosen with the expectation that community needs and regional goals would be met. The metrics chosen to assess the progress of the program focus on the reduction of readmissions services (I-X.1 Percent decrease in hospitalizations), reduction in ER services (I-X.1 Percent decrease in ER services) and reduction in Jail Bookings (10.1 Percent decrease from baseline in county jail bookings).

Relationship to other Projects: The proposed project is similar to several MHMRA DSRIP proposals, including the expansion of the Interim Care Clinic 113180703.2.1, the redesign of the transition from HCPC hospitalization to MHMRA outpatient aftercare 113180703.2.3 and Mobile Crisis service expansions 113180703.2.5 and 113180703.2.101. All four proposals seek to expand psychiatric

stabilization while reducing inpatient admissions and criminal justice involvement. It is hoped that many of the COD patients could access these less restrictive and more appropriate care levels in lieu of hospitalization. Also, this project will interface with the expansion of outpatient mental health clinic services, the collaborative primary medical and behavioral health care, and with integrating substance abuse treatment services into mental health services by referring individuals into the appropriate ongoing care alternative.

Plan for Learning Collaborative: We plan to participate in a region-wide learning collaborative offered by the Anchor entity for Region 3, Harris Health System. Our participation in this collaborative with other performing providers within the region that have similar projects will facilitate sharing of challenges and testing of new ideas and solutions to promote continuous improvement in our region's healthcare system.

REQUIRED CORE COMPONENTS

a) Convene community stakeholders who can support the development of crisis stabilization services to conduct a gap analysis of the current community crisis system and develop a specific action plan that identifies specific crisis stabilization services to address identified gaps
    - *In progress*. MHMRA convenes regularly with Harris County Psychiatric Center in a Joint Quality Council and also attends regular meetings to address patients with high recidivism rates of admissions to HCPC. From that list can be compiled a list of patients who may benefit from this step-down model. MHMRA is also a member of the Harris County Mental Health Needs Council, where issues pertaining to gaps and needs of the community are discussed.

b) Analyze the current system of crisis stabilization services available in the community including capacity of each service, current utilization patterns, eligibility criteria and discharge criteria for each service.
    - *Already completed*. MHMRA produces monthly reports on crisis stabilization services available within the agency, and has eligibility criteria and discharge criteria for each service.

c) Assess the behavioral health needs of patients currently receiving crisis services in the jails, EDs, or psychiatric hospitals. Determine the types and volume of services needed to resolve crises in community-based settings. Then conduct a gap analysis that will lead to a data-driven plan to develop specific community-based crisis stabilization alternatives that will meet the behavioral health needs of the patients (*e.g.*, a minor emergency stabilization site for first responders to utilize as an alternative to costly and time consuming Emergency Department settings)
    - *In progress*. MHMRA convenes regularly with Harris County Psychiatric Center in a Joint Quality Council and also attends regular meetings to address patients with high recidivism rates of admissions to HCPC. From that list can be compiled a list of patients who may benefit from this step-down model.

d) Explore potential crisis residential alternative service models and determine an acceptable and feasible program design for implementation.
    - *In progress*. MHMRA convenes regularly with Harris County Psychiatric Center in a Joint Quality Council and also attends regular meetings to address patients with high recidivism rates of admissions to HCPC. Also, a review of current literature such as SAMSHA best practices can be reviewed for program design of step-down models.

e) Review the intervention(s) impact on access to and quality of behavioral health crisis stabilization services and identify "lessons learned," opportunities to scale all or part of the

intervention(s) to a broader patient population, and identify key challenges associated with expansion of the intervention(s), including special considerations for safety-net populations

- *To be completed*. MHMRA will work with the outcomes department and key stakeholders to review impact and access, identify challenges and refine the intervention strategies.

Category 3 Measures: OD-6: IT-6.1: Patient Satisfaction: Improve patient satisfaction as measured by CAHPS by 3% over baseline by DY5. We believe patient satisfaction that addresses involvement in shared decision making, access to providers, and communication with providers, will reduce preventable admissions and readmissions to psychiatric emergency services. If patients are dissatisfied with services or the process, they may continue to over-utilize emergency services rather than engaging in preventative care.

OD- 9: IT-9.1: Functional Status: Improve functional status by ANSA by 3% over baseline by DY5. Engaging these adolescents in treatment options prior to aging out of the foster care system can reduce factors leading to crisis. Integrating services within the foster care system would provide support and transitional services to reduce trauma, substance abuse, onset of major mental illnesses, and emergence of gender identity issues to adolescents who are expected to experience the greatest difficulty transitioning into healthy adulthood.

PROJECT VALUATION

In the effort to value the proposed project accurately, assistance was sought from H. Shelton Brown, Ph.D. of the UT Houston School of Public Health and Thomas Bohman, Ph.D. of the UT Austin Center for Social Work Research. Their consultation was limited to only the valuation section of this document. The primary valuation method uses cost-utility analysis (a type of cost-effectiveness research) and additional information is reported on potential, future costs saved. The value of each of the above delivery systems will be reviewed separately. The total valuation will be the sum of the individual component valuations.

Valuations should be based on economic evaluation principles that identify, measure, and value the relevant costs and consequences of two or more alternatives. Typically, one alternative is a new program, while the second is treatment as usual. Cost-utility analysis (CUA) measures the cost of the program in dollars and the health consequences in utility-weighted units. This valuation uses a quality-adjusted life-years (QALYs) analysis that combines health quality (utility) with length of time in a particular health state.

Cost-utility analysis is a useful tool for assessing the value of new health service interventions due to the fact that it provides a standard way of valuing multiple types of interventions and programs. The valuation also incorporates costs averted when known (e.g., emergency room visits that are avoided). In order to make the valuations fair across potentially different types of interventions, the common health goal, or outcome, is the number of life-years added.

The benefits of the proposed program are valued based on assigning a monetary value of $50,000 per life-year gained due to the intervention. This threshold has been a standard way of valuing life-years in terms of whether the cost of the intervention exceeds this standard. The number of life-years added is based on a review of the scientific literature.

Cost-Utility Analysis:

Although no direct studies cost-utility related to psychiatric crisis units were found, a study related to housing for persons living with HIV seemed relevant. A cost-utility analysis by Holtgrave and colleagues (2012) was based on data from the Housing and Health (H&H) Study of unstably housed persons living with HIV in Baltimore, Chicago, and Los Angeles. This study combined outcome data with information on intervention costs to estimate the cost-QALY saved. Results indicated the cost-per-QALY-saved due to housing services was $62,493. They also reported 0.0324 QALY gains due to reduced stress and improved quality of life. For this valuation we focus on housing assistance. Assuming our 100 participants who each participate in crisis residential program, the total value gained from this component would be:

100	(persons served)
0.0324	(QALY gained)
× $50,000	(life year value)
= $162,000	QALY Value

Cost-effectiveness and Cost Savings:
Cost-effectiveness analysis (CEA) is similar to CUA, except that the cost averted is compared to a common health outcome, such as cost per depression-free day. We identified several studies that found crisis residential units are more cost effective than inpatient hospitals. In 2002, Fenton and team found the mean cost of an acute treatment episode was 44% lower per treatment in a residential crisis program as compared to treatment at a general hospital. They found an average savings of $17,504 (2012 US dollars) per acute care episode per year (treated in residential crisis program rather than a general hospital). Sledge and colleagues (1996) found similar results; they reported that when patients were randomly assigned to crisis respite care rather than hospitalization, respite care costs were $13,585 (2012 US dollars) lower per year. The average cost savings between these two studies was $15,544.

Based on average savings of $15,544 (Fenton et al., 2002) per acute care episode per year (treated in residential crisis program rather than a general hospital):

100	(persons served)
× $15,544	(savings per episode)
= $1,554,400	Cost Savings

Additional Cost Savings:
Two additional studies that looked specifically at services provided by a mobile crisis outreach team (MCOT) found lower expenses compared to treatment as usual. Scott (2000) found that patients using MCOT versus normal care were 27 percentage points less likely to be hospitalized, and had $443 lower expenses. In an Australian study, Hugo, Smout, and Bannister (2002) compared inpatient admission between MCOT users and traditional hospital services emergency services. MCOT patients were 30 percentage points less likely to be admitted.

In addition, a study conducted by Adams and El-Mallakh (2009) investigated crisis stabilization services in Kentucky. The authors determined that the cost for one day of care of crisis stabilization was $195 (in 2012 US dollars), while the cost for a day at the state hospital was $488 (in 2012 US dollars) – a savings of $293 per day. Although the Adams and El-Mallakh (2009) study is relevant, the study design did not randomize the patients to ensure comparability between CSU and hospitalization; therefore it was not used to value this project.

Cost-Utility Analysis

No studies directly valuing residential mental health and substance abuse programs were found; however, research indicates that non-residential programs that treat drug and alcohol dependence in conjunction with mental illness are efficacious and improve QALY. For example, Sellman and colleagues (2001) reported that a cognitive behavioral approach known as motivational interviewing produced 0.116 QALY gained of among males with mild to moderate dependence. This study is relevant as MHMRA therapists are trained in this treatment modality and are encouraged to use these skills, particularly among individuals with drug and alcohol dependence.

In a second study, Wilk and colleagues (1997) reported cognitive behavioral treatment produced 0.091 QALY gained among male participants and 0.125 QALYs among female participants during a six-month outpatient treatment program. We averaged the male and female QALYs together in order to average with the Selman et al., (2001) study. The average QALY was .108. The average QALY between the Sellman and Wilk studies was 0.112.

100	(number of patients who will be served)
0.112	(QALY gained)
× $50,000	(life year value)
= $560,000	QALY Value

Cost Effectiveness and Cost Savings

Cost-effectiveness analysis (CEA) is similar to CUA, except that the cost averted is compared to a common health outcome, such as cost per depression-free day. We did identify a benefit-cost study that is related.

Regarding cost effectiveness, French, Salomé & Carney, (2002b) estimated the costs and benefits of residential addiction treatment at five programs in the State of Washington that serve publicly funded clients. They reported an average total economic benefit of $58,868 per patient over one year (2012 US Dollars; the study was for 24 months, and we imputed a one-year estimate by halving, which yields $29,434)

The benefits and costs associated with mutual-help community-based recovery homes were reported by Lo Sasso, Byro, Jason, Ferrari and Olson (2012). They noted that the intervention compared quite favorably to usual care: the net benefit was estimated to be between $9,450 and $15,370 (2012 US Dollars) per person per year on average, depending on the method employed. We use the average of these two amounts in our analysis, which is $12,410.

In a study with a more comparable target sample, French, McCollister, Sacks, McKendrick and De Leon (2002a) examined the effectiveness of a therapeutic community for homeless mentally ill chemically dependent consumers. Among this homeless mentally ill sample, the researchers estimated the incremental economic benefit estimate to be $105,618, with a net benefit of $85,257 and benefit-cost ratio of 5.2.

Community residential treatment for those with dual (mental health and substance abuse) disorders has been observed to reduce subsequent heath care costs by half, a value of $13,288 per treated individual when compared to hospital care (Timko, Shuo, Sempel & Barnett, 2006).

An average across the four relevant studies yields an estimated savings per treated person of $35,097.25.

100	(persons receiving intervention)
× $35,097.25	(cost savings per person)
= $ 3,509,725	Cost Savings

Summary and Total Valuation

This valuation analysis shows that the intervention will have a positive value for participants who receive the intervention(s). The total valuation is estimated at $560,000 + $3,509,725 = $4,069,725 per 100 persons served per year.

REFERENCES

French, M., McCollister, K., Sacks, S., McKendrick, K., & De Leon, G. (2002a). Benefit--cost analysis of a modified therapeutic community for mentally ill chemical abusers. *Evaluation and Program Planning*, *25,* 137-148.

French, M., Salomé, H., & Carney, M. (2002b). Using the DATCAP and ASI to estimate the costs and benefits of residential addiction treatment in the State of Washington. *Social Science & Medicine*, *55*, 2267.

Lo Sasso, A., Byro, E., Jason, L., Ferrari, J. & Olson, B. (2012). Benefits and costs associated with mutual-help community-based recovery homes: The Oxford House model. *Evaluation & Program Planning*, *35*, 47-53.

Sellman, J., Sullivan, P. & Dore, G., (2001). A randomized control trial for Motivational Enhancement Therapy (MET) for mild to moderate alcohol dependence. *Journal of Studies on Alcohol, 62,* 389–396.

Timko, C., Shuo, C., Sempel, J. & Barnett, P. (2006). Dual diagnosis patients in community or hospital care: One-year outcomes and health care utilization and costs. *Journal of Mental Health, 15*, 163-177.

Wilk, A., Jensen, N. & Havighurst, T. (1997) Meta-analysis of randomized control trials addressing brief interventions in heavy alcohol drinkers. *Journal of General Internal Medicine 12,* 274–283.

#15 - Project Option 2.12.2 - Implement one or more pilot intervention(s) in care transitions targeting one or more patient care units or a defined patient population.

Unique RHP Project ID: 133355104.2.100
Performing Provider Name/TPI: Harris Health System / 133355104

Project Summary:

Provider:
Harris Health System is comprised of 16 community health centers, seven school-based clinics, a dental center, dialysis center, five mobile health units, one outpatient specialty services clinic, and three hospitals. With a tax base of $511.6 million, Harris Health System was able to provide more than $1.254 billion in charity care during FY 2012.

Volume Statistics - FY2013	Patient Payor Mix	Patient Demographics
Hospital discharges- 34,538 Births (babies delivered)- 6,676 Emergency visits- 173,651 Outpatient clinic visits- 1,092,197	Charity / Self Pay < 200% FPL - 50% Medicaid w/o CHIP- 22% Self Pay > 200% FPL - 14% Medicare- 9% Commercial and Other - 5% CHIP - 0.3%	Hispanic- 57% African American- 26% Caucasian- 9% Asian- 5% Other- 2% American Indian- 0.2%

Intervention(s):
This evidence-based project will proactively address the patient's needs following hospital discharge and additionally, discharges to home from the emergency center. The project will utilize evidence-based interventions in transition of care, education, coaching and home monitoring, focusing on a population of 1600 total patients diagnosed with heart failure, diabetes type 2 and hypertension (or combination thereof).
Need for the project:
The discontinuity of care during transitions typically results in patients with serious conditions "falling through the cracks", which may lead to otherwise preventable hospital readmission. Target Population: The population will be combined of Medicare, Medicaid and charity-funded patients who have had at least 2 admissions to acute care and 3 or more emergency visits in the last calendar year.
Category 1 or 2 expected patient benefits:
The goal of this project is to implement improvements in care transitions and coordination of care from inpatient to outpatient, post-acute care, and home care settings in order to decrease hospital-readmission rate and health-care costs for our target population. Further, our goal is to ensure that the hospital discharges are accomplished appropriately and that care transitions occur effectively and safely.

QPI Metric Description:
The quantifiable metric that will be used for this project will be based on individuals receiving care under within the new standardized care transition processes. For DY3 our goal is 25 individuals. For DY4, the goal is 1000 individuals. For DY5, the goal is 1600 individuals
Category 3 outcomes:

OD-3 Potentially Preventable Re-Admission – 30-day Readmissions Rates (PPRs)
IT-3.1 All cause 30 day readmission rate - NQF 1789[40]

- Re-admission is defined as an inpatient admission to any acute care facility which occurs within 30 days of the discharge date of an eligible index admission.
- patient cohorts: (1) admissions to acute care facilities for patients aged 65 years or older or (2) admissions to acute care facilities for patients aged 18 years or older.

Project Option 2.12.2 - Implement one or more pilot intervention(s) in care transitions targeting one or more patient care units or a defined patient population.

Unique RHP Project Identification Number: 133355104.2.100
Performing Provider Name/TPI: Harris Health System / 133355104

Project Description:
The discontinuity of care during transitions typically results in patients with serious conditions "falling through the cracks", which may lead to otherwise preventable hospital readmission. The project will utilize evidence-based interventions in transition of care, education, coaching and home monitoring, focusing on a population of 1600 total patients diagnosed with heart failure, diabetes type 2 and hypertension (or combination thereof).

The population will be combined of Medicare, Medicaid and charity-funded patients who have had at least 2 admissions to acute care and 3 or more emergency visits in the last calendar year. According to Fortinsky et al. [41], emergency visits and readmissions are dominantly related to exacerbation of disease that could be mitigated by practicing self-management techniques.

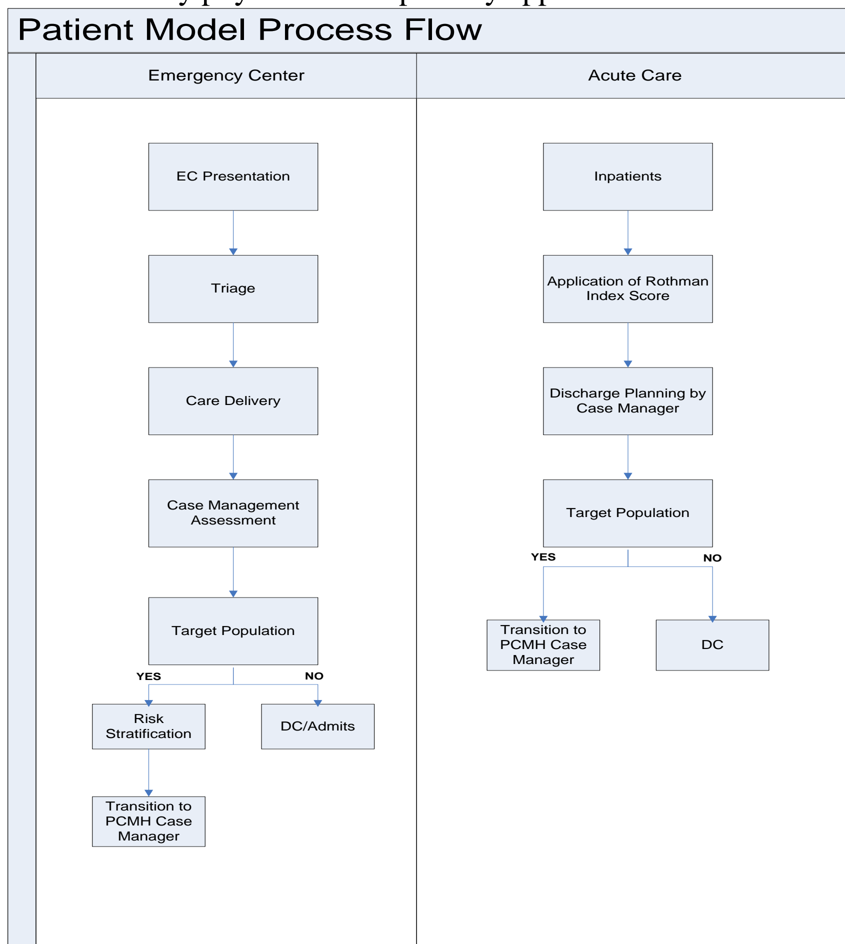
This evidence-based project will proactively address the patient's needs following hospital discharge and additionally, discharges to home from the emergency center. The type of services will include risk stratification, transition-of-care processes (aided by the use of the Rothman Index for making evidence-based decisions) and telephonic patient management. The duration of services will commence with the initiation of this project in the acute-care setting and be expanded into the ambulatory-care settings. The project will span the continuum to optimize patient access to evidence-based practice to achieve optimal health outcomes and patient self-management goals including disease prevention and wellness promotion.

A formal, comprehensive transition of care process is essential to improve quality of care and decrease costs[42]. The acute-care case manager and unit nursing staff will assess a transition of care for high risk, problem prone, identified patients prior to discharge, and formally "hand off" their care to a PCMH (Patient-Centered Medical Homes) case-management-team. It is essential to understand[43] the all-cause risks and factors that create a readmission. The Harris Health will develop a formal transition-of-care process that addresses the bio-psychosocial factors that are barriers or risks that are known to promote an emergency-center use or readmission. Such include self-care deficits, lack of a caregiver, financial constraints, transportation, chronic illness and the inability to self-manage and literacy level. Similarly, emergency-center patients discharged to a PCMH will be identified utilizing a Harris Health risk-stratification tool incorporating the elements from the CMS Probability for Readmission to Acute Care (PRA) elements. The transition of care process will be documented in the EHR, and the PCMH team in coordination with the patient's primary care physician (PCP) will establish a plan for care coordination to include but not limited to:

- Education at appropriate literacy level and in the patient's language of preference

[41] Fortinsky RH, Madigan EA, Sheehan TJ, Tullai-McGuinness S, Fenster JR. Risk factors for hospitalization among Medicare home care patients. West J Nurs Res. 2006 Dec;28(8):902-17
[42] (National Transitions of Care Coalition, 2008) Improving transitions of care: The vision of the National Transitions of Care Coalition.
[43] Jencks, S., F., Williams, M., V. Coleman, E., A. (2009). Rehospitalizations among patients in the Medicare Fee-for-Service program. *The New England Journal of Medicine. 360*

- Self-management coaching and counseling, culturally sensitive and at literacy level and language of choice
- Timely physician and specialty appointments



The mode of care delivery will be patient centric and a combination of telephonic, in- person and electronic, via "MyHealth", an interactive patient and provider/clinician portal.
The collaborative approach to linking the interdependency of the community and health systems to promote clinician and patient engagement is the foundation upon which this proposed model will be built. The community partnerships expert in training, medical care delivery and education will combine with the provider and clinician assessment, treatment and transition of the target population to be served. Decision-support and information systems will provide the electronic infrastructure for documentation, data collection and reporting of utilization, costs and clinical outcomes. The transition of the patient following risk stratification will enable seamless electronic communication of care rendered, ordered and received to all clinicians participating in the patient's care. Patient will be treated in a culturally sensitive manner, provided with literacy-appropriate educational materials and instructions, and placed in contact with case managers skilled in motivational interviewing techniques. Behavioral changes are necessary to enhance the patient's ability to seek appropriate care and self-manage chronic disease. According to Levensky et al. (2007)[44], it is the nurse's motivational interviewing skills that encourage

[44] Levensky, E., R. Forchimes, A., Donohue, W., T. Beitz, K. (2007).Motivational interviewing. American Journal of Nursing 107, 10

patients to be adherent with treatment plans and decreases overall costs of health. As such, nurses, case managers will receive formal training in motivational interviewing.

Goals and Relationship to Regional Goals

The goal of this project is to implement improvements in care transitions and coordination of care from inpatient to outpatient, post-acute care, and home care settings in order to decrease hospital-readmission rate and health-care costs for our target population. Further, our goal is to ensure that the hospital discharges are accomplished appropriately and that care transitions occur effectively and safely.

Project goal(s)

- Improving patient access to wellness, prevention and disease management services
- Improving the patient experience
- Decrease all-cause 30-day potentially preventable re-admission rate (PPRs)
- Decrease overall cost per capita of care
- Establish the use of the Rothman Index in transition-of-care decision-making process
- Carry out workforce development and training relevant to this project.

This project meets the following regional goals:

- to improve health care outcomes and patient satisfaction
- to ensure patients receive the most appropriate care for their condition
- to maximize use of technology and best practices
- to develop a regional approach to health care delivery that leverages and improves on existing programs and infrastructure.

Challenges:

- The patient's preference and historical use of service location
- Inability to contact via phone or e-mail
- Mobility of patients to include lack of transportation services

Mitigation efforts will be education of services at lower level of care locations and the promotion of less wait times and same day access availability in the community health centers. Contact information will be secured and repeatedly requested and amended at each encounter. The importance and value of telephonic capability will be shared as a means to establish relationships and ongoing engagement. Transportation concerns will be mitigated by the provision of a resource list, assistance with free services and coordination with disease specific agencies who offer patient transportation. In addition, the ability to provide the patient access to multiple clinicians during one visit creates a "one stop shopping" scenario as part of the Medical Home philosophy, and optimizes the time patients spend at the clinic and decreases the need for transportation services.

3-Year Expected Outcome for Provider and Patients:

The project aims to reduce the number of unnecessary hospital admissions, decrease the level of hospital re-admissions, and consequently decrease the cost per capita of care, improving both the patient experience and quality of healthcare delivery.

Starting Point/Baseline:

Data are available on categorized non-hospitalized visits and on the rate of hospital re-admission at our LBJ General Hospital[45] and at the Ben Taub General Hospital[46] for recent years up to and including year 2010. Therefore, the baseline to which our expected outcomes are to be compared are the data reported for year 2010. The sources for the data will remain consistent throughout the project to provide data integrity.

Quantifiable Patient Impact:

The Quantifiable Patient Impact of this project for each DY3-DY5 is:

- DY3: 50 individuals
- DY4: 1,000 individuals
- DY5: 1,600 individuals

Rationale:

The purpose and scope of the project coincides with the aims of Category 2 project 2.12.2 – "**Implement one or more pilot intervention(s) in care transitions targeting one or more patient care units or a defined patient population**.

The project's goals are to reduce readmissions and inappropriate emergency center visits for the target population. Measurement methodology is twofold; real time and retrospective data collection via the EHR and the Harris Health decision-support department. The project shall use the Rothman Index as a tool for making transfer-of-care decisions based on the patient's health status.

The Rothman Index quantifies a patient's condition (based on 26 different parameters derived from vital signs, nursing assessments and lab results) displayed in a user-friendly graphical format. It captures data and displays progression of a patient's health over time, summarizing thousands of pages of patient data at a glance. It gives physicians and nurses contextual insight into a patient's history and condition in order to improve the quality of care. Clinical trials of the Rothman Index have demonstrated an improvement in the overall continuity of patient care and outcomes. The Rothman Index makes it easier to track patient progress and detect subtle declines in health visually. Employing the Rothman Index in this project will give physicians, nurses and rapid-response teams the ability to see multiple patient graphs simultaneously for earlier interventions, thus providing patients the extraordinary care they need as effectively and as soon as possible.

The Rothman Index data is real time, ongoing, and the admission and discharge scores are collected and captured in the EHR and will be reviewed daily by the acute care and the PCMH case-management teams. Trending of the number of patients transitioned, with patients consenting and actively participating in case management programs will be collected monthly. Interventions specifically relevant to each patient will be captured in a database and evaluated monthly for success, when compared with the prior utilization of each patient. PCMH case-management teams can view and search real time for the location and level of care and utilization of the target population. Such reports are searchable, viewable and are accessible by unit, department and site and additionally by chronic disease diagnosis. In this manner the PCMH team can alert the inpatient nursing and case management staff, and also the primary care physician (PCP) in the PCMH to continue care coordination and reduce duplication of effort and hence minimize the length of stay. It has been documented that application of

[45] EMERGENCY DEPARTMENT USE STUDY, January 1, 2010 through December 31, 2010, Lyndon B. Johnson General Hospital, Harris County Hospital District. Prepared by The University of Texas School of Public Health, Houston, TX by Charles Begley, Patrick Courtney, Keith Burau. June 2012

[46] EMERGENCY DEPARTMENT USE STUDY for January 1, 2010 through December 31, 2010 at Ben Taub General Hospital, Harris County Hospital District

the Rothman Index can result in improvements in process as well as in outcomes[47], leading to significant financial savings for hospitals.

Patient satisfaction will be sought post discharge from acute care, the emergency center and in the PCMH via a combination of a third party vendor, patient relations' staff and the PCMH team. Reporting to CMS and Harris Health leadership will take the form of a scorecard that identifies, at the patient level, the outcomes in relation to the target goals.

Project 2.12.2 has the following components:
Conduct quality improvement for project using methods such as rapid cycle improvement. Activities may include, but are not limited to, identifying project impacts, identifying "lessons learned," opportunities to scale all or part of the project to a broader patient population, and identifying key challenges associated with expansion of the project, including special considerations for safety-net populations.

Unique Community-Need Identification Numbers:

- CN-7 : Insufficient access to care-coordination practice management and integrated care-treatment programs
- CN-8 : High rates of inappropriate emergency-department utilization
- CN-9 : High rates of preventable hospital readmission
- CN-10 : High rates of preventable hospital admission
- CN-11 : High rates of chronic disease and inadequate access to treatment programs and services for illnesses associated with chronic disease, including cancer, diabetes, obesity, cardiovascular disease, asthma and AIDS/HIV

How the project represents a new initiative or significantly enhances an existing delivery system reform initiative:

This is a new project for Harris Health. No similar program exists. The project represents a new, innovative initiative by applying Rothman Index health-status evaluation, validated for in-patient setting, to transitioned patients.

Related Category 3 Outcome Measure(s):
OD-3 Potentially Preventable Re-Admission – 30-day Readmissions Rates (PPRs)
IT-3.1 All cause 30 day readmission rate - NQF 1789[48]

- Re-admission is defined as an inpatient admission to any acute care facility which occurs within 30 days of the discharge date of an eligible index admission.
- patient cohorts: (1) admissions to acute care facilities for patients aged 65 years or older or (2) admissions to acute care facilities for patients aged 18 years or older.

Relationship to other Projects:
This project ties with an RHP project on Enhanced Access to Primary Care through Emergency Center Off-load Clinics, and to Remote Access Monitoring

[47] Stephen J. Swensen, M.D., M.M.M., Gregg S. Meyer, M.D., Eugene C. Nelson, D.Sc., M.P.H., Gordon C. Hunt, Jr., M.D., M.B.A., David B. Pryor, M.D., Jed I. Weissberg, M.D., Gary S. Kaplan, M.D., Jennifer Daley, M.D., Gary R. Yates, M.D., Mark R. Chassin, M.D., M.P.P., M.P.H., Brent C. James, M.D., M. Stat., and Donald M. Berwick, M.D., M.P.P. "Cottage Industry to Postindustrial Care – The Revolution in Health Care Delivery." New England Journal of Medicine, 0911199, Jan. 2010
[48] http://www.qualityforum.org/QPS/

Relationship to Other Performing Providers' Projects in the RHP:
Innovation is key to the transformation of healthcare in our community. The consistency of innovation in our region allows for increased improvements based on research trends, patient need, and provider availability. The waiver funding allows for innovation in specific areas and all innovative projects included in the plan are similar in the fact of program redesigns for historic treatments, and focus to chronic condition outcome measures such as central line infections.

Plan for Learning Collaborative: We plan to participate in a region-wide learning collaborative(s) as offered by the Anchor entity for Region 3, Harris Health System. Our participation in this collaborative with other Performing Providers within the region that have similar projects will facilitate sharing of challenges and testing of new ideas and solutions to promote continuous improvement in our Region's healthcare system.

Project Valuation: The purpose of implementing improvements in care transitions and coordination of care, with the use of a Rothman Index, is to provide the ability to evaluate inpatients at risk based on chronic disease states and associated utilization patterns that will facilitate the ability to identify gaps in service and deficits in patient understanding and management of their disease. Patients with chronic illness will be monitored real-time while inpatient and will receive appropriate discharge planning based on indicators reported in the tool. Upon discharge, patients will be followed by a transition care team via timely nurse intervention, patient education and case management. The patient costs are expected to decrease or be avoided due to decreased acute care length of stay and prevention of duplicated services. Harris Health internal data for the most recent year shows 34,538 patient admissions with an average LOS of 5.70 days. With the implementation of these improvements in care transition, coordination of care and potential for improved management of chronic disease conditions, the cost saving opportunity is substantial.

#16 - Project Option 2.7.5 – Implement innovative evidence-based strategies to reduce and prevent obesity in children and adolescents: Implement WeCan Obesity Prevention in Clinics

Unique RHP Project ID: 112672402.2.101
Performing Provider Name/TPI: The University of Texas MD Anderson Cancer Center / 112672402

Project Summary:
Provider: The University of Texas MD Anderson Cancer Center is a comprehensive cancer center ranked first in cancer care by U.S. News & World Report and dedicated to patient care, education, research and prevention. MD Anderson is comprised of several Texas Medical Center campus locations, two research campuses in Bastrop County, Texas, four regional care centers and a number of national and international divisions and affiliates. More than 108,000 people—almost one-third of them new patients—were seen in FY2011. MD Anderson provided $215 million in uncompensated charity care to Texans in FY2011.

Intervention(s):
This project will provide an evidence-based childhood obesity prevention program to children and parents of Harris Health System school-based clinics, elementary and middle schools affiliated with the clinics and surrounding communities. The project will target low-income, uninsured and underinsured populations of children who are at risk of obesity. There are three components to the proposed evidence-based We Can! Program (1): child, parent and community. Children and parents will receive health promotion programming that will increase knowledge of physical activity and healthy diets and children will engage in physical activity play time. Parents will also receive evidence-based health promotion counseling to help them identify barriers and solutions to meeting family health goals. The counseling will also help parents to adopt, change or maintain healthy weight behaviors as well as address questions that are specific to supporting the family in their health promotion goals. The We Can! community component will leverage established national and local health promotion events (e.g. Walk Bike to School, National Fruit & Veggies-More Matters Month, National Childhood Obesity Awareness Month, Turkey Trot, Houston Marathon Kids) to promote physical activity and healthy diets within the community and among We Can! participants and family members.

Need for the project:
The project addresses the epidemic of childhood obesity in the region of RHP 3. The identified community need (s) addressed by this projects
CN.11- High rates of chronic disease and inadequate access to treatment programs and services for illnesses associated with chronic disease, including: cancer, diabetes, obesity, cardiovascular disease, asthma, AIDS/HIV
CN.20 - Lack of access to programs providing health promotion education, training and support, including screenings, nutrition counseling, and patient education programs
CN.22 - Insufficient access to services that are specifically designed to address racial, ethnic and cultural health care disparities

Target Population: The We Can! Program will target RHP-3 parents and children, specifically children between the ages of 8 - 13 years, who are at risk for obesity, as defined by BMI percentile (>85th percentile), poor diet, lack of physical activity, low socioeconomic status or family history of obesity. The children and parents will reside within RHP-3 and are served by Harris Health System school-based clinics and the affiliated schools and neighborhoods surrounding the school-based clinics. Four hundred

seventy-five families will be enrolled in the obesity program. Based on data from Harris Health System, in FY2013 (2), 86.1% of their patients were either self-pay, i.e., uninsured (63.7%) or are Medicaid/CHIP recipients (22.4%); therefore, we are submitting a good-faith estimate that families reached via the intervention will be at least 26% will be Medicaid and 74% will be low-income/uninsured.

<u>Patient Benefit and Quantifiable Patient Impact</u>

DY3	QPI: Number of unique individuals receiving services/intervention = 75 children (and their parents)	Cumulative = 75 children (and their parents)
DY4	QPI: Number of unique individuals receiving services/intervention = 150 children (and their parents)	Cumulative = 225 children (and their parents)
DY5	QPI: Number of unique individuals receiving services/intervention = 250 children (and their parents)	Cumulative = 475 children (and their parents)

<u>Category 3 outcomes:</u>
IT-6.2.a – Client Satisfaction Questionnaire (CSQ Scales):
Description: The CSQ Scales® were created in response to the need for a standard instrument to replace idiosyncratic, ad hoc, and/or untested tools. The goal was to develop a standardized measure with strong psychometric properties that could be used to assess general satisfaction across varied health and human services. The CSQ Scales® (CSQ) include a series of brief instruments.131

Project Option 2.7.5 – Implement innovative evidence-based strategies to reduce and prevent obesity in children and adolescents: Implement WeCan Obesity Prevention in Clinics

Unique RHP Project Identification Number: 112672402.2.101
Performing Provider Name/TPI: The University of Texas MD Anderson Cancer Center / 112672402
Project Description: US childhood obesity rates have tripled in the past 30 years, with nearly one in three children being overweight or obese.(3) Low-income youth are at the highest for obesity. Therefore, the University of Texas, MD Anderson Cancer Center (MDA) and Harris Health System will partner to implement We Can! (Ways to Enhance Children's Activity and Nutrition), an obesity prevention program for children, families and communities. The program will enroll families who are served by Harris County resources. The target population is families who are reportedly indigent, low income, underinsured, and/or are eligible to receive Medicaid/Children's Health Insurance Program (CHIP).

The We Can! program is science-based, turn-key national education program that will help children 8 to 13 years old achieve a healthy weight through community action, strategic partnership development, and local events.(1) The program is a collaboration with the National Heart, Lung, and Blood Institute (NHLBI), National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), National Institute of Child Health and Human Development (NICHD), and National Cancer Institute (NCI). We Can! is unique because it focuses on parents and families in home and community settings.
The goals of the program are to help teach children to:

- Eat a sufficient amount of a variety of fruits and vegetables per day
- Chose small portions at home and at restaurants
- Eat fewer high-fat foods and energy-dense foods that are low in nutrient value such as French fires, bacon, and doughnuts
- Substitute water or fat-free or low-fat milk for sweetened beverages such as sodas
- Engage in at least 60 minutes of moderate physical activity on most, preferably all, days of the week
- Reduce recreational screen time to no more than two hours per day.

We Can! program results demonstrated that parents increased their knowledge and attitudes about healthy weight, families made more attempts to limit high-fat foods and decrease portion sizes; they showed increased positive attitudes toward physical activity and limited screen time in their homes.(4) Children increased their knowledge and attitudes toward healthy weight, made more attempts to increase fruit and vegetable consumption and physical activity engagement and made attempts to spend less time watching television.

To date, more than 1,500 local community sites in 50 states and 12 other countries have committed to using We Can!.(1) A total of 28 national organizations and corporations are active program partners, including Fortune 500 corporations and a number of government agencies. MD Anderson Cancer Center will partner with the Harris Health System to implement the We Can! program via outreach in the school-based pediatric clinics in the Harris Health System, as well as the schools and neighborhoods associated with the pediatric clinics. The 4-week group-based afterschool program will target children ages 8 to 13 and their parents. Parents and children will attend the program in-person once per week. Each week, children will receive a lesson from the CATCH Kids Club, based on the successful in-school

program, CATCH, is an evidence-based physical activity and nutrition education program for elementary school-aged children (grades K–5) in afterschool and summer care settings. By changing the environment in schools, homes, and recreation programs, it helps children adopt healthy dietary and physical activity behaviors. The program includes a curriculum, physical activity, and snack component. Parents will receive the We Can! Parent Program, a 4-session curriculum focused on helping parents make healthy behavior choices at home for energy balance, portion control, and physical activity. In addition, parents will receive monthly telephone counseling calls from trained counselors over the course of 6 months. Effective behavioral counseling requires active participation from the parent and will aim to help the parent engage in self-management practices and maintain healthy behaviors. Our counseling approach will utilize motivational interviewing techniques as an evidence-based intervention approach for weight management.(5) We Can! also promotes community awareness of the obesity epidemic and encouragement for communities to work together to reduce childhood obesity. The community component will leverage existing health promotion celebrations (e.g. Turkey Trot, End of the school year physical fitness field day, etc.) to increase awareness and preventive behaviors among families and children.

In Phase 1 of the project, we will recruit Harris Health school-based clinics and affiliated elementary and middle schools to participate in the program. We anticipate recruiting 2-3 clinics/affiliated schools per year. We will also hire and train staff to implement the project. Staff members, at MD Anderson, Harris Health, and the affiliated schools, will attend project trainings focused on: 1) protocols and procedures, 2) recruitment, enrollment and retention strategies, 3) program delivery, and 4) data collection procedures. In Phase 2, children and parents who decide to enroll will complete assessments for physical activity diet and knowledge of physical activity and diet recommendations at the time of program enrollments. The evaluation phase of the project will include follow-up appointments at 3- and 6-months post enrollment, assessment outcomes and dissemination of project findings.

Harris Health System Partnership. Harris Health System is the safety-net health system for Harris County, TX. It serves largely ethnic-minority populations (57% Hispanic and 26% African American) from low-income communities.(2) Twenty-eight percent of patients are Medicaid or CHIP, 60% are self-pay, and 98% live at or below 200% of the Federal Poverty Level. The health system has 13 community health centers in low-income communities throughout the county. Each is designated as a Medical Home. Harris Health System, in partnership with five local school districts, offers quality healthcare to children and adolescents in their neighborhoods through a network of school-based clinics. The clinics provide early detection of illness and appropriate healthcare intervention as well as education on a variety of children's health issues. At any of Harris Health's six school-based clinics, children and adolescents may receive regular physical exams, primary care, Texas Health Steps screening, sports physicals, developmental assessments, vision and hearing tests, immunizations, lead and anemia screening, health education, treatment of minor and acute illnesses, chronic disease management and, in two of the school-based clinics, behavioral health.

Goal(s) and Relationship to Regional Goals(s): The We Can! Program is an intervention that is family-centered, which is a process of helping that is in agreement with the needs and preferences of the family (e.g. culturally specific, age appropriate and least restrictive intervention). The goal of this program is to help children 8–13 years old stay at a healthy weight through improving food choices, increasing physical activity, and reducing screen time. This program will influence knowledge, attitudes and behaviors of youth people and their parents toward healthy weight maintenance. Overweight and obese children or children at risk for obesity who enroll in the program will be encouraged to lose and/or

maintain their weight. Participation in the We Can! Program will lead to increased consumption of fruits and vegetables, increases in physical activity, and reduced screen time.

We will partner with Harris Health System school-based clinics and affiliated school districts to implement the We Can! Program during after school hours. To be successful, the project will require the involvement of school-based clinics and clinic staff (e.g., nurses and physicians for referrals), school staff (e.g., school nurse, social workers for referrals), and partnership with community-based organizations to implement the community component of WeCan!

Regional Goal. The project meets the following regional goals:

- Increase access to primary and specialty care services, with a focus on underserved populations, to ensure patients receive the most appropriate care for their condition, regardless of where they live or their ability to pay.

- Transform health care delivery form a disease focused model of episodic care to a patient-centered, coordinated delivery model that improves patient satisfaction and health outcomes, reduces unnecessary or duplicative services, and builds on the accomplishments of our existing health care system.

- Develop a culture of ongoing transformation and innovation that maximizes the use of technology and best-practices, facilitates regional collaboration and sharing, and engages patients, providers, and other stakeholders in the planning implementation, and evaluation process.

Challenges:

Challenges for childhood obesity projects are as follows: 1) enrollment barriers; 2) retention of participants; and 3) program satisfaction. First, although there are two obesity treatment specialty clinics in Harris Health System, parents and families served by the school-based clinics struggle with the ability to travel to the specialty clinics which are outside of their immediate neighborhood boundaries. Families desire obesity prevention programs located in their neighborhoods. Programs within neighborhood school-based clinics and/or affiliated schools can reduce this barrier by providing children and families with an obesity prevention program that is conveniently accessible. Second, although we anticipate that parents will value the health benefits associated with their child participating in the We Can! program, parent attendance may be limited by busy parent and family lifestyles. We Can! is tailored to appeal to children and provide programs that will encourage children to engage in physical activity at the neighborhood school. For the children, We Can! sessions will take place immediately after school. The parent program will be conveniently scheduled on the same day as the sessions for the children. An aspect of participation in We Can! will include the parent's commitment to walk and/or drive to the neighborhood school to meet their child at the We Can! session. We will make the program as convenient as possible for parents, including staggered start times (i.e. a program will start every 30 minutes) and provide dinner for both parent and child. After the parent attends the parent session the child and parent will return home together. Third, we understand that parent and child dropout is a threat to the success the We Can! program goals. To minimize dropout we will conduct focus groups with parents, children and community members prior to the start of the program to identify program components that meets the expectations and needs of the families and communities. Also, program staff will have ongoing meetings with community stakeholders to access participant expectations, whether the project is meeting needs, and respond to participant suggestions for improving the parent and child and community program.

3-Year Expected Outcome for Provider and Patients:

We believe our program will result in improvements in weight management and obesity prevention behaviors among participating overweight or obese youth or youth at-risk for obesity within the Harris Health System school-based clinics and affiliated school systems. Enrolled families can expect improved diets, increases in physical activity, and reductions in screen time.

DY3	QPI: Number of unique individuals receiving services/intervention = 75 children (and their parents)	Cumulative = 75 children (and their parents)
DY4	QPI: Number of unique individuals receiving services/intervention = 150 children (and their parents)	Cumulative = 225 children (and their parents)
DY5	QPI: Number of unique individuals receiving services/intervention = 250 children (and their parents)	Cumulative = 475 children (and their parents)

Based on data from Harris Health System, in FY2013 (2), 86.1% of their patients were either self-pay, i.e., uninsured (63.7%) or are Medicaid/CHIP recipients (22.4%); therefore, we are submitting a good-faith estimate that families reached via the intervention will be at least 26% will be Medicaid and 74% will be low-income/uninsured.

Starting Point/Baseline:

The baseline is zero. There are no childhood obesity prevention programs currently available in the school-based clinics for the children who attend the school-based clinics and affiliated school districts. Participants will be recruited from Harris Health School-Based Clinics (n=7). The school based clinics provide services to 6359 students; of these 3373 are overweight or obese and 1413 are between ages 8-13 years old. Currently, there are no standardized treatment and/or childhood obesity prevention programs available at the Harris Health System Pediatric or School-Based Pediatric Clinics.

Likewise, Harris Health has been limited by the lack of funding to implement and sustain a comprehensive childhood obesity program that is targets families and communities. As a result, prevention and treatment programs are not standardized across clinics or providers. The school-based clinics are eagerly seeking partnerships to address the issue of childhood obesity using systematic and evidence-based approaches to treatment and prevention. Implementing the We Can! project within in the school-based clinics will fill the void for obesity prevention programming.

Rationale: Project Option 2.7.5 was chosen because We Can! is an evidence-based program with success among populations who are similar to the individuals served via Harris Health System and the School-based clinics. Obesity, in the past 30 years, has increased 3 fold among children ages 2-19. Recent data indicates that about 17% of children ages 2-19 are obese. The recent data from RHP 3 data indicate that the direct and indirect impact on children who are overweight is significant. Data have shown that children who are overweight are likely to become obese as adults(6). Obesity is directly related to chronic diseases, such as heart disease, high blood cholesterol levels, high blood pressure and diabetes that require expensive and ongoing medical treatment. The compounding negative indirect impact associated with childhood obesity is that overweight adolescents are less likely to achieve education beyond high school and more likely to report lower wages (7). This is an extremely alarming since individuals who report lower wages may be uninsured or underinsured which may limit access to healthcare. Lifestyle changes, such as meeting physical activity recommendation and healthy diets are critical health behaviors in the prevention of childhood obesity. The We Can! project will decrease the impact of high rates of chronic disease by empowering families to improve their physical activity and dietary habits through cultural specific health promotion program. Further the children and parents will gain knowledge and insight through health education and motivational interviewing based counseling. The We Can project will immediately create access to an evidenced based childhood obesity program in communities that did not have previous access to childhood obesity programming. .

Milestones & Metrics: The following milestones and metrics have been chosen for the We Can! youth obesity project: Process Milestones and Metrics: P-1 (P-1.1); P-X (P-X.1); P-7 (P-7.1, P-7.2); Improvement Milestones and Metrics: I-5 (I-5.1); Customizable milestones and metrics, P-X (P-X.1) were used to clarify specific milestones that are unique to this project's development and implementation. Existing options did not match the needs of this project.
Unique community need identification number the project addresses: The project addresses the following unique community needs as identified in the community needs assessment: **CN.11**- High rates of chronic disease and inadequate access to treatment programs and services for illnesses associated with chronic disease, including: cancer, diabetes, obesity, cardiovascular disease, asthma, AIDS/HIV; **CN.20 -** Lack of access to programs providing health promotion education, training and support, including screenings, nutrition counseling, and patient education programs; **CN.22 -** Insufficient access to services that are specifically designed to address racial, ethnic and cultural health care disparities
Required Core Components: This project has Required Core Component "A": *Conduct quality improvement for project using methods such as rapid cycle improvement. Activities may include, but are not limited to, identifying project impacts, identifying "lessons learned," opportunities to scale all or part of the project to a broader patient population, and identifying key challenges associated with expansion of the project, including special considerations for safety-net populations.* To enhance continuous quality improvement, the project team will meet to discuss project results, action items, progress on milestones, "lessons learned," challenges to implementing the project and any solutions. Meetings will be documented with meeting agendas, attendance sheets, and summaries of discussion points, action items, documents and handouts reviewed, and related milestones/metrics. The project team also will join monthly Waiver calls organized by the Anchor and participate in MD Anderson Waiver Oversight Committee meetings. Additionally, learning collaborative milestone/metrics for Project Option 2.7.5 (P-7, P-7.1, P-7.2) will be met.
How the project represents a new initiative for the Performing Provider or significantly enhances an existing delivery system reform initiative: There are currently no programs available to patients of the Harris Health school-based clinics. This project will partner with existing school-based clinics to deliver an evidenced-based obesity prevention program to low income children and parents who utilizes the resources of Harris Health System.

Related Category 3 Outcome Measure(s):
IT-6.2.a – Client Satisfaction Questionnaire (CSQ Scales):
Description: The CSQ Scales® were created in response to the need for a standard instrument to replace idiosyncratic, ad hoc, and/or untested tools. The goal was to develop a standardized measure with strong psychometric properties that could be used to assess general satisfaction across varied health and human services. The CSQ Scales® (CSQ) include a series of brief instruments. **Reasons/rationale for selecting the outcome measure(s):** This outcome was chosen to measure and assess consumer satisfaction with health and human services. While this project will be implemented in a clinic setting, it does not align well with other outcome measure options. We are implementing a prevention intervention in another entity's clinic, therefore we, as the performing provider, cannot be held accountable for outcome measures that assess their overall clinic operations or overall clinic satisfaction. We can only be held accountable for our implementation of this singular intervention with their patient population. This option provides program monitoring and evaluation for such a community-based intervention.
Relationship to other Projects: By delivering an evidenced based childhood obesity prevention program to the underserved population of children and families in Harris Health System's school-based clinics, this program is in line with the needs and goals of the RHP. This project also supports our other projects in that they all support one of the eight goals of the Comprehensive Cancer Control Program at The

University of Texas MD Anderson Cancer Center. Also, in order to capture patient satisfaction across varied health care services and domains all MD Anderson waiver projects will use IT6.2.a Client Satisfaction scores as a Category 3 outcome measure. Relationship to Other Performing Providers' Projects in the RHP: Innovation is key to the transformation of healthcare in our community. The consistency of innovation in our region allows for increased improvements based on research trends, patient need, and provider availability. The waiver funding allows for innovation in specific areas and all innovative projects included in the plan are similar in the fact of program redesigns for historic treatments, and focus to chronic condition outcome measures such as central line infections. The Region 3 initiative grid in the addendum can provide a side by side comparison of all projects that directly relate to innovation. The current project is related to others at MD Anderson in its use of an innovative evidence-based program (112672402.2.1, 112672402.2.2, 112672402.2.3, 112672402.2.4 and 112672402.2.5).

Plan for Learning Collaborative: We plan to participate in a region-wide learning collaborative(s) as offered by the Anchor entity for RHP3, Harris Health System. Our participation in this collaborative with other Performing Providers within the region that have similar projects will facilitate sharing of challenges and testing of new ideas and solutions to promote continuous improvement in our Region's healthcare system.

Project Valuation: We have based our project valuation on California's 1115 Medicaid Waiver model. As such, we have valued our projects at 2.5 times that of the estimated costs. Basing our valuations on California's calculations we know we are well within the potential range of future cost savings when looking at the following from Prevention Institute and Trust for America's Health Issue Report entitled Prevention for a Healthier America: Investments in Disease Prevention Yield Significant Savings, Stronger Communities (July 2008):

- Prevention saves money – an investment of $10 per person per year in programs to increase physical activity, improve nutrition, and prevent tobacco use could save the country more than $16 billion in annual health care costs within five years.

- Prevention can reduce end-of-life costs by increasing health during the lifespan, what researchers call the compression of morbidity.

There is a substantial return-on-investment in prevention – For every $1 invested in community-based prevention, the return amounts to $5.60.

#17 - Project Option: 2.11.1 Implement interventions that put in place the teams, technology, and processes to avoid medication errors

Performing Provider: OakBend Medical Center (OBMC)/127303903

Unique Project ID: 127303903.2.100

- **Brief provider description, including size of the provider and the role of the provider in the healthcare delivery system in a particular RHP:** OBMC is a stand-alone hospital authority that was established in October 1947 under the original name of Polly Ryon Memorial Hospital. OBMC has grown to a hospital system, still governed by a hospital authority. It has expanded to two hospital locations, two diagnostic imaging centers, an outpatient surgical center, a free-standing Emergency Room and a Medical Group with 7 clinic locations. The Medical Group consists of Family Practice, OB/Gyn, Infectious Disease, Podiatry, Orthopedic, Cardiology and Interventional Cardiology. OakBend was able to provide more than $29,412,325 in charity care through September during FY 2012.

- **Description of the intervention:** OBMC will educate and train patients and staff on the health benefits of medication management, as well implement evidence-based strategies to enhance the quality of life and the appropriate management. In furtherance of this goal, OBMC will partner with Fort Bend Family Health Center (FBFHC) and OakBend medical group physicians to educate their staff and the community on the importance of medication management, and to assist patients in managing their chronic conditions.

- **Need for the project:** OBMC serves a diverse population of patients with chronic diseases, many of whom are prescribed multiple medications and have several added during their hospital stay. Evidence shows that patients who have a list of medication and the reasons for use experience better outcomes. Medication management allows providers to monitor the patient medication list to avoid potential adverse drug interactions. By implementing an evidence-based program aimed at promoting the proper use of medication through the continuum of care OBMC can increase patients' awareness of medication management. This is a proven method of improving both clinical outcomes as well as quality of life.

- **Target population including the number of people that will be served by the project and percent that are expected to be Medicaid/low income uninsured individuals:** The target population includes all patients admitted to OBMC. Our goal is to provide the medication management services to a total of ___ unique patients in DY4 and ___ unique patients in DY5 (for a cumulative total of ___ unique patients). Of the ___ patients served, approximately 30% are expected to consist of Medicaid/low income uninsured individuals.

- **Category 1 or 2 expected patient benefit:** The expected outcome of this project is improved medication management for patients, including the chronically ill, through the expanded use of Computer Physician Order Entry (CPOE) documentation. Evidence shows that the use of CPOE improves the safety and efficiency of medication administration to patients, prevents duplicate orders and automatically checks for potential errors that can pose a serious threat to patient safety

and reduce the efficiency of healthcare. OMC serves a diverse population, a third of which are Medicaid recipients or uninsured; these patients usually do not have access to the support of a care management program to assist with the coordination of their medication, and this project is targeted to provide additional medication management support to those patients. Proper monitoring of medications to confirm compliance avoids potential drug interactions, especially for those patients who have chronic illness and are taking numerous medications.

- **Quantifiable Patient Impact**: The cumulative Quantifiable Patient Impact (QPI) metric goal for this project is 750 additional unique patients with computerized provider order entries (CPOEs). Of the 750 additional unique patients with CPOEs, approximately 30% are expected to be Medicaid/low income uninsured patients.

- **Description of the Category 3 measure(s):** IT-3.1 All Cause 30-Day Readmission Rate. Readmission is defined as an inpatient admission to any acute care facility which occurs within 30 days of the discharge date of an eligible index admission. All readmissions are counted as outcomes except those that are considered planned. Our goal is to reduce the all cause 30-day readmission rate by 3% over the DY2 baseline by DY5.

Project Option: 2.11.1 Implement interventions that put in place the teams, technology, and processes to avoid medication errors

Performing Provider: OakBend Medical Center (OBMC)/127303903

Unique Project ID: 127303903.2.100

Project Description:

Although OBMC currently provides some information and guidance regarding medication management, this will be a significant expansion of the program by increasing the amount of education available to both patients and staff. OBMC plans to have an ongoing medication reconciliation process that monitors and educate the patient from admission into the hospital through discharge. Efforts will also be made to follow up with the patients post discharge to answer questions and determine whether they are taking their medication as prescribed. This Project allows OBMC to participate in a learning collaborative and inter-agency coordination effort with other entities whose focus is to improve quality of life for the patients in the community.

The medication management program will be designed to evaluate every patient's medication upon admission to the hospital. During the hospital stay OakBend will administer all medication using a barcode process that has alerts in place to identify any medication interactions. There will also be a process for medication reconciliation at the time of discharge, and OBMC will follow up with the patients after discharge to ensure compliance with home medication regiment. Due to the diverse population served it will be beneficial for OBMC to employ bilingual staff to assist with language barriers. The medication management plan will include a workflow for providers that is hard-wired and is followed consistently by all providers to reduce medication errors and increase patient compliance.

The medication management program will be designed to evaluate every patient's medication upon admission to the hospital. During the hospital stay OakBend will administer all medication using a barcode process that has alerts in place to identify any medication interactions. There will also be a process for medication reconciliation at the time of discharge, and OBMC will follow up with the patients after discharge to ensure compliance with home medication regiment. Due to the diverse population served it will be imperative that OBMC hire additional bilingual staff to assist with language barriers. The medication management plan will include a workflow for providers that is hard-wired and is followed consistently by all providers to reduce medication errors and increase patient compliance.

Starting Point/Baseline:

The baseline period is the DY2 time period starting on October 1, 2012 and ending on September 30, 2013. As of the DY2 baseline, OMBC provides some information to patients regarding medication management, but does not have a fully developed medication management program for the education of patient from admission into the hospital through post-discharge.

Quantifiable Patient Impact:

The cumulative Quantifiable Patient Impact (QPI) metric goal for this project is 750 additional unique patients with computerized provider order entries (CPOEs). Of the 750 additional unique patients with

CPOEs, approximately 225 are expected to be Medicaid/low income uninsured patients. The QPI metric goals for each year are provided as follows:

- DY4 QPI Goal: 250 additional unique patients with CPOEs in comparison to DY2 baseline number. Of the 250 unique patients, approximately 75 are expected to be Medicaid/low income uninsured patients.

- DY5 QPI Goal: 500 unique patients with CPOEs in DY5 in comparison to DY2 baseline number. Of the 500 unique patients, approximately 150 are expected to be Medicaid/low income uninsured patients.

Rationale:

Medications are involved in 80 percent of all treatments and impact every aspect of a patient's life. The two most commonly identified drug therapy problems in patients receiving comprehensive medication management services are: (1) the patient requires additional drug therapy for prevention, synergistic, or palliative care; and (2) the drug dosages need to be titrated to achieve therapeutic levels that reach the intended therapy goals.[49] According to the World Health Organization, adherence to therapy for chronic diseases in developed countries averages 50 percent, and the major consequences of poor adherence to therapies are poor health outcomes and increased health care costs.[50] Drug therapy problems occur every day and add substantial costs to the health care system. Drug-related morbidity and mortality costs exceed $200 billion annually in the U.S., exceeding the amount spent on the medications themselves.[51] The Institute of Medicine noted that while only 10 percent of total health care costs are spent on medications, their ability to control disease and impact overall cost, morbidity, and productivity—when appropriately used—is enormous.[52]

OBMC serves a diverse population of patients with chronic diseases, many of whom are prescribed multiple medications and have several added during their hospital stay. Evidence shows that patients who have a list of medication and the reasons for use experience better outcomes. Medication management allows providers to monitor the patient medication list to avoid potential adverse drug interactions. By implementing an evidence-based program aimed at promoting the proper use of medication through the continuum of care OBMC can increase patients' awareness of medication management in the community. This is a proven method of improving both clinical outcomes as well as quality of life.

According to the Region 3 Community Needs Assessment, an estimated 16% of Fort Bend County's population is considered to be in poor or fair health, making medication management an important aspect of improving patient outcomes. By providing medication management services that will better enable patients to receive the right medications at the right times, this project will help address the

[49] Cipolle R, Strand L, Morley P. Pharmaceutical care practice: The clinician's guide. McGraw-Hill; 2004.
[50] World Health Organization. Adherence to long-term therapies: Evidence for action. 2003. Available at: http://whqlibdoc.who.int/publications/2003/9241545992.pdf.
[51] Johnson J, Bootman JL. Drug-related morbidity and mortality. Arch Intern Med. 1995; 155(18):1949-1956; Johnson JA, Bootman JL. Drug-related morbidity and mortality. Am J Health Syst Pharm. 1997; 54(5):554-558; Ernst, FR, Grizzle AJ. Drug-related morbidity and mortality: Updating the cost-of-illness model. J Am Pharm Assoc. 2001; 41(2):192-199.
[52] Centers for Medicare & Medicaid Services. National Health Expenditures. January 2008.

following Region 3 community needs: **CN.9** High rates of preventable hospital readmissions; **CN.10** High rates of preventable hospital admissions; **CN.11** High rates of chronic disease and inadequate access to treatment programs and services for illnesses associated with chronic disease; **CN.20** Lack of access to programs providing health promotion education, training and support including patient education programs; **CN.23** Lack of patient navigation, patient and family education and information programs; and **CN. 24** Lack of care coordination and unnecessary duplication of services due to insufficient implementation and use of electronic health records.

Project Core Components:

This project will include the following required core components:

a) OBMC will develop and identify targeted patient populations. OMBC's medication management program will be designed to evaluate every patient's medication upon admission to the hospital to identify chronic disease patient populations that are at high risk for developing complications.

b) OBMC will develop tools to provide education and support to those patients at highest risk of an adverse drug event or medication error. OMBC plans to implement an ongoing medication reconciliation process that monitors and educates the patient from admission into the hospital through discharge. Efforts will also be made to follow up with the patients post discharge to answer questions and determine whether they are taking their medication as prescribed. Due to the diverse population served it will be beneficial for OBMC to employ bilingual staff to assist with language barriers.

c) OBMC will conduct root cause analysis of potential medication errors or adverse drug events and develop/implement processes to address those causes. OBMC's medication management plan will include a workflow for providers that is hard-wired and is followed consistently by all providers to reduce medication errors and increase patient compliance.

d) OBMC will conduct quality improvement for the project using methods such as rapid cycle improvement. OBMC plans to participate in a learning collaborative and inter-agency coordination effort with other entities whose focus is to improve quality of life for the patients in the community. In DY3, OBMC will participate in at least two face-to-face learning (i.e. meetings or seminars) with other providers and the RHP to promote collaborative learning around shared or similar projects. At each face-to-face meeting, OBMC and other providers will identify and agree upon several improvements and publicly commit to implementing these improvements.

Related Category 3 Outcome Measure(s):

IT-3.1 All Cause 30-Day Readmission Rate. Readmission is defined as an inpatient admission to any acute care facility which occurs within 30 days of the discharge date of an eligible index admission. All readmissions are counted as outcomes except those that are considered planned. Our goal is to reduce the all cause 30-day readmission rate by 3% over the DY2 baseline by DY5. This project is intended to increase patients' compliance with medication management plans after discharge by implementing an evidence-based program aimed at promoting the proper use of medication through the continuum of

care. If this project successful, this will result in more effective management of patients' chronic conditions, which in turn will result in the reduction of unnecessary readmissions.

Relationship to other Projects (including Other Performing Providers' Projects in the RHP):

This project is related to OMBC's Patient Navigation Project (127303903.2.2), because the two projects will share some common staff and resources. Also, this project is related to OBMC's Implement Disease Management and Registry Functionality Project (127303903.1.1), because the disease management registry will be used to identify and track patients who will be receiving medication management services provided as part of this project. This project is not directly related to any other Performing Provider's projects in the RHP.

Plan for Learning Collaborative:

We plan to participate in a region-wide learning collaborative(s) as offered by the Anchor entity for Region 3, Harris Health System. Our participation in this collaborative with other Performing Providers within the region that have similar projects will facilitate sharing of challenges and successes as well as testing of new ideas and solutions to promote continuous improvement in our Region's healthcare system.

Project Valuation:

In valuing this project, OBMC took into account the extent to which the implementation of a Medication Management program would potentially meet the goals of the Waiver (support the development of a coordinated care delivery system, improve outcomes while containing costs, improve the healthcare infrastructure), the extent to which it will address the specific needs of the community, the size and identity of the population served, and the time, effort and clinical resources and cost necessary to implement the project. OBMC believes that the implementation of this project will significantly improve patients' compliance with medication management plan post-discharge, which will ultimately result in the reduction of healthcare costs; and improved patient outcomes.

#18 - Project Option - 2.7.5: Implement innovative evidence-based strategies to reduce and prevent obesity in children and adolescents

Unique Project ID: 158771901.2.100
Performing Provider Name/TPI: Harris County Public Health and Environmental Services/ 158771901

Project Summary:
Provider:
Harris County Public Health & Environmental Services (HCPHES) is a comprehensive local health department serving the third most populous county in the United States. It spans over 1700 square miles, and its land area is larger than the state of Rhode Island. The HCPHES jurisdiction includes approximately 2 million people within Harris County's unincorporated areas and over 30 small municipalities located in Harris County (not including the city of Houston). For certain public health services such as vector/mosquito control, Ryan White/Title I HIV funding, and refugee health screening, the HCPHES jurisdiction encompasses the entire county including the city of Houston, therefore providing services to over 4 million people in total. Since being chartered in 1942 by Harris County Commissioners Court, HCPHES has provided leadership in a wide range of public health activities and programming including but not limited to communicable disease control; veterinary and environmental public health; and clinical preventive services. These services include strong programming in immunizations, oral health, tuberculosis prevention & treatment, and nutrition/wellness through a variety of efforts including the HCPHES Women, Infants, & Children (WIC) program.

Across this broad organizational framework, HCPHES has engaged in significant departmental strategic planning activities, including the development of the *HCPHES Strategic Plan 2013-2018* which is grounded in the "Essential Public Health Services" model (e.g., assessment, policy development and education, and assurance activities). These categories allow HCPHES to engage within a variety of public health sectors including the services provided through its clinical programs. The mission statement of HCPHES is "*Promoting a Healthy and Safe Community, Preventing Illness and Injury, Protecting You, HCPHES, Your Department for Life*" while its clear vision is "*Healthy People, Healthy Communities…a Healthy Harris County*." The HCPHES staff (over 500) are public health professionals in the truest sense of the word and have a broad range of expertise in various public health program areas. HCPHES staff pride themselves in upholding the organizational values which they helped to craft: *Excellence, Compassion, Flexibility, Integrity, Accountability, Professionalism,* and *Equity*.

Intervention(s): Harris County Public Health and Environmental Services (HCPHES) proposes to expand its operations and leverage mobile clinic units alongside existing fixed clinics to meet the health needs of low income, indigent and special needs populations, that lack the resources and/or physical mobility to commute to fixed site locations to receive the vital and preventative services necessary to combat and address childhood and adolescent obesity. This expansion will allow for increased accessibility to services, health education programs, and the dissemination of critical health education information to the target communities.

Need for the Project:

- The 2009 Youth Risk Behavior Survey conducted by the Centers for Disease Control and Prevention (CDC) reported that 12.0% of Texas high school students are obese.[53]
- Obesity prevalence among children and adolescents has almost tripled since 1980.[54]
- According to the American Heart Association:
    - Overweight and obesity predispose to or are associated with numerous cardiac complications such as coronary heart disease, heart failure, and sudden death because of their impact on the cardiovascular system.
- Currently, 1 in 3 Americans (36.9 percent) have some form of heart disease, including high blood pressure, coronary heart disease, heart failure, stroke and other conditions. By 2030, approximately 116 million people in the United States (40.5 percent) will have some form of cardiovascular disease. The largest increases are anticipated in stroke (up 24.9 percent) and heart failure (up 25 percent).[55]

Target Population:
The primary target population will be at risk, low income, and Medicaid eligible/indigent children and adolescents with in the HCPHES jurisdiction. Participants will be recruited from HCPHES clinics and mobile operations which historically represent clinical patients who have been of low income or considered indigent. The minimum number of unique individuals served by this project is 825 with 90% expected to be Medicaid/low income uninsured individuals

Category 1 or 2 expected patient benefits:
- The DY3 goal is to enroll 250 Medicaid –eligible/ indigent children and adolescents from the HCPHES jurisdiction into the proposed evidence based program. Moving on into DY4 with an increase by 5% over initial enrollment (n=275) and by 10% over initial enrollment in DY5 (n=300).

Quantifiable Patient Impact:
QPI: Number of unique individuals receiving services/ intervention.

Related Category 3 Outcome Measures:
OD- 10 Quality Of Life/Functional Status
IT-10.1.j - CDC Health-Related Quality of Life (HRQoL) Measures

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[53] CDC Division of Nutrition, Physical Activity and Obesity website. www.cdc.gov/obesity/childhood/index.html. Accessed August 27, 2013.
[54] CDC Division of Nutrition, Physical Activity and Obesity website. www.cdc.gov/obesity/childhood/index.html. Accessed August 27, 2013.
[55] Paul A. Heidenreich, Justin G. Trogdon, Olga A. Khavjou, Javed Butler, Kathleen Dracup, Michael D. Ezekowitz, Eric Andrew Finkelstein, Yuling Hong, S. Claiborne Johnston, Amit Khera, Donald M. Lloyd-Jones, Sue A. Nelson, Graham Nichol, Diane Orenstein, Peter W.F. Wilson, Y. Joseph Woo, and on behalf of the American Heart Association Advocacy Coordinating Committee, Stroke Council, Council on Cardiovascular Radiology and Intervention, Council on Clinical Cardiology, Council on Epidemiology and Prevention, Council on Arteriosclerosis, Thrombo. Forecasting the Future of Cardiovascular Disease in the United States: A Policy Statement From the American Heart Association. Circulation, January 24, 2011 DOI: 10.1161/CIR.0b013e31820a55f5

Project Option – 2.7.5 Implement innovative evidence-based strategies to reduce and prevent obesity in children and adolescents.

Unique Project ID: 158771901.2.100
Performing Provider Name/TPI: Harris County Public Health and Environmental Services/ 158771901

Project Description:
HCPHES has been a trusted and reliable provider for quality maternal, child health, and family planning services to low income, uninsured populations in Harris County for over 40 years. HCPHES - specifically the HCPHES Disease Control & Clinical Prevention (DCCP) Division - has successfully managed several contracts with Texas Department of State Health Services (DSHS) over the years aimed at providing preventive clinical health services to the public. These DSHS-funded clinical programs have included family planning, prenatal care, child health (Texas Health Steps) and immunizations for children and adults in the past. Through strategic realignment 3 years ago, HCPHES transitioned its maternal and child health programs to the Harris Health System, a sister agency and close collaborative partner of HCPHES. Currently, HCPHES is managing DSHS contracts to provide family planning; tuberculosis control and prevention; refugee health screening; Supplemental Nutrition Program for Women, Infants and Children (WIC); dental services for children; and targeted case management services for residents in Harris County. HCPHES has been considered a leader in the provision of quality and cost-effective population-based public health services at the local level.

HCPHES, through the utilization of mobile and fixed clinics, will increase access to the vital services necessary to reduce childhood and adolescent obesity rates in the target communities by providing screenings, health promotion education, and a robust referral program into applicable services such as integrated care programs, primary care providers and treatment programs, as applicable. HCPHES aims to reduce childhood and adolescent obesity, which has been identified by the American Heart Association, Centers for Disease Control and Prevention, American College of Cardiology, and the National Institutes of Health along with many other health and research agencies nationally and internationally, as an elevated risk factor associated with and causing cardiovascular disease and disorders, including but not limited to, coronary heart disease, heart failure, and sudden death. HCPHES will implement, from mobile clinical sites and fixed clinical sites, an evidence based program similar to the MEND program to address overweight children and adolescents.

HCPHES will utilize the MEND program as a reference framework due to the programs notable outcomes. MEND is one of the world's largest evidence-based healthy lifestyle programs that empower children and adolescents, with the support of their families, to reach and maintain a healthy weight. This is accomplished by educating families and encouraging them change unhealthy attitudes about food, engaging in physical active on a regular basis, choosing foods that are healthy, tasty and nutritious, and taking action to sustain a healthy lifestyle. Empirical evidence demonstrates that programs that combine behavior change, physical activity and nutrition with ongoing support for families are more likely to produce long-lasting health benefits. The MEND Program has been designed by childhood obesity experts to contain all of these core components and is supported by 10 years of research attesting to the program's successes. Furthermore, the program embraces the recommendations of the U.S. Preventive Services Task Force (USPSTF) for improving physical and mental health in overweight and obese children. To date the program has posted a 79% retention rate, with over 75,000 individuals having completed the program, 80% of which reduced or maintained their BMI. Participants are assessed before

and after the program and they and their families complete questionnaires that would help HCPHES personnel to monitor and evaluate improvements in the body mass index (BMI), waist circumference, fitness, and self-esteem of program participants. At the conclusion of the program each participating family would receive a directory of community resources for post- program support such as local program graduate activities, after-school physical activity programs, follow-up measurements, and other local opportunities to reinforce positive health behaviors.

Community health workers (CHW) will play an integral role in the recruitment and retention of program participants. Follow-up and monitoring of participants, by community health workers, will be essential for data collection to determine the effectiveness of individual protocols assigned to programs participant by a certified exercise physiologist.

Participants will be recruited through current clinical services, community-based events, and other HCPHES community-based programs. Physical locations for the proposed evidence based program sessions will be identified that best meets the needs of the participants and their families. HCPHES proposes to partner with local agencies that may also offer physical space for this initiative.

Goals and Relationship to Regional Goals:

Project Goals:

- The goal of this project is to partner with community health workers, subject matter experts, clinical professionals, healthcare partners such as Harris Health System, and other stakeholders to provide services for targeted populations to significantly minimize childhood and adolescent obesity rates.
- Close gaps in access to vital and preventive services related to obesity within targeted populations.
- Minimize obesity rates, with an overall net benefit of significantly decreasing the risk of cardiovascular disease and other associated illnesses within targeted populations.
- Improve recognition, understanding and support of the HCPHES organization, our activities, and the broad mission of public health among our stakeholders.
- Guide project participants, their families, and other community residents to additional prevention and treatment, including HCPHES services and programming.

This project meets the following regional goals:

- Develop a culture of ongoing transformation and innovation that maximizes the use of technology and best-practices, facilitates regional collaboration and sharing, and engages patients, providers, and other stakeholders in the planning, implementation, and evaluation processes.
- Develop a regional approach to health care delivery that leverages and improves on existing programs and infrastructure, is responsive to patient needs throughout the entire region, and improves health care outcomes and patient satisfaction.

Challenges:

Some of the anticipated challenges are as follows:

- The recruitment and retention of program participants (i.e., maintaining their interest, motivation and commitment to the program).

- Development and implementation of an efficient referral process for patients into other applicable service.
- Consistency in program implementation among staff and providers.

3-Year Expected Outcome for Provider and Patients:
As the performing provider of services, HCPHES expects that the overall health outcomes of obese children and adolescents will improve. In addition, a significant improvement in cardiovascular health and a decline in the attributed risk factors to cardiovascular disease and disorders, such as obesity rates among the targeted population are expected.

Starting Point/Baseline:
No readily available data regarding the scope of this project exists in the targeted population at this time. Baseline for this program will be determined during children and adolescent health screenings. As this project is a new process for HCPHES participation rates will be assessed at baseline and reevaluated throughout the implementation phase.

Quantifiable Patient Impact:
DY3 QPI: Number of unique individuals receiving services/ intervention.
Goal: Minimum of 250 enrollees

DY4 QPI: Number of unique individuals receiving services/ intervention.
Goal: Minimum of 275 enrollees

DY5 QPI: Number of unique individuals receiving services/ intervention.
Goal: Minimum of 300 enrollees

Rationale:
Project Option 2.7.2 was selected because evidence-based programs similar to MEND have proven to combat obesity and maintain high levels of program participation.
Trends in behavioral risk factors can have a profound impact on population health. Estimates suggest that obesity accounts for 5 to 15% of deaths each year in the United States.[56] Moreover, the financial implications of cardiovascular disorders associated with obesity are catastrophic. The American Heart Association projects that between 2010-2030, the cost of medical care for heart disease will rise from $273 billion to $818 billion. Heart disease is also estimated to cost the nation billions more in lost productivity, increasing from an estimated $172 billion in 2010 to $276 billion in 2030.[57] Alternative causalities such as social and economic factors influence a broad array of opportunities, exposures, decisions and behaviors that promote or threaten adolescent and child health. Several studies over the past 15 years have shown a relationship between high rates of obesity, low-income or poverty.

[56] Stewart, Susan T., David M. Cutler, and Allison B. Rosen. 2009. Forecasting the effects of obesity and smoking on U.S. life expectancy. The New England Journal of Medicine 361:2252-2260. Accessed 8/20/13.
[57] Paul A. Heidenreich, Justin G. Trogdon, Olga A. Khavjou, Javed Butler, Kathleen Dracup, Michael D. Ezekowitz, Eric Andrew Finkelstein, Yuling Hong, S. Claiborne Johnston, Amit Khera, Donald M. Lloyd-Jones, Sue A. Nelson, Graham Nichol, Diane Orenstein, Peter W.F. Wilson, Y. Joseph Woo, and on behalf of the American Heart Association Advocacy Coordinating Committee, Stroke Council, Council on Cardiovascular Radiology and Intervention, Council on Clinical Cardiology, Council on Epidemiology and Prevention, Council on Arteriosclerosis, Thrombo. Forecasting the Future of Cardiovascular Disease in the United States: A Policy Statement From the American Heart Association. Circulation, January 24, 2011 DOI: 10.1161/CIR.0b013e31820a55f5. Accessed 8/23/2013

According to research conducted by the CDC, higher rates of children overweight are apparent in lower income groups, where families generally have less access to healthy food in addition to fewer opportunities for physical activity.[58]

Not only do social and economic factor influence behaviors but they also hinder timely accessibility to services, or make accessibility to services impossible, due to lack of resources (i.e. transportation, funds, physical condition), which makes the incorporation of mobile health clinics a key resource for this project. Mobile health clinics have grown out of the dire need for health care services among the most vulnerable populations in the US. Those with special needs , including disabled, homeless, children and elderly suffer from health disparities that leave them in poor health. By the time they seek health services, they are usually in need of far more expensive services than the ones they might have originally received, and they are much sicker than they should have ever become. Mobile health clinics are an essential source of health care for these populations because they provide care in a way that makes it accessible.

Project Core Components:
HCPHES will utilize a stage gate approach in applying project management best practices in implementing the obesity reduction project specifically utilizing a phased release process over the lifecycle of the program. In each stage gate we will focus on continuous stakeholder feedback from various data collection points including iterative reviews of lessons learned captured from project deliverables in remediating any future challenges and/or risks. In addition, given the majority of the population we serve are Medicaid/low income uninsured individuals, our program will be tailored to overcome the unique challenges/barriers that may exist such as transportation, communication, availability, and location

Unique community need identification numbers the project addresses:
- CN.6- Inadequate access to treatment and services designed for special needs populations, including disabled, homeless, children and elderly.
- CN.11-High rates of chronic disease and inadequate access to treatment programs and services for illnesses associated with chronic disease including: cancer, diabetes, obesity, cardiovascular disease, asthma, and AIDS/HIV.
- CN.20 – Lack of access to programs providing health promotion education, training and support, including screenings, nutrition counseling, patient education programs.
- CN.22-Insufficient access to services that are specifically designed to address racial, ethnic and cultural health care disparities
- CN.23-Lack of patient navigation, patient and family education and information programs.

How the project represents a new initiative or significantly enhances an existing delivery system reform initiative:
This project will be an innovative step for HCPHES as an expansion of community-focused intervention aimed at reducing childhood and adolescent obesity. Previous outreach efforts have consisted of the dissemination of information and program administration from fixed clinical establishments, that did not interface with a large populous of the targeted community. This project will not only expand services to

[58] CDC Division of Nutrition, Physical Activity and Obesity website. www.cdc.gov/obesity/childhood/index.html. Accessed August 27, 2013.

include mobile clinical operations to meet accessibility needs, but will offer additional services to the targeted population, including community based group programs, individualized exercise programs and individualized follow-up by community health workers.

Related Category 3 Outcome Measures:
OD- 10 Quality Of Life/Functional Status
IT-10.1.j - CDC Health-Related Quality of Life (HRQoL) Measures

Rationale for Category 3 Measures**:**
The obesity reduction project is focused on a metric based delivery system and alignment to the OD-10 domain (Quality Of Life/Functional Status) in which the associated category 3 improvement targets selected provides significant data points to demonstrate overall progress, area population impact, effectiveness, and continuous service improvement to bridge the gaps in the underserved region/population. In addition, the Health-Related Quality of Life measures provides critical awareness and surveillance to the region while also invoking proven health risk mitigation/improvement strategies.

Relationship to Other Projects:
Healthcare treatment and services cannot focus to only the acute or chronic encounter and properly treat the patient. It is critical that our region focuses to patient education and community education to ensure a proactive and responsive approach to healthcare needs.
The ability to properly identify, monitor, and assess at risk patients struggling with tobacco use and obesity is essential to minimize chronic conditions, such as those associated with cardiovascular events, which over time accounts for substantial resource utilization.

Plan for Learning Collaborative:
We plan to participate in a region-wide learning collaborative(s) as offered by the Anchor entity for Region 3, Harris Health System. Our participation in this collaborative with other Performing Providers within the region that have similar projects will facilitate sharing of challenges and testing of new ideas and solutions to promote continuous improvement in our Region's healthcare system.

Project Valuation:
HCPHES reviewed relevant data summaries from a variety of sources, such as demographic and public opinion data from the Rice University Kinder Institute's Houston Area Survey, and health related data specific to Harris County from the University of Texas School of Public Health's Houston Health Survey and the Texas Department of State Health Services, Center for Health Statistics. Additionally, HCPHES considered public health mandates and community need; the data, anecdotal information and the level of service provided by region 3 participating providers to address public health issues locally were considered to determine value. Valuation is based on cost avoidance and projecting health care expenditure savings by minimizing childhood and adolescent obesity through the implementation of accessible, cost contained, evidence based comprehensive weight management interventions to the target population.

#19 - Project Option 2.19.1 Design, implement, and evaluate care management programs and that integrate primary and behavioral health needs of individual patients - Community Re-Entry Network Program (CNRP)-Integrated Health Services Project

Unique Project ID: 093774008.2.101

Performing Provider Name/TPI: City of Houston Department of Health and Human Services/0937740-08

Project Summary:

Provider: The performing provider, Houston Department of Health and Human Services (HDHHS) is the public health authority for Houston, Texas, the fourth largest city in the U.S., with a population of 2.1 million in 2010. Established in 1840, HDHHS has grown to a department of 1,100 employees. HDHHS provides core public health services to all Houston residents such as air and water quality monitoring; restaurant inspections; lead paint safety; cancer screening and family planning for the uninsured; communicable disease prevention and control; disease surveillance; birth and death certificates; leadership in emergencies such as hurricanes; services to seniors; WIC programs; immunizations; and others. HDHHS operates 11 multi-service centers, 6 health centers, 14 WIC (Women, Infants and Children nutrition program) sites, the Harris County Area Agency on Aging, a comprehensive regional reference laboratory, and 44 health and human service programs. While HDHHS provides services that benefit all Houston residents, the department also takes additional steps to support those most in need, such as low income mothers and children, the elderly, and minority populations.

Intervention(s): The performing provider will implement the CNRP- Integrated Health Services Project to provide care management services that integrate primary and behavioral health needs of released ex-offenders, parolees and probationers in Houston, Harris County. The intervention targets newly released ex-offenders with co-occurring mental health, substance use and chronic physical disorders in order to increase use of primary and specialty care and to reduce the use of Emergency Rooms and crisis and jail diversion services. The total number served by the program will be 1575 individuals.

Need for the Project: Houston, Harris County receives more recently released ex-offenders than any other county in the surrounding area. Each year over 15,000 ex-offenders are released to Houston, Harris County. Approximately 90% of the target population is unlikely to have any form of private or public health insurance. The lack of a medical home and lack of access to a primary care provider results in greater health care costs and poorer health outcomes among those disconnected from primary care. Early engagement in appropriate services to address the multiple conditions for these individuals, as well as their needs for housing and social support, requires both behavioral health case managers and chronic disease care managers working closely to make service settings accessible and to track progress.

Target Population: The project target population is made up of ex-offenders in the Houston, Harris County area age 18 – 70 years of age with co-occurring mental health, substance use and chronic health conditions.

Category 3 outcomes**: Tentative Choice. This will be revised once the new Cat 3 measures are approved by CMS.**

IT-9.2 ED appropriate utilization ***(Standalone measure)***
Reduce all ED visits

Project Option 2.19.1 Design, implement, and evaluate care management programs and that integrate primary and behavioral health needs of individual patients- Community Re-Entry Network Program (CNRP)-Integrated Health Services Project

Unique Project ID: 093774008.2.101

Performing Provider Name/TPI: City of Houston Department of Health and Human Services / 0937740-08

Project Description:

HDHHS will implement a project that provides care management services that integrate primary and behavioral health needs of released ex-offenders, parolees and probationers in Houston, Harris County.

The Community Re-Entry Network Program (CRNP), Integrated Health Services Project will provide a multi-dimensional clinical approach to assess and address the mental, physical and psychosocial needs of ex-offenders released from prison and probationers in Houston, Harris County. The CRNP, Integrated Health Services Project will provide specialty care screenings (via HDHHS Health Clinics), behavioral case management, health education/risk reduction, patient navigators (disease care managers) and job readiness for each client to provide a holistic support system in order to reduce recidivism, reduce ER utilization, link to primary care and assist in overall client self-sufficiency. In this instance, the performing provider uses the Wagner's Chronic Care Model definition, which characterizes chronic conditions as any condition that requires ongoing adjustments by the affected person and interactions with the health care system.

The Expanded CRNP will only serve released ex-offenders, parolees and probationers with a criminal history which excludes, sex offenders and arsonists. HDHHS will coordinate and collaborate through existing relationships with Federally Qualified Health Centers (FQHC) and Harris Health System in linking clients to a permanent medical home via Point of Entry Agreements (POE). HDHHS will also coordinate and collaborate with Region 2—Harris County Probation and Parole Office to specifically receive referrals of clients that meet criteria for services (listed above). The project will enroll 500 individuals in in DY3 and increase enrollment by 5% over baseline in DY4 (N=525) and by 10% over baseline in DY5(N=550).

CRNP, Integrated Health Services Project will provide behavioral health care case management, service linkage and education According to McDonnell et al. (2011), the components of care continuity for criminal justice populations are: 1) Screening for substance use and mental health problems and physical health needs. 2) Comprehensive clinical assessment identifying likely course of care needed and recommended first placement. 3) Placement in community substance abuse/mental health services. 4) Ongoing care management to support engagement and retention in substance use/mental health services and medical services. 5) Ongoing care management to facilitate access to critical recovery support services. 6) Regular monitoring for compliance involving drug testing

Need for project

Houston, Harris County receives more recently released ex-offenders than any other county in the surrounding county area. Each year, over 15,000 ex-offenders are released to Houston, Harris County. Approximately 90% of our target population is unlikely to have any form of private or public health insurance. The goal of the project is to offer a community based program where newly released ex-offenders can receive services and referrals to address their primary and behavioral health care needs

without the need to access services at the ER. Lack of access to care and specialty services can lead to over-utilization of emergency departments, un-managed, medical, mental and behavioral health issues that increase the opportunity of unnecessary incarcerations.

The current US corrections system is a revolving door system, where individuals recycle through the criminal justice system repeatedly because of a lack of programs that can break the cycle of recidivism. Approximately 9 million adults churn through the jail system each year.

According to an Urban Institute report, "offenders often experience multiple problems, such as health and mental health illnesses, the breakdown of family structures, and unemployment or low income leading to difficulties in accessing or sustaining services to meet their basic needs. In some cases, the adversity offenders confront affects only them and their families. However, often the impact is more widespread, negatively impacting the larger community. For example, some health conditions (e.g., asthma, diabetes, heart disease, or high blood pressure) primarily affect the quality of life of the offender and his/her family or household; the impact on the community is largely limited to strains potentially introduced by increased need for health services or funding to treat those who lack health care coverage. Others health issues, however — such as human immunodeficiency virus/auto immunodeficiency virus (HIV/AIDS), Hepatitis B and C (HBV and HCV, respectively), sexually transmitted diseases (STDs, such as syphilis, gonorrhea, and chlamydia), tuberculosis (TB), severe psychiatric disorders, and substance abuse — not only disproportionately affect offenders in correctional facilities and in the community (Hammett et al., 1999), but also pose potential threats to the well-being of family members and the public as inmates return to the community" (Rossman, 2001).

Research has identified four key components to promote successful re-integration which involve pre-release preparation and post-release support. These are 1) Assessment of offenders' clinical and social needs and the risks to public health and safety 2) Planning for treatment and services required to address these needs 3) Identifying required correctional and community programs responsible for post release services 4) Coordinating the transition plan to ensure appropriate service delivery and mitigate gaps in care.

Target Population

The project target population is made up of ex-offenders, that are between the ages of 18-70, male and female that have been released from a correctional institution to Houston, Harris County area, age 18 – 70 years of age with co-occurring mental health, substance use or chronic health conditions.

Goals and Relationship to Regional Goals

The goals of the Expanded CRNP-Integrated Health Services Project as it relates to the ex-offender are: 1) To facilitate a comprehensive clinical intervention that assess and address the mental, physical and psychosocial needs of clients that are referred into the program 2) To conduct specialty care screenings (via HDHHS Health Clinic) with every assigned client within 30 days of entry into the program 3) To link clients into a primary medical home 4) To educate, empower and encourage clients via health education/risk reduction programs that correlates to stability and self-sufficiency

The goals of the CRNP-Integrated Health Services Project for the community at-large are:

- To reduce the over-utilization of ER by establishing clients in a primary medical home
- To decrease re-admissions to the criminal justice system

This project meets the following regional goals:

Increase access to primary and specialty care services, with a focus on underserved populations, to ensure patients receive the most appropriate care for their condition, regardless of where they live or their ability to pay.

Challenges:

The performing provider expects to face challenges in enrolling and following up with the target population, resistance from enrollees due to denial of the reality of their at-risk behaviors or their need for medical/mental health intervention. Additionally, distrust of providers, or of services (e.g., some subcultures are biased against accepting mental health services) and a history of poor decision making and often irresponsible choices can present challenges to the performing provider. However, the performing provider has a history of working with this difficult to reach population and will train staff to implement techniques and methodologies that will lead to successful engagement of clients in services.

3-Year Expected Outcome for Provider and Patients:

The three year expected outcome for providers are to: have an experienced and trained workforce of ex-offenders, increased service delivery and increase the number of individuals receiving integrated care. The three year expected outcome for the enrolled individuals are: increased self-sufficiency, improved quality of life, a reduction in behavioral health related illness, an increased continuity of care and ongoing professional support.

Starting Point/Baseline:

This is an expansion initiative with new components. A baseline will be established in the first year of full operation (DY3).

Rationale:

Since newly released ex-offenders present with multiple comorbid physical and behavioral health conditions, coordinated medical and behavioral health services are needed to serve this hard to reach population. Early engagement in appropriate services to address the multiple conditions for these individuals, as well as their needs for housing and social support, requires both behavioral health case managers and chronic disease care managers working closely to make service settings accessible and to track progress. This strategy benefits the community by reducing recidivism, reducing re-entry into criminal justice system and reduces inappropriate ER usage for conditions related to primary care or outpatient behavioral health.

Project Core Components:

- Conduct data matching to identify individuals with co-occurring disorders who are: not receiving routine primary care, not receiving specialty care according to professionally accepted practice guidelines, over-utilizing ER services based on analysis of comparative data on other populations, over-utilizing crisis response services. Becoming involved with the criminal justice system due to uncontrolled/unmanaged symptoms. CRNP-Integrated Health Services Project will collaborate with law enforcement and the justice system to identify individuals that are about to be released. Individuals with comorbid physical and behavioral health conditions that are frequent ER users will be the primary target of this program. Those that are willing to participate post-release will be enrolled in the program.

- Review chronic care management best practices such as Wagner's Chronic Care Model and select practices compatible with organizational readiness for adoption and implementation.

The performing provider team will review the existing evidence based models of chronic care and select the appropriate one(s) that would serve the needs of this population. Organizational readiness for adoption and implementation will also be assessed.

- Identification of BH case managers and disease care managers to receive assignment of these individuals : Behavioral health case managers will be hired to assess the mental health status of the participants. Disease care managers will work with the behavioral health case manager as a team to develop a coordinated approach for care delivery.

- Develop protocols for coordinating care; identify community resources and services available for supporting people with co-occurring disorders: After the appropriate chronic care model has been selected and identified by the performing provider, protocols will be initiated for coordinated care by bringing community resources, available services, training programs etc. to the participant to facilitate the re-entry process.

- Identify and implement specific disease management guidelines for high prevalence disorders, e.g. cardiovascular disease, diabetes, depression, asthma: In each case, disease management guidelines will be followed to provide best practices in care to the participants. Typically, those being released from incarceration have more health and psychosocial problems than the general populace. Some of the risk behaviors and living conditions that contribute to poor health in this population are: Heavy use of tobacco, alcohol, and drugs, Injection drug use, or tattooing, Multiple sex partners, Unprotected sex, in or out of prison, Transience, particularly if it involves homelessness, Financial instability, Poor or delayed access to health care and treatment, Emotional circumstances characterized by the lack of supportive relationships, Overcrowded conditions, and movement among prisons that spreads contagion.

- Train staff in protocols and guidelines: The care management staff and case managers on this project will receive structured training on the protocol and procedures.

- Develop registries to track client outcomes: A registry system will be piloted by the CRNP, Integrated Health Services Project , developed in partnership with the justice system.

- Review the intervention(s) impact on quality of care and integration of care and identify "lessons learned," opportunities to scale all or part of the intervention(s) to a broader patient population, and identify key challenges associated with expansion of the intervention(s), including special considerations for safety-net populations.

The integrated health care will be evaluated with respect to quality of care and coordination of care. Reliable and valid measures will be used to quantify the participant's perception of the quality of care and coordination of care. Several process measures will help monitoring of the program and changes will be implemented based on the lessons learned. Additionally, a continuous quality improvement (CQI) process will be put in place. Detailed notes on lessons learned and best practices will be documented and changes in program processes will be instituted based on the lessons learned.

Unique community need identification numbers the project addresses:

This project addresses the following community needs: 1) CN-20 Lack of access to programs providing health promotion education, training and support, including screenings, nutrition counseling, patient education programs 2) CN.8 High rates of inappropriate emergency department utilization 3) CN.23 Lack of patient navigation, patient and family education and information programs

How the project represents a new initiative or significantly enhances an existing delivery system reform initiative:

This project is a new initiative that adds a behavioral health and health services integration approach to an existing offender re-entry program which primarily focuses on connecting offenders to social services and providing life skills training that increases the ex-offenders ability to find and maintain employment and prevent recidivism.

Related Category 3 Outcome Measures: Tentative Choice

P- 3 Develop and test data systems

P- 4 Conduct Plan Do Study Act (PDSA) cycles to improve data collection and intervention activities

IT-9.2 ED appropriate utilization ***(Standalone measure) TENTATIVE***

☐Reduce all ED visits (including ACSC) 271
Numerator: Number of patients that went to ED for a primary care related condition after participating in navigation program

Denominator: Number of patients that participated in the navigation program

Reasons/rational for the selecting the outcome measures:

Navigation services provided to patients using the ED as high users or for episodic care can help reduce ED usage by making PCP or medical home appointments and ensuring continuity of care.

Relationship to Other Projects:

HDHHS will participate in a region-wide learning collaborative(s) as offered by the Anchor entity for Region 3, Harris Health System. Participation in this collaborative with other Performing Providers within the region that have similar projects will facilitate sharing of challenges and testing of new ideas and solutions to promote continuous improvement in the Region's healthcare system.
The need for coordinated physical and behavioral health care in Region 3 is considerable and the CRNP-Integrated Health Services Project initiative will play a small but important role in connecting ex-offenders without a primary care physician or access to behavioral health to a medical home. This project is similar to several other RHP projects that involve coordination of care to underserved populations.
The ability to properly identify and monitor specific patients with chronic conditions or frequent emergency department utilization trends will allow the region to accurately mange the very large patient base. Patient navigation includes a comprehensive list of tasks as well as unique provider types based on the focus of the initiative and will help the focus of cost containment, emergency department utilization, and chronic disease management. The Region 3 Initiative Grid in the addendum allows for a cross reference of all initiatives proposed within this concept.

Project Valuation:

HDHHS utilized two categories to calculate value for each DSRIP project. The first category is Prioritization and the second is Public Health Impact (see attachment for HDHHS Valuation Tool). HDHHS scored the project on a scale of 1 (poor) to 9 (exceptional) for each of the six factors that comprise the Prioritization category. The Prioritization category includes the following factors: 1) Transformational Impact, 2) Population Served / Project Size, 3) Alignment with Community Needs, 4) Cost Avoidance, 5) Partnership Collaboration and 6)Sustainability. Each factor was then given a

weighted score based on the score rated and a pre-determined percentage weight. The six weighted scores were added to get a composite score for the Prioritization category.

Public Health includes activities which seek to achieve the highest level of health for the greatest number of people. Public Health also focuses on preventing problems from happening or re-occurring through programs and activities that promote and protect the health of the entire community. As a public health department, HDHHS added an additional valuation category of Public Health Impact that looked at projects through a public health lens. The Public Health Impact category includes the following factors: 1) Alleviate Health Disparity, 2) Control Communicable and Chronic Disease , 3) Prevention Orientation, 4) Population Health Focus, 5) Access and Connection to Health Services and 6) Evidence Based Health Program. HDHHS scored the project on a scale of 1 (poor) to 9 (exceptional) for each of the six factors that comprise the Public Health Impact category. Each factor was then given a weighted score based on the score rated and a pre-determined percentage weight. The six weighted scores were added to get a composite score for the Public Health Impact category.
HDHHS gave the Prioritization score a weight of 25% and the Public Health Impact score a weight of 75% to determine the overall project value for the plan. The IHSREP Program received a composite Prioritization score of 5.35 and a Public Health Impact score of 6.

Relevant Articles:

1. Wagner EH. Chronic disease management: what will it take to improve care for chronic illness? Eff Clin Pract. 1998;1:2-4. (The Chronic Care Model image first appeared in its current format in this article)

2. Wagner EH, Austin BT, Davis C, Hindmarsh M, Schaefer J, Bonomi A. Improving chronic illness care: translating evidence into action. Health Aff (Millwood). 2001;20:64-78.

3. Rossman, S (2001). Service Integration Strengthening Offenders and Families, while promoting community health and safety. The Urban Institute.

   http://aspe.hhs.gov/hsp/prison2home02/rossman.htm
4. McDonnell, M et al (2011). Realizing the potential of the National Health Care Reform to reduce Criminal Justice Expenditures and recidivism among jail populations. http://www.cochs.org/files/CHJ%20Final.pdf

#20 - Project Summary – Fort Bend County 2967606-01 2.101

Provide an intervention for a targeted behavioral population to prevent unnecessary use of services in a specified setting - criminal justice

Provider: Fort Bend County Clinical Health Services is a division of the Fort Bend County Health & Human Services Department (FBCHHS), the local health department for the County. Fort Bend County is located in the Houston metropolitan area of southeast Texas. It encompasses a total of 875.0 square miles (562,560 acres). The current population is estimated at almost 607,000. FBCHHS services include: Animal Services, Clinical Health Services, EMS, Environmental Health, Social Services, Veterans Services and Public Health Preparedness. Fort Bend County also has a Behavioral Health Services program.

Intervention: Fort Bend County proposes to develop a continuum of care that is founded on evidence-based practices for this target group (persons with severe mental illness and / or mental illness and physical health conditions) identified as high risk for recidivism due to homelessness/ lack of stable housing, prior history of noncompliance, lack of access to services, complex trauma, lack of family supports and /or lack of integrated care to address complex needs. The target population will be the Medicaid and uninsured population.

Need for the project: The most recent Needs Assessment of FBC conducted by the Lyndon Baines Johnson School of Public Affairs in the summer of 2011 states that the lack of services for the mentally ill has resulted in "mental health becoming a law enforcement issue." As of 4/26/2013, according to the FBC Sheriff's Office, the total jail population was approximately 850 persons. Of those, 268 persons (male = 217, female = 51) have a mental health disorder and approximately 200 are currently on psychiatric medications. That is, greater than 30% of the jail population have identified mental health needs and many are receiving medication. To further delineate the clinical needs of this sub-population, additional data collection and analysis was conducted on the FBC jail population. As of 4/26/2013, there were 85 (85/268 = 32%) persons with co-occurring disorders (male = 71, female = 14) in the FBC jail. This data is likely an underestimate of the co-occurring/substance abuse sub-population among people with mental illness and behavioral health disorders. National trends suggest approximately 70% of jail inmates with mental illness have co-occurring disorders[59]. The need to identify and address co-occurring substance abuse disorders in this population is a priority given that this is often a major factor in "reason" for initial involvement in the criminal justice system as well as recidivism.

Although the overall jail population has decreased in recent years in FBC, the percentage of inmates with mental illness has steadily increased. The data and trends are consistent with state and national data suggesting that our jails are becoming the local psychiatric hospitals in many communities. The lack of appropriate and accessible community alternatives has, in too many situations, resulted in the unnecessary incarceration of individuals with mental illness, the escalation of behaviors often resulting in injury to both patients and officers, and treatment in an unnecessarily restrictive and inappropriate setting. This has been supported with data from focus groups, needs assessments, individual interviews with officers, family members, and service providers. Recent trends also indicate that the majority of persons with mental illness in jail are between the ages of 18 and 30 (approximately 42% of all mental health inmates), suggesting the young adult population makes up the majority of persons with mental

[59] Substance Abuse and Mental Health Services Administration (SAMHSA, 2004). The prevalence of co-occurring mental illness and substance abuse use disorders in jail. www.samhsa.gov/co-occurrimg/topics/data/disorders.aspx

illness in the criminal justice system. Many of these have co-occurring abuse disorders. Inadequate transition planning can result in a host of negative, costly outcomes, including compromised public safety, overdose, hospitalization, suicide, homelessness, and re-arrest. The first weeks following release from jail or prison is a critical time for intervention, as people experience 12.5 times the risk of death and are more likely to come into contact with emergency room services. [60]

Target population: The target population is adults with complex behavioral health needs such as serious mental illness and a co-occurring intellectual developmental disability, substance abuse disorder and/ or physical health condition that are at risk of incarceration. The priority population will be the uninsured and Medicaid population.

Category 2 expected patient benefits: FBC expects to see a reduction in the number adults with complex behavioral health needs that are incarcerated. The FBC project also expects to see an improvement in functioning for adults served by the FBC *Recovery & Reintegration* program. An anticipated 20 adults will be served in DY4 and 30 adults will be served in DY5. The total cumulative quantifiable patient impact is 50. It is expected that at least 20% of individuals receiving specialized interventions, through the FB Recovery & Reintegration project, will demonstrate improved functional status on standardized instruments in DY5.

Quantifiable Patient Impact:
An anticipated 20 adults will be served in DY4 and 30 adults will be served in DY5. The total cumulative quantifiable patient impact is 50.

Category 3 outcomes: IT 9.1 Reduce % (TBD) of admissions/ re-admissions to criminal justice settings for adults with complex behavioral health needs.

[60] Vera Institute of Justice Substance Use and Mental Health Program: Treatment Alternatives to Incarceration for People with Mental Health Needs in the Criminal Justice System: The Cost-Savings Implications; available at www.vera.org/pubs/treatment-alternatives-to-incarceration

Project Option 2.13.1 – Design, implement and evaluate research supported and evidence based interventions tailored towards individuals in the target population: adults with complex behavioral health needs involved or at risk of involvement in the justice system-Provide an intervention for a targeted behavioral population to prevent unnecessary use of services in a specified setting - criminal justice

Unique RHP Project Identification Number: 296760601.2.101
Performing Provider Name /TPI: Fort Bend County / 2967606-01

Project Description: 2.13.1
Fort Bend County proposes to develop a continuum of care that is founded on evidence-based practices for this target group (persons with severe mental illness and / or mental illness and physical health conditions) identified as high risk for recidivism due to homelessness/ lack of stable housing, prior history of non-compliance, lack of access to services, complex trauma, lack of family supports and /or lack of integrated care to address complex needs. The target population will be the Medicaid and uninsured population.

Evidence-based interventions will be developed based on the identified patient's and family needs. The goal of this project will be to reduce recidivism rates and to promote recovery. The focus will be to develop a system to support reintegration into the community, stability in living environment, and improved functioning. Evidence-based interventions such as short and long term residential supports, peer supports; specialized therapies, personal assistance, intensive case management and access to health (physical and behavioral health) will be developed. This project will focus on persons with high clinical needs and low criminogenic risk factors. The diversion of this population from ongoing incarceration is critical to preventing further deterioration in health as well as further involvement in the criminal justice system. The coordination of care, access to critical services in a timely manner, and social supports are critical components of this project.

In the criminal justice system the number of persons diagnosed with mental illness is significantly greater than that in the general population. Many jails are now de facto mental health hospitals. It is estimated that almost 15% of men and 31% of women recently booked in jail have a serious mental illness[61]. Many have co-occurring disorders of substance abuse. Furthermore, many struggle with learning disabilities, history of trauma/ abuse, and poverty. These vulnerabilities, coupled with loss of benefits (due to incarceration), inconsistent care, lack of family support, and legal involvement increase the odds for negative health outcomes. Research has shown that untreated substance-use disorders are a major factor of chronic disease progression that can increase risk of hospitalizations, loss of productivity, and dependence on social insurance programs. [62]

The Fort Bend County (FBC) *Recovery &Reintegration* program will focus on the development of specialized interventions and a service delivery system to address the complex health and social needs of persons at risk of incarceration. This project will interface other FBC-DSRIP projects including the

[61] Steadman, H., Osher, F. Robbins, P.C., Case, B., & Samuels, S. (2009). Prevalence of serious mental illness among jail inmates. *Psychiatric Services,* 60, 761-765
[62] Mancuso, D and Felver, BE, "Bending the Health Care Cost Curve by Expanding Alcohol/Drug Treatment", Department of Social and Health Services/Planning/research and Data Analysis Division; September 2010/RDA Report 4.81. http://.www.dshs.wa.gov/pdf/ms/rda/research/4/81.pdf

Behavioral Health Crisis and Response system. The FBC *Recovery & Reintegration* program will enhance the safety net, provide necessary interventions, increase the array of services, and as a result reduce incarceration rates for adults with serious mental illness and other complex behavioral health needs, as well as improve the functional outcomes for these persons, as measured by the Adult Needs and Strengths Assessment (ANSA). The FBC *Recovery & Reintegration* project will include cross systems training and development of data tracking systems to facilitate coordination of services and monitoring of outcomes.

The FBC *Recovery & Reintegration* program will develop a system to support reintegration into the community, stability in living environment, and improved functioning. Evidence-based interventions such as short and long term residential supports, peer supports; specialized therapies, personal assistance, intensive case management and access to health care (physical and behavioral health) will be developed. This project will focus on persons with high clinical needs and low criminogenic risk factors. The diversion of this population from ongoing incarceration is critical to preventing further deterioration in health as well as further involvement in the criminal justice system.

The FBC *Recovery & Reintegration* program will work collaboratively with public and private behavioral health providers, FBC's Health & Human Services, physical health providers, Mental Health America (MHA), National Alliance on Mental Illness (NAMI), and behavioral health providers and organizations in the community to provide the necessary array of services to divert adults from incarceration and provide the necessary array of services to improve functional outcomes and support recovery in the community.
The unique community need this project addresses is CN.2 – Insufficient access to behavioral healthcare services, resulting in lack of care or delay of care, delivery of inappropriate and insufficient care, unnecessary and preventable complications, and increased demand on the criminal justice system.

Goals and Relationship to Regional Goals:

Project Goals

Develop and deliver evidence-based practices for persons with severe mental illness and / or mental illness and physical health conditions identified as high risk for recidivism due to homeless / lack of stable housing, prior history of non-compliance, lack of access to services, complex trauma, and lack of family supports and /or lack of integrated care to address complex needs.

The FBC *Recovery & Reintegration* project presents a major opportunity to enhance the service delivery system for a complex behavioral health population (adults with serious mental illness at risk of involvement or further involvement with the legal system). This project also presents the opportunity for the development of necessary infrastructure to facilitate communication, access, coordination, evaluation of services and systems transformation. The FBC project is the result of collaboration and commitment among county officials, law enforcement, health and human services, behavioral health, courts, and community organizations to redesign current county operations to effectively respond to the behavioral health needs in the community.

This project meets the following Region 3 goals:

- Develop a regional approach to health care delivery that leverages and improves on existing programs and infrastructure that is responsive to patient needs throughout the entire region, and improves health care outcomes and patient satisfaction; and

- Increase access to primary and specialty care services, with a focus on underserved populations, to ensure patients receive the most appropriate care for their condition, regardless of where they live or their ability to pay

The FB *Recovery & Reintegration* project transforms the current service delivery system by expanding and better integrating the array of services available, implementing and evaluating evidence-based interventions, developing data tracking across systems, information sharing, and monitoring outcomes for a targeted population of adults with complex behavioral health needs at risk of further involvement in the criminal justice system.

Challenges:

Timely access to appropriate levels of care and social supports will be a challenge. Coordination of care across systems continues to be a challenge especially for populations with complex behavioral health needs and limited supports. The engagement of patients and follow-up is also a challenge given the patient's history with the system and the barriers to accessing care. The removal of barriers (e.g., transportation, ID cards, phones) to care will be a challenge but a priority for this project. The FBC project will address this by engaging with public and private providers of behavioral health services, community organizations, and volunteer groups. This project will also focus on the expansion of wraparound supports and patient/ family education necessary for successful recovery and reintegration into the community.

The integration of data systems will also be a challenge**.** FBC has well developed data tracking systems, but this needs to be better integrated to facilitate communication regarding patients' needs, linking them to appropriate services and tracking outcomes. The availability of integrated data tracking systems will allow us to continuously identify unmet needs and new resources. The project will work with various partners in the region as well as the county's Information Technology department to develop the most efficient data tracking system. These data elements will be used as part of the project's quality improvement process.

3-year Expected Outcome for Provider and Patients:

FBC expects to see the following:

- Reduce recidivism rates for adults with complex behavioral health problems (person with severe mental illness and/ or combination of behavioral health and physical health).
- Promote recovery in the community (reduce risks factors and needs and increase strengths / protective factors)

The project will be county wide and include the following zip codes:

77053	77406	77407	77417	77441	77444
77451	77459	77461	77464	77469	77471
77476	77477	77478	77479	77481	77487
77489	77494	77496	77497	77498	77545

Starting Point/Baseline:

This is a new program; therefore, the baseline for all metrics and milestones will be established after the project is implemented.

Quantifiable Patient Impact:

An anticipated 20 adults will be served in DY4 and 30 adults will be served in DY5. The total cumulative quantifiable patient impact is 50.

Rationale:

Reasons for selecting the project option: 2.13.1 – Design, implement and evaluate research supported and evidence based interventions tailored towards individuals in the target population: adults with complex behavioral health needs involved or at risk of involvement in the justice system.

Project Components:

Through the FBC Program, we propose to meet all the required project components below and the selected milestones and metrics that relate to the project components:

a. Assess size, characteristics and needs of target population

The project will expand the assessment of the needs of adults with severe mental illness as well as the factors leading to their involvement with law enforcement.

b. Review literature/ experiences with populations similar to the target population to determine community based interventions that are effective at diverting adults from incarceration.

The project will continue to review literature and evaluate ongoing experiences with adults with complex behavioral health needs that are effective at reducing negative outcomes, such as incarceration, decreased mental and physical functional status and promoting positive health, social and quality of life outcomes.

c. Develop project evaluation plan using qualitative and quantitative metrics to determine outcomes.

The project will develop a project evaluation plan that includes qualitative and quantitative measures to determine project outcomes.

d. Design models which include an appropriate range of community based and residential supports.

The project will work with public and private behavioral health providers, community organizations, and other stakeholders to develop an array of community-based services for adults with complex behavioral health.

e. Assess the impact of the interventions based on standardized quantitative measures and qualitative analysis relevant to the target population.

FBC will develop measurement processes that are based on standardized tools relevant to the target population, including the use of the Adult Needs and Strengths Assessment (ANSA).

Milestones & Metrics:

FBC has selected the following process milestones and metrics. These were chosen to ensure core components, some of which have already been fulfilled, are completed and documented appropriately.

- P-2 - Design community based specialized interventions for youth to prevent incarceration or re-incarceration and improve functional status (Metric-2.1).
- P-4 – Evaluate and continuously improve interventions (Metric-4.1).
- P-7– Participate in face-to-face learning (i.e., meetings or seminars) at least twice per year with other providers and the RHP to promote collaborative learning around similar or shared projects (Metric 7.1).

The following improvement milestone and metrics were chosen.

- **I-5: 10% of individuals receiving specialized interventions, through the FB Recovery & Reintegration project, will demonstrate improved functional status on standardized instruments (e.g., ANSA) in DY4 and 20% in DY5 (Metric I-5.1).**
  The Adult Needs and Strengths Assessment (ANSA) will be used to guide service planning and to evaluate functional status. The ANSA will be completed at intake and at regular intervals throughout the project to guide service planning. The ANSA post intervention data will be used as an improvement outcome.
- **I-6: 20 individuals with complex needs will be enrolled and served in DY4 and 30 in DY 5 (Metric I-6.1).**

How the project represents a new initiative for the Performing Provider or significantly enhances an existing service delivery reform initiative:
This is a new initiative for FBC and will improve response to adults with complex behavioral health needs that are involved with the probation department and/or at risk of involvement. In addition, this initiative will further the development of needed infrastructures and partnerships to leverage existing resources, develop additional resources based on identified needs, and improve access to care in the community.

Related Category 3 Outcome Measure(s):
The Category 3 Outcome Measure chosen falls within OD-9-Right Care, Right Setting.
Reasons/rationale for selecting the outcome measure(s):
The goal of the FBC Recovery & Reintegration project is to prevent adults with complex behavioral health needs from incarceration and connects them with needed services to improve their functioning. The Fort Bend County (FBC) *Recovery & Reintegration* program will focus on the development of specialized interventions and a service delivery system to address the needs of adults with serious mental illness at risk of incarceration. This project will interface other FBC proposed DSRIP projects including the Behavioral Health Crisis and Response system. The program will provide necessary interventions, supports and care coordination, and as a result reduce incarceration of adults with serious mental illness and other complex behavioral health needs as well as improve the functional outcomes.

Relationship to Other Projects:
This project will interface with the Behavioral Health Crisis Response and Intervention project proposed by FBC. The project will also interface with the FBC Primary Care Coordination (2967606-01.2.1) and Primary Care Expansion (2967606-01.1.2) projects to facilitate access to essential primary care often overlooked for adults with behavioral health disorders.

Relationship to Other Performing Providers' Projects in the RHP: The FBC project will interface with other Performing Provider's (PP's) in the region to ensure access to necessary behavioral health services to prevent criminal justice system involvement and improve functional status adults with complex behavioral health needs.

Plan for Learning Collaborative:
We plan to participate in a region-wide learning collaborative(s) as offered by the Anchor entity for Region 3, Harris Health System. Our participation in this collaborative with other Performing Providers within the region that have similar projects will facilitate sharing of challenges and testing of new ideas and solutions to promote continuous improvement in our Region's healthcare system.

Project Valuation:
Valuation is based on cost avoidance, projecting savings associated with reducing use of jail and State Hospital commitments to manage the target population with regard to mental and behavioral health needs. During DY 4 and DY 5 Fort Bend County will avoid an average of 61 days annually in detention for an average of 25 adults per year. At $125 per day, this will produce a total savings of $381,250. Over these demonstration years, there will be a savings of at least $621,700 for the target population by avoiding at least one commitment per year per individual (25) to the State Hospital. The costs include the hospital costs ($401/day for 29 days) and transport costs (staff & vehicles). These individuals will average one emergency department visit per year. Therefore $150,000 will be avoided over the two demonstration years for the 25 patients annually at $3,000 per visit. The overall cost avoidance totals $1,152,950 for this project.

#21 - Project Option: 2.13.1 Provide an intervention for a targeted behavioral health population to prevent unnecessary use of services in a specified setting: Juvenile Information Sharing

Project Unique ID: 113180703.2.104
Performing Provider/TPI: MHMRA Harris County/113180703
This project is a collaborative juvenile health information sharing database between multiple entities.

Provider**:** The Mental Health and Mental Retardation Authority (MHMRA) of Harris County is a public agency serving as the safety net provider for adults with serious mental illnesses; children and adolescents with serious emotional disorders; the developmentally delayed; and individuals experiencing acute psychiatric distress. MHMRA provides inpatient, residential and outpatient treatments, including psycho-therapy, case management and medication management for individuals. MHMRA serves more than 49,000 Harris County residents out of a culturally and ethnically diverse population of over 4.1 million. Of those individuals who received any agency service in FY12, 36.5% were medically indigent and 51.9% had Medicaid. Of those who received mental health services in FY12, such as those being proposed in this project, 55% were medically indigent and 34.9% had Medicaid.

Intervention(s): The Mental Health and Mental Retardation Authority (MHMRA) of Harris County proposes to provide an intervention for a targeted behavioral health population (at-risk children and adolescents) who are involved in multiple systems including mental health, child protective services and juvenile justice systems to prevent or reduce unnecessary use of services in a specified setting by establishing a secure electronic health system for the safety net providers that serve certain at-risk children.

Need for the project:
County departments and schools use separate systems to manage the delivery of services to children. The Juvenile Information Sharing system will integrate these systems. The participating agencies will collectively determine common data elements, how the system will function, what events trigger information sharing, and what will trigger data protection. The need this program addresses is to reduce preventable psychiatric hospital admissions, ER visits, rates of arrest and days incarcerated.

Target population: Underserved children and adolescents in Harris County.

Category 1 or 2 expected patient benefits:
- Reduction in criminal justice admissions
- Increase linkages to mental health services

Description of QPI metrics:
- 54,000 data queries performed

Category 3 measures: OD-6 Patient Satisfaction IT-6.1
TBD

Project Option 2.13.1 Provide an intervention for a targeted behavioral health population to prevent unnecessary use of services in a specified setting: Juvenile Information Sharing

Unique RHP Project Identification Number: 113180703.2.104

Performing Provider Name/TPI: Mental Health and Mental Retardation Authority of Harris County/113180703

Project Description:
The Mental Health and Mental Retardation Authority (MHMRA) of Harris County proposes to provide an intervention for a targeted behavioral health population (at-risk children and adolescents) involved in multiple systems including mental health, child protective services and juvenile justice systems to prevent or reduce unnecessary use of services in a specified setting by establishing a secure electronic health system for the safety net providers that serve certain at-risk children in Harris County to coordinate care of the child and their families; to reduce use of certain health care services delivered in specific settings (psychiatric admissions, hospital re-admissions, length of time in foster care/Medicaid, and incarcerations).

Harris County, Texas is the third largest county in the United States with a population of nearly 4.1 million, which includes 1.2 million children. (2010 US Census) and 25% percent of all Texans, an estimated 5.8 million Texans, are uninsured (US Census, Small Area Health Insurance Estimates (2011). Harris County's uninsured rate is even higher - 28.5% of all Harris County residents or more than 1 million people are uninsured, including nearly 186,000 uninsured children.

If a child in Harris County has a serious emotional disturbance or an intellectual and developmental disability, is the victim of a sexual assault or child abuse or neglect, does not attend school, or commits an offense, he or she may likely receive some type of health or mental health assessment or service from one or more of Harris County's juvenile service providers including the Mental Health and Mental Retardation Authority (MHMRA) of Harris County, the Harris County Children's Assessment Center (CAC), Harris County Protective Services for Children & Adults (HCPS), and the Harris County Juvenile Probation Department (HCJPD.) Indeed, these providers are an important part of safety net in Harris County given that they serve a vulnerable and at-risk population.

MHMRA is a public agency that serves as the safety net provider for adults with serious mental illnesses, children with serious emotional disorders, and individuals with intellectual and developmental disabilities. MHMRA serves more than 49,000 Harris County residents. The case mix of persons who received mental health services from MHMRA in FY 2012 was 55% medically indigent and 34.9% with Medicaid.

The Harris County Children's Assessment Center (CAC) provides specialized treatment for sexually-abused children and their families, conducts forensic interviews, and provides support to the non-offending caregiver during the investigative process. During FY 2012, CAC provided services to 5,191 clients of which 4,301 were children. In addition to individual and family therapy, CAC also conducts assessments to identify intellectual and developmental disabilities. CAC will work toward family reunification whenever possible. In 2012, 31% of child clients who received a mental health service had a Medicaid Number

Harris County Protective Services for Children and Adults (HCPS) provides early intervention services, case management, crisis counseling in schools, emergency shelter, respite services child and family assessments, parent/child conflict resolution, permanency planning, medical and dental services for children in foster care, transition services for youth aging out of foster care. During FY 2011, HCPS

served more than 36,000 children. In excess of 70% of children and youth served by CPS are medically indigent or Medicaid recipients.

The Harris County Juvenile Probation Department (HCJPD) is committed to the protection of the public with an emphasis on intervention strategies that are community-based, family-oriented and least restrictive while promoting responsibility and accountability of both parent and child. The department seeks ways to improve the quality of care and treatment given to those involved in the juvenile justice system, with the ultimate goal of reducing future crime. In 2012, HCJPD received 14,402 referrals while continuing its movement toward "front end" community intervention and prevention by working closely with low-level offenders to keep them from further involvement in the juvenile justice system. Of those referrals, HCJPD provided ongoing service to 5,860 Juveniles. Of those Juveniles 4,766 had a court appointed attorney, indicating that the vast majority (81.6%) were indigent.

Previous efforts to estimate the overlap of service recipients across agencies via probabilistic data techniques matching of 14 years of service entries have indicated that 24.8% of children in the juvenile justice system (HCJPD) have previous histories with the public mental health system (MHMRA). Similar analysis of overlap between the Children's Assessment Center (CAC) and the public mental health system show approximately one in twelve CAC service recipients had been previously treated at MHMRA,

Goals and Relationship to Regional Goals:
The primary goal of the program is to reduce preventable psychiatric hospital admissions, ER visits, rates of arrest and days incarcerated.

Challenges:
County departments and schools use separate systems to manage the delivery of services to children. Some were developed many years ago and have become antiquated. All lack the capacity to fully integrate with the other systems. The Juvenile Information Sharing system will integrate these systems. The integrated system will be developed to maintain confidentiality of personal information, maximize the existing IT architecture of the various entities, and comply with state and national standards on data exchange. The participating agencies will collectively determine the common data elements, how the system will function, what events trigger information sharing, and what will trigger data protection. The challenges include establishing a working, shared database that protects confidential information of the patients within each system.

Starting Point/Baseline: Currently, there is no other type of information sharing project about youth in Harris County.

Rationale: In SFY 2011, 19,435 Medicaid enrolled children received inpatient hospital services due to mental illness/substance abuse at a cost of $100 million. Mental health and substance abuse conditions comprised 8.5% of initial admissions but 25.8% of all potentially preventable hospital readmissions (PPR) in Texas. Medicaid enrolled children's PPR for mental health and substance abuse conditions was 9.1 percent within 15 days of discharge. This population was also more likely to have a chain of readmissions. The pediatric group with mental health/substance abuse conditions had the longest length of PPR stay, 12.6 days, than any other group and the PPR stays for this group cost $32.6 million in hospital charges and $11.8 million in Medicaid payments. (Source: Potentially Preventable Readmissions in Texas Medicaid Population, State Fiscal Year 2012 , Texas Health and Human Services

Commission, Nov 2012.) A recent study confirmed earlier studies that the majority of adolescents with psychiatric disorders do not receive treatment. Costello, J, Jian-ping He, Sampson, N, Kessler, R., Merikangas, Kathleen, "Services for Adolescents with Psychiatric Disorders: 12-Month Data from the National Comorbitity Survey – Adolescent" Psychiatric Services, 2013.

MHMRA and Harris County Child Protective Services propose to develop a secure Health Information Exchange to share health information among the Harris County juvenile service providers in order to identify the children and adolescents that are involved in multiple systems (mental health, child protective services and juvenile justice systems); review medical and social services histories; to coordinate the care of the child and their families; to reduce use of certain health care services delivered in specific settings (psychiatric admissions, hospital re-admissions, length of time in foster care/Medicaid, and incarcerations); collect data to evaluate programs and improve the quality of health services (Institute of Medicine, 2001).

In a well-coordinated system of care for children, primary care providers (PCPs) would receive confirmation that referrals were completed, along with pertinent information such as results of any follow-up tests and lab work and related follow-up services. PCPs would also receive comparable information about patients who receive developmental screening or a referral to early intervention services through other channels (e.g., Head Start). Early childhood providers would know about (or have a resource to find out about) available support services in the community and link families to them. In such a system, children and families would receive timely and appropriate care, including early intervention and support services." (Source: Hanlon, Carrie, Improving the Lives of Young Children: Opportunities for Care Coordination and Case Management for Children Receiving Services for Developmental Delay, Urban Institute, Medicaid/CHIP Policy Brief #3, December 2010.)

Category 3

OD-6: IT-6.1: Patient Satisfaction: Improve in patient satisfaction will be measured by collecting data from the actual end user of the database to determine their satisfaction with it's usefulness and capabilities.

Project Components:

In order to enhance the transition from inpatient to develop such a program, the following option and core components were chosen: 2.13.1, Design, implement, and evaluate research-supported and evidence-based interventions tailored towards individuals in the target population. These components have also been imbedded in the program process and improvement milestones (See milestone and metric chart for further details). The status of each component is noted, if that activity is currently underway:

a) Assess size, characteristics and needs of target population(s)

    - Monthly meetings with stakeholders to discuss target population needs and characteristics.

b) Review literature / experience with populations similar to target population.

    - Ongoing literature reviews have been conducted and continue to be done to determine new ways to develop collaborative databases.

c) Develop project evaluation plan using qualitative and quantitative metrics to determine outcomes.

- To be completed. Ongoing monthly meetings with stakeholders to discuss metrics and milestones to determine appropriate metrics and milestones for the program. Initial draft submitted to region.

d) Design models which include an appropriate range of community-based services and residential supports.

- In progress. Designs have been discussed during monthly meetings but a draft has not been finalized to date

e) Assess the impact of interventions based on standardized quantitative measures and qualitative analysis relevant to the target population.

- To be completed. These will be done through collaborative team meetings.

f) Community-based interventions should be comprehensive and multispecialty.

- To be completed through collaborative team meeting.

Unique community need identification number the project addresses:
This project directly meets broad goals identified by the regional needs assessment. First, it improves on existing programs and infrastructure by filling a void that is unmet by existing information sharing agreements. Second, it increases access to specialty care services by screening high risk youth. The proposed program will also complement the regional need to develop a culture of "best practices" whereby collaborative working relationships are developed in order to provide more cost-effective and efficient care for patients.

The JIS will address the following community needs:
CN5- Integrated Care for Behavioral Health
CN6- Inadequate access to treatment and services designed for special needs populations, including disabled, homeless, children and elderly
CN9- High rates of preventable hospital readmissions
CN12- Improved Access to Patient Education
CN14- Reduction of ER Services.

Relationship to other Projects: The proposed project complements the MHMRA DSRIP project Expansion of Children and Adolescent 113180703.1.12 services and the Collaborative Care program 113180703.2.1

Plan for Learning Collaborative: We plan to participate in a region-wide learning collaborative(s) as offered by the Anchor entity for Region 3, Harris Health System. Our participation in this collaborative with other Performing Providers within the region that have similar projects will facilitate sharing of challenges and testing of new ideas and solutions to promote continuous improvement in our Region's healthcare system.

Project Valuation:
In the effort to value the proposed project accurately, assistance was sought from H. Shelton Brown, Ph.D. of the UT Houston School of Public Health and Thomas Bohman, Ph.D. of the UT Austin Center for Social Work Research. Their consultation was limited to only the valuation section of this document. The primary valuation method uses cost-utility analysis (a type of cost-effectiveness research) and additional information is reported on potential, future costs saved. The value of each of the above delivery systems will be reviewed separately. The total valuation will be the sum of the individual component valuations.

The following valuation is aligned with the demonstration program goals to develop programs that enhance access to health care, increase the quality of care, the cost-effectiveness of care provided and the health of the patients and families served. The primary valuation method uses cost-utility analysis (a type of cost-effectiveness research) and additional information is reported on potential, future costs saved. The value of each of the above delivery systems will be reviewed separately. The total valuation will be the sum of the individual component valuations.

The benefits of the proposed program are valued based on assigning a monetary value of $50,000 per life-year gained due to the intervention. This threshold has been a standard way of valuing life-years in terms of whether the intervention is cost effective. The number of life-years added is based on a review of the scientific literature.

We were not able to find any studies directly valuing the electronic health record component of collaborative care. We therefore are making an assumption that the electronic health record component is 20% of the value of the service because people will be able to access the right combination of care due to the availability of a comprehensive, portable electronic record.

The closest study we identified examined collaborative care intervention for multi-symptom patients including depression (Katon, 2012). In this study, the effect of the intervention was 0.018 incremental life years gained. After quality-adjusting, 0.335 quality-adjusted life-years were added. Assuming the program would serve 100 persons in a year, the following formula shows the total valuation:

100	(persons served)
0.335	(QALY gained)
0.20	(adjustment for IT health record)
x $50,000	(life year value)
$335,000	QALY Value

Valuations should be based on economic evaluation principles that identify, measure, and value the relevant costs and consequences of two or more alternatives. Typically, one alternative is a new program while the second is treatment as usual. Cost-utility analysis (CUA) measures the cost of the program in dollars and the health consequences in utility-weighted units.

Cost-utility analysis is a useful tool for assessing the value of new health service interventions due to the fact that it provides a standard way of valuing multiple types of interventions and programs. The valuation also incorporates costs averted when known (e.g., emergency room visits that are avoided). In order to make the valuations fair across potentially different types of interventions, the common health goal, or outcome, is the number of life-years added.

One cost saving that could occur via the sharing of electronic records would be costs of assessments would not be duplicated across participating agencies. If 1% of assessments were shared across agencies per each year, $182,000 of assessments costs could be avoided. This cost-savings information is presented below.

cost savings

	Assessments shared	approximate cost of assmnt @mhmra	QPI	valuation/yr
yr3	1%	300	4000	$12,000.00
yr4	1%	300	25000	$75,000.00
yr5	1%	300	25000	$75,000.00

The benefits of the proposed program are valued based on a cost-utility analysis of placements avoided as individuals are served through better coordination and integration of services combined with providers becoming more proficient over three years with utilizing electronic records. Clinicians will have access to multiple clinical histories and assessments improving treatment recommendations, planning, and coordination with individual adolescents. This value-added process will reduce duplication of adolescents in treatments or criminal justice placements and those costs be saved. Program specific costs avoided are presented below.

Placement type	Average cost/day	Average Length of Stay	Placements avoided			Costs Avoided		
			Yr 3	Yr 4	Yr 5	Yr 3	Yr 4	Yr 5
JJAEP	$79.0	88.0	3	6	9	$20,856.0	$41,712.0	$62,568.0
Pre-adj juv facility	$11.9	12.0	3	6	9	$428.4	$856.8	$1,285.2
Post-adj juv facility	$38.9	108.0	3	6	9	$12,616.6	$25,233.1	$37,849.7
TYC	$270.5	435.0	3	6	9	$352,989.5	$705,978.9	$1,058,968.4
TDCJ	$48	1825	3	6	9	$260,062.5	$520,125.0	$780,187.5
State Jail	$40	365	3	6	9	$43,931.4	$87,862.8	$131,794.2
Substance Abuse Facility	$55	30	3	6	9	$4,944.6	$9,889.2	$14,833.8
Community Supervision	$6	1825	3	6	9	$32,795.3	$65,590.5	$98,385.8
Residential Treatment Ctr	$313	60	3	6	9	$56,340.0	$112,680.0	$169,020.0
Inpatient Psyc-Child	$342	14	3	6	9	$14,364.0	$28,728.0	$43,092.0

Average costs of placements were based on length of stay and daily costs of placement across 10 possible different settings. Reducing 3 placements in year 3, 6 placements in year 2, and 9 placements in year 3 across 10 settings would result in 180 placements averted. As clinicians increase utilization of the information sharing system and as more individuals are added to the system, placements avoided should increase over the three year period.

On average, a placement costs $26,328 with some placements lasting up to 5 years. If an average of 6 placements per year over 10 setting were reduced, the costs avoided would be $1,598,656 each year. Over three years, this would equal $4,795,968 in costs avoided.

Summary and Total Valuation

This valuation analysis shows that the intervention will have a positive value for participants who receive the intervention. Literature supporting: 1) improvement in quality of care, 2) reduced duplication of assessment costs, and 3) cost savings from averted placements have been presented. Only the costs associated with this last category are claimed. The costs avoided across the 10 placements locations would result in **a total valuation of $4,795,968.96.**

REFERENCES

Hugo, M., Smout, M. & Bannister, J. (2002). A comparison in hospitalization rates between a community-based mobile emergency service and a hospital-based emergency service. Australian & New Zealand Journal of Psychiatry, 36, 504-508.

Hickey, S., Strang, S., & Cantu, A. (2012). Psychiatric emergency service use among MHMRA of Harris County consumers. Presentation to the Board of Directors at MHMRA, Houston, Texas.

Hickey, S. (2008) "Juvenile Justice and Paths to Care in Houston: An Update" Paper present to The Zealous Advocacy 2008 Conference: Child & Adolescent Development & the Law, hosted by The Center for Children, Law & Policy. Houston, April 5.

Institute of Medicine, Committee on Quality of Health Care in America (2001) Crossing the Quality Chasm: A New Health System for the 21st Century, National Academies Press.

Katon, W., Russo, J, Lin, E., Schmittdiel, J., Ciechanowski, M., Peterson, D., Young, B. & Von Korff, M. (2012). Cost-effectiveness of a Multicondition Collaborative CareIntervention:A Randomized Controlled Trial. Archives of General Psychiatry. 69(5):506-514.

Scott, R. (2000). Evaluation of a mobile crisis program: Effectiveness, efficiency, and consumer satisfaction. Psychiatric Services, 51, 1153-1156.

#23 - Project Option: 2.13 PROVIDE AN INTERVENTION FOR A TARGETED BEHAVIORAL HEALTH POPULATION TO PREVENT UNNECESSARY USE OF SERVICES IN A SPECIFIED SETTING: EXPAND CHRONIC CONSUMER STABILIZATION INITIATIVE

Project Number: 113180703.2.100
Performing Provider/TPI: MHMRA Harris County/113180703
This project is an intervention for behavioral health population to prevent unnecessary use of services in a specified setting by expanding the Chronic Consumer Stabilization initiative.

Provider**:** The Mental Health and Mental Retardation Authority (MHMRA) of Harris County is a public agency serving as the safety net provider for adults with serious mental illnesses, for children and adolescents with serious emotional disorders, for the developmentally delayed and for individuals experiencing acute psychiatric distress. MHMRA provides inpatient, residential and outpatient treatments, including psycho-therapy, case management and medication management for individuals. MHMRA serves more than 49,000 Harris County residents out of a culturally and ethnically diverse population of over 4.1 million. Of those individuals who received any agency service in FY12, 36.5% were medically indigent and 51.9% had Medicaid. Of those who received mental health services in FY12, such as those being proposed in this project, 55% were medically indigent and 34.9% had Medicaid.

Intervention(s): MHMRA proposes to expand the Chronic Consumer Stabilization Initiative (CCSI), an interagency collaboration with the Houston Police Department (HPD). Staff members provide intensive case management and work directly with individuals, family members, health providers, and/or staff at living facilities. MHMRA provides family and community education about mental illness, outreach and engagement, intensive case management, Mental Health First Aide (an evidence-based mental health awareness program for community members), navigation to address physical health, housing and other social needs, crisis intervention and advocacy typically for several months, longer than other crisis diversion programs.

Need for the project: Although MHMRA is providing services to target individuals who have been diagnosed with a serious and persistent mental illness, there are at least 70 more individuals that have been identified who meet the target population than can be served within the current capacity of the program.

Target population: The program will target individuals who have been diagnosed with a serious and persistent mental illness, have frequent admissions to emergency and crisis services, and have frequent encounters with HPD.

Category 1 or 2 expected patient benefits:

- Enroll 150 additional individuals yearly starting in DY 3 who chronically access PES services.
- Reduce emergency detention orders, law enforcement calls for service, arrests, and jail by 10% decrease from baseline by DY5
- Reduce PES/HCPC admissions by 10% decrease from baseline by DY5.

Description of QPI metrics: Individuals served and enrolled in program

Category 3 measures: MHMRA expects to increase one domain of patient satisfaction (TBD) by 10% from baseline by DY5.

<u>Project Option:</u> 2.13 Provide an intervention for a targeted behavioral health population to prevent unnecessary use of services in a specified setting: Expand chronic consumer stabilization initiative

<u>Unique RHP Project Identification Number:</u> 113180703.2.100

<u>Performing Provider Name/TPI:</u> Mental Health and Mental Retardation Authority of Harris County/113180703

<u>Project Description:</u>

The Mental Health and Mental Retardation Authority (MHMRA) of Harris County proposes to provide an intervention for a targeted behavioral health population to prevent unnecessary use of services in a specified setting by expanding a chronic consumer stabilization initiative.

The Mental Health and Mental Retardation Authority (MHMRA) of Harris County is a public agency serving as the safety net provider for adults with serious mental illnesses, for children and adolescents with serious emotional disorders, for the developmentally delayed, and for individuals experiencing acute psychiatric distress. MHMRA serves more than 49,000 Harris County residents out of a culturally and ethnically diverse population of over 4.1 million. Of those who received mental health services in FY12, such as those being proposed in this project, 55% were medically indigent and 34.9% had Medicaid. MHMRA seeks to expand the Chronic Consumer Stabilization Initiative (CCSI), an interagency collaboration with the Houston Police Department (HPD). The purpose of this project is to improve behavioral health and reduce unnecessary use of emergency psychiatric services by identifying individuals who are frequent users of psychiatric emergency services (PES) and police.

<u>Goals and Relationship to Regional Goals:</u>

The primary goal of the program is to identify, engage and provide services to individuals who have been diagnosed with a serious and persistent mental illness, have frequent admissions to emergency and crisis services, and have frequent encounters with HPD either through their own initiative or by family and/or collateral contact. Staff members provide intensive case management and work directly with individuals, family members, health providers, and/or staff at living facilities. Familial and community education about mental illness is a key component. CCSI provides outreach and engagement; intensive case management; Mental Health First Aid (an evidence-based mental health awareness program for community members); navigation to address physical health, housing and other social needs; crisis intervention, and advocacy. It is also important to note the length of stay for individuals open to CCSI is several months, compared to other crisis diversion services in the area.

The goals of this project are to avert outcomes such as potentially avoidable inpatient admission and readmissions in settings such as general acute and specialty (psychiatric) hospitals; to avert disruptive and deleterious events such as criminal justice system involvement; to promote wellness and adherence to medication and other treatments; and to promote recovery in the community. This can be done by providing community-based interventions for individuals to prevent them from cycling through multiple systems such as the criminal justice system, general acute and specialty psychiatric inpatient system; and mental health system.

Expected 3-year Outcomes: The three-year goals of this project are to expand capacity in the program from 30 to 60 individuals and to reduce the number of law enforcement interactions, psychiatric crisis interventions, and psychiatric hospital admission for this cohort.

Challenges:
Challenges to implementation include motivating these individuals to accept and engage in care and providing adequate education and information to family members and/or staff at their living facilities. These challenges will be addressed through intensive engagement activities, motivational interviewing, providing education, and collaborating with law enforcement to divert the participants away from intensive crisis services.

Starting Point/Baseline:
CCSI is an existing MHMRA program that serves 30 individuals. The proposed project will expand the number of individuals served to 60 by DY5.

Quantifiable Patient Impact:
170 individuals will receive services through this expansion program

Rationale:
There is a cohort of individuals within the region who have been identified by HPD as having multiple involuntary admissions to psychiatric emergency services because they were brought in by law enforcement personnel. MHMRA and Houston Police Department have collaborated in a project to provide specialized interventions for 30 of these individuals. However, at least 70 more individuals have been identified who meet the target population than can be served within the current capacity of the program.

Outcomes from the existing program reveal a significant reduction in criminal justice involvement and in psychiatric emergency care and hospitalizations. If this program averted only one PES service per patient per year, the savings would be more than $7,000 per patient ($700 per bed x 10.25 average length of stay in Harris County public psychiatric hospital). Because many of these individuals have multiple admissions per year, the savings would be considerably higher. For example, data from the existing program revealed a 28% decrease in psychiatric emergency services and public psychiatric hospitalizations among existing CCSI consumers (MHMRA, 2010: Pilot Project Final Report). Additionally, all patients have a right to be served in the least restrictive environment possible. Lastly, the program has met with much success and has received recognition nationally, including nominations for Herman Goldstein Problem Oriented Policing award and an International Chiefs of Police Award.

Project Components:

a) Assess size, characteristics and needs of target population(s)
    - In progress. MHMRA and the Houston police department are continuously compiling a list of potential consumers who would benefit from the program. Demographic data, criminal justice involvement, and psychiatric emergency services are also gathered to better understand the needs of this population. MHMRA and HPD will continue to conduct this analysis as needed.

b) Review literature / experience with populations similar to target population.

- To be completed. MHMRA will look to expert authorities and national resources, such as SAMHSA, prior to implementing specific treatment approaches or adopting specific manuals/materials.

c) Develop project evaluation plan using qualitative and quantitative metrics to determine outcomes.
    - To be completed. MHMRA will develop a program evaluation that includes qualitative and quantitative metrics (e.g., pre/post assessment of program participants, use of psychiatric emergency services, jail bookings, patient satisfaction surveys, etc.)

d) Design models which include an appropriate range of community-based services and residential supports.
    - To be completed. MHMRA consumers often need assistance with transportation, housing, and medical needs. MHMRA clinicians can address these needs using existing psychoeducational material. Additionally, MHMRA has a residential step-down program that may be used by CCSI consumers if they need transitional housing post-hospitalization before returning to the community.

e) Assess the impact of interventions based on standardized quantitative measures and qualitative analysis relevant to the target population.
    - To be completed. MHMRA will work with the outcomes department to identify pre/post measures and patient satisfaction surveys that are empirically validated for individuals who are diagnosed with co-morbid conditions. See Category 3 Outcome for more details.

f) Community-based interventions should be comprehensive and multispecialty.
    - As mentioned above, this program is inherently multidisciplinary and uses resources provided both by the local mental health authority and the local police.

Milestones and Metrics:
The goals are consistent with the regional goals and community needs discussed above. Furthermore, the improvement metrics chosen for this project (I-10.1: % decrease in emergency detention orders, law enforcement calls for service, arrests, and jail, and I-X.1: % decrease from baseline in PES/HCPC) will determine the progress MHMRA is making to meet our stated goals. Both measure the success in reducing the use of jail services and ER services through the proposed program. Customizable metrics were chosen to reflect the need to reduce inpatient psychiatric hospitalization and emergency center visits. Inpatient psychiatric hospitalization and emergency center visits are more costly care options and not always necessary for care for the types of patients targeted by this intervention.

Related Category 3 Measures:
OD-6: IT-6.1: Patient Satisfaction: Improve patient satisfaction as measured by CAHPS by 3% over baseline by DY5. We believe patient satisfaction that addresses involvement in shared decision making, access to providers, and communication with providers, will reduce preventable admissions and readmissions to psychiatric emergency services. If patients are dissatisfied with services or the process, they may continue to over-utilize emergency services rather than engaging in preventative care.

OD- 10: Functional Status: Improve functional status by ANSA by 3% over baseline by DY5. Engaging these adolescents in treatment options prior to aging out of the foster care system can reduce factors leading to crisis. Integrating services within the foster care system would provide support and transitional services to reduce trauma, substance abuse, onset of major mental illnesses, and emergence

of gender identity issues to adolescents who are expected to experience the greatest difficulty transitioning into healthy adulthood.

Relationship to other Projects: At this time there is not enough information available from the RHP to describe how this project may or may not be related to other RHP DSRIP proposals. However, the proposed project is similar to several MHMRA DSRIP proposals, including the expansion of the Crisis Residential Unit (113180703.1.11), expansion of the Interim Care Clinic (113180703.1.8), and redesign of the transition from HCPC hospitalization to MHMRA outpatient aftercare (113180703.2.3). All three proposals seek to expand psychiatric stabilization while reducing inpatient admissions and criminal justice involvement. It is hoped that many of the CCSI patients could access these less restrictive and more appropriate care levels in lieu of hospitalization or civil commitment.

The behavioral health crisis in Region 3 is considerable and the proposed initiatives in our RHP plan will only imply a small impression into the overall community need for treatment, but is a good start. The outpatient focus of many RHP Plan initiatives will help numerous facilities focus to treating the patients in an ambulatory setting as well as continued navigation of services with a focus to keeping patients from the inpatient unit. This initiative is similar to many others in the sense of the category of behavioral health.

Unique community need identification number the project addresses:
This project directly meets broad goals identified by the regional needs assessment. First, it improves on existing programs and infrastructure by adding a component of treatment to existing community mental health service array. Second, it increases access to specialty care services by providing treatment to individuals who otherwise, may not be able to afford this type of intervention. Finally, this program is inherently a patient-centered approach that moves away from the historical "disease" focused model of repeated hospitalizations. The proposed program will also complement the regional need to develop a culture of "best practices," whereby the patient/consumer plays a more active role as a stakeholder by completing consumer satisfaction surveys.

CCSI addresses the following community needs:

- CN3-Inadequate access to Behavioral Health
- CN6- Inadequate access to treatment and services designed for special needs populations, including disabled, homeless, children and elderly
- CN9- High rates of preventable hospital readmissions

Plan for Learning Collaborative:
MHMRA plans to participate in a region-wide learning collaborative(s) as offered by the Anchor entity for Region 3, Harris Health System. Our participation in this collaborative with other Performing Providers within the region that have similar projects will facilitate sharing of challenges and testing of new ideas and solutions to promote continuous improvement in our Region's healthcare system.

Project Valuation:
In the effort to value the proposed project accurately, assistance was sought from H. Shelton Brown, Ph.D. of the UT Houston School of Public Health and Thomas Bohman, Ph.D. of the UT Austin Center

for Social Work Research. Their consultation was limited to only the valuation section of this document. The primary valuation method uses cost-utility analysis (a type of cost-effectiveness research) and additional information is reported on potential, future costs saved. The value of each of the above delivery systems will be reviewed separately. The total valuation will be the sum of the individual component valuations.

Valuations should be based on economic evaluation principles that identify, measure, and value the relevant costs and consequences of two or more alternatives. Typically, one alternative is a new program while the second is treatment as usual. Cost-utility analysis (CUA) measures the cost of the program in dollars and the health consequences in utility-weighted units. This valuation uses a quality-adjusted life-years (QALYs) analysis that combines health quality (utility) with length of time in a particular health state.

Cost-utility analysis is a useful tool for assessing the value of new health service interventions due to the fact that it provides a standard way of valuing multiple types of interventions and programs. The valuation also incorporates costs averted when known (e.g., emergency room visits that are avoided). In order to make the valuations fair across potentially different types of interventions, the common health goal, or outcome, is the number of life-years added.

The benefits of the proposed program are valued based on assigning a monetary value of $50,000 per life-year gained due to the intervention. This threshold has been a standard way of valuing life-years in terms of whether the cost of the intervention exceeds this standard. The number of life-years added is based on a review of the scientific literature.

Cost-Utility Analysis:

A literature reviewed one QALY that is highly relevant to this population. This 2012 study reported the QALY gains associated of assertive community treatment (ACT) compared to standard case management care in patients with schizophrenia (Karow, Reimer, König, Heider, Bock & Huber ...2012). ACT is highly similar to the proposed intervention in that it seeks to identify high utilizers of psychiatric emergency services and provide intensive case management to reduce psychiatric inpatient admissions and jail detentions. According to the Karow et al. study, the ACT intervention yielded a QALY of 0.76, whereas the treatment as usual group resulted in a QALY of 0.66; therefore, the incremental QALY for the ACT group was 0.10.

Applying this estimate to the current population the value of enhancing services for these underserved individuals from Level Four can be calculated as follows:

60	(persons served)
0.10	(QALY gained)
× $50,000	(life year value)
= $300,000	Level 4 QALY Value

Cost Savings:

In addition to quality of life years adjusted, we obtained local data that supports the notion that ongoing treatment in the form of medication management and case management reduces hospital admissions. Specifically, individuals who are deemed “psychiatrically underserved” in Harris County require higher

levels of public psychiatric hospital care. (Underserved means individuals received less services than their treatment plan and history indicates is necessary for recovery from mental illness.) In a sample of 6,275 consumers studied over seven years, underserved MHMRA consumers logged 0.819 additional hospital bed days per year. The increment in costs that could be averted with these interventions can be calculated as:

60	(persons served)
0.819	(psychiatric bed days gained)
× $700	(local bed day value)
= $ 34,398	Cost Savings

Summary and Total Valuation:

This valuation analysis shows that the intervention will have a positive value for participants who receive the intervention(s).The expected value of this proposal is $334,398 ($300,000 and $34,398) per 60 people served per year. (If 100 people were served per year, the estimated savings would be $557,330). Additional cost savings in the form of diverted jail detentions is also expected.

References

Karow, A., Reimer, J., König, H., Heider, D., Bock, T., & Huber, C., Schöttle, D., Meister, K., Rietschel, L., Ohm, G., Schulz, H., Naber, D., Schimmelmann, B., & Lambert, M. (2012). Cost-effectiveness of 12-month therapeutic assertive community treatment as part of integrated care versus standard care in patients with schizophrenia treated with quetiapine immediate release. *The Journal of Clinical Psychiatry, 73,* e402-e408.

#24 - Project Option 1.7.6 – Implement other evidence-based project to establish telemedicine/telehealth program to help fill significant gaps in services in an innovative manner: eVisits

Unique RHP Project ID: 133355104.1.101
Performing Provider Name/TPI: Harris Health System / 133355104

Project Summary:

Provider:
Harris Health System is comprised of 16 community health centers, seven school-based clinics, a dental center, dialysis center, five mobile health units, one outpatient specialty services clinic, and three hospitals. With a tax base of $511.6 million, Harris Health System was able to provide more than $1.254 billion in charity care during FY 2012.

Volume Statistics - FY2013	**Patient Payor Mix**	**Patient Demographics**
Hospital discharges- 34,538 Births (babies delivered)- 6,676 Emergency visits- 173,651 Outpatient clinic visits- 1,092,197	Charity / Self Pay < 200% FPL - 50% Medicaid w/o CHIP- 22% Self Pay > 200% FPL - 14% Medicare- 9% Commercial and Other - 5% CHIP - 0.3%	Hispanic- 57% African American- 26% Caucasian- 9% Asian- 5% Other- 2% American Indian- 0.2%

Intervention(s):
Harris Health System proposes to improve patient access to primary care by utilizing eVisits. The integration of eVisits as an additional approach to manage primary care related conditions will provide more timely access to treatment instead of utilizing the traditional face-to-face visit. This process will be driven by technology to develop a modality for primary care physicians to document the eVisit.
Need for the project:
Currently, it may be several weeks before an established patient is able to be scheduled with their PCP. As a result, the patient may utilize the emergency center for a non-emergent issue. In addition, they may also opt not to be scheduled with their PCP so that they are able to be seen. This results in poor continuity of care to manage the patient's condition. For new patients within the Harris Health System, on average they are able to be scheduled in 6-8 weeks.
Target Population:
All current and potential patients within the system may benefit from this project with a focus on underserved populations.
Category 1 or 2 expected patient benefits:
Expected patient benefits are to improve overall access to primary care, reduce patient wait time to care management and improve communication amongst primary care physicians and patients.
QPI Metric Description:
The quantifiable metric that will be used for this project will measure number of encounters per DY. For DY3, the estimated QPI is 100 encounters, 800 encounters in DY4, and 1,200 in DY5.
Category 3 outcomes:
OD-1- Primary Care and Chronic Disease Management

- IT-1.12 Diabetes care: Retinal eye exam

- IT-1.21 Comprehensive Diabetes Care Lipid testing
- IT-1.22 Preventive Care and Screening: Body Mass Index (BMI) Screening and Follow-Up

Project Option 1.7.6- Implement other evidence-based project to establish

telemedicine/telehealth program to help fill significant gaps in services in an innovative manner: eVisits

Unique RHP Project Identification Number: 133355104.1.101
Performing Provider Name/TPI: Harris Health System / 133355104

Project Description:
Harris Health System proposes to improve patient access to primary care by utilizing eVisits.

The integration of eVisits as an additional approach to manage primary care related conditions will provide more timely access to treatment instead of utilizing the traditional face-to-face visit. This process will be driven by technology to develop a modality for primary care physicians to document the eVisit. Harris Health System currently has an information system portal, MyHealth, which allows providers and patients to communicate remotely. The primary care physician (PCP) will review the patient's clinical question and the primary care physician will communicate to the patient remotely to manage the patient's condition.

Goal(s) and Relationship to Regional Goal(s):
The goals of this project are to:

- Improve overall access to primary care
- Reduce patient wait time to care management.
- Improve communication amongst primary care physicians and patients

Improving patient's access to primary care will assist in creating a more efficient avenue to treatment for the community. Currently, it may be several weeks before an established patient is able to be scheduled with their PCP. As a result, the patient may utilize the emergency center for a non-emergent issue. In addition, they may also opt not to be scheduled with their PCP so that they are able to be seen. This results in poor continuity of care to manage the patient's condition. For new patients within the Harris Health System, on average they are able to be scheduled in 6-8 weeks. Depending upon the nature of their visit, this delay in being scheduled also drives patients to the emergency center. With the advent of the eVisits, established patients would be able to communicate with their primary care physician remotely to manage their clinical concerns, versus utilizing a face-to-face visit at both their local health center with their primary care physician or the emergency center. This will also improve access to care for new patients that are not established with a primary care physician since our established patients will have the option of either a face-to-face encounter or an encounter via eVisits. The primary care physician's remote encounter with the patient would be documented in Harris Health's medical record system and the provider would code and charge for the encounter.
This project meets the following Region 3 goals:

- Increase access to primary care services, with a focus on underserved populations, to ensure patients receive the most appropriate care for their condition, regardless of where they live or their ability to pay.
- Transform health care delivery from a disease-focused model of episodic care to a patient-centered, coordinated delivery model that improves patient satisfaction and health outcomes, reduces unnecessary or duplicative services, and builds on the accomplishments of our existing health care system.

Utilization of eVisits will create an additional avenue to ensure patients receive more timely access to care at their convenience. Currently, patients scheduled to a primary care physician may not receive appropriate intervention for several weeks. This is an excellent feature for our patients so that they may also remain connected to their primary care physician if they are travelling and need to have their medical needs addressed. Via the eVisits, the provider will be able to have the patient scheduled for lab and radiologic studies to assist with the assessment and treatment of the patient's condition. The provider would receive the outcome of the results within the medical record system, and communicate the treatment plan to the patient, all completed without a face-to-face encounter to their primary care physician.
The addition of eVisits will transform the current health care delivery model by providing a coordinated approach to care. Harris Health System currently has a system-wide electronic medical record system within the outpatient and inpatient settings. By utilizing the electronic medical record system, it provides a mode of communication that includes not only with the primary care physician, but also other members of the patient's care team to intervene in a more timely and coordinated fashion to address the patient's needs as they would if the patient had a face-to-face visit. However, the timely access to care will also result in a downstream improved intervention by other health care members of the care team that may also be needed to manage the patient's condition.

Required core project components:

a) Conduct quality improvement for project using methods such as rapid cycle improvement. Activities may include, but are not limited to, identifying project impacts, identifying "lessons learned," opportunities to scale all or part of the project to a broader patient population, and identifying key challenges associated with expansion of the project, including special considerations for safety-net populations.

The required core project components will be accomplished by:

- Meet with stakeholders to assess the impact of eVisits
    - Assess the amount of patients receiving intervention via eVisits
    - Based on the metrics and milestone targets, meet with stakeholders to implement strategies to meet expectations

Challenges and how to address:
The challenge the Harris Health System faces is the ability to provide access to primary care to meet the current demand and ensuring that the compensation model that would be used is in keeping with expectations. There are currently plans in place to progressively increase access to primary care from 300,000 patients to an additional 300,000 visits within the next 4 years. In preparation for this increase within our platform, eVisits will assist in developing a more efficient model to manage the access needs of the patients. In addition, regarding the compensation model for the primary care physicians, assessments would be completed based on the current compensation model for face-to-face visits.

3-Year Expected Outcome for Provider and Patients:
The 5-Year expected outcomes are to:

- Improve overall access to primary care
- Reduce patient wait time to care management
- Improve communication amongst primary care physicians and patients

Starting Point/Baseline:
Currently, eVisits is not in place at the Harris Health System. As a result, the baseline is 0.

Quantifiable Patient Impact:
The Quantifiable Patient Impact of this project for each DY3-DY5 is:

DY3: 200 encounters
DY4: 1,440 encounters
DY5: 2,160 encounters

Rationale:
Currently, Harris Health System has 1.1 million outpatient visits annually, for approximately 300,000 patients. There are currently plans in place to progressively increase access to primary care from 300,000 patients to an additional 300,000 visits within the next 4 years. In preparation for this increase within our platform, eVisits will assist in developing a more efficient model to manage the access needs of the patients. Improving patient's access to primary care will assist in creating a more efficient avenue to treatment for the community. Currently, patients it may be several weeks before an established patient is able to be scheduled with their PCP. As a result, the patient may utilize the emergency center for a non-emergent issue. In addition, they may also opt not to be scheduled with their PCP so that they are able to be seen. This results in poor continuity of care to manage the patient's condition. For new patients within the Harris Health System, on average they are able to be scheduled in 6-8 weeks. Depending upon the nature of their visit, this delay in being scheduled also drives patients to the emergency center. With the advent of the eVisits, established patients would be able to communicate with their primary care physician remotely to manage their clinical concerns, versus utilizing a face-to-face visit at both their local health center with their primary care physician or the emergency center. This will also improve access to care for new patients that are not established with a primary care physician since our established patients will have the option of either a face-to-face encounter or an encounter via eVisits. The primary care physician's remote encounter with the patient would be documented in Harris Health's medical record system and the provider would code and charge for the encounter.

Milestones & (Metrics):
The following milestones and metrics have been chosen for the eVisit Program project based on the core components:

- Process Milestones and Metrics: P-3 (P-3.2); P-X (P-X.1); P-11 (P-11.1)
- Improvement Milestones: I-12 (I-12.2)

Unique community need identification number the project addresses:
This project addresses the following community needs according to the community needs assessment:

- CN.1- Inadequate access to primary care
- CN.24- Lack of care coordination and unnecessary duplication of services due to insufficient implementation and use of electronic health records

How the project represents a new initiative for the Performing Provider or significantly enhances an existing delivery system reform initiative:

Currently, Harris Health System has 1.1 million outpatient visits annually, for approximately 300,000 patients. There are currently plans in place to progressively increase access to primary care from 300,000 patients to an additional 300,000 patients within the next 4 years. In preparation for more than doubling our platform, eVisits will assist in developing a more efficient model to manage the access needs of the patients. Improving patient's access to primary care will assist in creating a more efficient avenue to treatment for the community. Currently, patients it may be several weeks before an established patient is able to be scheduled with their PCP. As a result, the patient may utilize the emergency center for a non-emergent issue. In addition, they may also opt not to be scheduled with their PCP so that they are able to be seen. This results in poor continuity of care to manage the patient's condition. For new patients within the Harris Health System, on average they are able to be scheduled in 6-8 weeks. Depending upon the nature of their visit, this delay in being scheduled also drives patients to the emergency center. With the advent of the eVisits, established patients would be able to communicate with their primary care physician remotely to manage their clinical concerns, versus utilizing a face-to-face visit at both their local health center with their primary care physician or the emergency center. This will also improve access to care for new patients that are not established with a primary care physician since our established patients will have the option of either a face-to-face encounter or an encounter via eVisits. The primary care physician's remote encounter with the patient would be documented in Harris Health's medical record system and the provider would code and charge for the encounter.

<u>Related Category 3 Outcome Measure(s):</u>
OD-1- Primary Care and Chronic Disease Management

- IT-1.12 Diabetes care: Retinal eye exam
- IT-1.21 Comprehensive Diabetes Care Lipid testing
- IT-1.22 Preventive Care and Screening: Body Mass Index (BMI) Screening and Follow-Up

Reasons/rationale for selecting the outcome measure(s):
The selected Category 3 Outcome Measure meets the Region 3 goals by:

- Increasing access to primary care services, with a focus on underserved populations, to ensure patients receive the most appropriate care for their condition, regardless of where they live or their ability to pay.
- Transforming health care delivery from a disease-focused model of episodic care to a patient-centered, coordinated delivery model that improves patient satisfaction and health outcomes, reduces unnecessary or duplicative services, and builds on the accomplishments of our existing health care system.

<u>Relationship to other Projects:</u> This project is related to other projects that are targeted to improving patient access to primary care.

<u>Relationship to Other Performing Providers' Projects in the RHP:</u> An innovative approach to increasing access to primary care and specialty care has been created by the miracles of the internet and computer systems. Telemedicine is leading edge for those communities who cannot easily access behavioral health or specialty care due to remote locations, lack of physicians, or urgency of encounter needs. Numerous telemedicine projects have been proposed, as seen in the Region 3 Initiative grid in the addendum, and all focus to outcomes such as appropriate emergency department utilization, 30-day readmission rates, and patient satisfaction scores.

Plan for Learning Collaborative: We plan to participate in a region-wide learning collaborative(s) as offered by the Anchor entity for Region 3, Harris Health System. Our participation in this collaborative with other Performing Providers within the region that have similar projects will facilitate sharing of challenges and testing of new ideas and solutions to promote continuous improvement in our Region's healthcare system.

Project Valuation: This project addresses one of the main objectives of the 1115 Waiver; increasing access to primary care for the underserved/uninsured population in Harris County. It will connect patients to a caregiver by utilizing remote communication with a primary care physician for management of clinical concerns. The value of the project is based on the incremental capacity to provide primary care services, along with timely referrals for specialty care and other needed services within the Harris Health System network. Within this framework we project to increase access by a total of 3,800 additional e-visits at the end of DY 5. In addition, the availability of telemedicine/telehealth appointments will result in fewer emergency room visits for public and private hospitals located in the service area. Early detection, treatment and education regarding wellness and prevention will also help prevent future downstream inpatient admissions.

#25 - Project Option: 2.7.2- Implement innovative evidence-based strategies to reduce tobacco use

Unique Project ID: 158771901.2.101
Performing Provider Name/TPI: Harris County Public Health and Environmental Services/ 158771901

Project Summary:

Provider:
Harris County Public Health & Environmental Services (HCPHES) is a comprehensive local health department serving the third most populous county in the United States. It spans over 1700 square miles, and its land area is larger than the state of Rhode Island. The HCPHES jurisdiction includes approximately 2 million people within Harris County's unincorporated areas and over 30 small municipalities located in Harris County (not including the city of Houston). For certain public health services such as vector/mosquito control, Ryan White/Title I HIV funding, and refugee health screening, the HCPHES jurisdiction encompasses the entire county including the city of Houston, therefore providing services to over 4 million people in total. Since being chartered in 1942 by Harris County Commissioners Court, HCPHES has provided leadership in a wide range of public health activities and programming including but not limited to communicable disease control; veterinary and environmental public health; and clinical preventive services. These services include strong programming in immunizations, oral health, tuberculosis prevention & treatment, and nutrition/wellness through a variety of efforts including the HCPHES Women, Infants, & Children (WIC) program.

Across this broad organizational framework, HCPHES has engaged in significant departmental strategic planning activities, including the development of the *HCPHES Strategic Plan 2013-2018* which is grounded in the "Essential Public Health Services" model (e.g., assessment, policy development and education, and assurance activities). These categories allow HCPHES to engage within a variety of public health sectors including the services provided through its clinical programs. The mission statement of HCPHES is "*Promoting a Healthy and Safe Community, Preventing Illness and Injury, Protecting You, HCPHES, Your Department for Life*" while its clear vision is "*Healthy People, Healthy Communities…a Healthy Harris County*." The HCPHES staff (over 500) are public health professionals in the truest sense of the word and have a broad range of expertise in various public health program areas. HCPHES staff pride themselves in upholding the organizational values which they helped to craft: *Excellence, Compassion, Flexibility, Integrity, Accountability, Professionalism,* and *Equity*.

Intervention:
Harris County Public Health and Environmental Services (HCPHES) proposes to expand its operations and leverage mobile clinic units alongside existing fixed clinics to meet the health needs of low income, indigent and special needs populations, that lack the resources and/or physical mobility to commute to fixed site locations to receive the vital and preventative services necessary to reduce tobacco use. This expansion will allow for increased accessibility to services, health education programs, and the dissemination of critical health education information to the target communities.

Need for the Project:
- In Texas, smoking leads to 24,000 deaths and $12.2 billion in healthcare cost and lost productivity, annually.[63]

[63] The State of Health – Houston and Harris County, 2012.

- Active smoking can cause: 1) respiratory disorders culminating in chronic obstructive pulmonary disease (COPD) and emphysema; 2) cardiovascular hazards by way of increased vascular spasm and atherosclerosis leading to acute and chronic myocardial events, cerebral and peripheral vascular diseases; 3) cancers: twelve types are caused or related to cigarette smoking.[64]
- According to the American Heart Association:
    - Between 2010-2030, the cost of medical care for heart disease will rise from $273 billion to $818 billion. Heart disease will also cost the nation billions more in lost productivity, increasing from an estimated $172 billion in 2010 to $276 billion in 2030.[65]

Target Population:
The primary target population will be at-risk, low income, and Medicaid eligible/indigent participants within the HCPHES jurisdiction. Participants will be recruited from HCPHES clinics and mobile operations which historically represent clinical patients who have been of low income or considered indigent. The minimum number of individuals served by this project is 990 with 90% expected to be Medicaid/low income uninsured individuals.

Category 2 expected patient benefits:
- The DY3 goal is to enroll an estimated 300 of Medicaid-eligible/indigent participants from the unincorporated areas of Harris County, into community group tobacco cessation programs. Moving on into DY4 with an increase by 5% over initial enrollment (330) and by 10% over initial estimated enrollment in DY5 (360).

Quantifiable Patient Impact:
Number of unique individuals receiving services/ intervention.

Category 3 Outcome Measures:
OD-1- Primary Care and Chronic Disease Management
IT-1.27 Adult tobacco use
Project Option: 2.7.2- Implement innovative evidence-based strategies to reduce tobacco use.

Unique Project ID: 158771901.2.101
Performing Provider Name/TPI: Harris County Public Health and Environmental Services/ 158771901

Project Description:
HCPHES has been a trusted and reliable provider for quality maternal, child health, and family planning services to low income, uninsured populations in Harris County for over 40 years. HCPHES - specifically the HCPHES Disease Control & Clinical Prevention (DCCP) Division - has successfully managed several contracts with Texas Department of State Health Services (DSHS) over the years

[64] Bartal, M. *Health effects of tobacco use and exposure.* Monaldi Arch Chest Dis 2001; 56: 6, 545–554. Accessed 8/23/13.
[65] Paul A. Heidenreich, Justin G. Trogdon, Olga A. Khavjou, Javed Butler, Kathleen Dracup, Michael D. Ezekowitz, Eric Andrew Finkelstein, Yuling Hong, S. Claiborne Johnston, Amit Khera, Donald M. Lloyd-Jones, Sue A. Nelson, Graham Nichol, Diane Orenstein, Peter W.F. Wilson, Y. Joseph Woo, and on behalf of the American Heart Association Advocacy Coordinating Committee, Stroke Council, Council on Cardiovascular Radiology and Intervention, Council on Clinical Cardiology, Council on Epidemiology and Prevention, Council on Arteriosclerosis, Thrombo. Forecasting the Future of Cardiovascular Disease in the United States: A Policy Statement From the American Heart Association. Circulation, January 24, 2011 DOI: 10.1161/CIR.0b013e31820a55f5. Accessed 8/23/2013

aimed at providing preventive clinical health services to the public. These DSHS-funded clinical programs have included family planning, prenatal care, child health (Texas Health Steps) and immunizations for children and adults in the past. Through strategic realignment 3 years ago, HCPHES transitioned its maternal and child health programs to the Harris Health System, a sister agency and close collaborative partner of HCPHES. Currently, HCPHES is managing DSHS contracts to provide family planning; tuberculosis control and prevention; refugee health screening; Supplemental Nutrition Program for Women, Infants and Children (WIC); dental services for children; and targeted case management services for residents in Harris County. HCPHES has been considered a leader in the provision of quality and cost-effective population-based public health services at the local level.

HCPHES, through the utilization of mobile and fixed clinics, will increase access to the vital services necessary to reduce tobacco use in the target communities by providing screenings, health promotion education, and a robust referral program into applicable services such as integrated care programs, primary care providers and treatment programs, as applicable.

According to the *2008 Update for Treating Tobacco Use and Dependence*, produced by the U.S. Department of Health and Human Services, all patients entering a health care setting should have their tobacco use status assessed routinely. Guidelines suggest that clinicians advise all tobacco users to quit and assess a patient's willingness to make a quit attempt.[66] For patients not ready to make a quit attempt at that time, clinicians are advised to use a brief intervention designed to promote the motivation to quit. To meet this need, HCPHES will adopt and implement a *2A's and R* (Ask, Advice, and Refer) tobacco intervention and deliver an evidence based group tobacco cessation program.

Modified from the evidence based 5A's model (Ask, Advice, Assess, Assist, Arrange), the *2A's and R* is a more practical program approach for clinical settings. The *2A's and R* is a brief tobacco intervention delivered by providers (designated clinical staff) that has been shown to significantly increase the likelihood that a client will make an attempt to quit smoking/ tobacco use. The intervention will also be delivered in community settings by community health workers.

Group settings are ideal therapeutic settings for smoking cessation. HCPHES will utilize the *Freshstart* program as a reference framework due to the programs notable outcomes. *Freshstart* incorporates the most current guidelines for tobacco cessation support into four face-to-face group support sessions. The *Freshstart* evidence-based approach is geared to help participants increase their motivation to quit, learn effective approaches for quitting and guide them in making a successful quit attempt. The evidence-based components of *Freshstart* include: Motivational intervention activities, Practical counseling (problem solving skills), Social support, and Education about medication and approaches to quitting.

Goals and Relationship to Regional Goals:

Project Goals:

- The goal of this project is to partner with community health workers, subject matter experts, clinical professionals, healthcare system partners such as Harris Health System, and other stakeholders to provide services for targeted populations to significantly minimize the use of tobacco.

[66] Tobacco Use and Dependence Guideline Panel. Treating Tobacco Use and Dependence: 2008 Update. Rockville (MD): US Department of Health and Human Services; 2008 May. Accessed 8/22/13.

- Close gaps in access to vital and preventive services related to tobacco use within targeted populations.
- Minimize tobacco use with an overall net benefit of significantly decreasing the risk of cardiovascular disease and other associated illnesses within targeted populations.
- Improve recognition, understanding and support of the HCPHES organization, its activities, and the broad mission of public health among stakeholders.
- Guide project participants, their families, and other community residents to additional prevention and treatment, including HCPHES services and programming

This project meets the following regional goals:

- Develop a culture of ongoing transformation and innovation that maximizes the use of technology and best-practices, facilitates regional collaboration and sharing, and engages patients, providers, and other stakeholders in the planning, implementation, and evaluation processes.
- Develop a regional approach to health care delivery that leverages and improves on existing programs and infrastructure, is responsive to patient needs throughout the entire region, and improves health care outcomes and patient satisfaction.

Challenges:

Some of the anticipated challenges are as follows:

- The recruitment and retention of program participants (i.e., maintaining their interest, motivation and commitment to the program).
- Development and implementation of an efficient referral process for patients into other applicable service.
- Consistency in program implementation among staff and providers.

3-Year Expected Outcome for Provider and Patients:

As the performing provider of services, HCPHES expects that the overall health outcomes for tobacco users will improve. In addition, a significant improvement in cardiovascular and respiratory health, and a decline in the attributed risk factors to lung cancer, respiratory and cardiovascular disease and disorders, such as tobacco use among the targeted population are expected.

Starting Point/Baseline:

The U.S. Public Health Service has published a best practice guideline to assist providers in helping tobacco users to quit. Updated in 2008, *Treating Tobacco Use and Dependence*, is considered the benchmark standard of care for tobacco cessation and recommends providers use the "brief intervention," or commonly called the "*2As & R*" approach with all patients. The baseline for participation into the intervention will be established by the end of DY3.

Quantifiable Patient Impact:

DY3 QPI: Number of unique individuals receiving services/ intervention.
Goal: Minimum of 300 enrollees

DY4 QPI: Number of unique individuals receiving services/ intervention.
Goal: Minimum of 330 enrollees

DY5 QPI: QPI: Number of unique individuals receiving services/ intervention.
Goal: Minimum of 360 enrollees

Rationale:
Project option 2.7.2 was selected because *2A's and R* is an evidence based intervention proven to reduce tobacco use and cessation.

Estimates suggest that smoking accounts 18% of deaths each year in the United States.[67] Moreover, the financial implications of cardiovascular disorders associated with smoking are crippling. The American Health Association projects that, between 2010-2030, the cost of medical care for heart disease will rise from $273 billion to $818 billion. Heart disease is also estimated to cost the nation billions more in lost productivity, increasing from an estimated $172 billion in 2010 to $276 billion in 2030.[68] Alternative causalities such as social and economic factors influence a broad array of opportunities, exposures, decisions and behaviors that promote or threaten health. A study conducted by the National Network of Smoking Prevention and Poverty identified that tobacco and poverty create[s] a vicious cycle where low income people smoke more, suffer more, spend more, and die more from tobacco use. The study further cited that lack of inquiry by providers and little advice or support by doctors and providers to quit and a fear of being scolded, were top contributing factors to continued tobacco use.[69]

Not only do social and economic factor influence behaviors, but they also hinder timely accessibility to services, or make accessibility to services impossible, due to lack of resources (i.e. transportation, funds, physical condition), which makes the incorporation of mobile health clinics a key resource for this project. Mobile health clinics have grown out of the dire need for health care services among the most marginalized populations in the US. Special needs populations, including disabled, homeless, children and elderly suffer from health disparities that leave them in poor health. By the time they seek health services they are usually in need of far more expensive services than the ones they might have originally received, and they are much sicker than they should have ever become. Mobile health clinics are an essential source of health care for these populations because they provide care in a way that makes it accessible. The proposed project will be delivered to both clinic and community-based participants to maximize the program's potential.

Project Core Components:
HCPHES will utilize a stage gate approach in applying project management best practices in implementing the tobacco reduction project specifically utilizing a phased release process over the lifecycle of the program. In each stage gate we will focus on continuous stakeholder feedback from various data collection points including iterative reviews of lessons learned captured from project

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[67] Stewart, Susan T., David M. Cutler, and Allison B. Rosen. 2009. Forecasting the effects of obesity and smoking on U.S. life expectancy. The New England Journal of Medicine 361:2252-2260. Accessed 8/20/13.
[68] Paul A. Heidenreich, Justin G. Trogdon, Olga A. Khavjou, Javed Butler, Kathleen Dracup, Michael D. Ezekowitz, Eric Andrew Finkelstein, Yuling Hong, S. Claiborne Johnston, Amit Khera, Donald M. Lloyd-Jones, Sue A. Nelson, Graham Nichol, Diane Orenstein, Peter W.F. Wilson, Y. Joseph Woo, and on behalf of the American Heart Association Advocacy Coordinating Committee, Stroke Council, Council on Cardiovascular Radiology and Intervention, Council on Clinical Cardiology, Council on Epidemiology and Prevention, Council on Arteriosclerosis, Thrombo. Forecasting the Future of Cardiovascular Disease in the United States: A Policy Statement From the American Heart Association. Circulation, January 24, 2011 DOI: 10.1161/CIR.0b013e31820a55f5. Accessed 8/23/2013
[69] National Network on Tobacco Prevention & Poverty, Smoking Habits and Prevention Strategies in Low Socio-economic Status Populations, 2004.

deliverables in remediating any future challenges and/or risks. In addition, given the majority of the population we serve are Medicaid/low income uninsured individuals, our program will be tailored to overcome the unique challenges/barriers that may exist such as transportation, communication, availability, and location.

Unique community need identification numbers the project addresses:

- CN.6- Inadequate access to treatment and services designed for special needs populations, including disabled, homeless, children and elderly.
- CN.12 – High rates of tobacco use and excessive alcohol use.
- CN.20 – Lack of access to programs providing health promotion education, training and support, including screenings, nutrition counseling, patient education programs.
- CN.22-Insufficient access to services that are specifically designed to address racial, ethnic and cultural health care disparities
- CN.23-Lack of patient navigation, patient and family education and information programs.

How the project represents a new initiative or significantly enhances an existing delivery system reform initiative:

This project will be an innovative step for HCPHES as an expansion of community-focused intervention aimed at reducing tobacco use. Previous outreach efforts have consisted of the dissemination of information and program administration from fixed clinical establishments, that did not interface with a large populous of the targeted community. This project will not only expand services to include mobile clinical operations to meet accessibility needs, but will offer additional services to the targeted population, including community based group programs, individualized exercise programs and individualized follow-up by community health workers.

Category 3 Outcome Measures:

OD-1- Primary Care and Chronic Disease Management
IT-1.27 Adult tobacco use

Rationale for Category 3 Measures:

The tobacco reduction project is focused on a metric based delivery system and alignment to the OD-1 domain (Primary Care and Chronic Disease Management) in which the associated category 3 improvement targets selected provides significant data points to demonstrate overall progress, area population impact, effectiveness, and continuous service improvement to bridge the gaps in the underserved region/population. In addition, adult tobacco use eradication provides a critical need to the regions healthy living status while also leading to an improvement in health for the individual, and also to those directly/indirectly impacted by the continued use of tobacco.

Relationship to Other Projects:

Healthcare treatment and services cannot focus to only the acute or chronic encounter and properly treat the patient. It is critical that the region focuses on patient education and community education to ensure a proactive and responsive approach to healthcare needs. The ability to properly identify, monitor, and assess at risk patients struggling with tobacco use is essential to minimize chronic conditions, such as those associated with cardiovascular events, which over time accounts for substantial resource utilization. Other regional projects may focus on smoking cessation but the proposed project will focus on populations within the HCPHES jurisdiction of Harris County.

Plan for Learning Collaborative:
We plan to participate in a region-wide learning collaborative(s) as offered by the Anchor entity for Region 3, Harris Health System. Our participation in this collaborative with other Performing Providers within the region that have similar projects will facilitate sharing of challenges and testing of new ideas and solutions to promote continuous improvement in our Region's healthcare system.

Project Valuation:
HCPHES reviewed relevant data summaries from a variety of sources, such as demographic and public opinion data from the Rice University Kinder Institute's Houston Area Survey, and health related data specific to Harris County from the University of Texas School of Public Health's Houston Health Survey and the Texas Department of State Health Services, Center for Health Statistics. Additionally, HCPHES considered public health mandates and community need; the data, anecdotal information and the level of service provided by region 3 participating providers to address public health issues locally were considered to determine value. Valuation is based on cost avoidance and projecting health care expenditure savings by significantly minimizing tobacco use and cessation through the implementation of proactive, cost contained, evidence based tobacco deterrent interventions to the target population.

#26 - Project Option 2.6.3 – Engage community health workers in an evidence-based program to increase health literacy of a targeted population: Engage CHWs for Melanoma/Skin Cancer Prevention
Unique RHP Project ID: 112672402.2.102
Performing Provider Name/TPI: The University of Texas MD Anderson Cancer Center / 112672402

Project Summary:
Provider: The University of Texas MD Anderson Cancer Center is a comprehensive cancer center ranked first in cancer care by *U.S. News & World Report* and dedicated to patient care, education, research and prevention. MD Anderson is comprised of several Texas Medical Center campus locations, two research campuses in Bastrop County, Texas, four regional care centers and a number of national and international divisions and affiliates. More than 108,000 people—almost one-third of them new patients—were seen in FY2011. MD Anderson provided $215 million in uncompensated charity care to Texans in FY2011.

Intervention(s): Community health workers (CHWs) will provide evidence-based, culturally-relevant and literacy-appropriate skin cancer health education and outreach to non-Hispanic whites and Hispanics (English and Spanish speakers). The primary target audience is adults. CHWs will work in communities in zip code areas that are identified from the Health of Houston Survey 2010 as low-SES geographic areas. Skin cancer health education will be provided through planned learning experiences (one-on-one or group educational sessions) in collaboration with community organization partners or through outreach at community gatherings (e.g., community centers, health fairs, parks, and stores). Skin cancer health education is designed to promote awareness and knowledge about melanoma/skin cancer including risk factors, prevention, early detection, and what to do when suspicious lesions are found. Facilitation of referral to community practitioners will be a component of the intervention. The project will provide information on how individuals may access community practitioners for evaluation of any suspicious lesions. The project will contact Houston Dermatological Society members, Texas Dermatological Society members, Federally Qualified Health Centers (FQHC), and other health care delivery partners in the targeted communities to facilitate referrals. The project will ask individuals in the community and health care delivery partners to contact the project team with any questions.

Need for the project: Over two million basal cell and squamous cell skin cancers are diagnosed in the U.S. each year.[1] The incidence of melanoma, the most dangerous type of skin cancer, increases about 3% per year.[2] In 2013, 76,690 new cases of invasive melanoma and 61,300 new cases of melanoma in situ are expected.[3] Melanoma incidence is highest in non-Hispanic whites, and the vast majority of melanomas are diagnosed in this group.[4] Melanoma incidence is lower, but increasing, in Hispanics.[5,6] A study utilizing the Florida Cancer Data System showed that melanoma incidence increased 3.4% per year in Hispanic women.[6] An analysis of data from the California Cancer Registry showed that in Hispanic men and women, the incidence of thicker melanoma tumors increased annually: an increase of 11.6% per year in men and 8.9% per year in women.[5] These findings demonstrate that skin cancer incidence is an important and growing public health concern in non-Hispanic whites and Hispanics. Health disparities in melanoma tumor thickness, stage and mortality are well documented. Hispanics are significantly more likely than non-Hispanic whites to have thicker melanoma tumors, more advanced melanoma stage at diagnosis and higher melanoma mortality.[4,6-9] A study in Florida showed that 26% of Hispanics were diagnosed with advanced-stage melanoma disease, compared to 16% of non-Hispanic whites.[7] Lower socioeconomic status (SES) is associated with thicker melanoma tumors, advanced melanoma stage at diagnosis and poorer survival rates.[8,10,11] It is important to provide skin cancer health

education and outreach to low-SES geographic areas or communities, as research shows that individuals who live in neighborhoods with lower income levels or lower education levels have poorer melanoma prognoses.[12] However, low-SES populations have not been the focus of health education about skin cancer. It is critical to reach underserved groups, particularly low-SES populations, with education to increase health literacy pertaining to melanoma/skin cancer. Non-Hispanic whites and Hispanics are priority groups for skin cancer health promotion programs given melanoma incidence and mortality rates.

The project addresses the following unique community needs as identified in the community needs assessment:

- CN.11-High rates of chronic disease and inadequate access to treatment programs and services for illnesses associated with chronic disease, including: cancer, diabetes, obesity, cardiovascular disease, asthma, AIDS/HIV
- CN.20- Lack of access to programs providing health promotion education, training and support, including screenings, nutrition counseling, patient education programs
- CN.22- Insufficient access to services that are specifically designed to address racial, ethnic and cultural health care disparities

Target Population:

This project will deliver melanoma/skin cancer health education and outreach to individuals in an underserved, low-SES population of non-Hispanic whites and Hispanics in Harris and Fort Bend counties. A total of 5,000 individuals, primarily adults, will be served by the project. According to the Health of Houston survey, US Census Bureau and the Texas Health and Human Services Commission we are providing a good faith estimate of:

- 70% of persons who will receive services/intervention are estimated to have Medicaid
- 30% of persons who will receive services/intervention are estimated to be low income uninsured

Patient Benefit and Quantifiable Patient Impact

DY3	**QPI:** 1,000 unique individuals will receive services/intervention	1,000 cumulative
DY4	**QPI:** 2,000 unique individuals will receive services/intervention	3,000 cumulative
DY5	**QPI**: 2,000 unique individuals will receive services/intervention	5,000 cumulative

Category 3 outcomes:

IT-6.2.a – Client Satisfaction Questionnaire (CSQ Scales):

Description: The CSQ Scales® were created in response to the need for a standard instrument to replace idiosyncratic, ad hoc, and/or untested tools. The goal was to develop a standardized measure with strong psychometric properties that could be used to assess general satisfaction across varied health and human services. The CSQ Scales® (CSQ) include a series of brief instruments.

Project Option 2.6.3 – Engage community health workers in an evidence-based program to increase health literacy of a targeted population: Engage CHWs for Melanoma/Skin Cancer Prevention

Unique RHP Project Identification Number: 112672402.2.102
Performing Provider Name/TPI: The University of Texas MD Anderson Cancer Center / 112672402

Project Description:
Over two million basal cell and squamous cell skin cancers are diagnosed in the U.S. each year.[1] The incidence of melanoma, the most dangerous type of skin cancer, increases about 3% per year.[2] In 2013, 76,690 new cases of invasive melanoma and 61,300 new cases of melanoma in situ are expected.[3] Melanoma incidence is highest in non-Hispanic whites, and the vast majority of melanomas are diagnosed in this group.[4] Melanoma incidence is lower, but increasing, in Hispanics.[5,6] A study utilizing the Florida Cancer Data System showed that melanoma incidence increased 3.4% per year in Hispanic women.[6] An analysis of data from the California Cancer Registry showed that in Hispanic men and women, the incidence of thicker melanoma tumors increased annually: an increase of 11.6% per year in men and 8.9% per year in women.[5] These findings demonstrate that skin cancer incidence is an important and growing public health concern in non-Hispanic whites and Hispanics.

Health disparities in melanoma tumor thickness, stage and mortality are well documented. Hispanics are significantly more likely than non-Hispanic whites to have thicker melanoma tumors, more advanced melanoma stage at diagnosis and higher melanoma mortality.[4,6-9] A study in Florida showed that 26% of Hispanics were diagnosed with advanced-stage melanoma disease, compared to 16% of non-Hispanic whites.[7] Lower socioeconomic status (SES) is associated with thicker melanoma tumors, advanced melanoma stage at diagnosis and poorer survival rates.[8,10,11] It is important to provide skin cancer health education and outreach to low-SES geographic areas or communities, as research shows that individuals who live in neighborhoods with lower income levels or lower education levels have poorer melanoma prognoses.[12] However, low-SES populations have not been the focus of health education about skin cancer. It is critical to reach underserved groups, particularly low-SES populations, with education to increase health literacy pertaining to melanoma/skin cancer. Non-Hispanic whites and Hispanics are priority groups for skin cancer health promotion programs given melanoma incidence and mortality rates.

Community health workers (CHWs) will provide evidence-based, culturally-relevant and literacy-appropriate skin cancer health education and outreach to non-Hispanic whites and Hispanics (English and Spanish speakers). The primary target audience is adults. CHWs will work in communities in zip code areas that are identified from the Health of Houston Survey 2010 as low-SES geographic areas. Skin cancer health education will be provided through planned learning experiences (one-on-one or group educational sessions) in collaboration with community organization partners or through outreach at community gatherings (e.g., community centers, health fairs, parks, and stores). Skin cancer health education is designed to promote awareness and knowledge about melanoma/skin cancer including risk factors, prevention, early detection, and what to do when suspicious lesions are found. Facilitation of referral to community practitioners will be a component of the intervention. The project will provide information on how individuals may access community practitioners for evaluation of any suspicious lesions. The project will contact Houston Dermatological Society members, Texas Dermatological Society members, Federally Qualified Health Centers (FQHC), and other health care delivery partners in

the targeted communities to facilitate referrals. The project will ask individuals in the community and health care delivery partners to contact the project team with any questions.

Goal(s) and Relationship to Regional Goals(s):

Non-Hispanic whites and Hispanics are priority groups for skin cancer health promotion programs given melanoma incidence and mortality rates.[2,4,5,7] Lower socioeconomic status (SES) is associated with thicker melanoma tumors, advanced melanoma stage at diagnosis and poorer survival rates.[8,10,11] It is important to provide skin cancer health education and outreach to low-SES geographic areas or communities, as research shows that individuals who live in neighborhoods with lower income levels or lower education levels have poorer melanoma prognoses.[12] However, low-SES populations have not been the focus of health education about skin cancer. It is critical to reach underserved groups, particularly low-SES populations, with education to increase health literacy pertaining to melanoma/skin cancer.

Thus, the **overall goal** of this project is to engage CHWs to provide evidence-based, culturally-relevant and literacy-appropriate skin cancer health education and outreach to non-Hispanic whites and Hispanics (English and Spanish speakers). The primary target audience is adults. CHWs will work in communities in zip code areas that are identified from the Health of Houston Survey 2010 as low-SES geographic areas. Skin cancer health education will be provided through planned learning experiences (one-on-one or group educational sessions) in collaboration with community organization partners or through outreach at community gatherings (e.g., community centers, health fairs, parks, and stores). Skin cancer health education is designed to promote awareness and knowledge about melanoma/skin cancer including risk factors, prevention, early detection, and what to do when suspicious lesions are found. Facilitation of referral to community practitioners will be a component of the intervention. The project will provide information on how individuals may access community practitioners for evaluation of any suspicious lesions. The project will contact Houston Dermatological Society members, Texas Dermatological Society members, Federally Qualified Health Centers (FQHC), and other health care delivery partners in the targeted communities to facilitate referrals. The project will ask individuals in the community and health care delivery partners to contact the project team with any questions.

Given this project's focus, it also meets Regional Goals. This project will fill an important gap by providing health education and outreach to underserved populations to increase health literacy related to melanoma/skin cancer.

Regional Goals.

- Develop a regional approach to health care delivery that leverages and improves on existing programs and infrastructure, is responsive to patient needs throughout the entire region, and improves health care outcomes and patient satisfaction.
- Develop a culture of ongoing transformation and innovation that maximizes the use of technology and best-practices, facilitates regional collaboration and sharing, and engages patients, providers, and other stakeholders in the planning, implementation, and evaluation processes.

Challenges:

Major challenges of this project include (1) reaching individuals in an underserved, low-SES population of non-Hispanic whites and Hispanics, (2) engaging individuals to increase their health literacy about melanoma/skin cancer, and (3) educating individuals about what to do when suspicious lesions are

found and facilitating referral to community practitioners. We have carefully considered each of these challenges in the design of this project. To address challenge (1), we will locate communities in zip code areas that are identified from the Health of Houston Survey 2010 as low-SES geographic areas. We will leverage existing relationships with partners in these communities to identify community-based organizations and community gatherings (e.g., community centers, health fairs, parks, and stores) for outreach. We also will build new relationships to enhance reach. To address challenge (2), to engage individuals, we propose that CHWs provide evidence-based, culturally-relevant and literacy-appropriate skin cancer health education and outreach through planned learning experiences (one-on-one or group educational sessions) in collaboration with community organization partners or through outreach at community gatherings. There is strong evidence to support the delivery of community-based health education and outreach by CHWs to underserved, low-SES populations to improve health awareness, knowledge, literacy and outcomes.[13-15] To address challenge (3), we will provide individuals with education about what to look for when examining their skin for signs of melanoma/skin cancer. Educational content and materials will be based on expertise of project investigators, including behavioral scientists, dermatologists and public education specialists. We also will provide information on how individuals may access community practitioners for evaluation of any suspicious lesions. We will contact health care delivery partners in the targeted communities to facilitate referrals.

3-Year Expected Outcome for Provider and Patients:
This project will deliver melanoma/skin cancer health education and outreach to individuals in an underserved, low-SES population of non-Hispanic whites and Hispanics in Harris and Fort Bend counties, in each distribution year (DY), as follows:

DY3	1,000 unique individuals will receive services/intervention	1,000 cumulative
DY4	2,000 unique individuals will receive services/intervention	3,000 cumulative
DY5	2,000 unique individuals will receive services/intervention	5,000 cumulative

- 70% of persons who will receive services/intervention are estimated to have Medicaid
- 30% of persons who will receive services/intervention are estimated to be low income uninsured

Starting Point/Baseline:
Low-SES populations have not been the focus of health education about melanoma/skin cancer. Currently, melanoma/skin cancer health education and outreach is not being provided to low-SES populations in Harris and Fort Bend counties.

Rationale:
Project Option 2.6.3 was selected because this project will engage CHWs in an evidence-based program to increase the melanoma/skin cancer health literacy of a targeted population. In this project, the targeted population is an underserved, low-SES population of non-Hispanic whites and Hispanics, a priority population for health education and outreach given melanoma incidence and mortality rates.

Milestones & Metrics:
The following milestones and metrics have been chosen for the Melanoma/Skin Cancer Education with CHWs project:

- Process Milestones and Metrics: P-X (P-X.1); P-8 (P-8.1, P-8.2)
- Improvement Milestones and Metrics: I-X (I-X.1)

In addition to P-8 (P-8.1, P-8.2), customizable milestones and metrics are proposed. The customizable milestones and metrics are designed to enhance progress on this project, and rationales are provided below.
DY3 - Milestone 1 [P-X]: Establish project infrastructure. **Rationale**: Staff hired to execute the project. Promotional materials are needed to increase awareness about the educational sessions and outreach. Educational materials are needed to implement the educational sessions. Outcome surveys are needed to evaluate the educational sessions. A database ensures timely and accurate project reporting.
DY3 - Milestone 2 [P-X]: Implement skin cancer health education and outreach. **Rationale**: Lower socioeconomic status (SES) is associated with thicker melanoma tumors, advanced melanoma stage at diagnosis and poorer survival rates. Low-SES populations have not been the focus of health education about skin cancer. It is critical to reach underserved groups, particularly low-SES populations, with education to increase health literacy pertaining to melanoma/skin cancer. Non-Hispanic whites and Hispanics are priority groups for skin cancer health promotion programs given melanoma incidence and mortality rates.
DY4 - Milestone 1 [P-X]: Maintain project infrastructure. **Rationale**: Promotional materials are needed to increase awareness about the educational sessions and outreach. Educational materials are needed to implement the educational sessions. Outcome surveys are needed to evaluate the educational sessions. Ongoing utilization of the database will enhance project tracking and reporting.
DY4 - Milestone 3 [I-X]: Increase the number of individuals reached with skin cancer health education and outreach. **Rationale**: Lower socioeconomic status (SES) is associated with thicker melanoma tumors, advanced melanoma stage at diagnosis and poorer survival rates. Low-SES populations have not been the focus of health education about skin cancer. It is critical to reach underserved groups, particularly low-SES populations, with education to increase health literacy pertaining to melanoma/skin cancer. Non-Hispanic whites and Hispanics are priority groups for skin cancer health promotion programs given melanoma incidence and mortality rates.
DY5 - Milestone 1 [P-X]: Maintain project infrastructure. **Rationale**: Promotional materials are needed to increase awareness about the educational sessions and outreach. Educational materials are needed to implement the educational sessions. Outcome surveys are needed to evaluate the educational sessions. Ongoing utilization of the database will enhance project tracking and reporting.
DY5 - Milestone 3 [I-X]: Increase the number of individuals reached with skin cancer health education and outreach. **Rationale**: Lower socioeconomic status (SES) is associated with thicker melanoma tumors, advanced melanoma stage at diagnosis and poorer survival rates. Low-SES populations have not been the focus of health education about skin cancer. It is critical to reach underserved groups, particularly low-SES populations, with education to increase health literacy pertaining to melanoma/skin cancer. Non-Hispanic whites and Hispanics are priority groups for skin cancer health promotion programs given melanoma incidence and mortality rates.

Unique community need identification number the project addresses:
The project addresses the following unique community needs as identified in the community needs assessment:

- CN.11-High rates of chronic disease and inadequate access to treatment programs and services for illnesses associated with chronic disease, including: cancer, diabetes, obesity, cardiovascular disease, asthma, AIDS/HIV
- CN.20- Lack of access to programs providing health promotion education, training and support, including screenings, nutrition counseling, patient education programs
- CN.22- Insufficient access to services that are specifically designed to address racial, ethnic and cultural health care disparities

Required Core Components:
This project has Required Core Component "A":

> Conduct quality improvement for project using methods such as rapid cycle improvement. Activities may include, but are not limited to, identifying project impacts, identifying "lessons learned," opportunities to scale all or part of the project to a broader patient population, and identifying key challenges associated with expansion of the project, including special considerations for safety-net populations.

To enhance continuous quality improvement, the project team will meet to discuss project results, action items, progress on milestones, "lessons learned," challenges to implementing the project and any solutions. Meetings will be documented with meeting agendas, attendance sheets, and summaries of discussion points, action items, documents and handouts reviewed, and related milestones/metrics. The project team also will join monthly Waiver calls organized by the Anchor and participate in MD Anderson Waiver Oversight Committee meetings. Additionally, learning collaborative milestone/metrics for Project Option 2.6.3 (P-8, P-8.1, P-8.2) will be met.

How the project represents a new initiative for the Performing Provider or significantly enhances an existing delivery system reform initiative: This project would represent a new initiative because, currently, there is no evidence-based melanoma/skin cancer health education and outreach being provided to low-SES populations in Harris and Fort Bend counties.

<u>Related Category 3 Outcome Measure(s):</u>
IT-6.2.a – Client Satisfaction Questionnaire (CSQ Scales):
Description: The CSQ Scales® were created in response to the need for a standard instrument to replace idiosyncratic, ad hoc, and/or untested tools. The goal was to develop a standardized measure with strong psychometric properties that could be used to assess general satisfaction across varied health and human services. The CSQ Scales® (CSQ) include a series of brief instruments.
Reasons/rationale for selecting the outcome measure(s):
This outcome was chosen to measure and assess consumer satisfaction with health and human services. This project is a community-based cancer prevention intervention and does not align well with other outcome measure options. This option provides program monitoring and evaluation for such a community-based intervention.

Relationship to other Projects: By delivering evidenced-based skin cancer health education and outreach to an underserved, low-SES population, to increase health literacy, this project is in line with

the RHP. This project also supports our other projects in that they all support one of the eight goals of the Comprehensive Cancer Control Program at The University of Texas MD Anderson Cancer Center. Also, in order to capture patient satisfaction across varied health care services and domains all MD Anderson waiver projects will use IT6.2.a Client Satisfaction scores as a Category 3 outcome measure.
Relationship to Other Performing Providers' Projects in the RHP:
Innovation is key to the transformation of healthcare in our community. The consistency of innovation in our region allows for increased improvements based on research trends, patient need, and provider availability. The waiver funding allows for innovation in specific areas and all innovative projects included in the plan are similar in the fact of program redesigns for historic treatments, and focus to chronic condition outcome measures such as central line infections. The Region 3 initiative grid in the addendum can provide a side by side comparison of all projects that directly relate to innovation. Similar to the City of Houston's Health Literacy (0937740-08.2.1) project, the current project will utilize community health workers (CHWS) to provide health education.

Plan for Learning Collaborative: We plan to participate in a region-wide learning collaborative(s) as offered by the Anchor entity for RHP3, Harris Health System. Our participation in this collaborative with other Performing Providers within the region that have similar projects will facilitate sharing of challenges and testing of new ideas and solutions to promote continuous improvement in our Region's healthcare system.

Project Valuation: We have based our project valuation on California's 1115 Medicaid Waiver model. As such, we have valued our projects at 2.5 times that of the estimated costs. Basing our valuations on California's calculations, we know we are well within the potential range of future cost savings when looking at the following from Prevention Institute and Trust for America's Health Issue Report entitled *Prevention for a Healthier America: Investments in Disease Prevention Yield Significant Savings, Stronger Communities (July 2008)*:

- Prevention saves money – an investment of $10 per person per year in programs to increase physical activity, improve nutrition, and prevent tobacco use could save the country more than $16 billion in annual health care costs within five years.
- Prevention can reduce end-of-life costs by increasing health during the lifespan, what researchers call the *compression of morbidity*.

There is a substantial return-on-investment in prevention – For every $1 invested in community-based prevention, the return amounts to $5.60.

This project is being submitted at its full proposed value ($19,999,998) for DY3-5 even though only $12,697,993 currently is available for the project (DY3 - $6,666,666, DY4 - $1,157,716, DY5 - $4,873,611) based on RHP 3's current allocation for the 3-year projects. The provider requires a minimum of $6,666,666 in all years DY3 through DY5 in order to move forward with the full scope of the project. With the amount that is currently available, we could establish the community health and wellness center and provide primary care services, but the additional health education interventions could not be fully supported and we would have to modify the project. If the project cannot be fully funded, we are willing to perform a modified version of the project.

#27 - Project Option 1.1.1 - Expand Primary Care Capacity: Establish more primary care clinics: UT Physicians Community Health and Wellness Center - Sharpstown

Unique RHP Project ID: 111810101.1.101
Performing Provider Name/TPI: UTHealth, UTPhysicians / 111810101

Project Summary:
Provider: UT Physicians is the clinical practice of The University of Texas Medical School at Houston. With more than 900 physicians certified in 80 medical specialties and subspecialties, 906 residents and fellows, and 283,920 patient visits in 2011, it is the fastest growing academic practice in the nation for the last five years. In addition to our flagship location in the Texas Medical Center, UT Physicians has 4 neighborhood locations throughout the Greater Houston area, and also offers specialty clinics at several Memorial Hermann Hospital locations.

Intervention(s): The lack of resources associated with poverty constitutes a barrier to healthy living among low income populations. This project seeks to establish prevention and wellness community health centers CHWC's) in low income areas in our region along with the provision of wellness services provided by ACPs. These centers will operate using expanded hours that include evening and weekend hours. These centers will be well integrated with existing resources in the community. Community leaders and stakeholders will be included in identifying gaps and priority services needed, as well as in the planning and implementation of support services

Need for the project: This project addresses the county's inadequate access to primary care and high rates of inappropriate emergency department utilization. For the fiscal year 2010, 10% of all potentially preventable hospitalizations (PPR) were ambulatory care sensitive. In 2009, 41% (390,945) of ED visits in Houston were primary care related (PCR), including non-urgent, primary care treatable, and primary care preventable, and for 26.8% (104,762) of these PCR visits, Medicaid was the payer.

Target Population: 47.9% of children in this ZCTA live below the Federal Poverty Level (FPL), amounting to over 8,500 children living in poverty. In total, there are over 21,500 people living below the FPL in this area. Of the estimated 47,470 low income population in this ZCTA, only about 6% of them are estimated to be receiving health care from federally funded 'Health Center Program grantees' (HCP grantees), leaving over 44,600 low income people with limited access to quality preventive and primary care. This service area includes large populations with economic, cultural, and language barriers to receiving care: it contains areas designated as Medically Underserved Populations and Governor-Designated Medically Underserved Areas (MUA/Ps).

Category 1 or 2 expected patient benefits: Our goal is to increase primary care clinic visits and improve access for patients seeking services. This will translate to better patient satisfaction with primary care services. By expanding primary capacity, we expect to successfully provide services to 5242 patients in DY4 and improve that number to a total of 5766 patients in DY5.

Category 3 outcomes we are considering:

- IT-12.1 Breast Cancer Screening (Non- standalone measure)
- (NEW) IT-12.6 Influenza Immunization -- Ambulatory (Non-standalone measure)
- (NEW) IT-12.12 Immunization and Recommended Immunization Schedule Education (Non-standalone)

This project is being submitted at its full proposed value ($19,999,998) for DY3-5 even though only $12,697,993 currently is available for the project (DY3 - $6,666,666, DY4 - $1,157,716, DY5 - $4,873,611) based on RHP 3's current allocation for the 3-year projects. The provider requires a minimum of $6,666,666 in all years DY3 through DY5 in order to move forward with the full scope of the project. With the amount that is currently available, we could establish the community health and wellness center and provide primary care services, but the additional health education interventions could not be fully supported and we would have to modify the project. If the project cannot be fully funded, we are willing to perform a modified version of the project.

Project Option 1.1.1 - Expand Primary Care Capacity: Establish more primary care clinics: UT Physicians Community Health and Wellness Center - Sharpstown

Unique RHP Project ID: 111810101.1.100
Performing Provider Name/TPI: UTHealth, UTPhysicians / 111810101

Project Description:

The lack of resources associated with poverty constitutes a barrier to healthy living among low income populations. This project seeks to establish prevention and wellness community health centers CHWC's) in low income areas in our region along with the provision of wellness services provided by ACPs. These centers will operate using expanded hours that include evening and weekend hours. These centers will be well integrated with existing resources in the community. The CHWC will be run by two Nurse Practitioners under the supervision of a Family Practice Physician who will (1) be on-site to provide medical direction and consultation at least once every 10 business days during which the advanced practice nurse is on-site providing care; (2) receive a daily status report from the advanced practice nurse or physician assistant on any problem or complication encountered; and (3) will available through direct telecommunication for consultation, patient referral, or assistance with a medical emergency. Community leaders and stakeholders will be included in identifying gaps and priority services needed, as well as in the planning and implementation of support services. The centers will provide the below services and wellness opportunities.

Preventive-type clinical services to be provided by ACPs include:

- Periodic physicals and well check-ups
- Immunizations: childhood vaccinations, flu shots, etc.
- Screenings: Mammography (mobile mammograms), Pap smears, Diabetes screening, Hypertension screening, Reproductive health screenings: STIs, pregnancy tests, Mental health screening: depression

Referral Services: patients found to have care needs that cannot be handled at the health center setting will be referred to receive more comprehensive care in the appropriate setting, such as primary care, specialty, or advanced care practices.

Wellness services/programs to be available include:

- Health education
  - Nutrition Classes: making healthy food choices, food preparation coaching
  - Community gardening
  - Disease Self-Management Education: diabetes, hypertension, asthma, etc.
- Physical activity programs
  - Exercise classes

    - Working with community to identify, harness, develop, and use resources to encourage physical activity such as walking and cycling
- Literacy education and GED classes
- Health camps for kids
- Facilitation of disease and care support groups: behavioral health, smoking cessation

This CHWC will be sited in ZIP Code Tabulation Area (ZCTA) 77036. 47.9% of children in this ZCTA live below the Federal Poverty Level (FPL), amounting to over 8,500 children living in poverty. In total, there are over 21,500 people living below the FPL in this area. Of the estimated 47,470 low income population in this ZCTA, only about 6% of them are estimated to be receiving health care from federally funded 'Health Center Program grantees' (HCP grantees), leaving over 44,600 low income people with limited access to quality preventive and primary care. This service area includes large populations with economic, cultural, and language barriers to receiving care: it contains areas designated as Medically Underserved Populations and Governor-Designated Medically Underserved Areas (MUA/Ps). In addition, this area has a high number of Hispanics (54.7%), for whom language, as well as poverty, may pose a barrier to accessing the health care system. African Americans, another segment of the population that tend to be medically underserved, make up a significant proportion of the population in this ZCTA (18.6%). This ZCTA also has a significant proportion of Asian people (16.4%), who the HHS 2010 survey shows to have a low uptake of preventative cancer screenings.

Goal and Relationship to Regional Goals:

Project Goals:

This project seeks to establish a prevention and wellness community health center (CHWC) in low income areas in our region, with the aim to protect and promote general health and wellbeing among indigent and low income populations in our region for whom traditional primary care services alone are not sufficient to ensure optimal health care. These centers will be well integrated with existing resources in the community and UTP will work with community leaders to identify gaps, and priority services for which these centers will be most suited to address.

This project addresses the following regional goals:

One of the goals of the region is to "Increase access to primary and specialty care services, with a focus on underserved populations, to ensure patients receive the most appropriate care for their condition, regardless of where they live or their ability to pay". Expansion of wellness centers certainly relates to this goal as it will make it easier for UT Physicians to provide care to underserved populations.

Challenges:

Need: 1) Inadequate access to primary care. 2) High rates of inappropriate emergency department utilization. Implementation: 1) Staff recruitment and retention. 2) Marketing of expansion.

By expanding capacity, UT Physicians will be better able to deliver timely care to more patients when needed thereby diverting patients away from the emergency room. A marketing campaign that addresses the culture(s) and needs of the community will be implemented to inform the community of our expanded capacity to provide quality care that is convenient for them.

3-Year Expected Outcome for Provider and Patients:

We anticipate the CHWC, run by at least two Nurse Practitioners, operating at approximately 90%, to have a patient panel of 1,643 or 5,242 annual patient visits in DY4 and a patient panel of 1,807 or 5,766 annual patient visits in DY5. There is a high level of unmet need in preventive care in Harris County. Only 64.0% of eligible persons were screened for breast cancer, 80.4% for cervical cancer, and 58% for

colorectal cancer according to guidelines; all significantly falling short of the Healthy People 2020 targets of 81.1%, 93.0%, and 70.5% respectively. Close to half of Asian residents had received no screening for cervical (48%) and colorectal cancer (50%). Hispanic residents were more likely to remain unscreened for breast (43%) and colorectal cancer (53%) than any other group. In addition the survey showed that Harris County has a higher prevalence of chronic diseases compared to statewide rates. UT Physicians expects to see an uptake of regular screenings particularly for breast cancer and colon cancer. Detecting cancer early can reduce the burden of the disease in terms of both improved health outcomes and lower costs. This project will benefit the Medicaid and low-income client base of this area. The expansion of service hours to nights and Saturdays will be of particular benefit to those unable to see a clinical provider during business hours. The increase in primary care capacity, conveniently located where there is great need, will help to address many of the barriers that the low-income populations typically encounter in getting the appropriate care, facilitating better health outcomes.

Starting Point/Baseline:

UTHSC-H has identified the targeted service area needing increased access to primary care. Since this will be a new clinic, the baseline is 0. Targets for milestones and metrics are based upon the projected capacity of the clinic.

Quantifiable Patient Impact:

We expect to provide services to 5,242 patients in DY4 and 5,766 patients in DY5.We anticipate, at least 1,310 of the patients in DY4 and 1,441 of the patients in DY5, to be Medicaid, or Medicaid-eligible.

Rationale:

Research has shown that access to primary care is associated with better health outcomes at less cost. Access to primary care ensures better preventive care and better management of chronic disease; on the other hand lack of access often results in more expensive care, received in hospitals and emergency departments (ED). For the fiscal year 2010, 10% of all potentially preventable readmissions (PPR) were ambulatory care sensitive. In 2009, 41% (390,945) of ED visits in Houston were primary care related (PCR), including non-urgent, primary care treatable, and primary care preventable, and for 26.8% (104,762) of these PCR visits, Medicaid was the payor. Getting more patients into primary care will help to reduce the use of this more costly care. Placing more primary care providers out in the communities served by the UT Physcians will help to address transportation access barriers and the expansion of clinic service hours will provide a greater selection of available appointment times. By increasing primary care capacity and engaging more people in the primary care system, avoiding inappropriate utilization of costly services, the community will experience better health outcomes and greater patient satisfaction.[70]

Project Components:

a) Identify and lease appropriate space within the defined service area to establish a new clinic.

b) Once leased, we will recruit Nurse Practitioners and support staff.

[70] (PPR rate was from the Texas Health and Human Services Commission report on Potentially Preventable Readmissions in the Texas Medicaid Population, Fiscal year 2010, published January, 2012. The statistics for ED use were from the Houston Hospitals Emergency Department Use Study (January 1, 2009 through December 31, 2009), Final Report, prepared by the UT School of Public Health, May 2011, included in the 2010 Harris County Community Needs Assessment for Memorial Hermann.)

c) The clinic will operate with expanded evening and Saturday hours to increase access.

Unique community need identification numbers the project addresses:
CN.1 Inadequate access to primary care, CN.2 Inadequate access to specialty care, CN.3 Inadequate access to behavioral health care, CN.6 Inadequate access to treatment and services designed for special needs populations, CN.7 Insufficient access to care coordination practice management and integrated care treatment programs, CN.8 High rates of inappropriate emergency department utilization, CN.9 High rates of preventable hospital readmissions, CN.10 high rates of preventable hospital admissions, CN.11 High rates of chronic disease and inadequate access to treatment programs and services for illnesses associated with chronic disease, CN.12 High rates of tobacco use and excessive alcohol use, CN.13 High teen birth rates, CN.14 High rates of poor birth outcomes and low birth-weight babies, CN.15 Insufficient access to services for pregnant women, particularly low income women, CN.17 High rate of sexually transmitted diseases, CN.18 Insufficient access to integrated care programs for behavioral health and physical health conditions, CN.19 Lack of immunization compliance, resulting in rising incidence of preventable illness, CN.20 Lack of access to programs providing health promotion education, training and support, including screenings, nutrition counseling, patient education programs, CN.21 Inadequate transportation options or individuals in rural areas and for indigent/low income populations, CN.22 Insufficient access to services that are specifically designed to address racial, ethnic and cultural health care disparities, and CN.23 Lack of patient navigation, patient and family education and information programs.

Customizable Process or Improvement Milestones:
Project includes three customizable process milestones. It is essential that proper planning is done in preparation for such a significant clinical implementation. Also, participation in learning collaboratives allows for the opportunity to learn from other providers experiences. We plan to not only attend the face-to-face meetings twice a year, but also participate in all cohorts relevant to the project. Finally, community outreach is a crucial component of opening a new clinic. Therefore, we have added the following customizable process milestones that were not addressed in the menu:

- **Milestone** [P-X1]: Complete a planning process/submit a plan, in order to do appropriate planning for the implementation of major infrastructure development or program/process redesign Metric [P-X1.1]: Documentation of plan for the new clinic. Baseline/Goal: Implementation plan (eligibility criteria, implementation components, responsibilities, and timeline). Data Source: UT Physicians' documents.
- **Milestone [P-X2]** Participate in face-to-face learning (i.e. meetings or seminars) at least twice per year with other providers and the RHP to promote collaborative learning around shared or similar projects. At each face-to-face meeting, all providers should identify and agree upon several improvements (simple initiatives that all providers can do to "raise the floor" for performance). Each participating provider should publicly commit to implementing these improvements**.** Metric [P-X2.1] Participate in semi-annual face-to-face meetings or seminars organized by the RHP. Data Source: Documentation of semiannual meetings including meeting agendas, slides from presentations, and/or meeting notes.
- **Milestone [P-X3]:** Conduct community outreach and marketing Metric [P-X3.1]: Conduct community outreach and marketing Goal: Reach all households in targeted service areas with a bi-lingual mailer announcing services to be provided at the new clinic Data Source: Mailing list, mailing contract, mailer

Category 3 Outcome Measure(s) being considered:

- IT-12.1 Breast Cancer Screening (Non- standalone measure)
- (NEW) IT-12.6 Influenza Immunization -- Ambulatory (Non-standalone measure)
- (NEW) IT-12.12 Immunization and Recommended Immunization Schedule Education (Non-standalone)

Relationship to other Projects:

1.2 (A2, SPH1) - Increased training of primary care workforce will provide physicians and support staff needed to expand primary care capacity.

1.7 (A1) - Expanded primary care capacity will facilitate and enhance access to specialty care via telemedicine.

1.10 (MS1) - The systems engineering and user dashboards will give providers greater access to information and provide reports facilitating a continuous quality improvement process.

2.1 (C1-2) - As part of the medical home project, all patients will be assigned to a primary care provider within the UT Health medical home. Expanded primary care capacity will be a necessary step to making this possible.

2.2 (CL3, C5-C9) - Expanded capacity in primary care will ensure the availability of staff to implement the expansion of the chronic care management model for the targeted diseases.

Relationship to Other Performing Providers' Projects in the RHP:

Primary Care/Ambulatory Care clinics are a top priority to Region 3 due to the regional patient mix, population concentration, and lack of primary care access points for our patient base. The regional approach of collaboration as well as existing patient referral pattern relationships allowed our team to properly identify the community needs based on the necessity of population, uninsured, and medically underserved patient bases. This program is consistent with our region and similar to numerous initiatives in our RHP plan sharing both concepts as well as outcome measures focused on percent improvement over baseline of patient satisfaction scores, reduction of inappropriate ED utilization, and third next available appointment status. The Region 3 Initiative Grid attached as a RHP Plan addendum reflects a grid of relationship for all initiatives.

Plan for Learning Collaborative:

UTHealth will participate in a region-wide learning collaborative(s) as offered by the Anchor entity for Region 3, Harris Health System. Our participation in this collaborative with other Performing Providers within the region that have similar projects will facilitate sharing of challenges and testing of new ideas and solutions to promote continuous improvement in our Region's healthcare system.

Project Valuation:

The anchor, Harris Health, facilitated a blind review process in which reviewers scored each project on 4 criteria, using a 9-point scale. The ratings for each criterion were weighted and summed for each project to arrive at a total score (value weight). All 80 projects for the region were then ranked. This project was ranked #4 of all 80 projects submitted. We used these scores/ranking in conjunction with other approved project valuations to arrive at the valuation assigned to this project. Below are the criteria and considerations for awarding project scores:

1. Aligned with Community Needs (Weight = 30%): Points were awarded based on judgment of whether the proposed project directly addresses one or more of the 25 identified community needs as outlined in the Regional Healthcare Partnership Plan. Projects that address a need directly and address multiple community needs were considered for a higher score.

2. Transformational Impact (Weight = 30%): Points were awarded for projects that meet the community benefit criteria, based on the following question: How likely and to what extent is this project going to positively impact the identified community needs? The highest rating was given to projects that yield a significant transformation. Those projects with a wider reach and/or evidence-based should be considered for a higher score.
3. Committed IGT (25%): Points based on ability to demonstrate that the project is supported by a committed IGT source. All of our projects have committed IGT and were therefore assigned the highest rating of points.
4. Likelihood of Success (Weight = 15%): Points based on determination of whether the goals of the project were achievable.

#28 - Project Option: 2.13 PROVIDE AN INTERVENTION FOR A TARGETED BEHAVIORAL HEALTH POPULATION TO PREVENT UNNECESSARY USE OF SERVICES IN A SPECIFIED SETTING: EXPANSION OF MOBILE CRISIS OUTREACH TEAM

RHP Project Number: 113180703.2.101

Performing Provider/TPI: MHMRA Harris County/113180703
This project will provide a Mobile Crisis Outreach Team intervention for a targeted behavioral health population to prevent unnecessary use of services in a specified setting.

Provider**:** The Mental Health and Mental Retardation Authority (MHMRA) of Harris County is a public agency serving as the safety net provider for adults with serious mental illnesses. MHMRA provides inpatient, residential and outpatient treatments, including psycho-therapy, case management and medication management for individuals. MHMRA serves more than 49,000 Harris County residents out of a culturally and ethnically diverse population of over 4.1 million. Of those individuals who received any agency service in FY12, 36.5% were medically indigent and 51.9% had Medicaid. Of those who received mental health services in FY12, such as those being proposed in this project, 55% were medically indigent and 34.9% had Medicaid.

Intervention(s): MHMRA proposes to expand the current Mobile Crisis Outreach Team (MCOT), which provides mobile crisis outreach and follow-up to adults and children who are unable or unwilling to access traditional psychiatric services. When a consumer initiates an MCOT intervention, two trained MCOT staff responds to the consumers' needs, meeting them in a variety of settings including in the consumer's community, home, or school and provide assessment, intervention, education, and linkage to other services to address identified needs.

Need for the project: MCOT has grown by more than 52% since inception in 2004, from 1,224 episodes of care to 1,861 episodes in 2011. The program reached its current peak capacity in 2010 after its most recent expansion in 2008. Over the past twelve years, MHMRA's psychiatric emergency services have nearly doubled, logging an 88% increase in the volume of service episodes from 12,899 in 2000 to 24,365 in 2011.

Target population: Individuals in need of mental health services.

Category 1 or 2 expected patient benefits:

- Provide 1,370 more initial interventions from baseline by DY5
- Increase percent of MCOT patients who follow up at MHMRA outpatient clinic within 30 days of discharge from MCOT by 10% from baseline by DY5.
- Reduce PES/HCPC admissions by 10% from baseline by DY5.

Description of QPI metrics:

- Count of number of individuals that will be served & enrolled in the program

Category 3 measures: OD-6: IT-6.1: Patient Satisfaction: Improve patient satisfaction as measured by CAHPS by 3% over baseline by DY5.

OD- 10: Functional Status: Improve functional status by ANSA by 3% over baseline by DY5.

Project Option 2.13.1 Provide an intervention for a targeted behavioral health population to prevent unnecessary use of services in a specified setting: Mobile crises unit (MCOT)

Unique RHP Project Identification Number: 113180703.2.101

Performing Provider Name/TPI: Mental Health and Mental Retardation Authority of Harris County/113180703

Project Description:
The Mental Health and Mental Retardation Authority (MHMRA) of Harris County proposes to provide an intervention for a targeted behavioral health population to prevent unnecessary use of services in a specified setting by expansion of a mobile crises unit.

The Mental Health and Mental Retardation Authority (MHMRA) of Harris County is a public agency serving as the safety net provider for adults with serious mental illnesses, for children and adolescents with serious emotional disorders, for the developmentally delayed and for individuals experiencing acute psychiatric distress. MHMRA serves more than 49,000 Harris County residents out of a culturally and ethnically diverse population of over 4.1 million. Of those who received mental health services in FY12, such as those being proposed in this project, 55% were medically indigent and 34.9% had Medicaid.

MHMRA proposes to expand the current Mobile Crisis Outreach Team (MCOT), which provides mobile crisis outreach and follow-up to adults and children who are unable or unwilling to access traditional psychiatric services.

MCOT adopts a multidisciplinary approach to mental health treatment. When a consumer initiates an MCOT intervention, two trained MCOT staff respond to the consumers' needs. Teams may meet with the patient in a variety of settings including in the consumer's community, home, or school. MCOT provides assessment, intervention, education, and linkage to other services to address identified needs. For example, MCOT may facilitate a referral to a medical provider, nurse, outpatient psychiatric clinic, or inpatient psychiatric hospital. MCOT also provides nursing and medication management for consumers who are in need of this type of care. Additionally, the program may assist local medical emergency rooms that do not have a psychiatric presence by screening patients who may be in need of psychiatric emergency services.

MCOT provides case coordination services similar to MHMRA's Chronic Consumer Stabilization Initiative (CCSI); however, MCOT provides short-term (4-6 weeks) stabilization interventions to consumers in need, whereas the CCSI is a long-term program. MHMRA's Crisis Intervention Response Team (CIRT) is also a variation of mobile response, except that it provides only one initial crisis intervention by a team composed of a mental health professional and law enforcement officer and the CIRT team responds to police dispatch in an unmarked police car. CIRT interventions typically last several hours, compared to MCOT, which may last several weeks. It is also important to note that police officers are not part of the MCOT multidisciplinary team. There are times when a CIRT crisis response results in a referral to MCOT for follow-up and continued interventions.

Goals and Relationship to Regional Goals:

The primary goal of the program is to reduce preventable psychiatric hospital admissions among MCOT recipients. The second goal is to improve linkage to outpatient treatment. By accomplishing these goals, cost savings will be accrued. Finally, we seek to provide high quality services as reflected

by patient satisfaction surveys and functional assessment of each patient. Process goals have been identified to ensure the program is well designed and reflects best practices.

Challenges:

The challenges include identifying appropriate ongoing service providers for linkage. This challenge will be addressed through expansion of outpatient behavioral health services for individuals with severe psychiatric conditions.

Starting Point/Baseline:

The existing MCOT program provides clinical intervention to approximately 1,400 unduplicated individuals per year. The proposed program will expand the number of cases from 1,400 to about 2,100 per year. The baseline year will begin in year three with an additional 200 interventions. Year four would provide an additional 450 interventions from the baseline of 1400. Year five would provide 720 initial interventions from the baseline of 1400 for a total of 2120 interventions by end of year five.

Quantifiable Patient Impact:

Count of number of individuals that will be served & enrolled in the program
This program will provide 1,370 more initial interventions from baseline by DY5.

Rationale:

Mobile crisis services offer several advantages, including decreased psychiatric emergency services, decreased service costs, increased community treatment, increased patient autonomy, and decreased burden on the community to expand emergency services. Mobile crisis services are well studied in the behavioral sciences literature. The most common outcome of mobile services is the reduction in preventable psychiatric hospitalizations. For example, Scott (2000) reported a 27% reduction in hospitalization rates, coupled with a 23% decrease in costs. Similarly, Hugo, Smout, and Bannister (2002) reported a 30% decrease in hospitalization rates when mobile crisis services were utilized. Our own program evaluation indicated MCOT interventions rarely result in inpatient admissions (e.g., less than 5% of service calls). The cost savings that result from preventable admissions is discussed below in the valuation section.

Mobile crisis services also seek to improve access to appropriate levels of treatment, such as linkage to community outpatient services. By engaging a consumer via mobile services, and successfully linking them to community treatment, our agency ensures the consumer is treated in the least restrictive environment possible. Again, MHMRA data indicates the longer a consumer is engaged in MCOT services (e.g., 3-4 weeks versus 1-2 weeks), the less likely the consumer is to return to the hospital immediately and the more likely the consumer is to access outpatient treatment.

Houston is a large city with a population of over 4.2 million. State and local data indicates an increased demand for mental health services. MHMRA data also supports this theory. For example, MCOT has grown by more than 52% since inception in 2004, from 1,224 episodes of care to 1,861 episodes in 2011. The program reached its current peak capacity in 2010 after its most recent expansion in 2008. Over the past twelve years, MHMRA's psychiatric emergency services have nearly doubled, logging an 88% increase in the volume of service episodes from 12,899 in 2000 to 24,365 in 2011. Further expansion is likely limited primarily by capacity.

Project Components: In order to enhance the transition from inpatient to develop such a program, the following option and core components were chosen: 2.13.1, Design, implement, and evaluate research-supported and evidence-based interventions tailored towards individuals in the target population. These

components have also been embedded in the program process and improvement milestones (See milestone and metric chart for further details). The status of each component is noted, if that activity is currently underway:

g) Assess size, characteristics and needs of target population(s)

- *In progress. MHMRA is in the process of completing a needs assessment to determine the number of consumers who may benefit from this expansion and the treatment needs of these consumers.*

h) Review literature / experience with populations similar to target population.

- *To be completed. MHMRA will look to expert authorities and national resources, such as SAMHSA, prior to implementing specific treatment approaches or adopting specific manuals/materials.*

i) Develop project evaluation plan using qualitative and quantitative metrics to determine outcomes.

- *To be completed. MHMRA will develop a program evaluation that includes qualitative and quantitative metrics.*

j) Design models to include a range of community-based services and residential supports.

- *In progress. MHMRA consumers often need assistance with transportation, housing, and medical needs. MHMRA clinicians currently address these needs using existing psychoeducational material. MHMRA has a residential program that may be used by consumers if they need transitional housing.*

k) Assess the impact of interventions based on standardized quantitative measures and qualitative analysis relevant to the target population.

- *To be completed. MHMRA will work with the outcomes department to identify pre/post measures and patient satisfaction surveys that are empirically validated for individuals who are diagnosed with co-morbid conditions. See Category 3 Outcome for more details.*

l) Community-based interventions should be comprehensive and multispecialty.

- *As mentioned above, this program is inherently multidisciplinary.*

Unique community need identification number the project addresses:

This project directly meets broad goals identified by the regional needs assessment. First, it improves on existing programs and infrastructure by filling a void that is unmet by existing psychiatric outpatient clinics and psychiatric emergency services. Second, it increases access to specialty care services by providing mobile treatment. The program also offers a preventative, patient-centered approach that provides short-term mental health treatment to those in urgent need. The proposed program will also complement the regional need to develop a culture of “best practices” whereby the patient plays a more active role as a stakeholder by completing patient satisfaction surveys.

Numerous community needs assessments reflect an extreme need for behavioral health services to include outpatient treatment centers, crisis stabilization units, inpatient beds, and much more. The

lack of funding as well as complexity of the regions patient base has limited the amount of behavioral health treatments available to our region and continues to drive cost in emergent and inpatient situations. The Crisis Stabilization Unit has a direct correlation to all behavioral health programs recommended in the RHP plan and will be a focus of two of the largest Local Mental Health Authorities of our region. Both CSU's share the outcome measures of mental health admissions & readmissions, and improvement of patient satisfaction scores. The Region 3 Initiative Grid attached in the addendum reflects the direct relationships of this initiative.

The specific community needs that the proposed program addresses include:

- CN3-Inadequate access to Behavioral Health
- CN6- Inadequate access to treatment and services designed for special needs populations, including disabled, homeless, children and elderly
- CN9- High rates of preventable hospital readmissions

Relationship to other Projects: The proposed project complements several MHMRA DSRIP proposals, including the expansion of the Crisis Residential Unit and expansion of the Chronic Consumer Stabilization Initiative. All three proposals seek to expand psychiatric stabilization while reducing inpatient admissions.

Related Category 3 Measure(s):
OD-6: IT-6.1: Patient Satisfaction: Improve patient satisfaction as measured by CAHPS by 3% over baseline by DY5. We believe patient satisfaction that addresses involvement in shared decision making, access to providers, and communication with providers, will reduce preventable admissions and readmissions to psychiatric emergency services. If patients are dissatisfied with services or the process, they may continue to over-utilize emergency services rather than engaging in preventative care.

OD- 10: Functional Status: Improve functional status by ANSA by 3% over baseline by DY5. Engaging these adolescents in treatment options prior to aging out of the foster care system can reduce factors leading to crisis. Integrating services within the foster care system would provide support and transitional services to reduce trauma, substance abuse, onset of major mental illnesses, and emergence of gender identity issues to adolescents who are expected to experience the greatest difficulty transitioning into healthy adulthood.

Plan for Learning Collaborative: We plan to participate in a region-wide learning collaborative(s) as offered by the Anchor entity for Region 3, Harris Health System. Our participation in this collaborative with other Performing Providers within the region that have similar projects will facilitate sharing of challenges and testing of new ideas and solutions to promote continuous improvement in our Region's healthcare system.

Project Valuation:

In the effort to value the proposed project accurately, assistance was sought from H. Shelton Brown, Ph.D. of the UT Houston School of Public Health and Thomas Bohman, Ph.D. of the UT Austin Center for Social Work Research. Their consultation was limited to only the valuation section of this document. The primary valuation method uses cost-utility analysis (a type of cost-effectiveness research) and additional information is reported on potential, future costs saved. The value of each of the

above delivery systems will be reviewed separately. The total valuation will be the sum of the individual component valuations.

The following valuation is aligned with the demonstration program goals to develop programs that enhance access to health care, increase the quality of care, the cost-effectiveness of care provided and the health of the patients and families served. The primary valuation method uses cost-utility analysis (a type of cost-effectiveness research) and additional information is reported on potential, future costs saved. The value of each of the above delivery systems will be reviewed separately. The total valuation will be the sum of the individual component valuations.

Valuations should be based on economic evaluation principles that identify, measure, and value the relevant costs and consequences of two or more alternatives. Typically, one alternative is a new program while the second is treatment as usual. Cost-utility analysis (CUA) measures the cost of the program in dollars and the health consequences in utility-weighted units. This valuation uses quality-adjusted life-years (QALYs) analysis that combines health quality (utility) with length of time in a particular health state.

Cost-utility analysis is a useful tool for assessing the value of new health service interventions due to the fact that it provides a standard way of valuing multiple types of interventions and programs. The valuation also incorporates costs averted when known (e.g., emergency room visits that are avoided). In order to make the valuations fair across potentially different types of interventions, the common health goal, or outcome, is the number of life-years added.

The benefits of the proposed program are valued based on assigning a monetary value of $50,000 per life-year gained due to the intervention. This threshold has been a standard way of valuing life-years in terms of whether the intervention is cost effective. The number of life-years added is based on a review of the scientific literature.

Cost-Utility Analysis: After an exhaustive review of the literature, no studies were located that contained a QALY for mobile crisis services; therefore the valuation proposed is limited to cost savings studies.

Cost-Effectiveness and Cost Savings: Cost-effectiveness analysis (CEA) is similar to CUA, except that the cost averted is compared to a common health outcome, such as cost per depression-free day. We did identify a benefit-cost study that is related. As previously discussed, Scott (2000) showed that people with mental illness using mobile crisis services avoided hospitalizations in 55%of the cases in Alabama compared those who received police intervention (28%) resulting in a net reduction of 27% in hospitalization. Additionally, MCOT services were 23% less costly per person ($2,295, 2012 US Dollars) compared to those served by the police department ($2,964). These costs include both program costs and hospitalization costs. Similar results were found in a study that compared mobile crisis assessment to emergency room assessment (Hugo, Smout & Bannister 2002). Their study showed that the 298 individuals receiving MCOT were 30% less likely to be admitted to a psychiatric inpatient unit compared to individuals served within an emergency room, regardless of their clinical characteristics.

The average reduction in hospitalization rate between these two studies is 28.5% (27+30/2). It is important to note the average cost of inpatient hospitalization in the Harris County Hospital District is $700 per day, with an average length of stay of 10.25 days (SD=7.23, N=33,680).

100	(People served)
.285	(Reduction in inpatient admissions, or 28.5%)
$700	(Average cost per hospital day)
x 10.25	(Average psychiatric hospital length of stay)

= $204,487.50 Total Valuation

Additional Costs: Hickey, Strang & Cantu (2012) reported that MHMRA of Harris County adult outpatient care reduced the annual percentage of individuals booked into the County Jail by 5% during an average 1.33 year treatment episode when compared to the rate in the year prior to admission to outpatient services. An average length of incarceration for mentally ill offenders in the County Jail is 40.73 days (Nguyen, Hickey & Farenthold, 2005). At a cost of $130/day for individuals receiving mental health care inside the jail, the cost savings can be estimated as (5% reduction x 40.73 days x $130/day x 100 served) $264,949 per 100 served.

Valuation: *This valuation analysis shows that the intervention will have a positive value for participants who receive the intervention(s). All valuations used 100 individuals that would receive all components of the program. Assuming a reduction of 28.5% in hospitalization rates, an average length of stay of 10.25 days, and $700 per day, the total valuation is estimated at nearly $205,000 per 100 individuals served. With the addition of jail avoidance costs ($264,949) the* ***total valuation would be $469,949 per 100 served****. Since the project aims to serve 1370 patients, the total valuation ($469,949 X 1370/100) is $6,4383,013*

REFERENCES

Scott, R. (2000). Evaluation of a mobile crisis program: Effectiveness, efficiency, and consumer satisfaction. *Psychiatric Services, 51*, 1153-1156.

Hugo, M., Smout, M. & Bannister, J. (2002). A comparison in hospitalization rates between a community-based mobile emergency service and a hospital-based emergency service. *Australian & New Zealand Journal of Psychiatry, 36*, 504-508.

Hickey, S., Strang, S., & Cantu, A. (2012). *Psychiatric emergency service use among MHMRA of Harris County consumers.* Presentation to the Board of Directors at MHMRA, Houston, Texas.

#30 - Project Option – 2.7.1 Implement innovative evidence-based strategies to increase appropriate use of technology and testing for targeted populations (patients with tuberculosis disease and infection)

Unique Project ID: 158771901.2.102
Performing Provider Name/TPI: Harris County Public Health and Environmental Services/ 158771901

Project Summary:

Provider:

Harris County Public Health & Environmental Services (HCPHES) is a comprehensive local health department serving the third most populous county in the United States. It spans over 1700 square miles, and its land area is larger than the state of Rhode Island. The HCPHES jurisdiction includes approximately 2 million people within Harris County's unincorporated areas and over 30 small municipalities located in Harris County (not including the city of Houston). For certain public health services such as vector/mosquito control, Ryan White/Title I HIV funding, and refugee health screening, the HCPHES jurisdiction encompasses the entire county including the city of Houston, therefore providing services to over 4 million people in total. Since being chartered in 1942 by Harris County Commissioners Court, HCPHES has provided leadership in a wide range of public health activities and programming including but not limited to communicable disease control; veterinary and environmental public health; and clinical preventive services. These services include strong programming in immunizations, oral health, tuberculosis prevention & treatment, and nutrition/wellness through a variety of efforts including the HCPHES Women, Infants, & Children (WIC) program.

Across this broad organizational framework, HCPHES has engaged in significant departmental strategic planning activities, including the development of the *HCPHES Strategic Plan 2013-2018* which is grounded in the "Essential Public Health Services" model (e.g., assessment, policy development and education, and assurance activities). These categories allow HCPHES to engage within a variety of public health sectors including the services provided through its clinical programs. The mission statement of HCPHES is "*Promoting a Healthy and Safe Community, Preventing Illness and Injury, Protecting You, HCPHES, Your Department for Life*" while its clear vision is "*Healthy People, Healthy Communities…a Healthy Harris County*." The HCPHES staff (over 500) are public health professionals in the truest sense of the word and have a broad range of expertise in various public health program areas. HCPHES staff pride themselves in upholding the organizational values which they helped to craft: *Excellence, Compassion, Flexibility, Integrity, Accountability, Professionalism,* and *Equity*.

With a current annual operating budget of $58 million, HCPHES is organized into four offices that apply specific skills broadly across all public health activities (Health Education and Promotion, Policy and Planning, Public Health Preparedness & Response, and Public Information); four divisions that focus on specific programmatic disciplines (Disease Control & Clinical Prevention, Environmental Public Health, Mosquito Control, and Veterinary Public Health); and a state-of-the-art Operations & Finance Division that manages its business infrastructure (e.g. financial services, information technology, human resources, etc.). HCPHES is highly regarded both nationally and state-wide for its continued leadership in the field of public health and is well-positioned as a model agency for public health services in the local community.

Intervention(s):

The performing provider will improve adherence with treatment in the target population by implementing video-based directly observed therapy (VDOT) for qualified tuberculosis (TB) patients. The project will also offer a shortened therapy regimen to qualified patients being treated for latent TB infection (LTBI) by changing the course of medication prescribed. This project will thereby increase the number of patients who are adequately treated for active TB disease and TB infection and ultimately decrease potentially preventable hospitalizations for tuberculosis as well as costs for treating drug-resistant TB.

Need for the Project:

This project will utilize new evidence-based technology and treatment strategies to increase adherence with treatment for both TB disease and LTBI. This project will ultimately reduce the number of hospital admissions for TB and days of hospital stay by ensuring adequate treatment of both conditions.

Target Population:

The target population will be patients in Harris County (outside the city of Houston), particularly homeless, low income, uninsured, refugee and/or immigrant patients, who are reported to or diagnosed by the HCPHES TB Program as having active TB disease or LTBI, as well as those suspected of having TB or those who are contacts to cases of TB. The minimum number of individuals served by this project is 270 with 90% expected to be Medicaid/low income uninsured individuals.

Category 1 or 2 expected patient benefits:

Provide VDOT to 30 TB and LTBI patients during DY3 and increase by 50% (to 45 patients) in DY4 and 100% (to 60 patients) in DY5. Provide the shortened LTBI treatment regimen to 30 patients in DY3 and increase by 50% (to 45 patients) in DY4 and by 100% (to 60 patients) in DY5.

Quantifiable Patient Impact:

Number of unique individuals receiving services/intervention

Category 3 Outcome Measures:

OD-15- Infectious Disease Management

IT-15.16 Curative Tuberculosis (TB) treatment rate

<u>Project Option –</u> 2.7.1 Implement innovative evidence-based strategies to increase appropriate use of technology and testing for targeted populations (patients with tuberculosis disease and infection)

<u>Unique Project ID:</u> 158771901.2.102
<u>Performing Provider Name/TPI:</u> Harris County Public Health and Environmental Services/ 158771901

<u>Project Description:</u>
Project Name: Enhancing Adherence With and Completion of Tuberculosis Therapy

Tuberculosis (TB) is a significant problem in Harris County, where the rate of TB disease (7.6 cases per 100,000 population in 2011) significantly exceeds the rate in Texas as a whole (5.2 in 2011) and is more than twice that of the U.S. (3.4 in 2011). Furthermore, TB rates are higher among homeless, low income, uninsured, and refugee and immigrant populations, all of which are found in large numbers in Harris County. Treatment for TB disease is lengthy, requiring a minimum of six months of medication. TB disease can be prevented by treatment of latent TB infection (LTBI), but the usual treatment regimen for LTBI lasts nine months. Thus, adherence with and completion of a full course of treatment for TB disease or LTBI is difficult for many patients. The two arms of this project will address adherence issues in different ways but will both enhance adherence with and completion of therapy, which will ultimately lead to decreases in rates of hospitalization and number of days of hospitalization for TB, as well as decreases in health system costs.

In 2012, HCPHES managed 159 patients known or suspected to have active TB disease, providing directly observed therapy (DOT) to 95% of them. Over 65% were members of racial or ethnic minorities and a significant majority were uninsured, medically indigent or on Medicaid. On average, HCPHES TB staff provided services, including provision of DOT and directly observed preventive therapy (DOPT), to 175 patients weekly. In addition, HCPHES evaluated 621 persons who were contacts to known or suspected cases as well as over 200 legal immigrants referred to HCPHES for evaluation of abnormal chest x-ray on overseas pre-immigration examination. While approximately 90% of those found to have LTBI begin treatment, only about 70% of those who begin treatment for LTBI actually complete it.

The standard of care for treatment of TB is directly observed therapy (DOT), which means that a healthcare worker meets the patient at a mutually agreed upon location and time in the community and watches the patient actually physically swallow the prescribed medication. Determining a reasonable location and time for DOT can be an issue when the patient is homeless or when the patient's work or commute schedule does not correlate with reasonable work hours for health department staff. Also, some medications need to be taken in a certain relationship to meals, which again may not correlate with health department schedules. **Video-based DOT (VDOT)** is a novel approach to addressing these crucial clinical care issues and will allow the patient the flexibility to choose the time to take his/her medication but also provide confirmation of adherence for health department records.

The usual treatment regimen for LTBI consists of a single medication, isoniazid (INH), taken daily for nine months. Most patients self-administer the medication although directly observed preventive therapy (DOPT) is used for high-risk patients. However, in December of 2011 the Centers for Disease Control & Prevention (CDC) issued recommendations for use of a new regimen of two

medications, INH and rifapentine (RPT), taken once weekly via DOT for twelve weeks. Studies of this **"3HP" regimen** demonstrated safety and efficacy along with the tremendous benefit – for both patient and health department – of a shortened course of treatment. Adherence with and completion of this treatment regimen is significantly improved compared to the usual INH-only regimen.

The **video-based DOT (VDOT)** arm will be conducted in partnership with the Division of Global Public Health at the University of California at San Diego. Patients will be given specially adapted cell phones and will record themselves taking each dose of medication. The video will upload automatically through a secure server and will then be downloaded and viewed at the performing provider's office by an outreach worker, who can confirm the dose was taken. This process will enhance adherence by allowing the patient to take the medication at a time and in a location convenient to him/her, based on mealtime, commute schedule and work schedule. This will make it easier for the patient to complete treatment on time, with fewer missed doses, and prevent the development of drug resistance as well as hospitalization for relapse due to inadequate treatment. Additionally, this system will save the performing provider the cost of staff time and mileage required to travel across the Harris County area to meet the patient and will reduce the need for the outreach worker to work outside of normal hours, since the video can be downloaded for viewing at any time after being transmitted. Cutting down travel time is significant in a community such as Harris County which is spread over 1700 square miles (or the equivalent of the size of the state of Rhode Island). A nurse case manager will also work with the patient to ensure that routine monthly evaluations are conducted and that any problems are reported promptly to the managing provider.

The **3HP** arm will be conducted according to Centers for Disease Control & Prevention (CDC) recommendations. This new regimen is recommended for otherwise healthy patients aged $\geq$ 12 years who have LTBI and factors that are predictive of TB developing (e.g., recent exposure to contagious TB). This will include those patients infected with HIV who are not receiving antiretroviral therapy. In addition, immigrants from countries where TB is common who are found to have LTBI will be treated with the 3HP regimen. Because of the lengthy treatment period (nine months) required for the standard regimen of daily doses of INH, many patients with LTBI fail to complete treatment. Studies have shown that approximately 10% of persons with LTBI will ultimately develop active TB disease. Shortening the course of treatment for LTBI will enable more patients to complete treatment, thus reducing the number of persons who develop active TB disease and therefore the need for hospitalization for TB and the risk that they will spread TB in the Harris County community. Additionally, patients with LTBI who are at high risk for developing active TB disease are usually treated via DOPT. Shortening the treatment regimen will result in significant savings to health system costs related to delivery of DOPT.

Target Zip Codes:

This project targets all zip codes in Harris County, Texas, outside of the City of Houston.

Goals and Relationship to Regional Goals:

The overarching goal of this project is to cure more patients who have active TB as well as to prevent cases of active TB by ensuring completion of treatment for LTBI.

Project Goals:

- Enhance adherence with treatment for TB disease
- Increase numbers and rates of patients who complete treatment for active TB disease
- Reduce hospitalization for TB due to relapse related to inadequate or incomplete treatment
- Reduce development of drug resistance due to non-adherence with treatment for TB

- Reduce new cases of TB by ensuring that cases receive adequate treatment that renders them non-infectious as quickly as possible
- Enhance adherence with treatment for LTBI
- Increase numbers and rates of patients who complete treatment for LTBI
- Reduce development of new cases of TB due to inadequate treatment of LTBI

This project meets the following regional goals:

While the Region has many specific objectives and improvement targets based on stakeholder input and community needs assessments, the over-arching goals that have guided many of our decisions include the following:

- Develop a regional approach to health care delivery that leverages and improves on existing programs and infrastructure, is responsive to patient needs throughout the entire region, and improves health care outcomes and patient satisfaction.
- Increase access to primary and specialty care services, with a focus on underserved populations, to ensure patients receive the most appropriate care for their condition, regardless of where they live or their ability to pay.
- Transform health care delivery from a disease-focused model of episodic care to a patient-centered, coordinated delivery model that improves patient satisfaction and health outcomes, reduces unnecessary or duplicative services, and builds on the accomplishments of our existing health care system.
- Develop a culture of ongoing transformation and innovation that maximizes the use of technology and best-practices, facilitates regional collaboration and sharing, and engages patients, providers, and other stakeholders in the planning, implementation, and evaluation processes.

Challenges:

The performing provider expects to address multiple challenges by implementing this project. The large geographic area covered by the HCPHES jurisdiction (over 1700 square miles or the equivalent size of the state of Rhode Island) means that providing face-to-face DOT or DOPT multiple times each week for six to nine months (or longer when TB treatment is complicated by drug resistance or comorbidities) is very costly in terms of staff time and mileage expense. Furthermore, patients frequently become non-adherent with treatment due to conflicts between their work schedule and DOT schedule or because they need to take medication in relationship to meals and can't correlate that with the DOT schedule. Those issues, as well as issues related to substance abuse, homelessness, and other problems, often result in missed doses, need for the outreach worker to make multiple attempts to deliver a scheduled dose, and extended duration of treatment. VDOT and 3HP will address these challenges by removing the need for the outreach worker to meet the patient in person several times a week. By shortening the duration of treatment for LTBI, the 3HP regimen will improve completion rates and reduce the number of persons infected with TB who eventually develop active disease.

3-Year Expected Outcome for Provider and Patients:

The performing provider expects overall outcomes to include improved health for the patients served, as a result of improved adherence with treatment for TB and LTBI and increased completion rates for adequate treatment of both conditions. In addition, the performing provider expects decreased incidence rates of TB disease and of drug-resistant TB in Harris County as well as cost savings to the

healthcare system as a whole resulting from shortened treatment course and reduced need to travel long distances to provide care.

Starting Point/Baseline:
As this project will be an innovative process for HCPHES staff, there will be a zero baseline for the proposed outcomes. Each DY will see marked increases in staff experience and capacity to plan and implement mobile events. Saturation of events will be offset by the large geographical area that is likely to be served by the project. The project will be evaluated on the outcomes discussed previously.

Quantifiable Patient Impact:
DY3 QPI: Number of unique individuals receiving services/ intervention.
Goal: 60

DY4 QPI: Number of unique individuals receiving services/ intervention.
Goal: 90

DY5 QPI: Number of unique individuals receiving services/ intervention.
Goal: 120

Rationale:
Implementing VDOT for treatment of TB and LTBI and the 3HP regimen for treatment of LTBI will mean more patients complete adequate treatment for their condition and will therefore reduce the rates of TB in the Harris County community. Furthermore, this project will reduce healthcare costs by reducing staff costs and travel expenses related to providing face-to-face DOT/DOPT several times a week for six to nine months (or longer).

Project Core Components:
HCPHES will utilize a stage gate approach in applying project management best practices in implementing the TB technology & testing project specifically utilizing a phased release process over the lifecycle of the program. In each stage gate we will focus on continuous stakeholder feedback from various data collection points including iterative reviews of lessons learned captured from project deliverables in remediating any future challenges and/or risks. In addition, given the majority of the population we serve are Medicaid/low income uninsured individuals, our program will be tailored to overcome the unique challenges/barriers that may exist such as transportation, communication, availability, and location.

Additional core components of the project include:
- Development of relationships with community entities, new and old, to plan and implement TB services
- Deliver TB health screenings and education services
- Utilize community health workers to follow-up with participants of screening services to ensure appropriate referral to next levels of care
- Guide project participants to other HCPHES DSRIP projects and clinical services, where appropriate

Unique community need identification numbers the project addresses:

CN.6 Inadequate access to treatment and services designed for special needs populations, including disabled, homeless, children, elderly
CN.10 High rates of preventable hospital admissions
CN.19 Lack of immunization compliance, resulting in rising incidence of preventable illnesses such as mumps, measles, pertussis and tuberculosis
CN.20 Lack of access to programs providing health promotion education, training and support, including screenings, nutrition counseling, patient education programs
CN.21 Inadequate transportation options for individuals in rural areas and for indigent/low income populations

How the project represents a new initiative or significantly enhances an existing delivery system reform initiative:

This project combines two new initiatives: VDOT and the shortened 3HP regimen for LTBI treatment.

Category 3 Outcome Measures:

OD-15- Infectious Disease Management
IT-15.16 Curative Tuberculosis (TB) treatment rate

Rationale for Category 3 Measures:

The TB Technology & Testing project is focused on a metric based delivery system and alignment to the OD-15 domain (Infectious Disease Management) in which the associated category 3 improvement targets selected provides significant data points to demonstrate overall progress, area population impact, effectiveness and continuous service improvement to bridge the gaps in the underserved region/population. In addition, the curative tuberculosis treatment rate provides a component of surveillance, follow-up, and treatment to improve/protect individual and regional health.

Relationship to Other Projects:

This project is related to the "Tuberculosis Rapid Identification, Treatment and Recovery Project" proposed by the city of Houston Department of Health & Human Services (project ID 0937740-08.2.4) in that both projects will implement the 3HP regimen for treatment of LTBI. These two projects complement each other in that HCPHES will provide this treatment to patients living in Harris County outside of the city of Houston, thereby enhancing Region 3 capacity to provide this treatment to medically indigent, uninsured and Medicaid populations.

Plan for Learning Collaborative:

We plan to participate in a region-wide learning collaborative(s) as offered by the Anchor entity for Region 3, Harris Health System. Our participation in this collaborative with other Performing Providers within the region that have similar projects will facilitate sharing of challenges and testing of new ideas and solutions to promote continuous improvement in our Region's healthcare system.

Project Valuation:

HCPHES reviewed relevant data summaries from a variety of sources, such as demographic and public opinion data from the Rice University Kinder Institute's Houston Area Survey, and health related data specific to Harris County from the University of Texas School of Public Health's Houston Health Survey and the Texas Department of State Health Services, Center for Health Statistics. Additionally, HCPHES considered public health mandates and community need; the data, anecdotal information and

the level of service provided by region 3 participating providers to address public health issues locally were considered to determine value. Valuation is based on cost avoidance and projecting health care expenditure savings by 1) reducing hospitalizations for TB by decreasing both the incidence of TB as well as relapses due to inadequate treatment of TB, 2) reducing the development of and therefore the costs of treating drug-resistant TB, and 3) saving staff time and travel costs incurred by providing DOT/DOPT in the target population.

References:

1. CDC - Morbidity and Mortality Weekly Report. *Recommendations for Use of an Isoniazid-Rifapentine Regimen with Direct Observation to Treat Latent Mycobacterium tuberculosis Infection.* December 9, 2011/Vol.60/No. 48: 1650

2. Garfein R, Collins K, Munoz F, Moser K, Cerecer-Callu P, Sullivan M, Chockalingam G, Rios P, Zuniga ML, Burgos JL, Rodwell T, Rangel MG, Patrick K. “High Tuberculosis Treatment Adherence Obtained Using Mobile Phones for Video Directly Observed Therapy: Results of a Binational Pilot Study” *Journal of Mobile Technology in Medicine*. 2012 Dec; 1(4S):30.

3. Stakeholder input from RHP 3Working Group Members throughout the Region (including providers, consumers, hospital and clinic administrators, government officials, researchers, and advocacy groups)

4. The State of Health – Houston and Harris County, 2012.

5. Healthcare Cost and Utilization Project (2008). Tuberculosis stays in US Hospitals, 2006. Statistical Brief #60

#33 - Project Option: 2.13 Provide an intervention for a targeted behavioral health population to prevent unnecessary use of services in a specific setting: Expansion of Residential Detoxification Services for Women with co-occurring disorders

RHP Project Number: 113180703.2.105

Performing Provider/TPI: MHMRA Harris County/113180703

The Mental Health and Mental Retardation Authority (MHMRA) of Harris County proposes to contract the Santa Maria Hostel to provide an intervention for a targeted behavioral health population to prevent unnecessary use of services in a specific setting: detoxification treatment for women with co-occurring mental health and substance abuse issues.

Provider: The Mental Health and Mental Retardation Authority (MHMRA) of Harris County is the safety net provider for adults with serious mental illnesses, for children and adolescents with serious emotional disorders, for the developmentally delayed and for individuals experiencing acute psychiatric distress. MHMRA provides inpatient, residential and outpatient treatments, including psycho-therapy, case management, and medication management for more than 49,000 Harris County residents out of a culturally and ethnically diverse population of over 4.1 million. Of those individuals who received any agency service in FY12, 36.5% were medically indigent and 51.9% had Medicaid. Of those who received mental health services in FY12, such as those being proposed in this project, 55% were medically indigent and 34.9% had Medicaid.

Intervention(s): The proposed project will increase local treatment capacity by adding 8 new residential detoxification beds, with 4 of those beds available to women accompanied by their children. Average length of stay will range from 5-14 days depending on type of substance used and duration of use, severity of co-occurring mental health issues, and pregnancy/health status.

Need for the project: Santa Maria is the primary source of treatment for lower income women and mothers in Harris and 12 surrounding counties in Texas Public Health Region 6, providing an average of 65% of substance abuse and co-occurring mental health services for pregnant/parenting women. Santa Maria provides trauma-informed and gender-responsive services designed to meet the unique needs of women. Through the proposed project, Santa Maria will provide comprehensive residential detoxification services 24 hours/day, 7 days/week through an interdisciplinary clinical staff to assist clients in the alleviation of signs and symptoms of their substance withdrawal.

Target population: Pregnant/parenting women with substance abuse and co-occurring mental health.

Category 1 or 2 expected patient benefits: Reduction in substance abuse

Description of QPI metrics: 150 women

Category 3 measures: IT-6.1: Patient Satisfaction: Improve patient satisfaction as measured by CAHPS by 3% over baseline by DY5.

Project Option: 2.13 Provide an intervention for a targeted behavioral health population to prevent unnecessary use of services in a specific setting: Expansion of Residential Detoxification Services for Women with co-occurring disorders

Unique RHP Project Identification Number: 113180703.2.105
Performing Provider Name/TPI: Mental Health and Mental Retardation Authority of Harris County/113180703

Project Description:

The Mental Health and Mental Retardation Authority (MHMRA) of Harris County proposes to contract the Santa Maria Hostel to provide an intervention for a targeted behavioral health population to prevent unnecessary use of services in a specific setting: detoxification treatment for women with co-occurring mental health and substance abuse issues.

The Mental Health and Mental Retardation Authority (MHMRA) of Harris County is a public agency serving as the safety net provider for adults with serious mental illnesses, for children and adolescents with serious emotional disorders, for the developmentally delayed and for individuals experiencing acute psychiatric distress. MHMRA serves more than 49,000 Harris County residents out of a culturally and ethnically diverse population of over 4.1 million. Of those who received mental health services in FY12, such as those being proposed in this project, 55% were medically indigent and 34.9% had Medicaid. MHMRA will contract the Santa Maria Hostel to provide SA Detoxification services to women.

Santa Maria is the primary source of treatment for women and women with children in Harris and 12 surrounding counties in Texas Public Health Region 6, providing an average of 65% of substance abuse and co-occurring mental health services for pregnant/parenting women. Santa Maria is licensed by the state of Texas for 144 residential beds and 220 outpatient treatment slots. However, need for treatment greatly outstrips funded capacity. Currently, 100% of the patients served by Santa Maria are Medicaid eligible or medically indigent.

The proposed project will increase local treatment capacity through provision of 8 new residential detoxification beds, with 4 of those beds available to women accompanied by their children. Detoxification services are proposed to be provided through Santa Maria Hostel, Inc. Santa Maria is the primary source of treatment for women and women with children in Harris and 12 surrounding counties in Texas Public Health Region 6. Santa Maria has a licensed physician serving as medical director responsible for admission, diagnosis, medication management, and client care. A feature of the proposed project is that women with children may keep their children with them at the facility. Currently, no provider offers this option in the Houston area. All detoxification clients receive an individual session daily with clinical staff to promote treatment engagement and motivation for change, As the detoxification unit is co-located with residential and outpatient treatment services, care coordination is enhanced.

Goals and Relationship to Regional Goals:

The five year goal is to expand residential treatment program for women, and their children. The program seeks to serve about 150 clients per year, beginning in DY3, by providing psychiatric and substance abuse treatment, housing, child-care, psychosocial training and support. The milestones we selected are to reduce unnecessary inpatient hospitalizations, reduce criminal recidivism, and provide transitional housing and community mental health treatment.

Challenges: One of the biggest challenges is to find additional staff.

Starting Point/Baseline: Currently, Santa Maria does not have a detoxification unit.

Quantifiable Patient Impact: 150 women will receive the intervention through the expansion of Residential Detoxification Services for Women with co-occurring disorders.

Rationale: The Texas Department of State Health Services (TDSHS) reports 10,444 admissions in Region 6 (which includes Harris and 12 surrounding counties) in 2009. Need for substance abuse treatment in Region 6 has been on the rise, with admissions reported as representing 19.99% of total admissions in Texas as compared to 12.8% in 1998, an increase of 56%. In regards to substance use by women, this need has grown exponentially, with 52% of the persons receiving treatment in the Houston area in 2009 reported as female, up from 40% in 2002 and representing a nearly 100% increase from the 26.5% female admissions reported in 1998 (TCADA, 1999; TDSHS 2009a). In Region 6, 77% of treatment admissions also resulted in admission to state-funded co-occurring psychiatric and substance use disorders programs (TDSHS, 2009b).

Substance use by women continues to increase, especially in childbearing years (Dakof et al., 2003). The *2000 Texas Survey of Substance Use Among Adults* estimates indicate 19,600 pregnant women annually abuse substances and 354,000 women who abuse substances have children under 18. *Substance Abuse Trends in Texas: June 2010* reports 1,764 women were pregnant at admission to DSHS-funded treatment programs. And, the Fetal Alcohol Spectrum Disorders Center for Excellence (FASD Center) reports of women 15 to 44, 1 in 2 report alcohol use in the past month, 1 in 4 report binge drinking and 1 in 20 report heavy alcohol use. Further, 1 in 30 pregnant women reported high-risk drinking at levels shown to increase the risk of FASD, with 1 in 5 reporting alcohol use in the 1st trimester, 1 in 14 in the 2nd and 1 in 20 in the 3rd trimester.

Women abusing substances are at higher risk of homelessness, unemployment, domestic violence, solo parenting and poverty. Mental health disorders, psychological distress, high rates of history of trauma and interpersonal violence, medical problems, few vocational skills, low income, and substantial addiction severity are among the multifaceted problems of women presenting for substance abuse treatment (Lincoln et al., 2006). Mothers involved with the child welfare system may have special barriers to treatment. Major needs of these mothers identified in the research are issues such as an inability to find adequate child care and a lack of transportation, especially in relation to outpatient treatment (Ryan et al., 2006). For these families, additional problems may include mental health issues, domestic violence, housing, and other poverty-related issues (Green et al., 2006). This complexity signals that interventions need to be multifaceted because responding to substance abuse issues alone is not enough.

Total economic costs of alcohol and drug abuse in Texas were estimated at $25.9 billion for 2000 and it costs an estimated $405 million annually to care for infants, children or surviving adults with fetal alcohol syndrome or perinatal drug exposure (Liu, 2002). Yet, within Region 6 and Houston, the 4th largest city in the United States and the intended area for this proposal, very few treatment facilities or resources exist that are exclusively oriented to the unique recovery needs of women and women with children. The region has seen a 17% decrease in licensed residential treatment beds which are reported at 2,157 for 2009, as compared to the 2,684 beds reported in October 1999 by the former Texas Commission on Alcohol and Drug Abuse, along with a decrease in the total number of outpatient treatment slots (TDSHS, 2009). In this entire region, there are only three publicly-funded providers of residential treatment for women and women with children, of which Santa Maria Hostel, Inc. is one.

Related Category 3 Outcome Measure(s):
IT 6.1 Percent improvement over baseline of patient satisfaction scores for one domain of patient satisfaction.

IT-9.4 Other Outcome Improvement Target: Percent decrease in psychiatric symptoms that provoke behavioral crises.
OD-6: IT-6.1: Patient Satisfaction: Improve patient satisfaction as measured by CAHPS by 3% over baseline by DY5. We believe patient satisfaction that addresses involvement in shared decision making, access to providers, and communication with providers, will reduce preventable admissions and readmissions to psychiatric emergency services. If patients are dissatisfied with services or the process, they may continue to over-utilize emergency services rather than engaging in preventative care.
OD-9. IT 9.1Right Care Right Setting was selected as providing the right type of treatment in the setting that provides the specialized treatment will reduce preventable admissions and readmissions to psychiatric emergency services.

Project Components: In order to develop the program described above, the following option and core components were chosen: 2.13.1, Design, implement and evaluate research-supported and evidence-based interventions tailored towards individuals in the target population. These components have also been imbedded in the program process and improvement milestones (See milestone and metric chart for further details).

A. MHMRA will assess size, characteristics and needs of the women with substance abuse issues through collaborations with local agencies.
In progress. Santa Maria Hostel and MHMRA are compiling a list of potential clients who would benefit from the program, including collaborating with DHS and local coalitions such as Houston Recovery Oriented Systems of Care and Houston-Harris County Office of Drug Policy to gather relevant data.. Demographic data, CPS/court involvement, criminal justice involvement, and health/mental health indicator data is also gathered to better understand the needs of the population.
B. MHMRA will review literature / experience with populations similar to target population to determine community-based interventions that are effective in averting negative outcomes such as repeated or extended inpatient psychiatric hospitalization, forensic encounters, or incarceration, while improving quality of life.
Ongoing. Santa Maria Hostel and MHMRA are reviewing relevant literature/research related to the population and effective treatment. SMH will continue to look to expert authorities and national resources, such as SAMHSA, as well as continue to work within ongoing partnerships/collaborations such as Texas Office of Prevention of Developmental Disabilities regarding FASD, Association of Substance Abuse Professionals, and NAADAC.
C. Develop project evaluation plan using qualitative and quantitative metrics to determine outcomes.
To be completed. MHMRA will develop a program evaluation that includes qualitative and quantitative metrics (e.g., pre/post assessment of program participants, use of psychiatric emergency services, successful program completions, patient satisfaction surveys, etc.)
D. Design models which include an appropriate range of community-based services and residential supports.
Ongoing. Santa Maria Hostel currently offers a broad range of community-based and residential supports for clients, including access to an onsite health clinic, parenting and life skills classes, GED instruction, transportation assistance, and transitional housing. SMH and MHMRA will continue to evaluate and assess the effectiveness of services offered and determine and address gaps in service or improvements needed.
E. Assess the impact of interventions based on standardized quantitative measures and qualitative analysis relevant to the target population.

a. To be completed. MHMRA will work with the outcomes department to identify pre/post measures and patient satisfaction surveys that are empirically validated for individuals who are diagnosed with co-morbid conditions. See Category 3 Outcome for more details.

Unique community need identification number the project addresses: This project directly meets broad goals identified by the regional needs assessment. First, it improves on existing programs and infrastructure by filling a void that is unmet by existing psychiatric and substance abuse residential programs. Second, it increases access to specialty care services by providing these services to a disenfranchised population. The program is expected to reduce the relapse rates of individuals who complete it and is also expected to improve the general functional well-being of its residents (ANSA scores) so that they are better able to cope with the stressors of life and care for their children. The proposed program will address the following community needs:

- CN2-Insuffcient Access to Behavioral HealthCN3-Inadequate access to Behavioral Health
- CN6- Inadequate access to treatment and services designed for special needs populations, including disabled, homeless, children and elderly
- CN 7- Insufficient access to care coordination practice management and integrated care treatment programs
- CN9- High rates of preventable hospital readmissions
- CN.14- High rates of poor birth outcomes and low birth-weight babies
- CN.15 Insufficient access to services for pregnant women, particularly low income women
- CN18- Insufficient access to integrated care programs for behavioral health and physical health conditions

Relationship to other Projects: The proposed project complements several MHMRA DSRIP proposals, including integration of substance abuse and mental health treatment 113180703.2.2, expansion of the Crisis Residential Unit 113180703.1.11. These related projects seek to expand substance abuse treatment and address housing difficulties. The behavioral health crisis in Region 3 is considerable and the proposed initiatives in our RHP plan will only imply a small impression into the overall community need for treatment, but is a good start. The outpatient focus of many RHP Plan initiatives will help numerous facilities focus on treating the patients in an ambulatory setting with a focus to keeping patients from inpatient units.

Plan for Learning Collaborative: We plan to participate in a region-wide learning collaborative(s) as offered by the Anchor entity for Region 3, Harris Health System. Our participation in this collaborative with other providers that have similar projects will facilitate sharing of challenges and testing of new ideas to improve our region's healthcare system.

Project Valuation: To value the proposed project accurately, assistance was sought from H. Shelton Brown, Ph.D. of the UT Houston School of Public Health and Thomas Bohman, Ph.D. of the UT Austin Center for Social Work Research. Their consultation was limited to the valuation section. Valuations should be based on economic evaluation principles that identify, measure, and value the relevant costs and consequences of two or more alternatives. One alternative is a new program while the second is

treatment as usual. Cost-utility analysis (CUA) measures the cost of the program in dollars and the health consequences in utility-weighted units. This valuation uses quality-adjusted life-years (QALYs) analysis that combines health quality (utility) with length of time in a health state. Cost-utility analysis is a useful tool for assessing the value of new health service interventions because it provides a standard way of valuing multiple interventions. The valuation also incorporates costs averted (e.g., emergency room visits that are avoided). To make the valuations fair across different types of interventions, the outcome is the number of life-years added. The benefits of the proposed program are valued based on assigning a monetary value of $50,000 per life-year gained due to the intervention. This threshold has been a standard way of valuing life-years in terms of whether the cost of the intervention exceeds this standard. The number of life-years added is based on a review of the scientific literature.

Cost-Utility Analysis: Although no direct studies of this type were found, a study related to housing for persons living with HIV seemed relevant due to the disenfranchised population, need for treatment and the potential costs in the absence of pre-natal care for pregnant women. A cost-utility analysis by Holtgrave and colleagues (2012) was based on data from the Housing and Health (H&H) study of rental assistance for homeless and unstably housed persons living with HIV in Baltimore, Chicago, and Los Angeles. They combined these outcome data with information on intervention costs to estimate the cost-per-QALY gained. They estimated that the cost-per-QALY-saved by the HIV-related housing services is $62,493. They also found that 0.0324 QALYs were gained due to improvements in perceived stress and thereby, quality of life.
For this valuation we focus on housing assistance. Assuming our 100 participants who each participate in crisis residential program, the total value gained from this component would be:

100	(persons served)
0.0324	(QALY gained)
× $50,000	(life year value)
= $162,000	**QALY Value**

Cost-effectiveness and Cost Savings: Cost-effectiveness analysis (CEA) is similar to CUA, except that the cost averted is compared to a common health outcome, such as cost per depression-free day. We identified several related cost-benefit studies, which are as follows:

Dual Disorder (Substance Abuse and Residential) Treatment: French, Salomé & Carney, et al. (2002b) estimated the costs and benefits of residential addiction treatment at five programs in the State of Washington that serve publicly funded clients. They reported an average (per client) total economic benefit was $58,868 (2012 US Dollars) over one year, leading to estimates of $45,314 for average net benefit and 4.34 for the benefit–cost ratio.

The benefits and costs associated with mutual-help community-based recovery homes were reported by Lo Sasso, Byro, Jason, Ferrari and Olson (2012). They noted that the intervention compared quite favorably to usual care: the net benefit was estimated to be between $9,450 and $15,370 (2012 US Dollars) per person per year on average, depending on the method employed. In a study with a more comparable target sample, French and colleagues examined the effectiveness of a therapeutic community for homeless mentally ill chemically dependent consumers (French, McCollister, Sacks, McKendrick & De Leon, 2002a). Among this homeless, mentally ill sample the incremental economic benefit estimate was $163,708 (2012 US Dollars), net benefit was $132,148, and the benefit–cost ratio was 5.2. Community residential treatment for those with dual (mental health and substance abuse) disorders has been observed to reduce subsequent heath care costs by half, a value or $13,288 per treated individual when compared to hospital care (Timko, Shuo, Sempel & Barnett, 2006). An average across the four relevant studies yields an estimated annual savings per treated person of **$33,341**.

100	(persons served)
$33,341	(cost-savings)
= $3,334,100	**Total Cost-savings**

Additional Cost Savings: In addition to the QALY value and cost-savings identified above, we also identify additional cost savings associated with children of women with substance abuse disorders. These cost savings fall under two broad categories: neonatal care and fetal alcohol syndrome (FAS). First, research has shown that substance abuse treatment for pregnant women is associated with improved neonatal outcomes. In a review of treatment programs for pregnant women, Ruger and Lazar (2012) identified several studies showing that women in treatment reduced drug use, and that their infants had better clinical outcomes and needed fewer medical services. These studies found average net savings of $4,644, $2,500, and $5,000 per mother-infant pair, for an average net savings of about $4,000.

Second, maternal substance abuse is associated with increased risk for FAS. If only 1 child is prevented from having FAS complications, there would be an additional $2 million in savings in 2002 dollars (see http://fasdcenter.samhsa.gov/publications/cost.aspx) over the life of the child. This amount consists of $1.6 million for medical treatment, special education, and residential care for individuals with intellectual disabilities, and $0.4 million for productivity losses. The total savings of $2.0 million per FAS is about $2.6 million in 2013 dollars.

Since the Santa Maria Hostel accepts pregnant women into its treatment programs, we expect that these two types of cost-savings are highly relevant to the valuation of this proposal. Out of 100 persons served, we assume that 10 will be pregnant, which yields the following estimated annual cost-savings per mother-infant pair:

10	(mother-infant pairs served)
$4,000	(cost-savings)
= $40,000	**Total Cost-savings**

Summary and Total Valuation: This valuation analysis shows that the intervention will have a positive value for participants who receive the intervention(s). The total expected value of quality benefits would be $**162,000 and the cost-savings would be at least $3,334,100 + $40,000+ $2,600,000. The total valuation for this project is estimated at $5,974,100 per 100 patients served.**

REFERENCES

Fenton, W., Hoch, J., Herrell, J. & Mosher, D. (2002). Cost and cost-effectiveness of hospital versus residential crisis care for patients who have serious mental illness. *Archives of General Psychiatry, 59,* 357-364.

French, M., McCollister, K., Sacks, S., McKendrick, K. & De Leon, G. (2002a). Benefit—cost analysis of a modified therapeutic community for mentally ill chemical abusers. *Evaluation and Program Planning*, *25,* 137-148.

French, M., Salomé, H. & Carney, M. (2002b). Using the DATCAP and ASI to estimate the costs and benefits of residential addiction treatment in the State of Washington. *Social Science & Medicine*, *55*, 2267-2282.

Holtgrave D., Wolitski, R., Pals, S., Aidala, A., Kidder, D., Vos, D., Royal, S., Iruka, N.,

Briddell,K.,Stall, R. & Bendixen, A. (2012). A cost-utility analysis of the housing and health intervention for homeless and unstably housed persons living with HIV. *Aids and Behavior, 1-6.*

Lo Sasso, A., Byro, E., Jason, L., Ferrari, J. & Olson, B. (2012). Benefits and costs associated With mutual-help community-based recovery homes: The Oxford House model. *Evaluation & Program Planning*, *35*, 47-53.

Sledge, W., Tebes, J., Wolff, N. & Helminiak, T. (1996). Day hospital/crisis respite care versus inpatient care, part II: Service utilization and costs. *The American Journal of Psychiatry, 153*, 1074-1083.

Timko, C., Shuo, C., Sempel, J. & Barnett, P. (2006). Dual diagnosis patients in community or hospital care: One-year outcomes and health care utilization and costs. *Journal of Mental Health, 15,* 163 – 177.

Project Option 2.1.2 - Collaborate with an affiliated Patient-Centered Medical Home to integrate care management and coordination for shared, high-risk patients: Medical Home for Post-Detention Teens and At-Risk Youth

Unique RHP Project Identification Number: 111810101.2.101
Performing Provider Name/TPI: UTHealth, UTPhysicians / 111810101

Project Summary:
Provider: UT Physicians is the clinical practice of The University of Texas Medical School at Houston. With more than 900 physicians certified in 80 medical specialties and subspecialties, 906 residents and fellows, and 283,920 patient visits in 2011, it is the fastest growing academic practice in the nation for the last five years. In addition to our flagship location in the Texas Medical Center, UT Physicians has 4 neighborhood locations throughout the Greater Houston area, and also offers specialty clinics at several Memorial Hermann Hospital locations.

Intervention(s): The UT medical homes for post-detention adolescents and at-risk youth will provide all medical and psycho-social services for this population. Our innovative program involves facilitating access to the medical home by assisting youths and their guardians in arranging clinic visits, transportation, overcoming language barriers, and other challenges that may interfere with clinic visits.

Need for the project: In our region there is inadequate access to primary care, insufficient access to care coordination practice management and integrated care treatment programs, and lack of access to programs providing health promotion education, training and support. Medical Home models provide accessible, continuous, coordinated and comprehensive patient-centered care that is managed centrally by a primary care physician with the active involvement of non-physician practice staff.

Target Population: This intervention will target the current Medicaid (estimated 60% as of 2011, or 1,980 patient visits) and low-income client base of Harris County Juvenile Justice Center (HCJJC) and will be available to another estimated 4,000 patient visits (due to continued recruitment and new youth seen over 5 years at HCJJC), most of which are expected to be Medicaid clients. This project will benefit all high risk youth Medicaid and low-income clients.

Category 1 or 2 expected patient benefits:
We expect to successfully enroll and provide coordinated care to 350 patients in DY4 and improve that number to 400 in DY5. Patients with high-risk behaviour and chronic diseases typically see their provider more frequently, such as in the juvenile justice center. Patients see the physican an average of 2 times per year,[2] which means that in DY4, we will have completed approximately 700 patient visits and by DY5, we will have completed approximately 800 visits for a total of 1,500 patient visits for the two years.

Category 3 outcomes:
Our goals are to improve screening rates for post-detention adolescents and the at-risk youth population pertaining to: chlamydia screening and follow-up in adolescents, syphilis screening and gonorrhea screening rates.

Project Option 2.1.2 - Collaborate with an affiliated Patient-Centered Medical Home to integrate care management and coordination for shared, high-risk patients: Medical Home for Post-Detention Teens and At-Risk Youth

Unique RHP Project Identification Number: 111810101.2.101
Performing Provider Name/TPI: UTHealth, UTPhysicians / 111810101

Project Description:
Youth in the juvenile justice center are a high-risk population with complex and varied health needs. In addition to common adolescent medical problems, national data shows that this population has higher rates of substance abuse, mental illness, suicidal ideation, trauma, sexually transmitted infections (STIs) and pregnancy compared to general high school students[1].

In 2011, Harris County Juvenile Justice Center (HCJJC) admitted 4300 youths, ages 10-17 years old[2]. HCJJC clinic completed 4,606 intake physical examinations and provided treatment to 8,857 youth[2]. Of these youth, 47.9% were African American, 37.8% were Hispanic and 13.8% were Caucasian[2]. The adolescent medicine physicians at the University of Texas Health Science Center at Houston, have provided medical services to the HCJJC for the past 17 years. As pediatricians in the HCJJC, we are often the only health care providers the adolescents see during their youth. Only one third of youth in the juvenile justice system report a regular source of medical care[3]. The other two thirds of youth (approximately 3300 annually in Harris County) lack a medical home. Juvenile justice health care policy statements stress the need for medical homes[4]. Literature reviews and communications with the American Academy of Pediatrics and Society of Adolescent Medicine, confirm that no current program exists for transitioning care for detainees to medical homes. We propose to improve access to health services and establish a medical home for this underserved, uninsured, and Medicaid eligible population.

Our innovative program involves facilitating access to the medical home by assisting youths and their guardians in arranging clinic visits, transportation, overcoming language barriers, and other challenges that may interfere with clinic visits. Establishing this program will meet this population's physical and psycho-social needs. It will also be a transition program for the older youths until they secure a medical home as adults. Prior studies of the health status of youth in the juvenile justice center highlight the need for establishing a medical home prior to their release[5]. The medical home model has been successful in reducing health care costs and improving health outcomes in caring for children with chronic health care needs[6]. We believe adapting the medical home model to high risk youth will also improve health care and reduce costs for this underserved group. This project will be run by adolescent medicine trained pediatricians who see those adolescents during their detention; hence, continuity of care will be ideal. The program will provide all medical and psycho-social services. This clinic will start with one day a week and plan to expand up to 2 days a week depending on demand. We will staff the clinic with 1 adolescent medicine trained pediatrician, 1 nurse, 1 case manager/social worker, and 1 behavioral health specialist. The medical home will also serve as a transition clinic for older youth by seeing patients ages 10 to 21 years of age or 24 years (if still pursuing higher education).

References:

1. Society for Adolescent Medicine Position Paper. Health Care for Incarcerated Youth. *Journal of Adolescent Health* 2000; 27:73-75.

2. Harris County Juvenile Probation Department. Getting Back to the Basics: 2011 Annual Report.

3. Feinstien RA, Lampkin A, Lorish CD, Klerman LV, Maisiak R, Oh MK. Medical status of adolescents at time of admission to a juvenile detention center. *Journal of Adolescent Health*. 1998; 22(3):190-196.
4. Committee on Adolescence. Health Care for Youth in the Juvenile Justice System. *Pediatrics.* 2011; 128; 1219.
5. Golzari M, Hunt SJ, Anoshiravani A. The health status of youth in juvenile detention facilities. *Journal of Adolescent Health.* 2006; 38(6): 776-782.
6. Mosquera R, Tyson J. Comprehensive Care Provided in an Enhanced Medical Home to Improve Outcomes and Reduce Costs for High-Risk Chronically Ill Children. *Health Care Innovation Award Summary.* 3.27.13.

Goal and Relationship to Regional Goals:

Project Goal:

To provide a primary care "home base" for post detention HCJJC adolescents and at-risk youth, who will be assigned a health care team that tailors services to their unique health care needs, effectively coordinates their care across all healthcare settings, and proactively provides preventive, primary, routine and chronic care where needed.

This project addresses the following regional goal:

Redesigning of the practice at UT Health on the PCMH concept fits right with the regional goal to "transform health care delivery from a disease-focused model of episodic care to a patient-centered, coordinated delivery model that improves patient satisfaction and health outcomes, reduces unnecessary or duplicative services, and builds on the accomplishments of our existing health care system."

Challenges:

Youth in the juvenile justice system encounter many barriers that impact access to medical homes and health care services. They face challenges secondary to their living environments, which may be inconsistent due to foster care, or even nonexistent in the case of runaway youth. A substantial barrier to care is communication between the youth, primary care physician (if available), and the legal guardian. Many youth are from non-English speaking households, making communication with families more challenging. Overall, many guardians lack medical literacy and are not able to navigate care for higher services such as subspecialty care or mental health services. Finally, funding for medical care is a barrier. Many of the detainees' families are disenfranchised from traditional funding sources such as private or public insurance programs. While they are in the detention facilities, many families allow existing insurance enrollments to expire.

A cornerstone of our project is coordinated care involving a case manager/social worker. Many barriers with regards to transportation, communication and funding will be addressed by the case manager. We aim to identify a funding source for each teen and assist them in enrolling in programs such as Medicaid, CHIPs, Harris County Hospital District Gold Card, and pharmacy assistance programs (PAP). We are exploring the possibility of partnering with graduate social work students from the University of Houston to assist with enrollment. These resources along with a medical summary will be provided to the youth upon discharge from the facility.

3-Year Expected Outcome for Provider and Clients:
Successful implementation of the medical home model will lead to better monitoring by the patient's care team and increased patient engagemment in self-care, thereby reducing the need for acute episodic care. In addition to benefiting the current Medicaid (estimated 60% as of 2011, or 1,980 patient visits) and low-income client base of HCJJC clinic, this model of high risk youth management will be available to another estimated 4,000 patient visits (due to continued recruitment and new youth seen over 3 years at HCJJC), most of which are expected to be Medicaid clients. This project will benefit all high risk youth Medicaid and low-income clients in addressing many of the barriers encountered in being compliant with health care management plans, facilitating better health outcomes. Improved patient compliance is expected to produce a decrease in hospitalization for the ambulatory care sensitive high risk youth that are targeted.
We expect to successfully enroll and provide coordinated care to 350 patients in DY4 and improve that number to 400 in DY5. Patients with high-risk behaviour and chronic diseases typically see their provider more frequently, such as in the juvenile justice center. Patients see the physican an average of 2 times per year,[2] which means that in DY4, we will have completed approximately 700 patient visits and by DY5, we will have completed approximately 800 visits for a total of 1,500 patient visits for the two years. At HCJJC, estimated current payer mix of 60% Medicaid or Medicaid eligible, approximately 900 of these visits would be from patients on Medicaid.

Starting Point/Baseline:
This is a new program. Consequently our baseline is zero. The targets for our milestones and metrics are based upon the current number of unique patients detained in the Harris County Juvenile Justice Center. In 2011, Harris County Juvenile Justice Center (HCJJC) admitted 4300 youths, ages 10-17 years old[2]. An estimated two thirds of youth (approximately 3300 annually in Harris County) lack a medical home and would be eligible to enroll in our program.

Quantifiable Patient Impact:
We expect to successfully enroll and provide coordinated care to 350 patients in DY4 and improve that number to 400 patients in DY5.

Rationale:
Youth in the juvenile justice center are a high-risk population with complex and varied health needs. The American Academy of Pediatrics stresses the need for continuity of care in their position paper "Health Care for Youth in the Juvenile Justice System." In this paper, the academy recommends: "Continuity of care starts at the time of admission to the facility. If the youth already has a primary care provider, it is crucial for the medical staff to be able to contact that clinician to verify previous diagnoses and treatment. For cases in which the youth does not have a primary care provider, resources to establish primary care should be provided. Providing summaries of medical care for the primary care provider, appropriate subspecialist, or mental health specialist for transitioning back to the community, is also extremely important. In some cases, a chronic medical condition may be first diagnosed while the youth is in custody. Facilitating the transition to a provider who can ensure continuity is critical, because it is not uncommon for youth to return to the correctional facility with unmet chronic health needs."

Project Core Components:

A. Improve data exchange between hospitals and affiliated medical home sites.
B. Develop best practices plan to eliminate gaps in the readiness assessment.

C. Hire and train team members to create multidisciplinary teams including social workers, health coaches, case managers, and nurses with a diverse skill set that can meet the needs of the shared, high-risk patients
D. Implement a comprehensive, multidisciplinary intervention to address the needs of the shared, high-risk patients
E. Evaluate the success of the intervention at decreasing ED and inpatient hospitalization by shared, high-risk patients and use this data in rapid-cycle improvement to improve the intervention.
F. Conduct quality improvement using methods such as rapid cycle improvement. Activities may include, but are not limited to, identifying project impacts, identifying "lessons learned," opportunities to scale all or part of the project to a broader patient population, and identifying key challenges associated with expansion of the project, including special considerations for safety-net populations

Customizable Process or Improvement Milestones:
It is essential that proper planning is done in preparation for significant clinical transformation such as implementation of medical homes. In addition, the appropriate personnel must be engaged to efficiently and effectively facilitate the transformation process. Considering this, we have created two customizable process milestones in DY3, which are aimed at developing an implementation plan and designating appropriate personnel to carry out the intervention.

- P-X1. Milestone: Conduct planning meetings with representatives of stakeholder groups (physicians, nurses, other clinical support, administration) to establish an implementation plan for the medical homes practice for our targeted adolescent population P-X1.1. Metric: Implementation plan (eligibility criteria, implementation components, responsibilities, and timeline). *Baseline: no current plan exists Goal*: Our current practice does not apply medical home processes to our targeted population. The goal is to develop and document a specific plan to make the appropriate transition *Data Source*: UT Physicians' report, policy, contract or other documentation

- P-X2. Milestone: Designate/hire personnel or teams to support and/or manage the project/intervention P-X2.1. Metric: Document the personnel assigned to teams, and team responsibilities. *Baseline*: 0. *Goal*: 1 project managers (adolescent medicine provider), 1 nurse, 1 case manager/social worker, and 1 behavioral health specialist, additional team members designated by the project managers and team leaders. *Data Source*: Program documentation

Related Category 3 Outcome Measure(s):
We are considering Category 3 outcome measures listed below, due to the significant prevalence of sexually transmitted infections seen in our targeted population. Post-detention adolescents and the at-risk youth are at a higher risk for acquring these infectious due to their cirucmstances. By increasing the screening rates for these common infectious diseases seen in this population, we will be able to identify more individuals that suffer from these infections, and better control their health and health outcomes.

- IT-15.7 Chlamydia Screening and Follow up in adolescents – *(NSA)*
- IT-15.9 Syphilis screening – *(NSA)*
- IT-15.12 Gonorrhea screening rates – *(NSA)*

Relationship to other Projects and other performing providers' projects in the RHP:
This project addresses community needs CN.1 (Inadequate access to primary care), CN.7 (Insufficient access to care coordination practice management and integrated care treatment programs), and CN.20 (Lack of access to programs providing health promotion education, training and support, including screenings, behavioral health services, patient education programs). Primary Care/Ambulatory Care clinics are a top priority to Region 3 due to the acuity of the regional patient mix, population concentration, and lack of primary care access points for our patient base. The regional approach of collaboration as well as existing patient referral pattern relationships allowed our team to properly identify the community needs based on the necessity of population, uninsured, and medically underserved patient bases. This program is consistent with our region and similar to numerous initiatives in our RHP plan sharing both concepts as well as outcome measures focused on reduction of inappropriate ED utilization.

Plan for Learning Collaborative:
Project members and stakeholders will plan to participate in face-to-face learning (i.e. meetings or seminars) at least twice per year with other providers and the RHP to promote collaborative learning around shared or similar projects. This environment will facilitate the exchange of valuable ideas and strategies through participation in various group activities and workshops that could be used to enhance the effectiveness and quality of our interventions.

Project Valuation:
The anchor, Harris Health, facilitated a blind review process in which reviewers scored each project on 4 criteria, using a 9-point scale. The ratings for each criterion were weighted and summed for each project to arrive at a total score (value weight). All 80 projects for the region were then ranked. This project was ranked #5 of all 80 projects submitted. We used these scores/ranking in conjunction with other approved project valuations to arrive at the valuation assigned to this project. Below are the criteria and considerations for awarding project scores:
1. Aligned with Community Needs (Weight = 30%): Points were awarded based on judgment of whether the proposed project directly addresses one or more of the 25 identified community needs as outlined in the Regional Healthcare Partnership Plan. Projects that address a need directly and address multiple community needs were considered for a higher score.
2. Transformational Impact (Weight = 30%): Points were awarded for projects that meet the community benefit criteria, based on the following question: How likely and to what extent is this project going to positively impact the identified community needs? The highest rating was given to projects that yield a significant transformation. Those projects with a wider reach and/or evidence-based should be considered for a higher score.
3. Committed IGT (25%): Points based on ability to demonstrate that the project is supported by a committed IGT source. All of our projects have committed IGT and were therefore assigned the highest rating of points.
4. Likelihood of Success (Weight = 15%): Points based on determination of whether the goals of the project were achievable.

#34 - Project Option - 1.1.3 Expand mobile clinics

Unique Project ID: 158771901.1.101
Performing Provider Name/TPI: Harris County Public Health and Environmental Services/ 158771901

Project Summary:
Provider:
Harris County Public Health & Environmental Services (HCPHES) is a comprehensive local health department serving the third most populous county in the United States. It spans over 1700 square miles, and its land area is larger than the state of Rhode Island. The HCPHES jurisdiction includes approximately 2 million people within Harris County's unincorporated areas and over 30 small municipalities located in Harris County (not including the city of Houston). For certain public health services such as vector/mosquito control, Ryan White/Title I HIV funding, and refugee health screening, the HCPHES jurisdiction encompasses the entire county including the city of Houston, therefore providing services to over 4 million people in total. Since being chartered in 1942 by Harris County Commissioners Court, HCPHES has provided leadership in a wide range of public health activities and programming including but not limited to communicable disease control; veterinary and environmental public health; and clinical preventive services. These services include strong programming in immunizations, oral health, tuberculosis prevention & treatment, and nutrition/wellness through a variety of efforts including the HCPHES Women, Infants, & Children (WIC) program.

Across this broad organizational framework, HCPHES has engaged in significant departmental strategic planning activities, including the development of the HCPHES Strategic Plan 2013-2018 which is grounded in the "Essential Public Health Services" model (e.g., assessment, policy development and education, and assurance activities). These categories allow HCPHES to engage within a variety of public health sectors including the services provided through its clinical programs. The mission statement of HCPHES is "Promoting a Healthy and Safe Community, Preventing Illness and Injury, Protecting You, HCPHES, Your Department for Life" while its clear vision is "Healthy People, Healthy Communities…a Healthy Harris County." The HCPHES staff (over 500) are public health professionals in the truest sense of the word and have a broad range of expertise in various public health program areas. HCPHES staff pride themselves in upholding the organizational values which they helped to craft: Excellence, Compassion, Flexibility, Integrity, Accountability, Professionalism, and Equity.

With a current annual operating budget of $58 million, HCPHES is organized into four offices that apply specific skills broadly across all public health activities (Health Education and Promotion, Policy and Planning, Public Health Preparedness & Response, and Public Information); four divisions that focus on specific programmatic disciplines (Disease Control & Clinical Prevention, Environmental Public Health, Mosquito Control, and Veterinary Public Health); and a state-of-the-art Operations & Finance Division that manages its business infrastructure (e.g. financial services, information technology, human resources, etc.). HCPHES is highly regarded both nationally and state-wide for its continued leadership in the field of public health and is well-positioned as a model agency for public health services in the local community.

Intervention(s):

The proposed project will improve access to appropriate/affordable prevention screening and wellness visits for target populations through the provision of community-based mobile health services and will include immunizations, health screenings, health promotion/education, and other established HCPHES public health programming. The project will also feature a robust education/referral program to navigate participants, as appropriate, to additional services such as integrated care programs, primary care providers and treatment programs.

Need for the Project:
A significant proportion of Harris County residents are uninsured and many lack the resources or face geographic and logistical barriers in accessing primary health care and basic health screenings. The project seeks to intervene within the HCPHES jurisdiction by delivering high quality screenings, immunizations for eligible children and adults, and track referral services offered to communities and residents directly.

Target Population:
Within Harris County, insurance status can vary depending on an individual's geographic location and racial or ethnic background. Thus this project will focus on delivery to the populations within Harris County that have historically been uninsured or underinsured. However, as a community-based project the communities themselves will be the targeted population. The targeted individual encounters served by this project is 120 with 90% expected to be Medicaid/low income uninsured.

Category 1 expected patient benefits:
Benefits to the targeted population as a result of the project will include:
- 100 total annual mobile community events completed by DY5
- Average of 30 discrete immunizations and/or health screenings per event, with CHW-assisted follow-up
- Average attendance of 60 individuals per event

Quantifiable Patient Impact:
Number of encounters provided through mobile clinic(s)

Category 3 Outcome Measures:
OD- 12 Primary Care and Primary Prevention
IT-12.10 Adults (18+ years) Immunization Status
IT-12.12 Immunization and Recommended Immunization Schedule Education
IT-12.17 Intensive behavioral dietary counseling for adult patients with hyperlipidemia and other known risk factors for cardiovascular and diet-related chronic disease

Project Option – 1.1.3 Expand mobile clinics

Unique Project ID: 158771901.1.101
Performing Provider Name/TPI: Harris County Public Health and Environmental Services/ 158771901

Project Description:
HCPHES has been a trusted and reliable provider for quality maternal, child health, family planning, and immunization services to low income, uninsured populations in Harris County for over 40 years. HCPHES - specifically the HCPHES Disease Control & Clinical Prevention (DCCP) Division - has successfully managed several contracts with Texas Department of State Health Services (DSHS) over the years aimed at providing preventive clinical health services to the public. These DSHS-funded clinical programs have included family planning, prenatal care, child health (Texas Health Steps) and immunizations for children and adults in the past. Through strategic realignment 3 years ago, HCPHES transitioned its maternal and child health programs to the Harris Health System, a sister agency and close collaborative partner of HCPHES. Currently, HCPHES is managing DSHS contracts to provide family planning; tuberculosis control and prevention; refugee health screening; Supplemental Nutrition Program for Women, Infants and Children (WIC); dental services for children; and targeted case management services for residents in Harris County. HCPHES also currently provides low-cost immunizations through the Texas Vaccines for Children (VFC) program and other funding sources. HCPHES has been considered a leader in the provision of quality and cost-effective population-based public health services at the local level.

HCPHES proposes to implement mobile health services to targeted Harris County communities by providing immunizations, health and wellness screenings, health promotion/education activities, while also enrolling individuals and their families into private and public health insurance programs, and guide participants to additional care, as appropriate. The project will capitalize on relationships with community partners, old and new, to plan and implement community events that draw in residents that may not have access to basic health screenings and prevention.

Immunizations will be provided year-round to participants but will be limited to children and adults eligible for the VFC Program and the Adult Safety Net Program. Project teams will have mobile access to assess program eligibility and have the option to upload shot records into the Texas Immunization Registry, ImmTrac. Flu shots however will be available for the general public at a nominal fee.

Routine health screenings to be conducted at community events may include, but are not limited to, blood pressure screenings, BMI indexing and obesity screening, diabetes screening, HIV and other sexually transmitted infection testing, and oral health assessments. As an added benefit, community health workers (CHW) will be utilized to follow-up with participants that have completed health screenings. Health education will be provided on a variety of wellness and prevention topics including cardiovascular health, smoking cessation, obesity and weight management, tobacco use, breast and cervical cancer, oral health, elderly fall prevention, family planning/women's health, and other topics to be determined. The project also has the opportunity to showcase the many other areas of quality HCPHES programming that include the Women, Infants and Children (WIC) program, environmental public health, mosquito and vector control, and veterinary public health. This project will benefit from the great diversity of services that HCPHES offers and will ensure community events have the potential to reach a wide variety of participants. HCPHES clinics will be an anchor for many of the services

advertised through these events but an emphasis will be made to direct participants to local providers and services, including Federally Qualified Health Centers.

Goals and Relationship to Regional Goals:

Project Goals:

The project will have the overarching goals to:

5. Deliver VFC and Adult Safety net immunizations to eligible populations; offer flu vaccines to the general public as well
6. Deliver preventive education programming on a variety of health issues directly to communities
7. Qualify and/or enroll participants into health programs such as the Texas Women's Health Program, the Children's Health Insurance Program (CHIP) or Children's Medicaid, etc.; also educate participants of the effects of the Affordable Care Act and other health reform topics
8. Utilize community health workers to reinforce educational activities and navigate project participants to additional care
9. Guide project participants, their families, and other community residents to additional prevention and treatment, including HCPHES services and programming

This project meets the following regional goals:

- Increase access to primary and specialty care services, with a focus on underserved populations, to ensure patients receive the most appropriate care for their condition, regardless of where they live or their ability to pay.
- Transform health care delivery from a disease-focused model of episodic care to a patient-centered, coordinated delivery model that improves patient satisfaction and health outcomes, reduces unnecessary or duplicative services, and builds on the accomplishments of our existing health care system
- Develop a culture of ongoing transformation and innovation that maximizes the use of technology and best-practices, facilitates regional collaboration and sharing, and engages patients, providers, and other stakeholders in the planning, implementation, and evaluation processes.

Challenges:

There are numerous challenges associated with the implantation of this project. Mobile operations require additional planning and are particularly subject to environmental concerns. Addressing this challenge will require project staff to cultivate working relationships with community organizations and businesses that may host events. HCPHES does not currently operate a mobile program and the proposed project represents a significant shift in focus for project administrators. In the past HCPHES has delivered immunizations from a mobile platform but the infrastructure for these interventions no longer exist. The challenge to project organizers will be to rebuild the capacity for the organization for such projects in an approach that is efficient, cost-effective, and capitalizes on existing resources and relationships. HCPHES is committed to planning and participating in community events, small and large, and proposes the use of currently owned and to-be-acquired equipment to meet the logistical

requirements in the delivery of mobile health services. HCPHES proposes to leverage its resources and technical expertise from other departments, including the Office of Public Health Preparedness, to meet these needs. In the recent past HCPHES has demonstrated its expertise in responding to public health emergencies and has the capacity to implement large and complex events in the field.

3-Year Expected Outcome for Provider and Patients:
Community events, as proposed, are difficult to evaluate on in terms of total impact to the individual. However, process evaluations and levels of impacts will be assessed with the following outcomes in mind:

- 100 total annual mobile community events completed by DY3
- Average of 30 discrete immunizations and/or health screenings per event, with CHW-assisted follow-up
- Average attendance of 60 individuals per event

Starting Point/Baseline:
As this project will be an innovative process for HCPHES staff, there will be a zero baseline for the proposed outcomes. Each DY will see marked increases in staff experience and capacity to plan and implement mobile events. Saturation of events will be offset by the large geographical area that is likely to be served by the project. The project will be evaluated on the outcomes discussed previously.

Quantifiable Patient Impact:
DY4 QPI: Number of encounters provided through mobile clinic(s)
Goal: Minimum of 60 encounters per community event
DY5 QPI: Number of encounters provided through mobile clinic(s)
Goal: Minimum of 60 encounters per community event

Rationale:
Heart disease, cancer, stroke, accidents, and chronic lower respiratory disease are the top five leading causes of death in the U.S and in Harris County. A common thread among them all is their tendency to cause disability, poor health or diminished quality of life at later life stages when death is not the immediate outcome. Deaths among adults ages 18-64 and older adults age 65 and older make up approximately 35% and 61% of all deaths respectively in Harris County. The leading causes of death for these age groups, heart disease and cancer, are consistent with the leading causes of death in Harris County overall. The fewest number of deaths occur among children aged 1-12 and adolescents aged 13-17 combined; death at this life stage accounted for 1%. The Center for Health Statistics at the Texas Department of State Health Services reported a total of 132,669 preventable hospitalizations in adults in Harris County for the period from 2005 to 2008. If those hospitalizations had been prevented, almost $4 billion would have been saved.

2010 US Census data results rank Texas with the highest rate of uninsured persons in the U.S. According to the 2010 American Community Survey, approximately 27.90% of Harris County residents are uninsured, a figure higher than state (23.70%) and national (15.50%) figures. Although the Texas Medical Center, the largest medical center in the world with one of the highest densities of clinical facilities for patient care, basic science, and translational research is located in Harris County, few institutions provide services to those who are uninsured. For those persons undocumented and uninsured living within Harris County, finding access to preventive and medical care services is complex and challenging.

Economic disparities also exist between ethnic and racial groups in Harris County. The Centers for Disease Control & Prevention (CDC) conducts the annual Behavioral Risk Factor Surveillance System (BRFSS) survey, and 2010 results for the Houston-Baytown-Sugar Land metropolitan statistical area report that 11% of Whites were uninsured compared to 55% of Hispanics and 27% of Blacks. In addition, *Health of Houston Survey 2010* results suggest the percentage of adults with no insurance can vary greatly by geographical region as proportions in the County range from 2% to 62%. Fifty-four percent of uninsured respondents to the survey reported they could not afford insurance as the primary reason why they were uninsured.

There is a need for basic health screenings and navigation to long-term medical and dental homes for uninsured Harris County residents and the proposed project will focus on the delivery of these services directly to residents. Topics, themes, and services can be altered seasonally or to meet new issues or legislation, including the implementation of the Affordable Care Act. Though the focus of the project will be in areas where there are many uninsured persons, the larger community will also stand to benefit from the proposed services as well. CHW will also reinforce the activities of the project through follow-up and referrals for select participants.

Project Core Components:
HCPHES will utilize a stage gate approach in applying project management best practices in implementing the mobile health project specifically utilizing a phased release process over the lifecycle of the program. In each stage gate we will focus on continuous stakeholder feedback from various data collection points including iterative reviews of lessons learned captured from project deliverables in remediating any future challenges and/or risks. In addition, given the majority of the population we serve are Medicaid/low income uninsured individuals, our program will be tailored to overcome the unique challenges/barriers that may exist such as transportation, communication, availability, and location.

Additional Project Core Components:

- Development of relationships with community entities, new and old, to plan and implement mobile services
- Deliver health screenings and education services in a mobile setting
- Utilize community health workers to follow-up with participants of screening services to ensure appropriate referral to next levels of care
- Guide project participants to other HCPHES DSRIP projects and clinical services, where appropriate

Unique community need identification numbers the project addresses:
CN.1 Inadequate access to primary care
CN.11 High rates of chronic disease and inadequate access to treatment programs and services for illnesses associated with chronic disease, including; Cancer, Diabetes, Obesity, Cardiovascular disease, Asthma, AIDS/HIV
CN.18 Insufficient access to integrated care programs for behavioral health and physical health conditions
CN.19 Lack of immunization compliance, resulting in rising incidence of preventable illnesses such as; Mumps, Measles, Pertussis, Tuberculosis CN.20
Lack of access to programs providing health promotion education, training and support,

including screenings, nutrition counseling, patient education programs
CN.21 Inadequate transportation options for individuals in rural areas and for indigent/low income populations CN.22 Insufficient access to services that are specifically designed to address racial, ethnic and cultural health care disparities

How the project represents a new initiative or significantly enhances an existing delivery system reform initiative:
As a strategy of broader health education and promotion, this project is innovative in that it has the capacity to offer an abundance of public health services and messaging and the scope of individual events can be tailored to meet the needs of the community being served. Many existing mobile services focus on specific issues such as child immunizations, dental services, or mammograms. The proposed project leverages the experience and breadth of services offered by HCPHES to not merely orchestrate health fairs but rather synthesize coordinated community events that inform and educate, offer direct services, and guide participants to other advanced services. As a large public health department HCPHES leads a diverse set of strategies to improve the health of County residents. The proposed project is aligned with current HCPHES strategic goals to improve the recognition, understanding, and support of HCPHES and the broader mission of public health.

Category 3 Outcome Measures:
OD- 12 Primary Care and Primary Prevention
IT-12.10 Adults (18+ years) Immunization Status
IT-12.12 Immunization and Recommended Immunization Schedule Education
IT-12.17 Intensive behavioral dietary counseling for adult patients with hyperlipidemia and other known risk factors for cardiovascular and diet-related chronic disease

Category 3 Description:
The expanded mobile health clinic is focused on a metric based delivery system and alignment to the OD-12 domain (Primary Care and Primary Prevention) in which the associated category 3 improvement targets selected provides significant data points to demonstrate overall progress, area population impact, effectiveness and continuous service improvement to bridge the gaps in the underserved region/population. In addition, our selection of combined non-standalone measures delivers enhancements to regional capacity building for prevention, education, and immunization services.

Reasons/rationale for the selecting the outcome measures:
Outcome measures, as related to DSRIP process and improvement milestones, include:

- (P-3.1) Milestone: Implement/expand a mobile health clinic program
  - Metric: Number of additional clinics or expanded hours or space
- (I-15) Milestone: Increase access to primary care capacity
  - Metric: Increase percentage of target population reached

Relationship to Other Projects:
There are other DSRIP mobile health projects but none of them will specifically be interacting with our targeted populations. Other projects may offer similar screening and educational services but none will be offered to our target population which has historically been segments of Harris County that are not part of the City of Houston's jurisdiction. The HCPHES jurisdiction includes over 2 million people within Harris County's unincorporated areas and over 30 small municipalities located in Harris County

(not including the city of Houston). Thus duplication of services is likely not to be an issue for the proposed project.

Plan for Learning Collaborative:

We plan to participate in a region-wide learning collaborative(s) as offered by the Anchor entity for Region 3, Harris Health System. Our participation in this collaborative with other Performing Providers within the region that have similar projects will facilitate sharing of challenges and testing of new ideas and solutions to promote continuous improvement in our Region's healthcare system.

Project Valuation:

HCPHES reviewed relevant data summaries from a variety of sources, such as demographic and public opinion data from the Rice University Kinder Institute's Houston Area Survey, and health related data specific to Harris County from the University of Texas School of Public Health's Houston Health Survey and the Texas Department of State Health Services, Center for Health Statistics. Additionally, HCPHES considered public health mandates and community need; the data, anecdotal information and the level of service provided by region 3 participating providers to address public health issues locally were considered to determine value. Valuation is based on cost avoidance and projecting health care expenditure savings by promoting immunization services to vulnerable populations, reducing chronic disease prevalence through preventive assessments and referral, and improving access to quality preventive programming

C. Category 3: Quality Improvements

Narratives for Category 3 measures will not need to be submitted at this time with the 3-year projects. Once revisions to Category 3 of the RHP Planning Protocol are approved, HHSC will ask providers to submit narratives for Category 3. For now, providers will indicate the value of the Category 3 measures in the Milestones and Metrics Table Excel file.

D. *Category 4: Population-Focused Improvements (Hospitals only)*

Population-focused improvements are “pay for reporting” measures reported by hospitals that demonstrate the impact of delivery system reform investments made under the demonstration. Category 4 will only be required of new hospital providers. Current hospital providers will not be updating their Category 4 selection and description.

With limited exceptions, all new hospital Performing Providers shall report on all Category 4 population-focused improvement measures described in Attachment I: RHP Planning Protocol and categorized in six domains:

Domain 1: Potentially Preventable Admissions (8 measures)
Domain 2: Potentially Preventable Readmissions – 30 days (7 measures)
Domain 3: Potentially Preventable Complications (64 measures)
Domain 4: Patient-Centered Healthcare (2 measures)
Domain 5: Emergency Department (1 measure)
Optional Domain 6: Children and Adult Core Measures (8 measures)

For each hospital Performing Provider, the following information should be included:

- Performing Provider involved with Category 4 (including TPI).
- **Domain Descriptions:** A description of how Category 4 measures relate to project(s)/outcomes(s) in Categories 1, 2, and 3. Include a description of the expected improvements in each Category 4 domain for DYs 2-5. (Note: Category 4 does not require demonstrating improvements to be eligible for DSRIP payments.) Indicate if a domain measure is exempt and state the reason. The description for each domain for each hospital is limited to 2 pages.
    - Optional Reporting Domain: At their option, hospital performing providers may report on Reporting Domain (RD) 6, which is the CMS Initial Core Set of Measures for Adults and Children in Medicaid/CHIP. While reporting on this domain is optional, participation in Domain 6 reporting is required for maximum of 15 percent at which providers may value Category 4.
- **Information related to Reporting and Measurement period, as well as valuation for each domain will now be included in the workbook only.**

RHP 3 ADDED ONE NEW HOSPITAL; HOWEVER, THIS HOSPITAL IS EXEMPT FROM CATEGORY 4 REPORTING.

Section IV. RHP Participation Certifications

Each RHP participant that will be providing State match or receiving pool payments must sign the following certification. ***For the December 20, 2013 submission of new three-year projects, this certification only needs to be signed by the IGT Entities and Performing Providers for the proposed three-year projects along with any IGT Entities/Performing Providers that were not included in the December 2012 RHP Plan submission that joined the RHP between then and now.***

By my signature below, I certify the following facts:

- I am legally authorized to sign this document on behalf of my organization;
- I have read and understand this document;
- The statements on this form regarding my organization are true, correct, and complete to the best of my knowledge and belief.

Signature	Name	Organization

SEE ATTACHED

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Signature	Name	Organization
Theresa Cheaney	Theresa Cheaney	Chambers County Public Hosp Dist #1

Section IV. RHP Participation Certifications

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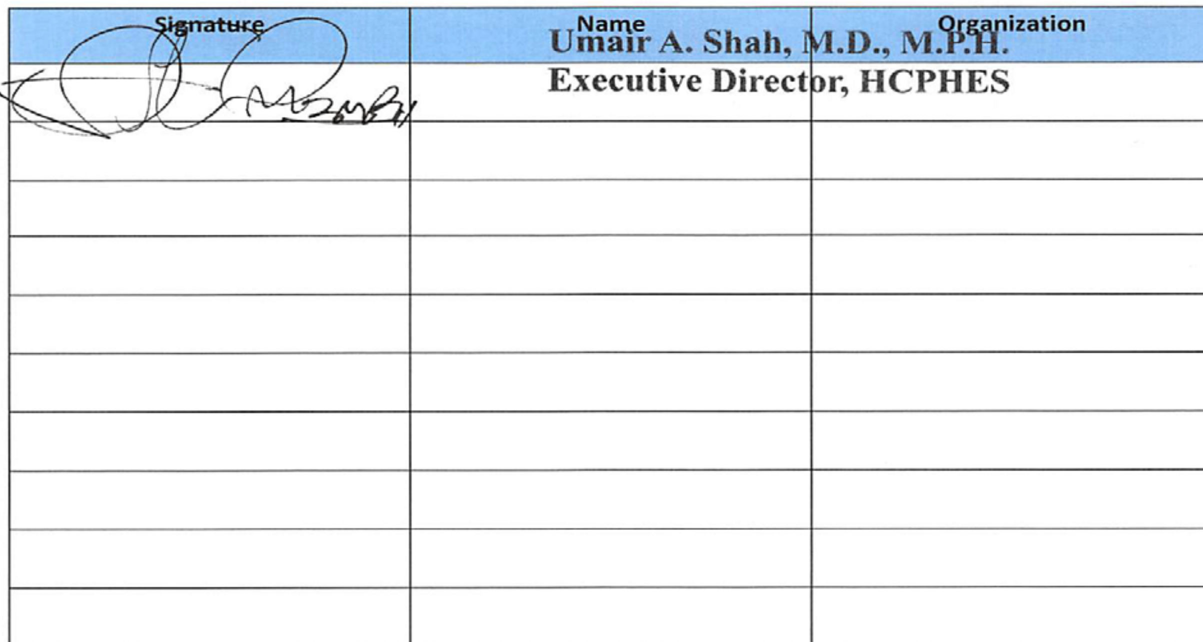

Signature	Name	Organization
[signature]	Umair A. Shah, M.D., M.P.H. Executive Director, HCPHES	

Appendix

Appendix: Summary of Projects

Prioritized List of Three-Year DSRIP Projects for DY3-5

RHP 3

Priority #	Performing Provider Name	Texas Provider Identifier (TPI)	Project Option	Descriptive Project Title	3-Year Project Value	Notes
1	UTHSC-Houston	111810101	2.7.4	This project will provide targeted evidence-based full continuum of care services during preconception (risk assessment, a reproductive live plan, health promotion, and medical and psychosocial interventions for identified risks), inter-conception (well-woman examinations, routine family planning needs, risk assessment, and updating the reproductive life plan), prenatal (evidence-based care, counseling, education on nutrition, diet, exercise, and breast feeding, and antenatal steroids for labor at 24-34 weeks), and postpartum periods (evidence-based care during delivery and home visits throughout the first 6 weeks after delivery). Also, intensive interventions will be provided to women whose prior pregnancy ended in adverse outcome.	$17,250,498	Included in the attached plan.
2	Texana	81522701	2.15.1	Primary Care Integration into a Behavioral Healthcare Clinic by hiring a primary care practitioner and nurse to provide services directly in a Behavioral Healthcare Clinic where a “warm” hand off can be made the same day as the visit to the behavioral healthcare provider	$4,000,000	Included in the attached plan.

3	Oakbend	127303903	1.13.1	Implement Technology Assisted Behavioral Health Services in Emergency Department -implement a data exchange system between the hospital and mental health organizations in the community, in order to provide timely interventions that meet the needs of these patients.	$5,000,001	Included in the attached plan.
4	Chambers County	20993401	1.1.1	Expansion of primary health services for the residents through the creation of a new clinic in a rural setting.	$3,254,580	Included in the attached plan.
5	Harris County PHES	158771901	1.8.9	Youth Dental Health - expand current oral health outreach and treatment services in a focused effort to provide preventive dental screenings and fluoride varnishes, oral health education, and navigator-assisted referrals to community based dental providers	$4,968,666	Included in the attached plan.
6	Harris Health	133355104	1.7.3	Remote Patient Monitoring System - the project will create and implement a home monitoring program for patients with a chronic illness such as diabetes, hypertension, asthma, or heart failure. Patient data specific to their condition (i.e., blood glucose monitoring for diabetes, blood pressure for hypertension, pulse oximetry for asthma, or weight for heart failure) will be collected and relayed to a clinician, who will respond to the patient directly and intervene as necessary to treat, advise, and or refer the patient.	$17,003,859	Included in the attached plan.
7	MHMRA	113180703	2.13.1	Expand the Critical Time Intervention Program (CTI), a well-researched, evidence based practice that assists homeless individuals with severe and persistent mental illness through a comprehensive psychosocial assessment and intensive case management services	$3,128,580	Included in the attached plan.
8	MD Anderson	112672402	2.9.1	The project will provide clinical trial education, clinical trial coordination and navigation to improve clinical trial participation rates among Low-income, Uninsured, Medicaid eligible Latinos with lung cancer who receive	$515,767	Included in the attached plan.

				services		
9	Memorial Medical	137909111	1.12.2	Expand access to psychiatric behavioral care for older adults (55 years and older) by implementing an Intensive Outpatient Program (IOP) utilizing a group psychotherapy clinical model.	$1,300,000	Included in the attached plan.
10	MHMRA	113180703	2.13.1	Preventative mental health care for foster youth - will serve adolescents within the foster care system with severe mental illness who are expected to experience the greatest difficulty transitioning into a healthy adulthood.	$4,130,580	Included in the attached plan.
11	City of Houston	0937740-08	2.9.1	A front end outreach and navigation service to link the uninsured, the insured who are disconnected from care and high end users of the Texas Children's Health Plan to appropriate levels of primary care and ancillary services.	$7,200,000	Included in the attached plan.
12	Ft. Bend County	2967606	2.15.1	Enhancement of integrated primary and behavioral health care services by adding a Screening, Brief Intervention and Referral to Treatment model (SBIRT) in an FQHC clinic.	$540,000	Included in the attached plan.
13	UTHSC-Houston	111810101	1.12.2	This project is an evidence-based trauma-focused behavioral intervention for children and youth, which will provide screening and general counseling or Trauma-Focused Cognitive Behavioral Therapy (TF-CBT) at wellness centers located in medically underserved areas and will provide access to other services such as parenting education, family counseling, and navigation to additional resources.	$13,249,950	Included in the attached plan.
14	MHMRA	113180703	1.13.1	Expand the current co-occurring (mental health and substance abuse) disorders program from a 30 bed to an ultimate 60 bed capacity. In this program, the provider will work with licensed chemical dependency residential treatment providers to offer up to 90 days of integrated co-occurring disorders care.	$7,974,233	Included in the attached plan.

15	Harris Health	133355104	2.12.2	Rothman Index - utilize evidence-based interventions in transition of care, education, coaching and home monitoring, focusing on patients diagnosed with heart failure, diabetes type 2 and hypertension. This includes a formal transition-of-care process that addresses the bio-psychosocial factors that are barriers or risks that are known to promote emergency-center use or readmission	$14,881,524	Included in the attached plan.
16	MD Anderson	112672402	2.7.5	Reducing Childhood Obesity Through the Implementation of Evidence-Based Obesity Programs in pediatric clinics	$3,864,300	Included in the attached plan.
17	Oakbend	127303903	2.11.1	Expand Use of Computer Physician Order Entry to Improve Patient Health Outcomes - implement a dedicated medication management team, consisting of physicians and pharmacist to have an ongoing medication reconciliation process that monitors and educates the patient from admission into the hospital through discharge	$4,000,002	Included in the attached plan.
18	Harris County PHES	158771901	2.7.5	Implement, from mobile clinical sites and fixed clinical sites, an evidence based program similar to the MEND program (a healthy lifestyle program) to address overweight children and adolescents. This is accomplished by educating families and encouraging them to change unhealthy attitudes about food, engaging in physical active on a regular basis, choosing foods that are healthy, tasty and nutritious, and taking action to sustain a healthy lifestyle.	$5,634,297	Included in the attached plan.
19	City of Houston	0937740-08	2.19.1	Expanded Community Re-Entry Network Program (CRNP) will provide access to primary care and behavioral health case management and services to newly released ex-offenders	$5,700,000	Included in the attached plan.
20	Ft. Bend County	2967606	2.13.1	Provide an intervention for a targeted behavioral population to prevent unnecessary use of services in criminal justice setting.	$1,080,000	Included in the attached

						plan.
21	MHMRA	113180703	2.13.1	Implement an electronic system that will enable juvenile service providers to work together in a coordinated approach guided by mutually identified goals, shared access to information, and a collaborative treatment and service plan.	$4,740,000	Included in the attached plan.
22	UTHSC-Houston	111810101	1.1.1	Wellness Center #7- The newly established center, targeting a medically underserved area and/or medically underserved population, will provide primary and preventive clinical services, health screenings, referral services, health education and promotion, and chronic disease self-management skills development.	$0	Withdrawn by the provider.
23	MHMRA	113180703	2.13.1	Expand the Chronic Consumer Stabilization Initiative (CCSI), an interagency collaboration with with local police to provide intensive case management and work directly with individuals, family members, health providers, and/or staff at living facilities.	$875,580	Included in the attached plan.
24	Harris Health	133355104	1.7.6	eVisits via a web-based patient portal as an additional approach to manage primary care related conditions will provide more timely access to treatment instead of utilizing the traditional face-to-face visit allowing the primary care physician to review the patient's clinical question and communicate to the patient remotely to manage the patient's condition.	$12,698,886	Included in the attached plan.
25	Harris County PHES	158771901	2.7.2	Adopt and implement a 2A's and R (Ask, Advice, and Refer) tobacco intervention and deliver an evidence based group tobacco cessation program for patients not ready to make a quit attempt and to promote the motivation to quit.	$5,993,698	Included in the attached plan.
26	MD Anderson	112672402	2.6.3	Engaging Community Health Workers to Provide evidence-based Health Education about Melanoma/Skin Cancer to Underserved Populations	$2,429,301	Included in the attached

						plan.
27	UTHSC-Houston	111810101	1.1.1	Wellness Center #1- The newly established center, targeting a medically underserved area and/or medically underserved population, will provide primary and preventive clinical services, health screenings, referral services, health education and promotion, and chronic disease self-management skills development.	$20,604,075	Included in the attached plan. Partially funded.
28	MHMRA	113180703	2.13.1	Expand the current Mobile Crisis Outreach Team (MCOT), which provides mobile crisis outreach and follow-up to adults and children who are unable or unwilling to access traditional psychiatric services	$13,225,692	Contingency Project.
29	Harris Health	133355104	1.9.2	Expand Wound Care Services - An initiative to ensure patients have access to specialty wound care services that are geographically convenient, and provide comprehensive services to include debridement, treatment, dressing changes, assessment and placement of wound vacutainers and ostomy care	$0	Withdrawn by the provider.
30	Harris County PHES	158771901	2.7.1	Implement video-based directly observed 3HP TB therapy through specially adapted cell phones that record patients taking medication that allow outreach workers to confirm medication adherence.	$3,376,380	Contingency Project.
31	UTHSC-Houston	111810101	2.1.2	The project will facilitate access to a medical home for youth leaving a juvenile justice center by assisting youths and their guardians in arranging for clinic visits, transportation, overcoming language barriers, and other challenges that can interfere with clinic visits; and establish a medical home that will meet this population’s physical and psycho-social needs and assist older youths until they secure a medical home as adults.	$3,961,014	Contingency Project.
32	Harris Health	133355104	2.2.1	Transitional Diabetes Care - The transitional program will identify patients who are within six months of their 18th birthday and with type 1 diabetes, and commence a care	$0	Withdrawn by the provider.

				plan of transition.		
33	MHMRA	113180703	2.13.1	Expansion of substance abuse detoxification services for women with co-occurring disorders and children.	$11,380,500	Contingency Project.
34	Harris County PHES	158771901	1.1.3	Implement mobile health services to targeted communities by providing immunizations, health and wellness screenings, health promotion/education activities, while also enrolling individuals and their families into private and public health insurance programs, and guide participants to additional care, as appropriate	$4,389,760	Contingency Project.
35	UTHSC-Houston	111810101	2.2.2	Create a partial hospital program (PHP) for children with complex diseases complicated by poor adherence to treatment plans and/or inadequately met psychosocial needs. As an evidence-based approach to improving care and reducing costs, this program consists of an individualized multi-disciplinary care plan that provides daily medical assessments, treatment, educational instruction, individual and peer support therapy, family therapy, and nutritional/occupational/speech therapy.	$9,999,999	Not included in attached plan.
36	MHMRA	113180703	2.13.1	Expansion of short-term residential treatment for women with co-occurring disorders and their children	$7,587,000	Not included in attached plan.
37	Harris Health	133355104	1.7.6	Integrate eConsults as an additional approach within the referral process from primary care physicians to specialists to provide more timely access to treatment instead of utilizing the traditional face-to-face visit allowing the specialist to provide a plan of care that the primary care physician can utilize to manage the condition.	$12,267,741	Not included in attached plan.

38	Harris County PHES	158771901	2.7.3	Through the utilization of trained community health workers, and clinical professionals the provider will implement evidence based education and training addressing fall prevention and safety to elderly adults (55+), and to those individuals providing in-home care to elderly adults	$5,914,096	Not included in attached plan.
39	UTHSC-Houston	111810101	1.1.1	Location #1 – Chronic disease care and care coordination will be provided in a medically underserved area at a stand-alone chronic disease care clinic by advanced-care practitioners with special training in managing targeted chronic diseases under the direction of specialist physicians making the initial evaluation of the patient and decisions on the treatment plan.	$20,604,075	Not included in attached plan.
40	MHMRA	113180703	2.13.1	Expand the Crisis Residential Unit (CRU) a free-standing program focused on the needs of individuals who access hospital services and other emergency and criminal justice services, including a strong, integrated chemical dependency education and treatment track.	$22,313,200	Not included in attached plan.
41	Harris Health	133355104	2.5.2	Implementation of a Predictive Modeling System - Prediction will promote optimal use of primary care interventions and disease and case management services tailored to specific individuals based on disease process and access to care patterns. Electronic information sharing will promote a continuum of awareness of adherence to treatment plans, pharmacy, and primary and secondary care utilization	$15,846,654	Not included in attached plan.
42	UTHSC-Houston	111810101	1.1.1	Location #2 - Chronic disease care and care coordination will be provided in a medically underserved area at a stand-alone chronic disease care clinic by advanced-care practitioners with special training in managing targeted chronic diseases under the direction of specialist physicians making the initial evaluation of the patient and decisions on the treatment plan.	$20,604,075	Not included in attached plan.

43	MHMRA	113180703	2.13.1	The project proposes to provide young adults recently discharged from public psychiatric hospitals with intensive rehabilitative services. It augments already available supportive housing with intensive mental health services modeled on a modified Assertive Community Treatment (ACT) model. These youth-oriented services will include high-intensity/low caseload case management offered on-site.	$2,850,000	Not included in attached plan.
44	UTHSC-Houston	111810101	2.7.1	This program will mobilize existing community resources in partnership with several agencies and care providers to establish a sustainable continuum of evidence-based breast cancer care to reduce disparities in underserved populations in Houston using: 1) participatory systems development of service provision, including mobile mammography screening; navigation to diagnostic services for women with positive mammography; and navigation to treatment for women with breast cancer, and 2) implementation of health promotion programs to increase use of breast health services in communities of underserved women.	$13,249,950	Not included in attached plan.
45	MHMRA	113180703	2.13.1	Additional units of the Crisis Intervention Response Team (CIRT), which is a program that partners law enforcement officers who are certified in crisis intervention training with licensed master-level clinicians to respond to law enforcement calls.	$10,556,988	Not included in attached plan.
46	UTHSC-Houston	111810101	1.1.1	Wellness Center #9- The newly established center, targeting a medically underserved area and/or medically underserved population, will provide primary and preventive clinical services, health screenings, referral services, health education and promotion, and chronic disease self-management skills development.	$20,604,075	Not included in attached plan.

47	MHMRA	113180703	2.13.1	Telephonic Case Management and Follow-Up Call Program - making follow-up calls to clients who have been released from emergency, residential and mobile services/facilities to ensure they are following through on their discharge plans and getting connected to the next level of care	$1,747,500	Not included in attached plan.
48	UTHSC-Houston	111810101	1.1.1	Wellness Center #3- The newly established center, targeting a medically underserved area and/or medically underserved population, will provide primary and preventive clinical services, health screenings, referral services, health education and promotion, and chronic disease self-management skills development.	$20,604,075	Not included in attached plan.
49	MHMRA	113180703	2.13.1	The provider will partner with a community-based organization to implement an evidence-based parent education program, the Positive Parenting Program (Triple P) at mental health clinics	$3,307,689	Not included in attached plan.
50	UTHSC-Houston	111810101	2.7.1	The evidence-based automated My Own Health Report (MOHR) tool will be integrated into the patient portal and Electronic Health Record (EHR) at wellness centers and clinics to allow primary care practices to systematically collect patient-reported data on health behaviors (e.g., eating patterns, physical activity, tobacco use, risky drinking) and psycho-social issues (e.g., anxiety, depression, and stress) that are important determinants of chronic disease. CHWs will assist patients in using the MOHR tool and providers will receive training on behavior change counseling and referral to appropriate services.	$8,499,999	Not included in attached plan.
51	MHMRA	113180703	1.11.1	Clients who are unwilling to access crisis services over the phone or in person will reach out through chat/text modalities so that services can be provided and explored before the client needs emergency services or hospitalization.	$2,790,000	Not included in attached plan.

52	UTHSC-Houston	111810101	2.7.1	At wellness centers and clinics, a program will be implemented that includes conduct opt-out HIV/STI testing and behavioral risk assessment; a referral system for persons diagnosed with HIV/STI; provider and patient education about routine testing and risk reduction strategies; and collaboration with community based organizations to develop a community education programs that will attract at-risk persons for testing for HIV/STIs.	$9,750,939	Not included in attached plan.
53	MHMRA	113180703	2.13.1	Expand existing staff to create a dedicated assessment intake team for the emergency back-dock law enforcement intakes.	$5,956,782	Not included in attached plan.
54	UTHSC-Houston	111810101	2.2.2	The provider will implement a Sickle Cell Crisis Prevention Program (SCCPP) that will establish trust relationships between patients and clinicians as patients are met in their home for both chronic preventive and acute impending crisis interventions. Patients may also be transported by SCCPP staff to an accessible outpatient setting, as appropriate. Providing SCD clients with an option for home care instead of ED visits will enhance their quality of life by limiting the intensity of the painful crisis, improve patient and clinician satisfaction, and greatly reduce costs due to ED visits and hospital admissions.	$15,000,000	Not included in attached plan.
55	UTHSC-Houston	111810101	2.6.2	Implement an internet-accessible portal within clinics to evidence-based disease management, disease prevention, and health promotion interventions for youth and adults with additional access from community locations (e.g. homes, schools, and organizations). The portal will be accessible to patients prior to their visits to provide a patient profile on important self-management issues for discussion with the provider and to provide self-management skills training as part of a self-	$5,353,500	Not included in attached plan.

				management action plan following the clinic visit. (Focus: Asthma, Epilepsy, and HIV)		
56	UTHSC-Houston	111810101	1.1.1	Wellness Center #5- The newly established center, targeting a medically underserved area and/or medically underserved population, will provide primary and preventive clinical services, health screenings, referral services, health education and promotion, and chronic disease self-management skills development.	$20,604,075	Not included in attached plan.
57	UTHSC-Houston	111810101	1.1.1	Wellness Center #4- The newly established center, targeting a medically underserved area and/or medically underserved population, will provide primary and preventive clinical services, health screenings, referral services, health education and promotion, and chronic disease self-management skills development.	$20,604,075	Not included in attached plan.
58	UTHSC-Houston	111810101	1.1.1	Wellness Center #8- The newly established center, targeting a medically underserved area and/or medically underserved population, will provide primary and preventive clinical services, health screenings, referral services, health education and promotion, and chronic disease self-management skills development.	$20,604,075	Not included in attached plan.
59	UTHSC-Houston	111810101	1.1.1	Wellness Center #2- The newly established center, targeting a medically underserved area and/or medically underserved population, will provide primary and preventive clinical services, health screenings, referral services, health education and promotion, and chronic disease self-management skills development.	$20,604,075	Not included in attached plan.
60	UTHSC-Houston	111810101	1.1.1	Wellness Center #10- The newly established center, targeting a medically underserved area and/or medically underserved population, will provide primary and preventive clinical services, health screenings, referral	$20,604,075	Not included in attached plan.

				services, health education and promotion, and chronic disease self-management skills development.		
61	UTHSC-Houston	111810101	1.1.1	Wellness Center #6- The newly established center, targeting a medically underserved area and/or medically underserved population, will provide primary and preventive clinical services, health screenings, referral services, health education and promotion, and chronic disease self-management skills development.	$20,604,075	Not included in attached plan.
62	UTHSC-Houston	111810101	1.12.2	Create a network of parent support services across a variety of organizations within the local community, including wellness centers, surrounding schools, child care centers, and community-based organizations to implement a comprehensive parent and child behavior intervention that will link with a systematic process for screening families of young children for home violence and dysfunction. Interventions include the evidence-based tiered Positive Parenting Program (Triple P, TP), and the Safe Environment for Every Kid (SEEK) program.	$14,900,784	Not included in attached plan.
63	UTHSC-Houston	111810101	2.7.5	The provider will implement a coordinated approach to reduce obesity and prevent obesity-related comorbidities in adolescents (14-18y) and their families. Adolescents identified as overweight, or obese by clinicians will be referred into a program developed by the National Initiative for Children's Healthcare Quality that includes brief motivational interviewing techniques training for providers and staff, decision supports for clinical care & integrated guidelines into day-to-day practice for identification, screening, use of EHR to identify children at risk for obesity, and supportive education for the family.	$6,151,158	Not included in attached plan.

64	UTHSC-Houston	111810101	2.7.5	The project aims to prevent obesity and promote weight maintenance in children (2-13y) and their families by promoting healthy diet and physical activity behaviors and environments. The project uses the Obesity Chronic Care Model to integrate primary care clinics, community resources, schools and preschools in a systems-level approach to reinforce and sustain behavior change. The project will build upon current health promotion efforts in diet and physical activity with children and their families in the Houston community.	$7,051,158	Not included in attached plan.
65	UTHSC-Houston	111810101	2.7.1	The program will increase and standardize the use of Screening, Brief Intervention, and Referral to Treatment (SBIRT) for alcohol and drug misuse in wellness centers and clinics targeting patients who are not yet alcohol dependent but are drinking at risk levels and those with severe alcohol dependence and in need of inpatient detoxification and treatment. The project will also target those who report any illicit drug use, or who report taking prescription medication in excess of what is prescribed.	$10,500,000	Not included in attached plan.
66	UTHSC-Houston	111810101	2.7.1	The project aims to decrease Second Hand Smoke Exposure (SHSe) and reduce related mortality and morbidity, particularly among children (under 18 years of age) with Pediatric Asthma by implementing a comprehensive stepped-care approach that seeks to protect non-smoking children (and adults who live with smokers) from SHSe and offer resources for quitting to patients who smoke.	$9,999,999	Not included in attached plan.
67	UTHSC-Houston	111810101	2.71	The provider will implement Ask-Advise-Connect (AAC), an evidence-based program that links tobacco users to Quitline treatment support by screening and proactively contacting these patients for follow-up within 48 hours.	$8,449,998	Not included in attached plan.

68	UTHSC-Houston	111810101	2.6.2	This project is an evidence-based, multidisciplinary weight management program for adults based on the LookAHEAD intervention, which produces clinically significant weight loss, improves chronic disease parameters, reduces medication requirements, and enhances functional status. The intervention also has a ripple effect on spouses and has been shown to be effective in all ethnic/racial groups.	$8,450,700	Not included in attached plan.
69	UTHSC-Houston	111810101	2.6.3	Integrate community health workers into pediatric and family practice centers to improve chronic disease management of asthma using Healthy Homes, an evidenced based environmental intervention through health education, home assessments, and by monitoring outcomes.	$9,750,939	Not included in attached plan.
70	UTHSC-Houston	111810101	2.1.2	Establish pediatric medical homes for children and youth with special health care needs (CYSHCN) in extended care clinics in medically underserved areas to provide multidisciplinary services, improve care coordination, and facilitate transitions.	$13,891,326	Not included in attached plan.
71	UTHSC-Houston	111810101	1.12.2	The proposed project will provide three levels of services to community colleges: 1. faculty and staff training on student mental health issues, and suicide prevention; 2. crisis intervention, assessment and brief therapy; 3. peer-to-peer support; and 4. Psychiatric assessments and treatment.	$11,791,440	Not included in attached plan.
72	UTHSC-Houston	111810101	2.15.1	Using Health Families America (HFA), and evidence-based, home visitation program which utilizes trained and supervised local, community-based lay home visitors, and is one of the home visitation models utilized by the USDHHS Maternal, Infant, and Early Childhood Home Visiting Program (MIECHV), the project aims to improve infant medical and developmental outcomes and maternal pregnancy related outcomes (including postpartum depression) by implementing a	$12,499,998	Not included in attached plan.

				comprehensive program of home visitation in conjunction with regular clinic-based maternal screening for post-partum depression (PPD).		
73	UTHSC-Houston	111810101	2.7.2	Implement an Internet-accessible portal to deliver direct access, or linkage to health promotion interventions for youth within clinics and wellness centers with additional access by patients from Internet-accessible community locations (e.g. homes, schools, and organizations). (Focus: Smoking Cessation)	$5,353,500	Not included in attached plan.
74	UTHSC-Houston	111810101	2.6.2	The project will provide an evidence-based program of pre-conception counseling to women at risk of alcohol and/or tobacco-exposed pregnancies, women who are obese, and women with other pregnancy risk factors to reduce risks of poor pregnancy outcomes, which will include alcohol/tobacco cessation services, immunization services (e.g., Hep B and rubella, if seronegative), folic acid and/or iron supplementation, STI testing, and referrals to clinics to discuss medications and chronic conditions.	$7,500,000	Not included in attached plan.
75	UTHSC-Houston	111810101	2.6.2	The provider will implement two evidence-based bilingual healthcare programs to promote diet and physical activity in pregnant women and mothers with infants (0-2y). One program is a CHW-led nutrition education program specifically for pregnant women and women with infants and the other program is a nationally-recognized cooking program led by CHWs and RDs and works in collaboration with several community organizations such as food banks, WIC clinics, etc.	$8,551,158	Not included in attached plan.

76	UTHSC-Houston	111810101	2.2.2	Targeting elderly patients, disabled patients, patients with incurable/advanced diseases and/or painful physical conditions, and postpartum women up to 2 weeks after delivery, this project will provide home health care focused on palliative care needs – to improve/maintain quality of life and optimize functional health status.	$13,986,000	Not included in attached plan.
77	UTHSC-Houston	111810101	2.7.1	This project will implement an evidence-based teen sexual health and dating violence prevention program among 6th-12th graders in clinics and wellness centers; train healthcare providers in implementing this program and in recognizing the signs and symptoms of dating violence and in administering effective adolescent DV screening practices for their adolescent patients ages 10-19; and replicate an evidence-based contraception project that has been shown to decrease teen birth rates by 59%.	$8,499,999	Not included in attached plan.
78	UTHSC-Houston	111810101	2.6.1	This project will improve the quality and availability of chronic disease management by using mobile health tools (mHealth) to enhance communication between clinicians and patients through cell phones and sensors that send data (e.g. blood glucose, blood pressure, weight, oxygen saturation) to clinicians.	$9,639,039	Not included in attached plan.