Project Option 2.2.2-Apply evidence-based care management model to patients identified as having high-risk health care needs: CL3 Preconception and Gestational Diabetes Care

<u>**Unique RHP Project Identification Number:**</u> 111810101.2.7
<u>**Performing Provider Name/TPI:**</u> UTHealth, UTPhysicians/111810101

<u>**Project Description:**</u> 2.2 Expand Chronic Care Management Models (Option 2.2.2)
     Half of all Americans suffer from at least one chronic disease. The current reactive health care system was built with the mindset of the 19th century when acute infectious diseases where the major burden on the health system. The physicians' role in the health care system was to fix patients who showed up sick and send them back to their normal daily life. Hence the health system has a passive and reactive orientation: it waited for the patient to fall sick before it acted to solve the problem.
     Today, patients live with chronic diseases for a fairly long time. Chronic diseases require ongoing adjustments and interactions of the affected person with the health care system. Unfortunately the current health care system has not adjusted to the peculiar demands of chronic care. Currently, providers experience challenges in following established practice guidelines over sustained periods, there is lack of care coordination and active patient follow up, and patients are inadequately trained to manage their illnesses. The need to transform the health care system to become more proactive led to the development of the chronic care model (CCM). The evidence-based CCM has been shown to improve patient care for chronic disease, thereby leading to improved outcomes and a reduction in costs (Coleman et al. Evidence On The Chronic Care Model In The New Millennium, Health Affairs 28, no. 1 (2009): 75–85; 10.1377/hlthaff.28.1.75). The model identifies the essential elements of a health care system that encourages high-quality chronic disease care. These elements are self-management support, delivery system design, decision support, clinical information systems, and the community. Evidence-based change concepts under each element, in combination, foster productive interactions between informed patients who take an active part in their care and providers with resources and expertise. The Model can be applied to a variety of chronic illnesses, health care settings and target populations.
     For this project we propose to identify young women in the 18-30 year age group who are newly diagnosed with diabetes and provide pre-conception diabetes education for these women through a proactive outreach program based on the CCM. Additionally, we will provide intensive pre-conception diabetes and risk factor management for these women and maintain a database for outcomes of this project. The necessary infrastructure and staff would be put in place to ensure that patients can access their care teams by phone or email as well as access their medical information through an electronic patient portal. Finally, quality improvement processes will be put in place to assess project impacts and opportunities for continuous improvement.

Goal and Relationship to Regional Goals:

<u>Project Goals:</u>
     To develop and implement a chronic disease management intervention for women of reproductive age with diabetes that will improve effective management of the disease. provide education for the patient about diabetes related to pregnancy and childbirth to assist the patient with self-management of the disease and family planning, to ultimately improve patient clinical indicators, health and birth outcomes, and quality.
<u>This project meets the following regional goals:</u>
     The implementation of chronic care management models for diabetic women of reproductive age will ensure better outcomes for these patients, in line with 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:
    Need: 1) High rates of poor birth outcomes. 2) Insufficient access to services for pregnant women, particularly low income women. 3) High rates of chronic disease and inadequate access to treatment programs and services for illnesses associated with chronic disease.
    Implementation: Staff recruitment and retention. The project will address the challenge of poor birth outcomes among mothers with diabetes in the region by ensuring adequate control of diabetes in pregnancy, thereby avoiding the damaging health effects that come with it. Competitive salaries and incentives will help to ensure recruitment and retention.

5-Year Expected Outcome for Provider and Patients:
We expect to see increased patient involvement in care, and improved diabetes control in women of reproductive age as evidenced by decline in HbA1c levels.

Starting Point/Baseline:
To be determined during DY3.

Rationale:
    In the U.S., 12.6 million women (10.8% of all women aged 20 years or older) have diabetes. Prior to conception and during the first trimester of pregnancy, poorly controlled type 1 diabetes can cause major birth defects in 5% to 10% of pregnancies, but for those with optimized blood glucose levels the risk of birth defects can be reduced. During the 2nd and 3rd trimesters of pregnancy, poorly controlled diabetes can result in very large babies that pose higher risks to mother and child. Furthermore, Hispanics have a 66% higher risk of being diagnosed with diabetes than non-Hispanic whites and non-Hispanic blacks have a 77% higher risk. (2011 National Diabetes Fact Sheet, National Center for Chronic Disease Prevention and Health Promotion, Division of Diabetes Translation, Centers for Disease Control and Prevention. http://www.cdc.gov/diabetes/pubs/estimates11.htm#8 Last reviewed and updated May 23, 2011. Accessed 10-11-12.) According to the 2010 Census, Harris county has 4,092,459 people with 72.1% age 18 and older, 8.4% age 65 and older, and 50.2% female. Extrapolating these numbers to the service area (within a 7-mile radius of clinic location) populations of just two of UT Physicians clinics (Bayshore and Bellaire) we can conservatively estimate that there are 137,372 Hispanic women of reproductive age at risk for diabetes, with 59,207 of these estimated to be either uninsured, or on Medicaid (Harris county rates of uninsured for Harris county residents 0-64 years of age are 28.6% and for those on medicaid the rate is 14.5%. Source: 2009. State and County by Demographic and Income Characteristics. SAHIE. U.S. Census Bureau and the Centers for Disease Control and Prevention.).
    Our experience shows that among the already pregnant diabetic women, the mean HbA1c when we first encounter them (usually well into their first or second trimester of pregnancy) is 10%. It is vital to identify this high-risk preconception diabetes group and initiate comprehensive diabetes management, together with education regarding preparation for pregnancy and diabetes self-management early in pregnancy.

Project Components:
    Through the Preconception and Gestational Diabetes Care Program, we propose to meet all required project components listed below.
    a) Conduct monthly reviews to identify women eligible for the program,
    b) Enroll eligible women and assign them to a care team tailored to the patient's health care needs,

c) Provide patient education and self-management support to empower patients to make health lifestyle choices and self-manage their diabetes,
d) Provide coordination with community resources,
e) Ensure that patients can access their care teams in person or by phone or
email,
f) Conduct quality improvement for project using methods such as rapid cycle
improvement.

Milestones and Metrics:

For the Preconception and Gestational Diabetes Care Program, we have chosen the below milestones and metrics based upon the above project components and relationship to project goals and population needs. All baselines and goals will be determined during DY2.

- Process Milestones and Metrics: P-3, P-3.1; P-5, P-5.1
- Improvement Milestones and Metrics: I-18, I-18.1

Unique community need identification numbers the project addresses:
This project addresses community needs CN.2 (Inadequate access to specialty care), CN.7 (Insufficient access to care coordination practice management and integrated care treatment programs), CN.11 (High rates of chronic disease and inadequate access to treatment programs and services for illnesses associated with chronic disease, including diabetes), 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.20 (Lack of access to programs providing health promotion education, training and support, including screenings, nutrition counseling, patient education programs.)

How the project represents a new initiative or significantly enhances an existing delivery system reform initiative:
This project represents a new initiative. UT Physicians proposes to provide chronic care management to its women patients of child-bearing age with diabetes, based upon Wagner's Chronic Care Model, which is a comprehensive, pro-active, patient-centered model of care, that is tailored specifically to this disease and the needs of this high-risk group of patient's needs for managing it.

Related Category 3 Outcome Measure(s):

OD-1 Primary Care and Chronic Disease Management
IT-1.10 Diabetes care: HbA1c poor control (>9.0%)17- NQF 0059) (Stand-alone measure) (Women of reproductive age)
Reduce the percentage of women of reproductive age (18-55 years of age) with diabetes (type 1 or type 2) who had hemoglobin A1c (HbA1c) control > 9.0%.

Reasons/rationale for selecting the outcome measures:

Relationship to other Projects:

1.1 (C3) - Expanded capacity in primary care will ensure the availability of staff to implement the expansion of chronic care management model for the high risk patients targeted by this project.
1.2 (A2, SPH1) - Part of the innovative training of primary care providers will be centered on the chronic care model with emphasis on team-based practice.

1.3 (C12) - The disease management registry (Information Technology support) is a very improtant component of Wagner's Chronic Care Model.

1.7 (A1) - Telemedicine will help to ensure that these high-risk chronic care patients will get specialist input into their care when and where needed.

1.9 (C4) - Also, the expansion of specialty care in the primary care setting will help to ensure that chronic care patients will get specialist input into their care when and where needed.

1.10 (MS1) - The QI project will aid in the adoption of a 'whole systems' approach to chronic management, enabling the implementation of a comprehensive and proactive approach to chronic care in which the patient is kept in continuos contact with the care team.

2.1 (C1) - The expansion of chronic care management models will ensure more effective care for patients enrolled in UT Medical Homes.

Relationship to Other Performing Providers' Projects in the RHP:

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, provided a spreadsheet which contained 6 criteria, which could be rated on a 10-point scale each project. The ratings for each criteria were weighted, summed for each project to arrive at a total score (value weight) for each project. The sum of all the project's total scores were then divided by the percent of total DSRIP funds available for that year to arrive at a dollar value multiplier to be applied towards each project's total score (value weight), thereby allocating a greater proportion of available funds towards those projects valued highest based upon the 6 criteria. UTHealth used this approach, with a couple of exceptions. First, we did not use two of the criteria and second, we began with a 5-point scale for each criteria rated, then doubled the score to put it on a 10-point scale. Following are the criteria, the way points were awarded for projects using that criteria, and the reasons two of the criteria were not used:

   1. Transformational Impact (Weight = 20%): Points were awarded for projects that meet the community benefit criteria. Score – 1 point for each of the following: improves access; improves quality; improves costs (long-term cost-savings); transformative (Innovative), collaborative (partners with other organization(s)).

   This project's score for this criteria: 3 X 2 = **6**

   2. Population Served/Project Size (Weight = 20%): Points were awarded based on the size of the population affected and whether the target population is uninsured or on Medicaid. Score - Four points for the whole population, 3 points for a relatively large population, 2 points for a moderate-sized population, and 1 point for a relatively small population. If a significant proportion of the target population is uninsured/Medicaid, add 1 additional point.

   This project's score for this criteria: 1 X 2 = **2**

   3. Aligned with Community Needs (Weight = 20%): Points were awarded based on judgments in two categories: whether or not the CNA indicates a need in the area of the project and the severity of the health/healthcare need(s) the project addresses. Score A - CNA indication: 2 points for strong support (bottom 25%), 1 point for moderate support. Score B - Severity: 3 points for issues judged to have

significant impact on population health, healthcare access, and quality; 2 points for moderate severity issues.

> This project's score for this criteria: 2 X 2 = **4**

4. <u>Cost Avoidance</u> (Weight = 15%): Points were awarded based on judgment of project's cost effectiveness relative to similar projects. Score – 5 points for very low cost per person, 4 points for low cost per person, 3 points for moderate cost per person, 2 points for high cost per person, 1 point for very high cost per person.

> This project's score for this criteria: 3 X 2 = **6**

5. <u>Partnership/Collaboration</u> (Weight = 10%): ***This was not rated***, because UTHealth plans to partner with Harris Health to perform many similar projects, so the rating would have been the same for all projects. This would have diluted the scores, hiding the more significant variations in other value criteria.

6. <u>Sustainability</u> (Weight = 15%): ***This was also not rated***, because UTHealth does not consider any of the projects to be unsustainable, or at the very least do not consider one project less sustainable than another, so giving the projects the same, or very similar ratings on this criteria would have again had a diluting effect, hiding the more significant variations in other value criteria.

Total Valuation Score for this project: **3.3**

111810101.2.7	2.2.2	N/A	APPLY EVIDENCE-BASED CARE MANAGEMENT MODEL TO PATIENTS IDENTIFIED AS HAVING HIGH-RISK HEALTH CARE NEEDS: CL3 PRECONCEPTION AND GESTATIONAL DIABETES CARE	
	UTHealth, UTPhysicians			111810101
Related Category 3 Outcome Measure(s):	111810101.3.18	IT-1.10	Diabetes care: HbA1c poor control (>9.0%)17- NQF 0059) (Stand-alone measure) (Women of reproductive age)	
Year 2 (10/1/2012 – 9/30/2013)	**Year 3 (10/1/2013 – 9/30/2014)**		**Year 4 (10/1/2014 – 9/30/2015)**	**Year 5 (10/1/2015 – 9/30/2016)**
Milestone 1 [P-3.]: Develop a comprehensive preconception and gestational diabetes care management program for women of reproductive age (18-55 years of age) with diabetes. Metric 1 [P-3.1.]: Documentation of Care management program. The Wagner Chronic Care Model will be utilized in program development. Baseline/Goal: TBD Data Source: Program materials Milestone 1 Estimated incentive payment: $ 1,544,349	**Milestone 2** [P-5.]: Implement a risk-reduction program for women of reproductive age (18-55 years of age) with diabetes mellitus. Metric 1 [P-5.1.]: Increase the number of women of reproductive age (18-55 years of age) with diabetes mellitus enrolled in the program. Baseline/Goal: TBD Data Source: Program enrollment records Milestone 2 Estimated incentive payment: $ 1,706,867		**Milestone 3** [I-18.]: Improve the percentage of women of reproductive age (18-55 years of age) with diabetes mellitus with self-management goals. Metric 1 [I-18.1.]: Percentage of women of reproductive age (18-55 years of age) with diabetes mellitus with self-management goals. Goal: TBD Data Source: Registry Milestone 3 Estimated incentive payment: $ 1,825,951	**Milestone 4** [I-18.]: Improve the percentage of women of reproductive age (18-55 years of age) with diabetes mellitus with self-management goals. Metric 1 [I-18.1.]: Percentage of women of reproductive age (18-55 years of age) with diabetes mellitus with self-management goals. Goal: TBD Data Source: Registry Milestone 4 Estimated incentive payment: $ 1,764,204
Year 2 Estimated Milestone Bundle Amount: $1,554,349	Year 3 Estimated Milestone Bundle Amount: $1,706,867		Year 4 Estimated Milestone Bundle Amount: $1,825,951	Year 5 Estimated Milestone Bundle Amount: $1,764,204
TOTAL ESTIMATED INCENTIVE PAYMENTS FOR 4-YEAR PERIOD: $6,851,371				

Title of Outcome Measure (Improvement Target): IT-1.10 Diabetes care: HbA1c poor control (>9.0%)17- NQF 0059) (Stand-alone measure)

Unique RHP outcome identification number(s): 111810101.3.18

Outcome Measure Description:

OD-1 Primary Care and Chronic Disease Management
IT-1.10 Diabetes care: HbA1c poor control (>9.0%)17- NQF 0059) (Stand-alone measure) (Women of reproductive age)
Reduce the percentage of women of reproductive age (18-55 years of age) with diabetes (type 1 or type 2) who had hemoglobin A1c (HbA1c) control > 9.0%.

Process Milestones:
- DY2: P-1 Project planning - engage stakeholders, identify current capacity and needed resources, determine timelines and document implementation plans
- DY3: P-3 Develop and test data systems; P-2 Establish baseline rates

Outcome Improvement Targets for each year:
- DY4: IT-1.10 Reduce by 3% the percentage of women of reproductive age (18-55 years of age) with diabetes (type 1 or type 2) who had hemoglobin A1c (HbA1c) control > 9.0%.
- DY5: IT-1.10 Reduce by 5% the percentage of women of reproductive age (18-55 years of age) with diabetes (type 1 or type 2) who had hemoglobin A1c (HbA1c) control > 9.0%.

Rationale:
Since HbA1c is a good measure of blood glucose control and the mean HbA1c when we first encounter already pregnant diabetic women (usually well into their first or second trimester of pregnancy) is 10%, we can reasonably use the HbA1c measure as a good indicator of the success of this program in reducing poor blood glucose control.

Outcome Measure Valuation:
Using the same project valuation scores assigned to the projects, the dollars allotted for each year were distributed across the projects' related Category 3 measures. For demonstration year 2 the amount was 5%, and for DYs 3, 4, and 5, the proportion of the funds allotted were 10%, 10%, and 20%, respectively.

111810101.3.18	IT-1.10	Diabetes care: HbA1c poor control (>9.0%)17- NQF 0059) (Stand-alone measure) (Women of reproductive age)	
	UTHealth, UTPhysicians		111810101
Related Category 1 or 2 Projects:	111810101.2.7		
Starting Point/Baseline:	To be determined during DY3.		
Year 2 **(10/1/2012 – 9/30/2013)**	**Year 3** **(10/1/2013 – 9/30/2014)**	**Year 4** **(10/1/2014 – 9/30/2015)**	**Year 5** **(10/1/2015 – 9/30/2016)**

Process Milestone 1 [P-1]: Project planning - engage stakeholders, identify current capacity and needed resources, determine timelines and document implementation plans
   Data Source: Project reports and documents
 	
Process Milestone 1 Estimated Incentive Payment: $ 81,808
	Process Milestone 2 [P-2]: Establish baseline rates
	   Data Source: Provider reports
	
	Process Milestone 2 Estimated Incentive Payment: $ 94,826
	
	Process Milestone 3 [P-3]: Develop and test data systems
	   Data Source: Project reports, EMR, claims
	
	Process Milestone 3 Estimated Incentive Payment: $ 94,826
		Outcome Improvement Target 1 [IT-1.10]: Reduce by 3% the percentage of women of reproductive age (18-55 years of age) with diabetes (type 1 or type 2) who had hemoglobin A1c (HbA1c) control > 9.0%.
		   Data Source: EMR, Registry, Claims
		
		Outcome Improvement Target 1 Estimated Incentive Payment:
		$ 202,883
			Outcome Improvement Target 2 [IT-1.10]: Reduce by 5% the percentage of women of reproductive age (18-55 years of age) with diabetes (type 1 or type 2) who had hemoglobin A1c (HbA1c) control > 9.0%.
			   Data Source: EMR, Registry, Claims
			
			Outcome Improvement Target 2 Estimated Incentive Payment:
			$ 441,051

Year 2 Estimated Outcome Amount: $ 81,808	Year 3 Estimated Outcome Amount: $ 189,652	Year 4 Estimated Outcome Amount: $ 202,883	Year 5 Estimated Outcome Amount: $ 441,051
TOTAL ESTIMATED INCENTIVE PAYMENTS FOR 4-YEAR PERIOD: $ 915,394			