Southeast Texas Regional Healthcare Partnership (RHP3)

Community Health Needs Assessment

REGION 3

2017

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REGION 3 ANCHOR EXECUTIVE SUMMARY

The updated Community Health Needs Assessment (CHNA) presents the status of public health across Texas Regional Healthcare Partnership (RHP) 3's nine counties. The document also assesses how community needs changed since the first RHP3 CHNA was published in 2012. According to data presented in both Assessments, many of the community's needs in 2012 remain needs today. The introduction below asks why and suggests how the Region should move forward in the quest to transform healthcare through the Delivery System Reform Incentive Payment program (DSRIP).

What Did the 2017 Community Health Needs Assessment Find?

The community needs highlighted in the 2017 assessment do not differ greatly from those outlined in the 2012 assessment. The priority areas are:

- The lack of primary and specialty care Providers, particularly for uninsured individuals and people requiring behavioral health services, results in insufficient access to care and frequent long waits for services.
- Inadequate transportation options continue to present challenges for many low-income residents and people living in rural communities with few or no public transportation options, and limited services for emergency transportation.
- The Region continues to face a high prevalence of chronic disease and poor health, including diabetes, heart disease, asthma, cancer and cardiovascular disease.
- Behavioral Health needs continue to grow throughout the Region, which lacks both the Providers and facilities to adequately meet the demand for behavioral healthcare services.
- While care coordination and collaboration among Providers have improved dramatically under the DSRIP program, patient services are still often fragmented and uncoordinated, creating challenges for both patients and Providers and contributing to inefficient healthcare delivery.
- A diverse population with varying cultural and socio-economic backgrounds requires a focused approach to address the cultural and economic barriers that contribute to wide variations in healthcare services and outcomes.

How Could the 2012 and 2017 Assessments Have Made Similar Findings After DSRIP Investments?

The 2017 assessment is an update on the RHP3 community's needs, not an assessment of DSRIP's impact. In fact, several reasons explain why the Region hasn't seen substantial change in community needs since 2012. First, most of the health data available for the 2017 needs assessment was measured in 2015, before many DSRIP projects were fully implemented. As a result, the data does not reflect DSRIP's full impact. Second, the population served by DSRIP (mostly uninsured and Medicaid) is only a portion of the population about which many recent publicly-available sources collect data. The DSRIP program's impact can be more appropriately assessed on the intervention population alone, a challenging feat given that the state does not have detailed data on the uninsured population's healthcare nor does it regularly match DSRIP Medicaid claims to specific DSRIP projects. Third, while DSRIP improved access to healthcare and many projects sought to navigate patients to social services, healthcare itself has a smaller impact on health outcomes than powerful social determinants. To see

greater population health improvement, multi-faceted interventions in the social determinants of health should occur in tandem with patient navigation and increased healthcare access.

What Else Can the Region Gather to Understand DSRIP's Impact?

The Region 3 Anchor gathered additional local information about DSRIP and community health to complement the data used in the 2017 CHNA. When DSRIP Learning Collaborative outcomes and project level metric achievement data are combined with the CHNA's data, the findings present more nuanced perspectives on the impacts of DSRIP in RHP3 and how community needs look in 2017. This information is detailed in the Appendices and discussed briefly below.

Learning Collaborative outcomes

The RHP3 Learning Collaborative implementation in Demonstration Years (DY) 3-6 shows that:

- Organizations previously unfamiliar with each other are connecting and sharing knowledge and innovations.
- DSRIP and non-DSRIP organizations are building continuums of care through collaboration
- Project owners are implementing new tools and performing value analyses learned through mentoring and Regional learning opportunities.
- Groups of stakeholders are working together to collect data on issues that were previously not clearly understood.
- Stakeholders agree on the broad issues that hamper healthcare transformation
- Healthcare Providers no longer view themselves in silos of care, but as a part of a larger system tapestry that includes the social determinants of health.
- Healthcare Providers' vigilance in protecting patients' information hinders appropriate data sharing necessary for system transformation.
- Sustaining services and collaborations without a dedicated funding stream is a challenge. DSRIP Providers want to sustain effective projects but many cannot do so without DSRIP funding because a substantial proportion of DSRIP patients are uninsured.
- DSRIP Providers and Medicaid Managed Care Organizations are in the early stages of assessing opportunities to partner to serve DSRIP's Medicaid patients.

Metric achievement in volume and quality outcomes

Based on metric achievement reporting, DSRIP's local impact can be understood in greater detail. The most obvious result of DSRIP is that access to care and overall DSRIP patient visits grew. In the 12 months of DY5 alone, the Region's DSRIP projects that measured encounters recorded 912,630 encounters more than occurred before DSRIP was implemented. More than half were primary care encounters. In projects measuring visits by individuals, Region 3 recorded 571,222 unique individuals receiving services (above pre-DSRIP baselines) in the 12 months of DY5 (though an overlap of individuals between projects likely occurred). In fact, several project types—chronic care, ER, specialty, and prevention/wellness projects— saw more volume than anticipated. While it is clear that demand was high, the data does not demonstrate whether additional demand still exists. Conversely, behavioral health and primary care projects recorded less volume than the projects' aggregate goals. Although the DY5 carry forward period is not complete (indicating that some additional volume is yet to be reported), Regional conversation is needed to evaluate why this occurred. Potentially, with behavioral health and primary care being the most popular project areas, service supply may have exceeded demand or

Providers faced unanticipated staff shortages. Perhaps project locations didn't draw patients as expected or projects were implemented late. Further conversation among DSRIP stakeholders can elucidate the data's findings.

Next, measured at the aggregate level, Region 3's projects improved health outcomes. The Region's Providers achieved 90% of DY4 Category 3 funds within two 12-month measurement periods, and 63% of DY5 Category 3 funds within the first of two possible 12-month measurement periods. While the Region's aggregate quality outcome performance shows that at least half of quality funds were achieved (indicating health improvement), patient health in certain outcome domains tied to DSRIP projects improved more than others. This indicates that more work or a different approach is needed to substantially improve health outcomes in those areas. Based on DY4 and DY5 goal achievement the quality outcome domains with the most challenges are listed below:

- Primary care and chronic disease management
- Potentially preventable readmission
- Oral health
- Perinatal outcomes and maternal and child health
- Right care, right setting
- Primary prevention

Collectively, What Does This Information Mean for Region 3?

DSRIP funding is integral

Among all of the sources, DSRIP funding was considered to be an integral factor in the establishment of new services to meet the needs of an otherwise underserved patient population. DSRIP funding is not, however, an indefinite financial resource for services that help the Medicaid Low-income Uninsured (MLIU) population. This is a threat to the Region, as a majority of Providers are unsure of their ability to continue current DSRIP projects without DSRIP funds and/or have not identified funding resources outside of DSRIP. The significance of this weakness is highlighted by the revised CHNA, which indicates that additional financial resources are necessary to continue healthcare improvements in the future and meet the needs of the growing uninsured population.

Collaboration leads to improvement

DSRIP has increased collaboration amongst Providers in the Region. Successes in collaboration also present an opportunity to advance partnerships in RHP3, as indicated in Regional Quality Plan findings. Learning Collaborative experiences show that structured, goal-driven collaborations work best. While DSRIP has increased collaboration within the Region, more engagement outside of DSRIP-related health care efforts is needed in order to further transform regional population health and the healthcare system.

More work on care coordination and the social determinants of health is needed

Region 3 is large. Difficulties exist in navigating patients to the appropriate level of care and to social services. Region 3 surveys indicate that over 70% of RHP3 respondents agreed that their organization had challenges navigating patients to necessary social resources, which could be due to Providers not understanding patient needs, not being aware of appropriate resources for patients, and/or the

Region not having an adequate number of appropriate social resources. Furthermore, the revised CHNA mirrored such conclusions by stating that patient care generally remains fragmented and uncoordinated throughout the Region (it is unclear whether patients still face insufficient access to primary and specialty care after DSRIP implementation, but if so, this likely contributes to the problem). Additionally, stable housing is a central challenge for patients with behavioral health conditions and inadequate transportation and the inability of patients to make use of it (to connect them to healthcare, healthy food, or work opportunities) continue to challenge the Region.

Data sharing and integration could benefit patients

Finally, data sharing and infrastructure—as both Regional weaknesses and as opportunities—emerged from multiple sources as a significant theme. Survey results collected by the Regional Quality Plan committee found that almost 50% of Region 3 respondents expressed their willingness to engage in data sharing. Still, a great number of Providers are concerned over the appropriate methods of data sharing and following HIPAA regulations. Approximately 70% of survey respondents acknowledged they encounter barriers when collaborating with other institutions to share healthcare data. The value of data sharing is outlined in the revised CHNA under key challenges, which reiterates the need for coordinated technological infrastructure to support care collaboration. Having the ability to extract and share pertinent patient information between Provider systems and across varying EMRs could potentially reduce duplicative or unnecessary healthcare and social services.

How Should Region 3's DSRIP Stakeholders Move Forward?

To improve regional population health over the next several DSRIP years, the Region's DSRIP stakeholders should consider:

- Supporting impactful DSRIP projects by assessing how to scale them up, hard wire them, collaborate with them, or transition them to a new owner in the Region if needed.
- Continuing to focus on providing access to behavioral healthcare and improving the overall well-being of patients with behavioral health conditions.
- Gradually shift resources from costly acute care interventions toward chronic disease prevention. Providers must plan for how to maintain healthcare access for the medically underserved and improve health quality with potentially less funding. Focusing on prevention should be a part of the solution.
- Seeking to improve health behaviors and impact the social determinants of health by understanding and treating each patient not just as a biological system but as a unique individual, a person situated in a social network, and a product of the physical and policy environment in which they live.
- Broadening healthcare collaborations to include other sectors of the social safety net. These collaborations can be made by communicating shared values, but will require developing technical know-how, building relationships, investing resources, leadership, and trust.
- Assessing whether the Region's current social safety net is strong enough, then determining what investment would be needed to improve it and identifying the right actors and investors to make necessary changes.
- Participating in efforts to identify values the Region 3 DSRIP Provider community shares to determine what community health needs have buy-in to make change at a Regional level.
- Participating in Regional efforts to improve areas of community need and selecting DY7-8 Measures or Measure Bundles related to community needs.

2017 REGION 3 COMMUNITY HEALTH NEEDS ASSESSMENT

Report by: Health Management Associates

Introduction

The Southeast Texas Regional Healthcare Partnership (RHP3) is the largest RHP in the Texas Delivery System Reform Incentive Payment (DSRIP) program. The Region is spread across nine counties and includes more than 5.2 million people who receive healthcare through one of the most comprehensive healthcare systems in the world. The counties in RHP3 include: Austin, Calhoun, Chambers, Colorado, Fort Bend, Harris, Matagorda, Waller, and Wharton. While each county has a distinct population and health care infrastructure designed to serve the local community, patterns of health care utilization and physician referrals commonly cross county lines, providing access to an extended network of Providers and organizations positioned to serve the diverse population of this Region.

The overarching goals that guided the development of the RHP3 plan (the plan) include the following:

- Develop a regional approach to healthcare delivery that leverages and improves on existing programs and infrastructure; is responsive to patient needs throughout the entire Region; and improves healthcare 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 healthcare 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 the existing healthcare 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 planning, implementation, and evaluation processes.

This Community Health Needs Assessment (CHNA) is a DSRIP program participation requirement for Demonstration Years 7-8 and includes updates that reflect regional changes since the initial CHNA was issued in 2012. The purpose of the report is to provide an overview of regional healthcare needs and challenges to identify health priorities and develop strategies for addressing the issues through the DSRIP program and other collaborative initiatives. This report includes an overview of the CHNA process, demographic data on the communities and population served by RHP3, summary information on health care characteristics and status, and identification of healthcare priorities for delivery system improvements and reform.

Process for Updating the Community Health Needs Assessment

The process for updating the CHNA was similar to the process used for the 2012 CHNA, which focused on a review of population health data, including a combination of both qualitative and quantitative data sources. As documented throughout this report, a variety of federal, state and local health data were used to document population statistics and identify health care challenges and needs regionally and within specific communities. Examples of data sources used include:[1]

- University of Wisconsin Population Health Institute, County Health Rankings
- Texas Department of State Health Services Health Facts Profile
- U.S. Census Bureau Current Population Survey
- U.S. Census Bureau American Community Survey
- U.S. Census Bureau, State and County Quick Facts
- Texas State Data Center Population Projections
- Houston Methodist Hospital Community Health Needs Assessment, 2016-2019
- Texas Children's Hospital Community Health Needs Assessment 2016
- Memorial Hermann Health System Community Health Needs Assessment 2016
- CHI St. Luke's Health 2016 Community Health Needs Assessment and Implementation Strategy
- Greater Houston Partnership
- Kaiser Family Foundation
- School of Public Health, University of Texas Health Science Center at Houston

In addition to the data analysis, stakeholder participation was encouraged throughout the process, with multiple opportunities for input. Announcements regarding the CHNA update were stated on monthly Regionwide call agendas distributed via email to Performing Providers and were discussed on Regionwide calls, with instructions on how to provide information and comments. All RHP performing Providers were notified directly of the CHNA process and encouraged to provide documents and resources for inclusion in the analysis. The CHNA process was discussed at the February 2017 RHP3 Learning Collaborative, including a preliminary presentation on CHNA findings and an overview of how stakeholders could participate in the process.

Community input also played a significant role in the Community Health Needs Assessments recently completed by the Region's participating hospital Providers. Each of these CHNAs included substantial input from stakeholders throughout the Region, including healthcare Providers of all types, public health agencies, community groups, academic institutions, community organizations, policy makers, and elected officials. Focus groups and interviews were conducted with hundreds of healthcare experts and healthcare decision makers to identify specific challenges and health care needs faced by Providers and residents. The findings from these assessments in conjunction with the healthcare and demographic statistical data were used to develop the list of community needs identified in this report.

Summary of Findings

While many of the priority health needs in the Region have not changed since the 2012 CHNA, stakeholders that contributed to these findings repeatedly noted that progress has been made in recent

[1] Complete citations for resources are included throughout the report

years. However, due to the large population served in RHP3, the large number of uninsured individuals, ongoing economic challenges and the extensive healthcare needs of the communities served, significant healthcare improvements will take many years to achieve and will require increasing financial and healthcare personnel resources due to the Region's continued growth. A key takeaway from this analysis is that regional collaboration on healthcare delivery, health promotion and chronic disease treatment and prevention is critical to the success of RHP3's DSRIP program for improving population health and access to care. While the Houston area has long enjoyed a collaborative environment among DSRIP Providers, the DSRIP program provided new opportunities to work together to develop strategic, deliberate plans for improving the healthcare infrastructure to address the many varied needs of the community.

The progress over the past five years is reflected in improved health outcomes and access to care that may not yet be obvious in statistical data, but is reflected on a daily basis by the health improvements Providers see in the thousands of individuals served by DSRIP projects. Due to the large volume of DSRIP projects and the complexities of the tracking and reporting process, this report does not include a comprehensive summary of the many accomplishments achieved to date. However, detailed information on project descriptions, goals and achievements is available at https://public.tableau.com/profile/texashhsc#!/vizhome/TexasDSRIPDashboard_02-06-2017/DSRIPAmountsbyRHP. These accomplishments translate into improvements such as:

- Expanding specialty care by increasing access to pediatric ophthalmology services
- Implementation of a new program to provide care coordination to reduce non-urgent ambulance services and unnecessary ER visits by linking patients to primary and preventive services in lieu of unnecessary emergency care
- Implementation of a day treatment program for psychosocial rehabilitation of adults diagnosed with a serious and persistent mental health problem
- Improving services for geriatric patients by assigning special hospital beds for these services and assigning a Senior Care Coordinator to manage and coordinate services and follow-up care
- Expanding access to primary care by establishing a new adult-focused primary care clinic
- Establishing a prevention and wellness Community Health Center that operates on extended hours, including weekends and evenings, to make it more convenient for low-income working adults to obtain care
- Implementation of a care management program that integrates primary care and Behavioral Health services for patients who do not already have a primary care physician

While the community can expect continued progress and measurable improvements throughout the remaining years of the DSRIP program and beyond, our Region still has significant unmet healthcare needs and opportunities for expansion of existing projects. Based on the quantitative and qualitative data provided in this report and the research included in numerous community assessments and stakeholder meetings held throughout the Region by our participating hospitals, the following priority challenges and community needs were identified:

- The lack of primary and specialty care Providers, particularly for uninsured individuals and people requiring behavioral health services, results in insufficient access to care and frequent long waits for services.

- Inadequate transportation options continue to present challenges for many low-income residents and people living in rural communities with few or no public transportation options, and limited services for emergency transportation.
- The Region continues to face a high prevalence of chronic disease and poor health, including diabetes, heart disease, asthma, cancer and cardiovascular disease.
- Behavioral Health needs continue to grow throughout the Region, which lacks both the Providers and facilities to adequately meet the demand for behavioral health care services.
- While care coordination and collaboration among Providers have improved dramatically under the DSRIP program, patient services are still often fragmented and uncoordinated, creating challenges for both patients and Providers and contributing to inefficient health care delivery.
- A diverse population with varying cultural and socio-economic backgrounds requires a focused approach to address the cultural and economic barriers that contribute to wide variations in healthcare services and outcomes.

Please note that this list is not intended to be a comprehensive list of all concerns the Region faces. It is limited to the issues most commonly identified in the literature and by community stakeholders. Clearly the Region faces numerous challenges in addition to those listed above, some of which are discussed in this report. For each of these identified health challenges, a number of recommendations for improvements are also included.

A comparison of these community needs to those identified in the Region's prior CHNA conducted in 2012 confirms that many of the same challenges still exist. This should not be interpreted to suggest the DSRIP program is ineffective or has not made a difference. As is indicated by the detailed reporting and evaluation of each individual DSRIP project, significant, documented improvements have occurred. However, each DSRIP project is limited to relatively small populations when compared with the widespread community needs and size of our Region's population. While the long-term goal of the DSRIP program is to develop experience, expertise and best practices for expansion and application to other patients and medical practices/Providers throughout the state, these changes will take time to achieve. With the continued population growth and increasing demand for healthcare services within the nine RHP3 counties, significant progress will require ongoing, long-term commitment and financial investment to achieve measurable improvements across all counties. In addition, many of the available health data used in this report to evaluate progress and identify community needs are at least two years old and do not yet reflect improvements attributed to the DSRIP program. And although the DSRIP program began in 2011, actual implementation of DSRIP projects did not begin until 2012, and much of that time was spent on infrastructure development and planning rather than actual service delivery. As more timely statistical data become available, we anticipate they will demonstrate ongoing progress in addressing the community needs identified above and will provide guidance for decisions regarding expansion or modification of existing DSRIP projects.

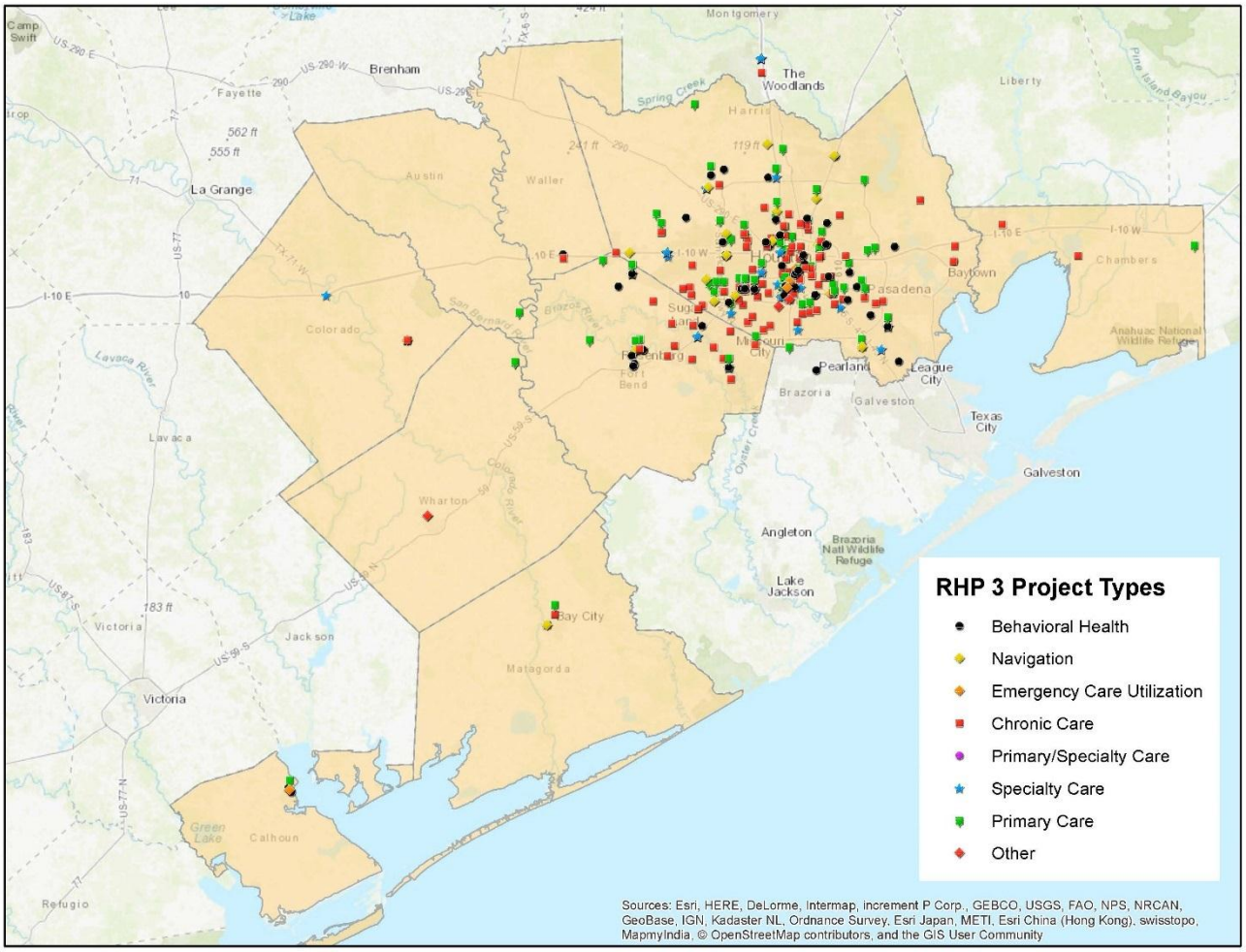
Overview of RHP3 DSRIP Projects

As the largest Regional Healthcare Partnership in Texas, RHP3's plan is by necessity an ambitious, comprehensive effort to improve healthcare services for more than five million people within a nine county area. Although the primary focus of the program and DSRIP projects is on services provided to an estimated 1.32 million individuals in RHP3 who are enrolled in Medicaid/CHIP or have low incomes and are uninsured, the lessons learned and operational improvements are expected to improve the overall healthcare delivery system and quality of care. In 2011, based on input from hundreds of stakeholders and a review of more than 75 health-related research reports and needs assessments, the Region identified an extensive list of critical healthcare needs and challenges. DSRIP projects were carefully evaluated and selected to address the following priority challenges identified as most important to our communities and critical to transformation of the Region's healthcare system:

- Inadequate primary care and specialty care capacity to meet the demands of a large and continually growing population. Every county in the Region is designated a Health Professional Shortage Area for primary care, behavioral healthcare and dental care. Patients experience long waits for appointments and often turn to emergency rooms for primary care and non-urgent health care services that do not require emergency services.
- High prevalence of chronic disease, including diabetes, obesity, cancer, asthma and heart disease;
- High prevalence of unhealthy lifestyle behaviors, including smoking, substance abuse, lack of exercise, and poor nutritional habits;
- A diverse population that includes a large number of immigrants that speak more than 90 different languages requiring language interpretation services and culturally appropriate care;
- Insufficient transportation services that delay patients' access to care and encourages inappropriate utilization of emergency services;
- High utilization of emergency services for non-urgent, episodic care;
- Lack of coordination among primary and specialty care Providers, and fragmentation of inpatient, outpatient and ancillary services;
- Lack of patient training and education programs that encourage and enable consumers to take charge of their health; and
- Absence of a regional plan for facilitating shared-training and learning programs among Providers, with a focus on sharing best-practices and lessons learned.

Based on these community needs, Providers selected projects to address a variety of needs related to the key challenges, including improved access to primary care services, access to specialty care services, healthcare navigation, patient education, behavioral health education and services, care integration, preventive health services, and workforce development. Though the majority of projects were implemented within Harris County due to the large concentration of healthcare Providers and services common to large urban counties, Map 1 displays the distribution of different project types throughout the entire nine county Region and illustrates the diversity of community needs addressed by project types.

Map 1: SE RHP3 - Distribution of Project Types by Location



As shown in Table 1 below, among the primary project types, the Region implemented a high number of projects related to behavioral health and primary care expansion and redesign, and the fewest number of projects implemented were related to oral health, palliative care, workforce development, and patient-centered medical home. At the onset of the DSRIP program, 33 of approximately 181 total projects were specifically targeted at pediatric individuals (under 21 Years), 13 projects were specifically for adults aged 21-64 years, and six projects specifically targeted the population of adults aged 65 and older. It must be noted that since the inception of the Waiver, there were a few projects that were withdrawn by Performing Providers, as well as the integration of projects from two Provider institutions into other RHPs, which accounts for the reduction in the number of DSRIP projects in the Region.

Table 1: Number of Projects by Type in RHP3 in 2017

RHP3 Project Type (abbreviation)	# of Projects
Behavioral Health (BH)	53
Chronic Care (CC)	14
Emergency Care (EC)	3
General (G)	7
Navigation/Case Management (N/CM)	16
Prevention/Wellness (P/W)	20
Primary Care (PC)	32
Specialty Care (SC)	28
Total	**173**

The following table identifies the most recent listing of Providers in the nine-county Region and the number of DSRIP projects in progress as of 2017. Column 3, "Primary Project Type," lists the categories of selected projects using the abbreviations included in Table 1. For example, "BH" means "Behavioral Health."

Table 2: RHP3 Performing Providers and Project Types in 2017

Provider	# of Projects	Primary Project Type
Baylor College of Medicine	1	PC
CHCA Bayshore LP dba Bayshore Medical Center	2	BH; PC
City of Houston, Department of Health and Human Services	15	BH; CC; PC; P/W; N/CM
Columbus Community Hospital	1	SC
El Campo Memorial Hospital	1	G
Fort Bend County	8	BH; P/W; PC; N/CM;
Harris County Public Health & Environmental Sciences	5	PC; P/W; SC
Harris Health System	22	BH; EC; CC; PC; SC; N/CM; G
Matagorda Regional Medical Center	3	PC; N/CM; SC
Memorial Herman Hospital	4	BH; PC; SC; N/CM
Memorial Hermann Northwest Hospital (The Woodlands)	5	BH; N/CM; PC
Memorial Medical Center	5	BH; EC; PC; G
Methodist Hospital	1	BH
Methodist Willowbrook Hospital	1	BH
MHMR Authority of Harris County	26	BH
Oak Bend Medical Center	9	BH; CC; N/CM; PC; P/W; SC; G
Rice Medical Center	8	CC; EC; PC; P/W; SC
St. Joseph Medical Center	2	BH
St. Luke's Episcopal Hospital	2	CC
Texana Center	5	BH
Texas Children's Hospital	17	BH; CC; SC
UT Health Science Center Houston	22	BH; CC; N/CM; PC; P/W; SC; G
UT MD Anderson Cancer Center	7	P/W
CHCA West Houston Medical Center	1	N/CM

Source: Texas Health and Human Services Delivery System Reform Incentive Payment (DSRIP) Online Reporting Tool, obtained by RHP3 Anchor Entity (Harris Health System) on 9/8/2017

Population Demographics and Health Indicators

Serving more than 5.2 million people, and growing rapidly, RHP3 includes the largest metropolitan area in the state (Harris County) and extends across eight other counties that include a diverse mix of urban, suburban and rural communities ranging in size of less than 21,000 (Colorado County) to 4.3 million (Harris County). RHP3 includes more than 25 hospital systems (many with multiple locations throughout the Region), and more than 15,000 physicians. Houston is home to the Texas Medical Center which includes both the world's largest children's hospital and largest cancer hospital, employs more than 106,000 people, and is the 8th largest business district in the United States.[2] Harris County, within which Houston is located, is a Federal Health Resources & Services Administration-designated Health Professional Shortage Area (HPSA) for primary care, dental and mental healthcare and struggles to meet the complex needs of a diverse population that is constantly growing. [3] While much progress has been achieved over the past five years, the Region continues to face significant challenges meeting the healthcare needs of all residents. Like other regions in Texas, RHP3 has a high uninsured rate with more than 1.16 million uninsured individuals. As the fifth largest Metropolitan Statistical Area (MSA) in the country (Houston-The Woodlands-Sugarland, TX), the Region reflects many of the same economic and demographic characteristics common in other large cities that face similar challenges related to healthcare access and outcomes. Following is an overview of some of the key population data and health findings that informed the Community Health Needs Assessment for RHP3.

Ethnicity and Race

The population of Region 3 includes over 5.2 million individuals that reflect a diverse race and ethnic distribution. As shown in Table 3, nearly three-quarters of the Region's population is White or Hispanic, with 33 percent of the population identified as White, 39 percent Hispanic, 18 percent Black, and 10 percent Other. Racial/ethnic distribution varies significantly among counties. In three counties (Austin, Chambers and Colorado), more than 50 percent of the population identifies as White. In all but two counties, individuals identified as White represent the largest single racial/ethnic group. In contrast, although Hispanics represent the largest racial/ethnic group in RHP3 overall, they are the largest group in only Calhoun and Harris counties. The highest concentration of individuals identifying as Black reside in Waller County (25 percent) and Fort Bend (20 percent).

[2] http://www.tmc.edu/about-tmc/facts-and-figures/

[3] U.S. Department of Health and Human Services, Health Resources and Services Administration. Data accessed July 2017.

Table 3: Population by Race/Ethnicity, Five-Year Estimates 2011-2015

County	White	%	Hispanic	%	Black	%	Other	%	Total
Austin	18,457	64%	7,327	25%	2,517	9%	585	2%	28,886
Calhoun	9,546	44%	10,349	48%	606	3%	1,165	5%	21,666
Chambers	25,470	68%	7,772	21%	2,947	8%	1,062	3%	37,251
Colorado	12,068	58%	5,780	28%	2,831	14%	78	0%	20,757
Fort Bend	231,705	35%	158,162	24%	134,742	20%	133,742	20%	658,331
Harris	1,379,900	32%	1,810,720	42%	804,534	18%	361,208	8%	4,356,362
Matagorda	16,895	46%	14,587	40%	3,614	10%	1,502	4%	36,598
Waller	19,713	43%	13,352	29%	11,436	25%	1,346	3%	45,847
Wharton	19,043	46%	16,171	39%	5,839	14%	211	1%	41,264
Total	**1,732,797**	**33%**	**2,044,220**	**39%**	**969,066**	**18%**	**500,789**	**10%**	**5,246,962**

Source: U.S. Census Bureau, 2011-2015 American Community Survey, 5-Year Estimates

Population Growth

As is true for the state of Texas, over the next three years, the Region is expected to continue its population growth, adding an additional 433,280 individuals for a growth rate of 7.6 percent.[4] As illustrated in Table 4, the counties with the highest growth rates, above 10 percent, include Austin, Chambers, Fort Bend, and Waller. The counties with the lowest rates of growth include Colorado and Wharton. These data are especially relevant to the assessment of healthcare challenges and needs as the Region already lacks important resources necessary to serve the current population.

Table 4: 2020 Population Growth Predictions

County	White	%	Hispanic	%	Black	%	Other	%	Total	Growth Rate 2015-2020
Austin	19,554	59.7%	9,617	27.1%	3,023	9.6%	580	1.9%	32,774	11.9%
Calhoun	9,729	40.6%	12,393	50.1%	551	2.4%	1,262	5.5%	23,935	9.5%
Chambers	27,714	66.1%	9,948	24.2%	3,262	14.3%	1,010	2.2%	41,934	11.2%
Colorado	11,927	54.5%	6,851	30.9%	2,793	12.9%	332	1.6%	21,903	5.2%
Fort Bend	234,511	31.6%	196,097	25.3%	156,352	20.8%	155,745	19.4%	742,705	11.4%
Harris	1,314,007	28.1%	2,133,401	43.8%	832,559	18.0%	403,907	7.8%	4,683,874	7.0%
Matagorda	17,103	43.4%	16,863	42.3%	4,217	10.7%	1,265	3.2%	39,448	7.2%
Waller	21,207	40.7%	17,899	31.6%	11,964	24.9%	1,063	2.2%	52,133	12.1%
Wharton	19,053	43.7%	18,110	41.3%	5,813	13.4%	575	1.3%	43,551	5.3%
Total	**1,674,805**	**29.5%**	**2,421,179**	**42.6%**	**1,020,534**	**18.0%**	**565,739**	**10.0%**	**5,682,257**	**7.6%**

Source: Texas State Data Center, 2014 Texas Population Projections

[4] Texas State Data Center, 2014 Texas Population Projections by Migration Scenario Tool (1/2 migration 2000-2010).

Education

Lack of education is one of the social determinants of health that is commonly linked to poor health care outcomes, particularly for uninsured individuals. An analysis of the National Health Interview Survey (NHIS) found that individuals with higher education levels are less likely to self-report a past diagnosis of an acute or chronic disease, less likely to die from the most common acute and chronic diseases, and are less likely to report anxiety or depression.[5] The research concluded a clear association exists between education and health, even when controlling for job characteristics, income, and family backgrounds.

As expected in a region of this size, educational attainment for residents aged 18-24 years varies widely, with the lowest reported high school graduation rates at 65.0 percent in Colorado County and the highest at 89.3 percent in Waller County. College graduation rates were significantly higher for adults ages 25 and over, but varied even more across counties, with the highest percentage in Fort Bend at 43.7 percent, followed by Harris County with a graduation rate of 29.4 percent. The high graduation rate in Fort Bend can be correlated with the high-income level in Fort Bend where the Median Household Income level is $95,117, compared to a statewide average of $55,668.[6] The lowest graduation rates for adults age 25 and over in Wharton and Matagorda counties also correlate with the lowest *income* levels in both counties, where the average median household income is $45,073 in Matagorda and $45,198 in Wharton.

Table 5: Educational Attainment by Age, 2011-2015 Average

	Age 18-24 Years			Age 25 and Over		
County	**Less than High School**	**High School Graduate**	**College Graduate**	**Less than High School**	**High School Graduate**	**College Graduate**
Austin	17.1%	78.2%	4.7%	15.6%	64.3%	20.1%
Calhoun	22.9%	73.4%	3.7%	20.1%	63.6%	16.2%
Chambers	23.2%	76.0%	0.9%	17.0%	64.3%	18.7%
Colorado	23.1%	65.0%	11.9%	17.5%	64.3%	18.2%
Fort Bend	15.2%	76.0%	8.8%	11.1%	45.2%	43.7%
Harris	19.9%	71.4%	8.8%	20.4%	50.1%	29.4%
Matagorda	20.2%	77.7%	2.0%	22.7%	62.0%	15.2%
Waller	9.6%	89.3%	1.1%	21.9%	59.3%	18.8%
Wharton	16.7%	78.0%	5.3%	23.5%	62.4%	14.0%

Source: Source: U.S. Census Bureau, 2011-2015 American Community Survey, 5-Year Estimates. Note, calculations of categories are sums of multiple categories of data, e.g. Age 25+ High School Graduate includes people with high school diploma plus some college plus Associates degree.

Employment

As the largest urban area in the state and the fifth largest Metropolitan Statistical Area (MSA) in the country,[7] the Houston MSA provides a diverse choice of employment opportunities and ranks third among areas serving as Fortune 500 headquarters.[8] As of November 2016, the Houston MSA recorded more than 3.03 million jobs. More than a fifth of Houston's job growth in the past ten years occurred in

[5] David N. Cutler, Policy Brief - "Education and Health", National Poverty Center, University of Michigan.
[6] See Table 7, Income and Poverty Status by County.
[7] https://en.wikipedia.org/wiki/List_of_Metropolitan_Statistical_Areas
[8] Greater Houston Partnership, Economic Development Facts and Figures, June 7, 2016.

education and health services. However, while the Region has enjoyed a notable increase in jobs over the past two years, the rate of growth has declined due to a drop in oil prices. The 10 county MSA added 15,200 jobs in 2015 and anticipates creating approximately 22,000 in 2016, a significant drop from the 117,000 jobs added in 2014.[9] It is anticipated that 29,700 net new jobs will be created in 2017, with growth in a number of non-energy and consumer driven sectors.[10] Table 6 below confirms that employment across the Region has historically been generally high, with unemployment rates among the counties ranging between 4.2 percent and 8.3 percent in the years 2011 through 2015. Waller County reported the highest unemployment rates at 8.3 percent and Colorado County the lowest at 4.2 percent. The job forecast calls for job losses to continue in energy exploration and production, oil field services and construction, while growth is expected in other areas such as healthcare, real estate, finance and insurance, arts and entertainment. Over the next thirty years, the Region is predicted to lead the state in job growth, growing from 2.7 million jobs in 2011 to 4.3 million jobs in 2040 and accounting for almost one-fourth of the state's job growth. [11]

Table 6: Workforce Status of People Aged 16 and Over, Five-Year Estimates 2011-2015

County	Total Population	Percentage in Labor Force	Percentage Employed	Percentage Unemployed
Austin	22,617	63.5%	59.6%	6.2%
Calhoun	16,670	60.9%	56.5%	7.2%
Chambers	28,155	58.5%	53.9%	7.8%
Colorado	16,508	58.0%	55.5%	4.2%
Fort Bend	493,742	67.2%	63.7%	5.1%
Harris	3,291,654	68.4%	63.2%	7.5%
Matagorda	28,268	60.0%	56.2%	6.4%
Waller	36,193	60.6%	55.6%	8.3%
Wharton	31,559	63.1%	58.9%	6.6%
Statewide	**20,241,168**	**64.7%**	**58.9%**	**7.0%**

Source: U.S. Census Bureau, 2011-2015 American Community Survey, 5-Year Estimates

Income Status

Income and insurance status are two of the strongest predictors of health status and barriers to health care access. Poor adults are almost five times more likely to report being in fair or poor health as adults with family incomes at or above 400 percent of the Federal Poverty Level (FPL), and are more than three times likely to have limitations due to chronic illness.[12] Low -income individuals also have higher rates of heart disease, diabetes, stroke, and other chronic disorders than higher income Americans.[13] Rates of low birth weight are highest among infants born to low-income mothers, and children in poor families

[9] Greater Houston Partnership, The Economy at a Glance, January 2017.
[10] Greater Houston Partnership, Economic Development Facts and Figures, 2016.
[11] Ibid.
[12] Urban Institute, "How are Income and Wealth Linked to Health and Longevity?," April 2015.
[13] J.S. Schiller, J.W. Lucas, and J.A. Peregoy, "Summary Health Statistics for U.S. Adults: National Health Interview Survey, 2011." http://www.cdc.gov/nchs/data/series/sr_10/sr10_256.pdf.

experience higher rates of asthma, heart conditions, hearing problems, digestive disorder, and elevated blood lead levels.[14]

Understanding population variations in income is an important step in understanding the needs of our low-income community members and how to best direct resources to improve healthcare access and outcomes. Statewide Census data shows that 15.9 percent of Texans had incomes below the federal poverty level; among children under 18 years of age, the rate was even higher at 22.9[15]

In RHP3, the average median household income varies dramatically throughout the Region and across counties. Average median household income in Fort Bend is reported at $95,117, 70 percent higher than the statewide average. At the other end of the scale, average median household income is $45,073 in Matagorda County, less than half the Fort Bend average. Approximately 830,000 residents of the Region live below the federal poverty level, many of whom work at low paying jobs that often do not provide insurance benefits.[16] Poverty rates vary from a low of 7.0 percent in Fort Bend County to a high of 20.5 percent in Matagorda County. Poverty rates are higher than the statewide average in five of the nine counties, including Harris County with 744,712 individuals living below the federal poverty level. Many of these people are part of the 1.6 million uninsured who rely on the safety net for critical health care services provided throughout the Region, and who often obtain care through emergency departments due to shortages of primary care services and lack of a regular source of care.

Table 7: Income and Poverty Status by County - 2015

County	Median Household Income	Number of People in Poverty	%	Number of Children Under 18 in Poverty	%
Austin	$57,960	3,720	12.7%	1,331	18.9%
Calhoun	$50,873	3,633	16.8%	1,422	26.2%
Chambers	$77,282	3,683	9.6%	1,282	12.0%
Colorado	$47,783	2,975	14.5%	1,121	23.6%
Fort Bend	$95,117	49,830	7.0%	19,071	9.7%
Harris	$56,670	744,712	16.6%	306,724	25.3%
Matagorda	$45,073	7,467	20.5%	2,868	30.9%
Waller	$50,746	7,125	16.0%	2,547	21.9%
Wharton	$45,198	7,058	17.2%	2,645	24.9%
Statewide	**$55,668**	**4,255,690**	**15.9%**	**1,634,149**	**22.9%**

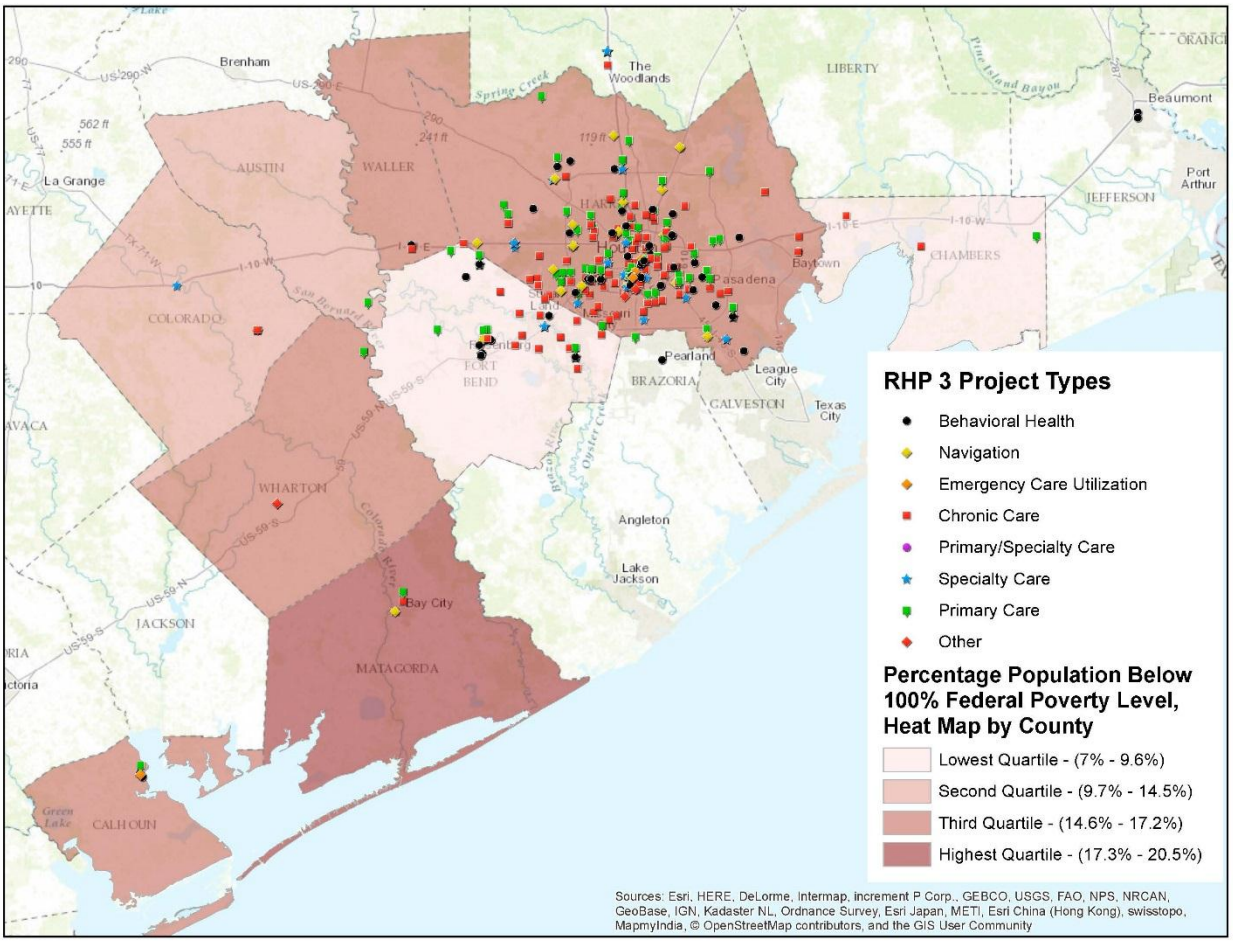
Source: U.S. Census Bureau, Small Area Income and Poverty Estimates (SAIPE) Program, 2015 State and County Level Estimations

To better understand how the current DSRIP project locations vary based on county poverty levels, the "heat map" below identifies the percentage of residents below 100% FPL in each of the nine RHP counties, with an overlay of DSRIP projects. The map, also known as a density map, presents quartiles of poverty level to visualize the geographic variation in where low income individuals live. Concentrations of RHP3 projects are in Harris County, which is in the third quartile with the second highest percentage of population below 100% FPL. Many projects also are located in Fort Bend County, the county with the lowest population below 100% but also the second largest county in the Region and with much higher

[14] Urban Institute, "How are Income and Wealth Linked to Health and Longevity?" April 2015.
[15] U.S. Census Bureau, Small Area Income and Poverty Estimates (SAIPE) Program, 2015 State and County Level Estimations and U.S. Census Bureau, 2011-2015 American Community Survey, 5-Year Estimates.
[16] U.S. Census Bureau, 2011-2015 American Community Survey, 5-Year Estimates.

demand for services than smaller counties. Matagorda County is in the highest quartile of population below 100% FPL and has few RHP projects.

Map 2: Percentage of Population Below 100% Federal Poverty Level, Heat Map by County



Health Indicators and Barriers to Care

Health Insurance Status

For more than 15 years, the state of Texas has experienced the highest uninsured rate in the country. As previously noted, lack of insurance (along with other socio-economic factors) is strongly linked to poorer health status and outcomes and results in costly, avoidable health care costs and inappropriate utilization of emergency services. While lack of insurance does not necessarily mean individuals lack access to care, individuals without insurance report problems obtaining needed medical care, including not having a usual source of care, postponing care or going without treatment or necessary prescriptions drugs due to cost.[17] In a recent Health Needs Survey distributed by Houston Methodist Hospital as part of its 2016 Community Health Needs Assessment, 75 percent of respondents cited lack of insurance as one of the top barriers to seeking medical treatment, followed closely by an inability to

[17] Kaiser Family Foundation. *The Uninsured: A Primer, October 2011.*

pay for coverage (64 percent).[18] Numerous studies have determined that uninsured individuals are more likely to suffer from chronic disease, untreated medical conditions, and lack of care or care that comes too late. For example:

- Uninsured women with breast cancer have a 30 to 50 percent higher risk of dying than those with health insurance, and uninsured individuals with colorectal cancer are 50 percent more likely to die.[19]
- The uninsured report higher rates of postponing care and are at higher risk for preventable hospitalizations and for missed diagnoses of serious health conditions.[20]
- In 2014, only 27 percent of uninsured adults reported a preventative/wellness visit compared to 65 percent of adults who had coverage.[21]
- The uninsured report difficulty finding a primary care doctor who will accept them; more than 41 percent of uninsured adults reported they were turned away from a doctor or clinic from which they sought primary care services.[22]

The most recent county-level census data available estimates 1,163,237 citizens in the Region have no insurance, which is larger than the statewide uninsured population in 44 states[23] and represents 22.3 percent of the Region's total population.[24] From 2012 to 2015, the percentage of uninsured decreased by about 3.7 percent with a corresponding 3.5 percent increase in the insured population. Of the individuals who have insurance, 74 percent were insured under private plans and 34 percent received coverage through a public program.[25]

As shown in Table 8 below, Matagorda County has the second lowest rate of insurance coverage at 77.2 percent, and also the lowest median household income of all counties in the Region (see Table 7). Fort Bend has both the lowest percentage of uninsured residents at 14.9 percent and the highest median household income at $95,117. Harris County, with the largest population, also had the highest percentage of uninsured residents at 23.5 percent. Insurance status also varies significantly among the various racial and ethnic groups residing in the Region. For example, U.S. Census data estimates indicate that in Harris County, 10.1 percent of people identifying as White (not Hispanic or Latino) are uninsured,

[18] Houston Methodist Hospital Community Health Needs Assessment 2016-2019
[19] Code Red, *The Critical Condition of Health in Texas*, Task Force on Access to Health Care in Texas.
[20] Institute of Medicine, *Health Insurance is a Family Matter*, 2002.
[21] R. Garfield and K. Young, *How Does Gaining Coverage Affect People's Lives? Access, Utilization, and Financial Security Among Newly Insured Adults*, Kaiser Family Foundation, 2015.
[22] Sara R. Collins, Ruth Robertson, Tracy Garber, and Michelle M. Doty, *The Income Divide in Health Care: How the Affordable Care Act Will Restore Fairness to the U.S. Health System*, The Commonwealth Fund, February 2012.
[23] The Kaiser Family Foundation, 2015 Health insurance Coverage of the Total Population, Calculator. Accessed January 22, 2017. http://kff.org/other/state-indicator/total-population/?dataView=1&currentTimeframe=0&selectedDistributions=uninsured
[24] County level data is only available through the American Community Survey and is therefore the best data for county comparisons. However, more recent Current Population Survey data released by the U.S. Census Bureau reports the statewide uninsured rate has declined from 22.1 percent in 2013 to 17.1 percent in 2015, a notable drop of 1.1 million fewer uninsured Texans.
[25] The numbers do not add to 100 due to the fact that some individuals report having both private and public coverage.

while rates are significantly higher among people of color, with Blacks at 19.1 percent and Hispanic/Latino of any race at 36.6 percent.[26]

In a 2015 survey of uninsured Texans, a total of 69.1 percent of survey respondents reported the primary reason for remaining uninsured was the high cost of coverage.[27] Ironically, a study of emergency department utilization in 26 Houston hospitals found that 39.7 percent of emergency department visits by Harris County residents were primary care related visits that were for non-emergency services that could have been treated in a primary care setting, down from 41% in 2009, and 40.9% in 2010.[28] Many of these services were provided to individuals without insurance who had no other place to go and ended up receiving treatment in the most expensive care setting. These data are significant to the Region's ongoing efforts to expand access to services that provide the most appropriate care in the most cost effective setting, improve patient care and satisfaction, and lead to a healthier population.

Table 8: Health Insurance Status, Five-Year Estimates 2011-2015

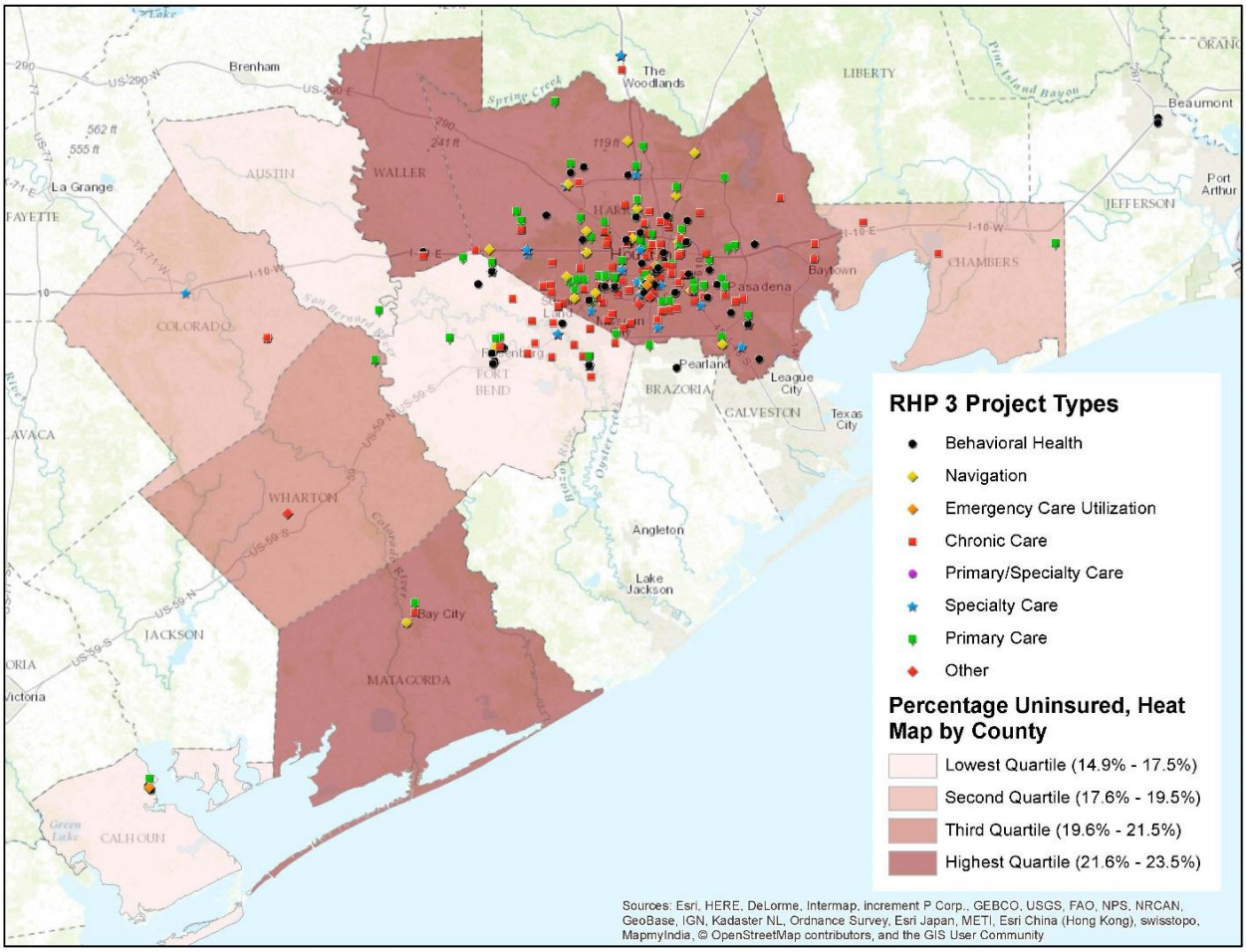
County	Total Population	Total Insured	%	Insured with Private Coverage	Insured with Public Coverage	Total Uninsured	%
Austin	28,641	23,803	83.1%	19,289	8,143	4,838	16.9%
Calhoun	21,472	17,716	82.5%	13,151	6,853	3,756	17.5%
Chambers	37,046	30,266	81.7%	23,535	9,824	6,780	18.3%
Colorado	20,417	16,820	82.4%	13,066	6,475	3,597	17.6%
Fort Bend	653,193	556,113	85.1%	483,151	112,996	97,080	14.9%
Harris	4,335,831	3,315,580	76.5%	2,373,799	1,190,695	1,020,251	23.5%
Matagorda	36,183	27,943	77.2%	18,812	12,918	8,240	22.8%
Waller	45,592	35,246	77.3%	25,482	13,136	10,346	22.7%
Wharton	40,954	23,605	79.6%	22,410	13,438	8,349	20.4%
Total	**5,219,329**	**4,047,092**	**77.5%**	**2,992,695**	**1,374,478**	**1,163,237**	**22.3%**

Source: U.S. Census Bureau, 2011-2015 American Community Survey, 5-Year Estimates

For a different perspective, the following heat map, *Map 3: Percentage Uninsured, Heat Map by County*, displays the percentage of population without health insurance in the nine RHP3 counties, with the Region's DSRIP project locations layered on top. The largest concentration of RHP3 projects is located in Harris County, which has the highest percentage of uninsured. Two counties in the highest quartile of uninsured, Matagorda and Waller, have few RHP projects but are also largely rural counties with much smaller populations and fewer health care Providers.

[26] U.S. Census Bureau, 2011-2015 American Community Survey, 5-Year Estimates.
[27] Rice University's Baker Institute, *Health Reform Monitoring Survey – Texas, Issue Brief 18: Why were 20% of Adult Texans Uninsured in 2015?* January 2016.
[28] School of Public Health, University of Texas Health Science Center at Houston; *Houston Hospitals Emergency Department Use Study, January 1, 2011 through December 31, 2011.* June 2013.

Map 3: SE RHP3 Percentage Uninsured, Heat Map by County



RHP3 Counties and County Health Rankings

In 2017, 243 of 254 total counties in Texas were ranked by the Robert Wood Johnson Foundation, County Health Rankings and Roadmaps initiative.[29] The County Health Rankings measure the health of nearly all the counties in the nation and rank them within states. The Rankings are compiled using county-level measures from a variety of national and state data sources. These measures are standardized and combined using scientifically-informed weights. The Rankings help to understand what influences how healthy residents are and how counties compare against each other within a state. Because the rankings compile data from various sources collected at various times, it is important to note that rankings do not necessarily reflect data collected in the same year as the publication of the County Health Report. For example, rankings from the County Health Ranking 2017 Report could reflect data from 2015.

In addition to providing comparative rankings for each county, the program also provides underlying data that is used to develop the rankings. This information is especially helpful to identify areas of need and improvement for specific counties, and to inform priorities for future health care planning decisions.

[29] http://www.countyhealthrankings.org/

For more information on specific data sources, the methodology for developing the county-level data, and the many ways the data can be used to inform local health care planning decisions, please see http://www.countyhealthrankings.org/.

Below is information from the 2017 County Health Rankings of the nine counties in Texas RHP3 for health outcomes and health factors. In these rankings, outcomes data includes information such as premature death, poor or fair health, poor physical and mental health days, and low birthweight, whereas Health Factors includes numerous data related to health behaviors, clinical care, socioeconomic factors, and the physical environment. As can be seen in Table 9 below, the Health Outcomes and Health Factors Rankings vary greatly across RHP3 counties, with Fort Bend County receiving the highest ranking at 7, and Matagorda ranking the lowest at 164. It is significant to note that five of nine RHP3 counties (Fort Bend, Austin, Waller, Harris, and Chambers) rank within the first quartile in the state overall.

Table 9: County Health Rankings, 2017

County	2017 Health Outcomes Ranking (Out of 243 Ranked Texas Counties)	2017 Health Factors Ranking (Out of 243 Ranked Texas Counties)
Austin	32	36
Calhoun	86	86
Chambers	60	60
Colorado	118	118
Fort Bend	7	7
Harris	52	52
Matagorda	164	164
Waller	45	45
Wharton	144	144

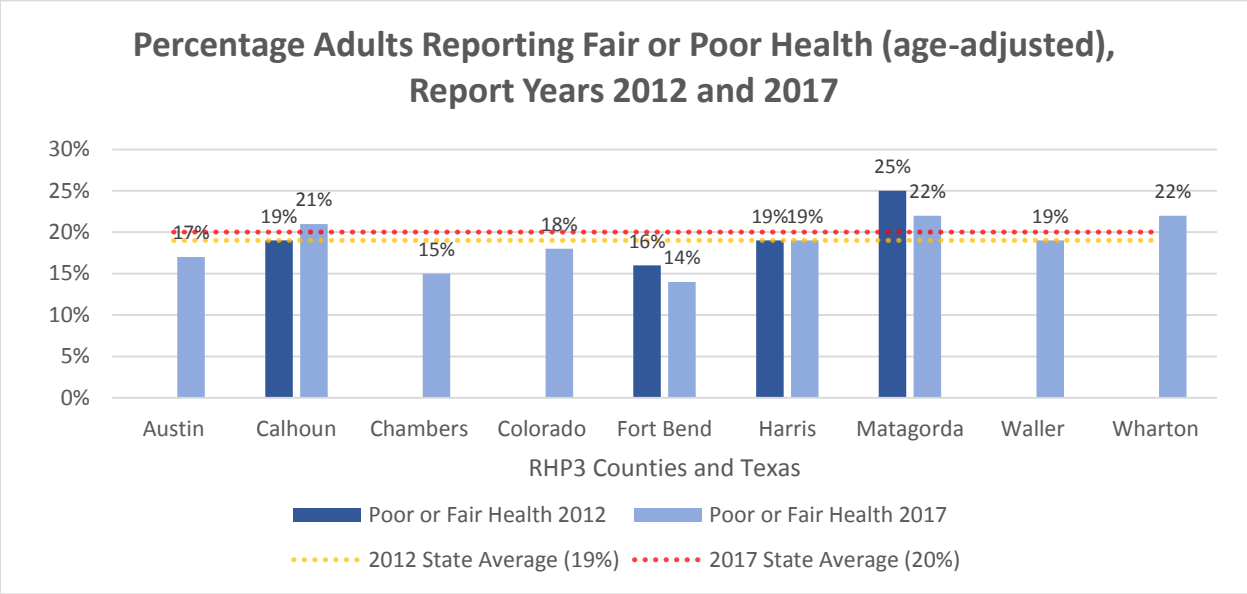
Source: County Health Rankings and Roadmaps. Accessed January 30, 2017: http://www.countyhealthrankings.org/app/texas/2017/rankings/outcomes/overall. Rankings of Texas counties totaled 243 of 254 counties; 11 were not ranked.

Physical and Mental Health Status of Adults

Data from the Centers for Disease Control Behavioral Risk Factor Surveillance System (BRFSS) survey and compiled by the Robert Wood Johnson Foundation County Rankings and Roadmaps Program illustrates key health indicators and gaps in care among the RHP3 population. As previously explained, County Health Rankings reports on data collected in earlier years. The 2012 County Health Rankings Report reflects BRFSS data collected in 2004-2010, and the 2017 report reflects BRFSS data collected in 2015. The BRFSS asked surveyed adults to describe their current health status in these years. Table 10 includes the results, which found that statewide, 20 percent of adults described their health as “fair or poor” in the 2017 report, up slightly from 19 percent in the 2012 report. Of the counties in RHP3, six counties reported lower levels of adults in fair or poor health than the statewide average in the 2017 report. Notably, Fort Bend County (which has the lowest level of uninsured individuals and the highest median income) had the lowest level of adults in fair or poor health at 14 percent in the 2017 report, approximately one third lower than the statewide average. Chambers and Austin counties also reported low rates at 15 percent and 17 percent, respectively. Matagorda - the county with the highest poverty rate, lowest median household income, and the second lowest rate of insurance coverage – has the

highest percentage of adults in fair or poor health, with 22 percent in the 2017 report. This was a slight decrease from 25 percent in the 2012 report. Of the four counties for which data was available for both the 2012 and 2017 reports, results in two counties (Fort Bend and Matagorda) suggest there were improvements over time, while Calhoun County experienced a slight increase in the percentage of adults reporting fair or poor health. Harris County maintained the same percentage of adults reporting fair or poor health between report years, representing a lack of improvement or deterioration of health status. However, it is important to note that the DSRIP initiatives were still in the early stages of implementation in 2015, when the most recent Health Rankings data was collected. While DSRIP projects were beginning to demonstrate improvements, this time-period was likely too early to reflect significant changes attributed to the DSRIP program.

Table 10: Percentage of Adults Reporting Fair or Poor Health (age-adjusted), 2012 and 2017



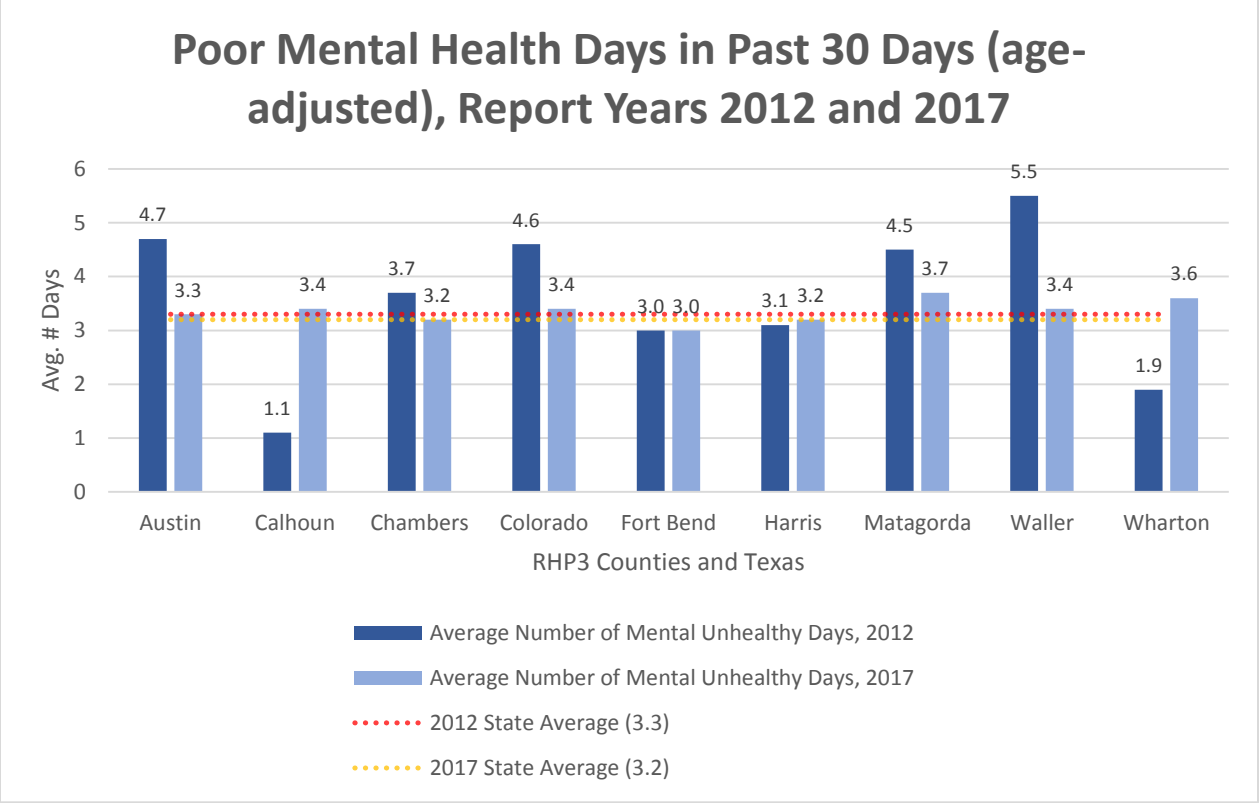
Source: http://www.countyhealthrankings.org/app/texas/2012/measure/outcomes/2/datasource missing bar indicates no data available. County Rankings measure of fair or poor health (age-adjusted) for 2017 ranking report reflects 2015 BRFSS survey data, whereas 2012 ranking report data reflects 2004-2010 BRFSS survey data.

The BRFSS survey also asks adults to report the number of days spent in poor mental health within the past 30 days. Statewide, adults reported 3.3 poor mental health days in the 2012 report compared to 3.2 days in 2017, a slight improvement. As shown in Table 11, five of the nine RHP3 counties also reported improvements over time. Although it maintained the same number between report years, Fort Bend County again had the best rating with an average of 3.0 days of poor mental health in the 2017 report, below the statewide average. Austin, Colorado, and Waller counties saw the most improvement in poor mental health days between the 2012 and 2017 ranking reports, although their numbers were consistently higher than the state average. Specifically, Austin and Colorado counties experienced over a one-day decrease in poor mental health days, decreasing from 4.7 to 3.3 days and 4.6 to 3.4 days,

respectively. Waller County saw the highest improvement among all RHP3 counties, with a decline from 5.5 poor mental health days as reported in 2012 to 3.4 days in 2017, a decrease of 2.1 days. Harris County experienced a slight increase in poor mental health days, increasing from 3.1 to 3.2 days.

While the survey data indicate that adults in all but three counties (Austin, Chambers and Fort Bend) still reported mentally unhealthy days *above* the statewide benchmark in 2017, the Region as a whole generally demonstrated measurable improvements. Though it is impossible to draw any conclusive correlation between this limited data and the impact of DSRIP projects focused on Mental Health improvements, it should be noted that improvements in access to Behavioral Health services and treatment is a high priority for the Region. As indicated in Table 1 at the beginning of this report, 57 of the 172 RHP3 DSRIP projects focus on Behavioral Health services. While the BRFSS data are only one measure of change in behavioral health status, it is reasonable to assume that the DSRIP program likely played a role in these measurable improvements.

Table 11: Poor Mental Health Days in Past 30 Days (Age-Adjusted), 2012 and 2017



Source: http://www.countyhealthrankings.org/app/texas/2012/measure/outcomes/2/datasource County Rankings measure of poor mental health days in past 30 days (age-adjusted) for 2017 ranking report reflects 2015 BRFSS survey data, whereas 2012 ranking report data reflects 2004-2010- BRFSS survey data.

Teen Births

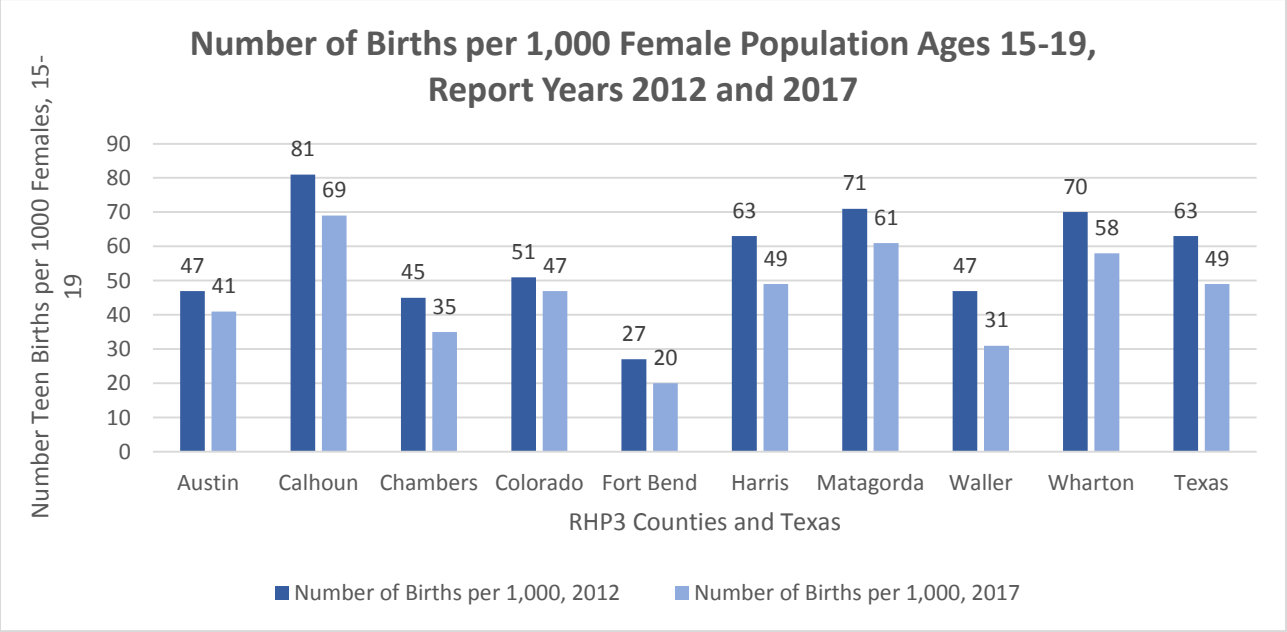
The State of Texas has the fourth highest birth rate and fifth highest pregnancy rate among teen age girls ages 15-19. Despite declines over the past ten years, the state continues to struggle with reducing

the number of teen pregnancies, the majority of which are unplanned and unwanted. According to a recent study by the University of Texas Child and Family Research Institute, teen pregnancies cost Texas taxpayers more than $1.1 billion in 2010 and have long term financial implications on the teen mothers. Only 38 percent of teen mothers who have a child before the age of 18 will earn a high school diploma by age 22 and less than 2 percent earn a college degree by age 30.[30] This educational disparity continues to impact teen mothers throughout their career. By age 30, teen mothers on average earn 57 percent of the annual salary of those who delayed childbearing. Forty-one percent of mothers who gave birth before age 20 were living below federal poverty levels and nearly two-thirds rely on public assistance for the first year of their child's birth.[31]

Data provided in the Texas Children's Hospital Community Health Needs Assessment 2016 indicates that Black and Hispanic women in Harris County are more likely to become mothers at a younger age than White teens.[32] Birth data for 2012 indicates that among Black and Hispanic women, 12 percent of births were to women age 19 and younger, compared to four percent of births among White women. Among all races combined, nine percent of all births were to women under age 19.

Statewide, the number of births to teen mothers age 15-19 was 49 per 1,000 teenage girls as reported in 2017, down from 63 in 2012. As shown in Table 12, every county in RHP3 saw a decline in births over the same time period. However, in three counties (Calhoun, Matagorda, and Wharton) the rates stated in the 2017 report were still above the statewide average. The highest birth rate is in Calhoun County at 69 births per 1,000 teen females, and the lowest rate was 20 births per 1,000 in Fort Bend County.

Table 12: Number of Births per 1,000 Female Population Ages 15-19, 2012 and 2017



Source: http://www.countyhealthrankings.org/app/texas/2012/measure/factors/14/map and http://www.countyhealthrankings.org/app/texas/2017/measure/factors/14/data. Data on deaths and births were

[30] University of Texas Child and Family Research Institute, *Mixed Messages: The Current State of Teen Pregnancy Prevention in Travis County, Texas*, May 2015.
[31] Ibid
[32] Texas Children's Hospital, Community Health Needs Assessment 2016

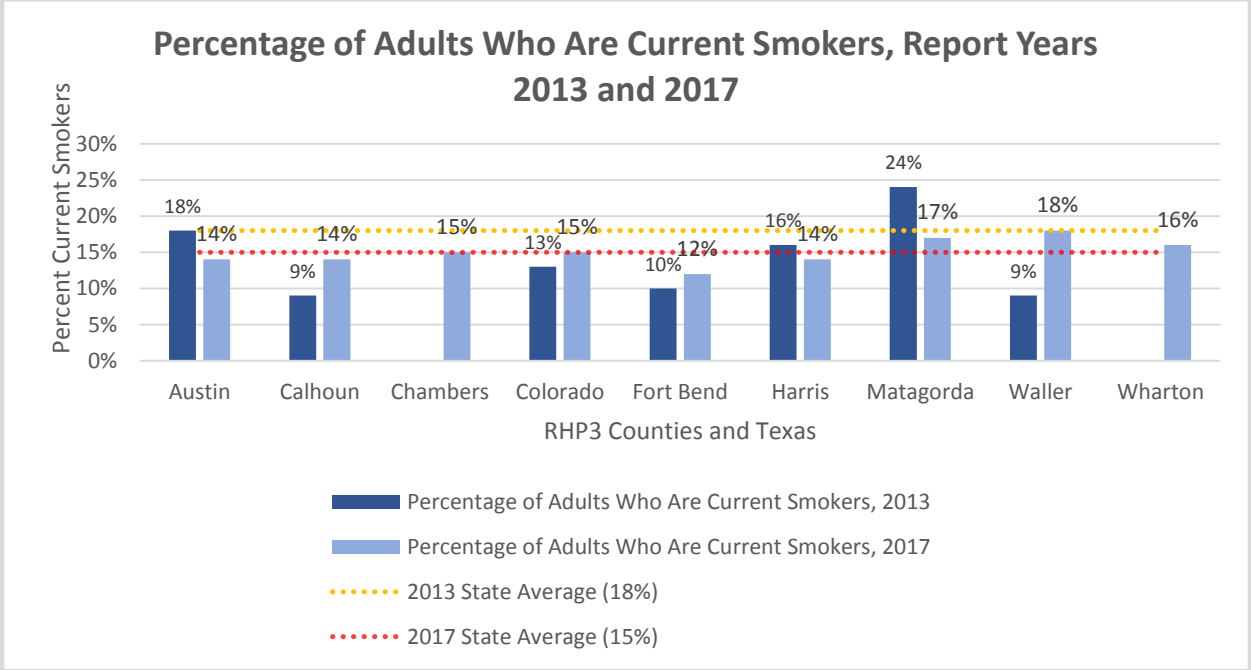
provided by the National Center for Health Statistics (NCHS) and drawn from the National Vital Statistics System (NVSS). These data are submitted to the NVSS by the vital registration systems operated in the jurisdictions legally responsible for registering vital events (i.e., births, deaths, marriages, divorces, and fetal deaths). The 2017 ranking report reflects 2008-2014 NCHS data, whereas 2012 ranking report data reflects 2002-2008 NCHS data.

Behavioral Health Risk Factors

Behavioral health factors such as smoking and excessive alcohol use can greatly impact health status and healthcare needs. According to Healthy People 2020, tobacco use is the single most preventable cause of death and disease in the United States. The use of tobacco is associated with numerous diseases such as stroke, diabetes, cancer and heart and vascular disease. Second hand smoking exposure also contributes to multiple health conditions, including respiratory infections, asthma attacks, ear problems, heart disease, and lung cancer.[33]

Statewide, data indicates that the percentage of adults who currently smoke declined from 18 percent in 2013 to 15 percent as reported in 2017. As shown in Table 13, smoking rates increased in four RHP3 counties (Calhoun, Colorado, Fort Bend, Waller) and decreased in Austin, Harris and Matagorda counties. Only three counties – Matagorda, Waller and Wharton - showed a higher percentage of adult smokers than the statewide average listed in the 2017 report.

Table 13: Percentage of Adults Who Are Current Smokers, 2013 and 2017



Source: http://www.countyhealthrankings.org/app/texas/2013/measure/factors/9/map and http://www.countyhealthrankings.org/app/texas/2017/measure/factors/9/data. The County Rankings measure of adult smoking for 2017 ranking report reflects 2015 data, whereas for 2013 ranking report the data reflects 2005-2011.

[33] Houston Methodist Hospital Community Health Needs Assessment, 2016-2019

Chronic Disease

Chronic disease affects every community and socio-economic group in the Region, though outcomes and treatments vary widely based on a variety of factors. Lower economic groups and uninsured individuals generally face poorer outcomes due to limited access to services, delayed diagnoses and poor living conditions that can aggravate conditions or inhibit recovery. The most common diseases include heart disease, stroke, asthma, cancer, diabetes, and cardiovascular disease. Diet, exercise, stress and other biological conditions are risk factors for certain chronic diseases, as well as individual choices to engage in unhealthy activities such as tobacco use, alcohol and substance abuse. Due to the small size of several of RHP3 counties, data on causes of death are limited to only certain categories. As indicated in Table 14, death rates due to heart disease indicate six of the nine counties reported rates higher than the average statewide. Six counties also reported higher than average rates for cancer. Fort Bend, the second largest county in the Region, reported significantly lower death rates for all categories. In comparison, Harris County reported slightly lower rates for diabetes, heart disease and suicide but slightly higher rates for cancer, stroke, and accidents.

Table 14: County Death Rate (age-adjusted) per 100,000 Population for Leading Causes of Death

	Cancer	Stroke	Diabetes	Heart Disease	Suicide	Accidents
Austin	136.1	ND	ND	139.4	ND	ND
Calhoun	171.3	ND	ND	181.8	ND	ND
Chambers	218.9	ND	ND	175.3	ND	ND
Colorado	192.4	ND	ND	196.9	ND	ND
Fort Bend	133.1	34.0	13.4	134.3	8.3	26.3
Harris	159.9	40.6	20.0	166.3	9.8	36.9
Matagorda	192.6	58.4	ND	186.4	ND	70.3
Waller	170.4	ND	ND	201.7	ND	58.9
Wharton	155.6	57.6	ND	197.6	ND	ND
Statewide	**156.1**	**40.1**	**21.6**	**170.7**	**11.6**	**36.8**

Source: Texas Department of State Health Services, Health Facts Profiles by County, 2013. ND = No Data available. https://www.cdc.gov/diabetes/data/county.html

In order to impact these health outcomes, many RHP3 DSRIP projects are designed to improve treatment of and reduce rates of chronic disease.[34]

Overview of Regional Health System and Challenges

As evidenced by the diverse population and economic dynamics of the communities participating in Region 3, by necessity the healthcare system serving this Region is significant in size and complexity. The city of Houston is home to the world-renowned Texas Medical Center, which includes some of the most

[34] Southeast Texas Regional Healthcare Partnership, "Region 3 Anchor Updates: April 2015" p. 4.

advanced medical research and academic institutions in the world, including three medical schools, six nursing programs, two schools of pharmacy, and schools of dentistry, public health, and virtually all health-related careers.[35] The Region includes a total of 84 acute care hospitals with more than 14,000 inpatient beds providing a wide range of specialty services. Consistent with the Region's continued population growth, from 2010 to 2012, the number of acute care hospital beds in Harris County increased by 780, from 12,098 in 2010 to 12,878 in 2012. The number of inpatient visits also increased by 21,899 from 476,500 in 2010 to 498,399 in 2012 (see Table 15). However, in all counties other than Harris and Fort Bend, inpatient admissions decreased between 2010 and 2012, with the largest decline in Colorado County. In terms of hospital utilization, RHP3 facilities provided services for more than 1.9 million emergency room visits, over 9 million outpatient visits in 2015, and more than 536,899 inpatient admissions in 2012.[36] Moreover, hospitals collected a total of nearly $65.4 billion in patient revenue and provided $4.92 billion in uncompensated care (UC), representing 7.52 percent of patient revenue.[37]

Table 15: Comparison of Hospital Beds and Inpatient Admissions, 2010 and 2012

County	# of Beds (2010)	# of Beds (2012)	+/-	Inpatient Admissions (2010)	Inpatient Admissions (2012)	+/-
Austin	23	23	0	620	434	-186
Calhoun	25	25	0	1321	1,272	-49
Chambers	39	39	0	799	722	-77
Colorado	73	55	-18	9,012	1,367	-7,645
Fort Bend	771	867	96	28,743	30,805	2,062
Harris	12,098	12,878	780	476,500	498,399	21,899
Matagorda	69	69	0	3,156	2,914	-242
Waller	0	0	0	0	0	0
Wharton	99	129	30	2,695	1,420	-1,275
Total	**13,197**	**14,085**	**888**	**522,846**	**537,333**	**14,487**

Source: Texas Department of State Health Services, Annual Survey of Hospitals and Hospitals Tracking Database 2010 and 2012: "Utilization Data for Texas Acute Care Hospitals by County" for # Beds and Inpatient Admissions.

[35] Texas Medical Center 2014 Strategic Plan. Accessed January 22, 2017 http://www.tmc.edu/about-tmc/vision/.
[36] Texas Department of State Health Services, Annual Survey of Hospitals and Hospitals Tracking Database: 2012 "Utilization Data for Texas Acute Care Hospitals by County" for # Beds and Inpatient Admissions; 2015 "Emergency and Outpatient Utilization Data for Texas Acute Care Hospitals by County, 2015" for # hospitals and ER/Outpatient Visits; and 2015 "Charity Care and Selected Financial Data for Texas Acute Care Hospitals by County, 2015" for Total Uncompensated Care, Net Patient Revenue, and Uncompensated Care as % of Total Patient Revenue.
[37] *Ibid.*

Table 16: Hospital Utilization and Financial Experience, 2012 and 2015

County	# of Hospitals (2015)	# of Beds (2012)	ER Visits (2015)	Out-patient Visits (2015)	Inpatient Admissions (2012)	Total Uncompensated (UC) Care (2015)	Total Gross Patient Revenue (2015)	UC as % of Total Patient Revenue (2015)
Austin	ND*	23	ND	ND	434	ND	ND	ND
Calhoun	1	25	9,759	50,445	1272	$9,065,188	$66,677,896	13.60%
Chambers	2	39	5,442	52,190	722	$8,092,934	$85,303,471	9.50%
Colorado	2	55	10,118	110,889	1367	$5,502,381	$69,244,650	7.90%
Fort Bend	9	867	143,093	394,842	30,805	$213,385,647	$3,421,143,022	6.20%
Harris	67	12,878	1,772,653	8,330,537	498,399	$4,660,173,225	$61,612,433,437	7.60%
Matagorda	2	69	23,275	70,317	2914	$18,439,347	$140,406,209	13.10%
Waller	ND	0	ND	ND	0	ND	ND	ND
Wharton	1	129	6,332	52,823	1420	$3,355,471	$30,024,955	11.20%
Total	**84**	**14,085**	**1,970,672**	**9,062,043**	**536,899**	**$4,918,014,193**	**$65,425,233,640**	**7.52%**

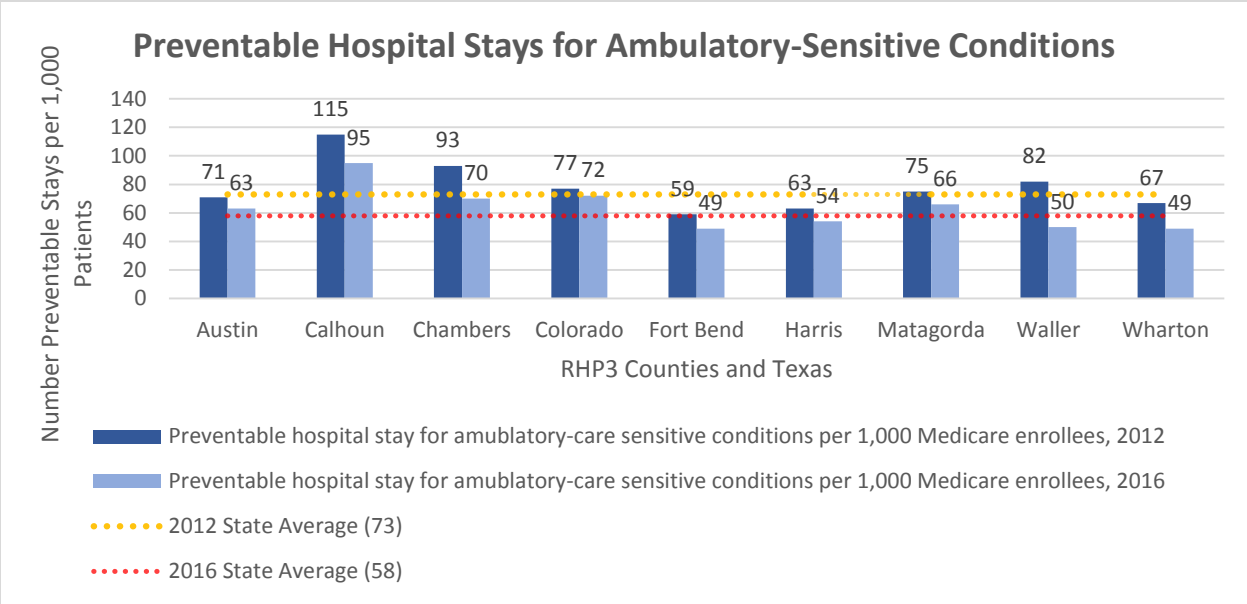
* ND = No data available

Source: Texas Department of State Health Services, Annual Survey of Hospitals and Hospitals Tracking Database: 2012 and 2015 "Utilization Data for Texas Acute Care Hospitals by County" for # Beds and Inpatient Admissions; 2015 "Emergency and Outpatient Utilization Data for Texas Acute Care Hospitals by County, 2015" for # Hospitals and ER/Outpatient Visits; and 2015 "Charity Care and Selected Financial Data for Texas Acute Care Hospitals by County, 2015" for Total Uncompensated Care, Net Patient Revenue, and Uncompensated Care as % of Total Patient Revenue.

Preventable Hospital Stays

Data from 2012 and 2016 depict the number of preventable hospital stays for ambulatory-sensitive conditions per 1,000 Medicare enrollees in all RHP3 counties, as well as the Texas state average. In all RHP3 counties this number decreased over the four-year period (See Table 17). While this improvement is likely a reflection of a statewide effort by Providers and both public and private health plans to reduce the number of preventable hospital stays, many of the Region's DSRIP projects provided services such as improved care coordination and patient education that likely contributed to this achievement. Reductions in avoidable hospital stays is both a federal and state goal for hospital Providers, and the identified improvements require a collaborative effort among hospitals, physicians and other health care Providers. As noted at the beginning of this report, improved coordination and collaboration among the Providers participating in DSRIP plans throughout the Region have increased significantly under the DSRIP program, and are one of the most notable accomplishments of this program.

Table 17: Preventable Hospital Stays, 2012 and 2016



Source: County Rankings and Roadmaps: http://www.countyhealthrankings.org/app/texas/2012/measure/factors/5/map. The 2012 ranking report data source is Medicare claims data reflecting 2009, and the 2016 ranking report data source is Medicare claims data from 2013. A weakness of using Medicare data is that it limits the population evaluated to mostly individuals age 65 and older.

Primary and Specialty Care Physicians

More than 15,100 physicians from more than 200 specialties serve residents living throughout the RHP3 community.[38] A comparison of 2012 to 2016 Provider data demonstrates that a total of 2,862 physicians were added to the workforce to serve the Region's population. While this employment growth is the result of continued hiring and recruitment efforts throughout the Region, as shown in Table 18, our communities continue to face shortages of critical resources. Physicians are highly concentrated in Harris County, with 92.5 percent of physicians, followed by Fort Bend County, with 6.5 percent of physicians. While 95 percent of the Region's population resides within these two counties, the remaining seven counties in the Region account for only 1.0 percent of the Region's physicians. It is important to note that five of the nine counties have no practicing psychiatrists, underscoring the ongoing challenges in meeting behavioral health needs of the population, and a reflection of the statewide shortage of practicing psychiatrists. In addition, three counties have no OB/GYN and five counties have only one pediatrician.

[38] Texas Medical Board, Physician Demographics by County and Specialty, September 2016.

Table 18: Physicians by County and Specialty, September 2016

County	General Practice, Family Medicine	Pediatrics	Internal Medicine	OB/GYN	General and Specialty Surgery	Psychiatry	Total Physicians – all Specialties*
Austin	5	1	3	0	1	0	15
Calhoun	10	1	4	2	0	0	23
Chambers	5	1	0	0	1	0	8
Colorado	13	1	3	1	3	0	21
Fort Bend	193	102	139	66	94	41	979
Harris	1,293	1,210	1,692	596	1,641	570	14,015
Matagorda	7	4	6	3	5	0	38
Waller	3	1	1	0	0	2	7
Wharton	10	6	4	3	4	1	42
Total	**1,539**	**1,327**	**1,852**	**671**	**1,749**	**614**	**15,148**

Source: Texas Medical Board, Physicians by County, September 2016. *This category includes *all* physician specialties not limited to those depicted in table.

Safety Net System

Serving as the focal point of the safety net for RHP3 is the publicly-funded Harris Health System which, as a fully integrated health care system, operates:

- 3 public hospitals
- 16 community health centers
- 2 multispecialty clinics
- 5 same-day clinics
- 5 school-based clinics
- 1 dental center
- 3 pediatric and adolescent health centers
- 1 dialysis center
- A health care program for the homeless
- 1 specialty center for people with HIV/AIDS
- Mobile immunization and medical outreach program

Staff for Harris Health's hospitals and clinics is provided through a contractual arrangement with the Baylor College of Medicine and UT Health Science Center Houston. In 2016, the System provided $648.7 million dollars in charity care, serving a patient payor mix of 62.2 percent uninsured; 20.4 percent Medicaid and CHIP beneficiaries; 9.5 percent Medicare beneficiaries; and 7.8 percent with Commercial and other funding.[39]

To meet the unique challenges of serving the population of more than 10,000 homeless people, the Region created Healthcare for the Homeless-Houston. Designated a Federally Qualified Health Center (FQHC) in 2002, the program operates three integrated health clinics that provide comprehensive health services, with a specific focus on integrated primary and mental health care.[40] In 2015, health and

[39] https://www.harrishealth.org/en/about-us/who-we-are/pages/statistics.aspx

[40] Held, Mary Lehman, Brown, Carlie Ann, Frost, Lynda E., Hickey, J. Scott Hickey, and David S. Buck*, Integrated Primary and Behavioral Health Care in Patient –Centered Medical Homes for Jail Releases with Mental Illness.*

support services were provided to more than 7,721 individual adults and children with over 38,800 patient visits, including medical visits, medical case management, and transportation services.[41] Among homeless persons in Harris and Fort Bend Counties surveyed in early 2014 by the Coalition for the Homeless Houston/Harris County, 35 percent reported severe mental illness and 39 percent had a substance abuse disorder; two percent reported as HIV positive and 34 percent had experienced domestic violence.[42]

However, despite the significant healthcare infrastructure and continued addition of new medical facilities, the Region continually struggles to keep up with the increasing demand for care. Access to care is clearly a critical issue for the Region that presents multiple challenges. A 2012 study documented that in Houston/Harris County, safety-net Providers were meeting approximately 30 percent of the demand for primary care visits by the low-income population, and the remaining demand is either met by private practice physicians or are unmet.[43] Community Health Needs Assessments conducted in 2016 by Texas Children's Hospital, CHI St. Luke's Health, Houston Methodist Hospital, and Memorial Hermann Health System identify access to care and coordination of care as priority issues and noted shortages of professional healthcare workers in both primary and specialty care settings.[44] With more than 1.2 million uninsured residents in the Region, many people still struggle to obtain basic healthcare services. Data gathered by the Behavioral Risk Factor Surveillance System in 2015 showed that in the Houston-Woodlands- Sugar Land Texas Metropolitan Statistical Area, only 67.1 percent of the population had visited a doctor for a routine check-up within the past year.[45]

In a December 2016 report, the Greater Houston Partnership noted that more than 325,000 Individuals work in the Houston-area healthcare sector.[46] Healthcare accounts for one in nine jobs and is one of the most resilient of the area's industries. But continued population growth has led to a continued shortage of health care professionals of nearly every type. Over the next few years, the strain is expected to grow

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Criminal Justice and Behavior, Feb 2012. http://www.pcictx.org/Papers_Publications/February-2012-Article-Criminal-Justice-and-Behavior-Feb-2012.pdf

[41] http://www.homeless-healthcare.org/achievements-outcomes/

[42] Coalition for the Homeless of Houston/Harris County. *Houston/Harris County/Fort Bend County Point-in Time Enumeration 2014 Executive Summary.* Accessed January 22, 2017 at http://www.homelesshouston.org/wp-content/uploads/2014/05/2014-PIT-Executive-summary-final.pdf.

[43] Begley, C., Le, P., Laison, D., Hanks, J., and Anthony Omojasola. "Health Reform and Primary Care Capacity: Evidence from Houston/Harris County, Texas." *Journal of Health Care for the Poor and Underserved*. 2012, vl. 23: 386-97.

[44] Chi St. Luke's Health, Baylor St. Luke's Medical Center "2016 Community Health Needs Assessment & Implementation Strategy" Accessed January 21, 2017: http://www.chistlukeshealth.org/documents/General%20Information/Assessments/2016_CHNA_BSLMC.pdf and Texas Children's Hospital, "2016 Community Health Needs Assessment" Accessed January 21, 2017: https://www.texaschildrens.org/sites/default/files/CHNA_Guide_2016_V10_0.pdf
Memorial Hermann Health System Community Health Needs Assessment 2016, http://www.memorialhermann.org/uploadedFiles/_Library/Memorial_Hermann/MH_TMC_CHNA_060916_finalfinal.pdf
Houston Methodist Hospital Community Health Needs Assessment: 2016-2019; http://www.houstonmethodist.org/~/media/pdf/Community-Benefits/2016%20CHNA/2016%20HMH%20CHNA.ashx?la=en

[45] BRFSS 2015 Age-adjusted Prevalence Data.

[46] Greater Houston Partnership, *Houston Employment Forecast 2017*, December 2016.

even more with the addition of at least 14 new hospitals schedule to open throughout the Region.[47] At the end of 2016, more than 2,400 job openings were listed for four of the largest health systems in the community. Forecasts for 2017 indicate an additional 9,800 jobs for the healthcare sector will be added this year, assuming individuals with the necessary skills are available to fill the positions.[48]

According to the U.S. Department of Health and Human Services, every county in the Region has been designated in part or in full a Medically Underserved Area/Population (MUA) and a Health Professional Shortage Area (HPSA).[49] Resolving this issue is not simple and requires long-term planning and infrastructure development necessary for the education and training of new physicians. This shortage of Providers is particularly critical due to the growing population of the Region and the increased demand for services that may be at least partly attributable to the increasing percentage of insured, due largely to the Affordable Care Act and implementation of health insurance tax credits for low income families.

Preparing for and addressing these changes requires a comprehensive strategy and significant financial investment to ensure patients have timely access to the appropriate healthcare Provider in the most cost-effective setting possible. Individuals without access to a medical home or primary care Provider are more likely to seek care in an emergency room setting, resulting in significant increases in health care costs. A 2011 study of hospital emergency department visits in Houston found that primary-care related emergency department visits that could have been treated in a primary care setting resulted in costs of more than $242 million, up from $214 million in 2009.[50] Accessing inappropriate care through the emergency room not only is inefficient and costly, but it delays services for more critical patients who need services immediately, and potentially contributes to poorer health outcomes for these patients. Many of these costs and delays could be avoided if patients had access to the services they needed through lower cost clinics and physician offices with extended hours that enable them to obtain non-urgent services at non-traditional times, and at facilities that are accessible. Improving access to these critically-needed services is an important component of the Region's DSRIP program and long-term strategy for ensuring that patients have access to the most appropriate care at the right time and in the right place.

[47] Ibid.
[48] Ibid.
[49] U.S. Department of Health and Human Services, Health Resources and Services Administration, Data Warehouse accessed January 21 2017. https://datawarehouse.hrsa.gov/topics/hrsainyour.aspx
[50] School of Public Health, University of Texas Health Science Center at Houston; *Houston Hospitals Emergency Department Use Study, January 1, 2011 through December 31, 2011.* June, 2013.

Key Challenges and Community Needs

As with any large urban community, our Region continues to face significant challenges in meeting the healthcare needs of our population. With over five million residents and thousands more traveling daily to the Region for healthcare services, our healthcare Providers continually strive to provide the best patient care possible. DSRIP projects initiated in 2012 targeted some of the most needy populations and difficult community health needs, and have shown encouraging results in many areas. But despite the progress over the past four years, the community needs identified in 2012 continue to persist as noted throughout this report and in the CHNA reports issued by hospital systems participating in the Region. Many of these challenges will never be completely resolved, and our continued focus will be critical to achieve future improvements. Although our priority needs have not changed, we continue to work together to develop new ways to address these complex issues in a thoughtful, inclusive manner that reflects the varying patient needs and the socio-economic disparities that make healthcare services and improved health status inaccessible for a large segment of our population.

Following is a brief summary of the priority challenges and suggested interventions identified for RHP3 based on data described in this report and Community Health Needs Assessment reports developed by RHP3 stakeholders and participants.

Insufficient Access to Care

The Region faces a continued shortage of primary and specialty care Providers, particularly for uninsured individuals and people requiring behavioral health care, who frequently face long waits for services. Texas ranks 47th in the country for primary care physician-to-patient ratios, and all counties in RHP3 have been designated fully or partially medically underserved areas. Anticipated population growth will further exacerbate the situation, despite the addition of more than 2,850 physicians to the Region in the past four years.

More than 20 percent of individuals in the Region are uninsured, which makes it difficult for people to obtain healthcare services. In the BRFSS survey, 38.2 percent of adults in Harris County reported they do not have a doctor or health care Provider, and many uninsured delay care and rely on emergency departments for services that could be provided in a primary care setting. Nearly 20 percent (19.8 percent) of Baylor St. Luke's discharged inpatients needed to see a doctor in 2014, but could not because of cost.[51] Uncompensated Care costs reported by hospitals within the nine RHP counties totaled nearly $5 billion in 2015, much of which is attributed to costs incurred by uninsured individuals. Of Memorial Hermann Texas Medical Center's 53,883 visits in 2013, 59.1 percent were from patients who were uninsured or on Medicaid, and 41.1 percent were classified as non-emergent or with primary care treatable conditions.[52]

[51] CHI St. Luke's Health, 2016 Community Health Needs Assessment & Implementation Strategy
[52] Memorial Hermann Texas Medical Center 2016 Community Health Needs Assessment

Recommended Initiatives for Addressing Access to Care:

1. Expand availability and access to healthcare services of all types, with a special emphasis on Behavioral Health services.
2. Promote multi-sector, cross-institutional collaboration to prioritize healthcare service needs and locations of new facilities to serve underserved populations.
3. Continue to focus on development of resources to assist in building the healthcare workforce, particularly as it relates to mental health services.
4. Continue to extend office hours for primary care Providers to increase number of appointments.
5. Continue to support and develop the network of public health and social service organizations to enhance safety net services for uninsured/under-served populations.
6. Disseminate key information to elected officials and policy makers to advocate for improved access to care.
7. Grow navigation services to help patients identify available services and programs, especially for low-income individuals.
8. Pursue telemedicine models for mental health care to expand access to these services.
9. Develop a screening tool to identify social and medical needs of individuals and develop community-based strategies to address identified needs.
10. Strengthen and improve access to palliative care and hospice programs for patients.

Inadequate Transportation Options for Individuals Needing Health Care Services

Accessing affordable transportation for medical appointments is a challenge for many low-income residents, particularly those living in rural communities with few or no public transportation services and very limited options for emergency transportation. The absence of these services results in patients delaying necessary care until it becomes a critical healthcare condition, and relying on emergency transportation for services that could have been provided in a primary care setting, or avoided entirely.[53]

Recommended Initiatives for Addressing Transportation Services

1. Identify transportation problems within specific communities and develop local solutions.
2. Work with community organizations that may be able to provide free or low-cost van services on a rotating basis for transporting individuals to healthcare appointments.
3. Identify funding sources to assist with costs of local transportation services.
4. Provide more marketing/education materials to inform residents in specific communities of low-cost transportation services they may not be aware of.
5. Provide local community education programs to help individuals understand how to use the public transportation system. Provide “ride the bus” partners for first time users who need assistance navigating the system.
6. Consider locations of new medical facilities to complement public transportation routes to make it easier for patients to access.
7. Design existing and new medical facilities to include safe sidewalks between bus stops and medical facilities, and covered areas for patients waiting for busses in inclement or hot weather.

[53] Houston Methodist Hospital Community Health Needs Assessment 2016-2019, Texas Children’s Hospital Community Health Needs Assessment 2016, and Memorial Herman Health System Community Health Needs Assessment 2016

8. Work with transportation authorities to ensure bus routes located close to medical facilities run at appropriate hours, including evenings and weekends, to accommodate extended office hours to meet needs of working individuals and increase access to care.
9. Consider development of incentives to encourage Providers to locate offices and medical facilities in medically underserved areas and areas with limited/no public transportation options.

High Prevalence of Chronic Disease and Poor Health

The Region continues to face a high prevalence of chronic disease, including diabetes, heart disease, asthma, cancer and cardiovascular disease. For example:

- In every county in RHP3, cancer and heart disease were identified as the top two causes of death. In five of the nine counties, the county rates of death for both cancer and heart disease were higher than the statewide average.[54]
- Obesity affects 16.8 percent of children in the Houston area; these children are at higher risk of developing diabetes, heart disease, joint pain and other conditions in comparison to children who are not obese.[55]
- Approximately seven in ten adults in Harris County (69.4%) reported that they were overweight, and 10.4 percent of adults reported having been diagnosed with diabetes.[56]
- Disease rates and level of risk vary by demographic and ethnic factors, with low income and Black and Hispanic populations at higher risk for many conditions. For example, BRFSS data shows that 91.7 percent of Black individuals in the Baylor St. Luke's community are at risk for obesity, compared to 79.1 percent of all Texans. Black patients' rate of heart disease is more than three-times higher than White and Hispanic patients. Black patients are also more likely to have asthma (9.2% Blacks, 7.4% Whites, and 1.88% Hispanics).[57]

Addressing these issues is a statewide problem and requires a long term strategic plan that focuses on not only treatment and early detection, but prevention and a comprehensive health education program. The community must also develop a comprehensive plan for addressing social determinants of health that contribute to poor health and prevent many residents from obtaining necessary care to treat chronic conditions.

Recommended Initiatives for Addressing Chronic Disease and Poor Health

1. Continue to improve access to primary care services, particularly for low income populations.
2. Identify barriers to making healthy choices and target initiatives towards removing or reducing barriers.
3. Collaborate with nonprofits and other local community organizations to create educational materials and host community forums to inform residents about ways to improve communication and information on disease conditions and prevention.

[54] Department of State Health Services, Health Facts Profiles, 2013
[55] Texas Children's Hospital, Community Health Needs Assessment 2016
[56] Memorial Herman Health System, Community Health Needs Assessment 2016
[57] CHI St. Luke's Health, 2016 Community Health Needs Assessment & Implementation Strategy

4. Provide coordinated and culturally specific disease prevention and educational outreach for heart disease, COPD, diabetes, cancer, stroke, depression, hypertension, obesity, Alzheimer's and renal problems.
5. Implement a plan for improving community relationships to address disease prevention.
6. Expand screening opportunities through health fairs and other events to increase diagnosis opportunities for common conditions and provide information for follow-up care.
7. Proactively identify barriers to obtaining prescriptions and maintaining long term medication adherence (such as affordability or access to a local pharmacy). Develop solutions to increase medication adherence, which will lead to improved health outcomes and prevent complications and avoidable hospital admissions.
8. Create volunteer groups within Regional communities to assist with health education and prevention activities.
9. Identify existing programs and improve community outreach to increase awareness of the available programs.
10. Establish community navigators to help link patients with existing services and programs.
11. Facilitate and sponsor family activity programs.
12. Identify medication assistance programs and link services with eligible patients.

Continued High Prevalence of Behavioral Health Conditions and Challenges Accessing Services

As noted throughout this report, the state of Texas and all counties in RHP3 lack both the Providers and facilities to adequately meet the demand for behavioral health care. Despite advances made under ongoing DSRIP projects, the Region still faces challenges providing an integrated approach to care that meets both the physical and mental healthcare needs of the patient.

As an example of how the DSRIP program has been working to improve BH services, the Harris Center for Mental Health and IDD (formerly known as the Mental Health Mental Retardation Authority of Harris County or MHMRA) increased its workforce by 13 percent in 2016. The Center oversees implementation of 27 approved DSRIP projects that support mental health services in Harris County, five of which are collaborative projects with other organizations such as The Lighthouse for the Blind.[58] One of the projects involves collaboration with The Council on Alcohol and Drugs Houston, and enabled Council staff to share electronic records to support integrated services with Harris Center teams at four locations. By April 2015, approximately 45 percent more patients than originally anticipated were participating in the program.[59] The DSRIP collaborations increased the Harris Center for Mental Health and IDD's impact by strengthening its partnerships with over 35 community organizations and serving 17,873 individuals.[60]

However, poor access to behavioral health services was identified as a key challenge in every Community Health Needs Assessment reviewed for this report. Many individuals may receive either physical treatment or behavioral health care, but not both, or they receive no care at all.

[58] The Harris Center for Mental Health and IDD. "Annual Report: Fiscal Year 2015." Accessed January 21, 2017: file:///C:/Users/sarvey/Downloads/Transformation+-+Annual+Report+2015+-+The+Harris+Center+.pdf
[59] Southeast Texas Regional Healthcare Partnership, "Region 3 Anchor Updates: April 2015," p. 1.
[60] The Harris Center for Mental Health and IDD. "Annual Report: Fiscal Year 2015." Accessed January 21, 2017: file:///C:/Users/sarvey/Downloads/Transformation+-+Annual+Report+2015+-+The+Harris+Center+.pdf.

Individuals with BH service needs find the system is difficult to navigate and challenging for both patients and Providers. These problems can be addressed by creating a health service system that is fully coordinated and integrated with behavioral health and primary health care, as well as coordinating with services provided through school programs, criminal justice systems, and social service Providers.

Recommended Initiatives for Addressing Growing Demand for Behavioral Health Treatment

1. Increase screening of new mothers for post-partum depression during initial well-baby exams.
2. Improve staff awareness and training of signs of BH conditions to enhance early detection and treatment.
3. Expand existing telehealth services for BH treatment, building on the existing program successes of the DSRIP projects.
4. Work with state officials to address any regulatory restrictions that impede or discourage telehealth services.
5. Increase access to BH Providers in areas with limited or no access to care through a rotation program that locates BH Providers in underserved communities on a weekly or bi-weekly basis.
6. Increase funding specifically for BH Provider education and training to encourage more Providers to specialize in BH services.
7. Coordinate with local school districts to provide teacher training and on-site counseling for students with BH issues.
8. Work with school districts to provide guest professional speakers to discuss common teen BH issues, such as depression, suicide, alcohol and substance abuse.

Fragmentation of Patient Services throughout a Large Health Care System and Lack of a Coordinated Information Technology (IT) Infrastructure to Support Collaboration

While care coordination and collaboration among Providers have improved dramatically under the DSRIP program, the large size of RHP3 and continued changes in infrastructure contribute to fragmented health care that is both inefficient and ineffective. Providers and individuals participating in stakeholder focus groups throughout the community expressed frustration regarding lack of communication among Providers, and continue to observe duplicative and unnecessary services, which could be avoided through a more integrated care system that maximizes the use of electronic health records and health information exchange.[61] Implementation of coordinated care systems requires long- term commitment by Providers and involves planning, IT infrastructure and support, training and communication strategies that maximize the use of technology. However, those who participate in a coordinated system of care have observed significant reductions in unnecessary services and costs, improved outcomes, and increased satisfaction among both Providers and patients. Providers participating in the DSRIP program have invested significant time in developing more integrated systems of care, but the DSRIP program has limited reach and includes participation of a relatively small number of Providers offering services throughout the nine-county Region.

[61] This community statement was also echoed in Region 3's Regional Quality Plan development meetings and stakeholder feedback sessions. See Appendix G.

Recommended Initiatives for Addressing Fragmentation of Patient Services[62]

1. Develop a strategy for advancing the DSRIP care coordination projects and related activities to include more Providers in the Region.
2. Create a patient task force to identify specific problems and challenges they face when navigating the healthcare system and seek their input on specific improvements.
3. Develop a more effective referral program among specialty and primary care physicians.
4. Improve staff training as it relates to administrative tracking of care coordination.
5. Evaluate and promote opportunities for IT infrastructure enhancement and coordination among Providers, including financing options.
6. Provide patient navigation and education information/materials to help patients better understand the concepts of care coordination and the benefits it provides.
7. Improve transitional care processes and communications between Providers and patients.
8. Develop more effective partnerships between Providers to better communicate about care coordination.
9. Improve management of care for patients discharged from hospitals.

A Diverse Population with Varying Cultural and Socio Economic Backgrounds that Require Focused Education and Services to Support Healthy Environments and Health Outcomes

Significant disparities in socio-economic conditions that impact social determinants of health are a persistent problem throughout the Region. While RHP3 is fortunate to be home to such a diverse group of individuals, serving a diverse population with specific cultural preferences and varying perspectives requires a focused community approach. The Region's population of more than five million residents lives and works in extremely diverse communities from the wealthiest neighborhoods to the poorest, and many face language, cultural and economic barriers that must be addressed to ensure they receive needed services. Stakeholders note that communities that are home to many of the underserved and uninsured populations with the poorest health outcomes often have a large number of individuals for whom English is not their primary language, non-existent recreational opportunities, limited access to healthy food, and limited access to convenient healthcare services. Many of the residents are poorly educated, are more likely to suffer from chronic health conditions (both diagnosed and undiagnosed), are more likely to suffer from mental health conditions, and often live in high-stress environments. Stakeholders also noted that while various organizations are engaged at some level in efforts to address the wide-ranging challenges, the lack of a coordinated, cohesive plan and common agendas limits the effectiveness of these efforts. Many plans also lack input from residents, and may not be realistic or effective without local participation.

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Recommendations to Address Diverse Communities and Socio-Economic Challenges to Improve Healthy Living and Ensure Access to Services

1. Develop action plans and partnerships that focus on improving healthy lifestyles for specific at-risk populations (including rural communities, low-income communities, and youth).
2. Identify local communication barriers and collaborate within the community to develop educational and health information materials in multiple languages
3. Work with local school districts to develop health education and outreach programs targeted at age-appropriate groups within specific communities, including after-school opportunities for teens, such as exercise programs, cooking/nutrition classes, and first-aid/wellness training.
4. Develop local community task forces to identify community barriers that prevent healthy living and develop a strategic plan and both temporary and long-term solutions tailored to the specific community. Include community residents throughout the process to ensure the program reflects their concerns and needs.
5. Partner with local community organizations and public entities to maximize use of local facilities (such as schools, churches) to provide a variety of culturally appropriate services, including exercise programs, nutrition and wellness classes, and pop-up clinics for services such as immunizations and screenings. Services should be provided on a regular basis rather than sporadically to increase participation.
6. Coordinate with local ethnic community organizations to identify specific health care needs and challenges and work with community members to develop and implement local solutions.
7. Incorporate more community health workers into health systems to increase access to care and provide community-based education and assistance that address social determinants of health.
8. Improve collaboration among major stakeholders (medical institutions, public health organizations, government, payers and social services) to develop specific strategies for improving population health, with a detailed agenda and time frame.
9. Address transportation issues to enable individuals living in low-income communities to access services in a primary care setting to reduce reliance on emergency departments.
10. Establish local patient navigation systems and place trained navigators in local communities to help individuals identify care options, provide information on how to effectively use healthcare services, and assist with arrangements, such as appointments and transportation.
11. Create programs targeted specifically for seniors, who are often isolated, have difficulty understanding the medical system, and are often reluctant to leave their homes until a medical emergency occurs.

Conclusion

As the DSRIP program continues to evolve, the projects designed to address our communities' greatest healthcare needs will continue to play a vital role in improving the healthcare delivery system and ensuring our community members receive the best care possible. Though the details regarding future DSRIP opportunities are unknown at this time, RHP3 plans to continue to evaluate projects on an ongoing basis to identify opportunities for further innovation and strategies for meeting the healthcare needs identified in this report. If additional projects are allowed, the information in this report will be used to inform the selection of projects to address the Region's priority needs.

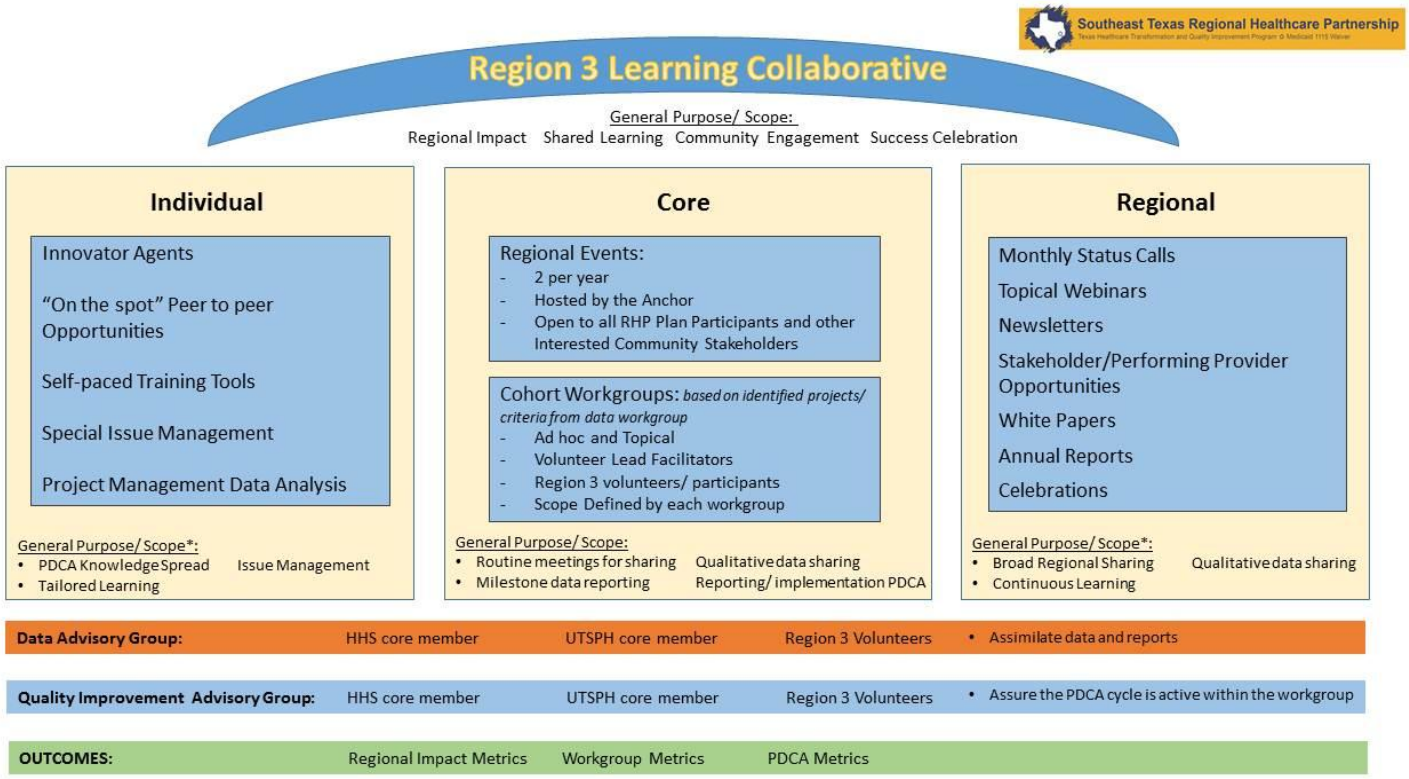
APPENDICES

Appendix A: DY3-6 Learning Collaborative Structures and Objectives

DY3-5: The RHP3 Anchor developed a systematic and multi-dimensional Learning Collaborative intent on assessing Regional impact, sharing project-level learning, engaging community stakeholders, and celebrating success. The RHP3 Learning Collaborative included three learning components: individual, core, and Regional. The individual component provided resources and opportunities for project owners and Participating Providers to expand their quality improvement knowledge, to obtain expertise for issue management, and to provide opportunities for tailored learning. The core components of the RHP3 Learning Collaborative focused on interorganizational learning by facilitating routine meetings for shared learning, supporting activities for outcome data reporting, providing a forum for qualitative data sharing, and guiding the reporting and implementation of Plan-Do-Check-Act (PDCA) activities. The Regional component encouraged interorganizational sharing of project successes and challenges, delivered opportunities for continuous learning, and shared aggregate data analyses about implementation and outcomes.

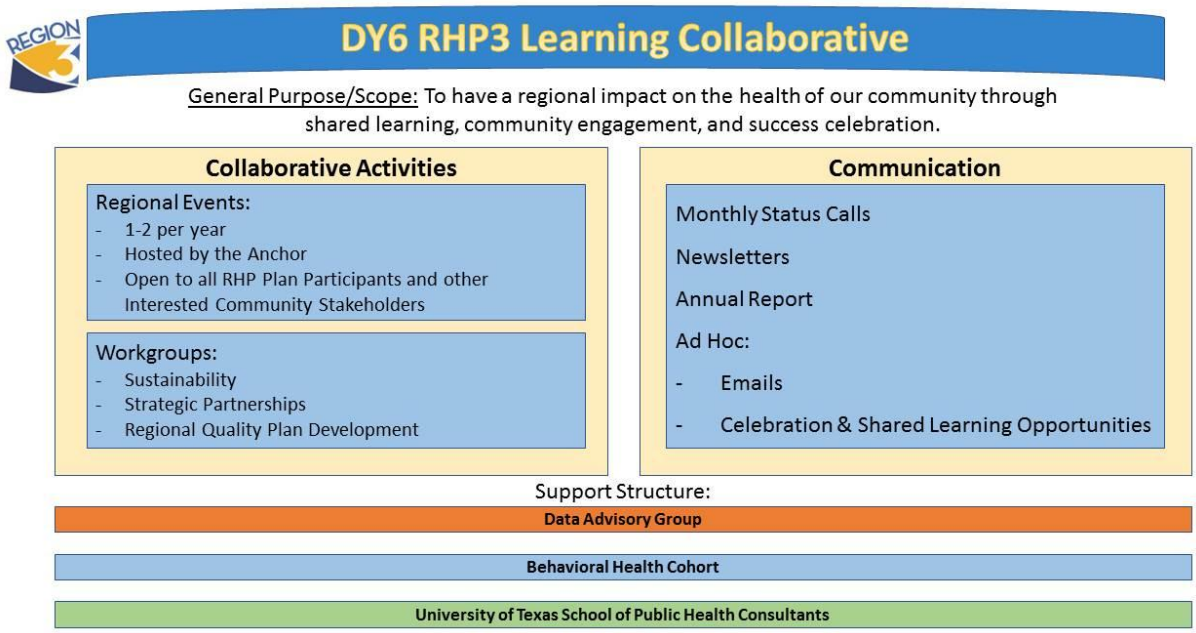
Over the course of DYs 3-5, RHP3 established six Cohorts to meet the Regions "core" needs: Emergency Care Utilization, Patient Navigation, Behavioral Health (Continuity of Care and Integrated Care), Disease Management Speaker Series, and Readmissions and Collaboration Best Practices. Each of the Cohort workgroups selected specific topical focuses, goals, and outcomes.

Figure 1. RHP3 DY3-5 Learning Collaborative Plan



DY6: The DY6 Learning Collaborative sought to leverage the relationships and collaborations developed in DY3-5 to begin developing a quality plan and to outfit Providers with tools to sustain DSRIP efforts. The Anchor implemented a plan covering two work streams—collaboration activities and communication—undergirded by a support structure. Collaboration activities included one broadly-themed Regionwide Learning Collaborative event and three workgroups strategically designed to help Providers in sustainability planning, developing strategic partnerships, and in determining areas of regional health quality in need of improvement through interorganizational efforts. Communication was the Anchor's second main function in the Learning Collaborative Plan. Communication involved calls, newsletters, emails, celebrations of success, shared learning opportunities and the annual report. To enable success in these areas, the Data Advisory Group, Behavioral Health Cohort, and University of Texas School of Public Health (UTSPH) consultants provided support.

Figure 2. RHP3 DY6 Learning Collaborative Plan



Appendix B: DY3-6 Learning Collaborative Plan Outcomes

A selection of the two Learning Collaboratives' outcomes is discussed below, specifically for Behavioral Health Cohort, ER Utilization Cohort, Patient Navigation Cohort, Sustainability Committee, Strategic Partnerships Committee, and the Regional Quality Plan Committee.

The Behavioral Health Cohort completed an analysis of the Region's 30-day behavioral health readmissions to determine a pre-DSRIP baseline against which to assess future performance and understand the most important factors leading to 30-day readmission (see Appendix E on page 50). The Cohort also sought to understand the Region's gaps in behavioral healthcare. The group administered a survey to the Region's DSRIP and non-DSRIP behavioral health stakeholders in 2016 and the results led to the Cohort's DY6 collaboration plans (see Appendix F on page 77). In DY6, the Cohort began planning a summit bringing together behavioral health and housing stakeholders to analyze and seek resolutions to Regional housing challenges for patients with behavioral health diagnoses.

The EC Utilization Cohort was a forum for ER navigation managers to discuss best practices in reducing unnecessary ER use and find partners in care coordination. The discussions spawned MCO-collaborations and a series of presentations at several of the Region's ERs about nearby DSRIP-funded primary care services.

The Patient Navigation Cohort sought to create a web-based patient navigation tool available to every DSRIP Provider, as well as a Community Health Worker training locator website. The initiatives were well-supported by front-facing staff but were hampered because of technical, financial, ownership, and data provision challenges.

The Data Advisory Group tracked Region-level population health indicators via annual Category 4 reporting and analyzed DSRIP project metric and dollar achievement in Quantifiable Patient Impact and Category 3 quality metrics. Pages 46-47 of Appendix C provide detail.

The Sustainability and Strategic Partnerships activities took place within the eight-part "Pathways to Program Sustainability" webinar series delivered in DY6. Most participants in the committees and on the webinars were DSRIP Providers from Region 3, however, attendees and presenters included MCOs in the Region, other Texas Anchors, UC-only Providers, Providers from outside regions, and various community members. About 95 unique Providers and about 270 unique individuals participated in the series. The series educated attendees about using the Washington University Sustainability tool, developing logic models and performing cost/benefit analyses. The series also introduced the Regions' MCOs, their particular focuses in quality, examples of value-based payment in action, and the partnership possibilities available.

The Regional Quality Plan, led by a cross-Provider committee, completed a Regional Strengths-Weaknesses-Opportunities-Threats (SWOT) assessment focused on Region 3's DSRIP program. The committee validated their findings through a survey to all RHP3 Providers, leading to the identification to four focuses that will structure future initiatives (see page 115). To further identify the plan's aims, the committee will apply this problem-identification structure to the Region's commonly selected DY7-8 measures and bundles.

In review, the RHP3 Learning Collaborative implementation plan shows that: organizations previously unfamiliar with each other are connecting; agencies are building continuums of care through collaboration; project owners are implementing new tools and performing analyses learned through mentoring and Regional learning opportunities; groups of stakeholders are working together to collect data on issues that were previously not clearly understood; stakeholders agree on the broad issues that hamper healthcare transformation; and stakeholders, critical to the healthcare delivery infrastructure, are no longer viewing themselves in silos of care, but as a part of a larger system tapestry. Still, the Learning Collaborative has demonstrated that challenges exist for sharing raw data and for sustaining services without a funding stream.

Appendix C: Metric Achievement in Volume and Quality Outcomes

The Data Advisory Group tracked DSRIP outcomes across DYs2-5. Achievement figures are shown in Tables 1 and 2 below.

Table 1. DYs 3-5 Category 3 Outcome Domain Achievement in Region 3

Outcome Domains	% of allocation achieved		
	DY3	DY4	DY5*
OD-1-Primary Care and Chronic Disease Management	99%	83%	59%
OD-2-Potentially Preventable Admissions	71%	100%	100%
OD-3-Potentially Preventable Readmissions (PPRs) – 30-day Readmission Rates	98%	89%	46%
OD-4-Potentially Preventable Complications, Healthcare Acquired Conditions, and Patient Safety	100%	100%	100%
OD-5-Cost of Care	100%	100%	100%
OD-6-Patient Satisfaction	99%	100%	48%
OD-7-Oral Health	100%	76%	44%
OD-8-Perinatal Outcomes and Maternal Child Health	97%	76%	44%
OD-9-Right Care, Right Setting	98%	88%	52%
OD-10-Quality of Life/Functional Status	100%	100%	92%
OD-11-Behavioral Health/Substance Abuse Care	100%	99%	92%
OD-12-Primary Prevention	100%	93%	53%
OD-13-Palliative Care	100%	100%	90%
OD-14-Healthcare Workforce	100%	100%	100%
OD-15-Infectious Disease Management	100%	100%	92%
Grand Total	99%	90%	63%

***As of April DY6 reporting. Does not include final DY5 reporting from October DY6.**

QPI Measures

Table 2. DY5 QPI "Encounters" Metric Outcomes

Project Type	Pre-DSRIP Baseline	DY5 QPI Goal	DY5 QPI Achieved	DY5% Achieved/Goal
Behavioral Health	6,859	34,430	28,912	84%
Chronic Care	-	-	-	NA
Emergency Care	-	1,400	2,131	152%
General	-	27,200	30,082	111%
Navigation/Case Management	20,390	131,320	99,571	76%
Prevention/Wellness	300	4,500	6,404	142%

Primary Care	529,257	556,675	551,717	99%
Specialty Care	234,238	135,725	193,813	143%
Grand Total	791,044	891,250	912,630	102%

Table 3. DY5 QPI "Individuals" Metric Outcomes

Project Type	Pre-DSRIP Baseline	DY5 QPI Goal	DY5 QPI Achieved	DY5% Achieved/Goal
Behavioral Health	25,245	38,959	32,848	84%
Chronic Care	4,942	69,262	161,848	234%
Emergency Care	-	3,600	13,176	366%
General	153	79,600	143,738	181%
Navigation/Case Management	4,969	34,869	49,723	143%
Prevention/Wellness	334	41,308	54,039	131%
Primary Care	30,223	11,554	8,938	77%
Specialty Care	-	36,525	106,912	293%
Grand Total	65,866	315,677	571,222	181%

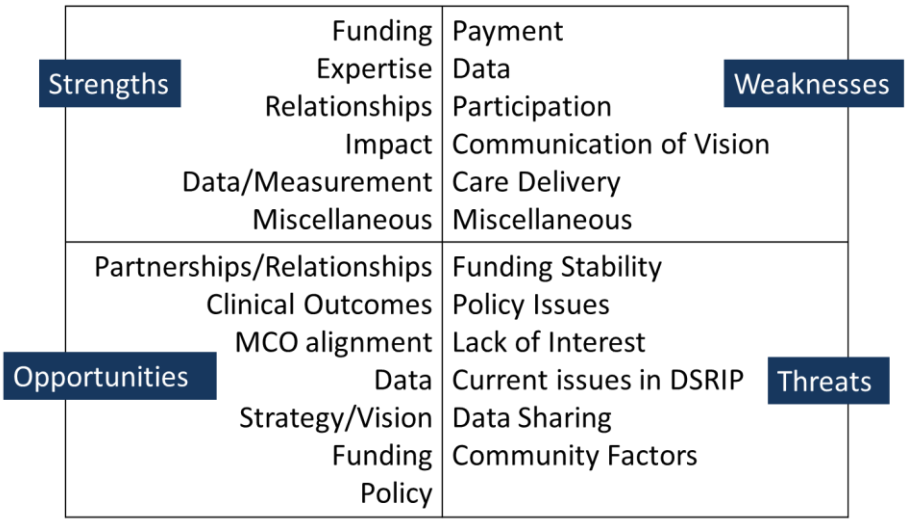
Appendix D: Regional Quality Plan

As part of the DY6 LC Plan, quality plan development was indicated as a primary goal for the Region. The focus of this initiative would be to identify quality issues of interest to RHP3 stakeholders, and develop a plan to mitigate these issues by identifying needs and barriers associated with healthcare quality and collaboration amongst Providers**.**

In order to begin work on the quality plan, a Regional Quality Plan (RQP) steering committee was developed in September 2016 through engaging a range of interested and diverse individuals from multiple RHP3 Performing Provider entities, including Harris Health System, Memorial Hermann Health System, UT Physicians, The Harris Center for Mental Health and IDD, and Memorial Medical Center.

The RQP committee used information presented in the original CHNA to develop a list of the Region's strengths, weaknesses, opportunities, and threats, otherwise known as a SWOT analysis. From this activity, the committee formed the following list of Regional characteristics that could be attributed to quality issues:

Figure 3. Regional SWOT Analysis Results



While some of the items correlated with findings in the first CHNA (such as relationships, care delivery, clinical outcomes, and data sharing), there were some quality issues that were based mainly on objective statements and Provider experiences. In order to corroborate this initial analysis, the committee surveyed RHP3 stakeholders via the "SWOT Validation Survey." The survey categorized the items from the SWOT analysis into seven domains: financial factors, inter-organizational relationships, data management, healthcare environment, stakeholder engagement, healthcare policy, and regional vision. On a scale from "Strongly Agree" to "Strongly Disagree," the survey asked respondents to rate their level of agreement to two or three statements per domain. The survey results are in Appendix H.

Afterwards, the RQP committee narrowed the scope of the quality plan by establishing focused domains. This consisted of two priority domains, which would encompass the major quality issues affecting the Region, while two enabling areas would serve as supporting initiatives to quality improvement (described below).

- Priority domains:
    a. Healthcare environment – considers the linkages between the social determinants of health, health outcomes, and healthcare quality, and what can be done to minimize these gaps in access to care.
    b. Inter-Organizational relationships – emphasizes collaboration between DSRIP and non-DSRIP entities by strengthening the foundation of partnerships established in Waiver 1.0, as well as forming new relationships.
- Enabling factors:
    a. Data management – analyzes the necessity of data sharing in order to advance quality initiatives and how healthcare data is communicated between institutions.
    b. Stakeholder engagement – focuses on garnering buy-in at the leadership and organizational levels to engage in Regional quality improvement.

Once the quality domains were established and HHSC released the DY7-8 Category C measure protocols and specifications, the committee decided to combine the two structures such that the quality plan would align with DSRIP's financial incentives. Thus, another survey was administered to the Region in July 2017 in order to gauge the Region's interest in healthcare outcomes based on the menu of Measure Bundles or Measures that Performing Providers must choose from in order to improve and transform healthcare quality under Waiver 2.0. The results of this survey, as well as Providers' final measure and bundle selections, will be used to structure regional conversations in order to help the RQP committee identify its next steps and determine Regional activities to impact specific quality concerns or health outcomes. Moreover, the committee will use the 2017 CHNA to update or validate the plan.

Appendix E: RHP3 30-Day Behavioral Health Readmission Analysis

Goals

1) To describe a baseline for evaluating the impact if DSRIP intervention on 30-day readmission rates

2) To describe demographic and diagnostic characteristics associated with 30-day re-admissions

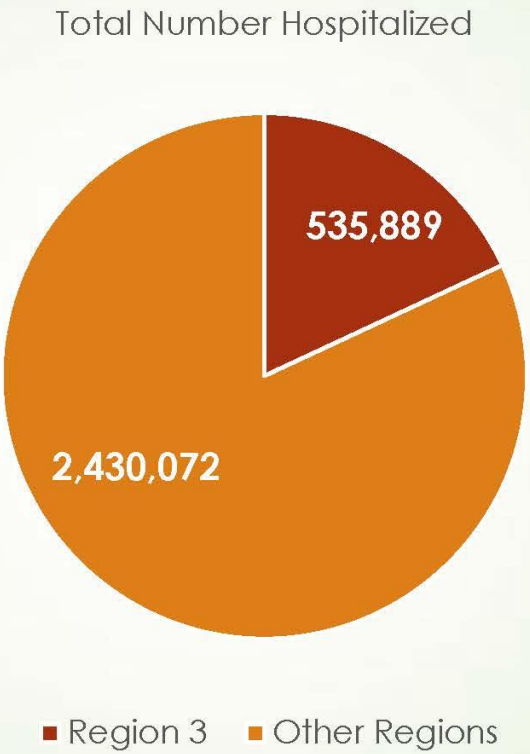
Texas Health Care Information collection (THCIC)

- Charged with collecting data and reporting on health care activity in hospitals and HMO's in Texas
- Goal of enabling consumers to have an impact on the cost and quality of health care
- Maintain a data set of virtually all hospital admissions in Texas
- Thanks to our anchor, Harris Health we have purchased the most recent available year of data, 2012

Advantage of THCIC Dataset

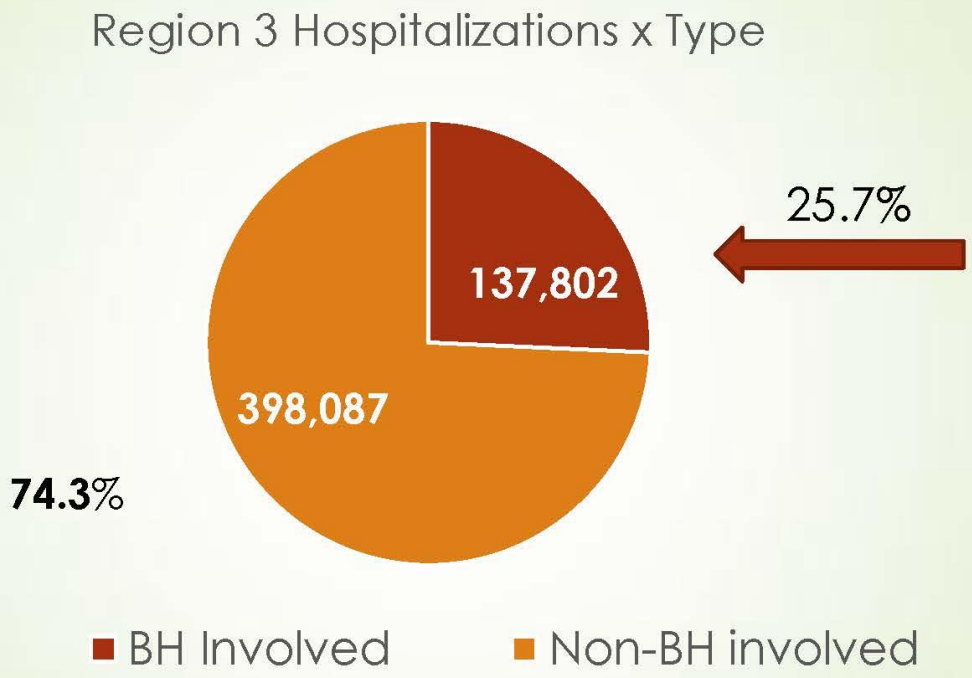
- While other existing data sets are proprietary or are focused on Medicaid, Medicare and SCHIP, THCIC includes all payors as well as the uninsured
- Public agencies including many DSRIP participants serve the low income uninsured often in greater numbers than federally insured
- THCIC may provide a more representative look at re-hospitalizations for especially for these organizations

The 2012 numbers



Region 3 had 18.1% of Texas Hospitalizations

Within Region 3



One fourth of Region 3 Hospitalizations were BH-involved

County of residence

	Frequency	Percent
Harris County	116904	84.8
Fort Bend County	11389	8.3
Matagorda County	1534	1.1
Austin County	1451	1.1
Colorado County	1420	1.0
Wharton County	1380	1.0
Waller County	1314	1.0
Chambers County	1296	.9
Calhoun County	1114	.8
Total	**137802**	**100.0**

Types of admissions

	Frequency	Percent
Index Admit	118621	86.1
Readmit (30 Days)	14058	10.2
Chained Readmit (Following readmit)	5123	3.7
Total	137802	100

Readmission rates

- The published statewide Mental Health/Substance Abuse PPR rate for Texas Medicaid and CHIP adults is 11.81% and for children 9.06%.
- In the Region 3 Sample (including all payors) the 30-day readmission rates were just slightly higher:
  - 12.4% for Adults and 10.0% for Children

Region 3 BH readmission rates are similar to Texas Medicaid rates

Previous findings for Texas Medicaid hospital admission "strings"

- The highest PPR rate is for MH/SA admissions. For adults these admissions have a higher than average number of PPRs per chain (1.38) indicating that patients with MH/SA admissions are more likely to have a string of related admissions.

Schizophrenia & mood disorders

Schizophrenic Disorders produce the longest admission "chains" among BH Diagnostic Groups (1.30 admissions/chain as compared to 1.21 overall)

Behavioral Health Hospital Costs

1) BH-involved admissions in Region 3 rack up **$5B in costs/year**
2) Admissions with **Secondary BH Diagnoses cost the most**
3) **Mood Disorders and Schizophrenic Disorders** add up to be the **most costly BH primary diagnoses**

Texas Medicaid Costs Related to PPR's with Behavioral Health Diagnoses

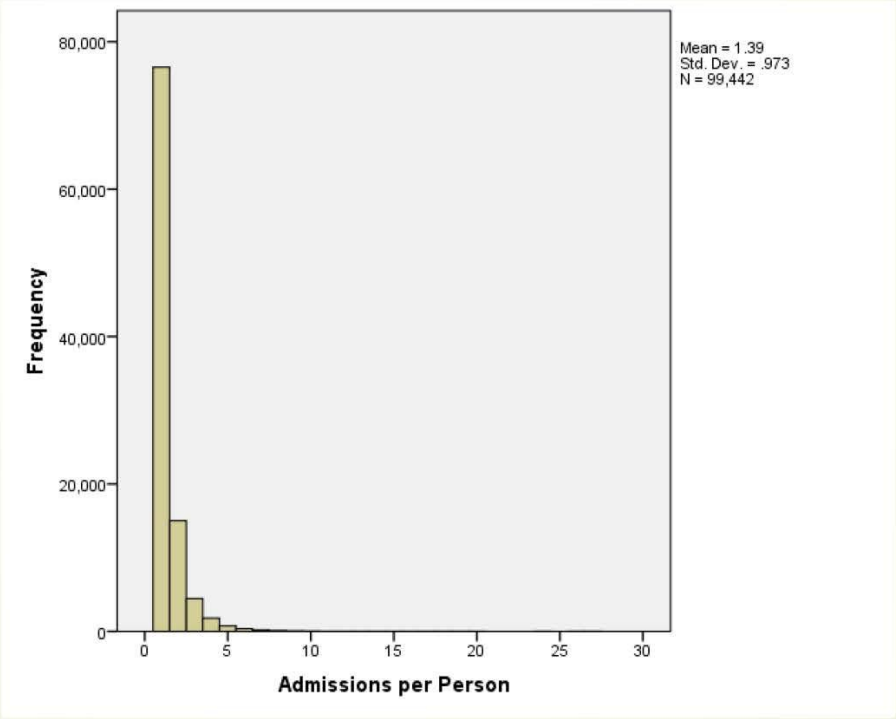
Top three categories were MH/SA related:

1) bipolar disorders with a PPR rate of 9.74 percent, cost of $10,839,063.43,
2) schizophrenia with a rate 14.31%, cost of $5,437,553.45,
3) major depressive disorders & other psychoses with a rate of 9.12%, cost of $4,321,369.13.

The "Big Three" mental health diagnoses are costly

High utilizers: Admissions

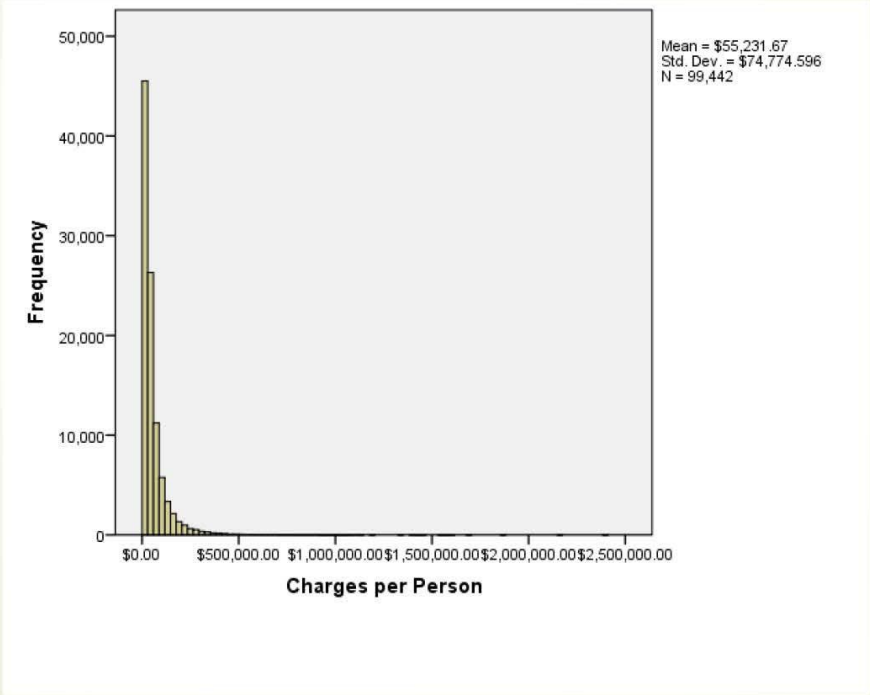
Mean Admissions per Person = 1.39
Range= 1-27 Admissions per Person



16% of readmissions are made by five percent (n=4,972) of BH-involved patients

High utilizers: costs

Mean Cost=$55,232 per person
Range=$0-$2,389,022



5% of patients account for 18% of Charges

Findings Related to Admission Type

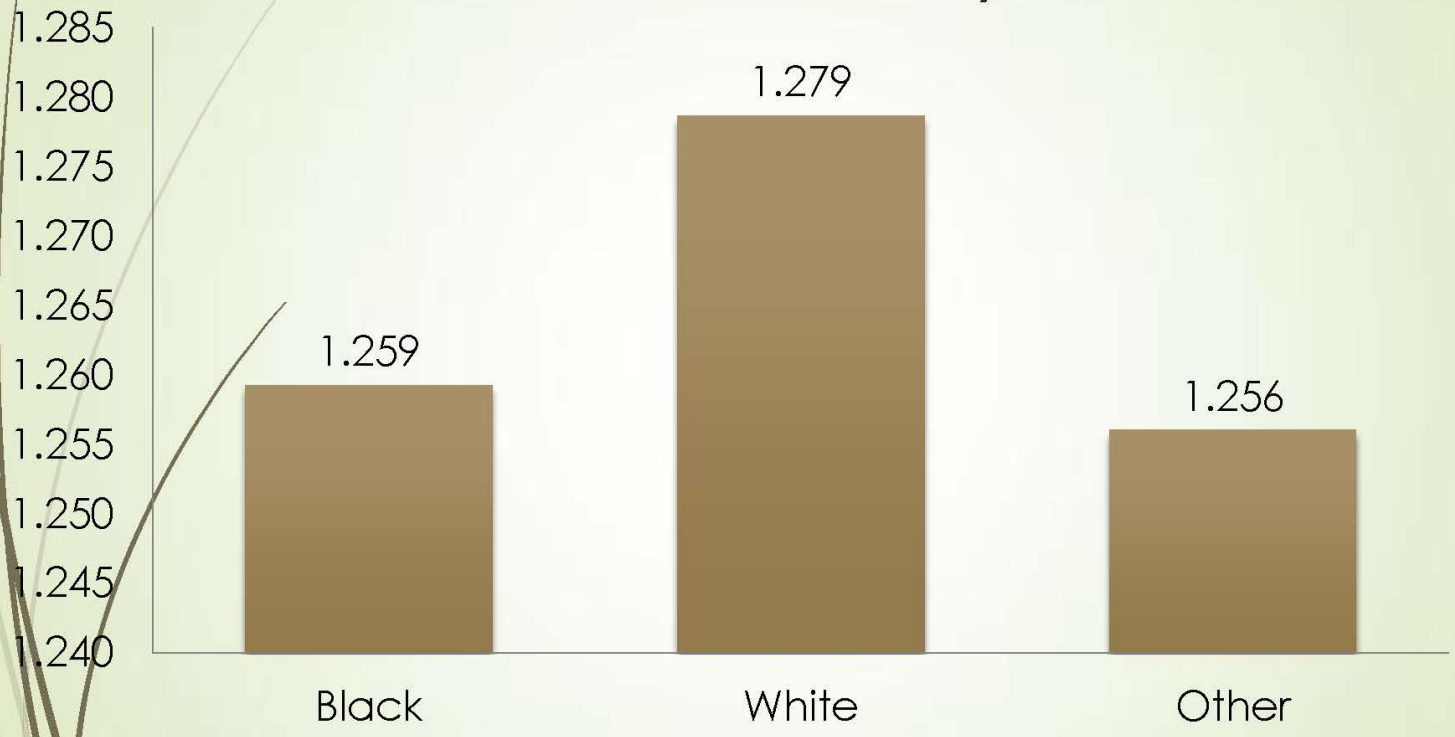
- Associated with higher readmission rates;
  - Secondary BH diagnoses
  - Ethnicity
  - Source of Admission
  - Payor Type
  - Primary BH Diagnostic Group
- Non-psychiatric facilities have more (absolute number) index, readmission, and chained readmission rates.
- AHRQ Primary Diagnostic Group is related to readmission rate with Mood disorders and Schizophrenia being the highest (n) for index, readmission, and chained readmission.

Binary logistic regression

Inputs within the Model
(These red variables are predictive!)

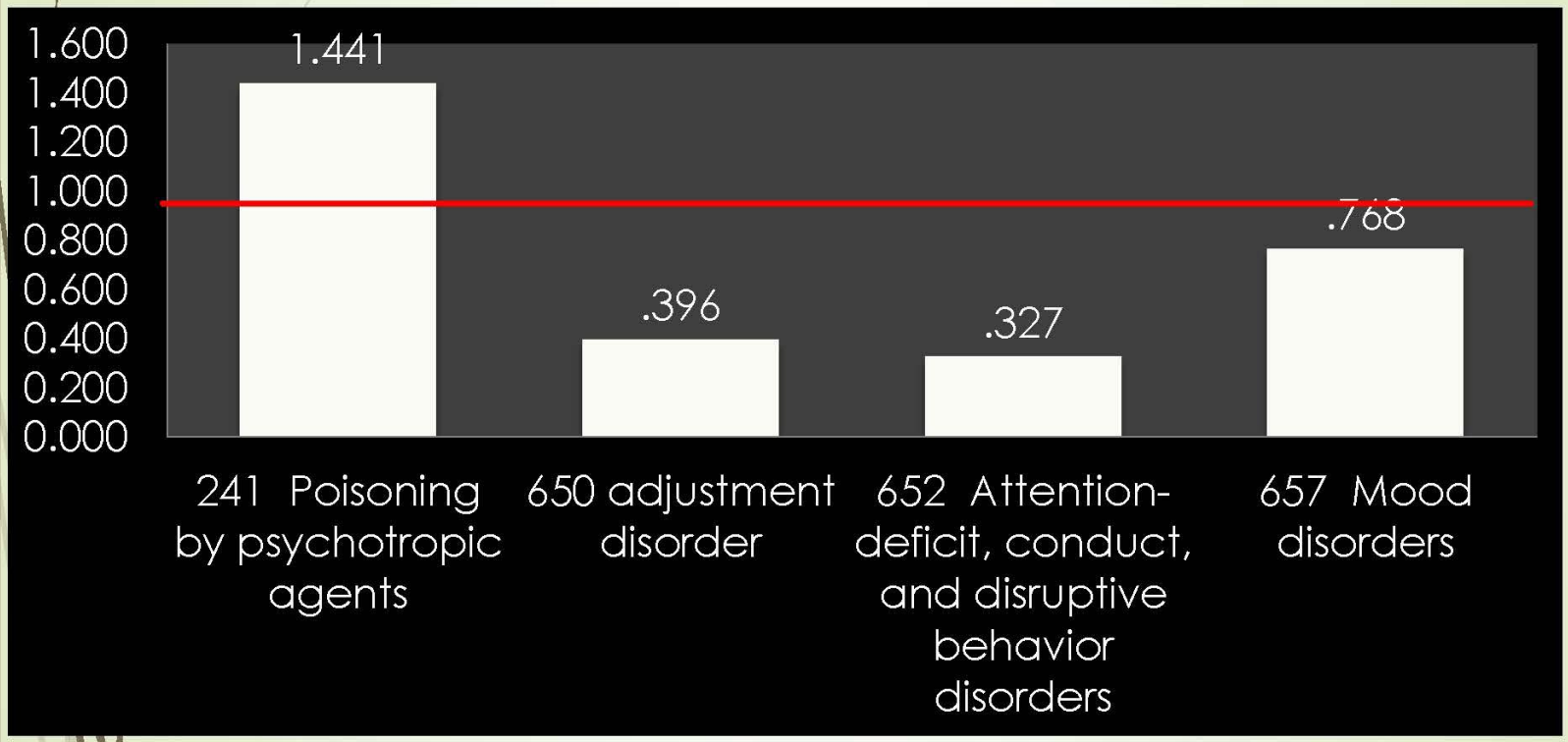
- First-Pay Source (Insurance)
- Principal Diagnostic Group
- Source of Admission
- Ethnicity
- Psychiatric Facility Indicator
- Sex

Significant Odds Ratios For Ethnicity



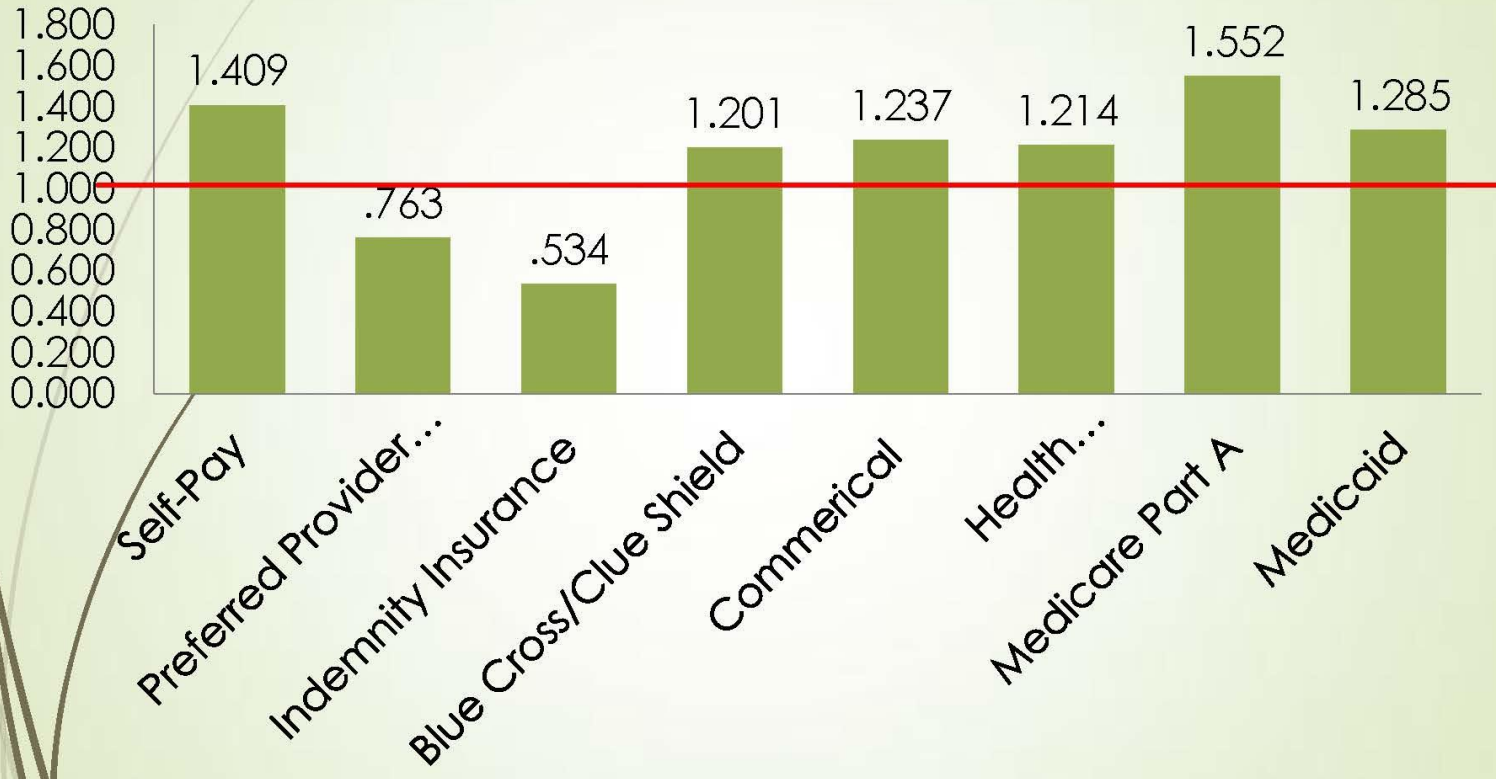
Reference Group: Hispanics
Significant Ethnic Groups for Readmission included Black, White, and Other

Significant Odds ratios for Principal Diagnostic groups



Reference: Screening and History of Mental Health and Substance Abuse Codes

Significant odds ratios for insurance

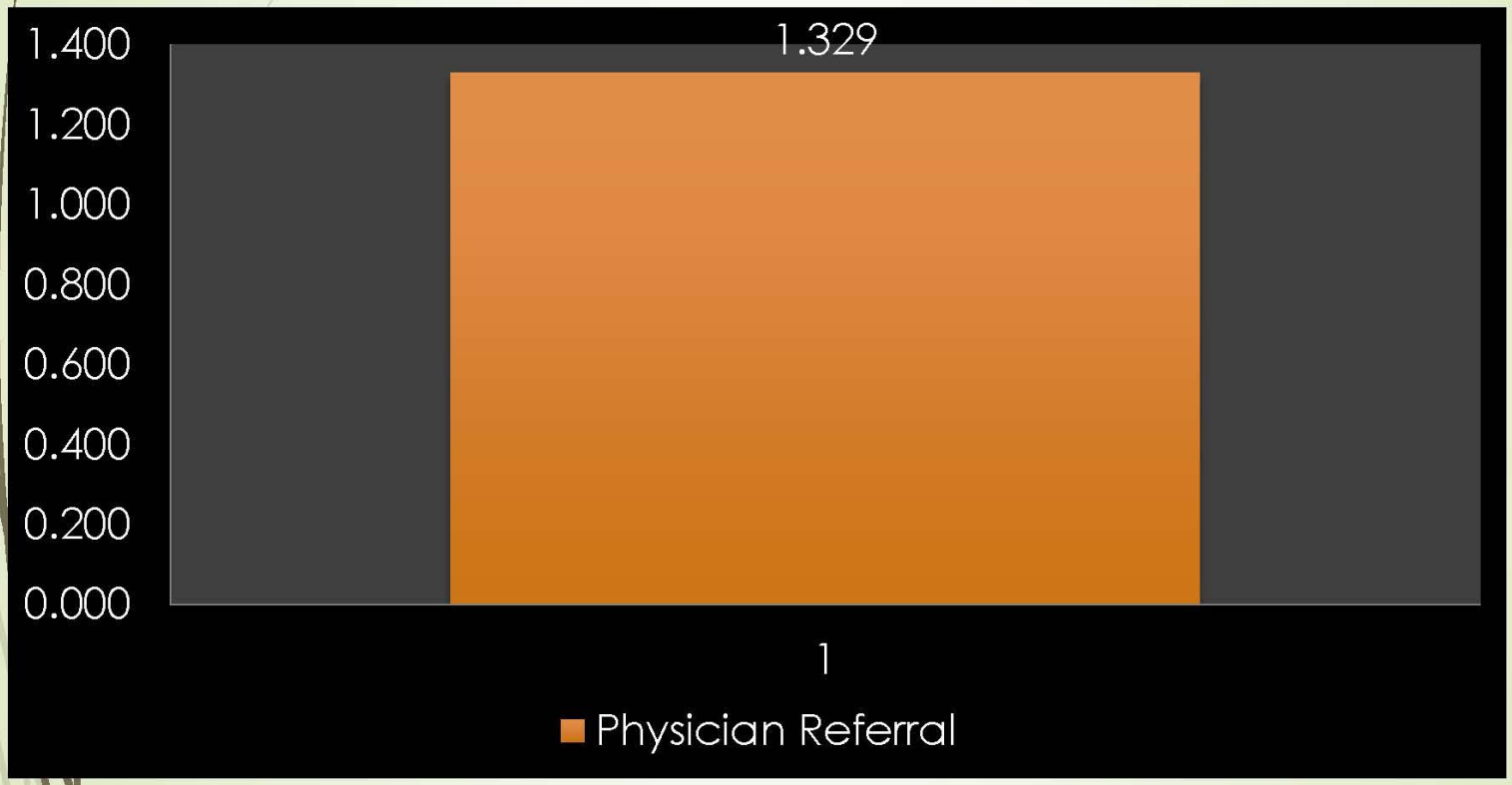


Reference Group: Charity, Indigent, Unknown

Sources of Admission

- Physician Referral
- Clinic Referral
- Transfer from a Hospital
- Transferred from Skilled Nursing Facility
- Transfer from Other Care Facility
- Court Law
- Information NA

Significant odds ratios for Source of Admission



Reference Group: Information Not Available

Implications

- The majority of BH-involved admissions and re-admissions are for secondary BH diagnoses
  - Implication: Collaborative Care is necessary to address co-morbid physical/mental health conditions
- Among BH primary diagnoses, admissions to patients with Mood Disorders and Schizophrenia frequently result in re-admission
- Schizophrenic disorders result in the longest "chains"
  - Implication: a focus on care issues for individuals with major depression, bipolar disorder and schizophrenia might bring payoffs
- Age, diagnosis, ethnicity, insurance status and source of admission influence rehospitalization rates
  - Implication: higher risk patients can be identified for special intervention

RHP 3 programs addressing these issues

- Collaborative Care (26)
- BH Consultation and Liaison within hospitals (7)
- Continuity of Care/Patient Engagement projects (5)
- Expansion of mental health/substance abuse outpatient services (26)

Projects with related Category 3s

RHP3 has 15 projects with Category 3 measures that may reduce 30-day readmissions

Follow-Up After Hospitalization for Mental Illness

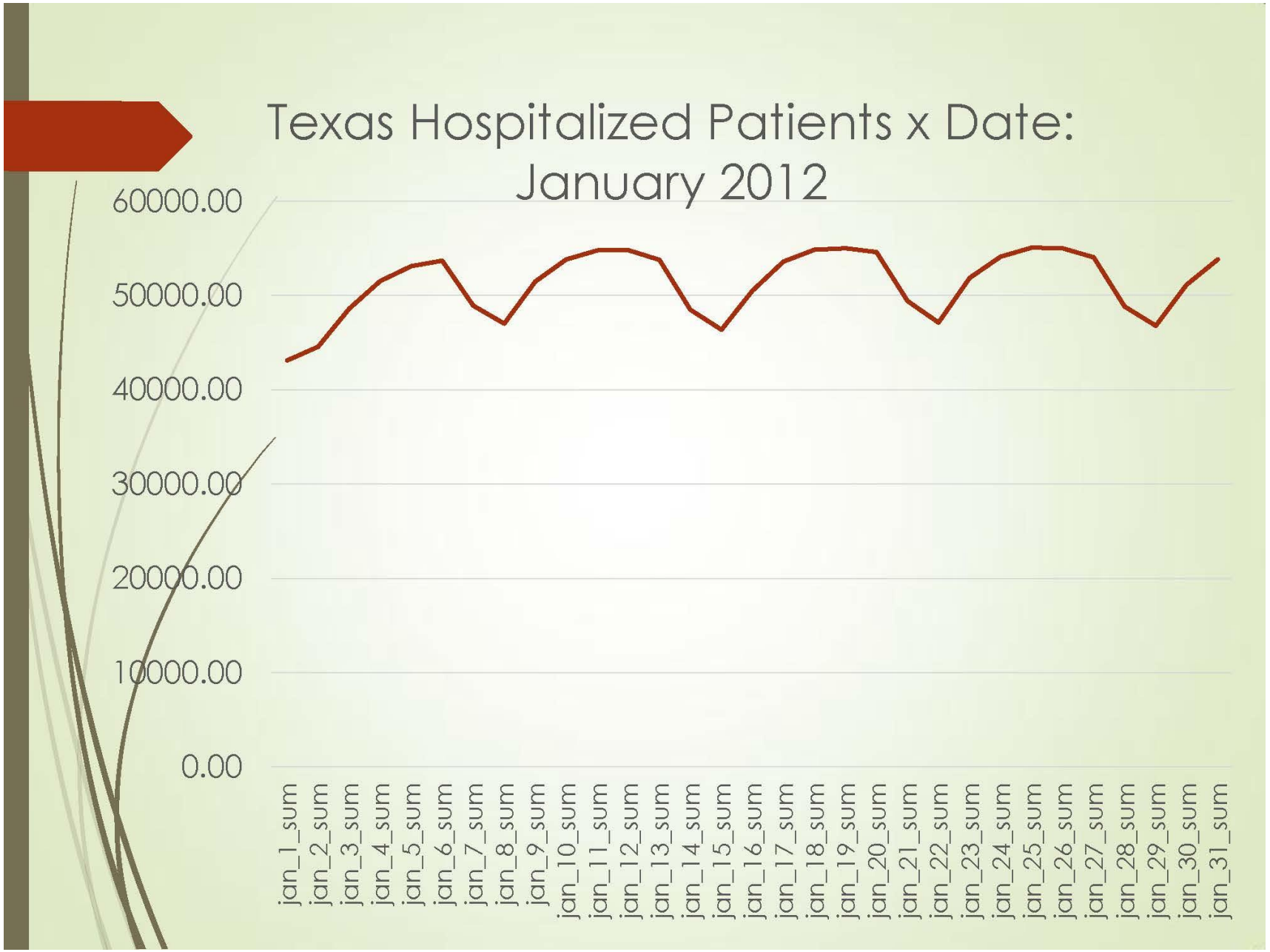
- Gulf Bend MHMR Center
- MHMR Authority of Harris County (2)
- Texana Center

Risk Adjusted Behavioral Health /Substance Abuse 30-day Readmission Rate

- Bayshore Medical Center
- MHMR Authority of Harris County
- OakBend Medical Center
- OakBend Medical Center

Emergency Department visits for Behavioral Health/ Substance Abuse

- Fort Bend County Clinical Health Services
- Memorial Hermann (3)
- Methodist Hospital (2)
- St. Joseph's Medical Center


Texas Hospitalized Patients x Date: January 2012
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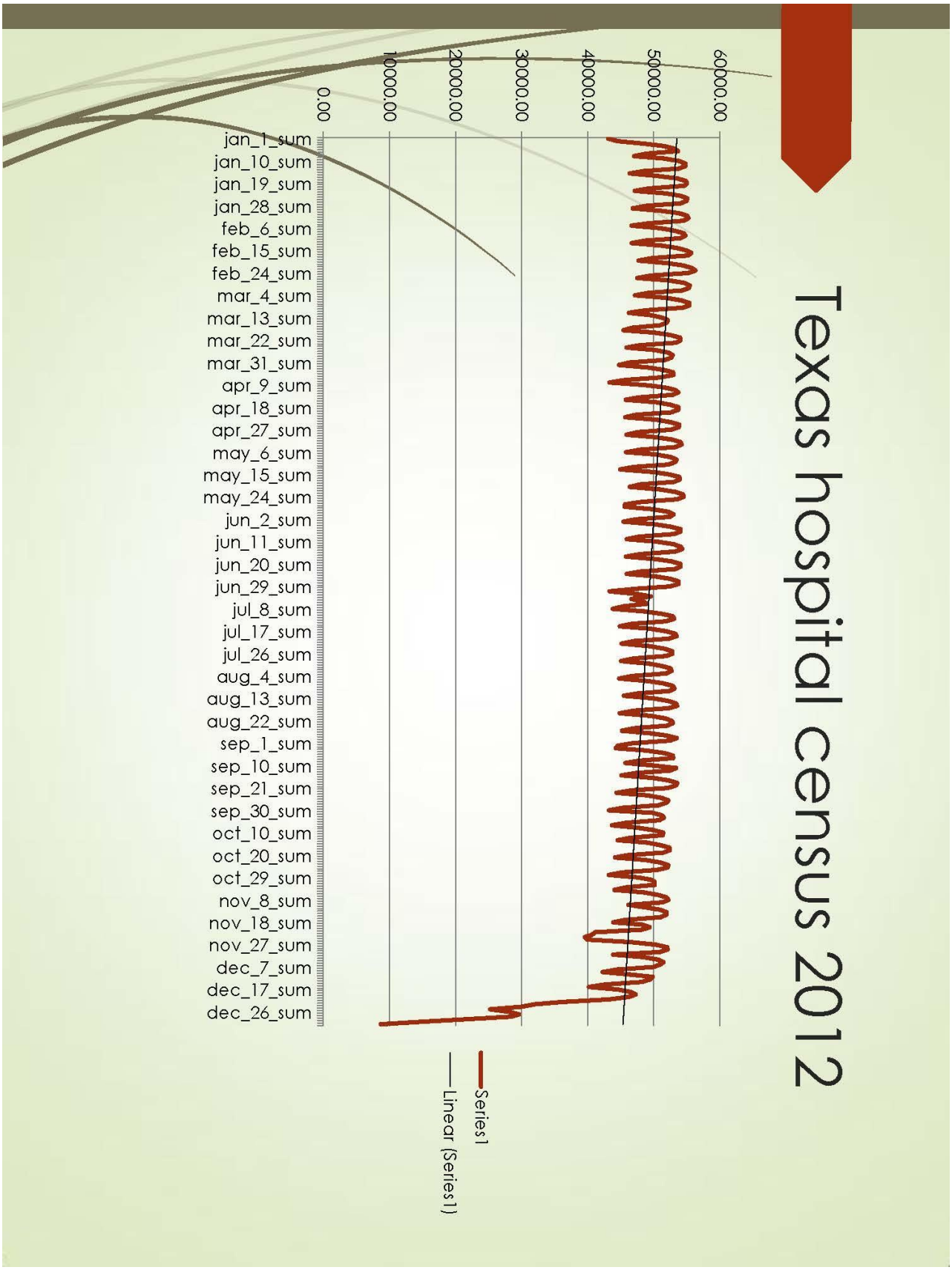
Texas hospital census 2012
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0.00
jan_1_sum
jan_10_sum
jan_19_sum
jan_28_sum
feb_6_sum
feb_15_sum
feb_24_sum
mar_4_sum
mar_13_sum
mar_22_sum
mar_31_sum
apr_9_sum
apr_18_sum
apr_27_sum
may_6_sum
may_15_sum
may_24_sum
jun_2_sum
jun_11_sum
jun_20_sum
jun_29_sum
jul_8_sum
jul_17_sum
jul_26_sum
aug_4_sum
aug_13_sum
aug_22_sum
sep_1_sum
sep_10_sum
sep_21_sum
sep_30_sum
oct_10_sum
oct_20_sum
oct_29_sum
nov_8_sum
nov_18_sum
nov_27_sum
dec_7_sum
dec_17_sum
dec_26_sum
Series1
Linear (Series1)

RHP3
Data Advisory Workgroup
December 2012
questions:
scott.hickey@mhmraharris.org

RHP 3 Behavioral Health Gap Analysis Survey Results

Conducted by the Regional Healthcare Partnership (RHP) 3 Behavioral Health Cohort

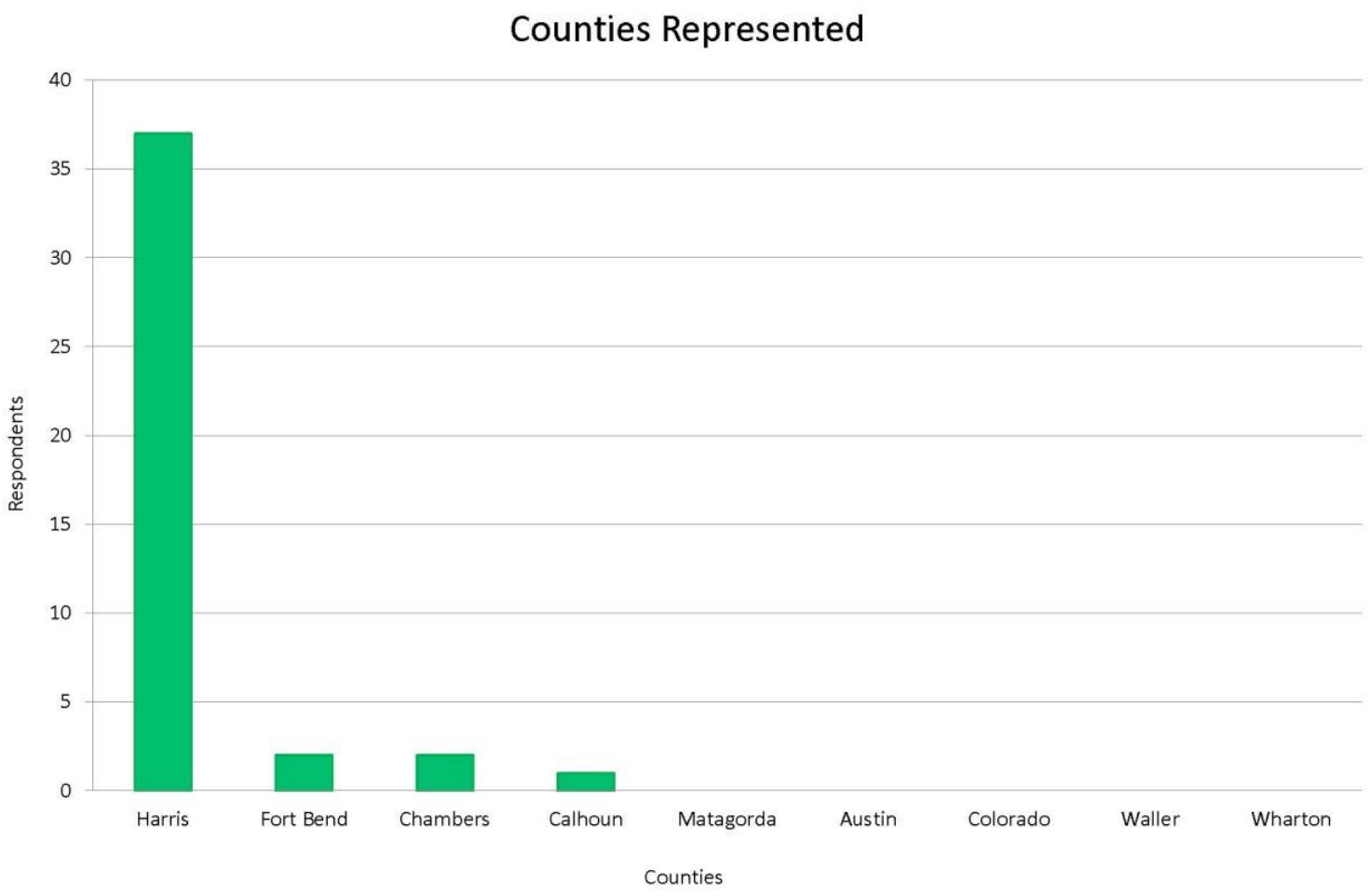
Analysis conducted by:
Dr. Charles Begley
Ifeoluwa Osundare
Michelle Eunice
Data Advisory Committee

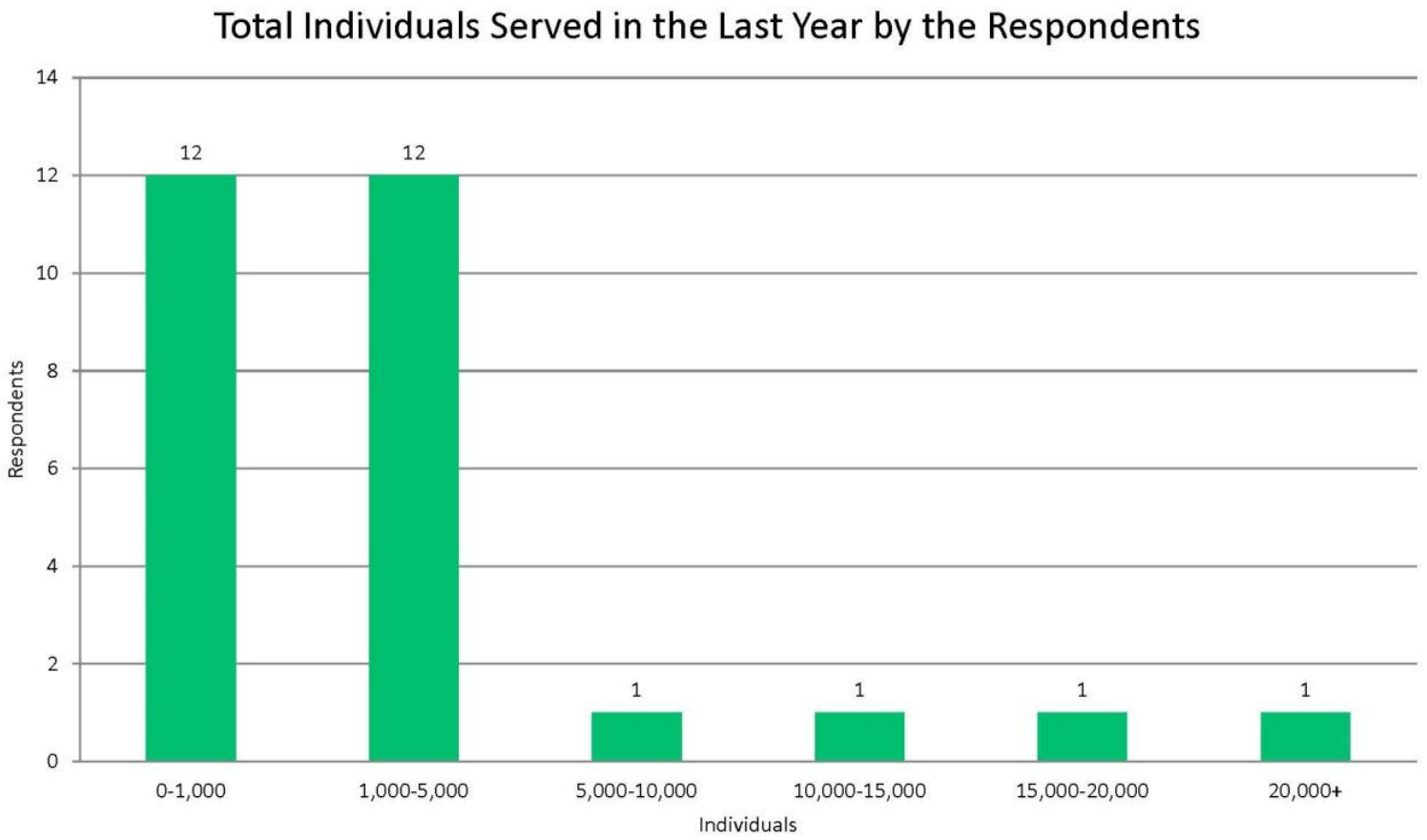
Texas 1115 Waiver

September 2017

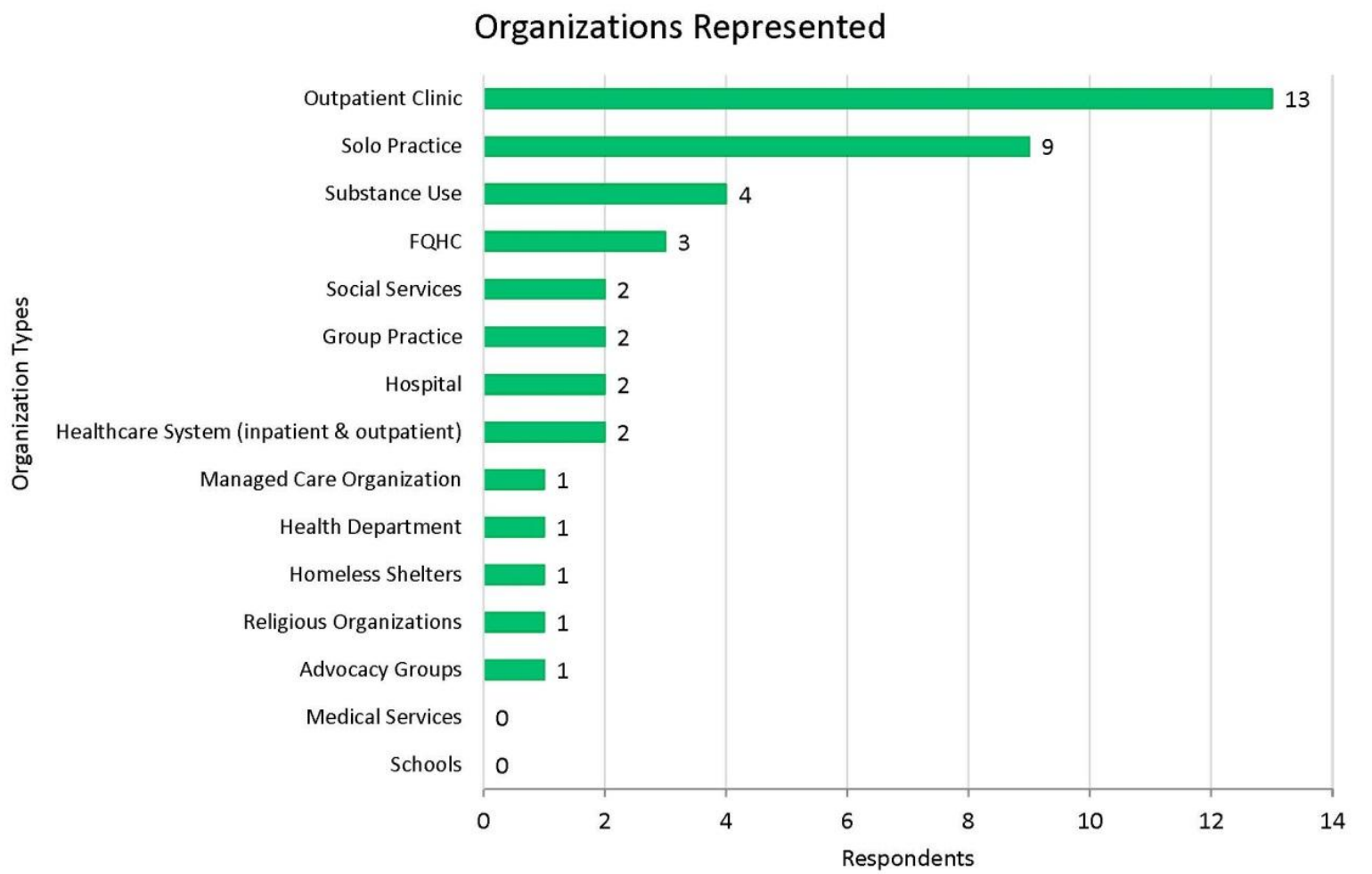
Introduction

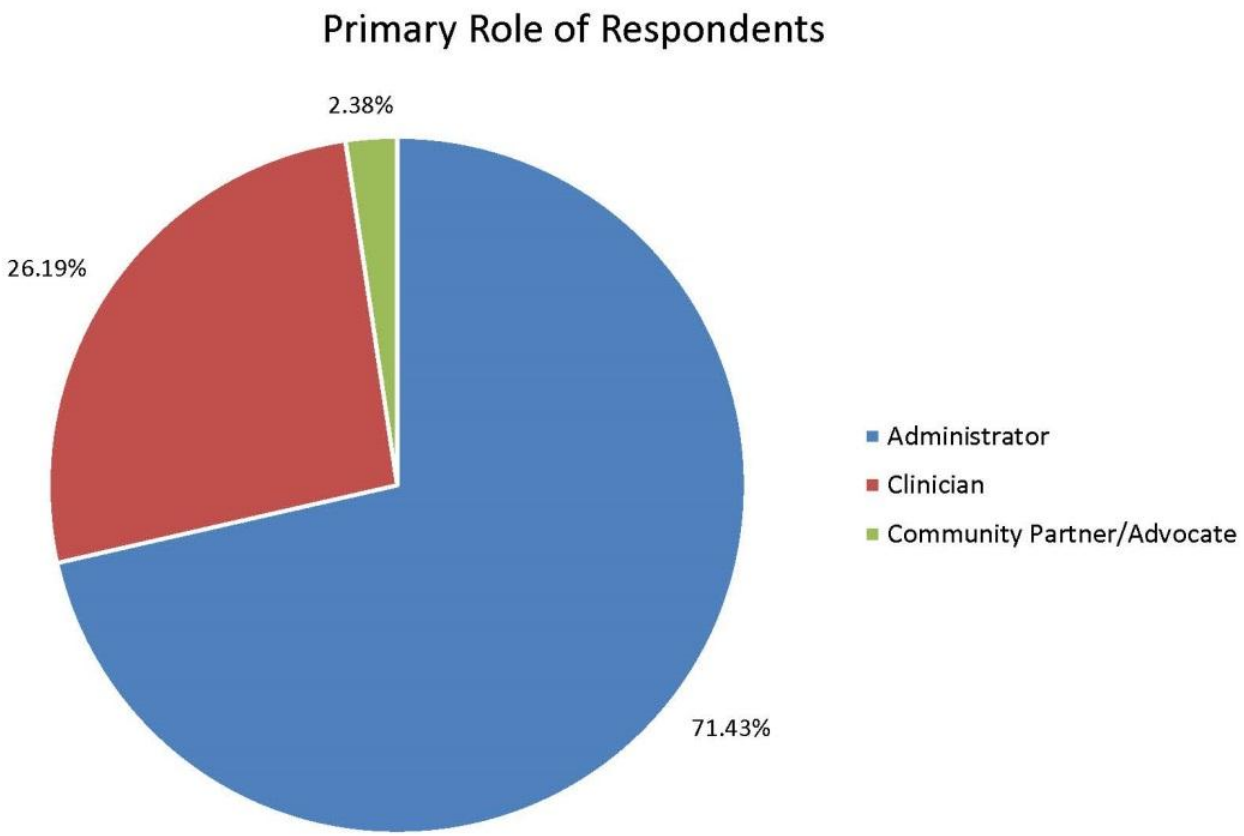
- The Regional Healthcare Partnership 3 (RHP3) Behavioral Health Gap Analysis Survey was developed by the RHP 3 Behavioral Health Cohort in the spring of 2016
- The survey was administered to approximately **395 individuals** between September 12, 2016 and October 10, 2016
- The survey had a total of **42 respondents** (one organization had more than one respondent)
- A total of **35 organizations** were represented
- Questions pertaining to adults are for ages 18 and older
- Questions pertaining to children are for ages 0-17

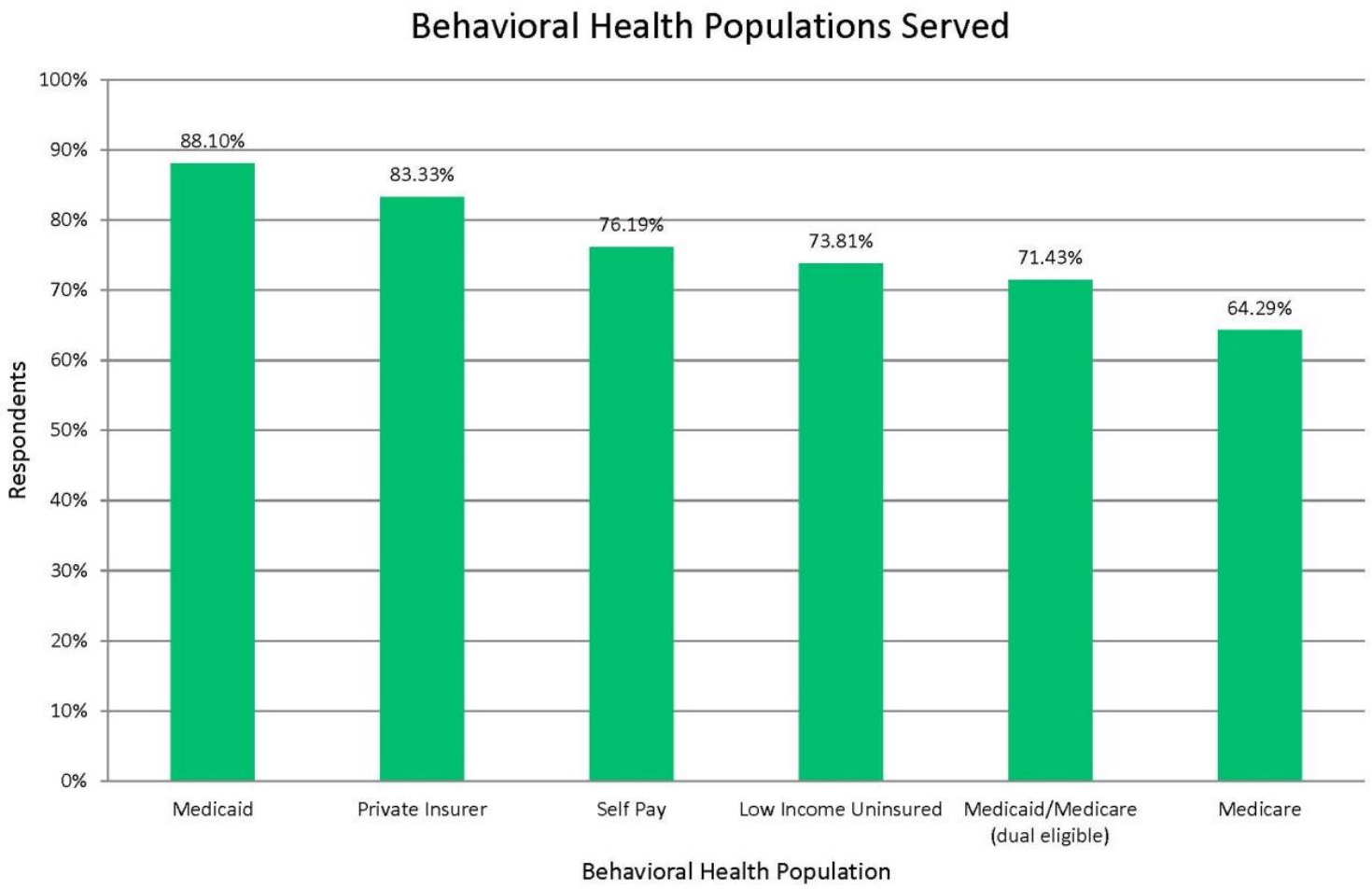

Counties Represented
40
35
30
25
20
15
10
5
0
Respondents
Harris
Fort Bend
Chambers
Calhoun
Matagorda
Austin
Colorado
Waller
Wharton
Counties



≈ 88,360 total individuals served

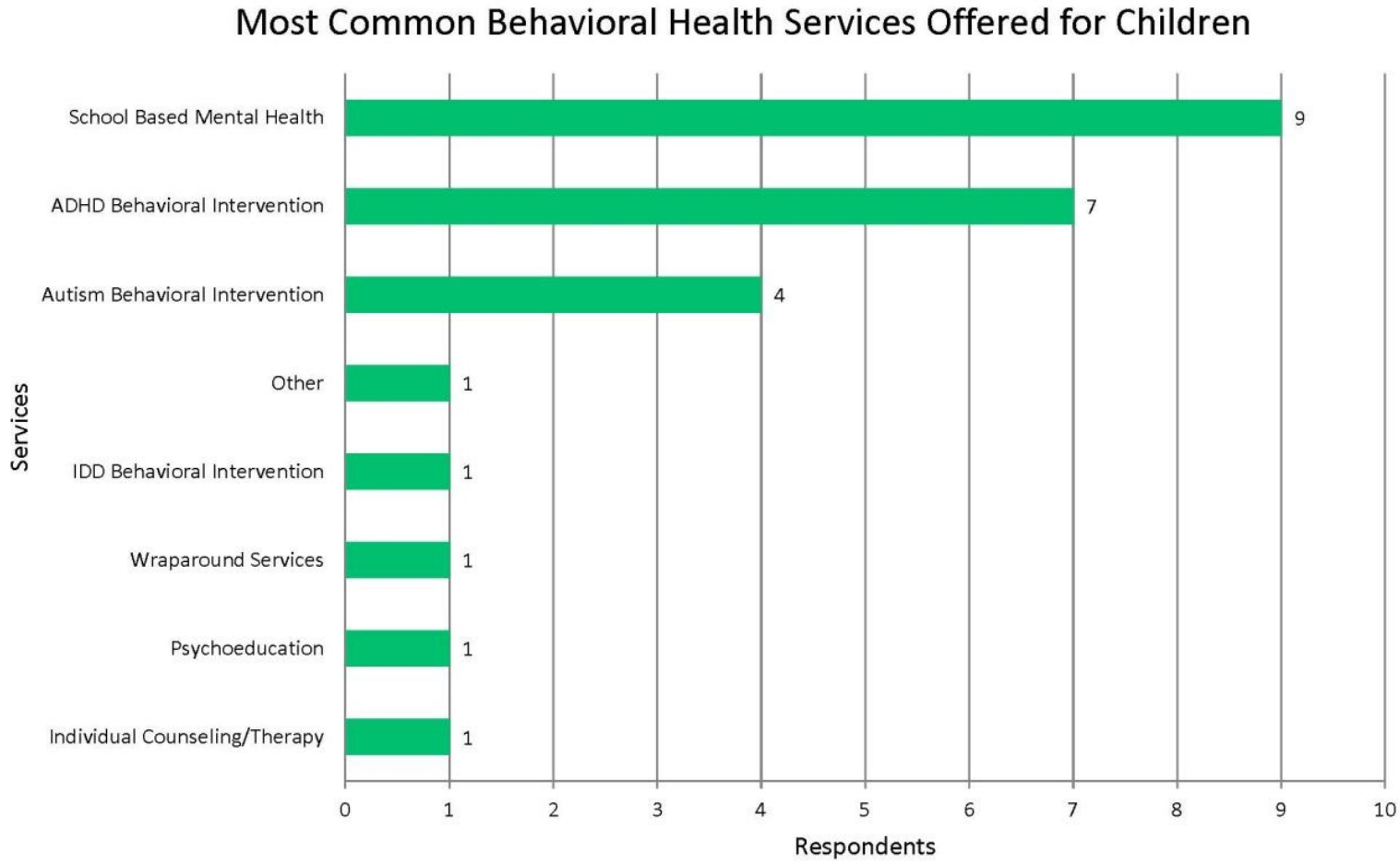

Organizations Represented
Organization Types
Outpatient Clinic
Solo Practice
Substance Use
FQHC
Social Services
Group Practice
Hospital
Healthcare System (inpatient & outpatient)
Managed Care Organization
Health Department
Homeless Shelters
Religious Organizations
Advocacy Groups
Medical Services
Schools
13
9
4
3
2
2
2
2
1
1
1
1
1
0
0
0
2
4
6
8
10
12
14
Respondents

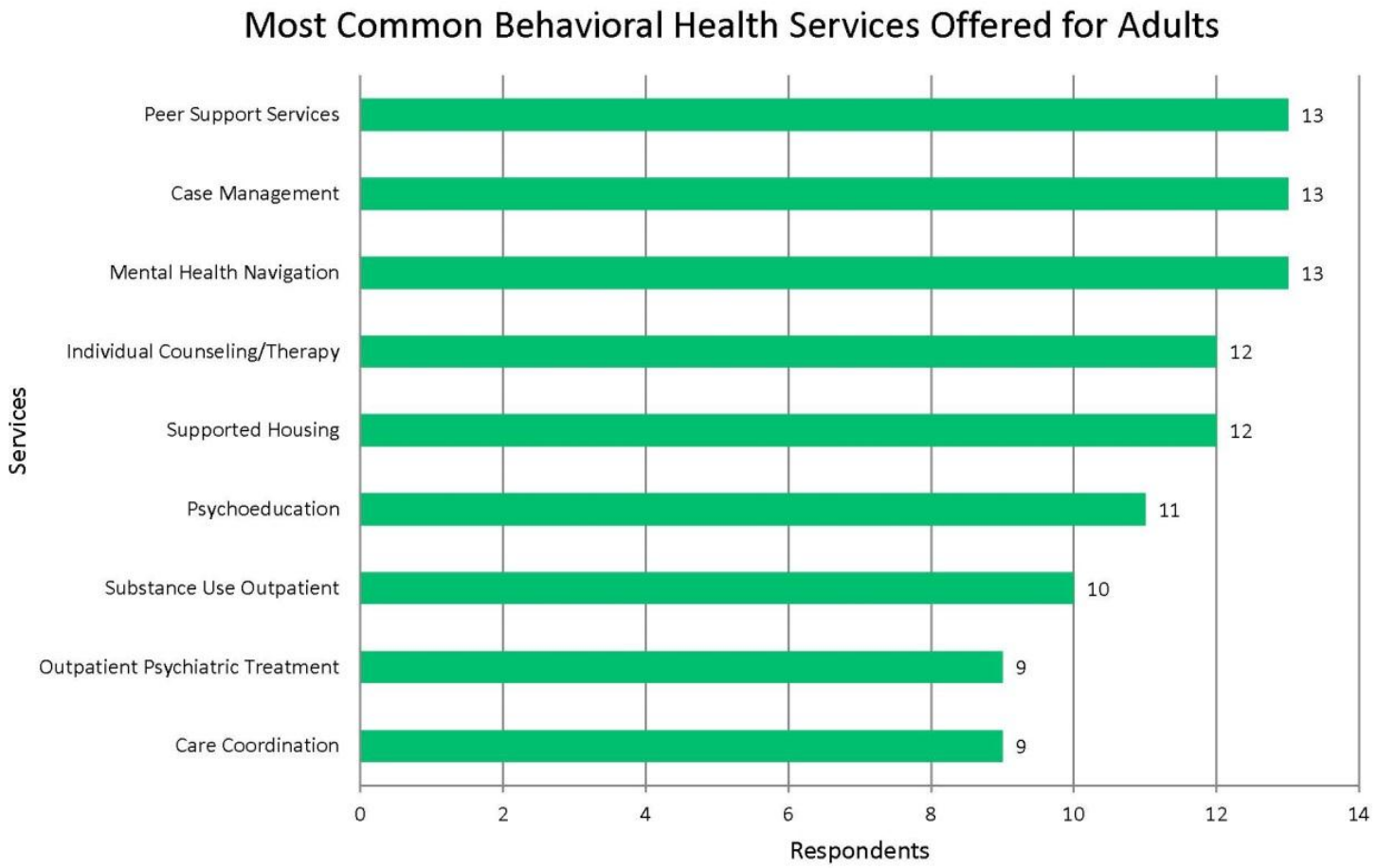

Primary Role of Respondents
2.38%
26.19%
71.43%
Administrator
Clinician
Community Partner/Advocate

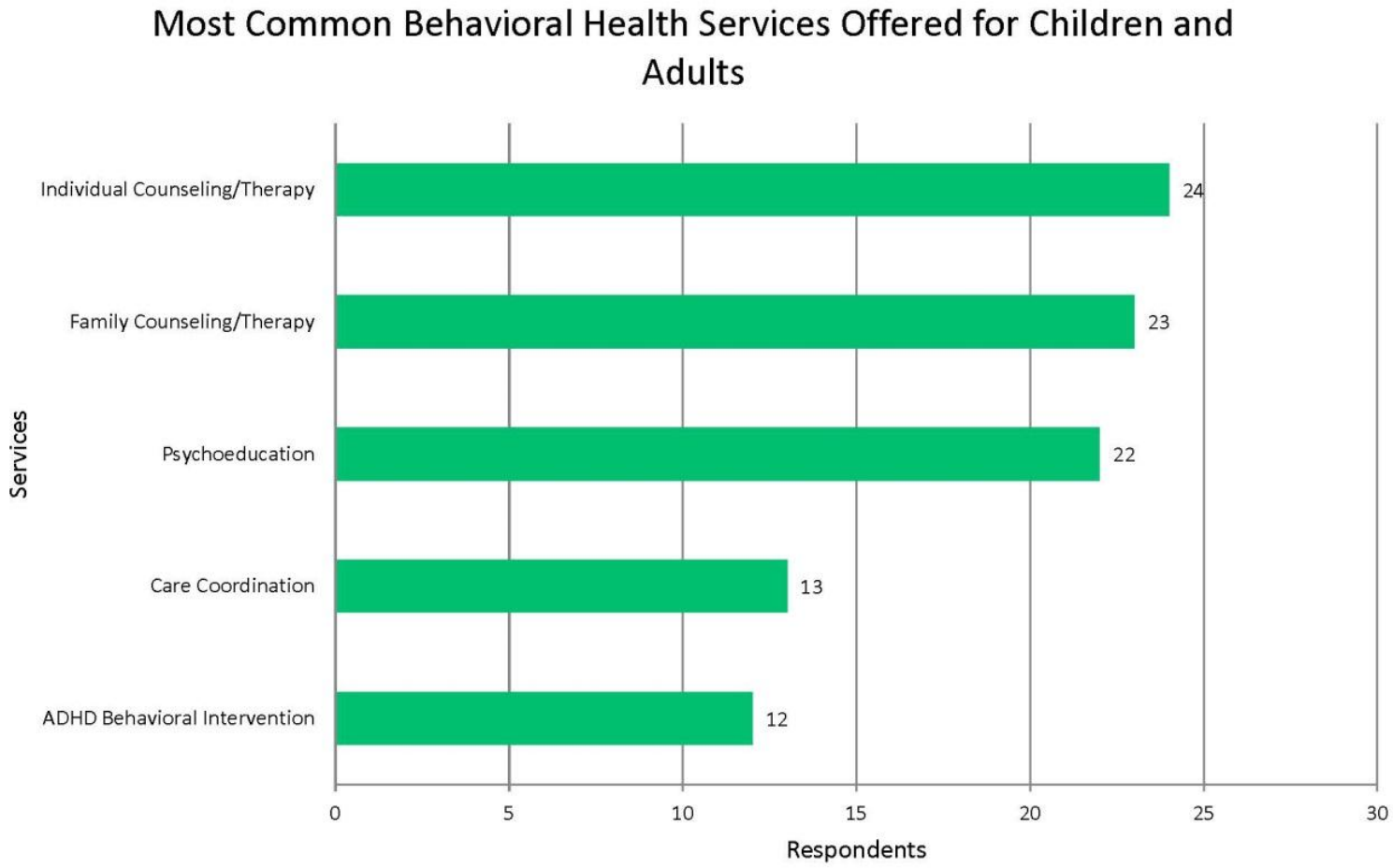

Behavioral Health Populations Served
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Respondents
88.10%
83.33%
76.19%
73.81%
71.43%
64.29%
Medicaid
Private Insurer
Self Pay
Low Income Uninsured
Medicaid/Medicare (dual eligible)
Medicare
Behavioral Health Population

Most Common Behavioral Health Services Offered in RHP 3

8

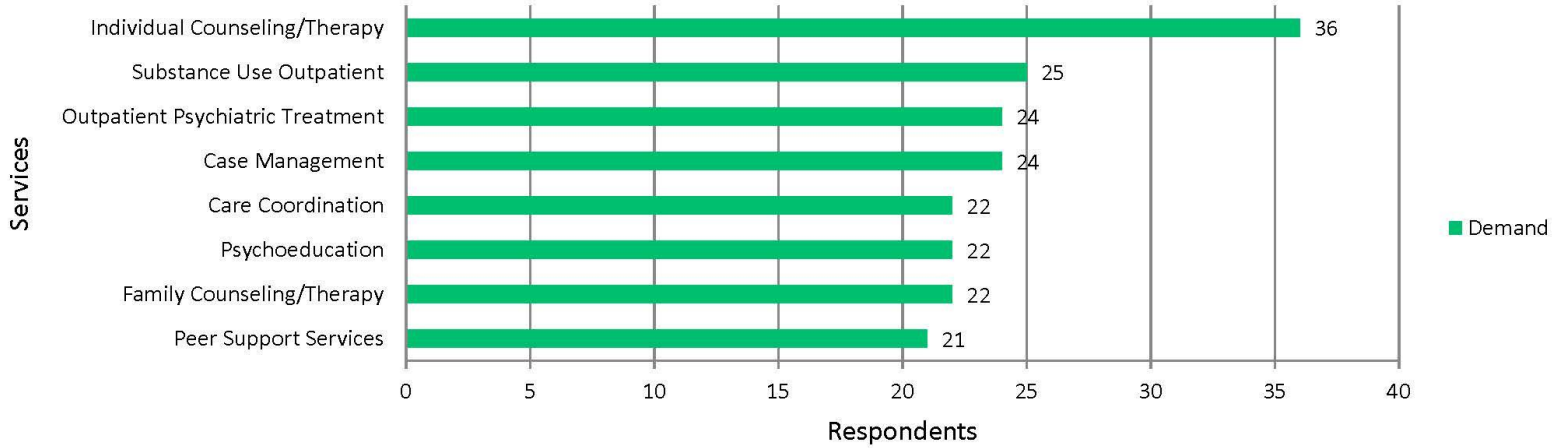

Most Common Behavioral Health Services Offered for Children
School Based Mental Health
ADHD Behavioral Intervention
Autism Behavioral Intervention
Other
IDD Behavioral Intervention
Wraparound Services
Psychoeducation
Individual Counseling/Therapy
9
7
4
1
1
1
1
1
Services
0
1
2
3
4
5
6
7
8
9
10
Respondents


Most Common Behavioral Health Services Offered for Adults
Peer Support Services
Case Management
Mental Health Navigation
Individual Counseling/Therapy
Supported Housing
Psychoeducation
Substance Use Outpatient
Outpatient Psychiatric Treatment
Care Coordination
13
13
13
12
12
11
10
9
9
Services
0
2
4
6
8
10
12
14
Respondents

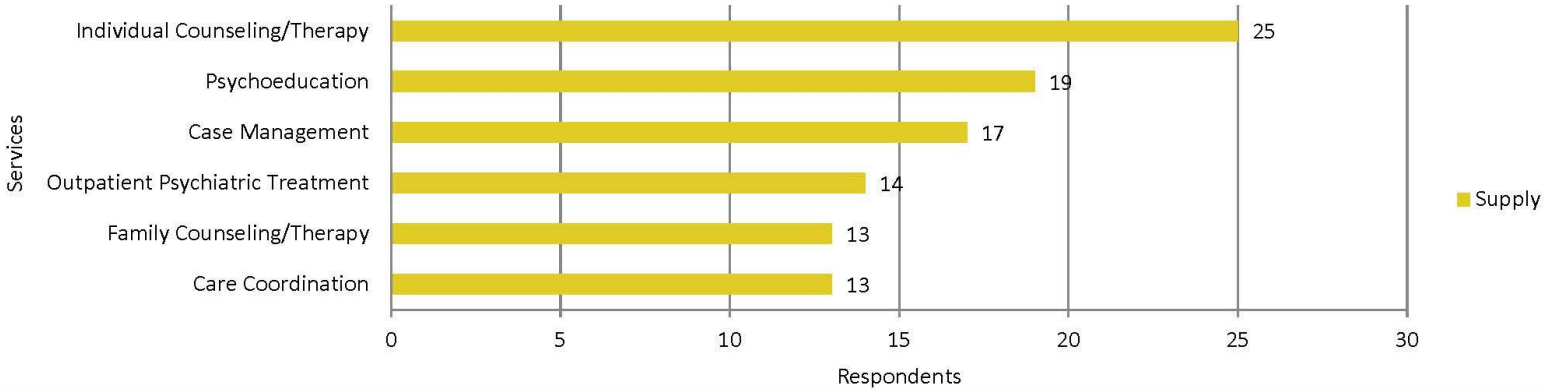

Most Common Behavioral Health Services Offered for Children and Adults
Individual Counseling/Therapy
24
Family Counseling/Therapy
23
Psychoeducation
22
Care Coordination
13
ADHD Behavioral Intervention
12
Services
0
5
10
15
20
25
30
Respondents

Demand and Supply for Behavioral Health Services in RHP 3

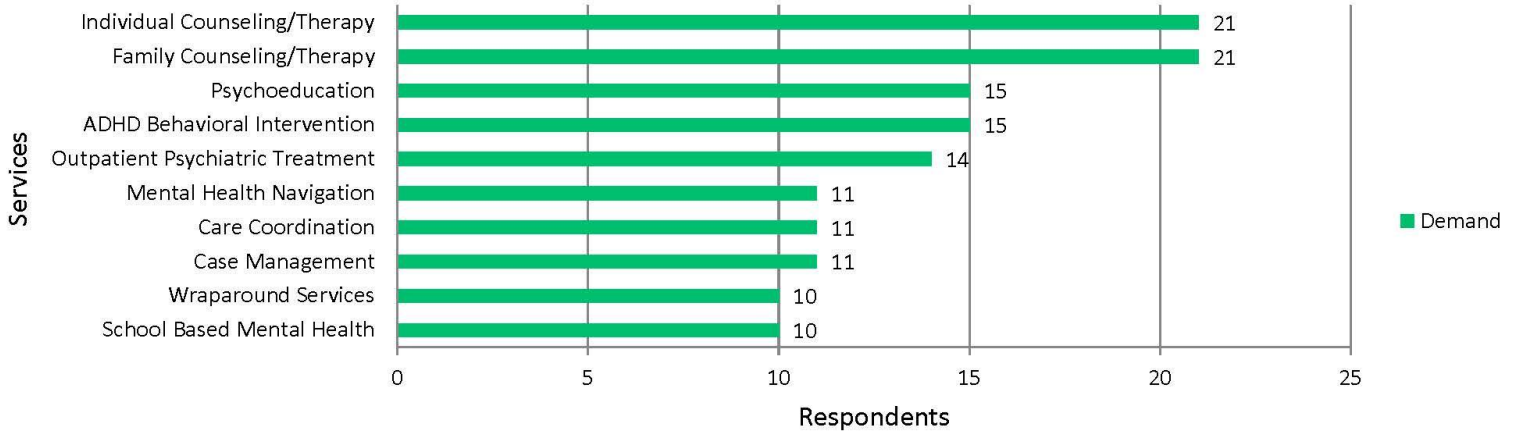
Top Behavioral Health Services in High Demand for Adults



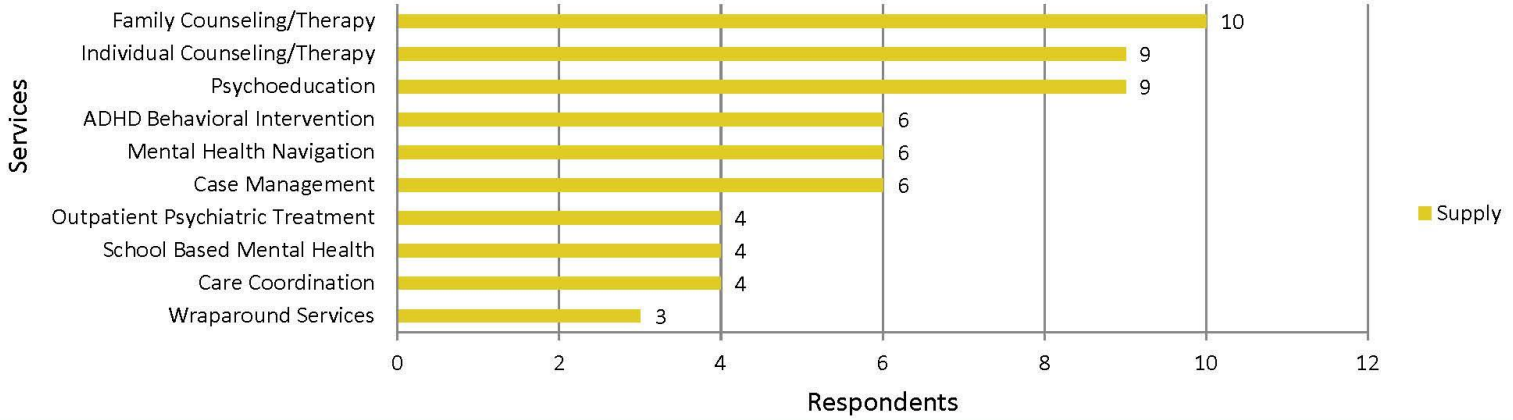
Top Behavioral Health Services in High Supply for Adults



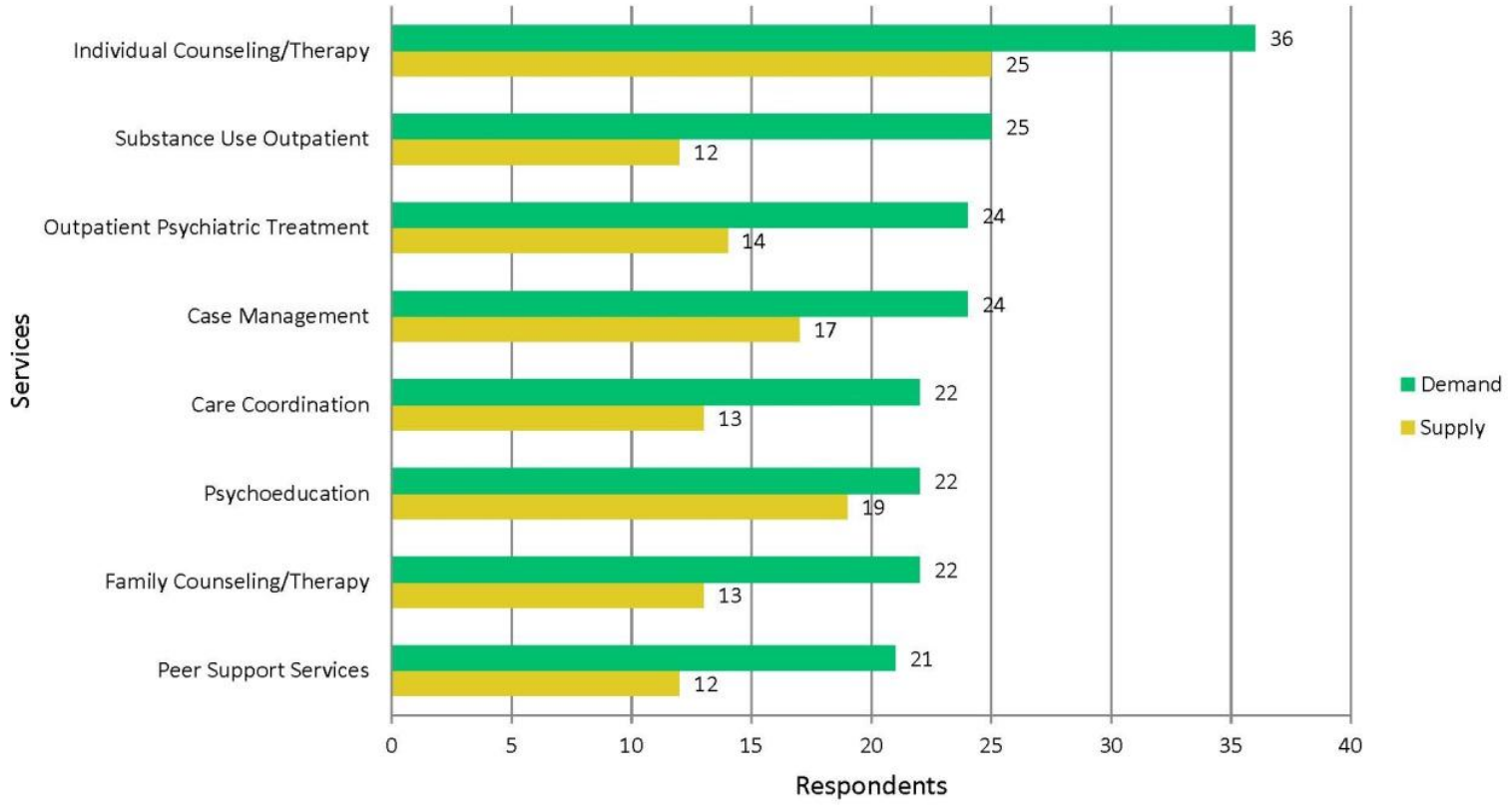
Top Behavioral Health Services in High Demand for Children



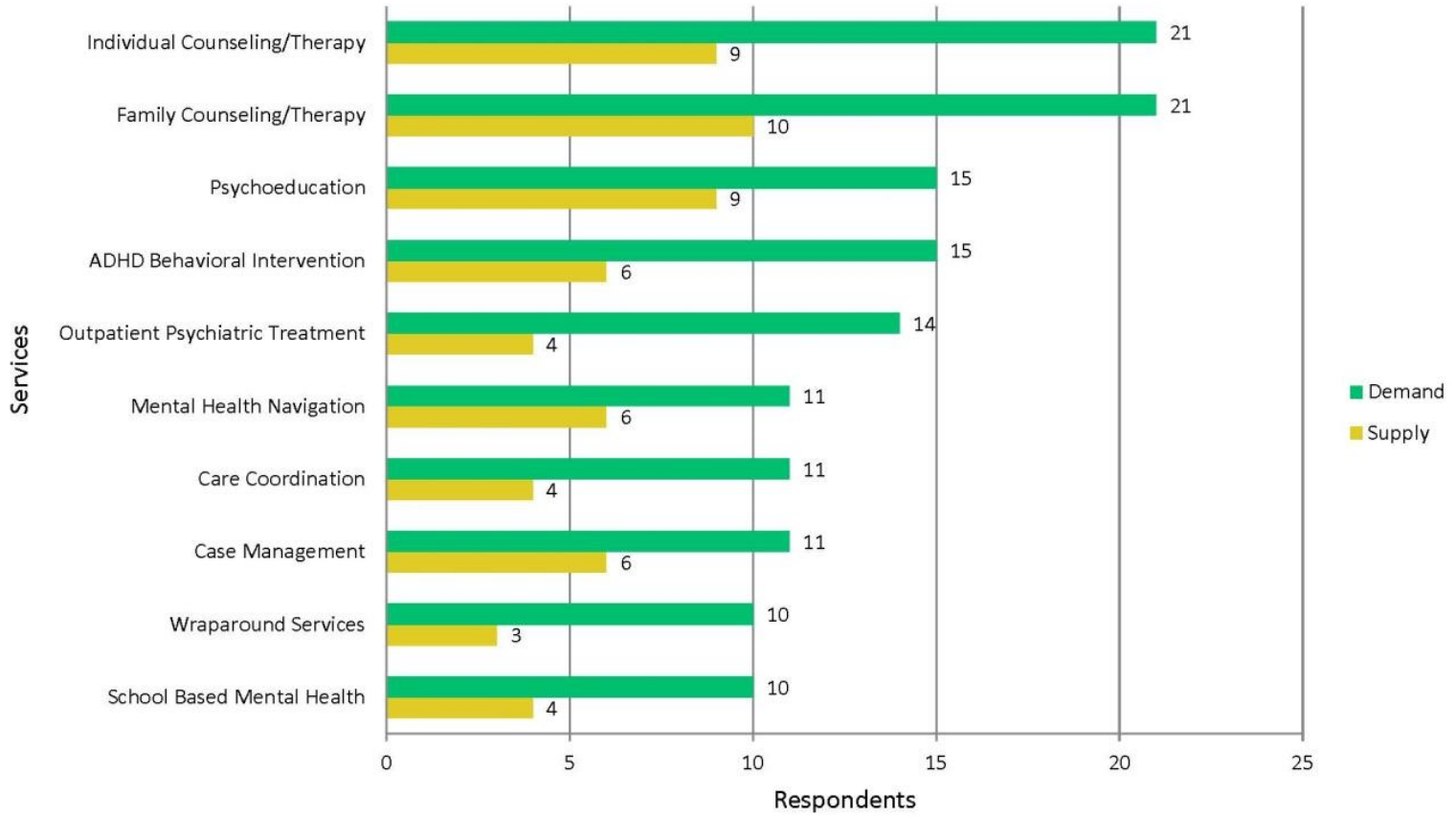
Top Behavioral Health Services in High Supply for Children



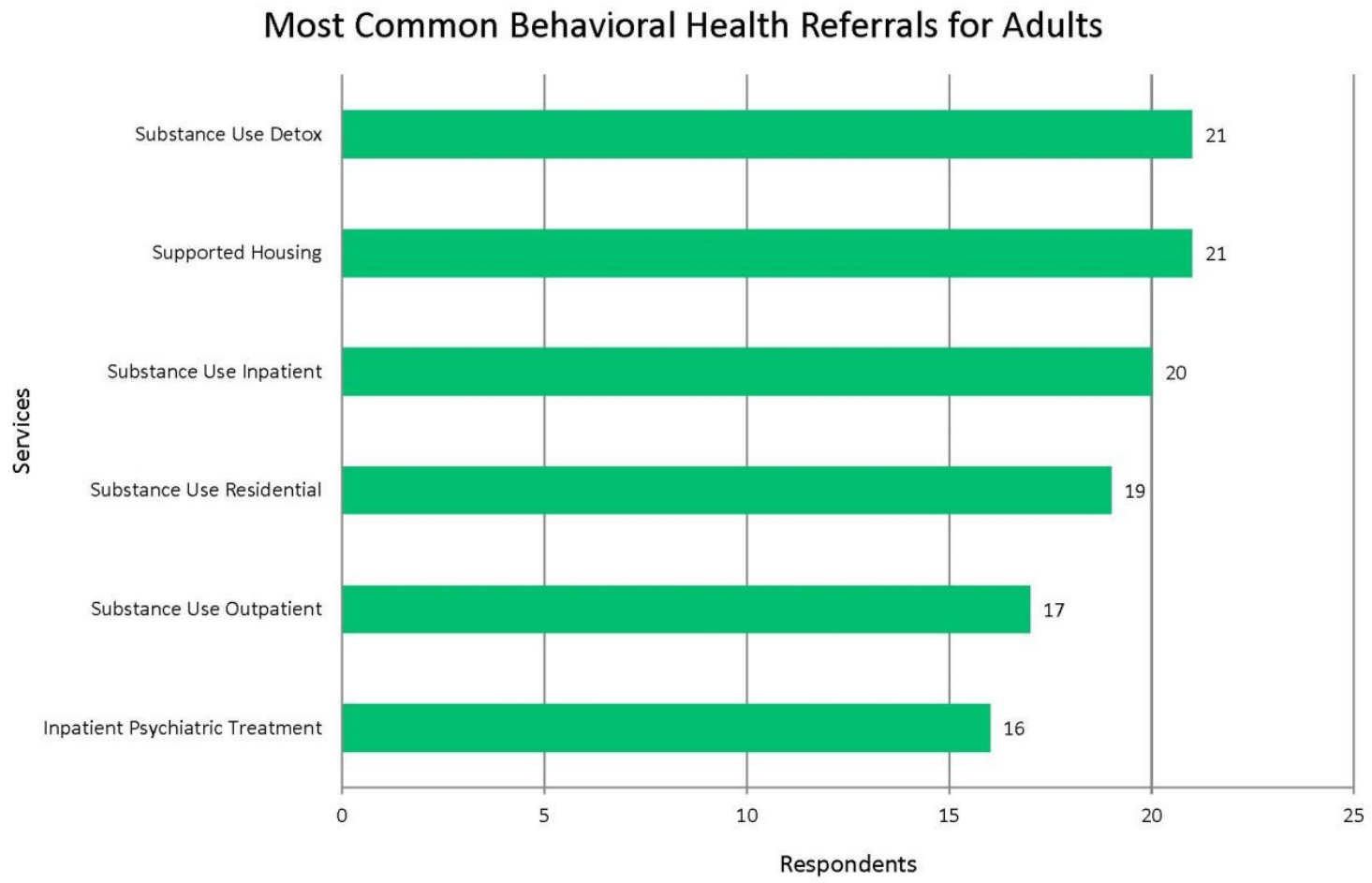
Demand and Supply Comparison for the Most Demanded Behavioral Health Services for Adults

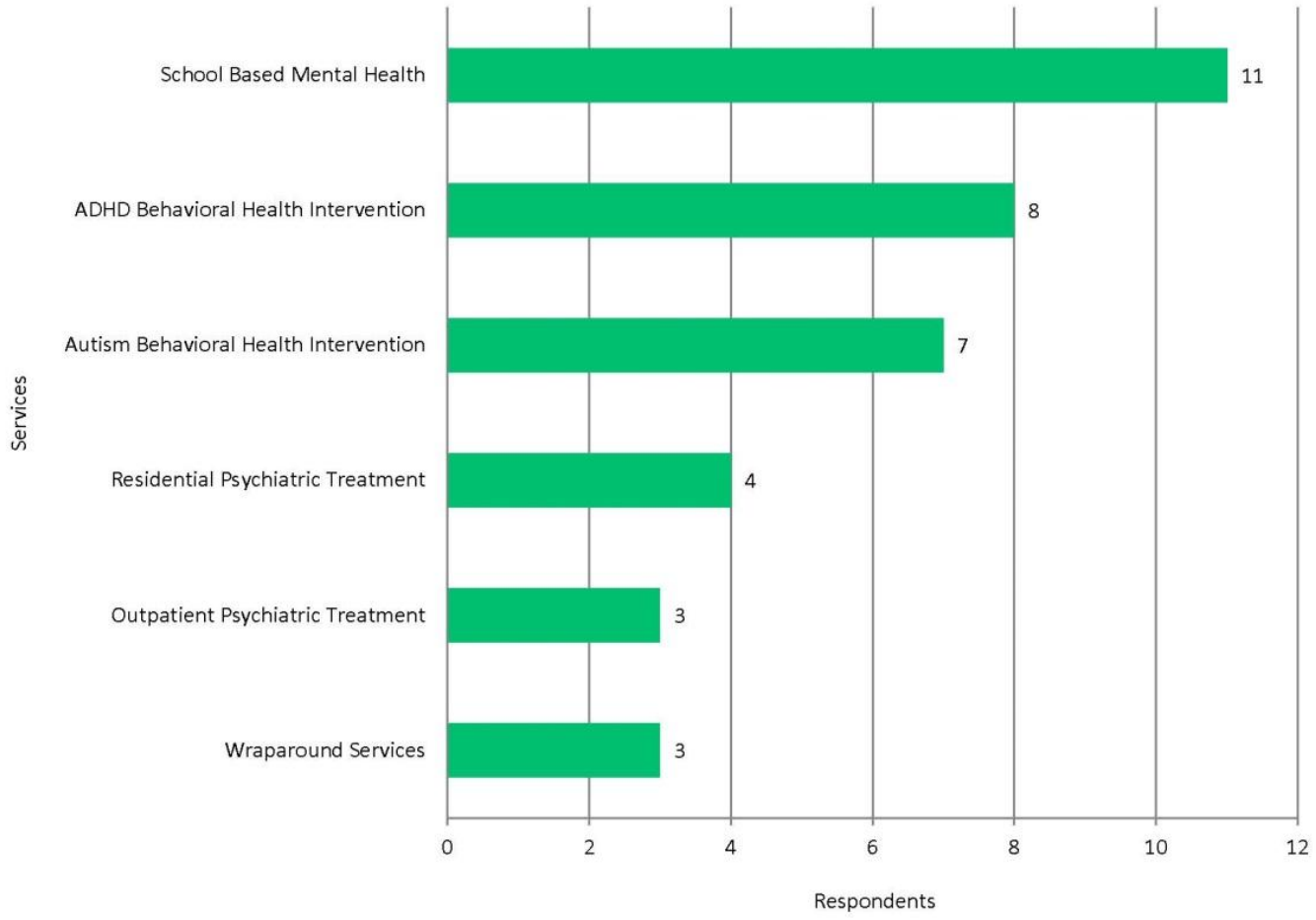


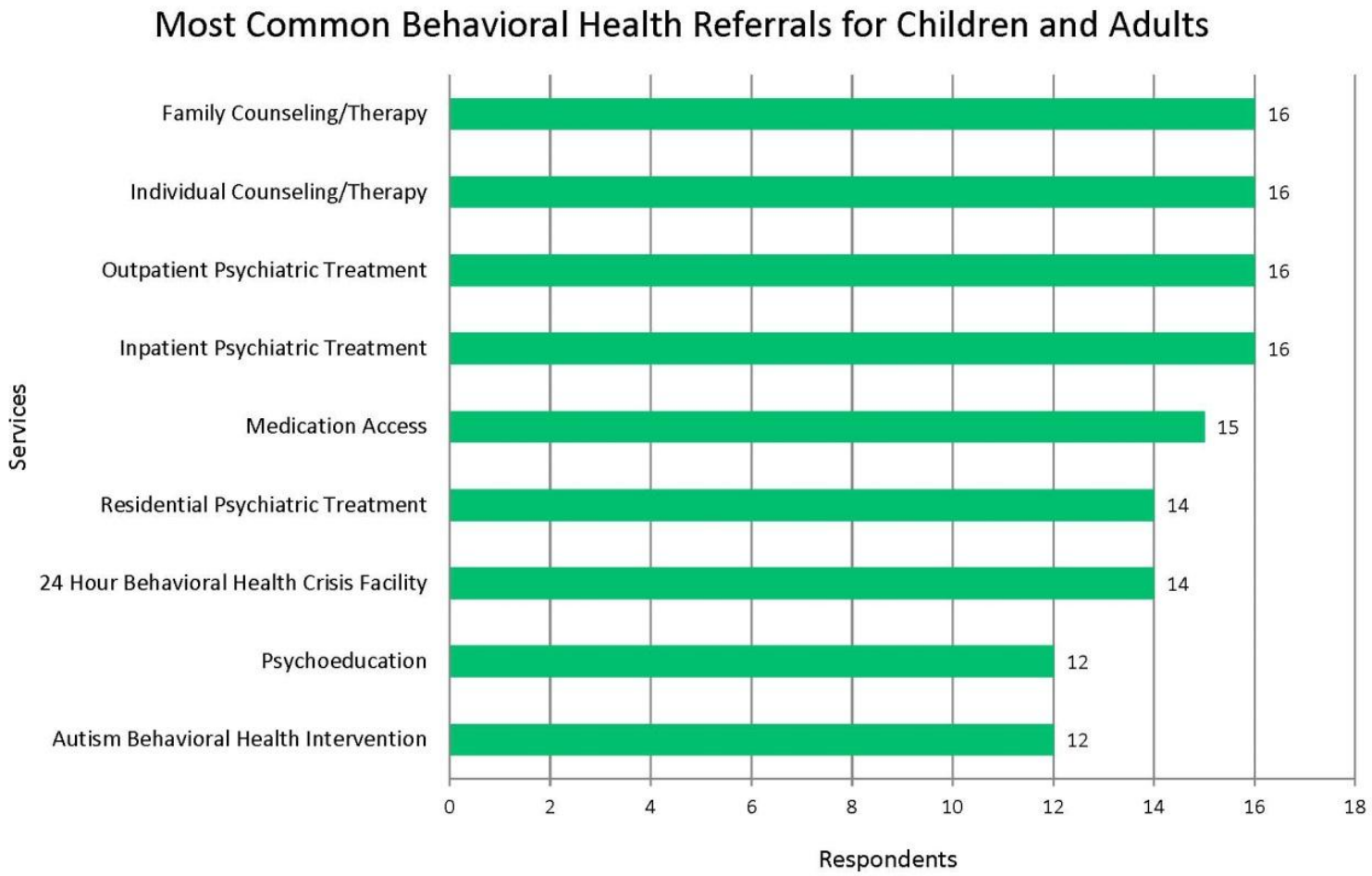
Demand and Supply Comparison for the Most Demanded Behavioral Health Services for Children



Referral Patterns for Behavioral Health Services in RHP 3

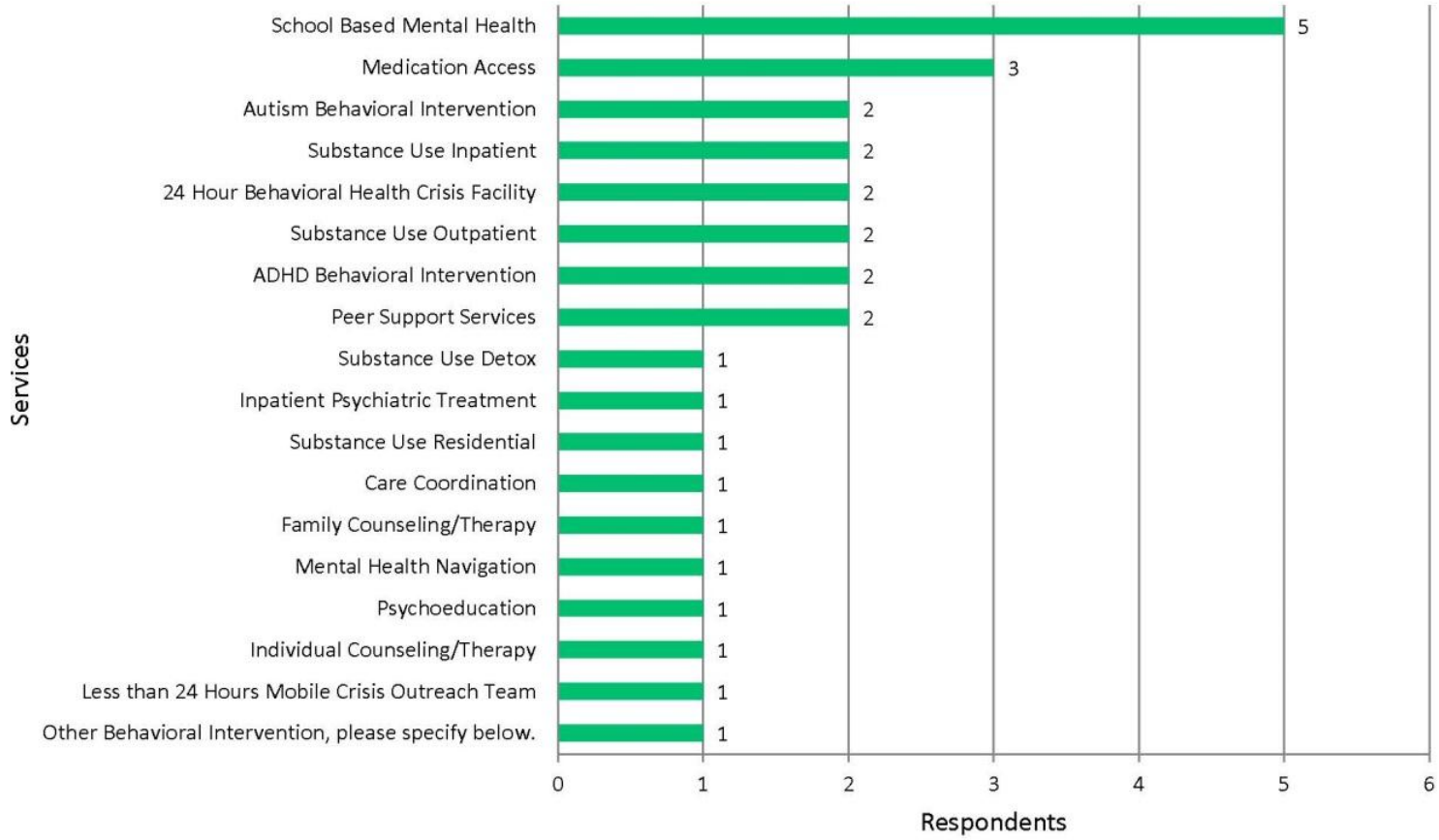

Most Common Behavioral Health Referrals for Adults
Substance Use Detox
21
Supported Housing
21
Substance Use Inpatient
20
Substance Use Residential
19
Substance Use Outpatient
17
Inpatient Psychiatric Treatment
16
Services
0
5
10
15
20
25
Respondents

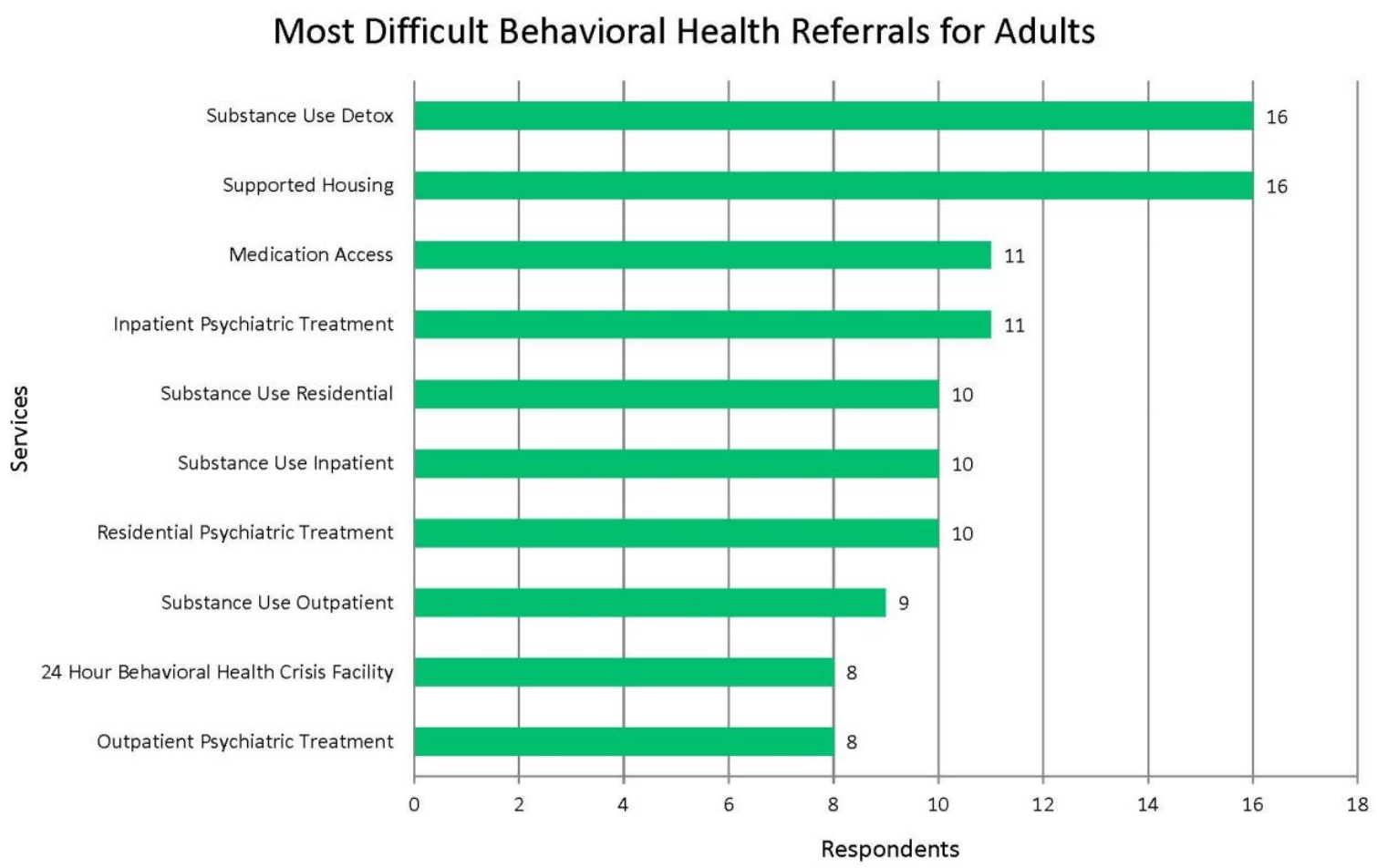

Top Behavioral Health Referrals for Children
School Based Mental Health
11
ADHD Behavioral Health Intervention
8
Autism Behavioral Health Intervention
7
Residential Psychiatric Treatment
4
Outpatient Psychiatric Treatment
3
Wraparound Services
3
Services
0
2
4
6
8
10
12
Respondents

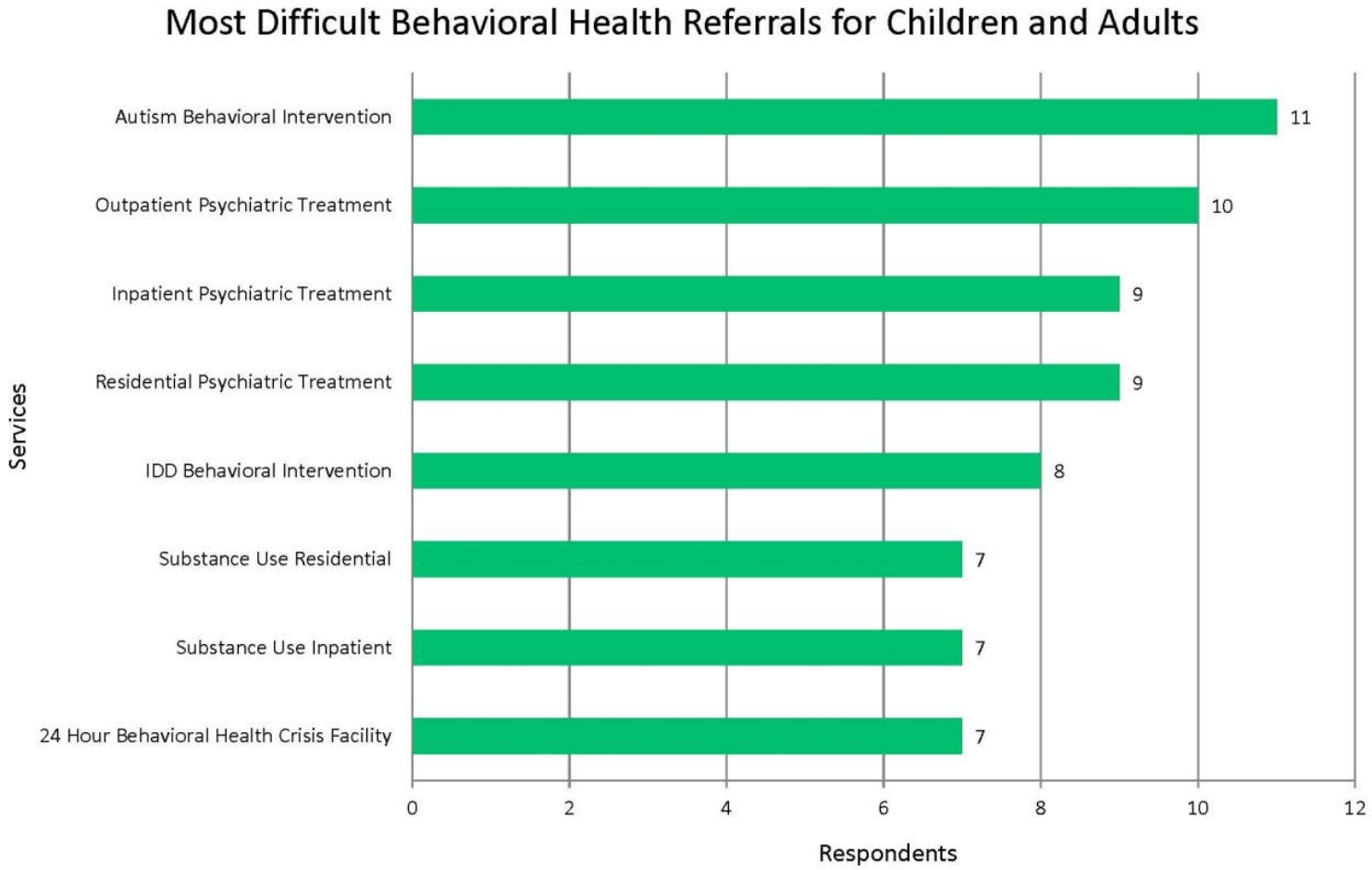

Most Common Behavioral Health Referrals for Children and Adults
Family Counseling/Therapy
Individual Counseling/Therapy
Outpatient Psychiatric Treatment
Inpatient Psychiatric Treatment
Medication Access
Residential Psychiatric Treatment
24 Hour Behavioral Health Crisis Facility
Psychoeducation
Autism Behavioral Health Intervention
16
16
16
16
15
14
14
12
12
Services
0
2
4
6
8
10
12
14
16
18
Respondents

Difficult Behavioral Health Service Referrals in RHP 3

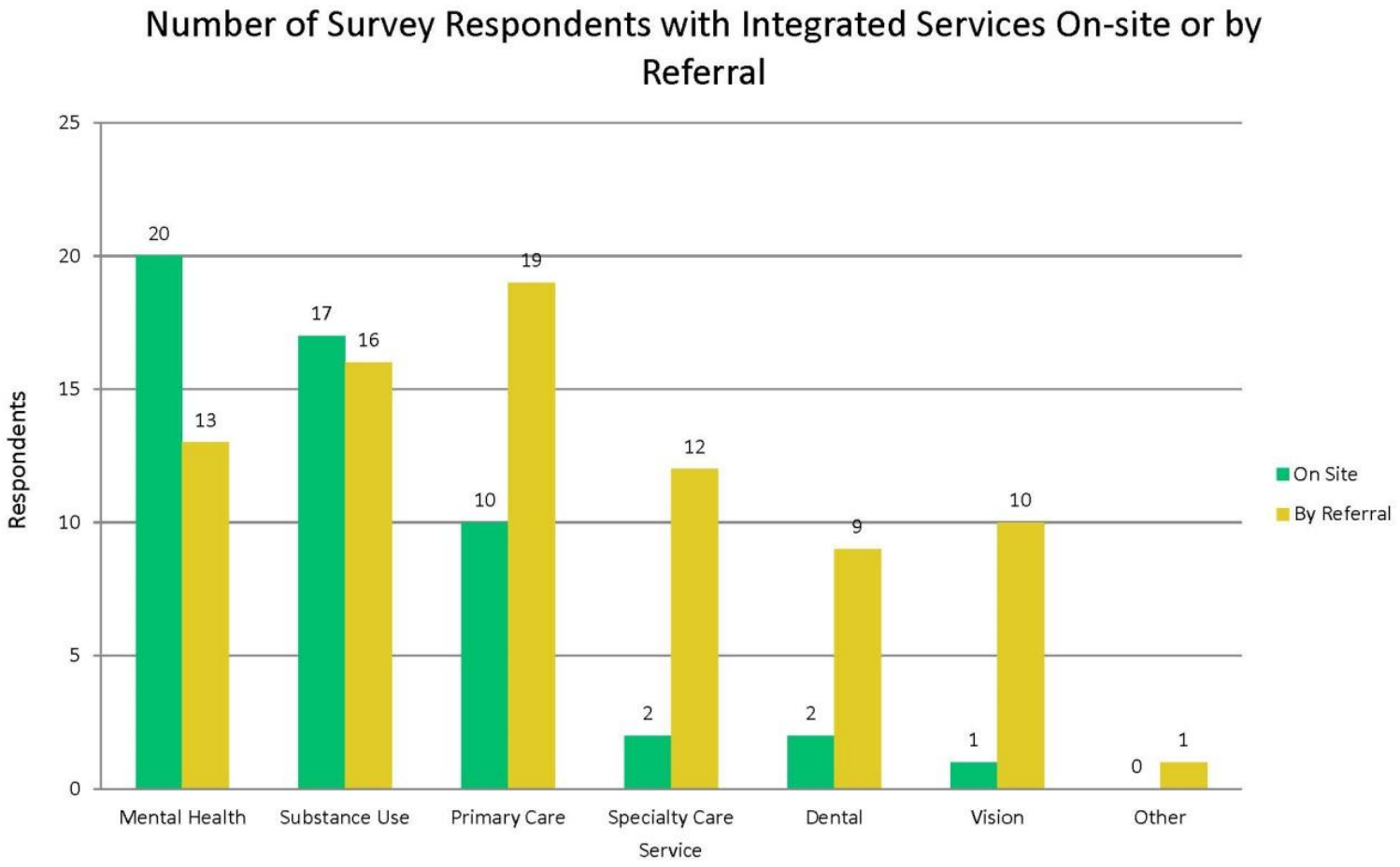
Most Difficult Behavioral Health Referrals for Children

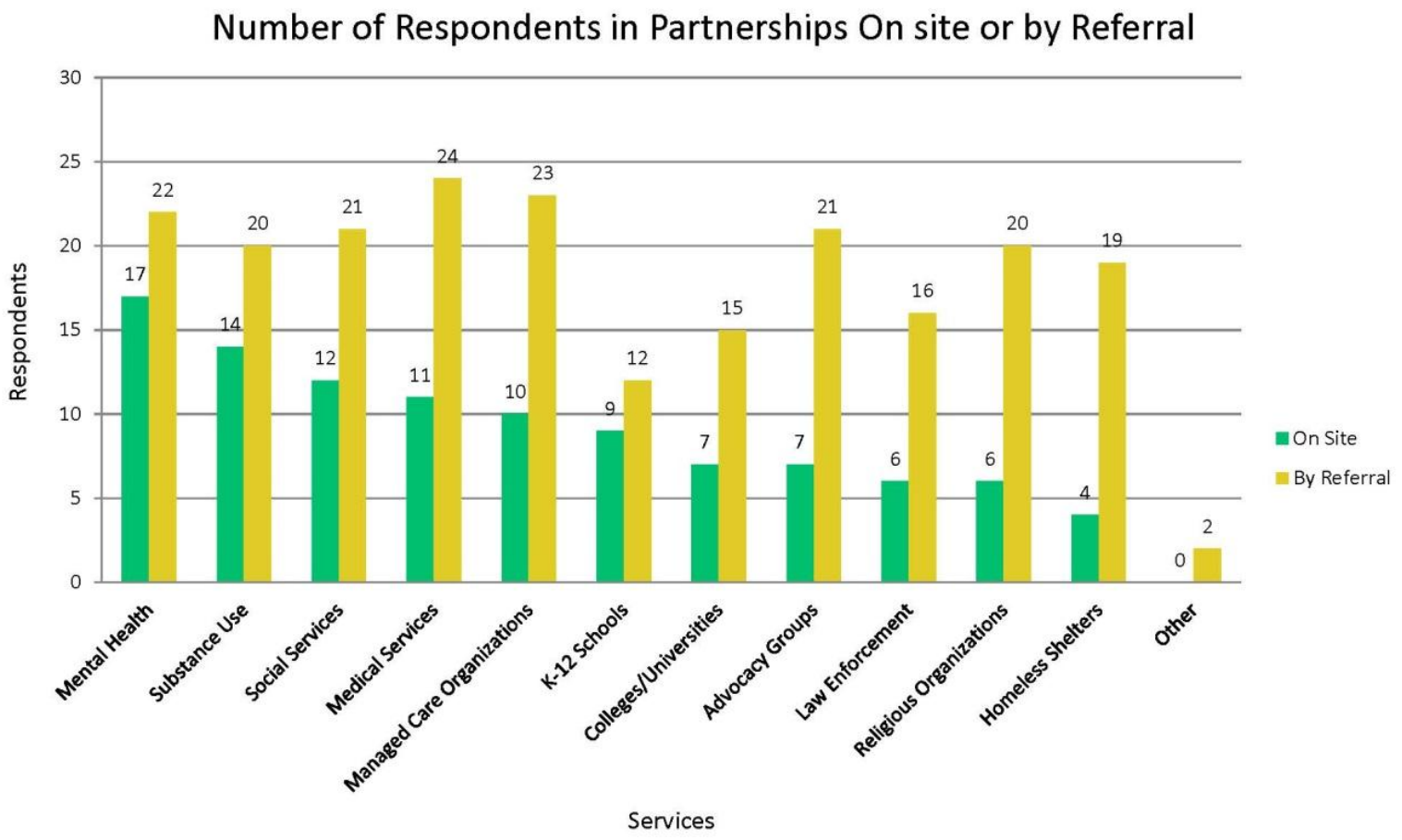



Most Difficult Behavioral Health Referrals for Adults
Substance Use Detox
Supported Housing
Medication Access
Inpatient Psychiatric Treatment
Substance Use Residential
Substance Use Inpatient
Residential Psychiatric Treatment
Substance Use Outpatient
24 Hour Behavioral Health Crisis Facility
Outpatient Psychiatric Treatment
16
16
11
11
10
10
10
9
8
8
Services
0
2
4
6
8
10
12
14
16
18
Respondents


Most Difficult Behavioral Health Referrals for Children and Adults
Services
Autism Behavioral Intervention
Outpatient Psychiatric Treatment
Inpatient Psychiatric Treatment
Residential Psychiatric Treatment
IDD Behavioral Intervention
Substance Use Residential
Substance Use Inpatient
24 Hour Behavioral Health Crisis Facility
11
10
9
9
8
7
7
7
0
2
4
6
8
10
12
Respondents

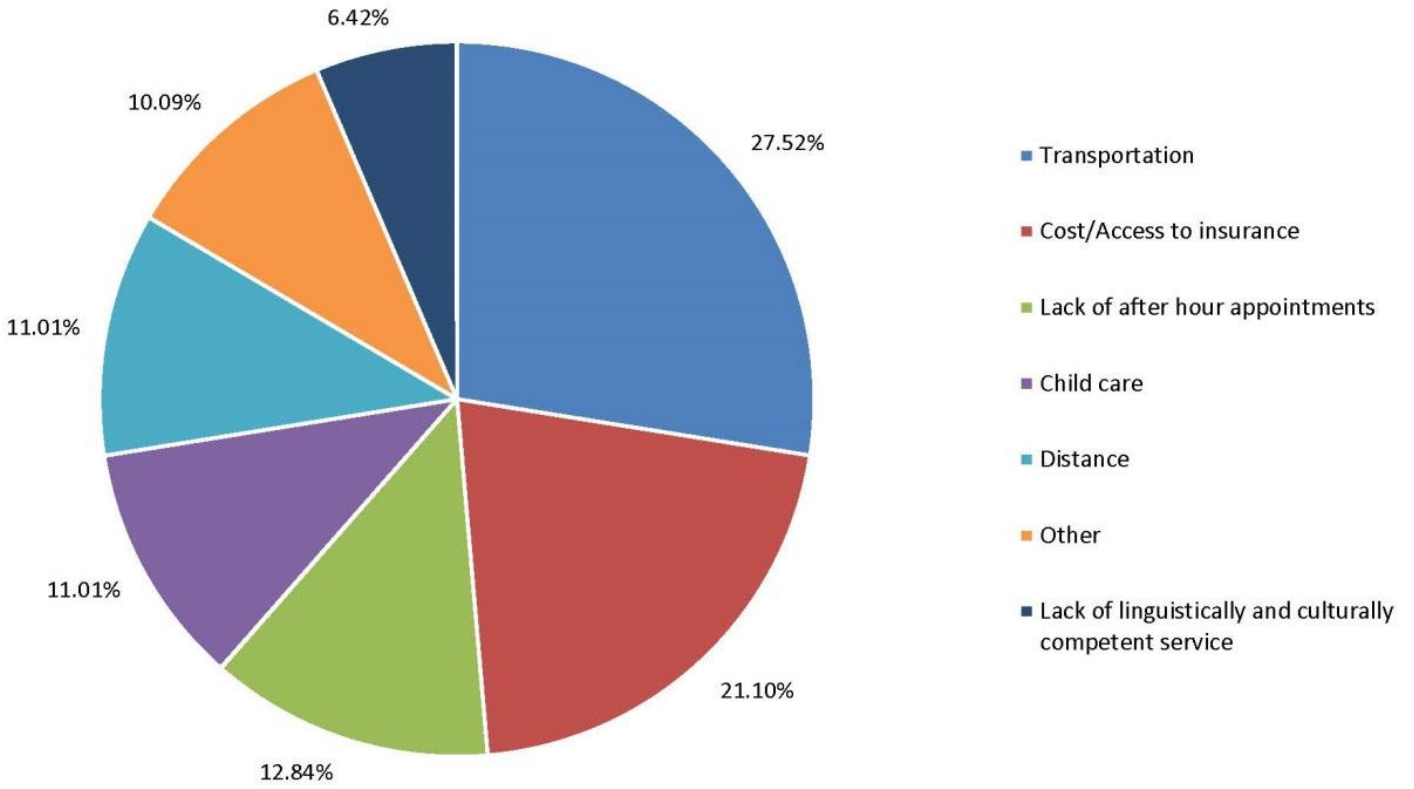
Integrated Services and Partnerships


Number of Survey Respondents with Integrated Services On-site or by Referral
Respondents
25
20
15
10
5
0
20
13
17
16
10
19
2
12
2
9
1
10
0
1
Mental Health
Substance Use
Primary Care
Specialty Care
Dental
Vision
Other
Service
On Site
By Referral


Number of Respondents in Partnerships On site or by Referral
Respondents
30
25
20
15
10
5
0
17
22
14
20
12
21
11
24
10
23
9
12
7
15
7
21
6
16
6
20
4
19
0
2
Mental Health
Substance Use
Social Services
Medical Services
Managed Care Organizations
K-12 Schools
Colleges/Universities
Advocacy Groups
Law Enforcement
Religious Organizations
Homeless Shelters
Other
Services
On Site
By Referral

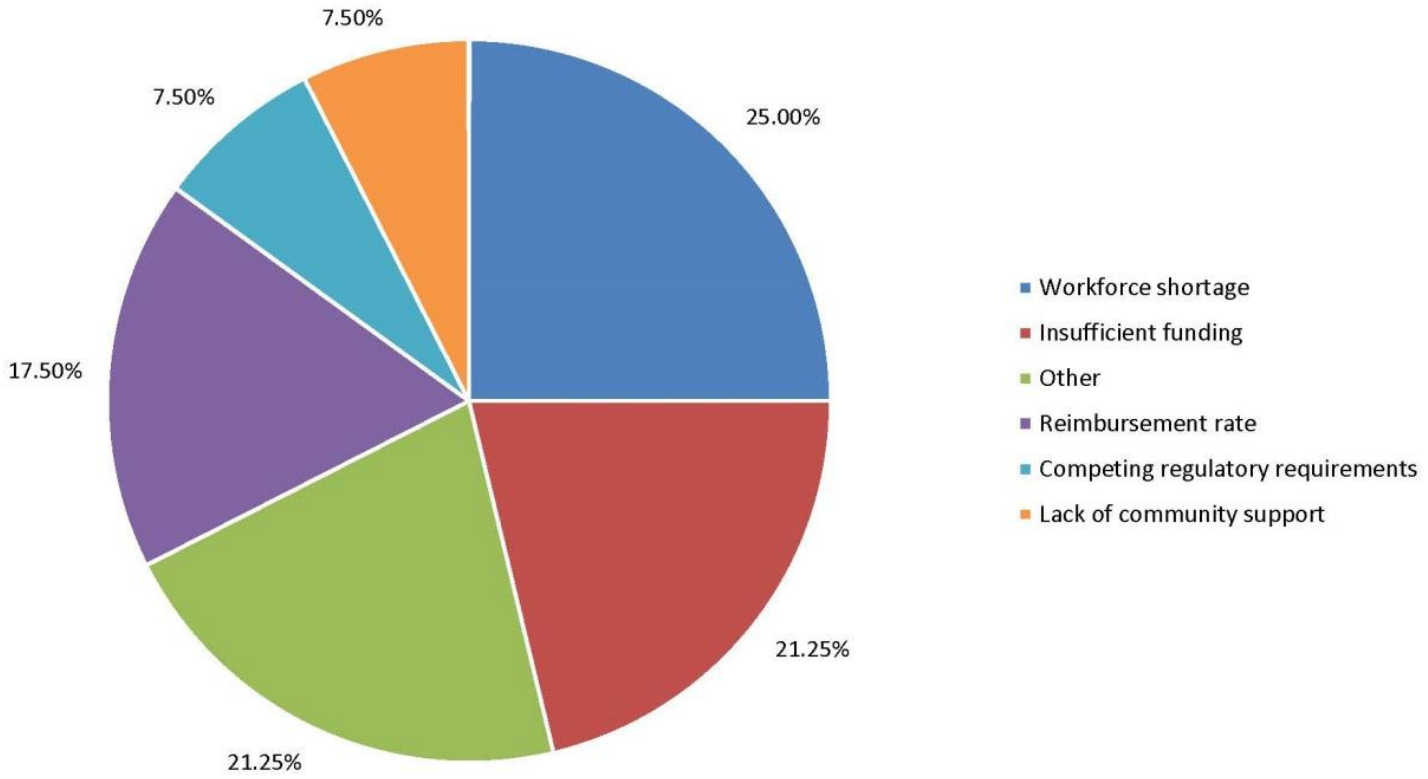
Major Barriers to Care

Major Barriers to **Accessing** Behavioral Health Services for Patients



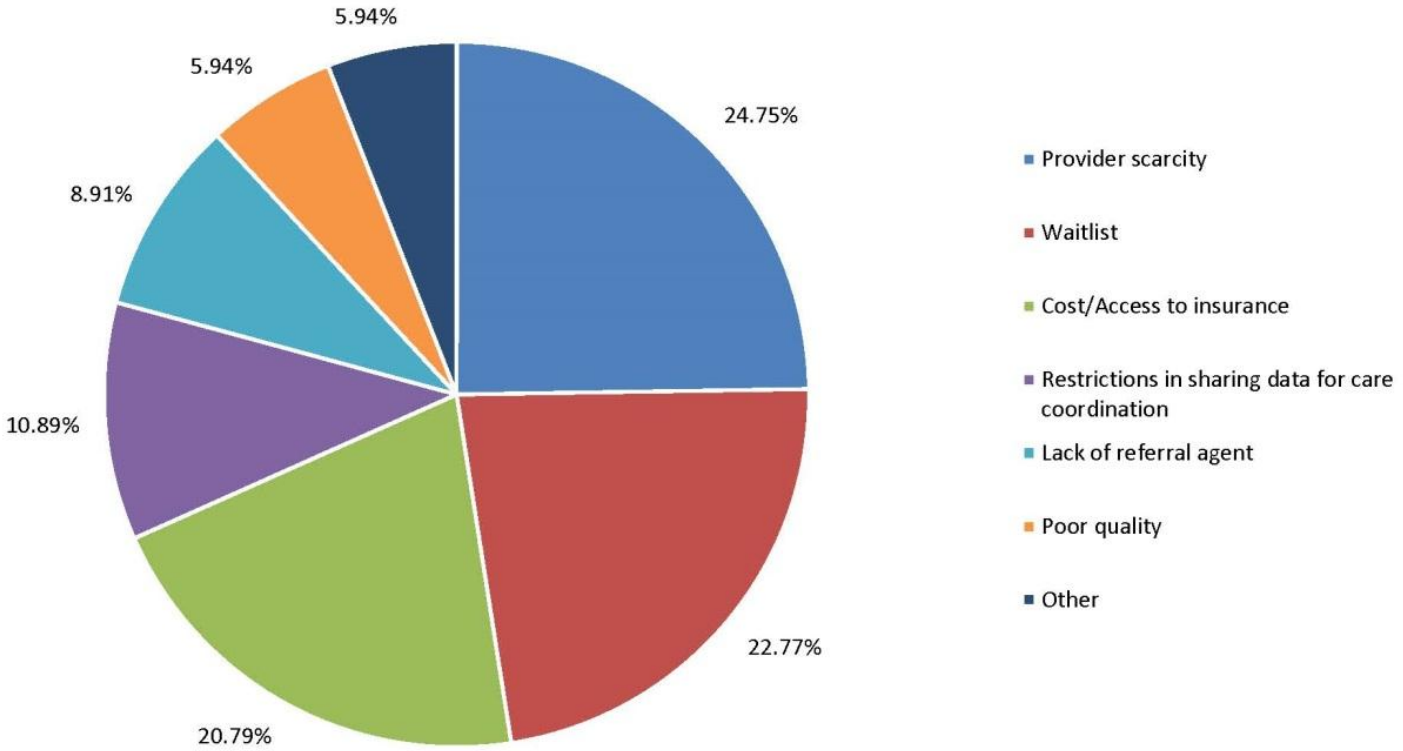
Respondents could choose more than one. Total number of responses = 109

Major Barriers to **Providing** Behavioral Health Services



Respondents could choose more than one. Total number of responses = 80

Major Barriers to **Referring** Patients to Behavioral Health Services



Respondents could choose more than one. Total number of responses = 101

Respondents would like to make these services more available at their organization:

- Substance abuse treatment
- Supportive Housing
- Wrap around services
- Partial hospitalization
- Outpatient psychiatric services in outlying counties
- Emergency CPS
- Family services
- Medical Services
- Medication related services

Recommendations/Conclusion

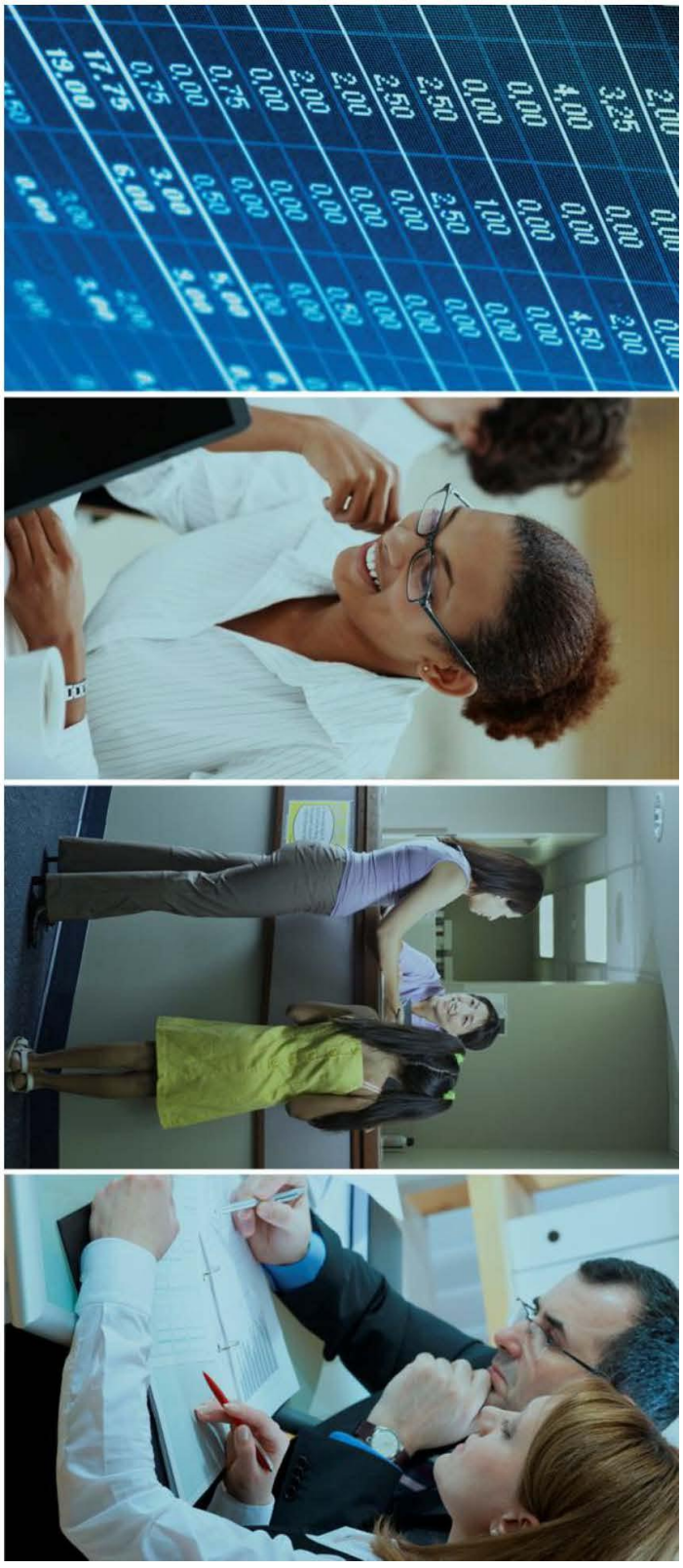
- The demand/supply gap and barriers to access seem more common for children.
- Referral issues are mostly related to substance abuse and psychological treatment.
- The integration of services and partnerships were indicated by well over 50% of respondents for several services especially by referral.
- Attention should be focused on the services with the largest gaps in demand and supply and the most frequently listed barriers to access.
- Attention should also be focused on alleviating barriers to referrals and accessing and providing services to patients of all ages.

Next Steps

As a result of the survey, the RHP 3 Behavioral Health Cohort learned that housing was a common and difficult referral resource for many behavioral health providers in Region 3. The group thought this was an area they could make a difference in and decided to begin addressing this finding first. Therefore, the Cohort decided to develop a Local Housing and Behavioral Health Symposium where housing and behavioral health advocates and professionals in the Region can come together to discuss how to identify and address housing needs in RHP 3's behavioral health population. The event will be hosted on November 3, 2017 at The Harris Center for Mental Health and IDD.

THANK YOU!

Appendix G: Regional Quality Plan SWOT Validation Survey Results



Regional Quality Plan Committee Meeting #5

Texas DSRIP – 1115 Waiver

April 14, 2017

Where we left off…

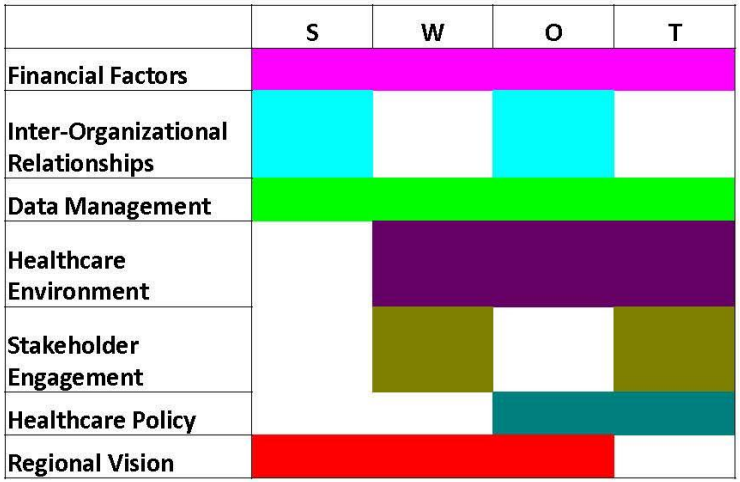
- Creation of SWOT analysis in meeting #4
- Proposal to gain stakeholder feedback at RHP3 LC event in February
  - No substantial feedback generated
- Data validation and stakeholder feedback
  - SWOT survey
  - Other sources

Organizing the SWOT

- Organize SWOT results into buckets:

Strengths	Weaknesses	Opportunities	Threats
• Funding • ~~Expertise~~ • Relationships • Impact • Data/Measurement • ~~Miscellaneous~~	• Payment • Data • Participation • Communication Vision • Care Delivery • ~~Miscellaneous~~	• Partnerships/ Relationships • Clinical Outcomes • MCO alignment • Data • Strategy/Vision • Funding • Policy	• Funding Stability • Policy Issues • Lack of Interest • Current issues in DSRIP • Data Sharing • Community Factors

- 7 domains/areas of interest:
  - Financial Factors
  - Inter-Organizational Relationships
  - Data Management
  - Healthcare Environment
  - Stakeholder Engagement
  - Healthcare Policy
  - Regional Vision



SWOT Domains

Financial Factors

How DSRIP projects are maintained or affected by financial resources, and how providers have been working on sustainability.

Inter-Organizational Relationships

How medical and/or non-medical entities collaborate in order to achieve DSRIP initiatives.

Data management

How healthcare data is communicated between different institutions.

Healthcare environment

How current healthcare operating conditions affect the ability of DSRIP providers to meet the medical and non-medical/social needs of patients.

Stakeholder Engagement

How involvement and buy-in is generated for DSRIP participation and regional transformation of healthcare.

Healthcare Policy

How healthcare policy influences provider priorities and operations, as well as the level of involvement between healthcare providers and policymakers.

Regional Vision

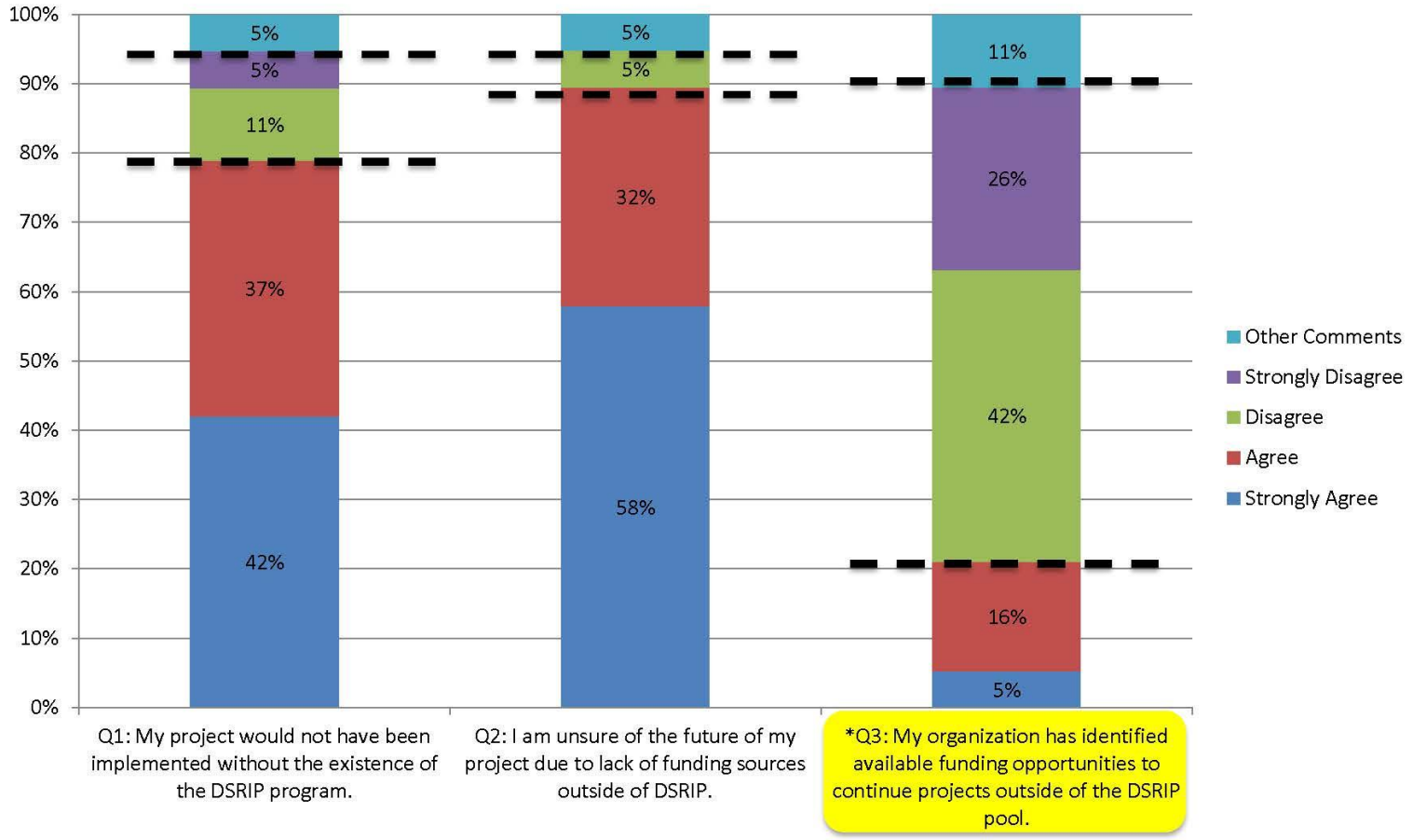
How providers feel about regional performance in meeting health needs.

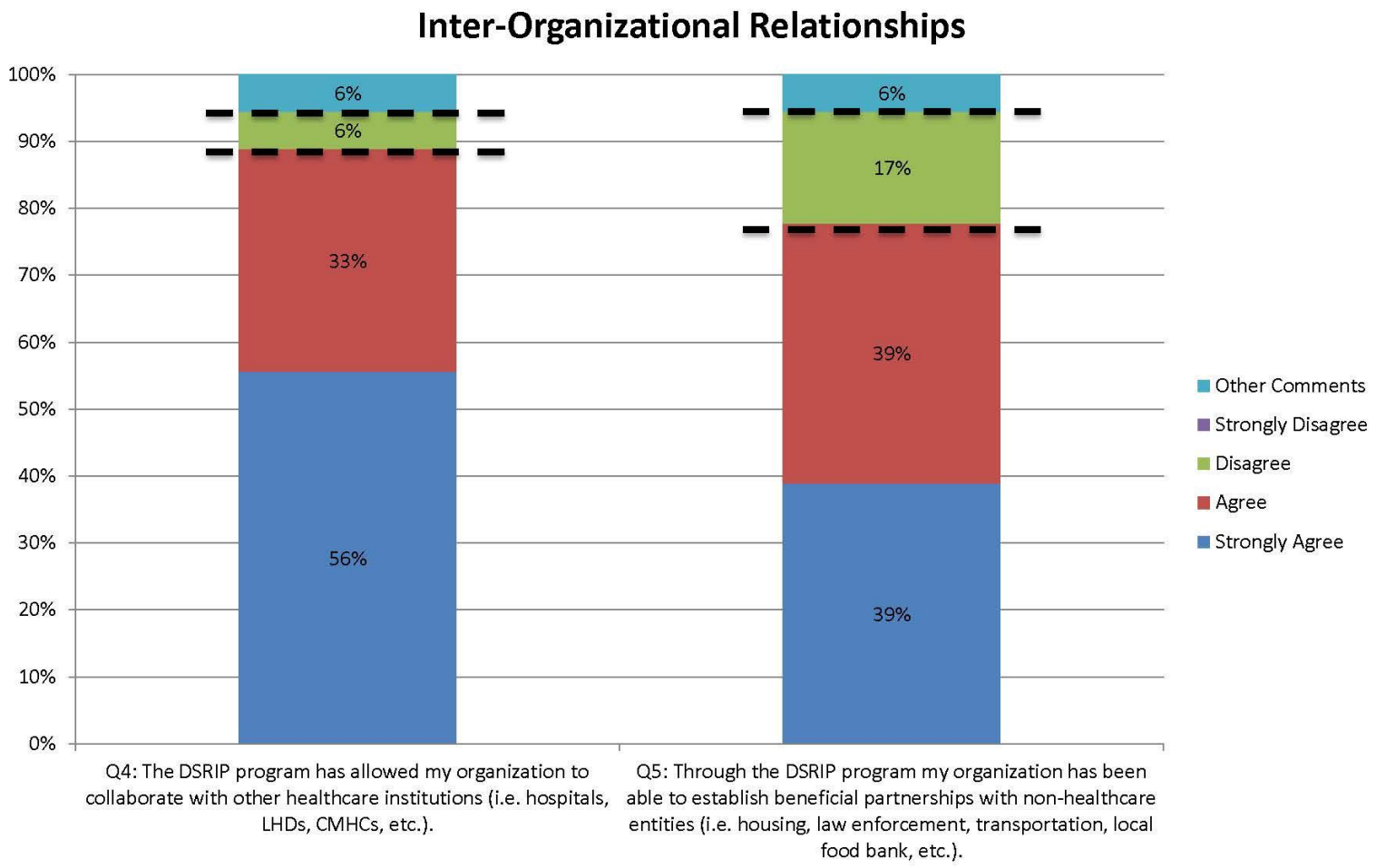
Stakeholder Survey Format/Delivery

- 15-question survey
- 2-3 general statements per SWOT domain
  - Rate from Strongly Agree to Strongly Disagree
  - Other option; comment section
- Distributed to 43 RHP3 DSRIP leaders
  - 44% response rate (19 respondents; 1 partial)
  - Representation from all but 5 organizations

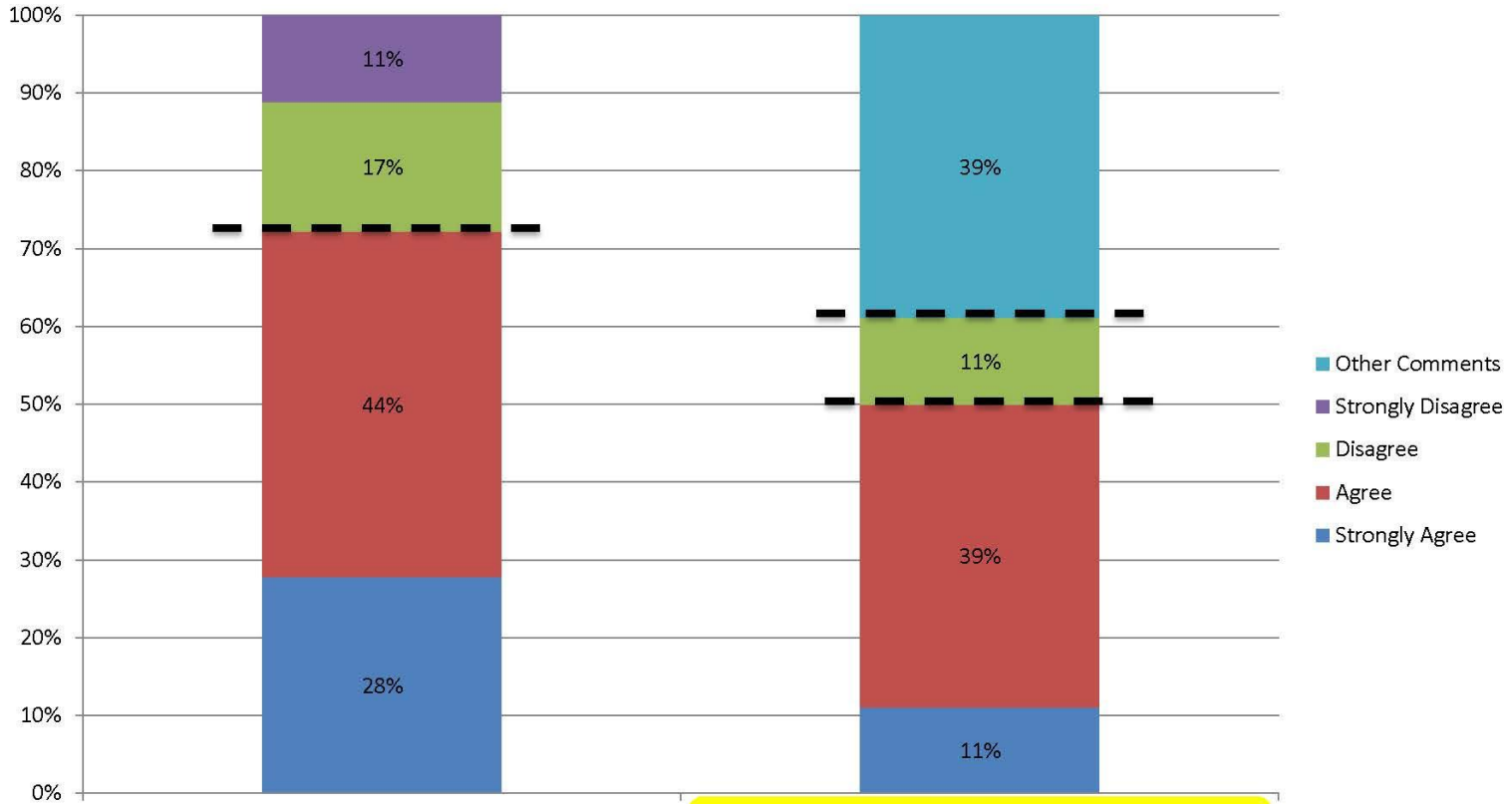
Strengths	Weaknesses
Q1 – Funding ~~Expertise~~ Q4 – Relationships Q1; Q14 – Impact Data/Measurement ~~Miscellaneous~~	Payment – Q3 Data – Q6 Participation – Q8; Q10 Communication of Vision – Q15 Care Delivery – Q9 (non-medical needs) ~~Miscellaneous~~
Opportunities	**Threats**
Q5; Q9 – Partnerships/Relationships Q8 (alignment) – Clinical Outcomes MCO alignment Q7 – Data Strategy/Vision Funding Q12 – Policy	Funding Stability – Q2 Policy Issues – Q12; Q13 Lack of Interest – Q8; Q10; Q11 Current issues in DSRIP – Q9 (social determinants) Data Sharing – Q7 Community Factors

Financial Factors




Inter-Organizational Relationships
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
6%
6%
33%
56%
6%
17%
39%
39%
Other Comments
Strongly Disagree
Disagree
Agree
Strongly Agree
Q4: The DSRIP program has allowed my organization to collaborate with other healthcare institutions (i.e. hospitals, LHDs, CMHCs, etc.).
Q5: Through the DSRIP program my organization has been able to establish beneficial partnerships with non-healthcare entities (i.e. housing, law enforcement, transportation, local food bank, etc.).

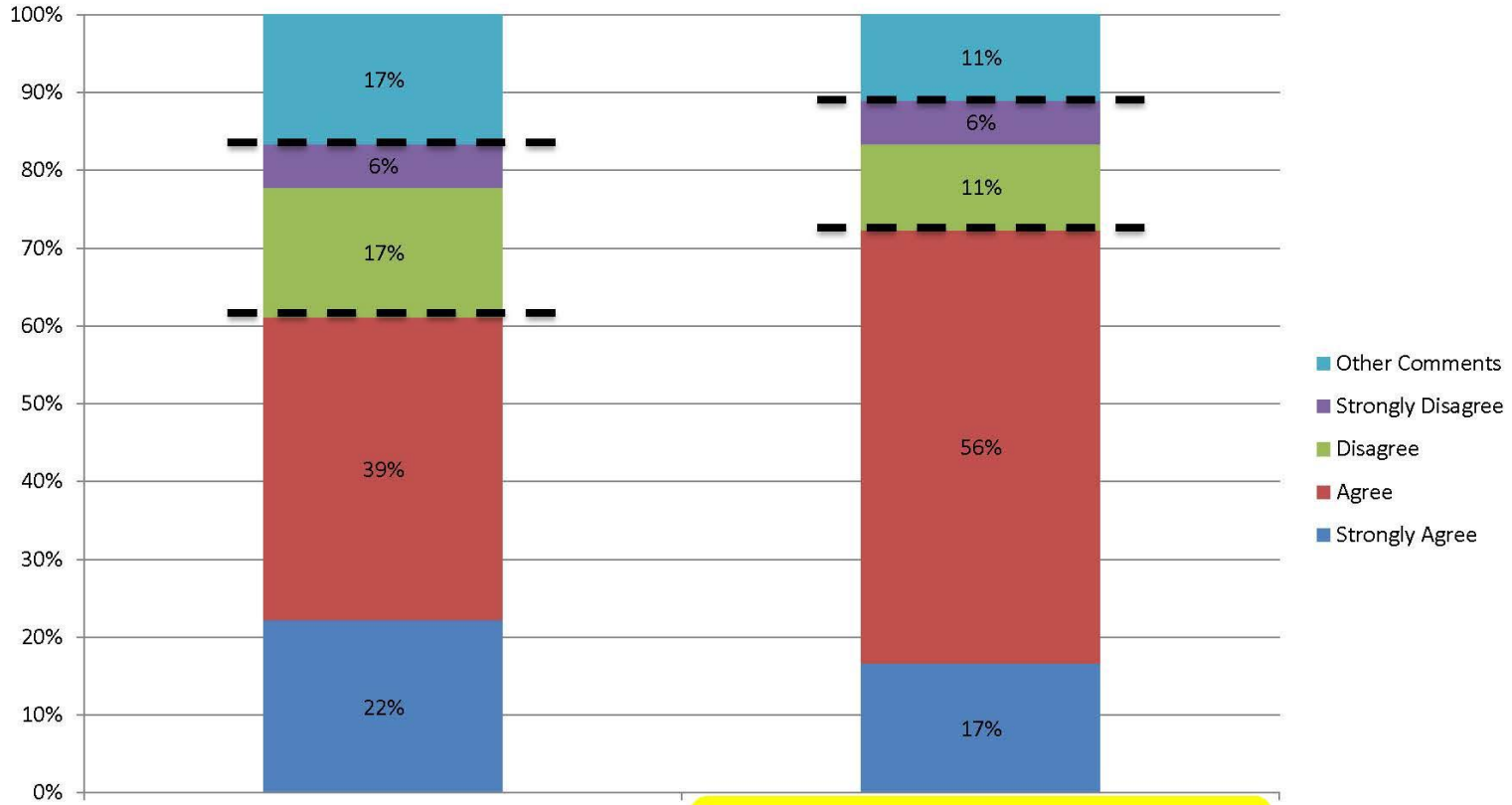
Data Management



Q6: My organization encounters barriers when it comes to collaborating with other institutions (i.e. hospitals, MCOs, LHDs, etc.) to share healthcare data.

*Q7: My organization is willing to share internal healthcare data with external organizations.

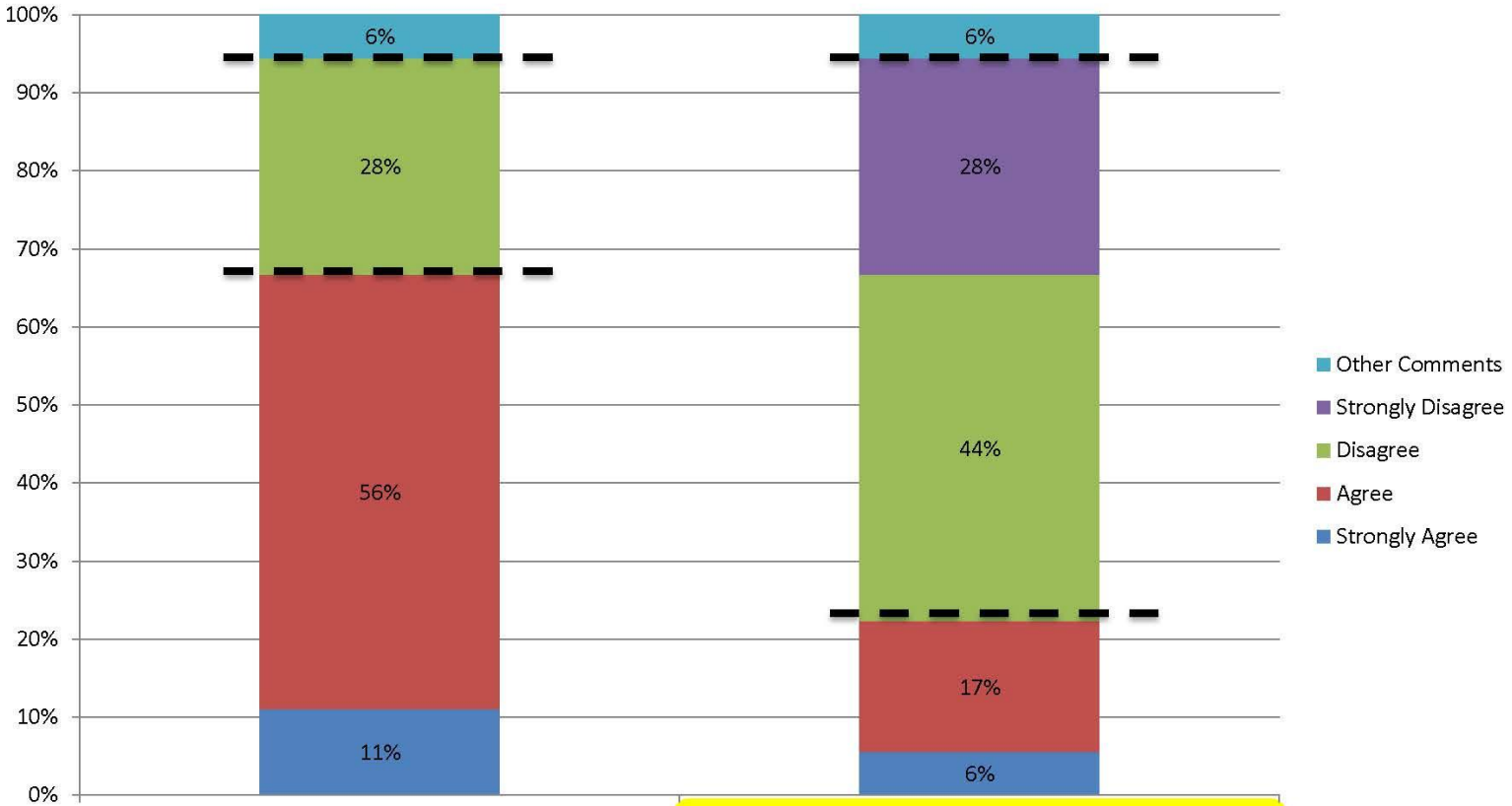
Healthcare Environment



Q8: Leadership alignment across healthcare institutions to address clinical outcomes is a difficult thing to accomplish within my region.

*Q9: My organization has challenges navigating patients to necessary non-medical/social resources within the community.

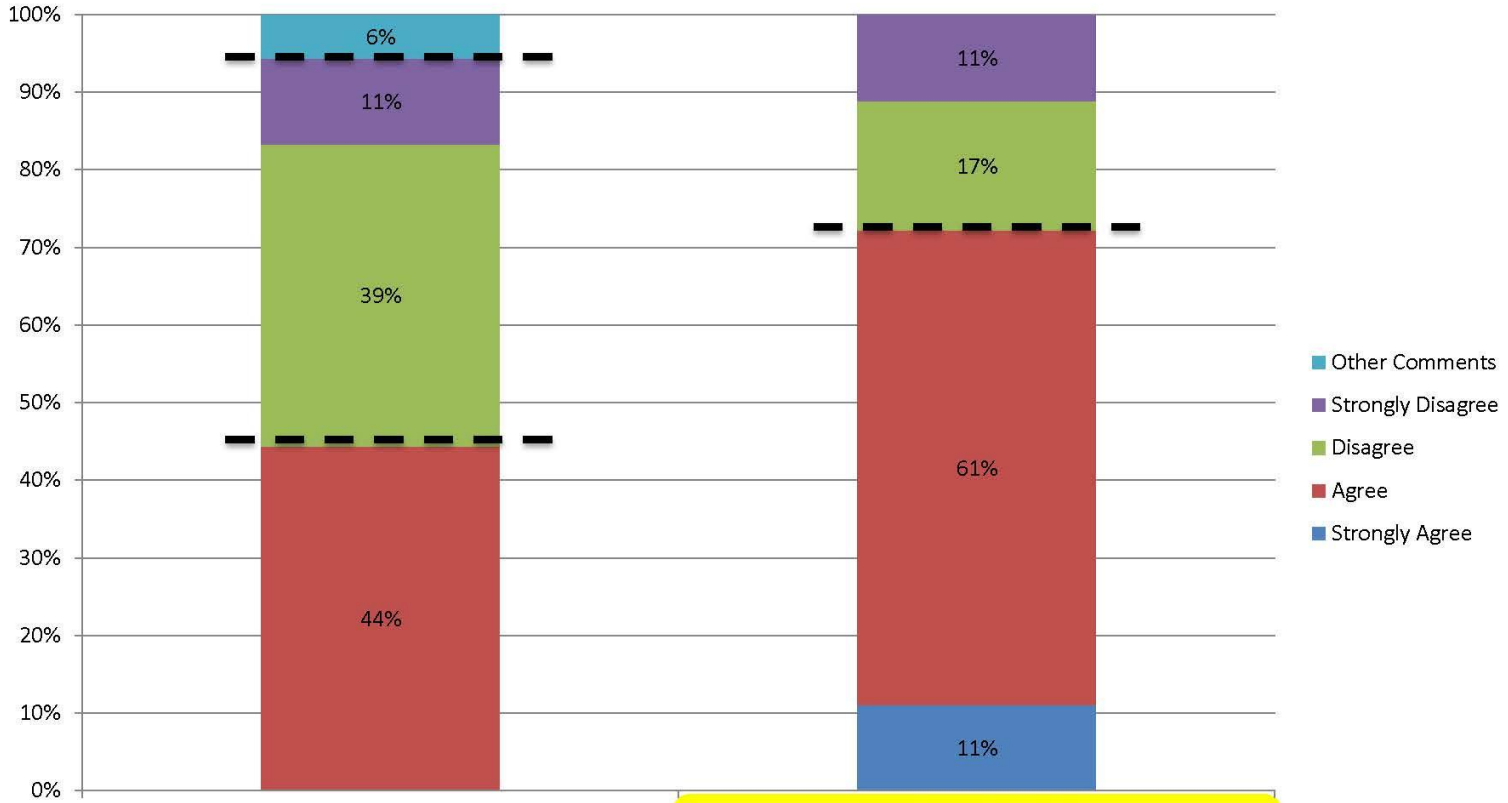
Stakeholder Engagement



Q10: It is difficult to gain buy-in from leadership on regionally-coordinated efforts without a financial incentive.

*Q11: Leadership at my institution is considering withdrawing from future DSRIP participation due to lack of financial incentive.

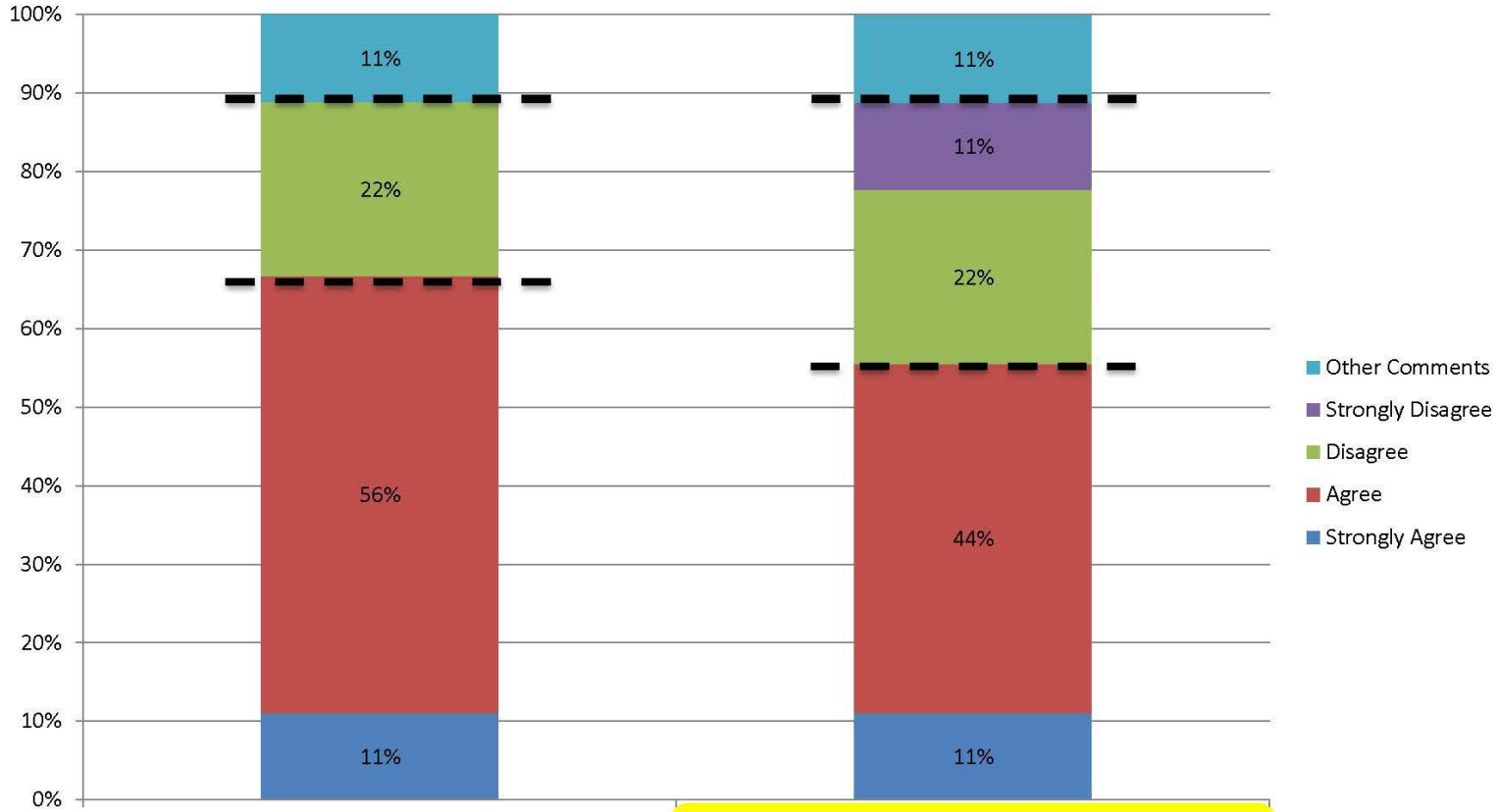
Healthcare Policy



Q12: There is a lack of awareness and/or engagement from government officials (local, state, or federal) with the DSRIP program.

*Q13: I am unsure of how changing payment models and reimbursement reforms will affect the operations and priorities of my organization.

Regional Vision



Q14: The amount of DSRIP funds awarded in my region indicates that we have been able to move the needle significantly on regional health outcomes.

*Q15: There is a clear and cohesive understanding of regional healthcare issues that can drive the development of a regional quality plan.

Major Findings

- Financial Factors: a majority of providers have not been able to find funding outside of DSRIP; sustainability is an issue
- Data Management: providers not willing to make an outright statement on sharing data; concern for privacy of patient information and HIPPA regulations
- Healthcare Environment: providers have a hard time navigating patients to non-medical/social resources; possible gap that needs to be addressed

Major Findings, cont.

- Stakeholder Engagement: although most agree leadership buy-in is hard to achieve without financial incentive, most leadership is not wanting to withdraw from DSRIP
- Healthcare Policy: most providers are unsure of how payment models and reimbursement reforms will affect them; how can RQP contribute?
- Regional Vision: no clear consensus on level of understanding of health issues amongst RHP3 providers

What are some areas of priority?

- Financial Factors
- Data Management
- Healthcare Environment

What needs further validation?

- Healthcare Environment
- Data Management (strengths)
- Regional Vision (opportunities)

What areas can we eliminate?

Other Data Sources for Validation

- Behavioral Health Cohort Gap Analysis
- County Health Rankings
- Community Health Needs Assessment (waiting on corrections for updated version)
- Regional Hospital CHNAs
- Houston/Harris County
  - Clinton Foundation
  - Harris County Social Determinants
  - Greater Houston Partnership
- Other Ideas?

RHP 3 DY7-8 Planning Survey Results

Texas DSRIP 1115 Waiver – RHP 3 Monthly Status Update

September 20, 2017

Today's objectives

- Educate Region on potential Category C selections
- Review likely Regional quality focuses for DY7-8
- Inform Region about upcoming Anchor-led conversations about priority quality areas
- Explain how findings will advance the Regional Quality Plan's development

Agenda

- 7 minutes – Regional Quality Plan
- 2 minutes - Regional DY7-8 survey
- 7 minutes - Category C selections and challenges
- 5 minutes - Priority areas found
- 5 minutes - Measure/Bundle conference call plan

RHP3 Regional Quality Plan

Vision: Develop a regional plan to improve patient-level quality of care through 1) meeting the non-medical/social needs of patients, 2) developing more integrated care systems, 3) establishing better data sharing arrangements, and 4) reducing the population's disease burden for highly prevalent disease(s).

Healthcare Environment

- **Social Determinants**
- Health Outcomes
- Healthcare Quality

Inter-Organizational Relationships

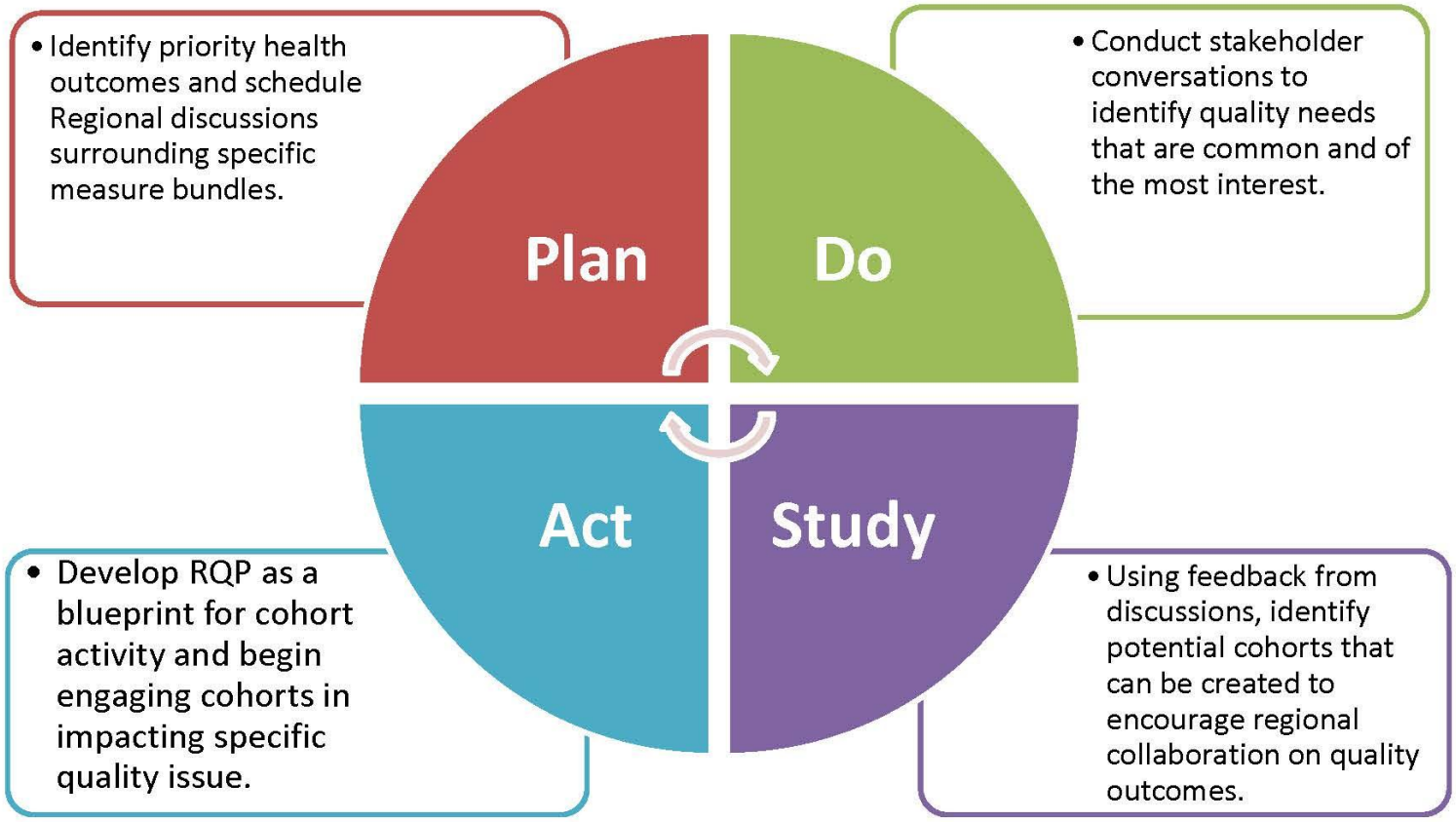
- **Collaboration**
- Partnership Development
- Care Integration

Enabling Factors:

Data Management: How healthcare data is communicated between institutions.

Stakeholder Engagement: How buy-in and collaboration are induced through continuous feedback from stakeholders and identifying partners.

Regional Quality Plan Objectives

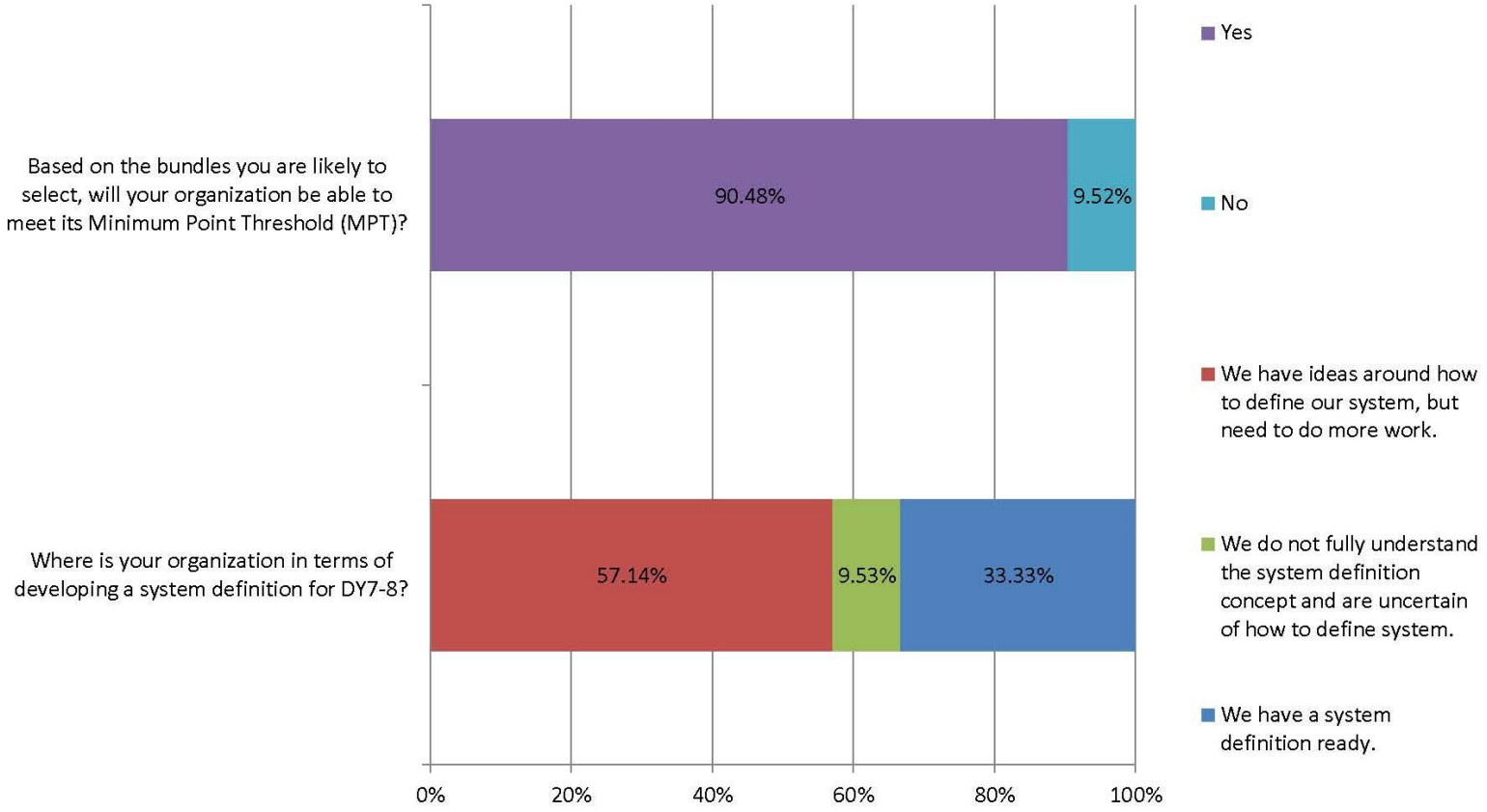


Respondent Information

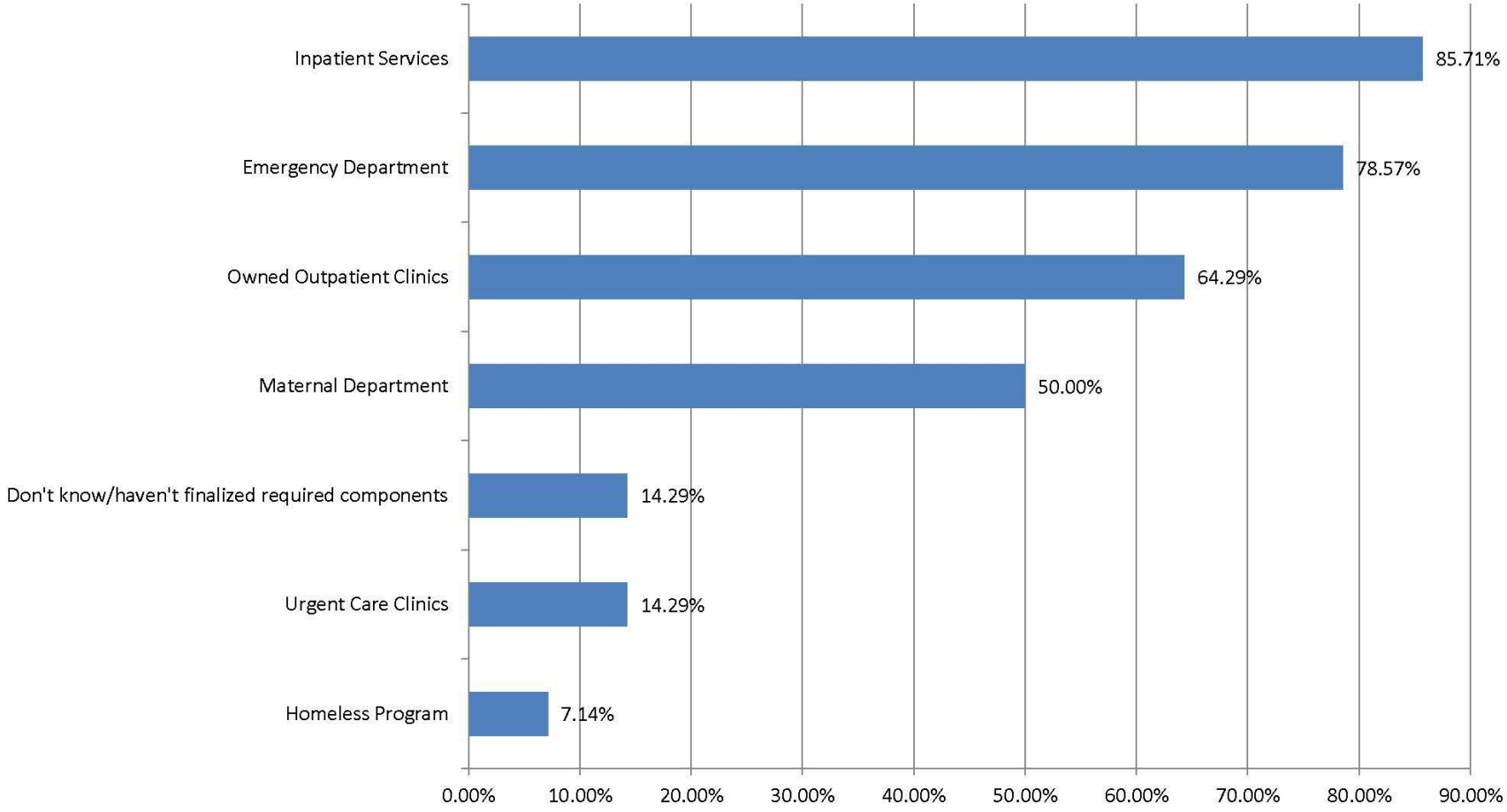
- Survey was administered to the Region online via SurveyMonkey July 24th thru July 31st
  - Some Providers were granted extensions through Friday, August 4th
- 21 unique responses were received from all Performing Provider institutions in RHP3
  - 14 Hospitals*
  - 2 Physician Practices
  - 2 Community Mental Health Centers (CMHCs)
  - 3 Local Health Departments (LHDs)

*Four Providers have 2 TPIs and therefore 2 system definitions

System Definition and MPT Status



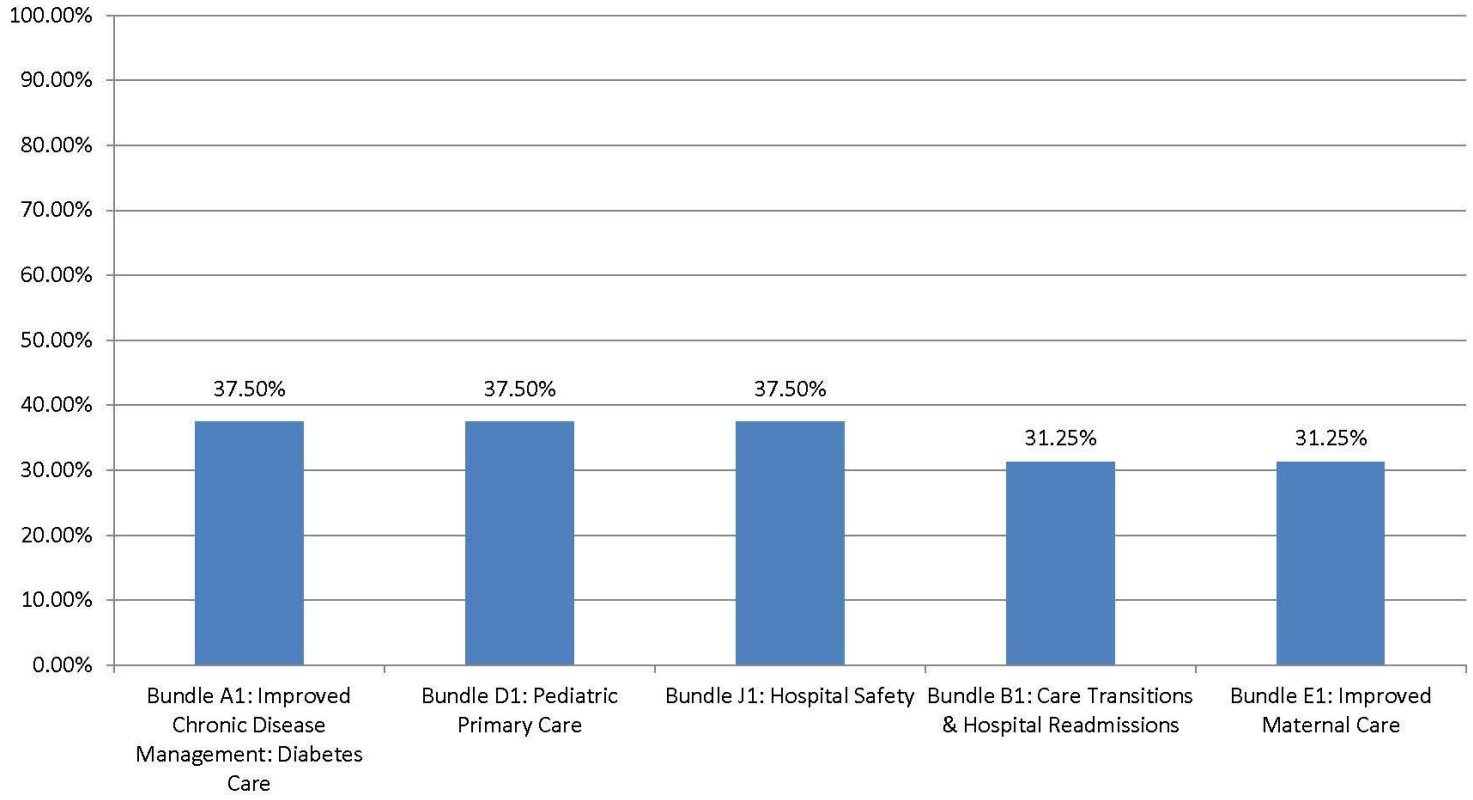
Required Components for Hospital System Definition



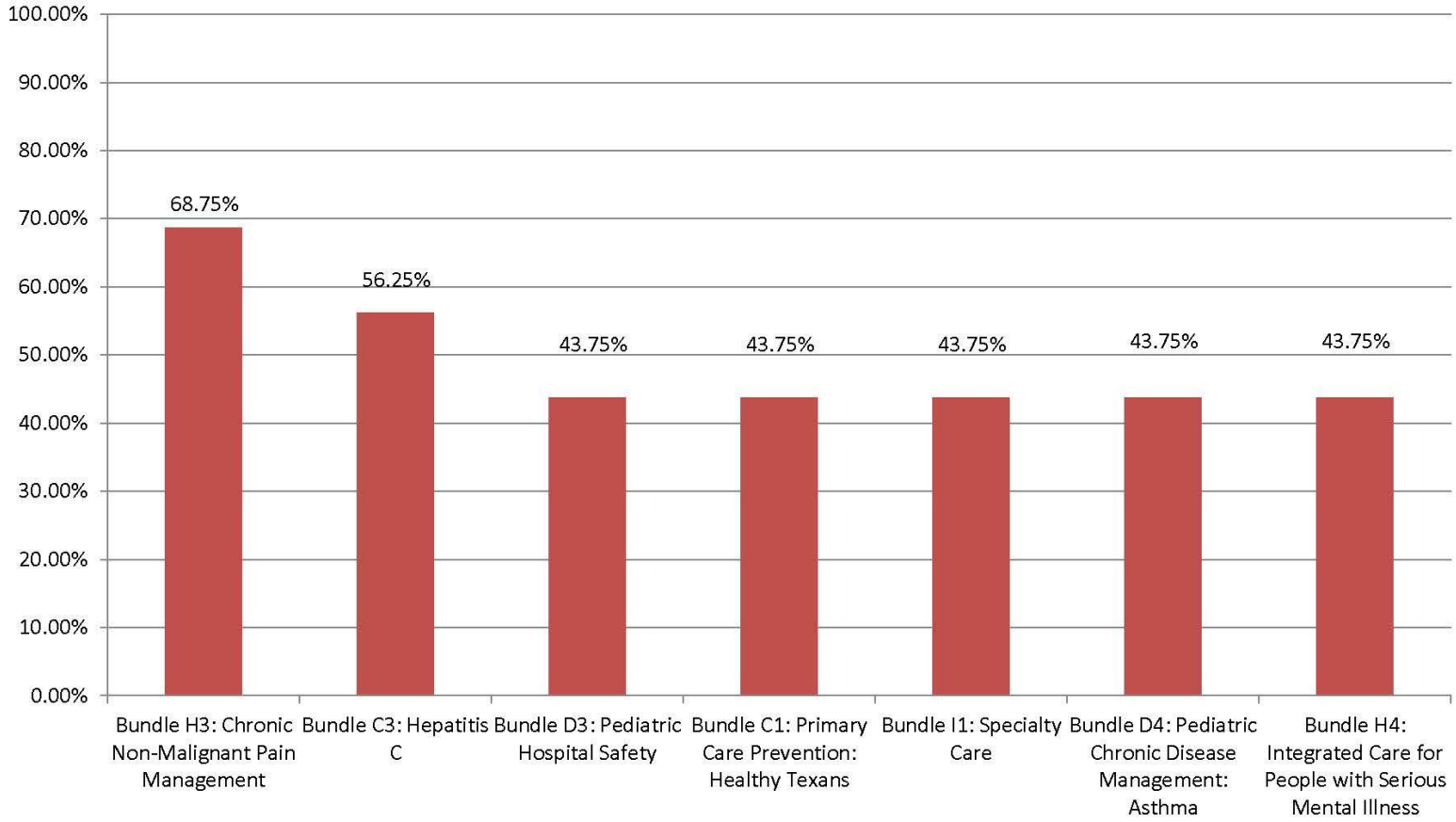
Comments on system definition…

- Most Providers will not be limited by geography
  - Exception of one that IGTs for two locations and would like two separate systems
- Defining contracted/partner entities to include (4)
- How to define system so resources/manpower is not spread too thin; impact of moving from project-level to system-level scope (4)
- Having to retrospectively collect data across system for baseline reporting; other data issues (3)
- Analyzing system components based on HHSC requirements (2)
- Wanting to limit system definition by service lines and locations impacted by DSRIP (1)
- What appropriate populations to include under system definition (1)

Top 5 Bundles Likely to be Selected by Hospitals and Physician Practices



Bundles Most Unlikely to be Selected by Hospitals and Physician Practices



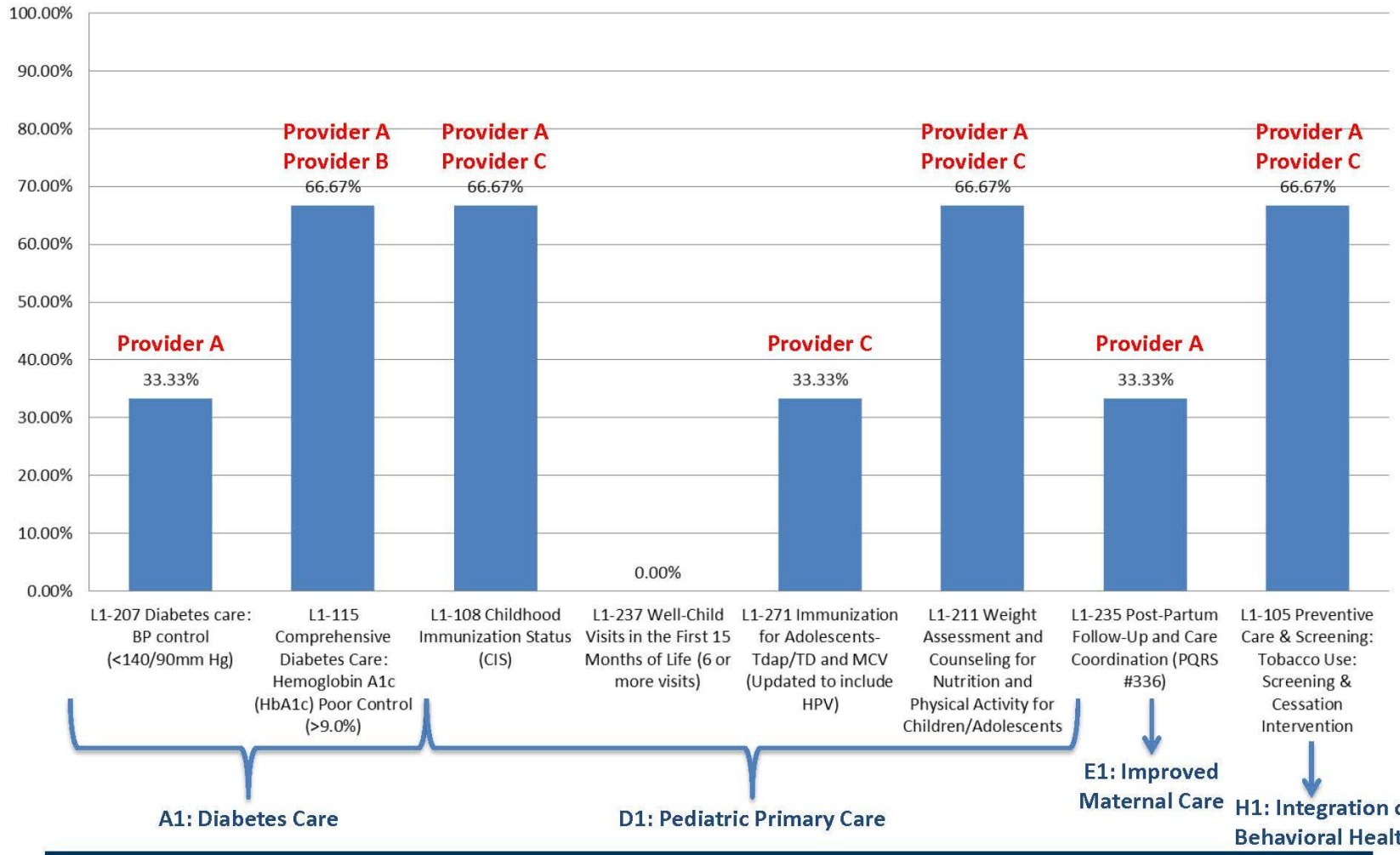
Measures Likely to be Selected by 2 LHDs	Measures Likely to be Selected by 1 LHD	Measures Not Likely to be Selected by a LHD
L1-105 Preventive Care & Screening: Tobacco Use: Screening & Cessation Intervention	L1-103 Controlling High Blood Pressure	L1-186 Breast Cancer Screening
L1-107 Colorectal Cancer Screening	L1-160 Follow-Up After Hospitalization for Mental Illness	L1-210 PQRS #317 Preventive Care and Screening: Screening for High Blood Pressure and Follow-Up Documented
L1-108 Childhood Immunization Status (CIS)	L1-205 Third next available appointment	L1-237 Well-Child Visits in the First 15 Months of Life (6 or more visits)
L1-115 Comprehensive Diabetes Care: Hemoglobin A1c (HbA1c) Poor Control (>9.0%)	L1-207 Diabetes care: BP control (<140/90mm Hg)	L1-242 Reduce Emergency Department (ED) visits for Ambulatory Care Sensitive Conditions (ACSC)
L1-147 Preventive Care and Screening: Body Mass Index (BMI) Screening and Follow-Up	L1-224 Dental Sealant: Children	L1-346 Follow-up testing for N. gonorrhoeae among recently infected men and women
L1-211 Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents	L1-227 Dental Caries - Adults	
L1-225 Dental Caries - Children	L1-235 Post-Partum Follow-Up and Care Coordination (PQRS #336)	
L1-231 Preventive Services for Children at Elevated Caries Risk - Modified Denominator	L1-268 Pneumonia vaccination status for older adults	
L1-241 Decrease in mental health admissions and readmissions to criminal justice settings such as jails or prisons	L1-271 Immunization for Adolescents- Tdap/TD and MCV (Updated to include HPV)	
L1-269 Preventive Care and Screening: Influenza Immunization	L1-272 Adults (18+ years) Immunization status	
L1-347 Latent Tuberculosis Infection (LTBI) treatment rate	L1-280 Chlamydia Screening in Women (CHL)	
	L1-343 Syphilis positive screening rates	
	L1-344 Follow-up after Treatment for Primary or Secondary Syphilis	
	L1-345 Gonorrhea Positive Screening Rates	
	L1-387 Reduce Emergency Department visits for Behavioral Health and Substance Abuse (Reported as two rates)	

Measures Likely to be Selected by both CMHCs	Measures Likely to be Selected by 1 CMHC	Measures Not Likely to be Selected by a CMHC
M1-105 Preventive Care & Screening: Tobacco Use: Screening & Cessation Intervention	M1-100 Initiation and Engagement of Alcohol and Other Drug Dependence Treatment (IET)	M1-103 Controlling High Blood Pressure
M1-125 Antidepressant Medication Management (AMM-AD)	M1-124 Medication Reconciliation Post-Discharge	M1-104 Medical Assistance with Smoking and Tobacco Use Cessation (MSC) - Modified Denominator
M1-146 Screening for Clinical Depression and Follow-Up Plan (CDF-AD)	M1-160 Follow-Up After Hospitalization for Mental Illness	M1-115 Comprehensive Diabetes Care: Hemoglobin A1c (HbA1c) Poor Control (>9.0%)
M1-147 Preventive Care and Screening: Body Mass Index (BMI) Screening and Follow-Up	M1-203 PQRS #400: Hepatitis C: One-Time Screening for Hepatitis C Virus (HCV) for Patients at Risk	M1-165 Depression Remission at 12 Months
M1-180 Adherence to Antipsychotics for Individuals with Schizophrenia (SAA-AD)	M1-211 Weight Assessment and Counseling for Nutrition and Physical Activity for Children/Adolescents	M1-181 Depression Response at Twelve Months- Progress Towards Remission
M1-182 Diabetes Screening for People With Schizophrenia or Bipolar Disorder Who Are Using Antipsychotic Medications (SSD-AD)	M1-255 Follow-up Care for Children Prescribed ADHD Medication (ADD)	M1-205 Third next available appointment
M1-210 PQRS #317 Preventive Care and Screening: Screening for High Blood Pressure and Follow-Up Documented	M1-256 Initiation of Depression Treatment	M1-207 Diabetes care: BP control (<140/90mm Hg)
M1-262 Assessment of Risk to Self/Others	M1-257 Care Planning for Dual Diagnosis	M1-208 Comprehensive Diabetes Care LDL-C Screening
M1-263 Assessment for Psychosocial Issues of Psychiatric Patients	M1-259 Assignment of Primary Care Physician to Individuals with Schizophrenia	M1-216 Risk Adjusted Behavioral Health /Substance Abuse 30-day Readmission Rate
M1-287 Documentation of Current Medications in the Medical Record	M1-260 Annual Physical Exam for Persons with Mental Illness	M1-241 Decrease in mental health admissions and readmissions to criminal justice settings such as jails or prisons
M1-317 Preventive Care and Screening: Unhealthy Alcohol Use: Screening & Brief Counseling	M1-261 Assessment for Substance Abuse Problems of Psychiatric Patients	M1-280 Chlamydia Screening in Women (CHL)
M1-319 Adult Major Depressive Disorder (MDD): Suicide Risk Assessment (eMeasure)	M1-264 Vocational Rehabilitation for Schizophrenia	M1-339 SUB-3 Alcohol & Other Drug Use Disorder Treatment Provided or Offered at Discharge
	M1-265 Housing Assessment for Individuals with Schizophrenia	M1-342 Time to Initial Evaluation
	M1-266 Independent Living Skills Assessment for Individuals with Schizophrenia	M1-385 Assessment of Functional Status or QoL (Modified from NQF# 0260/2624) Specific to IDD Services
	M1-286 Depression Remission at Six Months	M1-386 Improvement in Functional Status or QoL (Modified from PQRS #435) Specific to IDD Services
	M1-306 Use of First-Line Psychosocial Care for Children and Adolescents on Antipsychotics (APP-CH)	M1-387 Reduce Emergency Department visits for Behavioral Health and Substance Abuse (Reported as two rates)
	M1-316 Alcohol Screening and Follow-up for People with Serious Mental Illness	
	M1-340 Substance use disorders: percentage of patients aged 18 years and older with a diagnosis of current opioid addiction*	
	M1-341 Substance use disorders: percentage of patients aged 18 years and older with a diagnosis of current alcohol dependence*	

RHP 3 Priority Bundles

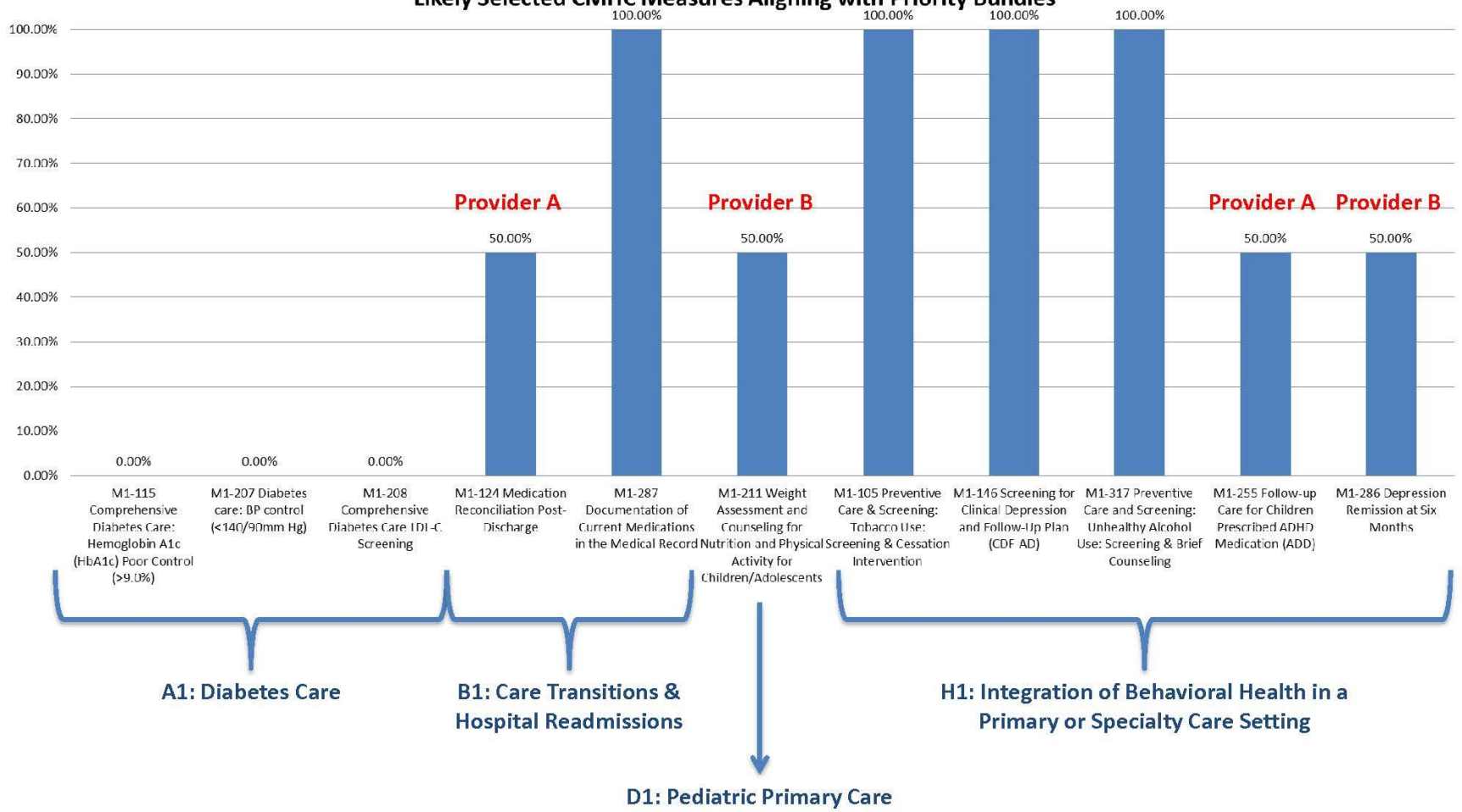
- A1: Improved Chronic Disease Management: Diabetes Care
- D1: Pediatric Primary Care
- E1: Improved Maternal Care
- B1: Care Transitions & Hospital Readmissions
- H1: Integration of Behavioral Health in a Primary or Specialty Care Setting

Likely Selected LHD Measures Aligning with Priority Bundles

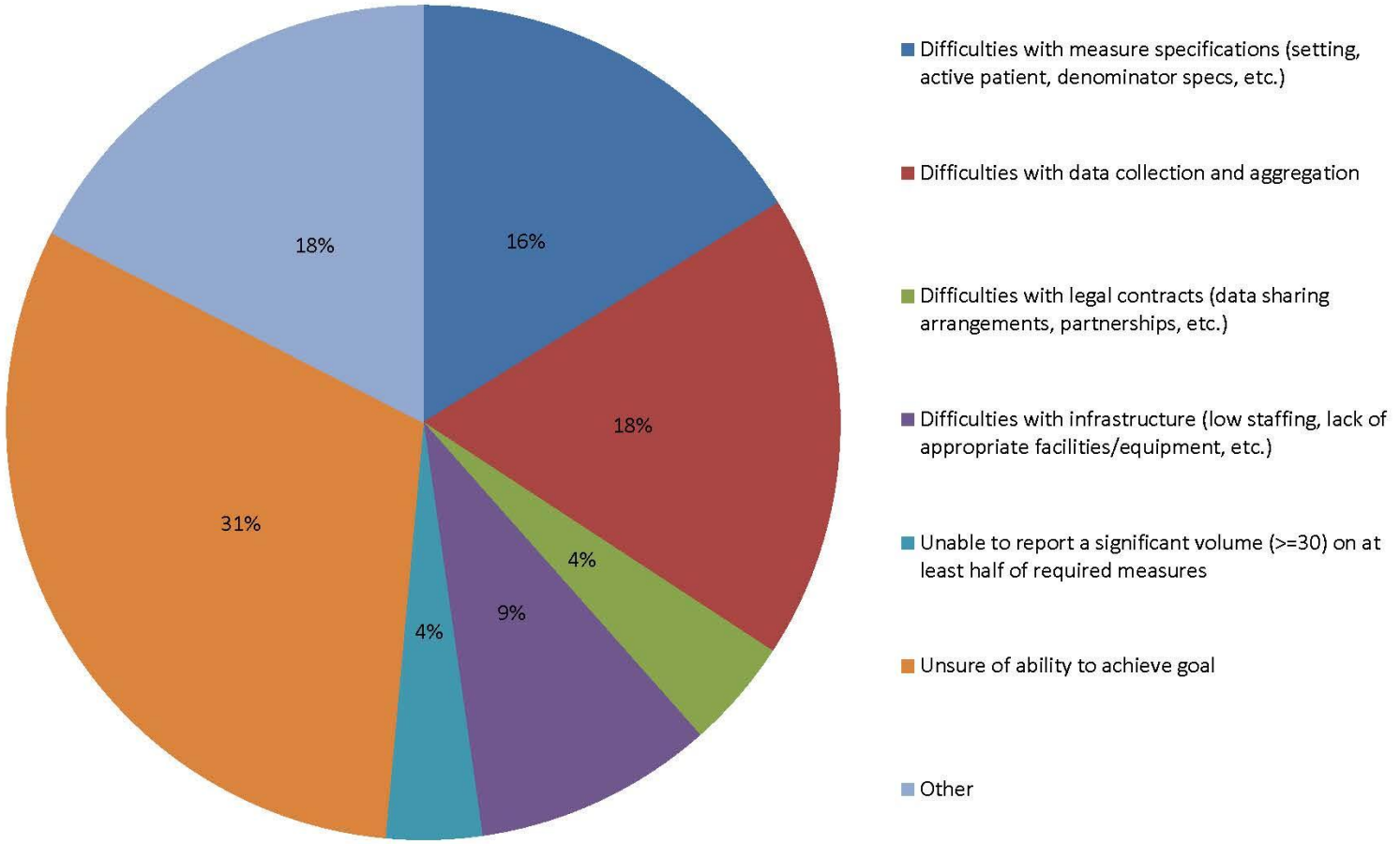


Southeast Texas Regional Healthcare Partnership
Texas Healthcare Transformation and Quality Improvement Program ☆ Medicaid 1115 Waiver

Likely Selected CMHC Measures Aligning with Priority Bundles



Difficulties with Selecting Bundles/Measures



Other reasons for not selecting bundles…

- Bundle criteria issues (5):
  - Specialty care bundle: not enough detail on specifications; organization does not measure QoL
  - Problems with settings for bundle measures
  - Inappropriate age inclusion criteria for Pediatric bundles
  - Cannot meet criteria for enough measures in the bundle
- Data issues(3):
  - Don't have discharge info for Medicaid patients – only LIU
  - Have to rely on patient to provide health records
  - Manual data abstraction
- Issues with measure/bundle point valuations (3)
- Bundle is a low priority (2)
- LHD that wants to select measures from hospital menu (1)

Comments on DY7-8 challenges…

- Data concerns (6)
  - Data sharing
  - How to collect appropriate data for reporting measures (2
  - Retrieving data from EHR and staff training for detailed reports (2
  - Establishing baselines and specific reporting requirements
  - If cannot reconfigure software, will have to pull data manually
- Protocol challenges (5)
  - Measures that do not specify particular document for data collection (i.e., Assessment of Psychological Issues and Independent Living Skills Assessment; Specialty Care bundle)
  - Would like to have finalized protocols instead of DRAFT (2)
  - Cat C measure specs differ slightly from measures used for other reporting reasons such as ACOs
  - More details on measure specs
- Organizational challenges (5)
  - Internal financial analysis & analysis of bundles/measures
  - System definition (2)
  - Rural hospital challenges and ability to impact community
  - Aligning quality metrics with existing organizational strategies; allowing flexibility for reporting with measures specifications that are already reported statewide or nationally (2)
  - Sustainability
- Resource challenges (2)
  - Cost vs. benefit of core activities
  - Too many resources devoted to DSRIP

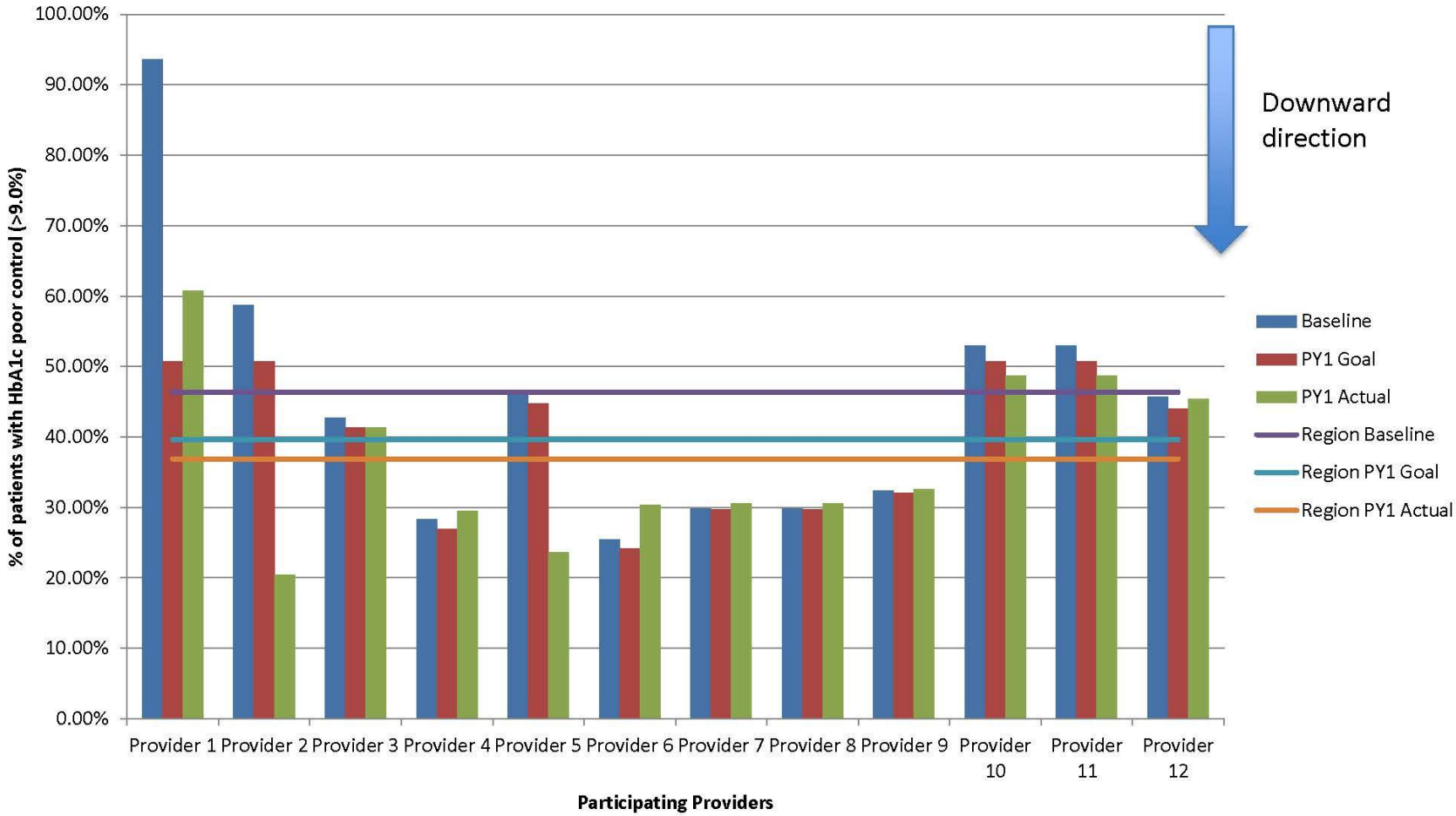
Factors that may impact survey results:

- Changes for LHDs and CMHCs:
  - LHD cap changed from 40 to 20
  - LHDs allowed to use DY6 P4P QISMC measures in DY7-8 (Grandfathered measures)
  - Additional points for state priority measures on CMHC menu
- Changes for Hospitals and Physician Practices:
  - Measure Bundle D5 added to bundle menu
  - Valuation limit to select Bundles K1 and K2 changed from $2 million to $2.5 million

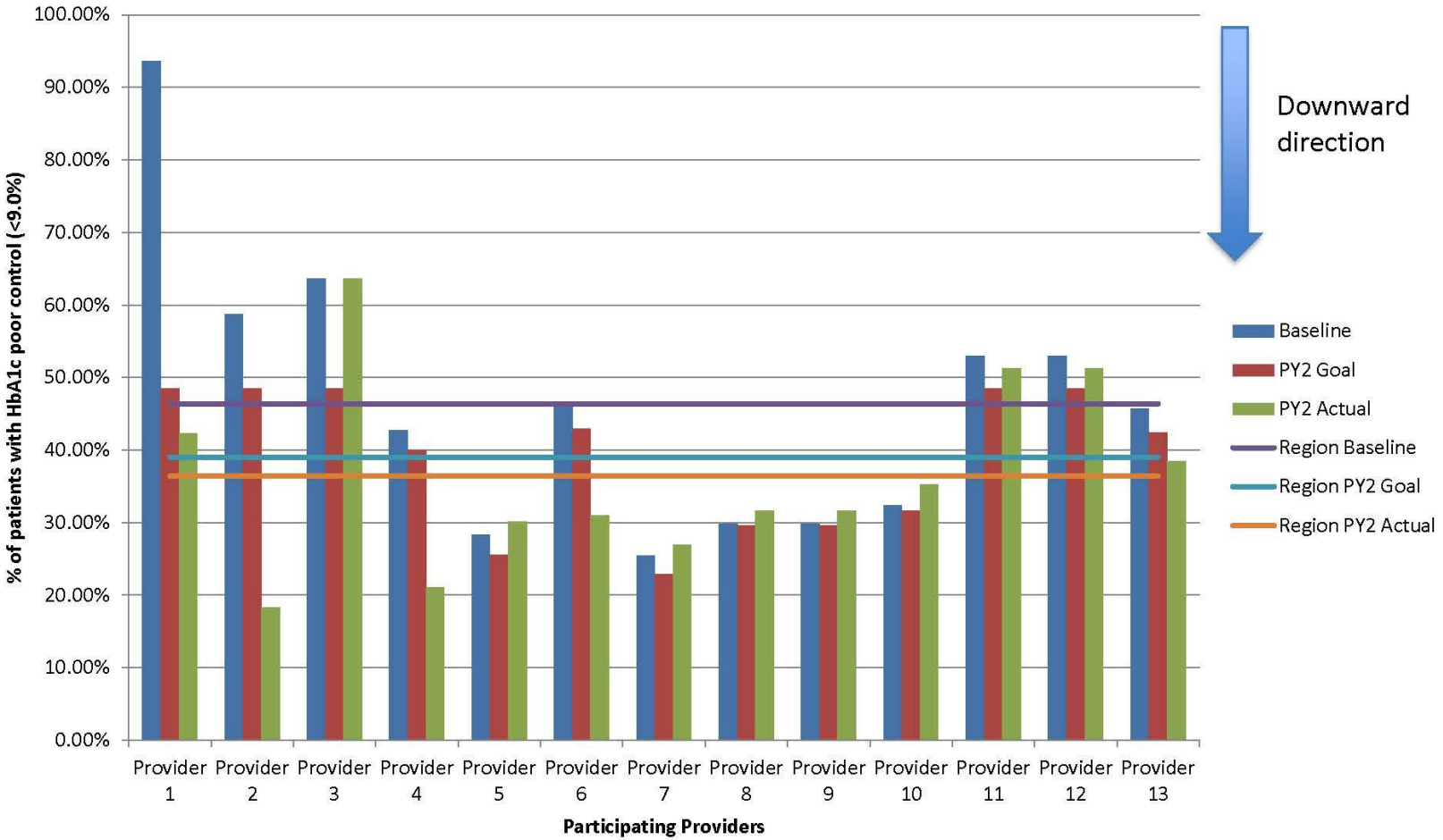
November Conference Calls

- Engage in regional conversations with fellow DSRIP Providers and non-DSRIP stakeholders who are interested in impacting outcomes on the same bundles.
- 1.5 hour conference calls possibly about:
  - Technical issues
  - Performance issues
  - Sharing of best practices
  - Population health needs
  - Regional methods for addressing bundle outcomes
  - Stakeholder feedback

IT-1.10 (Diabetes care: HbA1c poor control (>9.0%) Performance in PY1



IT-1.10 (Diabetes care: HbA1c poor control (>9.0%) Performance in PY2



Thank you for participating, we appreciate your feedback!

Any questions?