

Project Summary

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

Project Title: Use Telemedicine to Deliver Primary Care and Specialty Care Services in School-Based Settings

Unique Project ID: 13890807. 1.100

Performing Provider Name/TPI: Children's Medical Center of Dallas / 13890807

Provider

Children's Medical Center of Dallas (Children's) has two hospitals, one in Dallas with 487 licensed beds and one in Plano with 72 licensed beds. Children's has pediatric specialty outpatient services in Dallas, Plano and Southlake. Children's also has a system of primary care centers, MyChildren's, which focuses on providing primary care to children covered by Medicaid, CHIP and children who are uninsured. Annually, Children's has approximately 600,000 patient contacts.

Children's has a large role in the Medicaid and indigent/uninsured pediatric population of RHP9. Children's has the largest market share for pediatrics in DFW region with 51% of the market for inpatient discharges. Of that volume, 67% of the cases were either covered by a government payor (Medicaid and CHIP) or had no insurance (indigent/uninsured).

Intervention

Expand community-based health services cost-effectively by use of a telemedicine program involving community-based nurses and pediatric clinical personnel at Children's to better accommodate the needs of the pediatric population during the school day (reduce unnecessary use of emergency department services). Telemedicine services may also be developed in other community settings such as daycare centers, after school programs and community centers.

Need for the Project

Children's Medical Center emergency department (Dallas campus) treats approximately 50,000 Level 4 and Level 5 visits annually (36% of total emergency visits) for children with low acuity illnesses and acute care symptoms which can be more cost-effectively addressed in a primary care setting. Many of these children are seen after physician offices close, when the parents return from work. Some percentage of the visits could be avoided if primary care were available to children during the school day or during after-school care. The Regional Health Partnership IX Community Needs Assessment Report, Dallas Fort Worth Hospital Council, 2012, found that over 68% of emergency encounters for the top primary health conditions were either none-urgent or emergent/primary care treatable.

Target Population

Children covered by Medicaid 75% or uninsured 5% for a combined total of 80%.

Expected Patient Benefits

The benefits for patients participating in this program are increased access to medical care, reduced absence from school, reduced parental absence from work and reduced use of emergency departments for non-emergent care.

Description of QPI

The proposed project will result in an increase of telemedicine encounters. Because we are working on a school calendar year in August 2014, we anticipate 30 telemedicine encounters in DY3, 1,800 telemedicine encounters in DY4 and 2,800 telemedicine encounters in DY5 and cumulatively 4,630 encounters in DYs 3-5.

Description of Category 3 Measure:

The Category 3 measure being considered is:

- IT-9.2.b Reduce pediatric emergency department visits

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

Project Title: Use Telemedicine to Deliver Primary Care and Specialty Care Services in School-Based Settings

Unique Project ID: 13890807. 1.100

Performing Provider Name/TPI: Children's Medical Center of Dallas / 13890807

Project Description:

In conjunction with local school districts and other community partners, Children's Medical Center of Dallas (Children's) proposes to build a plan for expansion of community-based health programs using telemedicine and a series of evidence-based clinical protocols including:

- Install telemedicine linkages throughout the community connected to a telemedicine Clinical Access Center sponsored by Children's Medical Center
- In conjunction with community primary practitioners, build a plan for establishing and implementing a specialty care telemedicine program, using telemedicine, a series of evidence-based clinical protocols and a pediatric telemedicine clinical access center sponsored by Children's Medical Center
- Children's Medical Center will supply and install telemedicine equipment to all locations and in the primary care centers, hire/train staff, train primary care center staff and steadily increase e-consultations. We will ensure that the equipment meets compliance and security specifications for telemedicine. We will ensure the equipment is performing correctly and is connected to the network.
- The school nurses are licensed (LVN and/or RN) will be trained on the equipment and how to present a patient for telemedicine. We will use a competency check list with every patient presenter. We will have one nurse per school site locations. We will have the two primary care providers based at two MyChildren's locations with the ability to expand based on volume.

Goals and Relationship to Regional Goals

Project Goals:

1. Shorten time to accessing treatment
2. Reduce avoidable exacerbations and complication of acute and chronic illness
3. Reduce school absenteeism
4. Reduce parental work absenteeism due to caring for a sick Child
5. Reduce non-emergent pediatric visits to emergency centers

This project meets the following Region 9 goals:

- **Capacity – Primary and Specialty Care:** This project would increase primary and specialty care capacity
- **Chronic Disease – Adult and Pediatric:** This project would increase the management of pediatric chronic disease
- **Emergency Department Usage and Readmissions:** This project would reduce Emergency Department usage and readmission

Challenges: A number of operational challenges will be faced both with the implementation of telemedicine in school systems and primary care centers, requiring thoughtful and inclusive planning processes, as well as effective project management skills and techniques. Parental consent and confidentiality requirements of school districts as well as HIPAA considerations will need to be addressed.

3-Year Expected Outcome for Providers and Patients: Patients participating in the program will have better health outcomes, more timely access to medical care, fewer days absent from school, and less use of the Emergency department services for non-emergent care. Parents will have better daytime access to medical care for their children. Schools and community programs will have real-time access to medical care and providers will be able to access and treat patients across a much larger geography than in traditional bricks and mortar buildings.

Starting Point/Baseline: As this is a new program, the baseline is zero. The program will be implemented in 12 schools in Dallas County in the fall of 2014. We will identify the number of telemedicine programs in community settings at beginning of DY3.

Quantifiable Patient Impact: The proposed project will result in an increase of telemedicine encounters. We anticipate 1,800 telemedicine encounters in DY4 and 2,800 telemedicine encounters in DY5.

Rationale: Children's emergency department (Dallas campus) treats approximately 50,000 Level 4 and Level 5 visits annually (36% of total emergency visits) for children with low acuity illnesses and acute care symptoms which can be more cost-effectively addressed in a primary care setting. Many of these children are seen after physician offices close, when the parents return from work. Some percentage of the visits could be avoided if primary care were available to children during the school day. The Regional Health Partnership IX Community Needs Assessment Report, Dallas Fort Worth Hospital Council, 2012, found that over 68% of emergency encounters for the top primary health conditions were either none-urgent or emergent/primary care treatable. For asthma, 98% of all encounters are primary care treatable. DISD is the fourteenth largest school district in the nation, enrolling 157,000 students, yet only 11 schools currently have professionally staffed school-based programs due to the high cost of supporting a school-based clinic. The 12 schools were selected based on zip codes that identified the school districts that had a lack of access to primary care and/or were high utilizers for ED services for non-acute visits. The use of telemedicine connecting school nurses with primary care resources has been implemented in a number of school districts across the country. One such program in Tennessee is sponsored by the Cherokee Health System Federally Qualified Health Center (FQHC). The availability of primary care services within school systems can avoid unnecessary emergency department visits and allow parents to reduce absenteeism from work to take their children for a doctor's appointment.

The milestones and metrics for this project were selected to provide project support and document the implementation of the service and the ongoing improvements derived from the project.

This project addresses the following community needs:

- CN.3: Healthcare Capacity
- CN.4: Primary Care and Pediatrics
- CN.8: Chronic Disease
- CN.9: Specialty Care
- CN.12: Emergency Department Usage and Readmissions

According to the RHP9 Community Health Needs Assessment Report (CHNA), Dallas County has significant Health Professional Shortage Areas (HPSA) and Medically Underserved Areas (MUA), especially critical in pediatric specialties available and accessible to pediatric beneficiaries of Medicaid and CHIP. Data from the CHNA indicates that many of the pediatric specialties are limited, causing a backlogged pipeline for those needing specialty services after seeking primary care. Children's Medical Center and the University of Texas Southwestern provide virtually all the pediatric specialty services to patients on Medicaid and CHIP. Current appointment wait times commonly extend 8-12 weeks, or longer, for key pediatric specialties. One approach to increasing availability of and access to, pediatric Medicaid and CHIP beneficiaries is to establish a telemedicine program with community primary care practitioners using telemedicine technology services combined with services of evidence-based clinical protocols. The project involves the creation of a Telemedicine Clinical Access Center sponsored by Children's Medical Center, the development of evidence-based clinical protocols with primary care physicians and specialists, the acquisition of telemedicine equipment for the primary care clinic and Telemedicine Clinical Access Centers, hiring and training staff for the Clinical Access Center and training primary care office staff.

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

This will be an expansion of a small pilot project which was implemented during the 2013-2014 school year in a head start program in two locations in Dallas. The project will use pediatricians whose primary practices are located MyChildren's primary care practices. Other DSRIP projects are being implemented in the MyChildren's practices. This project will compliment and further expand the scope of outreach possible through telemedicine, beyond the walls of the MyChildren's locations.

Project Core Components:

The program addresses the required core component:

- a) *Conduct quality improvement for project using methods such as rapid cycle improvement* - Quality, process improvement and Lean/six Sigma methodologies will be applied during the implementation and ongoing operations of the project. Staff will receive specific training in improvement methodologies to apply to the project.

Related Category 3 Outcome Measures:

The Category 3 measures being considered are:

- IT9.2.b Reduced pediatric emergency department visits.

Providing telemedicine services through school settings for primary and low complexity specialty care for children should reduce inappropriate use as well as overall use of Emergency Department services. This outcome measure was selected to support the successful implementation of the project. We selected telemedicine to increase our ability to see children who are low income and living in medically underserved areas. Within these targeted telemedicine sites, we will address the geographic and economic barriers to accessing healthcare for children. Between 2000 and 2010, the percentage of Texas doctors accepting Medicaid patients decreased from 67% to 31%. In Dallas County, more than 68% of doctors said they would not take on children who use CHIP. Consequently, many families seek primary care treatment for their children in emergency care settings, resulting in increased health care costs and higher volumes of preventable and avoidable cases populating emergency department waiting rooms. Dallas County has significant Health Professional Shortage Areas (HPSA's) and Medically Underserved Areas (MUA's). Furthermore, in Dallas County, over 36.2% of children were enrolled in Medicaid in 2010, exacerbating the issue of availability of primary care access and treatment. By leveraging our Telemedicine program in Dallas County schools, we will increase the number of children that can be seen and treated by Pediatricians and reduce the number of inappropriate emergency department visits.

Relationship to other Projects:

This project will compliment other projects providing pediatric healthcare. By providing care at the place where the child is located, additional capacity can be gained through reduction in non-emergent care in the emergency department.

The related Category 1 and 2 projects are:

- 138910807.1.1 Expand Pediatric Primary Care
- 138910807.1.2 Expand Pediatric Primary care Hours
- 138910807.1.3 Expand Disease Management
- 138910807.1.4 Expand Pediatric Behavioral Health
- 138910807.2.1 Expand/Enhance Medical Homes
- 138910807.2.3 Expand/Enhance Patient/Family Navigation
- 138910807.2.4 Implement/Expand Care Transitions Program
- 138910807.200.1 Develop Care Management Function that integrates primary and behavioral health needs of individuals

We will be taking lessons learned, protocols and processes developed in the above listed projects that Children's Medical Center is implementing and apply them as appropriate to this project. This project is different from other projects as it involves use of technology to provide services to children in the community.

Plan for Learning Collaborative: We plan to play an active role in the development and ongoing content of RHP9 Learning Collaborative, appropriate to our project. We

will also participate in any Improvement Collaboratives that are associated with the outcomes of this project to obtain additional perspectives that may enable us to improve this project. We believe that the exchange of best practices and shared learning contributes significantly to continuous quality improvement and will advance the success of this project.

Project Valuation: Project valuation is based on the RHP 9 Scoring Criteria Guidance with a 1 to 9 scoring range and a weighted score based on:

- Transformational Impact 20%
- Population Served and Project Size 25%
- Alignment with Community Needs 20%
- Cost Avoidance 15%
- Sustainability 15%
- Partnership Collaboration 5%

The weighted score was multiplied by a value factor based on the potential reduction of downstream costs, long-term (into adulthood) improved health outcomes, increased workforce productivity, reduction in school absenteeism to determine the valuation of \$11,000,610.

Project Summary

Project Option: 2.19.1 Design, implement, and evaluate care management programs and that integrate primary and behavioral health needs of individual patients

Project Title: Enhance Service Availability of Appropriate Levels of Behavioral Health Care

Unique Project ID: 138910807.2.100

Performing Provider Name/TPI: Children's Medical Center of Dallas/138910807

Provider

Children's has two hospitals, one in Dallas with 487 licensed beds and one in Plano with 72 licensed beds. Children's has pediatric specialty outpatient services in Dallas, Plano and Grapevine. Children's also has a system of primary care centers, MyChildren's, which focuses on providing primary care to children covered by Medicaid and CHIP. Annually, Children's has approximately 600,000 patient contacts.

Provider's role in region's health care infrastructure (especially for Medicaid and indigent/uninsured): Children's has the largest market share for pediatrics in DFW region with 51% of the market for inpatient discharges. Of that volume, 67% of the cases were either covered by a government payor (Medicaid and CHIP) or had no insurance (indigent/uninsured).

Intervention

Design, implement and evaluate care management programs and that integrate primary and behavioral health needs of individual pediatric patients covered by Medicaid or uninsured.

Need for the Project

The need for this project is documented in the community needs (CN) assessment, specifically: CN. 3 Healthcare Capacity, CN. 4: Primary Care and Pediatrics, CN. 5: Behavioral Health, CN. 6: Behavioral Health and Primary Care CN 8: Chronic Disease, CN. 9: Specialty Care and CN. 12 Emergency Department Usage and Readmissions.

Target Population

Children covered by Medicaid or uninsured who are receiving behavioral health services and have an identified primary care provider. Provider anticipates 75% of children will be covered by Medicaid and 5% will be uninsured for a total of 80%.

Expected Patient Benefits

By providing a targeted care management intervention program for children with co-occurring mental health or substance abuse to coordinate care with primary and specialty medical providers, it is anticipated that there will be reduced use of emergency services, need for crisis intervention, and need for inpatient psychiatry admissions.

Description of QPI

Number of unique individuals receiving care services/ intervention. DY4: 2,000 individuals; DY5: 2,200 individuals

Description of Category 3 Measure

The Category 3 measure being considered is:

- IT-11.26.e.i – Patient Health Questionnaire 9 (PHQ-9)

Project Option: 2.19.1 Design, implement, and evaluate care management programs and that integrate primary and behavioral health needs of individual patients

Project Title: Enhance Service Availability of Appropriate Levels of Behavioral Health Care

Unique Project ID: 138910807.2.100

Performing Provider Name/TPI: Children's Medical Center of Dallas/138910807

Project Description:

This project is based on community needs and local data that demonstrate the project is addressing an area of poor performance (coordination of pediatric behavioral health care with medical care). Coordinating behavioral health delivery with primary care settings will align and coordinate care for behavioral and medical illnesses to improve patient/family self-management and reduce unnecessary exacerbation of behavioral health needs. Collaborating with other behavioral health providers will assist in the coordination of care between medical services and behavioral health services.

Role of Case Managers:

- Facilitation of communication among care providers including school when appropriate
- Coordination of appointments, follow-up on missed appointments
- Follow-up with families on medication compliance
- Management through transitions of care
- Outcomes measurement: satisfaction surveys
- Quality Improvement facilitation for Plan, Do, Study, Act cycles related to Integrated Behavioral Health services
- Assist families with other needed services such as Medicaid application, food bank assistance, transportation assistance, connection to support groups such as Al-Anon
- Perform other duties to allow social workers and others to practice at the top of their license

Goals and Relationship to Regional Goals:

Project Goals:

1. Coordinate care between behavioral health and medical care
2. Establish effective primary care relationships/medical homes for children receiving behavioral health services
3. Reduce the use of emergency services and other community resources (such as juvenile justice system) through effective management of behavioral health and medical care
4. Increase provider communication between behavioral health providers and providers of medical care

5. Increase quality of life for pediatric patients and their families receiving the services through this project
6. *There will be 12 MyChildren's locations (Bachman Lake, Carrollton, Cedar Hill, Cockrell Hill, Garland, Irving, Lake Highlands, Lancaster Kiest, Mill City, Oak Cliff, Pleasant Grove and St. Philips) where integrated behavioral health services will take place. We selected these locations because they are within the boundaries of the RHP and where our target primary care population is seen.*
7. *Our behavioral health specialists (currently staffed at 5) will communicate with the MyChildren's patients telephonically in Dallas and Denton Counties, so they will work in all locations.*
8. *We will be able to integrate BH with our primary care practices because we will be practicing at the MyChildren's locations and integrated with the primary care staff, have access to the same electronic health records, participate in all appropriate quality improvement activities with the locations and they are practicing out of patient center medical home models, which encourages integration of activities.*

This project meets the following Region 9 goals:

- CN.3: Healthcare Capacity
- CN.5: Behavioral Health
- CN.6: Behavioral Health and Primary Care
- CN.7: Behavioral Health and Jail Population
- CN.8: Chronic Disease
- CN.12: Emergency Department Usage and Readmissions

Challenges: A major challenge will be working through the privacy and confidentiality issues regarding the release and sharing of behavioral health information as well as the technical issues with communication between disparate medical record systems including electronic and paper processes. Second, another challenge will be the development of processes and protocols to integrate behavioral health services into the primary care setting and align/integrate behavioral health and medical services. We will be working with Timberlawn Psychiatric Services, which currently provides inpatient and outpatient behavioral health services to children and adolescents in Dallas County, and other behavioral health providers in RHP 9 to assist us in overcoming the challenges noted. We will also be working with the Pediatric Psychiatry division of the Department of Psychiatry at UT Southwestern Medical Center to assist us in recruitment of staff and development of processes and protocols.

3-Year Expected Outcome for Providers and Patients:

1. Coordinate care between behavioral health and medical care
2. Establish effective primary care relationships/medical homes for children receiving behavioral health services
3. Reduce the use of emergency services and other community resources (such as juvenile detention) through effective management of behavioral health and medical care

4. Increase provider communication between behavioral health providers and providers of medical care
5. Increase quality of life for pediatric patients and their families receiving the services through this project

Starting Point/Baseline: In October of 2013, there was no formal process to coordinate the behavioral and medical needs of pediatric patients when the care was being provided by different provider groups and agencies. The baseline is 0.

Quantifiable Patient Impact: Number of unique individuals receiving care services/intervention. DY4: 2,000 individuals; DY5: 2,200 individuals and cumulatively 4,200 individuals served.

Rationale: According to RHP9 Community Needs Assessment Report, the behavioral health (mental health and substance abuse) system in Dallas County is delivered via the NorthSTAR program, instead of a traditional local mental health authority system. Since the program's inception, the growth in enrollment has outpaced funding such that the funding per person is 30% less today than when the program started in 1999. Texas ranks 50th nationally in mental health funding. Despite the strong relationship between behavioral health and medical illness related outcomes and costs, the percentage of the 200% FPL population receiving behavioral health care to primary care settings is below the national average in Dallas County (19.8% vs. 37.1%). Children's Medical Center, one of the largest providers of primary care to low income populations in Dallas County, is not a NorthSTAR provider, and consequently, there is limited coordination of care between medical care and behavioral healthcare.

Additionally the RHP9 Community Health Needs Assessment reported that the number of Dallas County children who are receiving publicly funded mental health services has tripled from 2000 to 2010. In Dallas County, the number of children identified with a diagnosable emotional disturbance or addictive disorder has increased to approximately 142,000 children, with 5% of those children experiencing a significant impairment as a result. Among youth between the ages of 12-17, 7.2% have experienced a major depressive episode. However, mental health services available to children are limited and are often times not adequately covered by private and public insurance plans. Services in the health care community frequently do not include the family-focused and comprehensive approach needed to adequately address these issues. Rather, nearly all of the intensive service availability, including evidence-based programs such as multi-systemic therapy, is provided through the Juvenile Justice System. Furthermore, the number of youth served in the juvenile justice system is increasing, as evidenced by a 17% increase in the number of children receiving psychotropic medications in juvenile detention from 2010 to 2011.

Hispanics comprise 40% of the population but only 25% of the NorthSTAR population. While there is a lack of services available and written materials available in Spanish, it is difficult to characterize the extent of the need, because data on primary language is not collected.

Expanded pediatric behavioral health capacity and integration with medical care in the primary care setting in a family-focused, comprehensive and culturally appropriate manner will improve access for children to behavioral health services, prevent unnecessary exacerbation of chronic illnesses, improve patient/family self-management and improve cost and quality outcomes. The result will be reduced ED visits, specialty care visits and preventable admissions/readmissions for the identified population.

This project addresses the following community needs:

- CN.3: Healthcare Capacity
- CN.5: Behavioral Health
- CN.6: Behavioral Health and Primary Care
- CN.7: Behavioral Health and Jail Population
- CN.8: Chronic Disease
- CN.12: Emergency Department Usage and Readmissions

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

This project represents a new project for the Performing Provider while it also enhances an existing delivery system reform initiative which is bringing behavioral health into the MyChildren's primary care settings. This project will address coordination of care regardless of care providers and brings in both behavioral health and medical care services outside of the MyChildren's delivery system.

Project Core Components:

This project addresses the required core components:

- a) *Conduct data matching to identify individuals with co-occurring disorders who are not receiving routine primary care, not receiving specialty care according to professionally accepted practice guidelines, over-utilizing ER services based on analysis of comparative data on other populations, over-utilizing crisis response services and becoming involved with the criminal justice system due to uncontrolled/unmanaged symptoms.* - This will be accomplished by working with the behavioral health providers in Dallas county but those in the NorthStar program and those who are not in the program as well as the juvenile justice system.
- b) *Review chronic care management best practices such as Wagner's Chronic Care Model and select practices compatible with organizational readiness for adoption and implementation.* - A work group has been formed and has selected a model.
- c) *Identification of BH case managers and disease care managers to receive assignment of these individuals.* - We are anticipating hiring 5 new BH case managers.
- d) *Develop protocols for coordinating care; identify community resources and services available for supporting people with co-occurring disorders.* - The workgroup has researched best practices and is engaging content experts in assisting to develop the protocols.
- e) *Identify and implement specific disease management guidelines for high prevalence disorders, e.g. cardiovascular disease, diabetes, depression, asthma.* -

Based upon our initial identification of patients for this project, we will identify both the high prevalence disorders as well as those low prevalence disorders with overly high utilization of services or complexity of needs.

- f) *Train staff in protocols and guidelines.* - This will be accomplished as staff are hired.
- g) *Develop registries to track client outcomes.* - Work is currently underway to identify the best solution for registry needs.
- h) *Review the intervention(s) impact on quality of care and integration of care and identify “lessons learned,” opportunities to scale all or part of the intervention(s) to a broader patient population, and identify key challenges associated with expansion of the intervention(s), including special considerations for safety-net populations.* - The workgroup will serve as the oversight group for quality but will establish working groups to address specific processes and issues as they are identified during the duration of this project.

Related Category 3 Outcome Measures:

The Category 3 measure being considered is:

- IT-11.26.e.i – Patient Health Questionnaire 9 (PHQ-9)

The PHQ-9 assesses and monitors depression severity. We feel this outcome measure best fits our objectives for this project.

The proposed category 3 measure was selected to quantify the impact of behavioral health integration with primary care by longitudinally measuring the child’s quality of life. A child with behavioral health concerns can impact the quality of life of that child as well as the entire family. An estimate of lost family income for a child with psychological problems was estimated at approximately \$300,000. (Gillian C. Smith Long-term Economic Costs of Psychological Problems During Childhood *Social Science & Medicine*, v. 71, no. 1, July 2010, p. 110-115.) Comprehensive primary care mental health screening can identify common somatic and emotional concerns that could precede depression and anxiety. Routine screening for these issues along with depression and anxiety screening is suggested. (Dumont IP, Olson AL, Primary care, depression, and anxiety: exploring somatic and emotional predictors of mental health status in adolescents. *J Am Board Fam Med* 2012 May-Jun;25(3):291-9.)

Relationship to other Projects:

The related Category 1 and 2 projects are:

- 138910807.1.1 Expand Pediatric Primary Care
- 138910807.1.2 Expand Pediatric Primary care Hours
- 138910807.1.3 Expand Disease Management
- 138910807.1.4 Expand Pediatric Behavioral Health
- 138910807.2.1 Expand/Enhance Medical Homes
- 138910807.2.3 Expand/Enhance Patient/Family Navigation

- 138910807.2.4 Implement/Expand Care Transitions Program
- 138910807.100.1 Implement/Expand Telehealth/Telemedicine Services

We will be taking lessons learned, protocols and processes developed in the above listed projects that Children’s Medical Center is implementing and apply them as appropriate to this project. This project is different from other projects as it involves providers and resources outside of the services provided only by Children’s and its affiliates.

Plan for Learning Collaborative: We plan to play an active role in the development and ongoing content of RHP 9 Learning Collaborative, appropriate to our project. We will also participate in any Improvement Collaboratives that are associated with the outcomes of this project to obtain additional perspectives that may enable us to improve this project. We believe that the exchange of best practices and shared learning contributes significantly to continuous quality improvement and will advance the success of this project.

Project Valuation:

Project valuation is based on the RHP 9 Scoring Criteria Guidance with a 1 to 9 scoring range and a weighted score based on:

- Transformational Impact 20%
- Population Served and Project Size 25%
- Alignment with Community Needs 20%
- Cost Avoidance 15%
- Sustainability 15%
- Partnership Collaboration 5%

The weighted score was multiplied by a value factor based on the potential reduction of downstream costs, long-term (into adulthood) improved health outcomes, increased workforce productivity, reduction in school absenteeism to determine the valuation of \$13,299,390.

Project Summary

Project Option: 1.12.2 – Establish the number of community-based settings where behavioral health services may be delivered in underserved areas

Project Title: Metrocare Outpatient Clinic

Unique Project ID: 137252607.1.100

Performing Provider Name/TPI: Dallas County MHMR dba Metrocare Services/
137252607

Provider

Metrocare Services is a community-based behavioral health organization, serving approximately 50,000 persons in Dallas County with diagnoses of mental illness and/or intellectual or developmental disabilities. Approximately 15,000 of these persons are children and adolescents between the ages of birth and 18 years. Metrocare Services is the primary behavioral health provider in RHP 9.

Intervention

Metrocare Services will expand behavioral health services to the underserved by opening an additional outpatient clinic in the Northwest region of Dallas County. Using census tracking data, Metrocare Services has determined this area to be most in need of additional outpatient services. The clinic will serve children and adults and will target indigent and Medicaid insured clients. The proposed therapeutic interventions for this clinic include: psychiatric evaluation, pharmacy services, medication management, counseling, rehabilitation/skills training and case management services. The type and volume of services provided to a client will be determined by information collected during the initial psychiatric evaluation, including patient reported needs on the Child and Adolescent Needs and Strengths Assessment (CANS) and the Adult Needs and Strengths Assessment (ANSA).

Need for the Project

The Region 9 Community Needs Assessment reports “an inadequate supply of behavioral health services is one of the most significant unmet health needs” of our area. Further, the RHP identifies the need for “development of lower levels of care in order to prevent the need for high-cost services” in our community. By operating an additional community based mental health clinic, Metrocare will expand access to behavioral health services to the underserved in Dallas County. To determine the site of this additional clinic, census tracking data was used to identify an area in Dallas County where there is a lack of community based resources and services.

Target Population

The mental health clinic will provide treatment services to children, youth, families and adults. Metrocare estimates that 49% of the people served through this clinic will be indigent patients and 41% of the clients served will be insured by Medicaid.

Expected Patient Benefits

As a result of this program, Metrocare expects the following benefits:

- Increase the number served of patients served each year
- Increase the percentage of patient satisfaction

Description of QPI

Increase the number served of patients served each year (DY4-1000, DY5-2000) and cumulatively 3,000 individuals served in DY4 and DY5.

Related Category 3 Outcome Measures

The Category 3 measures being considered are:

- IT – 11.5 Adherence to Antipsychotic Medications for Individuals with Schizophrenia
- IT – 11.6 Follow-up Care for Children Prescribed ADHD medication (ADD)

Project Option: 1.12.2 – Establish the number of community-based settings where behavioral health services may be delivered in underserved areas

Project Title: Metrocare Outpatient Clinic

Unique Project ID: 137252607.1.100

Performing Provider Name/TPI: Dallas County MHMR dba Metrocare Services/
137252607

Project Description:

Expand the number of community based settings where behavioral health services may be delivered in underserved areas. As identified in the Community Needs Assessment for Region 9, “an inadequate supply of behavioral health services is one of the most significant unmet health needs” of our area (Collins, 2012.RHP 9: Community Needs Assessment Report). To combat this ever growing problem, Metrocare Services will create an additional community mental health clinic located in the Northwest region of Dallas County to provide mental health treatment to the underserved living in that area. The site will provide treatment services to children, youth, families and adults. During the first year of operation, it is projected that the direct-care staff will include:

- 1 Psychiatrist
- 1 Registered Nurse
- 1 Pharmacist and 1 Pharmacist Technician
- 1 Business Office Coordinator
- 1 Clinical Manager
- 2 Licensed Clinicians (LPC, LCSW, LMFT)
- 1 Qualified Mental Health Professional
- 2 Business Support Staff, 1 Financial Assessment Staff and 1 janitor.

Treatment services offered at the Northwest clinic will include psychiatric evaluations, pharmacy services, counseling, rehabilitation and skills training and case management. The current project plan also includes the hiring of an LPHA (LCSW, LPC or LMFT) to provide enhanced family services, using The Nurturing Parenting skills curricula recently approved by the State.

Goals and Relationship to Regional Goals

Project Goal:

1. To expand underserved consumers’ access to behavioral health services by opening a community outpatient clinic in the Northwest region of Dallas County.

By expanding access to treatment, these consumers increase their ability to participate in services in their community and through these services may decrease the need for expensive interventions such as hospitalization, residential treatment and criminal justice involvement. The National Association of Mental Illness identifies that “lack of community services results in significantly overcrowded emergency rooms and inappropriate use of prisons as warehouses for people with mental illness” (NAMI, 2009. Grading the State 2009 Report: TX). Furthermore, the Region 9 Community Needs

Assessment reports providers in Dallas County need to develop lower levels of care in order to prevent the need for high-cost services (Collins, 2012). There is a correlation between increased utilization of not only expensive behavioral health services, such as residential treatment, but also costly medical treatment including hospitalization when mental health issues are not treated. For Dallas County specifically, the presence of a “co-occurring behavioral health condition is associated with increased case severity of medical encounters and a 36% increase in the average charges per encounter” (Collins, 2012). Lastly, the North Texas Behavioral Health Authority conducted a survey and identified transportation as one of the major barriers to accessing needed services (Collins, 2012). By operating a clinic in an underserved area in Northwest Dallas County, Metrocare is expanding access to thousands of potential clients who have historically struggled to receive services.

This project meets the following Region 9 goals:

- **Capacity – Primary and Specialty Care:** Demand for access to primary and specialty care exceeds resources; this is especially true for children.
- **Behavioral Health – Adult, Pediatric, and Jail Populations:** The behavioral health system is often utilized at capacity and an unmet need for services remains in the Region
- **Chronic Disease – Adult and Pediatric:** Many individuals in North Texas suffer from chronic diseases that present earlier in life, are becoming more prevalent, and exhibit more severe complications
- **Emergency Department Usage and Readmissions:** “Emergency departments are treating high volumes of patients with preventable conditions, or conditions that are suitable to be addressed in a primary care setting. Additionally, readmissions are higher than desired, particularly for those with severe chronic disease or behavioral health.”

Challenges: According to a recent analysis of the Texas Public Behavioral Health System, Texas ranks last nationally among all states in mental health funding and relies too heavily upon a system of emergency services versus promoting recovery and prevention through a system of community based care (Public Consulting Group, 2011). Limited funding forces a behavioral health system to focus on crisis services to meet immediate need and does not allow for sufficient provision of preventive or maintenance care. Unfortunately, this focus on crisis intervention with limited follow up services creates an ineffective cycle where clients engage in services only when in crisis and do not participate in ongoing services that can aid a client to improve overall functioning and decrease dependency on those emergency services.

The PCG (2011) acknowledges in its report that our reliance upon “spending millions of dollars in mental health and substance abuse services within the county jail and other law enforcement agencies is symptomatic of our inadequate community based system of care.” Research conducted by the Texas Department of State Health Services (2010) found that many clients who received services outlined in a traditional RDM Service Package as a jail diversion strategy reported “clinical benefits including decreased risk of harm, decreased need for support, fewer psychiatric hospitalizations, decreased functional

impairment, decreased employment problems, decreased housing instability, and decreased co-occurring substance abuse.”

Regarding children and adolescents, research reveals that “mental health services available to children are limited” and services “oftentimes do not include the family-focused and comprehensive approach needed to adequately address client issues” (Collins, 2012). In addition, the need for publicly funded mental health services for youth has grown significantly in the last 10 years with the majority of intensive services for youth provided by the juvenile justice system (Collins, 2012). The lack of early intervention and consistent treatment at the community level can result in expensive treatment that often involves separation from immediate family. Furthermore, research reveals that effective treatment for children must be a comprehensive approach that addresses all areas of the child and family’s lives; an intervention that is much easier and effectively implemented at a community level versus institutionalization (Blader, Joseph 2003).

Evidenced based research consistently demonstrates that community based outpatient care is a beneficial and cost effective therapeutic approach to treatment. By opening an additional clinic in an underserved area of Dallas County, Metrocare is helping to address the challenges identified here; enhancing access to behavioral health services that can improve quality of life and result in less dependence upon higher levels of care.

3-Year Expected Outcome for Providers and Patients:

- Develop administrative protocols and clinical guidelines for new clinic
- Hire and train staff to operate and manage clinic
- Establish behavioral health services in new community-based clinic in underserved area
- Evaluate and continuously improve services
- Increase percentage of patient satisfaction

Starting Point/Baseline: Baseline for measures is zero.

Quantifiable Patient Impact: Increase the number served of patients served each year (DY4-1000, DY5-2000) and cumulatively 3,000 individuals served in DY4 and DY5.

Rationale: The Region 9 Community Assessment reports “an inadequate supply of behavioral health services is one of the most significant unmet health needs” of our area (Collins, 2012). Further, the RHP identifies the need for “development of lower levels of care in order to prevent the need for high-cost services” in our community (Collins, 2012). The impact of scarce community based treatment is profound, influencing all aspects of a client’s life and the greater community. To begin, unmet mental health needs greatly affect a person’s ability to properly care for their medical needs and can result in increased cost to taxpayers for potentially preventable medical illnesses. For Dallas County, the presence of a “co-occurring behavioral health condition is associated with increased case severity of medical encounters and a 36% increase in the average charges per encounter (Collins, 2012). Lack of community based services also results in

“significantly overcrowded emergency rooms” for people seeking crisis services and “inappropriate use of prisons as warehouses for people with mental illness” (NAMI, 2009). According to the Region 9 Community Assessment, 27% of all book-ins to Dallas County jail are currently referred to behavioral health services within the jail” (Collins, 2012). In addition, homeless individuals with behavioral health conditions “cost 3 times as much and are booked into jail 2 times as often as the general NorthStar population” (Balfour, 2011). By providing case management services to clients in our community based clinics, Metrocare can assist consumers to stabilize and improve functioning; resulting in less dependence upon higher levels of care. Lastly, NTBHA identified transportation as one of the major barriers to individuals accessing services (Collins, 2012); by launching a community based clinic in Northwest Dallas County, Metrocare will expand access to behavioral health services for potentially thousands of Dallas County residents.

The new clinic will serve children, youth and families in addition to adults. The need for publicly funded mental health services for youth has grown significantly in the last 10 years with the majority of intensive services for youth provided by the juvenile justice system (Collins, 2012). The lack of early intervention and consistent treatment at the community level can result in expensive treatment that often involves separation from immediate family. Furthermore, research reveals that effective treatment for children must be a comprehensive approach that addresses all areas of the child and family’s lives; an intervention that is much easier and effectively implemented at a community level versus institutionalization (Blader, Joseph 2003). To ensure a comprehensive approach to family services, based on best practice, Metrocare plans to enhance clinical support services by hiring an additional LPHA, preferably a LMFT, to provide counseling and skills training using The Nurturing Parenting Model and skills curricula.

In summary, Metrocare Services is the largest provider of mental health services in Dallas County. We serve approximately 20,000 people diagnosed with a mental illness each month. By operating an additional community based mental health clinic, Metrocare will expand access to behavioral health services to the underserved in Dallas County. Evidence based research reveals the need for additional community based programs and outcomes demonstrate that these programs are effective and cost beneficial to the greater community. To ensure success towards our goal, Metrocare chose milestones and metrics that are relevant to project development; training of staff; operating the clinic; and continuously evaluating operations for expanding access and provision of quality services.

This project addresses the following community needs:

- CN.5 Behavioral Health
- CN.6 Behavioral Health and Primary Care
- CN.7 Behavioral Health and Jail Population

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

This project will significantly enhance access to behavioral health services by expanding the number of community based settings in an underserved area in Dallas County.

Project Core Components:

There are no required core components for Project Option 1.12.2

Related Category 3 Outcome Measures:

The Category 3 measures being considered are:

- IT – 11.5 Adherence to Antipsychotic Medications for Individuals with Schizophrenia
- IT – 11.6 Follow-up Care for Children Prescribed ADHD medication (ADD)

By measuring a patient’s adherence to medication and follow up care, Metrocare can assess the effectiveness of the services offered at the clinic in assisting the client to meet his/her treatment goals. ADHD is a common diagnosis for children in the population we serve as schizophrenia is a primary diagnosis for our adult patients. Demonstrating adherence to treatment will indicate successful therapeutic intervention for both youth and adults served at our Northwest site.

Relationship to other Projects: This project is one element of the behavioral health services continuum of care and relates to all other projects that provide/enhance behavioral services.

The related Category 1 and 2 projects are:

- 137252607.1.1 Workforce Enhancement
- 137252607.1.2 Grand Prairie Clinic
- 137252607.2.1 Integrated Primary Care and Behavioral Health
- 137252607.2.2 ACT (Assertive Wrap-around Program)
- 137252607.2.3 Family Preservation Program
- 137252607.2.4 Center for Children with Autism
- 137252607.2.5 Behavioral Day Program
- 137252607.2.100 Pediatric Integrated Primary Care and Behavioral Health
- 137252607.2.101 Patient Navigation Program
- 137252607.2.102 Rapid Assessment and Prevention
- 137252607.2.103 Intensive Applied Behavioral Analysis Program

Plan for Learning Collaborative: We plan to play an active role in the development and ongoing content of RHP9 Learning Collaborative, appropriate to our project. We will also participate in any Improvement Collaboratives that are associated with the outcomes of this project to obtain additional perspectives that may enable us to improve this project. We believe that the exchange of best practices and shared learning contributes significantly to continuous quality improvement and will advance the success of this project.

Project Valuation: Metrocare Services determined the value of each project by comparing the budgeted cost of the specific project against the cost to the community

should the services go unprovided. Costs associated with emergency room visits, hospitalization, arrest, detention and residential treatment were factors in determining the value of this project. It is estimated that participation in outpatient services will result in less than 20% of those served seeking higher levels of care for psychiatric needs or involved in the criminal justice system.

References

1. Balfour, M.E. (2011) “Homelessness, Criminal Justice and the NorthStar Top 200 Report”
2. Blader, Joseph. (2003) “Symptom, Family and Service Predictors of Children’s Psychiatric Rehospitalization within One Year of Discharge.” *Journal of American Academy of Child and Adolescent Psychiatry*
3. Collins, S. (2012) *Regional Healthcare partnership 9: Community Needs Assessment Report*
4. National Association of Mental Illness (2009) “Grading the State 2009 Report: TX”
5. Public Consulting Group (2011) “Analysis of the Texas Public Behavioral Health System”
6. Texas Department of State Health Services (2010) “Another look at Mental Illness and Criminal Justice Involvement in Texas: Correlates and Costs”.

Project Summary

Project Option: 2.13.1 – Design, implement and evaluate research-supported and evidence-based interventions tailored towards individuals in the target populations.

Project Title: Intensive Applied Behavior Analysis Program

Unique Project ID: 137252607.2.103

Performing Provider Name/TPI: Dallas County MHMR Center dba Metrocare Services/ 137252607

Provider

Metrocare Services is a community-based behavioral health organization, serving approximately 50,000 persons in Dallas County with diagnoses of mental illness and/or intellectual or developmental disabilities. Approximately 15,000 of these persons are children and adolescents between the ages of birth and 18 years. Metrocare Services is the primary behavioral health provider in RHP 9.

Intervention

The Center for Children with Autism (CCAM) will provide an Applied Behavior Analysis (ABA) based program to children on the autism spectrum and/or children with other developmental disabilities. The program will be structured as a tiered system; offering 1:1 staff/ client ratio for Level 1, 1:2 staff/ client ratio for Level 2 and group participation for Level 3. Services will also include speech and occupational therapy for those clients that demonstrate a need for those services.

Need for the Project

The Center for Disease Control (CDC) reports that 1 in 88 children are diagnosed with an Autistic Spectrum Disorder. Additionally, the report indicated that the rate of autism increases 10-17% annually. Research studies have shown that children diagnosed with autism have the most likelihood of having successful outcomes when they receive early intensive behavioral intervention services. The Region 9 Community Needs Assessment highlights that “an inadequate supply of behavioral health services is one of the most significant unmet health needs” of our community. The addition of ABA based programs in the northeast and southwest areas of Dallas County will address the community needs outlined in our region’s assessment by maintaining individuals in their homes while increasing relevant and effective services to those individuals and their caregivers. Through research conducted it was clear that these areas of Dallas have limited access to ABA services for those individuals who are indigent/low income or Medicaid clients. Research has shown that children who receive ABA therapy early in life demonstrate the most improvement in communication skills, social skills, academic skills and a decrease in problematic behaviors all of which impact a child’s quality of life. In addition to ABA therapy, the National Standards Project emphasized Speech Language Pathology (SLP) therapy as an important tool to improve functional communication. This model will decrease the time and cost associated with services a child with autism and or developmental disabilities would receive across their lifetime.

Target Population

CCAM will provide ABA based services, speech therapy, and occupational therapy to children on the autism spectrum and/or children with other developmental disabilities at two locations within the underserved areas of Dallas County. The project estimates to serve 60 children in year 4 and 90 children in year 5. The target population includes children on the autism spectrum and/or children with other developmental disabilities. Metrocare estimates that the target population served each year will include 69% Medicaid insured and 21% indigent.

Expected Patient Benefits

The CCAM project will increase the number of children served in the program each year and increase the percentage of those served reporting improvement utilizing the Assessment of Basic Language and Learning Skills (ABLLS) standardized assessment.

Description of QPI

The project estimates to serve 60 children in year 4 and 90 children in year 5 and cumulatively 150 individuals DY4-DY5. The target population includes children on the autism spectrum and/or children with other developmental disabilities.

Description of Category 3 Measure:

The Category 3 measures being considered are:

- No an approved Category 3 measure IT-10.4.a - Development Profile-3 (DP-3)
- IT-10.4.b - Vineland Adaptive Behavior Scales, 2nd Edition

Project Option: 2.13.1 – Design, implement and evaluate research-supported and evidence-based interventions tailored towards individuals in the target populations.

Project Title: Intensive Applied Behavior Analysis Program

Unique Project ID: 137252607.2.103

Performing Provider Name/TPI: Dallas County MHMR Center dba Metrocare Services/ 137252607

Project Description:

CCAM will provide an intervention for a targeted behavioral health population to improve quality of life, functional status and decrease the amount of other services an individual would need across the lifespan.

Scientific studies have shown that children diagnosed with autism have the most likelihood of having successful outcomes when they receive early intensive behavioral intervention services. These services should address learning communication and social skills. Applied Behavior Analysis (ABA) arranges the environment to make behaviors more or less likely to occur in a socially significant setting. While there are many different types of ABA, the basics and the way skills are taught are identical. ABA focuses on increasing behaviors, such as communication and social skills in order to decrease inappropriate behaviors. Currently, Applied Behavior Analysis is the most evidence-based treatment available for children with autism.

The Center for Children with Autism at Metrocare (CCAM) offers quality ABA based services at multiple locations in the underserved areas of Dallas County who are indigent/low income or on Medicaid. The goal is to lead each child to his or her potential through evidence based therapy founded on the principles of ABA. The CCAM provides a hands-on approach with assessments, one-to-one therapy, one-to-two therapy, group therapy and parent training to maximize progress. Speech therapy and occupational therapy will be available for those clients who demonstrate a need for these services.

CCAM will provide ABA based services to children on the autism spectrum and/or children with other developmental disabilities. The primary focus areas of the CCAM are communication, behavior management, and social skills. ABA techniques are utilized to teach new appropriate skills, such as communication, while decreasing inappropriate skills such as aggressive behavior. Each child's program is individualized to their needs and parents will receive monthly parent training. The program is supervised by licensed professionals, including a Board Certified Behavior Analyst. The program is based on a tiered system with levels from one to three. Level one will be the most intensive and designated for those that are assessed to be the most severe. Level one offers 1:1 staff/client ratio, allowing the staff to give focused attention to one child at a time while providing immediate teaching and feedback. Children will progress to Level two, where the ratio is 1:2 staff/client, which allows the child to practice those skills learned thus far. Finally, children will progress to Level 3, which is a group session offered once a week, allowing multiple children to interact with one another and refine the skills learned in the program. Additionally, a Licensed Speech Therapist and Licensed Occupational

Therapist will be on staff to assess client needs for those services. All therapy will be provided in a fun, creative and energetic environment to maximize a child's potential. The therapy center will be equipped with toys and therapeutic tools designed to help children on the autism spectrum learn.

The proposed project will serve consumers at 2 different locations. One location will be located in the northeast area of Dallas County and the second location will be located in southwest area of Dallas County. The northeast location will be added in DY3. The southwest location will be added in DY4.

Goals and Relationship to Regional Goals:

Project Goals:

- To lead each child to his or her potential through evidence based therapy founded on the principles of ABA
- To provide behavioral services to increase self-reliance and improved functioning, thus decreasing the need for costly and intensive services that children with autism and/or other developmental disabilities typically utilize later in life

The Region 9 Community Needs Assessment highlights that “an inadequate supply of behavioral health services is one of the most significant unmet health needs” of our community (Collins, RHP 9 Community needs assessment report, 2012). In addition, “mental health services available to children are limited” and services “oftentimes do not include the family-focused and comprehensive approach needed to adequately address” client issues (Collins, 2012). The addition of an Intensive Applied Behavior Analysis Program in the underserved areas of Dallas County for individuals who are indigent/low income or on Medicaid will address the community needs outlined in this assessment by reducing the frequency and intensity of high cost services in the future. This program will increase relevant and effective services for the children served and their caregivers.

Additionally, this project meets the regional goals of coordinating care for patients with behavioral needs.

This project meets the following Region 9 goals:

The Region 9 Community Needs Assessment (1) cites the following findings as Regional priorities:

- **Capacity – Primary and Specialty Care:** Demand for access to primary and specialty care exceeds resources; this is especially true for children.
- **Behavioral Health – Adult, Pediatric, and Jail Populations:** The behavioral health system is often utilized at capacity and an unmet need for services remains in the Region

Challenges: Recent reports from the CDC suggest that 1 in 88 children are diagnosed with an Autistic Spectrum Disorder. Texas Council on Autism reported in its 2011 Annual Report that 1.5 million individuals in the United States were affected by Autism. Additionally the report indicated that the rate of autism increases 10-17% annually.

Autism Speaks, an autism advocacy organization, estimates that autism costs society \$137 billion per year. Autism is a Pervasive Developmental Disorder (PDD) that involves severe deficits in a person's ability to communicate and interact with others. Children with autism often have trouble using their imagination, have a limited range of interests, and may show repetitive patterns of behavior or body movements. The disorder is often associated with some degree of mental retardation. Autism is the most prevalent pervasive developmental disorder and the most common of all serious childhood disorders. Autism is four times more common in boys than in girls (1 in 54 boys are affected by Autism). More children will be diagnosed with autism this year than with AIDS, diabetes & cancer combined. There is currently no medical detection or cure for autism and funding opportunities for research is limited when compared to other less prevalent childhood diseases.

3-Year Expected Outcome for Providers and Patients:

- Recruit and train community health workers to serve in the program
- Increase number of children with developmental disabilities served by team by 60 over baseline in DY4
- Increase number of children with developmental disabilities served by team by 90 over baseline in DY5
- Cumulatively 150 children with developmental disabilities will be served DY4 & DY5

Starting Point/Baseline: Baseline for measures (clients served, number of encounters, and number of trained staff) is zero.

Quantifiable Patient Impact: The project estimates to serve 60 children in year 4 and 90 children in year 5 and cumulatively 150 children will be served DY4 & DY5. The target population includes children on the autism spectrum and/or children with other developmental disabilities.

Rationale: Children diagnosed with an Autism Spectrum Disorder have multiple needs and face multiple barriers. Research shows that these children often benefit from and have the best future outcomes when they receive intensive ABA training. There are limited intensive services available in Region 9 for people with developmental disabilities displaying extreme behaviors. Metrocare offers a graduated system of care for people with developmental disabilities and behavioral health issues. This project enhances the continuum of care where gaps currently exist. This project will allow for two locations to be opened in areas of Dallas County where little to no services currently exist for children who are indigent/low income or on Medicaid.

Metrocare Services is the largest provider of mental health services in Dallas County. We serve approximately 1,000 people diagnosed with a developmental disability each month and 10,000 people diagnosed with a mental health disorder. To provide quality services to such a large population, we must implement programs that are proven to be effective with our families. Further, as a member of this community, we recognize the societal and financial impact that having a child with autism and/or developmental

disabilities can have on a family and the greater community. The intensive Applied Behavior Analysis program will take a comprehensive, systematic approach to treating children with complex needs by providing intensive services to quickly establish a plan of care. Additionally, the program will simultaneously work rigorously to assist the individual/caregiver with getting needs met to improve daily functioning and improve quality of life. Through the efforts of this program, the need for costly and intensive services for children with autism and/or developmental disabilities would significantly decrease over their life span.

This project addresses the following community needs:

- CN.5: Behavioral Health
- CN.6: Behavioral Health and Primary Care

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

This project will significantly enhance services for children with autism by teaching children new appropriate skills, such as communication, while decreasing inappropriate skills such as aggressive behavior. Each child's program is individualized to their needs, parents receive monthly parent training, and programs are supervised by licensed professionals including a Board Certified Behavior Analyst. This program will allow families in underserved areas of Dallas County to access much needed services by opening two locations. Therapy is provided in a fun, creative and energetic environment to maximize a child's potential.

Project Core Components:

This project addresses the required core components:

- Assess size, characteristics and needs of target population* - Program Design, as outlined in Manual of Operations, will include information regarding target population based on evidence and experience
- Review literature/experience with populations similar to target population to determine community based interventions that are effective in averting negative outcomes*- Program Design, as outlined in Manual of Operations, will be based on information derived from literature review and agency experiences with target population, to determine effective and relevant interventions and services to offer
- Develop project evaluation plan using qualitative and quantitative metrics to determine outcomes* - Use of real time data for rapid cycle improvement for continuous Quality Improvement; use of standardized tools (Metrocare Clinical Data System and the ABLLS) to determine the level of improvement in functional status, quality of life, and patient satisfaction
- Design models which include appropriate range of community-based services and residential supports* – Program Design, as outlined in Manual of Operations, will be based on information derived from literature review and agency experiences with target population, to determine effective and relevant interventions and services to offer

- e) *Assess the impact of interventions based on standardized quantitative measures and qualitative analysis* – Use of standardized tools (Metrocare Clinical Data System, the ABLLS, Achenbach System of Empirically Based Assessment (ASEBA), and Aberrant Behavior Checklist (ABC) to determine the level of improvement in functional status, quality of life, and patient satisfaction.

Customizable Process or Improvement Milestones:

A customizable process milestone was added in DY3 to hire and train staff. Project Area 2.13 does not offer an existing metric for hiring and training staff.

Related Category 3 Outcome Measures:

The Category 3 measures being considered are:

- Not an approved Category 3 measure IT-10.4.a - Development Profile-3 (DP-3)
- IT-10.4.b - Vineland Adaptive Behavior Scales, 2nd Edition

The Category 3 Improvement Target regarding functional status and behavioral health are the related outcome to this project. The DP-3 and VABS-II are standardized assessment tools for the target population of autism. The DP-3 measures skills in the areas of Physical, Adaptive Behavior, Social-Emotional, Cognitive, and Communication. The VABS-II measures skills in the areas of Communication, Daily Living Skills, Socialization, Motor Skills, and Maladaptive Behaviors.

While both the Cat 2 (I-5.1) and Cat 3 measures (IT-10.4.a, IT-10.4.b) fall under the functional status heading, the tools utilized are different and measure different areas of functional status. The Cat 2 tool selected is the ABLLS assessment. It is a criterion referenced assessment which assesses 25 core areas. These areas include imitation, language development, socialization, motor skills, daily living skills, academics, visual, perceptual, cooperation, academics, and play skills. This assessment provides specific details of a child's current performance and is utilized to develop child specific programming. The ABLLS will be compared to each individual's baseline to determine each individual's progress and is updated approximately every 6 months.

The Cat 3 functional status measures (VABS-II and DP-3) measure functional status at a more global level. They provide information in regards to a child's strengths and weaknesses. The DP-3 measures skills in 5 areas including Physical, Adaptive behavior, Social- emotional, Cognitive, and Communication. The VABS-II measures skills in the areas of Communication, Daily Living, Socialization, Motor Skills, and Maladaptive Behaviors. These assessments will be utilized to see how the program as a whole improves functional status by calculating each child's change score and averaging the change scores. The change scores will be compared to baseline. Individual improvement will not be shown with the CAT 3 functional status, like it will be with the Cat 2 functional status.

There is significant financial impact to the community and these improved outcomes are identified as priorities to our region. It is estimated that individuals with a diagnosis of Autism can cost society \$137 billion dollars per year. Additionally, research shows that these children often benefit from and have the best future outcomes when they receive intensive ABA training. Thus, intensive services that are comprehensive, offering multiple services to address unique needs of the individual/caregiver must be provided. The services provided through an Intensive Applied Behavior Analysis Program are proven effective at improving daily functioning, communication skills, social skills, and reducing problematic behaviors. These services will include comprehensive functional assessment, skills training, family/caregiver training, and if needed psychiatric evaluation and medication management.

Relationship to other Projects:

This project is one element of the behavioral health services continuum of care and relates to all other projects that provide/enhance services along the continuum:

The related Category 1 and 2 projects are:

- 137252607.1.1 Workforce Enhancement
- 137252607.1.2 Grand Prairie Clinic
- 137252607.2.1 Integrated Primary Care and Behavioral Health
- 137252607.2.2 ACT (Assertive Wrap-around Program)
- 137252607.2.3 Family Preservation Program
- 137252607.2.5 Behavioral Day Program
- 137252607.1.100 Expansion of Behavioral Health Outpatient Services for Children, Families and Adults
- 137252607.2.100 Pediatric Integrated Primary Care and Behavioral Health
- 137252607.2.101 Patient Navigation Program
- 137252607.2.102 Rapid Assessment and Prevention

Plan for Learning Collaborative: We plan to play an active role in the development and ongoing content of RHP9 Learning Collaborative, appropriate to our project. We will also participate in any Improvement Collaboratives that are associated with the outcomes of this project to obtain additional perspectives that may enable us to improve this project. We believe that the exchange of best practices and shared learning contributes significantly to continuous quality improvement and will advance the success of this project.

Project Valuation: Metrocare Services determined the value of each project by comparing the budgeted cost of the specific project against the cost to the community should the services go unprovided. In regards to the Intensive Applied Behavior Analysis program, the significant cost of Special Education services, emergency room visits, and placement in a State Supported Living Facility were used as comparison data against cost for the Intensive Applied Behavior Analysis program. The starting point/baseline for the program is zero, with a total census of 90 at the end of the year five. It is estimated that participation in CCAM will result in less than 10% requiring a high level of support

through Special Education services and less than 2% requiring placement in a State Support Living Facility in the future.

ABA is a cost-intensive intervention ranging from \$20,000 to \$60,000 per child per year depending upon the scope and structure of the program. Research has shown that children that receive intensive early intervention will save society in the long run, as their need for costly special education services, group home, and hospitalization is reduced due to the skills obtained early in life. According to the Autism Society autism costs society \$137 billion per year. The program proposal will include intensive ABA therapy, Speech Therapy as needed, and Occupational Therapy as needed for each child. This proposal also indicates there will be 2 locations providing the services, one in northeast portion of Dallas County, and one in Southwest portion of Dallas County. We will be serving a cumulative total of 150 children across DY4 and DY5. These children will consist of 90% indigent/Medicaid without any other funding source to be able to access ABA services. With the ever increasing rate of autism continuing to rise, most recently 1:68, it is imperative that children be able to access the most research based effective therapy available, ABA. The therapy is provided in 1:1, 1:2 or small group (6 kids with 2 therapists) in order to provide quality ABA services. The plan is for these children to receive services for a minimum of 1 year. Additionally, the materials needed to be able to offer a quality, fun, energetic, learning environment, which assists in kids enjoying learning and making progress, are costly.

References

1. Chasson, G. S.; Harris, G. E.; Neely, W.J. (2007). "Cost Comparison of Early Intensive Behavioral Intervention and Special Education for Children with Autism." Retrieved Aug 2012, from Journal of Child and Family Studies
2. Eldevik, S. et al. (2010). "Using Participant Data to Extend the Evidence Base for Intensive Behavioral Intervention for Children with Autism." Retrieved Aug 2012, from American Association on Intellectual and Developmental Disabilities.
3. *Data and Statistic*. (2012). Retrieved Aug 2012, from CDC.gov: <http://www.cdc.gov/ncbddd/autism/data.html/>
4. *Facts about Autism*. (2012). Retrieved Aug 2012, from AutismSpeaks.org: <http://www.autismspeaks.org//print/node/195>
5. *New Data on Autism Spectrum Disorders*. (2012). Retrieved Aug 2012, from CDC.gov: <http://www.cdc.gov/Features/CountingAutism/>

Project Summary

Project Option: 2.15.1—Design, implement, and evaluation projects that provide integrated primary and behavioral healthcare services

Project Title: Integration of Child and Adolescent Behavioral and Primary Healthcare Services

Unique Project ID: 137252607.2.100

Performing Provider Name/TPI: Dallas County MHMR Center dba Metrocare Services/ 137252607

Provider

Metrocare Services is a community-based behavioral health organization, serving approximately 50,000 persons in Dallas County with diagnoses of mental illness and/or intellectual or developmental disabilities. Approximately 15,000 of these persons are children and adolescents between the ages of birth and 18 years.

Intervention

This project will create an integrated model of easy, open access to primary care services for children and adolescents, age's birth to 18 years of age, who are receiving treatment in our community-based behavioral health clinics, intellectual or developmental delay services or early childhood intervention (ECI) program. This project effectively establishes a 'one stop shop' for patients to receive both behavioral and primary care services.

Need for the Project

The Region 9 Community Needs Assessment, in its discussion of limited physician capacity in primary care and select specialties, cites the following: "The impact of the limited primary and specialty care is significantly profound for children and families in the region. With the current pediatric need being more than 80% of the current supply, in rural and urban areas the demand for primary care services is much higher than the current supply. In Dallas County alone, over 36.2% of children were enrolled in Medicaid in 2010, exacerbating the issue of availability of primary care access and treatment (Collins, 2012) (1). The National Alliance on Mental Illness states, "Addressing the whole person by integrating care is one way to begin to address the fragmentation that often exists in our health care system. Integrated care is designed to treat mental health conditions like other health conditions that children experience.... Youth with serious mental health conditions who require ongoing, regular care from mental health providers may benefit from coordinated care in a mental health care setting that also has the capacity to provide essential primary care." (2)

Target Population

The target population is Metrocare patients between the ages of birth to 18 years of age who are diagnosed as having a mental disorder and/or an intellectual or developmental delay (IDD) who are enrolled in community mental health or IDD services and who are in need of primary care services in an integrated setting. The identified population is

either indigent or has Medicaid as a primary payer source. Metrocare estimates that 46% of the people served through this clinic will be indigent patients and 44% of the clients served will be insured by Medicaid.

Expected Patient Benefits

- Early recognition and intervention in behavioral and physical health issues which will have a positive impact on current symptom severity and functioning, as well as a decrease in morbidity in later life
- Access to primary care in an environment which lessens the stigmatization of mental illness and intellectual and developmental disabilities
- Increase numbers of patients receiving integrated behavioral and physical healthcare services during each year of the project (DY 3-100; DY4-1500; DY 5-2500)
- Decrease in school absenteeism related to being able to access non-emergent ambulatory primary care in a timely manner

Description of QPI

- Increase numbers of patients receiving integrated behavioral and physical healthcare services during each year of the project (DY 3-100; DY4-1500; DY 5-2500) for a cumulative total of 4,100 individuals served.

Description of Category 3 Measure

The Category 3 measure being considered is:

- IT-1.22 Asthma Percent of Opportunity Achieved

Project Option: 2.15.1—Design, implement, and evaluation projects that provide integrated primary and behavioral healthcare services

Project Title: Integration of Child and Adolescent Behavioral and Primary Healthcare Services

Unique Project ID: 137252607.2.100

Performing Provider Name/TPI: Dallas County MHMR Center dba Metrocare Services/ 137252607

Project Description:

This project will expand the availability of integrated behavioral and physical healthcare to children and adolescents who are enrolled in behavioral health or intellectual and developmental disabilities services at Metrocare. The clinics will achieve at least Level 4 interaction of "close collaboration in a partly integrated system." Healthcare services will be co-located on the same physical sites and share a common electronic medical record and scheduling system. There will be opportunity for both informal case consults between behavioral and physical healthcare staff, as well as more formal scheduled staffing's to discuss the status of patient treatment.

The project will establish a total of two integrated behavioral and physical healthcare clinics and is expected to provide physical healthcare services to 2500 children by DY 5 of the project. Clinics will be staffed with psychiatrists; either pediatricians or primary care physicians experienced in seeing children and adolescents; advanced nurse practitioners; registered nurses; medical technicians; licensed professional counselors or licensed clinical social workers, as well as case management and business staff. Integrated sites will be located on public transportation lines and will be easily accessible via major highway systems.

Goals and Relationship to Regional Goals:

Project Goals: Establish co-located, integrated, easily accessible behavioral and primary healthcare services for children and adolescents served at Metrocare who receive services in Dallas County of Region 9.

This project meets the following Region 9 goals:

The Region 9 Community Needs Assessment (1) cites the following findings as Regional priorities:

- Capacity – Primary and Specialty Care. Demand for access to primary and specialty care exceeds resources; this is especially true for children.
- Behavioral Health – The behavioral health system is often utilized at capacity and an unmet need for services remains in the Region
- Chronic Disease – Many individuals in North Texas suffer from chronic diseases that present earlier in life, are becoming more prevalent, and exhibit more severe complications
- Emergency Department Usage and Readmissions – “Emergency departments are treating high volumes of patients with preventable conditions, or conditions that are suitable to be addressed in a primary care setting. Additionally, readmissions

are higher than desired, particularly for those with severe chronic disease or behavioral health.”

Challenges:

- The Region 9 Community Needs Assessment (1) indicates that Region 9 is below average in the number of primary care physicians. Hiring and retaining primary care physicians is expected to become a greater challenge over the next several years, as competition for these providers’ increases. This shortage is especially significant for child and adolescent populations.
- Development of an adequate, easy to access medical specialty referral base
- Engagement of children and adolescents with mental health issues or intellectual disabilities and their families in primary care services, including preventive care
- Engagement and facilitation of patients and families with utilization of community integrated services as an alternative to the utilization of more acute levels of care

3-Year Expected Outcome for Providers and Patients:

- Improved asthma control in pediatric patients with mental illness and/or IDD diagnoses
- Increased preventive care utilizations such as increased preventive care immunization rates in children and adolescents with mental illness and/or IDD diagnoses and prevention of childhood obesity
- Decreased ER utilization rates
- Decreased hospitalization
- Decreased per capita healthcare costs

Starting Point/Baseline:

The baseline for measures is zero

Quantifiable Patient Impact:

- Increase numbers of patients receiving integrated behavioral and physical healthcare services during each year of the project (DY 3-100; DY4-1500; DY 5-2500) for a cumulative total of 4,100 individuals served.

Rationale:

The Region 9 Community Assessment (1) identifies the need for “development of lower levels of care in order to prevent the need for high-cost services” in our community. For Dallas County, the presence of ‘co-occurring behavioral health conditions is associated with increased case severity of medical encounters and a 36% increase in the average charges per encounter and overcrowded waiting rooms (1). By providing integrated services within Metrocare’s community based integrated care clinics, behavioral and physical healthcare staff can assist patients with stabilization of both symptoms of mental illness, as well as prevention or stabilization of physical health illnesses. The result of engagement and treatment in an integrated environment will result in decreased use of higher levels of care, improved patient functioning, improved assessment scores for chronic conditions such as asthma, improved engagement of patients and family in

mental and physical healthcare, and a decrease in local dollars spent on emergency room visits for patients with comorbid mental and physical illnesses. The North Texas Behavioral Health Authority has identified transportation as one of the major barriers to individual accessing services (1). The two community mental health clinic sites to be targeted for integration will be located on Dallas Area Rapid Transit bus routes and are also located on high capacity local streets, easily accessible from major highways.

As per Dallas county community health dashboard Parkland Health and Hospital Systems (5):

- 34.1% of emergency room visits in Dallas County in 2010 were for non-emergent conditions. Metrocare Services is located in Dallas County, and by providing open access to primary care services for our patients with mental illness and/or IDD diagnoses, we will be able to decrease the ED visits for non-emergent conditions.
- The number of primary care physicians per 100,000 population in Dallas County is 82.3 in 2010, compared to the Texas average of 95.2 per 100,000 population. Having primary care services at Metrocare will increase the access to preventive care utilization, thereby decreasing healthcare costs.

This project addresses the following community needs:

- CN.6: Primary care and behavioral health

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

This project will significantly enhance access to primary care services for children and adolescents who are diagnosed with mental illness and/or intellectual and developmental disabilities. It will be a unique and innovative program for Dallas County, providing a full range of behavioral health services integrated with on-site primary healthcare in an outpatient community setting. The majority of children and adolescents served either have Medicaid or are indigent.

Project Core Components:

2.15.1 Design, implement, and evaluate projects that provide integrated primary and behavioral healthcare services.

Required core components:

- a) Identify sites for integrated care projects, which would have the potential to benefit a significant number of patients in the community: Metrocare serves approximately 15,000 children and adolescents per year, most of whom have either Medicaid or are part of the indigent population. The 2 clinic sites identified for integration are proximate to Dallas Area Rapid Transit (DART) lines and to major highway systems. Each clinic site will be staffed with both behavioral and primary care staff who will have the ability and willingness to integrate and share information via both face-to-face interactions and electronically, and who are receptive to an integrated team approach.
- b) Develop provider agreements whereby co-scheduling and information sharing between physical and behavioral health providers could be facilitated: both

behavioral and primary care staff will be employed by Metrocare services, not independent contractors. They will use an integrated scheduling and electronic health record system.

- c) Establish protocols and processes for communication, data sharing, and referral between behavioral and physical health providers: protocols and processes for communication, data sharing will be established in DY 3 of the project.
- d) Recruit a number of specialty providers to provide services in the specified locations: behavioral health providers currently exist in each site identified for integration. Physical healthcare staff who are invested in the integration and collaboration or behavioral and physical healthcare will be recruited and hired.
- e) Train physical and behavioral health providers in protocols, effective communication and team approach. Build a shared culture of treatment to include specific protocols and methods of information sharing that include:
 - Regular consultative meetings between physical health and behavioral health practitioners: in DY 3 of the project, behavioral and primary healthcare staff will engage in bimonthly consultative meetings
 - Case conferences on an individualized as-needed basis to discuss individuals served by both types of practitioners: co-location of both behavioral and physical healthcare providers at the same site allows for case consultation on an as-needed basis
 - Shared treatment plans co-developed by both physical health and behavioral health practitioners: the current NorthStar system carves out behavioral health and requires a specific treatment plan for behavioral health services. However, the integrated care clinics allow for both behavioral and physical healthcare staff to have significant input into treatment recommendations
- f) Acquire data reporting, communication and collection tools to be used in the integrated setting: Metrocare currently has the capacity to implement an integrated electronic medical record
- g) Explore the need for and develop any necessary legal agreements that may be needed in a collaborative practice: both behavioral and physical healthcare staff will be Metrocare employees and patients or their parents sign a consent for services form at the time of admission to services at Metrocare
- h) Arrange for utilities and building services for these settings: both identified clinic sites are currently Metrocare facilities with utilities and building services, including management/disposal of bio hazardous materials, currently in operation.
- i) Develop and implement data collection and reporting mechanisms and standards to track the utilization of integrated services as well as the healthcare outcomes of individuals treated in these integrated service settings: Metrocare's current electronic scheduling system and health record has the capacity to track utilization and outcomes.
- j) Conduct quality improvement for the project using methods such as rapid cycle improvement: CQI meetings will occur monthly and will include behavioral and physical healthcare providers, management and business staff. Goals will

include identifying impacts of the project, discussing ‘lessons learned’, and identification of opportunities and challenges.

Related Category 3 Outcome Measures:

The Category 3 measures being considered are:

- IT-1.22 Asthma Percent of Opportunity Achieved

Current literature indicates that asthma is one of the leading health issues with which the pediatric population presents to emergency rooms (6). Improved access to outpatient care, along with education and training on chronic disease management can result in better management of asthma symptoms, resulting in a decrease in the number of school absences for children, work absences for parents, and emergency department admissions.

Relationship to other Projects:

This project is one element of the behavioral health services continuum of care and relates to all other projects that provide/enhance services along the continuum:

The related Category 1 and 2 projects are:

137252601.1.1	Metrocare---Workforce Enhancement
137252607.2.1	Metrocare ---Primary Care Integration (Adults)
137252607.2.2	Metrocare ---ACT (Assertive WRAP-around program for persons with IDD)
137252607.2.3	Metrocare ---Family Preservation
137250607.2.4	Metrocare---Center for Children with Autism
137250607.2.5	Metrocare ---Day Program
137252607.2.103	Metrocare – Intensive Applied Behavioral Analysis Program

Plan for Learning Collaborative:

We plan to play an active role in the development and ongoing conduct of Project Learning Collaborative, appropriate to our project, as organized by RHP 9 and described in Section IV – Stakeholder Engagement. We will also participate in any Outcomes Learning Collaborative that is associated with the outcomes of this project to obtain additional perspectives that may enable us to improve this project. We believe that the exchange of best practices and shared learning contributes significantly to continuous quality improvement and will advance the success of this project.

Project Valuation:

Metrocare Services determined the value of each project by comparing the budgeted cost of the specific project against the cost to the community should these integrated services not exist. Costs associated with emergency room visits and hospitalizations due to chronic medical conditions and to preventable childhood illnesses were considered in determining the value of this project. Also of importance is that well-care, health education and early intervention in childhood health issues, including asthma and obesity, can prevent future morbidity in the adult population. Persons with severe and persistent mental illness have lifespans up to 30 years shorter than their age-related non-mentally ill

counterparts (7). It is estimated that participation in outpatient integrated behavioral and primary healthcare will result in less than 15 % of patients served seeking higher levels of medically-related healthcare within the 12 month period of receiving integrated services in Metrocare's outpatient clinics.

Resources:

1. Collins, Summer. "Regional Health Partnership 9: Community Needs Assessment Report." April, 2012. Texas Healthcare Transformation and Quality Improvement Program.
2. National Alliance on Mental Illness. "Integrating Mental Health and Pediatric Primary Care." A Family Guide., 2011
3. Texas Asthma Control Program. Texas Department of State Health Services, 2009.
4. Arons, Abigail. "Childhood Obesity in Texas, The Costs The Policies, and a Framework for the Future.", 2011. Prepared for the Children's Hospital Association of Texas.
5. Dallas County Community Health Dashboard Parkland Health and Hospital Systems. 2011. Retrieved Aug 2012, from [Heathyntexas.org](http://www.healthyntexas.org/javascript/htmleditor/uploads/dashboard): <http://www.healthyntexas.org/javascript/htmleditor/uploads/dashboard> 2011 final.pdf
6. Hall, M.J., DeFranses, C., Williams, S., Golosinskiy, A., Schwartzman, A. National Hospital Discharge Survey: 2007 Summary <http://www.cdc.gov/nchs/data/nhsr/nhsr029.pdf>
7. De Hert, M., Correll, C., et al. "Physical illness in patients with severe mental disorders. 1. Prevalence, impact of medications and disparities in health care". World Psychiatry, 2011.

Project Summary

Project Option: 2.9.1 - Establish/expand a patient care navigation program

Project Title: Metrocare Patient Navigation Program

Unique Project ID: 137252607.2.101

Performing Provider Name/TPI: Dallas County MHMR Center dba Metrocare Services/ 137252607

Provider

Metrocare Services is a community-based behavioral health organization, serving approximately 50,000 persons in Dallas County with diagnoses of mental illness and/or intellectual or developmental disabilities. Approximately 15,000 of these persons are children and adolescents between the ages of birth and 18 years. Metrocare Services is the primary behavioral health provider in RHP 9.

Intervention

Metrocare will provide patient navigation services to patients who are at high risk of disconnecting from institutionalized health care services or are identified as not having a primary care physician to address their needs. The objective of this project is to improve outpatient treatment adherence while decreasing subsequent emergency department (ED) utilization rates by using navigation coaches. The project will target the indigent and Medicaid eligible population diagnosed with a co-occurring mental illness and chronic disease. The intervention will utilize a coaching method that supports patients to assert a more active role in their health care. The proposed intervention is based on Eric A. Coleman's, MD, MPH, Care Transitions Intervention® (*The Care Transition Program*®, 2007) and will utilize "The Four Pillars". Patients will participate in a four to eight week long intervention (duration will be dependent on individual need) and receive specific person-centered tools and skills that are reinforced by a "Navigation Coach" and focuses on the following components:

- A patient-centered record of the essential care elements for facilitating communication between health care providers.
- A structured checklist of critical activities to help patients and their families enlist assistance across the continuum of care.
- Navigation Coach—facilitated patient activation and self-management sessions to help patients and their caregivers understand and apply the first two components, and assert their role in managing their own health.
- Navigation Coach follow-up visit(s) and phone calls designed to sustain all the above and provide continuity across the continuum of care.

Need for the Project

Access to the health care services is especially imperative to individuals with mental illness, as they are often on a fixed income, lack resources and supports, have increased problems with mobility, memory, and access to health care. Through the patient navigation project, Navigation Coaches will assist individuals in overcoming these barriers by empowering them with decision support, coordinating access to community

resources and linking patients to a primary care physician. Persons with serious and persistent mental illnesses frequently have difficulty securing reliable or affordable transportation and have problems accessing and engaging in routine medical services, thereby increasing the use of emergency departments (ED) for non-emergent conditions and driving up readmission rates.

Target Population

The project will specifically target an at-risk population, individuals diagnosed with a co-occurring mental illness (as defined by the Texas Department of State Health Services) and chronic disease. Individuals must be cognitive and/or have a caregiver or support person who is able to make decisions for the individual. Approximately 90% of the individuals enrolled in the program will be Medicaid eligible or indigent.

Expected Patient Benefits

As a result of this program, Metrocare would expect the following benefits:

- Provide care management/navigation services to targeted patients.
- Reduce number of ED visits and/or avoidable hospitalizations for patients enrolled in the navigation program. Baseline will be established in DY3 which is expected to be 103.
- The project seeks to provide documented education or resources to identify a PCP from a patient navigator for ED patients without a PCP documented in their medical record. In DY3, 80% of patients will receive education or resources, 85% in DY4, and 90% in DY5.

Description of QPI

- Provide care management/navigation services to targeted patients. Target: DY3—103, DY4—1,121, DY5—1,365 and cumulatively 2,589 individuals will be served.

Description of Category 3 Measure

The Category 3 measure being considered is:

- IT 9.4.e Reduce Emergency Department visits for Behavioral Health/Substance Abuse

Project Option: 2.9.1 - Establish/expand a patient care navigation program

Project Title: Metrocare Patient Navigation Program

Unique Project ID: 137252607.2.101

Performing Provider Name/TPI: Dallas County MHMR Center dba Metrocare Services/ 137252607

Project Description

Metrocare will provide patient navigation services to targeted patients who are at high risk of disconnecting from institutionalized health care services or are identified as not having a primary care physician and/or medical home to address their needs. This project will identify frequent ED users diagnosed with a co-occurring mental illness and chronic disease. The project will increase the number of people trained and deployed for innovative health services such as community health workers. The project will connect patients to primary and preventative care and increase access to care management and/or chronic care management. The project will improve the utilization of unnecessary ED utilization and the health condition of those most at risk for costly chronic conditions and decrease subsequent ED utilization. Navigation Coaches will help and support these patients as they navigate through the continuum of care services and will ensure that patients receive timely, coordinated and site appropriate health care services.

Goals and Relationship to Regional Goals

Project Goals:

1. Less frequent use of emergency services
2. Decreased healthcare service costs to RHP 9

The Region 9 Community Needs Assessment reports that the top 10 utilizers of emergency services in Region 9, in 2011, all had diagnoses of mental illness, but none presented to emergency departments with chief complaints related to their mental illnesses. In Dallas County, the presence of a “co-occurring behavioral health condition is associated with increased case severity of medical encounters and a 36% in the average charges per encounter.” (Collins, 2012).

By establishing a patient navigation program, “Navigation Coaches” can redirect and connect patients to appropriate care settings by empowering patients to assert a more active role in their health care. Establishment of a patient navigation program would result in less frequent use of emergency services and decreased healthcare service costs to the Region.

This project meets the following Region 9 goals:

The Region 9 Community Needs Assessment (1) cites the following findings as Regional priorities:

- **Behavioral Health – Adult, Pediatric, and Jail Populations:** The behavioral health system is often utilized at capacity and an unmet need for services remains in the Region

- **Chronic Disease – Adult and Pediatric:** Many individuals in North Texas suffer from chronic diseases that present earlier in life, are becoming more prevalent, and exhibit more severe complications
- **Emergency Department Usage and Readmissions:** “Emergency departments are treating high volumes of patients with preventable conditions, or conditions that are suitable to be addressed in a primary care setting. Additionally, readmissions are higher than desired, particularly for those with severe chronic disease or behavioral health.”

Challenges:

- Engagement of persons with serious and persistent mental illnesses in preventive care practices.
- Engagement and facilitation of having patients utilize community integrated services as alternative to the utilization of more acute levels of care.
- Engagement and education of patient participation in the patient navigation program.
- Access to limited community resources and support.

3-Year Expected Outcome for Providers and Patients:

- Increased preventive care utilization
- Decreased ER utilization rate
- Decreased hospitalization
- Decreased per capita health care costs
- Decreased preventable hospital admissions
- Decreased preventable hospital readmissions

Starting Point/Baseline: There is not a patient navigation program in place that targets this at risk population within the acute care setting. The baseline measure is zero.

Quantifiable Patient Impact: Provide care management/navigation services to targeted patients. Target: DY3—103, DY4—1,121, DY5—1,365 and cumulatively 2,589 individuals will be served.

Rationale: Emergency Department utilization in North Texas exceeds national utilization rates resulting in higher costs for providing care to the region. The Community Health Needs Assessment points to a lack of accessing primary care sites and the inability to redirect patients to a more appropriate care setting (Collins, 2012). The patient navigator project will provide resources to help patients and their families better locate and navigate appropriate care locations and local resources.

For Dallas County, the presence of a co-occurring behavioral health condition is associated with increased case severity of medical encounters and a 36% increase in the average charges per encounter (Collins, 2012). Lack of community based services also results in “significantly overcrowded emergency rooms” for people seeking crisis services. Individuals with mental illness face unique challenges in obtaining care, and those challenges must be addressed in order for them to have effective access to care.

Navigation coaches will assist patients and their families in navigating the fragmented health and human services system. Services provided by the navigation coach will vary based on needs of the patient and may include:

- Facilitating communication among patients, family members, caregivers and healthcare providers
- Coordinating care among providers
- Arranging financial support and assisting with paperwork/applications
- Arranging transportation
- Facilitating follow-up appointments
- Community outreach and building partnerships with local agencies and groups

Access to the above services is especially imperative to individuals with mental illness, as they are often on a fixed income and may have increased problems with mobility, memory, and access. Navigation Coaches can assist individuals in overcoming these barriers by empowering them with decision support and access to community resources.

This project addresses the following community need:

- CN.12 Emergency Department Usage and Readmissions

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

This project will significantly enhance access to primary care services, reduce utilization of emergency departments, and subsequently reduce readmission rates for persons with severe and persistent mental illnesses in Dallas County. Currently, there is not a dedicated patient navigation program for the mental illness population, thus this is a brand-new initiative at Metrocare Services.

Project Core Components:

This project addresses the required core components:

- Identify frequent ED users and use navigators as part of a preventable ED reduction program. Train health care navigators in cultural competency* - The project has identified patients with a co-occurring mental illness and chronic disease as a patient population with high rates of ED users. The project will target individuals for education and intervention aimed at preventing future ED use for non-emergent conditions and/or preventing conditions from becoming emergent in the first place.
- Deploy innovative healthcare personnel, such as case managers/workers, community health workers and other types of health professionals as navigation coaches* - The project will recruit and train qualified health care workers and require certification as a community health worker within one year of employment.
- Connect patients to primary and preventative care* - Navigation coaches will assist patients in making primary and preventative care appointments, provide assistance as needed to help individuals keep their appointments, connect individuals and families to resources to assure access to community supports is

- adequate, and link individuals to a primary care physician or community mental health center, as needed.
- d) *Increase access to care management and/or chronic care management, including education in chronic disease self-management* - Navigation coaches will provide assistance to community resources to ensure access to appropriate chronic disease self-management and care.
 - e) *Conduct quality improvement for project using methods such as rapid cycle improvement* - Metrocare will conduct ongoing quality improvement efforts for the project. The project will participate in Metrocare's current quality improvement process and will have systems in place to identify improvement opportunities throughout all stages of implementation.

Related Category 3 Outcome Measures:

The Category 3 measure being considered is:

- IT 9.4.e Reduce Emergency Department visits for Behavioral Health/Substance Abuse

The relationship between emergency room utilization rates and quality of care is driven by a general consensus that utilization may result from circumstances surrounding the lack of chronic disease management, access to community supports, and access to appropriate care settings. By identifying frequent users of the ED and providing navigation services, these patients will be exposed to alternative care locations that would be more effective for managing non-urgent health conditions and health needs.

Relationship to other Projects:

The Region 9 Community Needs Assessment highlights that emergency departments are treating high volumes of patients with preventable conditions, or conditions that are suitable to be addressed in outpatient settings. Additionally, readmissions are higher than desired, particularly for those with severe chronic disease or behavioral health. For emergency department encounters that resulted in a hospital admission, the most common health conditions by volume are: stroke, diabetes, congestive heart failure, weak/failing kidneys, chronic bronchitis and heart attack. The implementation of a Patient Navigation Program will improve outpatient treatment adherence while decreasing subsequent readmission rates. This model will decrease the time and cost associated with multiple emergency department visits and institutionalization.

The related Category 1 and 2 projects are:

- 137252607.1.1 Workforce Enhancement
- 137252607.1.2 Grand Prairie Clinic
- 137252607.2.1 Integrated Primary Care and Behavioral Health
- 137252607.2.2 ACT (Assertive Wrap-around Program)
- 137252607.2.5 Behavioral Day Program
- 137252607.2.102 Rapid Assessment and Prevention

Plan for Learning Collaborative: We plan to play an active role in the development and ongoing content of RHP9 Learning Collaborative, appropriate to our project. We will also participate in any Improvement Collaboratives that are associated with the outcomes of this project to obtain additional perspectives that may enable us to improve this project. We believe that the exchange of best practices and shared learning contributes significantly to continuous quality improvement and will advance the success of this project.

Project Valuation: The valuation of the project takes into account the degree to which the project accomplishes the community needs, population served (both the number of people and the complexity of patient needs), and investment required to implement the project. The rationale for valuating each outcome measure is based on following, but not limited to, various factors such as size, project scope, population served, community benefit, cost avoidance, addressing community need, and estimated local funding.

References

1. Collins, Summer. (2012, April). *Regional Healthcare Partnership 9: Community Needs Assessment Report*. Print.
2. The Care Transition Program®. ©2007 Care Transitions Program; Denver, Colorado. <http://www.caretransitions.org/>. September 25, 2013.

Project Summary

Project Option: 2.13.1 – Design, implement, and evaluate research-supported and evidence-based interventions tailored towards individuals in the target population.

Project Title: Metrocare Rapid Assessment and Prevention (RAP)

Unique Project ID: 137252607.2.102

Performing Provider Name/TPI: Dallas County MHMR Center dba Metrocare Services/ 137252607

Provider

Metrocare Services is a community-based behavioral health organization, serving approximately 50,000 persons in Dallas County with diagnoses of mental illness and/or intellectual or developmental disabilities. Approximately 15,000 of these persons are children and adolescents between the ages of birth and 18 years. Metrocare Services is the primary behavioral health provider in RHP 9.

Intervention

The Rapid Assessment and Prevention (RAP) Program will include case management services for adults with severe mental illness as they are making the transition from a psychiatric hospital or an incarceration back into the community. RAP services will be based on the evidence-based practice Critical Time Intervention (CTI). CTI is an empirically supported, time-limited case management model designed to prevent adverse outcomes in people with mental illness following discharge from hospitals, shelters, prisons and other institutions (Herman, Conover, Felix, Nakagawa, & Mills, 2007). The case management team will provide crisis intervention, psychosocial rehabilitation, medication management, counseling and case management services. Consistent with the CTI model, clients will receive intensive services for 90 days following community re-entry. Less frequent contacts and monitoring will be provided for an additional 6 months following re-entry.

Need for the Project

Schizophrenia and Bipolar disorders rank among the top ten leading causes of disability due to their life long debilitation and associated social and financial costs (Jaeger & Vieta, 2007; Druss, Marcus, Olsson, & Pincus, 2002). Individuals with untreated schizophrenia or bipolar disorder frequently decompensate to the point of requiring inpatient stabilization. Inpatient care is indicated when an individual can no longer be safely managed in a community setting (Bobier & Warwick, 2004). Many individuals transitioning from inpatient to outpatient care find themselves in a cycle of hospitalization to community discharge and back, sometimes in quick succession. Such individuals are likely to have been impacted by poor continuity of care between their inpatient and outpatient experience. In fact, a lack of continuity of care for those with mental illness has been implicated as a causal factor in adverse outcomes, such as, homicide and suicide (Sweeney et al., 2012).

Furthermore, the Region 9 Community Needs assessment highlights that “an inadequate supply of behavioral health services is one of the most significant unmet health needs” of our community (Collins, 2012). The RHP 9 Community Needs Assessment describes the underserved behavioral health population in Dallas County and six surrounding counties. The seven county area is funded differently from the remainder of the state through a managed care carve-out program, known as the NorthSTAR program. It is a privatized system administered by ValueOptions of Texas. Over the past decade the NorthSTAR program has greatly expanded access to care and now serves over 60,000 individuals with behavioral health and substance abuse needs. The RHD 9 Community Needs Assessment states that the ‘growth of enrollment has outpaced funding such that the funding per person served is 30% less than when the program started in 1999 and is half that of the state average compared to non-NorthSTAR counties. The report further states that given Texas’ standing as 50th among all states in mental health funding, the funding per person served in RHP 9 is among the lowest in the nation. The underfunded mental health system has resulted in an inadequate supply of behavioral health services. The unmet needs of the behavioral health population in Dallas County arguably contributes to a higher mortality rate, a much greater cost of overall care - \$50,000 - \$100,000 prior to age 21 and increasing with age (DFW Hospital Council Foundation). Underfunding also increasingly pushes the community mental health population into the criminal justice system or state hospitals. In an underfunded system, intensive community mental health programs providing vital hands-on interventions to the most fragile have been increasingly down-sized. The proposed RAP program is planned to target individuals that might otherwise fall through the cracks.

Target Population

RAP will target adults with Schizophrenia and Bipolar disorder immediately following a psychiatric hospitalization or jail release. The program has projected to serve 75 clients in year 3, 360 clients in year 4 and 420 clients in year 5 for a cumulative total of 855 clients served DY3-DY5. The target population will be 90% indigent patients or those covered by Medicaid.

Expected Patient Benefits

The RAP project will maintain an annual client admission as follows: DY 3 – 75, DY 4 360, DY 5 – 420. The RAP team will provide interventions supporting medication adherence. Specifically, for individuals with a diagnosis of Schizophrenia, an improvement in access to antipsychotic medications will be demonstrated. Pharmacy dispensing records will support that RAP clients are obtaining a 30 day supply of medication at least once every 32 days. In addition, the functionality of RAP consumers will improve over the course of treatment, as measured by the Adult Needs and Strengths Assessment (ANSA) Life Domain Functioning score. Improvements in these areas are expected to significantly decrease the likelihood of a readmission into a psychiatric or an arrest in the 30 day period following a hospital discharge.

Description of QPI

The RAP project will maintain an annual client admission as follows: DY3 – 75, DY4 - 360, DY5 – 420 and 855 cumulatively DY3-DY5.

Description of Category 3 Measure

The Category 3 measure being considered is:

- IT – 10.1.a.iv Assessment of Quality of Life (AQoL-8D)

Project Option: 2.13.1 – Design, implement, and evaluate research-supported and evidence-based interventions tailored towards individuals in the target population.

Project Title: Metrocare Rapid Assessment and Prevention (RAP)

Unique Project ID: 137252607.2.102

Performing Provider Name/TPI: Dallas County MHMR Center dba Metrocare Services/ 137252607

Project Description:

Provide an intervention for a targeted behavioral health population to prevent unnecessary use of services in a specified setting. A Rapid Assessment and Prevention Team will serve adults with Schizophrenia or Bipolar disorder following psychiatric hospitalization or incarceration. The primary goal will be to improve the continuity of care in the transition from a facility to community based services. The evidenced-based treatment model Critical Time Intervention (CTI) will be applied towards this goal. CTI is outlined as a 9-month, 3-stage intervention that seeks to enhance engagement with treatment and community supports through building problem-solving skills, motivational coaching, and advocacy with community agencies. CTI has been demonstrated to be an effective model for individuals transitioning from psychiatric inpatient care and from homeless shelters.

CTI is designed to be a 3 stage intervention. During the first 90 days immediately following the transition to the community, services are more intensive with small caseloads and multiple contacts per week. The emphasis during the first phase is on helping clients to identify goals and then linking them to resources that can remain in place permanently. The CTI case managers also provide direct care when needed. In the second phase, known as the ‘Try Out Phase’, the CTI team assesses the strength of the links to the new resources and intervenes as needed to solidify these links. In the third phase, roughly the final 3 months, the case manager continues to monitor progress and facilitate continuation with the services that were put in place several months before. If the client’s engagement in treatment begins to waver as time passes, the case manager again intervenes.

Goals and Relationship to Regional Goals

Project Goals:

1. To provide case management services for adults with severe mental illnesses as they are making the transition from a psychiatric hospital or incarceration back in to the community.

The RAP team is intended to address the underserved regional behavioral health needs outlined in the RHP 9 Community Needs Assessment. Dallas County and 6 counties in the region have been carved out of the mental health funding stream found in the remainder of Texas, resulting in about 30% less per capita funding in the NorthSTAR region than in the remainder of Texas. The implementation of post-acute intensive services by a RAP team would allow Metrocare to provide intensive, community-based

services that are proven to reduce costly out-of-home treatment episodes and addresses priority goals identified in the Region 9 community Assessment Report.

The proposed team would be centrally located in Dallas and would act primarily as a mobile team. Staff will be traveling into the field and to the area psychiatric hospitals to locate and engage clients. The office location is planned to be in inner city South Dallas within the Martin Luther King Community Center.

This project meets the following Region 9 goals:

The Region 9 Community Needs Assessment (1) cites the following findings as Regional priorities:

- **Behavioral Health – Adult, Pediatric, and Jail Populations:** The behavioral health system is often utilized at capacity and an unmet need for services remains in the Region
- **Emergency Department Usage and Readmissions:** “Emergency departments are treating high volumes of patients with preventable conditions, or conditions that are suitable to be addressed in a primary care setting. Additionally, readmissions are higher than desired, particularly for those with severe chronic disease or behavioral health.”

Challenges: According to the National Alliance of Mental Illness, Texas spent \$38.38 per capita on mental health in 2009, which ranked last in the nation (Honberg, Kimball, Diehl, Usher, & Fitzpatrick, 2011). In the Dallas County region, this lack of funding has resulted in an inadequate supply of outpatient behavioral health services. In an underfunded system, intensive community mental health programs providing vital hands-on interventions to the most fragile are increasingly down-sized. Metrocare Services’ mental health division is mostly funded by a fee for service model funded, through NorthSTAR dollars. Payment is only collected only for face to face services to individuals that are currently authorized for treatment. Under the fee for service model, services provided outside of a client’s presence or to an individual not authorized for services are not reimbursed. With some relatively rare exceptions, only individuals with Schizophrenia, Bipolar Disorder or Major Depressive Disorder are defined as the mental health priority population and are therefore eligible for services. An unforeseen consequence of this fee for service model is that providers are not offered adequate financial support to assign resources to activities that may not result in face-to-face contact with clients or that are provided to individuals who have not been formally diagnosed with a priority mental illness. This provides disincentive for providers to travel out into the community to locate potential new consumers referred at the time of a hospital or incarceration release. The proposed RAP program will target individuals that might otherwise fall through the cracks. Investing resources wisely in interventions and treatment programs that are effective can interrupt the cycle of multiple hospitalizations.

3-Year Expected Outcome for Providers and Patients:

- Baseline is Zero
- Increase client enrollment in program by 75 over baseline
- Increase client enrollment in program by 360 over baseline

- Increase client enrollment in program by 420 over baseline
- Improve antipsychotic medication adherence for those with schizophrenia
- Improve the functionality of clients served
- Decrease rate of readmission to psychiatric hospitals for those served
- Decrease rate of incarceration for those served
- Improve the Quality of Life of clients served

Starting Point/Baseline: Baseline for measures (clients served, number of encounters, and number of trained staff) is zero. Currently Metrocare does not offer a program specifically targeting the larger majority of post-hospitalized adult consumers. The Assertive Community Treatment (ACT) team provides longer-term intensive behavioral health services to about 300 clients per year that have been hospitalized repeatedly. However there is limited funding for this service and as a result, there is strict eligibility criteria established by state guidelines and enforced through managed care review. ACT also differs from the intended RAP team in that it is an all-inclusive delivery model, while the CTI model is intended to supplement and insure linkage to an outside treatment team.

Quantifiable Patient Impact: The RAP project will maintain an annual client admission as follows: DY 3 – 75, DY 4 - 360, DY 5 – 420 and 855 cumulatively DY3-DY5.

Rationale: There is value in intervening rapidly when individuals with severe mental illness are transitioning to community care following psychiatric hospitalization. For many reasons, individuals with mental illness often choose not to continue with treatment following release from an inpatient setting. Often as a consequence of discontinuing treatment, individuals experience hospitalization recidivism. This recidivism is frequently due to resumption in dangerous and/or abnormal behaviors in the community. Individuals with unmanaged mental illness contribute to numerous economic and social problems. These problems include increased economic costs due to high utilization of law enforcement and court systems, expensive state-funded hospitalizations, and lost productivity. The social problems associated with untreated mental illness include homelessness, illegal substance use and trafficking and family and community violence. Additionally, quality of life for individuals with untreated mental illness tends to be significantly compromised. Programs aimed at disrupting the cycle of multiple hospitalizations many mentally ill individuals experience can presumably reduce the societal and economic costs while improving quality of life for those affected.

Metrocare Services is the largest provider of mental health services in Dallas County. We serve approximately 10,000 people diagnosed with a mental illness each month. To provide quality services to such a large population, we must implement programs that are proven to be effective with adults with mental illness. Further, as a member of this community, we recognize the societal and financial impact that multiple psychiatric hospitalizations and arrests can have on the individual, their family, and the greater community. RAP takes a comprehensive, systematic approach to treating individuals with complex needs, providing community based, intensive services to quickly establish

stabilization and then work rigorously to assist the family with getting needs met to sustain safety and stabilization. Through the efforts of this program, there will be a decrease in the number of adults readmitted to psychiatric hospitals, jail, or prison.

This project addresses the following community needs:

- CN.5 Behavioral Health
- CN.6 Primary and Behavioral Care
- CN.7 Behavioral Health and Jail Population

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

This project will significantly enhance behavioral health services through recruitment of community mental health workers to serve patients with behavioral needs. Additionally, by reducing the utilization rates of psychiatric hospitalizations, Metrocare will aid our community partners by alleviating the number of adults seeking emergency services or ending up in the criminal justice system.

Project Core Components:

This project addresses the required core components:

- a) *Assess size, characteristics and needs of target population* – We will conduct a needs assessment.
- b) *Review literature/experience with populations similar to target population to determine community based interventions that are effective in averting negative outcomes* – We will develop a program design of interventions
- c) *Develop project evaluation plan using qualitative and quantitative metrics to determine outcomes-* Use of real time data for rapid cycle improvement for continuous Quality Improvement; use of standardized tools (Metrocare Clinical Data System, pharmacy records, ANSA, and Achenbach) to identify increases in community-based services and client functioning/quality of life, while also monitoring for decreases in hospitalizations and/or arrests.
- d) *Design models which include appropriate range of community-based services and residential supports* – Program design, as outlined in the project plan, will be based on information derived from literature review and agency experiences with target population, to determine effective and relevant interventions and services to offer.
- e) *Assess the impact of interventions based on standardized quantitative measures and qualitative analysis* – We will use standardized tools (Metrocare Clinical Data System and ANSA) to measure the decrease in psychiatric hospitalizations and recidivism, while increasing community-based services and client functioning/quality of life. The Adult Needs and Strengths Assessment (ANSA) is an information integration tool designed to support individual case planning, and the planning and evaluation of service systems. The ANSA for Texas is used in service delivery systems that address the mental health needs of adults.

Related Category 3 Outcome Measures:

The Category 3 measures being considered are:

- IT – 10.1.a.iv Assessment of Quality of Life (AQoL-8D)

The quality of life of those receiving RAP services, measured through Assessment of Quality of Life (AQoL-8D), is expected to progressively increase. Specifically, in DY3 of the program, we are expecting 65% of enrolled clients to demonstrate an improved Quality of Life score, increasing to 75% by end of DY4, and 80% by end of DY5.

For I-5.1, ANSA will be used. The ANSA is a clinician assessment tool. By design, it is an *objective* assessment of 8 dimensions relating to mental health, strengths, and functionality. As described in the Texas State Department of Health Services ANSA Manual, the Adult Needs and Strengths Assessment (ANSA) is a multi-purpose tool developed to support care planning and level of care decision-making, to facilitate quality improvement initiatives and to allow for the monitoring of outcomes of services. It is described to monitor treatment outcomes in two ways, a) individual items that are elevated at a score of two or three are monitored over time to determine the percent of individual improvements in scores to a rating of 0 and b) the scores within a particular dimension can be summed and compared to past overall dimension scores. For purpose of reporting on RAP, overall dimension scores will be monitored for changes.

In contrast, the AQoL used for Category 3 is a self-assessment, primarily making use of an individual's personal perception of their own well-being. By design, it is subjective to each individual. As retrieved from www.aqol.com.au/index.php/choice-of-an-instrument, there is no demonstrated 'best', 'all purpose' instrument for measuring quality of life. The AQoL instruments were designed because of the perceived limitations in the other instruments, at least in some contexts. Each of the AQoL instruments increased instrument content and length (although AQoL8D, the longest, only takes an average of 5.4 minutes to complete). The increased content may sometimes - but not always - be necessary for the context and overall instrument validity.

Relationship to other Projects:

This project is one element of the behavioral health services continuum of care and relates to all other projects that provide/enhance services along the continuum:

The related Category 1 and 2 projects are:

- 137252607.1.1 Workforce Enhancement
- 137252607.1.2 Grand Prairie Clinic
- 137252607.2.1 Integrated Primary Care and Behavioral Health
- 137252607.2.5 Behavioral Day Program
- 137252607.2.101 Patient Navigation Program

Plan for Learning Collaborative: We plan to play an active role in the development and ongoing content of RHP9 Learning Collaborative, appropriate to our project. We will also participate in any Improvement Collaboratives that are associated with the outcomes of this project to obtain additional perspectives that may enable us to improve

this project. We believe that the exchange of best practices and shared learning contributes significantly to continuous quality improvement and will advance the success of this project.

Project Valuation: Metrocare Services determined the value of each project by comparing the budgeted cost of the specific project against the cost to the community should the services go unprovided. In regards to the RAP Project, the significant cost of hospitalization, emergency room visits, and incarceration were used as comparison data against cost for the community-based RAP Project. The starting point/baseline for the program is zero, with a total census of 420 individuals served at the end of year three. The total census of those served will increase each year. It is estimated that a 9 month participation in RAP will result in less than 10% returning to the hospital in the year following completion of services.

References

1. Druss, B. G., Marcus, S. C., Olfson, M., & Pincus, H. A. (2002). The most expensive medical conditions in America. *Health Affairs*, 21(4), 105-111.
2. Bobier, C. & Warwick, M. (2004). Factors associated with readmission to adolescent psychiatric care. *Australian and New Zealand Journal of Psychiatry*, 39, 600-606.
3. Collins, S. (2012). Regional healthcare Partnership 9: Community Needs Assessment Report
4. Herman, D., Conover, S., Felix, A., Nakagawa, A., & Mills, D. (2007). Critical Time Intervention: an empirically supported model for preventing homelessness in high risk groups. *The Journal of Primary Prevention*, 28(3-4), 295-312.
5. Honberg, R., Kimball, A., Diehl, S., Usher, L., & Fitzpatrick, M., (2011, November). State Mental Health Cuts: The Continuing Crisis. Retrieved from the Nation Alliance of Mental Illness website:
<http://www.nami.org/ContentManagement/ContentDisplay.cfm?ContentFileID=147763>
6. Jaeger, J. & Vieta, E. (2007). Functional outcome and disability in bipolar disorders: ongoing research and future directions. *Bipolar Disorders*. pp. 1-2.
7. Sweeney, A., Rose, D., Clement, S., Jichi, F., Jones, I., Burns, T., & Wykes, T. (2012). Understanding service user-defined continuity of care and its relationship to health and social measures: a cross-sectional study. *BMC Health Services Research*, 12: 145. doi: 10.1186/1472-6963-12-145

Project Summary

Project Option: 1.1.2 - Expand Primary Care

Project Title: East Dallas Primary Health Care Center Expansion

Unique Project ID: 127295703.1.100

Performing Provider Name/TPI: Parkland Health & Hospital System/TPI 127295703

Provider

Dallas County Hospital District d/b/a Parkland Health & Hospital System, “Parkland”, is the public hospital and the largest major safety net hospital serving Dallas County and, in accordance with its mandate, furnishes medical aid and hospital care to the indigent and needy persons residing in the hospital district. As presented in the table below, Parkland is a critical provider in the region, particularly for the low income population. Parkland’s payer mix includes 48% Charity/Self Pay, 31% Medicaid, 14% Medicare and 7% Commercial Insurance.

Parkland operates a 725-adult bed and 65-neonatal bed acute care hospital, a Level I Trauma Center with the only ACS certified burn center in the region, 95 Specialty Clinics, 12 community health centers and 11 school-based clinics located throughout Dallas County. On an annual basis, the Parkland system provides care to approximately 290,000 individuals through approximately 1,400,000 encounters.

Intervention

Expand access to primary care in East Dallas by increasing clinic hours, hiring additional staff and providers, and replacing the existing East Dallas Health Center to expand capacity.

Need for the Project

There is significant unmet need for primary care services for the indigent in Dallas County. There are more than one million in Dallas County with income levels at or below 200% FPL (Federal Poverty Level). This project will make a substantial contribution to the new primary care visit capacity in Dallas County. The value of the additional access is leveraged because it will be provided through extended hours of operation provided greater flexibility and convenience to the patients served. Additionally by moving the Health Center to a new location, patients will receive services in their community and will have access to a public transportation station located across from the new facility. The new facility will increase exam rooms by 6 and add 2 new clinical teams.

Target Population

The target population includes more than one million residents of Dallas County with income levels at or below 200% FPL, particularly those patients in the catchment areas East Dallas Health Center. Of the individuals served, 60% are expected to be Medicaid patients, and 20% are expected to be uninsured.

Expected Patient Benefits

This project will improve access to primary care services for patients with incomes less than 200% FPL in the catchment areas of East Dallas Health Center and the South Dallas community by expanding capacity to an additional ~~the 5,~~ 4,500 visits by DY5.

In addition to increasing the number of patients who can be seen within the COPC primary care clinic system the utilization of a medical home model will provide more coordinated care for patients. East Dallas Health Center is already a NCQA Patient Centered Medical Home. The Center will be reapplying for NCQA Patient Center Medical Home designation under the 2014 guidelines.

Description of QPI

Number of primary care encounters provided. The East Dallas Health Center provided 44,217 patient visits in FY2013. In DY4, an additional 2500 primary care visits will be provided over the DY3 baseline. In DY5, an additional 4,500 primary care visits will be provided at the East Dallas Health Center over the DY3 baseline, for a cumulative quantifiable patient impact (QPI) of 7000 visits.

Description of Category 3 Measure

The Category 3 measures being considered are:

- IT-1.2: Annual monitoring for patients on medications: ACE inhibitors or ARBS
- IT-1.12: Diabetes care: Retinal Eye Exam.
- IT-12.11: Immunization for Adolescents – HPV

Project Option: 1.1.2-- Expand Primary Care

Project Title: East Dallas Primary Health Center Expansion

Unique Project ID: 127295703.1.100

Performing Provider Name/TPI: Parkland Health & Hospital System/TPI 127295703

Project Description:

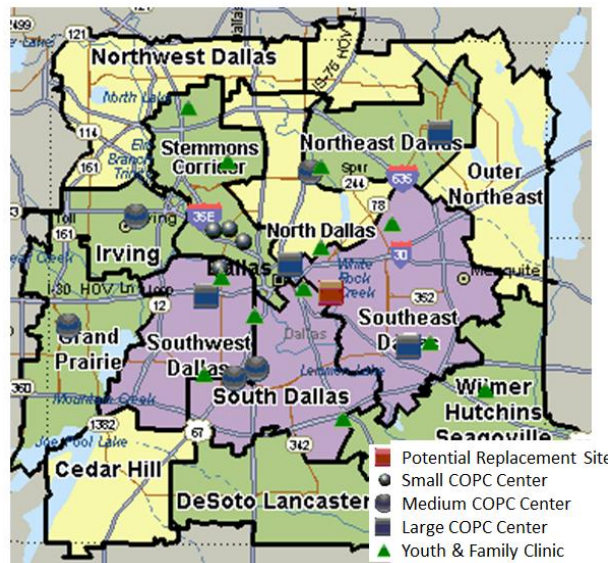
Expand Parkland’s primary care capacity by replacing East Dallas Health Center and adding two new medical teams; increasing capacity to serve low income/indigent patients in the Southern Sector.

Parkland currently provides services in twelve Community Oriented Primary Care (COPC) health centers and twelve Youth and Family centers. Parkland has identified a potential site for the construction of a new COPC Health Center as a replacement and expansion of East Dallas Health Center:

The project has identified the replacement location for East Dallas Health Center:

- Replace East Dallas Health Center
- Expand an additional 100 hours of operations and add 2 new clinical teams for 6 new FTE’s
- Increase patient visits by 2,500 over DY3 baseline in year 4 and by 4,500 over DY3 baseline in year 5

The adjacent map (Dallas County markets) provides an overview of clinic sites. This expansion serves the Dallas County community, targeting those whose income levels fall below 200% FPL, through improved access to primary care and improved management of chronic disease for the low income/indigent population. Additional staff and hours will provide the capacity to increase the number of primary care visits.



The Weekend Clinic will be opened at least 2 Saturdays per month from 8:00 AM – 5:00 PM. Initially, the Weekend Clinic is scheduled to be opened every 1st and 3rd Saturday of the month, with the intent of increasing days as we ramp up interest to our patient population. We will ensure that the Weekend Clinic will meet or exceed 100 hours of expanded patient care by the end of DY3. On the weeks that the Weekend Clinic is opened, the site will provide an additional 8 hours of primary patient care.

Goals and Relationship to Regional Goals:

Project Goals:

- Replace East Dallas Health Center
- Expand an additional 100 hours of operations and add 2 new clinical teams for 6 new FTE's
- Increase patient visits by 2,500 in DY4 and an additional 2,000 in DY5
- Incorporate the benefits of several additional projects the chronic care model and the enhancement of the Primary Care Medical Home model. Provider should include project numbers of referenced projects. Provider Response:

The additional Parkland Hospital projects that will be utilizing the chronic care model and the PCMH include:

- 127295703.1.1 Expand existing primary care capacity – Grand Prairie
- 127295703.1.2 Expand existing primary care capacity – other sites
- 127295703.1.6 Establish new primary care clinics – Acute Response Clinic

This project meets the following Region 9 goals:

- **CN3 - Healthcare Capacity – Primary and Specialty Care:** The goal of this project aligns with the regional goal of increasing access. The replacement of East Dallas Health Center including the addition of 2 new health center teams (6 FTE's) which will effectively expand service hours will increase appointment availability reducing unnecessary emergency department utilization.
- **CN4 -** This project will increase that accessibility to healthcare for adult and pediatric populations by providing a new medical home for the East Dallas community.
- **CN9 - Chronic Disease – Adult and Pediatric:** Provide Primary care in a Medical Home model that extends the primary chronic disease management throughout the health system
- **CN12 - Emergency Department Usage and Readmissions:** Establish comprehensive care management program that includes a standardized discharge planning process to insure patients are discharged to the appropriate post-acute care setting

Challenges: Challenges include securing the new site and having structures in place by the end of the third year of this three year project. Additional challenges include recruitment of providers to staff the additional hours added by adding the new project staff. Several of the COPC clinics are in neighborhoods where crime is high and the safety of the patients and staff must be paramount when extending hours into evenings and on weekends. However Parkland is determined to insure additional access and will develop an implementation plan that will address the challenges.

3 Year Expected Outcome for Providers and Patients: Parkland expects to add capacity sufficient to provide 4,500 additional primary care clinic visits by DY5 at the East Dallas health center.

In addition to increasing the number of patients who can be seen within the COPC primary care clinic system the utilization of a medical home model will provide more coordinated care for patients.

The East Dallas Health Center is already a NCQA Patient Centered Medical Home. The Center will be reapplying for NCQA Patient Center Medical Home designation under the 2014 guidelines.

Starting Point/Baseline: In fiscal year 2013, Parkland provided 44,217 provider visits at the East Dallas Health Center identified for replacement and expansion:

Quantifiable Patient Impact: Number of primary care encounters provided. In DY4, an additional 2,500 primary care encounters will be provided over DY3 baseline. By year 5, an additional 4,500 primary care visits will be provided at the East Dallas Health Center over DY3 baseline for a cumulative QPI of 7000 visits for DY4&5.

Rationale: In Dallas County low income, uninsured, and minority populations disproportionately lack access to care. Dallas County has more than a million residents living at or below 200% poverty, many of whom have very limited access to health services.¹ Parkland is the largest provider of care for the medically indigent in the region; however, the system is at capacity, constraining care throughout the continuum including not only the primary care clinics but the ED and the specialty clinics. The existing East Dallas Health Center is open 50 hours a week. Weekend hours will be added beginning in May 2014. Project expects to add an additional 100 hours of access in DY3 through the addition of Saturday hours. The additional hours will continue when the new clinic is replaced in January 2015.

In coordination with other Parkland projects, this project will expand access to primary care through the relocation of the East Dallas Health Center by:

- 1) Providing care to the patients in their community. Based on an assessment of patients served at the current East Dallas Health Center, the facility is not located near the patients' residence. By relocating the current facility, we will be able to provide care to the patients in their community. Additionally the new site will be located in a federally-designated health professional shortage area (HPSA).
- 2) Reducing the barrier of transportation. The new site will be located across from a public transportation station,
- 3) Increasing access through the addition of 6 new exam rooms and 2 new clinical teams.

¹ U.S. Census Bureau. 2009 American Community Survey. http://www.census.gov/acs/www/data_documentation/summary_file/

Other Parkland projects will:

- 4) Provide Primary care in a Medical Home model that extends the primary chronic disease management throughout the health system
- 5) Establish comprehensive care management program that includes a standardized discharge planning process to insure patients are discharged to the appropriate post-acute care setting

This project is designed to leverage the investment in new capacity by providing that capacity through a new site and an additional 100 hours of operation – to provide access in a manner that will provide enhanced convenience and flexibility to the patients served by this project.

This project addresses the following community needs:

- CN.3 Healthcare Capacity: Specialty physician shortages exist in Dallas County and of those currently providing care, many close their practices to Medicaid/indigent patients.
- CN.4 Primary Care and Pediatrics: This project will increase that accessibility to healthcare for adult and pediatric populations by providing a new medical home for the East Dallas community.
- CN.9 Chronic Disease: The addition of a clinic at Hatcher Station will increase accessibility to healthcare for populations in East Dallas who suffer from chronic diseases and co-morbidities.

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

More than 80% of the patient visits provided by the COPC network are for indigent patients and Medicaid beneficiaries. By introducing new primary care visits, this project directly supports the need for expanded primary care services for the low income patient population in the neighborhoods already served by the Parkland community health system. Expanding hours, adding more exam rooms and staff will provide access to a system of care including a primary care medical home through which same day appointments, episodic and chronic disease management services will provide a comprehensive system of primary care.

The project has no related activities funded by U.S. Department of Health & Human Services.

Project Core Components:

This project includes the required core components:

- a) **Expand primary care clinic space:** This project will expand clinic space by adding 6 exam rooms. Additionally the exam room space will be larger.

- b) **Expand primary care clinic hours:** This project will add weekend hours beginning in May 2014.
- c) **Expand primary care clinic staffing:** This project will expand primary care staffing by the addition of 6 clinic staffing.

Related Category 3 Outcome Measures:

The Category 3 measures being considered are:

- IT-1.2: Annual monitoring for patients on medications
- IT-1.12: Diabetes care: Retinal Eye Exam
- IT-12.11: Immunization for Adolescents – HPV

The tasks for primary care providers are many, including but not limited to – medication management for persistent medications, appropriate preventive services for chronic disease such as retinal scanning for diabetics and preventive services for adolescents.² Among other chronic disease and acute care issues, this project will specifically address diabetes retinal exams, monitoring for patients on ACE inhibitors or ARBs, and preventive services for children and adolescents (patients who by age 13 years were up-to-date with recommended adolescent immunizations NQF 1407).

- Annual monitoring for patients on persistent medications – ACE inhibitors/ARBs. Congestive heart failure (CHF) and diabetes are two of Parkland’s most common diagnoses, resulting in a significant number of patients on chronic medications needing to be monitored to decrease risk of adverse drug events from long-term medication use or misuse of medications. Persistent use of ACE Inhibitors or ARBs warrants monitoring and follow-up by the medical home to assess for side-effects, particularly loss of kidney function, and adjust drug dosage/therapeutic decisions accordingly.³ The costs of annual monitoring are then offset by the reduction in health care costs associated with complications arising from lack of monitoring and follow-up of patients on long-term medications⁴.

² American Diabetes Association, Position statement: standards of medical care in diabetes - 2012 Diabetes Care, 2012. 35 (Supp 1): p. S11-S63.

³ Jessup, M., et al., 2009 focused update: ACCF/AHA guidelines for the diagnosis and management of heart failure in adults: a report of the American College of Cardiology Foundation/American Heart Association Task Force on Practice Guidelines: developed in collaboration with International Society for Heart & Lung Transplantation. 2009. 119(14): 1977-2016.

⁴ Briggs, A., et al., Cost effectiveness of perindopril in reducing cardiovascular events in patients with stable coronary artery disease using data from the EUROPA study. Heart, 2007. 93: p. 1081-1086.

- Diabetes: Retinal Eye Exam. Diabetic retinopathy, one of the leading causes of blindness in adults, can be treated if detected and addressed in the early stages.⁵

Relationship to other Projects: As stated earlier, Parkland fully intends to utilize the opportunities set forth through the waiver to ensure its sustainability and viability in the region as the major safety net public hospital serving Dallas County. Parkland will balance the care continuum to ensure those patients who need a medical home and/or require care through a chronic care model have access and also assure that the patients who do not need a medical home but require occasional medical care also receive the care they need in the right setting. Without expanding the primary care system, Parkland would be unable to successfully balance the needs of the patients who must seek care throughout the entire health system, thus, all projects are inter-connected elements within Parkland's projects.

Other RHP9 providers are also expanding or establishing new clinics for primary care. Several of the providers are focusing specifically on Pediatrics. However, for those providers who are similarly opening clinics the areas are greatly underserved. Parkland's projects are focused not only on the underserved but also on the indigent/low income patients in those areas.

The related Category 1 and 2 Projects are:

- 127295703.1.1 Expand existing primary care capacity – Grand Prairie
- 127295703.1.2 Expand existing primary care capacity – other sites
- 127295703.1.6 Establish new primary care clinics – Acute Response Clinic
- 195018001.1.1 Establish more care clinics – Carrollton
- 121790303.1.1 Expand Primary Care Capacity – Garland
- 121776204.1.1 Expand Primary Care Capacity – Irving
- 139485012.1.1 Expand Specialty Care Capacity – Garland
- 139485012.1.1 Expand Primary Care Capacity – Dallas
- 138910807.1.1 Expand Primary Care Capacity – Pediatric Dallas
- 138910807.1.2 Expand Primary Care Capacity – Pediatric Dallas
- 020943901.1.3 Expand Primary Care Capacity – Pediatric Dallas
- 020908201.1.1 Expand existing primary care capacity – Dallas
- 126686802.1.1 Establish more primary care clinics – Dallas
- 126686802.1.2 Expand Primary Care Capacity -Dallas

Plan for Learning Collaborative: We plan to play an active role in the development and ongoing content of RHP9 Learning Collaborative, appropriate to our project. We

⁵ American Optometric Association. *Diabetes is the leading cause of blindness among most adults.* 2012 [cited 2012 October 19]; Available from: <http://www.aoa.org/x6814.xml>

will also participate in any collaborative that is associated with the outcomes of this project to obtain additional perspectives that may enable us to improve this project. We believe that the exchange of best practices and shared learning contributes significantly to continuous quality improvement and will advance the success of this project.

Project Valuation: Parkland adopted the RHP 9 global method to project valuation supplemented by comparisons with like projects within and outside the region. Each project was evaluated with respect to its transformational impact, population served, project size and complexity, alignment with the community needs, cost avoidance impact, sustainability and partnership collaboration.

The impact this project will have on the Dallas low income population by introducing capacity growth of 4,500 annual visits over the three years of the project to this under-resourced community and the alignment with the community need for primary care capacity expansion were primary factors included in the valuation process. The estimated project valuation in DY3 is \$2,352,788, DY4 is \$2,868,429, and DY5 is \$4,015,201.

This project will address the significant unmet need for primary care services for the indigent in Dallas County. More than 80% of the patient visits provided by the COPC network are for indigent patients and Medicaid beneficiaries. The area served by this project is complementary to and does not conflict with other RHP 9 DSRIP projects [Project score = 7.38 out of 10]. From this broad reasonableness review, this project value is demonstrated to fit below the comparative value range.

Project Summary

Project Option: 1.9.2 - Expand high impact specialty care capacity in most impacted medical specialties

Project Title: Gynecology Specialty Services Expansion

Unique Project ID: Project 127295703.1.101

Performing Provider Name/TPI: Parkland Health & Hospital System/TPI#127295703

Provider

Dallas County Hospital District d/b/a Parkland Health & Hospital System, “Parkland”, is the public hospital and the largest major safety net hospital serving Dallas County and, in accordance with its mandate, furnishes medical aid and hospital care to the indigent and needy persons residing in the hospital district. As presented in the table below, Parkland is a critical provider in the region, particularly for the low income population. Parkland’s payer mix includes 48% Charity/Self Pay, 31% Medicaid, 14% Medicare and 7% Commercial Insurance.

Parkland operates a 725-adult bed and 65-neonatal bed acute care hospital, a Level I Trauma Center with the only ACS certified burn center in the region, 95 Specialty Clinics, 12 community health centers and 11 school-based clinics located throughout Dallas County. On an annual basis, the Parkland system provides care to approximately 290,000 individuals through approximately 1,400,000 encounters.

Intervention

The proposed project will expand gynecology specialty services 10 hours per week per site at 8 existing Women’s Health Center sites throughout Dallas County. Services will focus on screening and follow up of cervical dysplasia, i.e., follow up of abnormal Pap results. The demonstration project will initiate specialty gynecology services at existing clinic locations.

During the project, Nurse Practitioners will provide routine exams followed by colposcopy and biopsy (per established medical protocols) for patients with abnormal Pap test results. Additional services provided by nurse practitioners may include medical management of abnormal bleeding, pelvic pain, and other gynecology problems. Physicians will be available for complex cases. Referrals may be made to the Gynecology Specialty Clinic for complex procedures such as cryotherapy, LEEP, conization, and surgical intervention. Additional referrals will be made to the Gynecology/Oncology clinic for significant findings and advanced cases of cancer. Uro-gynecology and incontinence issues may be managed by Nurse Practitioners in the community or referred to the centralized clinic as needed.

Need for the Project

Women in need of gynecology specialty services at Parkland are low income and medically indigent -- at or below 200% of FPL. Existing community clinics (Women’s Health Centers) focus on family planning and prenatal care due to available funding

streams (e.g., Medicaid, CHIP Perinate, Federal and State Family Planning Grant Programs). Very limited gynecology screening and follow up services are offered in the community setting for women beyond child-bearing age -- only 8% of more than 168,000 community visits.

Most gynecology specialty care is offered one large Gynecology Clinic at the main Parkland campus. As a result, existing gynecology specialty clinic appointments have peaked at over 28,600 per year

Due to limited space and providers, many gynecology specialty appointments are booked months in advance. Patients with significant findings are often overbooked, creating overcrowded conditions in the centralized specialty clinic.

Recent legislative changes to family planning funding resulted in Planned Parenthood clinics closing. Consequently, demand at Parkland Women's Health Center locations increased. Additional gynecology capacity in the community clinics is needed to meet the demand for routine and specialty care. Funding under the State's new Expanded Primary Health Care Program is insufficient to cover the number of patients requiring care. In fact, one contractual requirement of the program is to continue caring for patients even after funding is exhausted.

Implementation of the DSRIP 3-year demonstration project will bring additional gynecology specialty services to the community setting where patients received care in the past (i.e., prenatal or family planning). Services will be available in a timely manner, allowing clinicians to identify and treat pre-cancerous conditions earlier.

Target Population

The target population is women between childbearing age and Medicare eligibility (approximately 45-65) in need of routine gynecological services, and women of any age who have an abnormal Pap test result. Approximately 75% of patients served will be indigent or Medicaid.

Expected Patient Benefits

As a result of this program, PHHS expects the following benefits:

- Increase in the number of women receiving gynecological services
- Quicker intervention after an abnormal Pap test result

Description of QPI

The number of advanced practice nurses providing gynecology specialty care will increase from 0 to 2 during demonstration year 3 of the project. In subsequent years the number of providers will increase to support expanded services. As a result, the community gynecology specialty clinics will be established in demonstration year 4, providing 360 hours of service and completing 5,400 visits. During demonstration year 5, completed gynecology specialty clinic appointments for low income women will increase to 12,000, 17,400 in total for DY4&5. The number of low income women receiving screening and treatment for gynecologic conditions such as cervical cancer will increase dramatically due to the project.

Description of Category 3 Measure

The Category 3 measures being considered are:

- IT-12.15 Abnormal Pap Test follow up rate
- IT- 12.2 Cervical Cancer Screening

Project Option: 1.9.2 - Expand high impact specialty care capacity in most impacted medical specialties

Project Title: Gynecology Specialty Services Expansion

Unique Project ID: Project 127295703.1.101

Performing Provider Name/TPI: Parkland Health & Hospital System/TPI#127295703

Project Description:

Women in need of gynecology specialty services at Parkland Health and Hospital System (PHHS) are low income and medically indigent -- at or below 200% of FPL. Existing community clinics (Women’s Health Centers) focus on family planning and prenatal care due to available funding streams (e.g., Medicaid, CHIP Perinate, Federal and State Family Planning Grant Programs). Very limited gynecology screening and follow up services are offered in the community setting for women beyond child-bearing age -- only 8% of more than 168,000 community visits.

Most gynecology specialty care is offered one large Gynecology Clinic at the main Parkland campus. As a result, existing gynecology specialty clinic appointments have peaked at over 28,600 per year.

Due to limited space and providers, many gynecology specialty appointments are booked months in advance. Patients with significant findings are often overbooked, creating overcrowded conditions in the centralized specialty clinic.

Implementation of the DSRIP 3-year demonstration project will bring additional gynecology specialty services to the community setting where patients received care in the past (i.e., prenatal or family planning). Gynecology services will be expanded 10 hours per week per site at 8 existing Women’s Health Center sites throughout Dallas County. Services will focus on screening and follow up of cervical dysplasia, i.e., follow up of abnormal Pap results. During the project, Nurse Practitioners will provide routine exams followed by colposcopy and biopsy (per established medical protocols) for patients with abnormal Pap test results. Additional services provided by nurse practitioners may include medical management of abnormal bleeding, pelvic pain, and other gynecology problems. Physicians will be available for complex cases. Referrals may be made to the Gynecology Specialty Clinic for complex procedures such as cryotherapy, LEEP, conization, and surgical intervention. Additional referrals will be made to the Gynecology/Oncology clinic for significant findings and advanced cases of cancer. Uro-gynecology and incontinence issues may be managed by Nurse Practitioners in the community or referred to the centralized clinic as needed. Services will be available in a timely manner, allowing clinicians to identify and treat pre-cancerous conditions earlier.

	Clinic Name & Location	DY4 Specialty Clinic Hours: (example, Monday - Thursday, 9am - 1pm)	DY5 Specialty Clinic Hours:
Clinic 1	Vickery Health Center	Monday 7:30 a.m. – 6:00 p.m.	Monday 7:30 a.m. – 6:00 p.m.
Clinic 2	DeHaro Health Center	Tuesday 7:30 a.m. – 6:00 p.m.	Tuesday 7:30 a.m. – 6:00 p.m.

Clinic 3	Lakewest Health Center	Wednesday 7:30 a.m. – 6:00 p.m.	Wednesday 7:30 a.m. – 6:00 p.m.
Clinic 4	East Dallas Health Center	Friday 7:30 a.m. – 6:00 p.m.	Friday 7:30 a.m. – 6:00 p.m.
Clinic 5	Garland Health Center		Monday 7:30 a.m. – 6:00 p.m.
Clinic 6	Irving Health Center		Wednesday 7:30 a.m. – 6:00 p.m.
Clinic 7	Oak West Health Center		Thursday 7:30 a.m. – 6:00 p.m.
Clinic 8	Southeast Health Center		Friday 7:30 a.m. – 6:00 p.m.

Goals and Relationship to Regional Goals:

Project Goals:

1. Increase the number of women receiving gynecologic screening and follow up services after an abnormal pap test result.
2. Decrease the time between abnormal pap test results and the first follow up appointment.
3. Increase the number of women receiving gynecology specialty services for conditions such as abnormal bleeding, pelvic pain, etc.

Services will be provided to patients who receive care at or are referred to Parkland Health & Hospital System, typically members of low income, underserved populations. As capacity permits, additional screening services may be provided along with same day gynecology appointments for minor, non-urgent problems such as vaginal discharge, itching, STI exposure or other conditions.

This project meets the following Region 9 goals:

- **CN.3: Capacity - Primary and Specialty Care:** This project will increase access to gynecological services by expanding hours at 8 clinics.
- **Emergency Department Usage and Readmissions:** This project has the potential to positively impact others focused on reduction of ED utilization for non-urgent conditions. By providing access to gynecologic specialty care in the community, patients may not resort to obtaining the care they need in the emergency setting.

Challenges: Hiring and training advanced practice nurses will be the greatest challenge. However, the availability of providers has increased since some Planned Parenthood clinics have reduced services or closed clinics. Parkland currently employs over 200 advanced practice nurses, some of whom will be attracted to the opportunity for obtaining advanced skills such as colposcopy.

3-Year Expected Outcome for Providers and Patients:

The project will progressively add up to 6 advanced practice nurses who will provide services at multiple sites throughout the Dallas community, travelling to as many as 8 established clinic locations.

Expansion of services will significantly increase the availability of Gynecology appointments for low income women in Dallas County. More appointments will decrease the wait time for patients seeking annual exams, Pap tests, clinical breast exams, follow up of abnormal pap results, colposcopy, biopsy, pelvic pain, abnormal bleeding, incontinence, and referral for surgical intervention. Referrals for highly specialized gynecology care and evaluation for surgical intervention will be made by midlevel providers to Gynecology specialists.

Overall, the number of completed gynecology specialty encounters will increase during the demonstration period.

Specialty Care Information:

1) Does the project include a clear description of specialties that the initiative is focusing on?

Services will focus on cervical screening and follow up of abnormal Pap results, colposcopy, and biopsy.

2) Are selected specialty areas in high need for the Medicaid/uninsured population?

Women in need of gynecology specialty services at Parkland are low income and medically indigent -- at or below 200% of FPL.

3) Are high-intensity specialties in areas of high need for the Medicaid/uninsured population?

Existing community clinics (Women's Health Centers) focus on family planning and prenatal care due to available funding streams (e.g., Medicaid, CHIP Perinate, Federal and State Family Planning Grant Programs). Very limited gynecology screening and follow up services are offered in the community setting for women beyond child-bearing age -- only 8% of more than 168,000 community visits.

Starting Point/Baseline: During demonstration year 3, the number of advance practice nurses will increase from 0 to 2. In subsequent years, staff numbers will increase to support the volume metrics established for demonstration years 4 and 5.

During demonstration year 4, the number of clinic hours will increase from 0 ~~to 360~~ to 2,080 (this calculation does not account for holiday closures).

During demonstration year 4, the number of visits will increase from 0 to ~~5,400~~ 4,386 (this calculation accounts for provider vacation time).

During demonstration year 5, the number of clinic hours will increase from ~~360~~ 2,080 to ~~720~~ 4,160.

(this calculation does not account for holiday closures).

During demonstration year 5, the number of visits will increase from ~~5,400~~ 4,386 to ~~12,000~~ 8,772.

(this calculation accounts for provider vacation time).

Quantifiable Patient Impact: Most patients will be below the federal poverty level and ineligible for state or federal programs. Over the course of the 3-year period, the number of clinic visits will increase from 0 to 12,000. Patient encounters will be documented in the electronic health records (EHR). Reporting from the EHR will demonstrate the impact of the project related to patient volumes and demographics as well as the type of services rendered. During demonstration year 5, completed gynecology specialty clinic appointments for low income women will increase to 12,000, 17,400 in total for DY4&5.

Rationale: According to the Centers for Disease Control, it is estimated that about 11,967 new cases of HPV-associated cervical cancer are diagnosed in the United States each year. More black and Hispanic women get cervical cancer than women of other races or ethnicities, possibly because of decreased access to Pap testing or follow-up treatment.

At Parkland Health & Hospital System the demand for gynecology services is high. Annually, the centralized gynecology specialty clinic's volume is between 26,000 to 28,000 visits; the clinic receives approximately 150 referrals per week. As of September 11, 2013, the next available dysplasia appointment is mid-December. The next available generic gynecology specialty visit is late December. At the Lake West Women's Health Center, there are 155 patients on a waiting list for gynecology annual exams. A study conducted in May 2012 showed that more than 3,800 patients with ESI scores of 4-5 utilized the Parkland ED within 6 months of a visit to one of the Women's Health Centers. Some patients were self-referred; others visited the ED due to the lack of community services. Approximately 43% of the ED visits were from patients associated with the Lake West Women's Health Center. This location focuses on gynecologic care and next available appointments are often booked 6-8 months out. Expanding gynecology services to additional Women's Health Centers may reduce ED utilization for non-urgent gynecologic care.

Lack of appointments leads patients to put off routine screening, allowing pre-cancerous or early stages of cancer to progress. Patients in the Parkland system, have little to no access to other community providers due to the lack of insurance or other financial resources to cover the cost of care. Women who are sterilized or are not of child-bearing age are not covered by most family planning programs and are unlikely to be eligible for Medicaid coverage. With no coverage, patients wait to be seen in the Parkland system.

Lack of appointment availability also drives some patients to utilize the Emergency Department. Additional capacity in neighborhood clinics may reduce the burden of non-emergent visits in the Women's ED.

This project seeks to increase access to essential gynecology services for low income women in order to enhance the overall health of the community.

This project addresses the following community needs:

- CN.3 Healthcare Capacity: Specialty physician shortages exist in Dallas County and of those currently providing care, many close their practices to Medicaid/indigent patients. Midlevel providers will be trained to provide specialty services in areas with physician shortages.
- CN.8 Specialty Care: Demand for specialty care services exceeds the current supply

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

Currently, gynecology specialty services are available at one community clinic location, Lake West Women's Health Center. The vast majority of gynecology specialty services are offered at Parkland's centralized Gynecology Clinic. Most of Parkland's gynecology patients wait for months for an appointment due to the high demand for and short supply of services.

Existing community clinic locations have traditionally provided only primary care services. The demonstration project will initiate specialty gynecology services at existing clinic locations, utilizing midlevel providers practicing under evidence-based clinical protocols (guided by CDC recommendations). Enhancing the specialty services available at community clinic locations will allow patients to be screened and treated earlier for cervical dysplasia (and other conditions), prevent unnecessary visits to the emergency department, and improve the overall health of the community. In addition, the patient experience will improve due to improved access and reduced crowding at the main clinic location.

Patients without insurance are unable to obtain gynecology services in the community. Unfortunately, there are few local, state or federal sources of funding for gynecology services. The few that exist, such as Breast and Cervical Cancer Screening (BCCS) or Medicaid for Breast and Cervical Cancer (MBCC), are underfunded and difficult to access. In fact, MBCC coverage is only available after problems are detected.

The demonstration project is designed to offer services to low income women between 45 and 65 years of age who are currently ineligible for local, state or federal programs. As coverage becomes available under the Affordable Care Act (ACA), some women may become eligible for insurance. The sustainability of the project increases as coverage expands. However, many women will not be eligible for coverage. The demonstration project will provide screening and early treatment for all women, ultimately contributing to the overall health of the community.

Project Core Components:

The required core components for this project include:

- a) Increase service availability with extended hours: Service will be expanded by 10 additional hours per week, per site with four sites expanding in DY 4 and an additional 4 sites in DY 5 for a total of 8 sites offering additional clinic hours.

- b) Increase number of specialty clinic locations: 8 existing Women's Health Center locations are expanding service hours from 4 ten hour days to 5 ten hour days per week. Women's Health Care Nurse Practitioners will be trained to provide gynecology services including dysplasia, coloposcopy, cervical and endometrial biopsies, endocervical curettage, cryotherapy, medical management of abnormal bleeding, and other care. Training will include didactic courses and clinical preceptorship. The medical director for dysplasia services will serve as a preceptor to ensure all midlevel providers understand evidence-based clinical protocols. Faculty, residents and fellows may rotate to clinic locations to participate in community gynecology specialty services, allowing trainees to enhance their gynecology specialty skills and assist midlevel practitioners as appropriate.
- c) Implement transparent, standardized referrals across the system: Current referral guidelines are under review/revision by the Gyn Specialty Medical Director. Upon completion Medical Director will educate referring providers on new process for referring patients to Gyn Specialty.
- d) *Conduct quality improvement for project using methods such as rapid cycle improvement:* - Progress toward implementation of the demonstration project will be tracked and monitored under the Gynecology Performance Improvement Committee in the Division of Women & Infants Specialty Health. Quality metrics will be developed, tracked, communicated, and monitored during the implementation and operation of the project. Various quality improvement methodologies will be utilized by clinical and non-clinical staff to track program impact and enhance performance. Challenges, successes, and lessons learned will be shared with collaborators inside and outside the Parkland organization.

Related Category 3 Outcome Measures:

The Category 3 measures being considered are:

- IT-12.15 Abnormal Pap Test follow up rate
- IT- 12.2 Cervical Cancer Screening

By increasing access to gynecological services, we expect to decrease the turnaround time from an abnormal Pap test result to a follow-up appointment and increase identification of cervical cancer through additional screenings.

Relationship to other Projects:

The gynecology clinic initiative will fit well with Category 1 infrastructure projects, i.e., 1.5 and 1.1 (pending) expanding care projects. Goals are also likely to align with projects under Category 2, section 2.15 for integrating primary and behavioral health care services. While there are several related projects within Region 9 that focus on expanding specialty health services, this one is different in that it is focused specifically on women's health.

The related Category 1 and 2 projects are:

- 127295703.1.5 Expand Specialty Care Capacity
- 195018001.1.2 Expand specialty care capacity – Carrollton
- 121790303.1.2 Expand specialty care capacity – Garland
- 121776204.1.2 Expand specialty care capacity – Irving
- 139485012.1.2 Expand specialty care capacity – Dallas

Plan for Learning Collaborative: We plan to play an active role in the development and ongoing content of RHP9 Learning Collaborative, appropriate to our project. We will also participate in any Improvement Collaboratives that are associated with the outcomes of this project to obtain additional perspectives that may enable us to improve this project. We believe that the exchange of best practices and shared learning contributes significantly to continuous quality improvement and will advance the success of this project.

Project Valuation: This project seeks funding to train midlevel providers and establish new clinic services for low income women (12,000 visits). The total valuation of the project is \$11 million.

The DY 3 allocation of \$2,000,000 will be utilized to train midlevel providers to perform colonoscopy and other specialty services. Training is offered in several locations nationally, requiring travel, lodging, and living expenses for several weeks. Once didactic training is complete, midlevel providers must spend time with the medical staff for close observation and preceptorship. Medical staff provides close supervision and training under evidence-based clinical protocols until clinical competence is established. Funding during DY3 will provide medical supervision to precept and proctor midlevel providers while clinical competence is established and credentialing is obtained. Once credentials are in place, clinical services will be expanded.

The DY4 and DY5 allocations of \$6,000,000 will be utilized to expand clinical services at numerous clinic locations. Services will be offered in multiple locations throughout the community which are currently closed one day per week. Clinical teams will travel to the sites, opening the clinic for specialty services at least one day per week. In addition to midlevel providers, support staff will be hired and trained for each clinical team. Each site requires staff to manage appointments and registration processes (clinic staff assistants and financial counselors), provide clinical support during examinations (RN, LVN, medical assistants), offer laboratory services (phlebotomist and cytology technician). Staffing will be assessed as services are provided to ensure careful stewardship of funding.

Project Summary

Project Option: 1.12.2 - Enhance service availability (i.e., hours, locations, transportation, mobile clinics) of appropriate levels of behavioral health care. Expand the number of community based settings where behavioral health services may be delivered in underserved areas

Project Title: Post-Partum Mental Health Initiative

Unique Project ID: 127295703.1.102

Performing Provider Name/TPI: Parkland Health & Hospital System/ 127295703

Provider

Dallas County Hospital District d/b/a Parkland Health & Hospital System, “Parkland”, is the public hospital and the largest major safety net hospital serving Dallas County and, in accordance with its mandate, furnishes medical aid and hospital care to the indigent and needy persons residing in the hospital district. As presented in the table below, Parkland is a critical provider in the region, particularly for the low income population. Parkland’s payer mix includes 48% Charity/Self Pay, 31% Medicaid, 14% Medicare and 7% Commercial Insurance.

Parkland operates a 725-adult bed and 65-neonatal bed acute care hospital, a Level I Trauma Center with the only ACS certified burn center in the region, 95 Specialty Clinics, 12 community health centers and 11 school-based clinics located throughout Dallas County. On an annual basis, the Parkland system provides care to approximately 290,000 individuals through approximately 1,400,000 encounters.

Intervention

The Postpartum Depression Program will integrate behavioral health into the outpatient obstetrics setting to provide increased access to mental health services and an optimal environment for the treatment of postpartum depression. Mental health counselors will be added to existing clinical staff to provide individual/group counseling services and phone follow-up to patients onsite at eight Women’s Health Centers located throughout the Dallas community. Community-based counselors will refer patients with complex psychiatric disorders to a psychiatrist for specialty care.

Need for the Project

It is well documented in medical literature that 10-20% of women will experience postpartum depression. These statistics project that approximately 1,000-2,000 of Parkland’s patients may experience postpartum depression, and, therefore, be in need of mental health services. Additional women outside of the Parkland system (e.g., Denton and Kaufman Counties) will need postpartum depression services. Intervention is important as literature states that “depression in women may be associated with reduced attachment, reduced parent–child bonding, and delays in offspring’s cognitive and emotional development” along with the risk of maternal suicide and infant harm or death. In addition, children of mothers with postpartum depression can: 1) become withdrawn, irritable, or inconsolable; 2) display insecure attachment and behavioral problems; 3)

experience problems in cognitive, social, and emotional development; 4) have higher risk of anxiety disorders and major depression in childhood and emotional development. Intervention with women may prevent the perpetuation of mental health problems among family members, leading to long-term mental health and health care cost savings.

Target Population

The target population for the proposal includes more than 10,000 female obstetrical patients seen at the Parkland Women's Health Centers (or referred by community providers). The primary focus will be on those who are experiencing behavioral health disorders. Specific attention will be placed on anxiety and mood disorders, especially postpartum depression, bipolar disorder and schizophrenia or schizoaffective disorders. The population served by this project is expected to be 50% Medicaid, and 30% low-income uninsured.

Expected Patient Benefits

Appropriate screening, intervention and referral will provide the necessary services to the patient population. Currently, the only intervention offered to patients is referral to a central psychiatric clinic. Under the demonstration project, intervention will be stratified, based on the needs of the individual patient. Early intervention may prevent problems from progressing to conditions requiring acute care. Harm to children and families may be averted.

Description of QPI

During the progression of the demonstration project the number of community-based locations offering mental health services for postpartum women will increase from 0 to 4 to 8 (DY3-DY5). In addition, the number of individuals served in the community will increase from 0 in DY3, to 400 in DY4, to 1,200 in DY5 for a cumulative QPI of 1,600.

Description of Category 3 Measure

The Category 3 measure being considered is:

- IT-11.7 Initiation of Depression Treatment
- IT-11.16 Assessment for Substance Abuse Problems of Psychiatric Patients
- IT-11.17 Assessment of Risk to Self/Others

Project Option: 1.12.2 - Enhance service availability (i.e., hours, locations, transportation, mobile clinics) of appropriate levels of behavioral health care. Expand the number of community based settings where behavioral health services may be delivered in underserved areas

Project Title: Post-Partum Mental Health Initiative

Unique Project ID: 127295703.1.102

Performing Provider Name/TPI: Parkland Health & Hospital System/ 127295703

Project Description:

The Postpartum Depression Program will integrate behavioral health services into the outpatient obstetrics setting, adding mental health counselors at multiple clinic locations. Counselors will provide increased access to mental health services and an optimal environment for the treatment of postpartum depression. New services offered will include individual/group counseling and phone follow-up to patients onsite at eight Women's Health Centers located throughout the Dallas community. The community-based counselors will refer patients with complex psychiatric disorders to a psychiatrist for specialty care.

Today, women are screened for depression at their postpartum visits. The only mental health services currently available are at the psychiatric clinic. Appointment compliance rates are very low, about 30%. Psychiatric providers at the clinic become frustrated with low clinic attendance and are reluctant to appoint postpartum patients.

Some patients feel that services are not necessary; some are concerned with the stigma of being seen by a psychiatrist. Additional challenges relate to accessing services include the Behavioral Health Center's central location, distance from the community centers where postpartum/pediatric visits occur; lack of reliable transportation; wait time for appointments due to lack of psychiatry staffing, and the high prevalence of stigma regarding mental illness in the Hispanic community. The transformational design of the proposed program overcomes these challenges.

Services under the demonstration project will expand to include a wide array of interventions such as phone follow up, mothers groups, parenting groups, shared medical appointments (group counseling), as well as couples, family and individual counseling. Services will be based on the needs of our patients and families. Specialized psychiatric interventions will be offered at the psychiatric clinic as they are today. Community based services will allow limited appointments at the central clinic to be utilized by patients with the most critical needs.

Goals and Relationship to Regional Goals:

Project Goals:

1. Increase access to mental health services to postpartum women.
2. Provide stratified services to women with differing mental health needs.

3. Improve the appointment compliance rate for postpartum women appointed for mental health services.
4. Improve clinical outcomes for women experiencing postpartum depression.

This project meets the following Region 9 goals:

- **Behavioral Health** - Behavioral health, either as a primary or secondary condition, accounts for substantial volume and costs for existing healthcare providers, and is often utilized at capacity, despite a substantial unmet need in the population.

Challenges: Mental health counselors must be hired and trained to provide services in the clinic locations. Bilingual staff is preferred due to the limited English proficiency of our patient population. Recruitment efforts will focus on applicants who speak Spanish fluently.

Appointment compliance rates have been a challenge in the past. However, stratifying services an offering them in community clinic locations will positively affect compliance.

Coordination of care between clinical divisions will be important to the success of the program. Key leaders from Psychiatry, Women's & Infants Specialty Health (WISH), and Community Oriented Primary Care Behavioral Health (COPC) are eager to expand services which should overcome any barriers to implementation of the project.

3-Year Expected Outcome for Providers and Patients: The project will progressively add mental health services to eight Women's Health Centers located throughout the Dallas community. Access to mental health services will be greatly enhanced and will be tailored to patient needs. Clinic locations are already familiar to patients, where they receive prenatal, postpartum, and pediatric services, increasing the likelihood of appointment compliance.

Services will be accessed primarily by low income women in Dallas County -- from within the Parkland system or referred to Parkland by community providers. Overall, the number of completed mental health encounters will increase during the demonstration period.

Starting Point/Baseline: During demonstration year 3, administrative policies and procedures will be developed along with clinical protocols for mental health counselors. Orientation and training of staff will be based on the operational guidelines, policies, and procedures developed during this phase of the project.

During demonstration year 4, the number of mental health counselors hired will increase from 0 to 5.

During demonstration year 4, the number of locations where services are offered will increase from 0 to 4. Approximately 400 individuals will be served.

During demonstration year 5, the number of individuals will increase from 400 to 1,200.

During demonstration year 5, the number of locations where services are offered will increase from 4 to 8.

During demonstration year 5, the number of mental health counselors and staff will increase from 5 to 10

Quantifiable Patient Impact: Number of unique individuals receiving community-based behavioral health services. The number of individuals served in the community will increase from 0 to 400 to 1,200 (DY3-DY5)

Rationale: The community needs assessment for RHP9 states, “In addition to hospital-type services, there is also a need for less-acute levels of behavioral care in order to prevent the need for these high-cost services.” The postpartum mental health proposal will meet a portion of the need by establishing community-based locations for mental health services. Locations will be familiar to patients since they currently receive prenatal, postpartum and pediatric care at the same clinic sites.

This project addresses the following community needs:

- CN5 Behavioral Health
- CN6 Behavioral Health and Primary Care

The addition of mental health services to the Women’s Health Clinics will close an access to service gap for postpartum women who require services for postpartum depression.

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

The proposed model hinges upon collaboration between the obstetric, pediatric, and behavioral health providers in the treatment of women with postpartum depression. The current model relies heavily on independence amongst these disciplines often resulting in fragmented coordination of care. Including behavioral health team members in the community-based practice will yield better coordination of care, more effective use of resources and, ultimately, improved outcomes for patients. The proposed initiative will also enhance collaboration with various external community resources; for example, community mental health providers, i.e., NorthSTAR, when patients will require hospitalization, crisis intervention and/or case management.

Integration of behavioral health services into the community setting will result in better access and coordination of care for patients experiencing postpartum depression. Currently, only about 30% of the women referred to for behavioral health services attend their appointments, leaving many without the mental health services they need. The challenges related to accessing services include the Behavioral Health Center’s central location, distance from the community centers where postpartum/pediatric visits occur; lack of reliable transportation; wait time for appointments due to lack of psychiatry staffing, and the high prevalence of stigma regarding mental illness in the Hispanic community. The transformational design of the proposed program overcomes these challenges.

The new model will stratify women in need of behavioral health services to better match patients' needs with the appropriate level of mental health services using creative interventions to include phone follow up, shared medical appointments, community-based services, and specialty care. Specifically, women with mild to moderate depressive symptoms will be referred to and managed by the counselors in the same location where they receive their OB/GYN or pediatric care. Such a model will build on the strengths of established relationships between patients and providers in the community health centers. Referral guidelines will be redesigned to allow women with more severe symptoms to receive specialized care at the Behavioral Health Center with a psychiatrist.

Project Core Components:

There are no required core components for this project.

Related Category 3 Outcome Measures:

The Category 3 measures being considered are:

- IT-11.7 Initiation of Depression Treatment
- IT-11.16 Assessment for Substance Abuse Problems of Psychiatric Patients
- IT-11.17 Assessment of Risk to Self/Others

Postpartum follow up and care coordination will be enhanced by the demonstration project. Patients are currently assessed using the Edinburgh screening tool. Screening results will be used to develop individual, needs-based follow up care which will be provided via the demonstration project for women at their established clinic setting. Establish a baseline during DY3 and identify improvement goals for DY 4 and DY 5.

Relationship to other Projects: The postpartum mental health initiative will fit well with Category 1 infrastructure projects, i.e., 1.12 and 1.13 behavioral health care projects. Goals are also likely to align with projects under Category 2, section 2.15 for integrating primary and behavioral health care services. While there are several related projects within Region 9 that focus on providing expanded, enhanced, and integrated behavioral health services this one is different in that it is the only one focused specifically on postpartum mental health.

Additional benefits may include a reduction in emergency room visits. Literature states that among the health care services utilized, depressed women were four times as likely to visit the emergency room and six times more likely to seek mental health counseling than non-depressed women. Thus, this proposal may have a positive impact on RHP9 projects that seek to reduce inappropriate Emergency Department utilization.

The related Category 1 and 2 projects are:

- 138910807.1.4 Enhance service availability to appropriate levels of behavioral health
- 137252607.1.2 Expand Behavioral Health Outpatient Services for children, Adults and Families
- 121988304.1.1 Develop behavioral health crisis stabilization services

- 135234606.2.2 Integrate Primary and Behavioral Health Care Services
- 020943901.2.1 Integrate Primary and Behavioral health Services

Plan for Learning Collaborative: We plan to play an active role in the development and ongoing content of RHP9 Learning Collaborative, appropriate to our project. We will also participate in any Improvement Collaborative that is associated with the outcomes of this project to obtain additional perspectives that may enable us to improve this project. We believe that the exchange of best practices and shared learning contributes significantly to continuous quality improvement and will advance the success of this project.

Project Valuation: This project seeks funding to establish new community-based mental health services for low income, postpartum women. The total valuation of the project is \$13 million.

Demonstration year 3 funding will be used to establish administrative and clinical operating procedures for new clinic locations. Staff recruitment, training, and orientation will begin in DY 3 in order to operationalize new clinic sites as early as possible. Orientation and training of mental health counselors will be based on the newly developed administrative procedures and clinical protocols.

The demonstration year 4 allocation of \$5,000,000 will be utilized to expand clinical services at five clinic locations. Mental health counselors will be hired and trained to initiate services. Operations will be initiated at various clinic sites located throughout the community. Appointment templates will be established, components of the EHR will be activated, and support staff will be hired and trained as needed. Revenue cycle operations will also be activated to capture available funding for services. Reporting procedures will be established to ensure metrics are tracked and monitored. Staffing will be assessed as services are provided to ensure careful stewardship of funding.

The DY 5 allocation of \$4,500,000 will be utilized to bring eight clinic locations to full operation. Clinical coordination between Psychiatry, WISH, and COPC divisions will be highly coordinated. Information regarding new mental health services will be communicated internally and externally as services are expanded to ensure full utilization of available appointments. Clinical and administrative operations will be reviewed regularly to identify potential improvements. Metrics will be reported, reviewed, and acted upon as needed to improve performance, access, and overall operations to meet established goals of the demonstration project.

Project Summary

Project Option: 2.11.1 Implement interventions that put in place the teams, technology, and processes to avoid medication errors.

Project Title: Apply New Technology and Expanded Medication Therapy Management Services to Improve Adherence to Medication and Avoid Medication Related Readmissions

Unique Project ID: 127295703.2.100

Performing Provider Name/TPI: Parkland Health & Hospital System/127295703

Provider

Dallas County Hospital District d/b/a Parkland Health & Hospital System, “Parkland”, is the public hospital and the largest major safety net hospital serving Dallas County and, in accordance with its mandate, furnishes medical aid and hospital care to the indigent and needy persons residing in the hospital district. As presented in the table below, Parkland is a critical provider in the region, particularly for the low income population. Parkland’s payer mix includes 48% Charity/Self Pay, 31% Medicaid, 14% Medicare and 7% Commercial Insurance.

Parkland operates a 725-adult bed and 65-neonatal bed acute care hospital, a Level I Trauma Center with the only ACS certified burn center in the region, 95 Specialty Clinics, 12 community health centers and 11 school-based clinics located throughout Dallas County. On an annual basis, the Parkland system provides care to approximately 290,000 individuals through approximately 1,400,000 encounters. Fiscal Year 2012 Statistics include:

Intervention

Medication therapy management services will provide an avenue for patients to access clinical pharmacists for basic or comprehensive medication reviews. Part of the medication management services will include the implementation of new technology that will help patients understand, adhere to, and manage their medication regimens using literacy level appropriate tools.

Need for the Project

Pharmacists play a major role in medication therapy management for both inpatient and outpatient services in Parkland patients with chronic diseases. One of the more common referrals to pharmacists from the healthcare team is for medication non-adherence and polypharmacy/medication related problems. Preliminary analysis of one Parkland clinic showed a medication adherence rate of around 50% in two classes of medications used in common chronic diseases. With decreases in medication adherence rates, patients are at higher risk for uncontrolled chronic diseases such as hypertension and diabetes. In addition, polypharmacy plays a contributory role in admissions for medication complications. In fact, studies show that approximately 7% of admissions are due to adverse drug reactions and another showed that the use of five or more medications were correlated with increased risk of drug-drug interactions.¹⁻³ Therefore, we are proposing

new technology and expanded medication therapy management (MTM) services to improve adherence to medications and avoid medication related problems.

Target Population

Our target population will include a mix of both inpatient and outpatients that need medication management services for the following:

Inpatients

- New allergic reactions or adverse events related to medications
- Admission medication histories for patients at risk for medication related problems
- Medication education for low literacy patients

Outpatients

- Diabetic patients with uncontrolled diabetes
- Patients needing help with pill box education, complicated medication regimen education or consolidation, cost containment, medication monitoring, or medication reconciliation
- Medication education for low literacy patients

Target population is 43.3% Medicaid patients, and 37.3% low income uninsured (80.6%).

Expected Patient Benefits

By developing an infrastructure that provides access to pharmacy services for patients who need additional medication management services beyond currently available services, patients will have the tools to better take ownership of their medication regimen. Pharmacy services can also identify and address medication misadventures and increase adherence by addressing primary reasons for non-adherence. In addition, pharmacist and pharmacist technician involvement in the collection of medication histories upon admission to the hospital will help with reduce the number of medication errors that occur during transitions of care.

Description of QPI

We estimate in DY4 we will see 500 unique outpatients for I-9.1 and 600 unique outpatients over our baseline of 300 for I-15.1 For DY5 we estimate seeing 1100 unique patients for for I-9 and 3,600 unique inpatient consults over our baseline of 300 for I-15.1 (1,600 in total for DY4-5 for I-9.1 and 3,600 in total for DY4-5 for I-15.1).

Description of Category 3 Measure

The Category 3 measures being considered are:

- IT-1.4 Annual Monitoring for Patients on Persistent Medications- Diuretic: Subpopulation of Hispanic patients that receive care at Grand Prairie Clinic location
- IT-1.10 Diabetes Care: HbA1c Poor Control: Subpopulation of Hispanic patients that receive care at Grand Prairie Clinic location

Project Option: 2.11.1 Implement interventions that put in place the teams, technology, and processes to avoid medication errors.

Project Title: Apply New Technology and Expanded Medication Therapy Management Services to Improve Adherence to Medication and Avoid Medication Related Readmissions

Unique Project ID: 127295703.2.100

Performing Provider Name/TPI: Parkland Health & Hospital System/127295703

Project Description: *This project proposes to expand medication management services provided by pharmacy in both the inpatient and outpatient settings. Through the use of new technology we aim to increase patient's understanding of and adherence to their medication regimens and reduce medication misadventures. We believe that utilizing electronic identification of specified patient populations will help to focus our efforts to those most in need of medication management services.*

Goals and Relationship to Regional Goals

Project Goals:

1. *Create an electronic identification system to prioritize patients in need of medication therapy management services and put into place protocols that allow for patients to be referred automatically to pharmacy services once specific criteria are met.*
2. *Provide new medication therapy management services by pharmacy in areas that they previously did not exist and expand current services:*
 - *An additional community based clinic*
 - *Emergency department and observation unit for patients being admitted to the hospital or experiencing medication related problems*
 - *On campus discharge clinic*
3. *Create a patient web portal which will include medication handouts and videos for patients to access when needed.*

This project meets the following Region 9 goals:

- **Chronic Disease – Adult and Pediatric:** By targeting patients with uncontrolled diabetes for referral to a clinical pharmacy specialist, we aim to decrease the long and short-term complications of this chronic disease.
- **Patient Safety and Hospital Acquired Conditions:**
 - By identifying patients at risk for medication misadventures, we aim to prevent or mitigate the adverse effects that can result from medication administration.
 - By providing accurate medication histories on patients admitted to the hospital, we aim to prevent and identify medication prescribing errors during and after hospitalization.
 - By providing low literacy educational materials to our low literacy population, we aim to increase the safe use of medications by our patients.
- **Emergency Department Usage and Readmissions:** By teaching patients how to use medications safely, we aim to decrease the number of visits to the emergency room for medication related problems.

Challenges: *A major challenge that we face in relation to the medication regimen is the overall cost to the patient given our low income population. We aim to overcome this challenge by minimizing the use of unnecessary therapies, ranking medications in their order of importance to allow patients to incorporate the most effective medications into their budgets first, and finally get patients enrolled in drug assistance programs when they are available.*

A second challenge will be to ensure that the information used to target patients is accurate. Currently, low literacy documentation in our electronic medical record is not consistent. We plan on using standardized means of determining health literacy and reading level to accurately identify patients in need of medication management services.

Finally, documentation of medication management services is not consistent within our institution. We will create a formal way of documenting and reporting on medication therapy management services in relation to this project that is automated and runs on a minimum of monthly basis to ensure we are on target with our expected quantifiable patient impact measures.

Our three year expected outcome would be to impact 5,200 individual in/outpatients by either increasing their knowledge and compliance to their medication regimens or making their transitions of care safer through medication management.

3-Year Expected Outcome for Provider and Patients: The 3 year expected outcomes of this project is to improve patient knowledge about medication therapy and show a positive impact on patient care. Through this project, Parkland believes the average drug therapy cost for chronic medications will be less and utilization of laboratory tests and other acute care resources would be contained.

Starting Point/Baseline: Since this is a new project, the baseline is zero.

Quantifiable Patient Impact: We estimate in DY4 we will see 500 unique outpatients for I-9.1 and 600 unique outpatients over our baseline of 300 for I-15.1 For DY5 we estimate seeing 1100 unique patients for for I-9 and 3,600 unique inpatient consults over our baseline of 300 for I-15.1 (1,600 in total for DY4-5 for I-9.1 and 3,600 in total for DY4-5 for I-15.1).

These numbers are based off of an average number of 2,000 encounters per year for an additional Ambulatory Clinical Pharmacy Specialist, 1,500 encounters per year for a medication therapy management (MTM) discharge clinic pharmacist, 1,500 encounters per year for an inpatient MTM pharmacist and 3,000 encounters per year for a medication reconciliation team. Included are additional encounters for new services that would be performed by existing clinical pharmacists in relation to MTM services. 1,600 (outpatients) and 4,200 (inpatient consults) in total for DY3-5) and 10,000 encounters.

Patients serviced per year for I-9.1 (Outpatient)				
I-9.1				
	DY3	DY4	DY5	Total
Baseline	0	0	500	
Goal	0	500	1,100	1,600
Unique Patients for DY 3 - 5				1,600

Patients serviced per year for I-15.1 (Inpatient)				
I-15.1				
	DY3	DY4	DY5	Total
Baseline	-	300	600	
Goal	-	600	3,600	4,200
Unique Patients for DY 3 - 5				4,200

Rationale: Expansion of medication management services is greatly needed in both the inpatient and outpatient setting. Listed below are specific reasons why we chose to implement new or expanded pharmacy services in each area.

Inpatient Setting:

The last expansion to inpatient clinical pharmacy services was in 2009, when we instituted an inpatient pharmacy consultation service. The volume of consultations has exceeded our capacity to provide this service on a consistent basis.

- **Discharge Counseling:** This year, patients referred to pharmacy services due to a high risk of readmission were not seen by a pharmacist more that 50% of the time. There has been a growing need to expand these consultation services to patients that have experienced drug related problems prior to or during their hospitalization.
- **Allergic Reactions/Adverse Drug Events:** Only 10 consultations to pharmacy were received in 2012 for adverse drug events or allergies and 0 consultations in 2013, which grossly underestimates the patients needing counseling after such events occur.
- **Admission Medication Histories:** In 2012, pharmacists were consulted 279 times to perform an admission medication history. This represents pharmacist involvement during admission medication reconciliation in <0.01% of all medical/surgical patient admissions annually. Based on a medication reconciliation quality audit performed in 2012 we found that the accuracy of medication histories was not adequate. Of the admission histories sampled, there was an average of 3 corrections needed per medication history taken by the nurse or provider.

In order to expand these services we will need to hire and train 5 new inpatient pharmacy staff (1 pharmacist for DY3 and 1 pharmacist + 3 pharmacy technicians for DY4)

Ambulatory Setting:

The last expansion to ambulatory clinical pharmacy services was in 2008, when we joined a third party association to identify patients in need of MTM services. However, this project ended in 2011 due to inadequate resources to sustain the service. Since then other departments within the Parkland system have expanded their services, necessitating expanded medication management pharmacy services. Currently, there are 2 new community oriented clinics that do not have a clinical pharmacy specialist available for medication management under protocol. In the clinics that have clinical pharmacy specialists, patients who were referred for diabetes management over the last 3 years had an average difference in HgbA1c of -2.5% and average decreases in blood pressure of -9mmHg for SBP and -4mmHg for DBP by the time they were discharged from the pharmacist's care.

Our campus clinic has made additional room for patients after discharge from the hospital. All patients that are seen in this clinic should also be seen by pharmacy services to ensure that any new, changed, or discontinued medications were properly reconciled and that the patient is not experiencing any medication related problems (e.g., inability to afford, side effects, allergic reactions). On average 6.2 corrections are required per medication history in this clinic. Pharmacy services would ensure that these corrections are made and medication lists are accurate.

In order to expand these services we will need to hire and train 2 new outpatient pharmacy staff for DY3.

Health Literacy:

In an effort to consolidate patient health education into the electronic medical record new software called ExitCare® was implemented. Unfortunately, this application does not contain 'easy-to-read' literature for patients and their families for all topics related to medications and are only accessible to the provider seeing the patient for dissemination. The last reading study done at Parkland indicated that a substantial percentage of our patients are low literacy or have a low reading level, therefore we aim to focus on this patient population by creating a web portal available to the patient at any time for access to easy-to-read (or understand) medication information.

This project addresses the following community needs:

- CN.2 Regional Healthcare Infrastructure and Patient Migration Patterns
- CN.9 Chronic Disease Management
- CN.11 Patient Safety and Quality

Project Core Components: The program addresses the required core components:

- a) *Develop criteria and identify target populations* - We will develop an electronic mechanism to identify patients needing medication therapy management services that is readily available in the EMR. In addition protocols will be set up so that pharmacy can act upon these triggers immediately.

- b) *Develop tools to provide education and support* – We will create a web-based tool that is accessible to patients that contains medication related handouts and videos. Additionally the IVR system will be expanded to include refill reminders.
- c) *Conduct root cause analysis of potential medication errors or adverse drug events and develop/implement processes to address those causes* - EPIC's software solution will be the tool used to comply with the automated flagging / identification of potential ADE within the institution. Additionally we will develop a specific IHI trigger for targeted populations.
- a) *Conduct quality improvement for project using methods such as rapid cycle improvement* - This will be achieved through (1) Patient surveys on the web-based tool every quarter will occur to collect feedback on teaching method effectiveness Collect MTM referral information and determine what percentage of the target patient population are referred for MTM services; (2) Pharmacy dashboards will be used to show how well chronic diseases are being managed by the pharmacist in comparison with the rest of the institution; and (3) Device upload will be investigated for implementation (e.g., glucometers).

Description of Category 3 Measure

The Category 3 measures being considered are:

- IT-1.4 Annual Monitoring for Patients on Persistent Medications- Diuretic: Subpopulation of Hispanic patients that receive care at Grand Prairie Clinic location
- IT-1.10 Diabetes Care: HbA1c Poor Control: Subpopulation of Hispanic patients that receive care at Grand Prairie Clinic location

We chose these particular measures because safe use of medications, adherence to drug regimens, and medication management in chronic disease states are a large focus of our Category 2 project. In Category 2 we plan on expanding the number of encounters that patients are seen by a clinical pharmacist and thereby will increase compliance to diabetes medications and increase the monitoring of medications. We have shown significant improvements diabetic outcomes and cost savings when pharmacists are involved in patient care. The technology that will be implemented from Category 2 milestones will enhance our ability to identify and educate our low literacy populations and those patients that are experiencing medication related problems.

Relationship to other Projects:

This project is one element of chronic disease care through addressing of medication management.

The related Category 1 and 2 projects are:

- 121790303.2.1 Expand Chronic Care Management Model-Create Chronic Disease management and Prevention Program
- 121790303.2.5 Evidence Based Interventions that put in place teams, technology and processes to ensure medication compliance and management
- 121790303.2.5 Medication Management and Assistance Program
- 121776204.2.5 Medication Management and Assistance Program

- 139485012.2.5 Medication Management and Assistance Program

Plan for Learning Collaborative: We plan to play an active role in the development and ongoing content of RHP9 Learning Collaborative, appropriate to our project. We will also participate in any Improvement Collaboratives that are associated with the outcomes of this project to obtain additional perspectives that may enable us to improve this project. We believe that the exchange of best practices and shared learning contributes significantly to continuous quality improvement and will advance the success of this project.

Project Valuation: To value the impact of clinical pharmacy services at Parkland hospital we used both an analysis was completed on the cost avoidance of an individual inpatient clinical pharmacy specialist and the current literature to estimate cost savings or avoidance. For the inpatient clinical specialist taking the interventions performed over a 4-year time frame and applying national benchmarking data from the 2010 Thomas Reuters Action OI standards we found the cost avoidance for interventions in which a dollar amount was available for calculation totaled \$1,418,287.37. Assuming that documented interventions account for 75% of the true number of interventions the real cost avoidance would be closer to \$1,772,859. With the identification of a targeted patient population the number of opportunities for a pharmacist to intervene should increase dramatically and efforts could be focused on interventions that provided more impact on cost avoidance such as adverse drug event prevention (\$2,200 per major event avoided and medication history activities at \$642 per activity).

For outpatient pharmacy services over the 3 years, the additional 4 pharmacist FTEs and 3 pharmacy technicians will also focus on decreasing the cost of medications to the patient by discontinuing unnecessary medications, consolidating therapy, and switching to alternative cost effective therapy. The additional benefit in this group of patients is estimated to be \$682 per individual patient for an additional cost savings of \$4,000,000 by the end of DY5.⁵ In relation to chronic disease state management, our ambulatory clinical pharmacy specialists lowered HgbA1c an average of 2.5% in patients seen for diabetes management. With an estimated savings of \$820 for each 1% decrease in HgbA1c on average each patient seen should generate a savings of a least \$2,050 per patient.⁶ We estimate that over the next 3 years our ambulatory specialist will see approximately 2000 diabetic patients resulting in a cost savings of \$4,100,000. Finally, with the cost of medication non-adherence to the U.S. health care system being estimated by the New England Health Institute (NEHI) as \$290 Billion annually, we believe that an additional \$3,000,000 can be saved with medication management services that focus on patient medication education over the next 3 years.

References

1. Hofer-Dueckelmann, et al. Adverse drug reactions associated with hospital admissions – elderly female patients are at the highest risk. *Int J Clin Pharmacol Ther.* 2011 Oct;49(10):577-86.
2. Pirmohamed M et al. Adverse drug reactions as cause of admission to hospital: prospective analysis of 18,820 patients. *BMJ.* 2004 Jul 3;329(7456):15-9

3. Moura CS et al. Drug-drug interactions associated with length of stay and cost of hospitalization. *J Pharm Pharm Sci.* 2009;12(3):266-72
4. Partial Thromboplastin Time (PTT) > 100 seconds and Heparin: Elevated PTT levels may occur when patients are on heparin therapy. The Reviewer looks for evidence of bleeding to determine if an ADE has occurred.
5. Moczgamba LR, et al. Outcomes of a Medicare Part D telephone medication therapy management program. *J Am Pharm Assoc.* Nov/Dec 2012;52(6):e144-52
6. Raqucci KR, et al. Effectiveness of pharmacist-administered diabetes mellitus education and management services. *Pharmacotherapy.* Dec 2005;25(12):1809-16

Project Summary

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

Project Title: Improving Transitions of Care through an Inpatient HIV Care Team

Unique Project ID: 127295703.2.101

Performing Provider Name/TPI: Parkland Health and Hospital System/ 127295703

Provider

Dallas County Hospital District d/b/a Parkland Health & Hospital System, “Parkland”, is the public hospital and the largest major safety net hospital serving Dallas County and, in accordance with its mandate, furnishes medical aid and hospital care to the indigent and needy persons residing in the hospital district. As presented in the table below, Parkland is a critical provider in the region, particularly for the low income population. Parkland’s payer mix includes 48% Charity/Self Pay, 31% Medicaid, 14% Medicare and 7% Commercial Insurance.

Parkland operates a 725-adult bed and 65-neonatal bed acute care hospital, a Level I Trauma Center with the only ACS certified burn center in the region, 95 Specialty Clinics, 12 community health centers and 11 school-based clinics located throughout Dallas County. On an annual basis, the Parkland system provides care to approximately 290,000 individuals through approximately 1,400,000 encounters. Fiscal Year 2012 Statistics include:

Intervention

This program will develop and implement a multidisciplinary care transition team for hospitalized HIV patients to improve transition from inpatient to outpatient care. The team will consist of an infectious diseases trained physician, a midlevel medical provider, an HIV case manager, a pharmacist and a care transitions nurse. The team will coordinate with case managers from the outpatient program to improve transition from inpatient to outpatient care and reduce post-discharge readmissions. The project will establish a post-hospital discharge clinic to provide continuity of care, and the care team will be able to address medical and social issues associated with high risk for ED utilization and 30 day readmission.

Need for the Project

Currently only one-third of HIV inpatients at Parkland are evaluated by an HIV specialist during their hospital stay, and there is minimal coordination between the medical specialist, case management or pharmacy. In addition, specifically for those patients who have not been engaged in outpatient HIV care prior to admission, a more intensive approach may be beneficial for the transition to outpatient care. The multidisciplinary HIV care transitions team aims to address both medical and social factors at the different phases of care (inpatient stay, discharge, follow-up) to reduce preventable readmissions and inappropriate ED utilization.

New strategies are needed to reduce preventable readmissions and improve appropriate Emergency Department utilization among HIV patients in order to improve engagement in care and clinical outcomes in this population. Approximately 15,000 people are living with HIV/AIDS in Dallas, one of the 12 US cities targeted by the National HIV/AIDS Strategy.⁵ Parkland Hospital is the largest HIV outpatient provider in the region, and also cares for the majority of low-income HIV inpatients in Dallas, with greater than 1200 index admissions annually. Our research has demonstrated that most hospitalized HIV patients at Parkland are poor, African American or Hispanic, not engaged in routine care, not taking ART and clinically have AIDS.⁶ Both clinical and social factors predict readmission including advanced illness, frequent ED visits, and Medicaid insurance. High readmission rates may reflect a combination of the quality of inpatient care received, the discharge process, and the follow-up outpatient care after hospital discharge and may be impacted by medical as well as social determinants of health.

Target Population

All HIV-infected adults who are hospitalized at Parkland Hospital are eligible to receive services from the multidisciplinary team. This population is targeted due to their high rate of 30-day readmissions and long average length of stay in the hospital (7-8 days). On average, 20-30 patients with HIV are admitted to Parkland at any one time. Population served will be comprised of 35% Medicaid and 31% low-income uninsured.

Expected Patient Benefits:

Patients receiving a patient-centered coordinated team approach that addresses acute and chronic medical issues, medication management and psychosocial needs with particular attention to the transition of care from inpatient to outpatient care (including inpatient management, discharge planning and follow-up care) will be less likely to have preventable readmissions to the hospital or inappropriate visits to the emergency department.

Description of QPI

The HIV care transitions team will increase the number of patients receiving specialized and coordinated care post-discharge [I-11.2]. In DY4, we expect 260 patients to receive standardized, evidence-based care according to the approved clinical protocols and care transitions policies. In DY5, the volume will increase to 390 patients for a cumulative total of 350 patients receiving care in DY4&5.

Description of Category 3 Measure

The Category 3 measure being considered is:

- IT.9.2.a Reduce Total ED Visits for All Causes (including ACSC)

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

Project Title: Improving Transitions of Care through an Inpatient HIV Care Team

Unique Project ID: 127295703.2.101

Performing Provider Name/TPI: Parkland Health and Hospital System/ 127295703

Project Description

Parkland Hospital will develop and implement a multidisciplinary transition team for hospitalized HIV patients to improve transition from inpatient to outpatient care. The team will consist of an infectious diseases trained physician, a midlevel medical provider, an HIV case manager, a pharmacist and a care transitions nurse. The team will coordinate with HIV service providers in the community to improve transition from inpatient to outpatient care and reduce post-discharge readmissions. The project will establish a post-hospital discharge clinic to provide continuity of care, and the care team will be able to address medical and social issues associated with high risk for ED utilization and 30 day readmission.

The goal is to reduce inappropriate ED utilization through improved engagement in outpatient HIV care after hospital discharge. This team will include a medical HIV specialist and midlevel provider, an HIV case manager, a pharmacist, and a care transitions nurse. This intervention will incorporate elements from other successful readmission reduction approaches including a recent CHF intervention at Parkland using a “SWAT team” approach,⁷ project RED (Re-Engineered hospital Discharge), a safety-net hospital intervention in general medicine patients,⁸ and the care transitions team model, an intervention in elderly community dwelling patients.⁹ Our intervention will be tailored to the HIV population and will be designed to address three phases of care: inpatient, discharge and outpatient follow-up.

While HIV outpatient services are provided at Parkland, they are grant funded (Ryan White) and support HIV case management inpatient care for HIV patients. The HIV Care team will consist of an HIV MD specialist, mid-level provider, pharmacist, and HIV Care Transition Nurse.

We will have a dedicated post-hospital discharge clinic, staffed by HIV Transitional Care Team mid-level provider. The goal of the post-hospital discharge clinic is to provide continuity of care by evaluating clinical stability of the patient, reviewing medical and non-medical needs to achieve treatment plan goals and facilitate the transition to routine follow-up care. There will be intensive focus on individualized patient education on disease and medication and Transitional Care nursing support from discharge through post-discharge follow-up.

Goals and Relationship to Regional Goals

Project Goals:

The project goal is to reduce inappropriate ED utilization and hospital readmissions through improved engagement in outpatient HIV care after hospital discharge.

This project will provide the ability for the care team that has cared for these patients when they were admitted in providing follow up care in the outpatient setting to ensure continuity of care especially for those with low incomes (< 200% FPL).

9. Develop a protocol, order sets, and standard operating procedures for the multidisciplinary care transitions team.
10. Develop staffing resources and implement a multidisciplinary care transitions team for hospitalized HIV patients.
11. Increase number of consults provided to HIV inpatients by the multidisciplinary care team.

This project meets the following Region 9 goals:

- **Capacity – Primary and Specialty Care:** Expanding specialty services will meet the goals of improving access if the necessary resources can be obtained and will also improve care coordination and management. Many patients within Parkland's health system have learned their way around waits in certain clinics by finding other doors into the system (such as the ER) which causes backlog and inappropriate use of sites of care.
- **Emergency Department Usage and Readmissions:** The multidisciplinary HIV care transition team will focus on strategies to reduce ED utilization and hospital readmissions by determining barriers to care and identifying resources to overcome those challenges.

Challenges: One challenge for Parkland is the increasing demand for HIV care. Currently some of the HIV clinics have long waits for appointments and many patients seek care in the ED to avoid those waits, thus the ED is at capacity and the new hospital's ED will not be sufficiently expanded to meet increasing demand. A fraction of the patient population currently is seen by a consult service. Their medical and social needs are not being addressed at the appropriate level due to lack of specialized HIV resources on the inpatient side with lack of coordination and continuity to the outpatient clinics. This patient population has an increased risk of comorbidities which increases their ED utilization and 30-day hospital readmissions. Additionally, this patient population is disengaged from their clinical care and this care team is intended to provide support needed to re-engage patients in their care.

Another challenge is the regional physician shortage. With the physician shortage in Texas expected to increase from 30% to 50% by 2016, as identified in the Community Needs Assessment coupled with the substantial demand for care by the low income population, many seek care in the ED. This increases costs and causes capacity bottlenecks for emergencies. Parkland intends to do a comprehensive market assessment to determine specialty care needs for those who may seek care in the ED but have lower acuity needs that could be better addressed in an ambulatory care setting. Parkland is

also recruiting mid-level providers to assist in providing consultative services on the inpatient side and to follow these patients in the ambulatory setting.

Additional challenges include collecting accurate and consistent data to measure progress to goals and patient scheduling systems, policies and protocols. A team of data and clinical subject matter experts will determine the best way to quantify the next routine appointment indicator. This data must be standardized throughout the outpatient system and provided as a reportable outcome by which to measure performance.

3-Year Expected Outcome for Providers and Patients:

- To fully develop clinical protocol outlining the roles of the various members of the HIV inpatients consult team, implementation of the protocol and outcomes measures.
- To fully implement multidisciplinary HIV inpatient consult team based on these protocols.
- Increase the number of HIV inpatients being evaluated by the HIV consult team, and receiving specialized transition care from admissions to discharge to outpatient care.
- Implement a post hospital discharge clinic to provide continuity of care for this patient population
- Decreased ED utilization and hospital readmissions from receiving coordinated transitions care and timely follow-up post-discharge.

Starting Point/Baseline: In FY 2012, there were 1144 patients with HIV admitted to Parkland hospital that utilized 7797 inpatient days. The current ID (Infectious Disease) consult team, who are not specialized in HIV care, consulted on a fraction of these patients.

With an increase in inpatient medical consults to these patients and specialized resources to coordinate care from admission to discharge to outpatient care, this project should assist with decreasing ED utilization and reducing hospital readmissions and provide timely follow up.

Quantifiable Patient Impact:

The HIV care transitions team will increase the number of patients receiving specialized and coordinated care post-discharge [I-11.2]. In DY4, we expect 260 patients to receive standardized, evidence-based care according to the approved clinical protocols and care transitions policies. In DY5, the volume will increase to 390 patients, for a cumulative total of 650 patients receiving care in DY4&5.

Currently a general infectious diseases consult service exists at Parkland. A chart review of all re-admitted HIV patients showed that 30% had received a medical consultation by an infectious disease provider. This 30% underrepresents the total number of HIV-infected inpatients who would benefit from this strictly medical input. In addition, there is an unmet need for all hospitalized HIV patients to receive care from a multi-disciplinary team, including transition of care, coordination of services, education on medical condition, and education on medications. With the initial hiring of 2 staff, we

will implement the multidisciplinary care team for 30% of HIV-infected inpatients in DY4. With staffing increases in DY5, increased awareness among the medical staff of this available service and the persistent need for multidisciplinary care, we will expand this service to 50% of inpatients with HIV. In subsequent years, once protocols and the team are well-established, we aim to expand this service to all hospitalized HIV patients.

Rationale:

FY 2012 data showed a 30-day readmission rate for HIV patients of 19.1% for Parkland Hospital.

Project was selected because of current lack of focused transitional care for HIV patients from inpatient to outpatient care. Milestone one and associated metrics were selected in order to provide the foundation for the multidisciplinary team function and implementation. Milestone two was selected to operationalize the multidisciplinary care team by hiring and training the appropriate staff. Milestone three was selected to increase the number of encounters.

In Dallas County, few private specialist physicians accept Medicaid and indigent patients. Parkland is the main resource for HIV care and follow up for both medical and surgical subspecialties. As estimated below, the estimated demand for adult medical and surgical subspecialty care in Dallas County far exceeds the 345,000 visits currently provided.

As demonstrated, there is a critical shortage of subspecialty services for adults and, as a result, the Emergency Department often serves as the access point for needed services. Additionally, a large percentage of Parkland patients have chronic conditions, such as diabetes and require ongoing treatment. With clinics at capacity, even if a patient can get in within a reasonable time, their next appointment could be months out and that is not conducive to a regimented treatment schedule for patients who require ongoing care. Patients must be able to access services if clinical protocols for treating their condition are to be successful. This includes not only HIV and specialty clinics but primary care medical homes, lab for blood draws, pharmacy, etc. For instance, some patients on specific medications must have a visit with their physician to get refills and if the physician's schedule cannot accommodate, those patients will go to the ER to insure they get their medications or in unfortunate circumstances, they quit their medications which can have detrimental results. The backlog in referrals for specialty services at Parkland thus contributes to unnecessary utilization of the ED.

This project addresses the following community needs:

- CN.12: Emergency Department Usage and Readmissions - The development of this HIV program provides a means of coordinating fragmented care, identifying gaps in care, and facilitating patient access to appropriate follow-up care settings. As a result, these programs are expected to reduce the number of patients who inappropriately utilize the ED.

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

Currently at Parkland there is not a multidisciplinary care team dedicated to comprehensive transitional care for HIV patients.

While HIV outpatient services provided at Parkland are funded through the U.S. Department of Health and Human Services Ryan White grant and support HIV case management inpatient care for HIV patients, funding does not cover inpatient medical care. Therefore this proposal, by addressing inpatient and transitional care needs, will improve access to outpatient services provided through Ryan White without overlapping with existing Ryan White services.

Medical care provided by the MD or mid-level is not covered by Ryan White. A clinical pharmacist to evaluate inpatient medications and drug interactions, counsel patients on medications received in the hospital for opportunistic infections, treatment of HIV, or treatment of other diseases related to HIV-infection is not covered by Ryan White. The role of the HIV Care Transitions Nurse is to work with and educate the patient during their hospitalization, including at the time of discharge, asking the patient to explain in their own words their diagnosis for their hospitalization, what the treatment is, for how long, possible side effects and review follow-up arranged by the HIV Case Manager. This intensive discharge model is not funded by Ryan White. Thus, this proposal will integrate current Ryan White services into a multi-disciplinary team whose goal is to provide excellent inpatient care and effectively transition patients from the inpatient to the outpatient setting.

There is no overlap between this project and other funding. This proposal, by addressing inpatient and transitional care needs, will improve access to outpatient services provided through Ryan White without overlapping with existing Ryan White services.

Project Core Components:

This project addresses the required core components of project option 2.12.2:

- a) *Conduct quality improvement for project using methods such as rapid cycle improvement.* - Quality Improvement projects will be identified and performed every six months based on project outcomes/findings during development and implementation phases.

This project will also address the following core components:

- b) *Review best practices from a range of models (e.g. RED, BOOST, STAAR, INTERACT, Coleman, Naylor, GRACE, BRIDGE, etc.)* - During the protocol development phase, a review will be conducted on best practices from a range of transition of care models. The intervention will be tailored to the HIV population and will be designed to address three phases of care- inpatient, discharge and outpatient follow-up.
- c) *Conduct an analysis of the key drivers of 30-day hospital readmissions using a chart review tool (e.g. the Institute for Healthcare Improvement's (IHI) State Action on Avoidable Re-hospitalizations (STAAR) tool) and patient interviews.* - A chart review of 30-day readmissions will be done to determine key drivers of

- 30-day hospital readmissions. Provider will utilize a modified STAAR tool that is HIV specific as project is targeting the HIV population.
- d) *Integrate information systems so that continuity of care for patients is enabled.* - EPIC will be utilized to ensure continuity of care for patients from inpatient to outpatient..Epic will ensure continuity of care during transition from inpatient to outpatient care:
- By utilizing a common EMR system throughout Parkland, all patient care plans will be accessible to health care teams within our system.
 - Inpatient care team will alert outpatient care team of admission, discharge plan, and/or pending actions through EMR.
 - For patients with a provider outside our system, the care plan will be sent electronically to the patient's PCP through our EMR. For providers not on a EMR, continuity of care will be achieved through fax.
- e) *Develop a system to identify patients being discharged potentially at risk of needing acute care services within 30-60 days.* - Multidisciplinary care team will specifically address medical and social issues associated with high risk for ED utilization and 30 day readmission and develop a post-hospital discharge clinic to ensure continuity of care to this high risk patient population.
- f) *Implement discharge planning program and post discharge support program.* - Discharge planning will begin upon admission and post discharge support program will be defined in the protocols. A discharge support program will be developed through the protocol. A transitional care nurse will establish a collaborative relationship with the patient prior to discharge. The nurse will provide education, assess education teach-back, and will provide support post-discharge through telephone follow-up as the point of contact for the patient.
- g) *Develop a cross-continuum team comprised of clinical and administrative representatives from acute care, skilled nursing, ambulatory care, health centers, and home care providers.* - A multi-disciplinary care transition team will be developed to include a transitional care nurse, provider, HIV case manager, pharmacist to provide services based on evidence-based protocol. This team will follow the patients from inpatient to outpatient areas. The majority of HIV patients remain within the Parkland system upon discharge. The same providers in the inpatient setting will be providing care in the post hospital discharge clinic. For patients that seek care outside the Parkland system, the care plan is sent to the patients PCP.

Related Category 3 Outcome Measures:

The Category 3 measure being considered is:

- IT.9.2.a Reduce Total ED Visits for All Causes (including ACSC)

The development of this HIV program provides a means of coordinating fragmented care, identifying gaps in care, and facilitating patient access to appropriate follow-up

care settings. As a result, these programs are expected to reduce the number of patients who inappropriately utilize the ED.

Relationship to other Projects: Parkland intends to balance the care continuum to insure those patients who need a medical home and/or require care through a chronic care model have access and also assure that the patients who do not need a medical home but require occasional medical care also receive the care they need in the right setting. All Parkland projects address a key component of the care continuum that must be addressed to find the right balance. This balance will insure all patients get the right care at the right time in the right place. Increasing the HIV consult team and establishment of the ambulatory post discharge clinic is an integral component in the care continuum and constrained access increases unnecessary utilization of other services in the continuum (ED, inpatient, etc.)

The related Category 1 and 2 projects are:

Although in RHP9 there are Category 1 and 2 projects related to specialty care, there are no RHP9 projects specifically to HIV care.

Plan for Learning Collaborative: We plan to play an active role in the development and ongoing content of RHP9 Learning Collaborative, appropriate to our project. We will also participate in any Improvement Collaborative that is associated with the outcomes of this project to obtain additional perspectives that may enable us to improve this project. We believe that the exchange of best practices and shared learning contributes significantly to continuous quality improvement and will advance the success of this project.

Project Valuation: Parkland adopted the RHP 9 global method to project valuation supplemented by comparisons with like projects within and outside the region. Each project was evaluated with respect to its transformational impact, population served, project size and complexity, alignment with the community needs, cost avoidance impact, sustainability and partnership collaboration.

This project will specifically impact Medicaid, low income and vulnerable populations for several reasons. This population is marginalized and patients are frequently affected by substance use, mental health issues, unemployment, and homelessness.^{11,10,12} In addition, there are significant health disparities in clinical outcomes in HIV patients. Overall, safety-net hospitals are 30% more likely to have 30-day readmission rates above the national average,¹⁴ underscoring the contribution of social determinants of health to patient outcomes and the need for targeted quality improvement initiatives in this setting.¹⁵

This project has the potential to impact important areas relevant to the community: cost and improved health in highly-impacted communities. Reducing readmissions and inappropriate ED utilization will result in reduced costs, as admissions for HIV patients typically have a long length of stay (7 days),⁶ readmissions may cost even more than the index admission⁴ and nearly one quarter of all-cause admissions result in in ED visits in the subsequent 30 days.¹⁶ Also, the mean annual total expenditures for an HIV patient in

2006 was \$19,000, though it was up to \$40,000 in patients with a CD4 <50, attributable to inpatient costs. ¹⁷

In FY12, we had 1144 patients admitted at an average cost of \$19,000 per admission. ¹⁷ This project will reduce patient readmissions thus decreasing the estimated overall cost of \$21,736,000.

Consults-Patients Receiving Service		
DSRIP Year	Patients (Baseline)	Total Patients
DY4	0	260
DY5	260	375

References

4. PRHI Readmission Brief, Brief II: Patterns of Hospital Admission and Readmission Among HIV-Positive Patients in Southwestern Pennsylvania. Pittsburgh Regional Health Initiative, 2010. (Accessed August 27, 2013, at http://www.chqpr.org/downloads/PRHI_ReadmissionBrief_HIV_July2010.pdf.)
5. Enhanced Comprehensive HIV Prevention Planning and Implementation for Metropolitan Statistical Areas Most Affected by HIV/AIDS. Centers for Disease Control and Prevention, 2013. (Accessed September 3, 2013, at <http://www.cdc.gov/hiv/prevention/demonstration/echpp/>.)
6. Nijhawan AE, Clark C, Kaplan R, Moore B, Halm EA, Amarasingham R. An electronic medical record-based model to predict 30-day risk of readmission and death among HIV-infected inpatients. *Journal of acquired immune deficiency syndromes* 2012;61:349-58.
7. Amarasingham R, Patel PC, Toto K, et al. Allocating scarce resources in real-time to reduce heart failure readmissions: a prospective, controlled study. *BMJ quality & safety* 2013.
8. Jack BW, Chetty VK, Anthony D, et al. A reengineered hospital discharge program to decrease rehospitalization: a randomized trial. *Ann Intern Med* 2009;150:178-87.
9. Coleman EA, Parry C, Chalmers S, Min SJ. The care transitions intervention: results of a randomized controlled trial. *Arch Intern Med* 2006;166:1822-8.
10. Communities in Crisis: Is There a Generalized HIV Epidemic in Impoverished Urban Areas of the United States? Centers for Disease Control, 2010. (Accessed October 28, 2013, at <http://www.cdc.gov/hiv/risk/other/poverty.html>.)
11. Klinkenberg WD, Sacks S, Hiv/Aids Treatment Adherence HO, Cost Study G. Mental disorders and drug abuse in persons living with HIV/AIDS. *AIDS Care* 2004;16 Suppl 1:S22-42.
12. Kidder DP, Wolitski RJ, Royal S, et al. Access to housing as a structural intervention for homeless and unstably housed people living with HIV: rationale, methods, and implementation of the housing and health study. *AIDS and behavior* 2007;11:149-61.
14. Berenson J, Shih A. Higher readmissions at safety-net hospitals and potential policy solutions. *Issue brief* 2012;34:1-16.

15. Werner RM, Goldman LE, Dudley RA. Comparison of change in quality of care between safety-net and non-safety-net hospitals. *JAMA* 2008;299:2180-7.
16. Rising KL, White LF, Fernandez WG, Boutwell AE. Emergency department visits after hospital discharge: a missing part of the equation. *Annals of emergency medicine* 2013;62:145-50.
17. Gebo KA, Fleishman JA, Conviser R, et al. Contemporary costs of HIV healthcare in the HAART era. *Aids* 2010;24:2705-15.

Project Summary

Project Option: 1.8.6 – The expansion of existing dental clinics, the establishment of additional dental clinics, or the expansion of dental clinic hours.

Project Title: Expansion of Dental Services at Community Clinics

Unique Project ID: 009784201.1.100

Performing Provider Name/TPI: Texas A&M University Baylor College of Dentistry / 009784201

Provider

Texas A&M University Baylor College of Dentistry (BCD) is the largest provider of oral health care services in the Dallas/Fort Worth Metropolitan area. BCD is dedicated to combining higher education and research with community-based clinical training and community service. BCD completes in excess of 103,500 patient visits annually on its main campus. 45% of these encounters benefit low-income individuals who are primarily underserved minorities. BCD donates \$3.3 million in services to the community through these endeavors. In addition to its main campus services, BCD students and faculty provide \$1.4 million in donated services in its community outreach programs for approximately 37,000 patients.

BCD is the only dental organization that directly participates in RHP 9. It plays a pivotal role in providing dental services to low-income, dentally underserved individuals in RHP 9. Currently, BCD provides these services in collaboration with a local non-profit organization in the Parkland Health & Hospital System's Community Oriented Primary Care Health Centers and with Dallas County at the Juvenile Detention Center.

Intervention

BCD proposes to open two new dental clinics co-located with community medical clinics in the Dallas area. The clinics will be staffed by senior dental students supervised by BCD faculty to expand BCD's community-based clinical training program. Each clinic will operate 8 hours daily, five days per week, with four dental student clinicians supervised by a BCD faculty member. The two clinics chosen for this project are operated by Healing Hands Ministries (HHM) and North Dallas Shared Ministries (NDSM). BCD will be working in close collaboration with two other performing providers in RHP 9. BCD will be coordinating its dental services with the medical care offered by Texas Health Resources at HHM and with the University of Texas Southwestern Medical Center at NDSM.

Need for the Project

As documented in the RHP 9 Community Needs Assessment section CN.10 Dental Health, the disease burden of dental decay is high in many sectors of the population, particularly minorities and low-socioeconomic groups. Dental decay is the most prevalent chronic disease in man, five times more common than asthma in children. Oral health problems are a major cause of school absences among elementary school children, and the seventh leading cause of workdays lost nationally. Finally, the combination of disease

prevalence, strategic manpower shortages and difficulties in general with access to dental care, results in a growing number of patients seeking treatment for dental problems

Target Population

The target population for this project will be the patient populations at existing community medical clinics. The majority (80%) of the patients are Medicaid patients or Medicaid-eligible and the remaining 20% poor and/or uninsured. Approximately 60% of the patients are pediatric.

Expected Patient Benefits

The disease burden of dental decay is high in many sectors of the population, particularly minorities and low-socioeconomic groups. This burden is exacerbated by dental manpower shortages in many areas of the state. The combination of disease prevalence, strategic manpower shortages and difficulties in general with access to dental care, results in a growing number of patients seeking treatment for dental problems in the emergency departments of hospitals, most of which are not equipped to manage the problems. This adds to the expense of treatment and compounds the problems of already over-burdened emergency departments. The majority (80%) of the patients are Medicaid patients or Medicaid-eligible and the remaining 20% poor and/or uninsured. Approximately 60% of the patients are pediatric. By opening two new dental clinics in collaboration with the existing community medical clinics, these patients will have dental care conveniently co-located with medical care and easily accessible.

Description of QPI

The proposed project will result in 15,800 dental treatment appointments for 7,900 unduplicated patients over three years. In excess of 6,320 (80%) of these will be Medicaid patients or Medicaid eligible and the remaining 20% low-income and/or uninsured individuals.

Description of Category 3 Measure

The Category 3 measures being considered are:

- IT-7.1 Cavities: Percentage of children with untreated dental caries
- IT-7.6 Urgent Dental Care Needs in Children: Percentage of children with urgent dental care needs
- IT-7.8 Chronic Disease Patients Accessing Dental Services

Project Option: 1.8.6 – The expansion of existing dental clinics, the establishment of additional dental clinics, or the expansion of dental clinic hours.

Project Title: Expansion of Dental Services at Community Clinics

Unique Project ID: 009784201.1.100

Performing Provider Name/TPI: Texas A&M University Baylor College of Dentistry / 009784201

Project Description

Texas A&M University Baylor College of Dentistry (BCD) proposes to open two new dental clinics co-located with community medical clinics in the Dallas area. The clinics will be staffed by senior dental students participating in the BCD community-based clinical training program. Each clinic will operate 8 hours daily, five days per week, with four dental student clinicians supervised by a BCD faculty member. More than 80% of the patient population at the clinics will be Medicaid patients or Medicaid-eligible and the remaining 20% low-income and/or underserved individuals. The two clinics tentatively chosen for this project are operated by Healing Hands Ministries of Dallas and North Dallas Shared Ministries.

Healing Hands Ministries is a grassroots, volunteer-driven community-based organization that provides medical and dental care to patients in Dallas County. The clinic is a beacon of hope providing reliable, efficient, low-cost medical and dental care to the needy – in a nurturing, welcoming environment. Texas Health Resources, Texas Health Presbyterian Hospital Dallas, and Texas Health Physician Group have fostered a relationship with Healing Hands through Dallas County Medical Society’s Project Access Dallas.

North Dallas Shared Ministries is an organization supported by 53 churches and over 400 volunteers that provides primarily emergency assistance including food, clothing, and financial aid. Other programs include activities to enhance wellness and financial independence and improve access to health. NDSM served over 35,000 individuals this past year. Currently, NDSM provides dental care exclusively to adults four mornings per month with a corps of dedicated volunteers. Extractions and some restorative dental procedures are provided.

Goals and Relationship to Regional Goals

Project Goals:

1. Establishing two community dental clinics in high-need areas
2. Increasing the hours of operation of these dental clinics
3. Increasing the participation of senior dental students in these clinics
4. Increasing the number of patients treated at these clinics

This project meets the following Region 9 goals:

- **Oral Health:** Reducing the prevalence of dental decay in many sectors of the population, particularly minorities and low-socioeconomic groups

- **Emergency Department Usage and Readmissions:** Reducing the high volume of patients with preventable conditions seeking care in emergency departments

Challenges: The major challenges to the success of the project are the highly structured dental curriculum and clinical training program at the dental school, which limits students' participation in extramural training. BCD has recognized the value of community-based clinical training and over the past five years embarked on a program to develop clinical externship programs in rural and underserved areas of the state. Curriculum changes also have been initiated that allow students, particularly in the senior year, to participate more frequently and for longer periods than ever before. In concert with the curriculum changes, the College looks to expand its community-based clinical training program in order to provide student clinicians to staff new dental clinics at Healing Hands Ministries and North Dallas Shared Ministries, two existing community medical clinics in the Dallas metropolitan area.

3-Year Expected Outcome for Providers and Patients: Establishing two new dental clinics as described above will result in approximately 15,800 encounters for 7,900 unduplicated patients during the three years of the project. These clinics serve primarily low socioeconomic status, underserved populations. More than 80% of the patient population at the clinics are Medicaid patients or Medicaid-eligible and the remaining 20% low-income and/or underserved individuals. Additionally, more than 300 senior dental students will have the opportunity of treating patients in these clinics, adding to their clinical experience and exposing them to the oral health needs of this population of patients.

Because this rotation will become part of the BCD community-based clinical training program for fourth-year dental students, continued operation of the clinics at the proposed levels after the DSRIP project ends is assured.

Starting Point/Baseline: Because this proposal is to open two new dental clinics, the baseline for this project is zero patients currently being treated.

Quantifiable Patient Impact: 15,800 dental treatment appointments for 7,900 unduplicated patients will be accomplished by DY5. The majority (80%) of the patients are Medicaid patients or Medicaid-eligible and the remaining 20% poor and/or uninsured. Approximately 60% of the patients are pediatric.

Rationale: As documented in the RHP 9 Community Needs Assessment section CN.10 Dental Health, the disease burden of dental decay is high in many sectors of the population, particularly minorities and low-socioeconomic groups. Dental decay is the most prevalent chronic disease in man, five times more common than asthma in children. Oral health problems are a major cause of school absences among elementary school children, and the seventh leading cause of workdays lost nationally. Finally, the combination of disease prevalence, strategic manpower shortages and difficulties in general with access to dental care, results in a growing number of patients seeking treatment for dental problems in the emergency departments of hospitals, most of which

are not equipped to manage the problems. This adds to the expense of treatment and compounds the problems of already over-burdened emergency departments. Efforts to increase dental manpower and improve access, particularly in rural and underserved areas will serve to prevent emergency department visits for dental problems, addressing CN.12 Emergency Department Usage and Readmissions.

In order to increase access to dental care, the first milestone chosen for this project is *P-4 Establish additional/expand existing/relocate dental clinics or space, metric P-4.1: Number of additional clinics, expanded space, or existing available space used to capacity*. Because the opening of the clinics will proceed in a phased process, the second milestone chosen is *P-5: Expand the hours of a dental care clinic or office, including both evening and/or weekend hours, metric P-5.1: Increased number of hours at dental care clinic or office over baseline, number of patients served during extended hours*. Milestone P-4 will be included in year one of the project, when both clinics are scheduled to open. In the second and third years of the project, Milestone P-4 will be replaced by Milestone P-5 (expanded hours), as participation by BCD dental students increases and the clinic hours of operation are expanded.

- DY3: 2 clinics opened, each open 15 hours per week; 30 hours in total
- DY4: 2 clinics, hours expanded by 5 hours per clinic to 20 hours per week, 40 hours in total
- DY5: 2 clinics, hours expanded by 20 hours per clinic to 40 hours per week; 80 hours in total

The two clinics will be opened in staggered fashion during DY3, and the number of days of operations in each gradually increased during DY4 and DY5, as our curriculum is modified to accommodate an increased number of student rotation days. The final result will be two clinics, each open 40 hours per week in DY5.

The third milestone chosen for the project is *P-7: Enhance efforts to improve quality of care and quality assurance in the delivery of dental care, metric P-7.1 Integrate oral health information into electronic health records*. Dental EHR software certified for meaningful use will be introduced at both clinics, and integrated with the medical EHR currently used at the facilities.

This metric is included in DY4 in order to meet the Center for Medicaid and Medicare Services (CMS) Stage 2 meaningful use requirements. To receive a Medicaid EHR incentive payment providers must show that they are “meaningfully using” their EHRs by meeting thresholds for a number of objectives. The CMS standards for meaningful use include both a core set and a menu set of optional objectives that are specific to eligible professionals. There are a total of 22 meaningful use objectives for eligible professionals, to include dental professionals. There are 13 required core objectives and 5 optional objectives that must be chosen from a list of 9 menu options. To qualify for an incentive payment, 18 of these incentives must be met.

In DY3, we plan to select and adopt a dental EHR certified for Stage 1 meaningful use. This will involve purchasing additional computer hardware, software licenses, and migration of some data from the current system in one clinic. Extension of the existing

network in the second clinic will be required, as well as purchase of the necessary hardware, software licenses and installation. DY4 goals include selecting menu options for the optional and required elements of Stage 2 of meaningful use. DY4 activities will also include developing dental EHR metrics for quality assurance and productivity performance measures for the clinics. The goals for DY5 will be to develop quality assurance and improvement targets for improving patient care. This will require integrating the medical and dental EHR systems at both clinics, and developing common quality assurance and improvement targets for improving patient care. In DY5 we plan to complete integration of the dental EHR with the EHR system used in the medical clinics at both performance sites, which will require additional software capabilities and programming. The optional objectives for eligible dental and medical professionals are much different and will require prolonged and rigorous effort to find common ground for integration. This integration is critical to improving patient care and will require comprehensive planning and collaboration between the dental provider and the organizations providing medical care

The third milestone chosen for the project relates to the continuous quality improvement (CQI) process, and is *P-9: Review project data and respond to it every week with tests of new ideas, practices, tools, or solutions, metric P-9.1 Number of new ideas, practices, tools, or solutions tested by each provider*. A CQI Committee will be established for this project (as is the case for the other BCD DSRIP projects), to provide oversight and monitoring for CQI activities related to this and all other DSRIP projects. The CQI Committee will meet at least monthly to discuss issues related to engaging stakeholders, identifying current capacity and needed resources, determine timelines, and document implementation plans. For this project input will be solicited from students, supervising faculty and administrators at each clinic site to generate new ideas, practices, tools, or solutions that can be tested at the various other locations. These ideas will be brought back to the CQI Committee and their various aspects and potential for improvement discussed for potential adoption. The new ideas, practices, tools, or solutions will then be tested at various locations and replicated if successful.

The final milestone chosen relates directly to the patient impact of the project, *I-14: Increase number of special populations members that access dental services, metric I-14.1 Increasing the number of children, special needs patients, pregnant women, and/or elderly accessing dental services*. The majority (80%) of the patient population in the sites selected will be Medicaid patients or Medicaid-eligible and the remaining 20% poor and/or uninsured. Approximately 60% of the patients are pediatric.

This project addresses the following community needs:

- CN.10 Dental Health
- CN.12 Emergency Department Usage and Readmissions

As documented in the RHP 9 Community Needs Assessment section CN.10 Dental Health, the disease burden of dental decay is high in many sectors of the population, particularly minorities and low-socioeconomic groups. Dental decay is the most prevalent chronic disease in man, five times more common than asthma in children. Oral health

problems are a major cause of school absences among elementary school children, and the seventh leading cause of workdays lost nationally. Finally, the combination of disease prevalence, strategic manpower shortages and difficulties in general with access to dental care, results in a growing number of patients seeking treatment for dental problems in the emergency departments of hospitals, most of which are not equipped to manage the problems. This adds to the expense of treatment and compounds the problems of already over-burdened emergency departments. Efforts to increase dental manpower and improve access, particularly in rural and underserved areas will serve to prevent emergency department visits for dental problems, addressing CN.12 Emergency Department Usage and Readmissions.

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

The dental training program at Texas A&M University Baylor College of Dentistry has traditionally consisted of didactic and clinic instruction at the college, with limited opportunity for training at other sites. This project will provide senior dental students with the opportunity for clinical experience with patient populations and communities that are often underrepresented in a manner not available at the college. This additional experience will result in greater familiarity with the needs of the underserved and perhaps a greater willingness to incorporate this population into the future practice plans of the students.

Project Core Components:

The program addresses the required core component:

- a) *Conduct quality improvement for the project using methods such as rapid cycle improvement* - A Continuous Quality Improvement (CQI) Committee will be established for this project (as is the case for the other BCD DSRIP projects), to provide oversight and monitoring for CQI activities related to this and all other DSRIP projects. The CQI Committee will meet at least monthly to discuss issues related to engaging stakeholders, identifying current capacity and needed resources, determine timelines, and document implementation plans. For this project input will be solicited from students, supervising faculty and administrators at each site to generate new ideas, practices, tools, or solutions that can be tested at the various other locations. These ideas will be brought back to the CQI Committee and their various aspects and potential improvements discussed for potential adoption. The new ideas, practices, tools, or solutions are then tested at various locations and replicated if successful.

Additionally the project will:

- b) *Identify opportunities for establishment of new community dental clinics and/or collaboration with existing clinics* – Project staff will identify potential sites for establishment of new community dental clinics, and work with the administration of existing local clinics to identify facilities where collaborative efforts can be made to expand operations, in terms of new clinics, and/or expansion of hours of operation and number of providers.

- c) *Renovate and equip clinic space (if necessary) to meet clinical standards of care, recruit faculty and staff* – Clinical space at the selected sites will be renovated and/or equipped with the necessary dental instrumentation to meet the BCD standard of care, and additional faculty members and auxiliary staff will be hired to supervise and assist senior dental students staffing the clinics.
- d) *Increase student rotations* – The Department of Public Health Sciences, responsible for community-based clinical training, will continue expansion of the program, working with the curriculum committee and Dean at the college to integrate increased numbers of students and rotation days into the schedule.

Related Category 3 Outcome Measures:

The Category 3 measures being considered are:

- IT-7.2 Cavities: Percentage of children with untreated dental caries
- IT-7.6 Urgent Dental Care Needs in Children: Percentage of children with urgent dental care needs
- IT-7.8 Chronic Disease Patients Accessing Dental Services

The Category 3 stand-alone measures selected impact children and chronic disease patients accessing dental services. As documented in the RHP 9 Community Needs Assessment section CN.10 Dental Health the disease burden of dental decay is high among minorities and low-socioeconomic groups. National, state, and regional data document that eighty per cent of the incidence of dental decay is in twenty percent of the population that is low-income and dentally underserved. By opening two new dental clinics in collaboration with existing medical clinics, these low-income patients will have dental care conveniently co-located with medical care and easily accessible. The majority (80%) of the patients are Medicaid or Medicaid-eligible patients and the remaining 20% are low-income uninsured. 60% of these patients are pediatric. The majority of the children have untreated dental care and a high percentage of them have urgent dental care needs. Most of the adults have chronic diseases such as diabetes and hypertension. By enhancing access to dental services and offering dental care to many of these patients for the first time, there will be a marked positive impact on reducing the percentage of children with untreated dental caries, reducing the percentage of children with urgent dental care needs, and increasing the percentage of patients with chronic diseases accessing dental services.

Relationship to other projects: This project is part of an overall effort to increase community-based clinical training for BCD dental students, while serving the needs of our community. BCD is currently operating three DSRIP projects in RHP 9. These involve 1) increasing the number of dental students participating in internships in rural and/or underserved areas of the state, 2) expanding the number of hours and the number of patients seen, and 3) expanding BCD's existing school-based dental sealant program.

Because we are the only dental performing provider in RHP 9, it is sometimes difficult to foster collaboration between this project and other providers' projects. However, Texas Health Resources, Texas Health Presbyterian Hospital Dallas (THD), and Texas Health Physician Group have developed a relationship with Healing Hands Ministries through

Dallas County Medical Society's Project Access Dallas (PAD). Dallas County Medical Society determined in December 2012 to discontinue Project Access Dallas, and RHP 9 project THD 020908201.2.3 provides care for those patients previously cared for through PAD who utilized THD's services and patients Healing Hands cares for that were not previously enrolled in PAD. Another RHP 9 Performing Provider, The University of Texas Southwestern Medical Center, has proposed to expand the North Dallas Shared Ministries Medical Clinic through RHP 9 projects 126686802.1.1, 126686802.1.8, 126686802.1.9 and 126686802.1.10. This expansion will include physician assistant students, community health workers, and family practice residents. Texas A&M University Baylor College of Dentistry will work closely with these providers and projects to ensure that there are reciprocal referral arrangements to enhance access to medical and dental care for these patients.

The related Category 1 and 2 projects are:

- 009784201.1.1 Expansion of Senior Dental Student Externship Program
- 009784201.1.2 Expansion of Dallas County Dental Clinic Hours
- 009784201.1.3 Expansion of School-based Dental Sealant Program

Plan for Learning Collaborative: We plan to play an active role in the development and ongoing content of RHP9 Learning Collaborative, appropriate to our project. We will also participate in any Collaboratives that are associated with the outcomes of this project to obtain additional perspectives that may enable us to improve this project. We believe that the exchange of best practices and shared learning contributes significantly to continuous quality improvement and will advance the success of this project.

Project Valuation: The valuation of this project is based primarily on the value of the care provided by the students during their rotations. The population seen in the clinics is overwhelmingly disadvantaged, underserved and of low-socioeconomic status, and will number approximately 7,900 unduplicated patients over the three years of the project. By estimating the number of students participating annually and their production capacity, we project an annual total of 1,800 patient encounters in DY3, 6,000 in DY4 and 8,000 in DY5, for a total of more than 15,000 over three years. Based on data from non-profit providers in the Dallas area and some of the current externship sites, the average cost of each encounter is approximately \$125. A multiplier based on data from The Original National Dental Advisory Service 2012 (Yale Wasserman, D.M.D. Medical Publishers, Ltd. NDAS 30th Edition), will be applied to the average encounter cost to approximate the total impact on the community of the services provided. Calculation of this multiplier is based on Medicaid dental reimbursements by procedure code versus the NDAS Comprehensive Fee Report, which is a nationwide marketplace analysis of usual and customary fees. The multiplier is also a way to incorporate the benefit to the community, in terms of addressing a high-priority need, reducing school absences, improving academic performance in children and decreasing workdays lost due to dental complaints, the size of the population served and cost avoidance, as well as the benefit of additional clinical training for the dental students. Altogether, these figures estimate a total of over \$600,000 in treatment during the first year of the project, slightly more than \$2M in DY4 and approximately \$2.7M in DY5.

Project Summary

Project Option: 2.13.1 – Design, implement, and evaluate research-supported and evidence-based interventions tailored towards individuals in the target population.

Project Title: Develop a partial hospitalization program for high utilizers of mental health inpatient services to reduce inpatient utilization for mental health services.

Unique Project ID: 094379701.2.100

Performing Provider Name/TPI: Timberlawn Mental Health System / 094379701

Provider

Located in Dallas, Timberlawn Mental Health System includes a 144-bed psychiatric hospital for severe mental illness treatment, detoxification, emergency services and crisis intervention, as well as an outpatient center for both intensive and traditional mental health and substance abuse services. Timberlawn provides 5,793 admissions and 18,721 outpatient visits annually. As such, Timberlawn is a comprehensive and integrated system of psychiatric and substance abuse services for seniors, adults, adolescents and children. Our payer mix is: 46% Medicare, 28% Medicaid, 25.5% Private and 0.5% Self-pay.

Intervention

We have selected Project Option 2.13.1: Design, implement, and evaluate research-supported and evidence-based interventions tailored towards individuals in the target population. This project would allow us to expand our partial hospitalization program to an estimated 250-275 adolescent and adult medically indigent recipients per year from the NorthSTAR⁶ population, of whom we anticipate approximately 92% would be Medicaid/low-income. The project would target high utilizers of services in order to reduce costly and preventable inpatient utilization for mental health needs.

Need for the Project

The RHP 9 community health needs assessment finds that behavioral health accounts for high volume and costs, and is often utilized at capacity, despite a substantial unmet need in the population (CN.5). Additionally, readmissions are higher than desired, particularly for those with behavioral health issues (CN.12). An inadequate supply of behavioral health services is one of the most significant unmet health needs of RHP 9, including the need for less-acute levels of behavioral care in order to prevent the need for these high-cost services (CN.6). This project would address all three of these significant community needs by expanding access to less-acute levels of behavioral health services for those patients most in need and who have historically been generating high utilization and costs. Thus, the project would help reduce costs, reduce admissions/readmissions and

⁶ The NorthSTAR Program is a publicly funded managed care approach to the delivery of mental health and substance use disorder services to the eligible residents of Dallas, Ellis, Collin, Hunt, Navarro, Rockwall and Kaufman counties. NorthSTAR provides a comprehensive mental health/substance abuse benefit package for all eligible individuals, and access to benefits is determined by clinical need, not funding source. Client services to both eligible Medicaid and medically indigent individuals are managed under contract with the State by a behavioral health organization (BHO), ValueOptions.

increase these patients' access to ongoing behavioral health services. Overall, patients would receive more longitudinal, coordinated care at a lower acuity level, generating system cost savings and improved patient health status.

Target Population

The target population is high utilizers of mental health services. This project would provide partial hospitalization services to at least 146 unique individuals from our expanded NorthSTAR population in DY 3, 228 unique individuals in DY 4 and 253 in DY 5. It is estimated that 92% of the expansion NorthSTAR patients would be Medicaid, indigent and uninsured. We are currently providing partial hospitalization services to a population that is approximately 29% Medicaid/low-income. Therefore, in aggregate, we expect to serve 800-825 patients annually, of whom we anticipate approximately 48% would be Medicaid/low-income.

Expected Patient Benefits

As a result of this program, Timberlawn would expect the following benefits:

- Overall patient mental health needs to be better addressed;
- Patients' health status to be improved;
- Patients to have an improved ability to control and self-manage their conditions;
- Patients to be connected to community-based, outpatient mental health services so that these patients can manage their conditions and avoid hospitalizations;
- Reduced admissions/readmissions for the program population; and
- Mental health system cost savings for the Dallas area.

Description of QPI

We have selected I-6.1 (QPI) Metric: Number of targeted individuals enrolled/served in the project. We plan to provide partial hospitalization services to at least 146 unique individuals who are from our expanded NorthSTAR population in DY 3, 228 unique individuals in DY 4 and 253 unique in DY 5. Over the baseline of 572 individuals, our cumulative QPI for this project would be 627 unique individuals served during DY3-5.

Description of Category 3 Measure

The Category 3 measure being considered is:

- IT-3.14: Behavioral Health /Substance Abuse 30-day Readmission Rate – (SA)

Project Option: 2.13.1 – Design, implement, and evaluate research-supported and evidence-based interventions tailored towards individuals in the target population.
Project Title: Develop a partial hospitalization program for high utilizers of mental health inpatient services to reduce inpatient utilization for mental health services.

Unique Project ID: 094379701.2.100

Performing Provider Name/TPI: Timberlawn Mental Health System / 094379701

Project Description:

Timberlawn proposes to expand its partial hospitalization program to adolescent and adult medically indigent recipients who are high utilizers of services in order to reduce costly and preventable inpatient utilization for mental health needs. The program would target high utilizers of inpatient mental health services and provide immediate treatment based on an assessment of the patient’s individualized needs (such as an overnight stay, a doctor's visit or a medication review). Beyond the immediate needs of the patient, the program will include expanded transportation capabilities (two to three vans), physician involvement and a series of group therapy and individual therapy sessions that in general consist of six hours/day, five days/week. Timberlawn will be marketing the program to Dallas mental health providers as an intervention to be ideally applied before patients would have an acute episode, but also serves as a resource to patients who need immediate care.

Goals and Relationship to Regional Goals

Project Goals:

The stated goal of the program is to reduce the likelihood of hospitalization and facilitate successful community integration. As a result of this program, Timberlawn would expect the meet the following objectives:

1. Overall patient mental health needs are better addressed;
2. Patients’ health status is improved;
3. Patients have an improved ability to control and self-manage their conditions;
4. Patients are connected to community-based, outpatient mental health services so that they can manage their conditions and avoid hospitalizations;
5. Reduced admissions/readmissions for the program population; and
6. Mental health system cost savings for the Dallas area.

This project meets the following Region 9 goals:

- **Behavioral Health - Adult, Pediatric and Jail Populations:** Behavioral health, either as a primary or secondary condition, accounts for substantial volume and costs for existing healthcare providers, and is often utilized at capacity, despite a substantial unmet need in the population.

By improving access to the behavioral services need by this targeted, high-risk patient population, we can provide better care, patients can experience improved outcomes, and we can prevent avoidable hospitalizations for behavioral health needs among those patients, thereby also avoiding system costs.

Challenges: The hospital will need to enhance referral relationships with existing providers of services for the targeted population. In addition, a transportation network must be created to assure access to Partial Hospitalization services. Finally, community support relationships must be established to create and maintain participation by clients that have historically been inconsistent in their willingness to receive care.

3-Year Expected Outcome for Providers and Patients: We expect to provide partial hospitalization services to at least 146 unique individuals in DY 3, 228 unique individuals in DY 4 and 253 unique individuals in DY 5. As a result of this program, for the patients we are providing services we expect to see a 16-18% reduction in admissions to the state mental hospital, signifying that patients who had frequently-utilized inpatient services or who would have been at risk of being admitted were appropriately treated in the outpatient setting and are better able to self-manage their conditions. Indeed, results of a controlled study have shown that use of a community program greatly reduced the need to hospitalize patients and enhanced the community tenure and adjustment of the experimental patients.⁷

Starting Point/Baseline: In 2012, we provided partial hospitalization services to 572 unique individuals. We plan to expand partial hospitalization services to a brand new population of patients under NorthSTAR starting March 1, 2014.

Quantifiable Patient Impact: We have selected I-6.1 (QPI) Metric: Number of targeted individuals enrolled/served in the project, consistent with HHSC's recommended QPI measure for this project option. The project provides partial hospitalization services so that Dallas residents who are high utilizers of behavioral health inpatient services have increased access to behavioral health services, as evidenced by providing partial hospitalization services to at least 146 unique individuals from our expanded NorthSTAR population in DY 3, 228 unique individuals in DY 4 and 253 in DY 5. Of the expansion NorthSTAR patients, we estimate approximately 92% would be Medicaid, indigent and uninsured. We are currently providing partial hospitalization services to a population that is approximately 29% Medicaid/low-income. Therefore, in aggregate, we expect that approximately 48% of individuals served would be Medicaid/low-income. Over the baseline of 572 unique individuals, our cumulative QPI for this project would be 627 unique individuals served (146 unique individuals in DY 3, 228 unique individuals in DY 4 and 253 in DY 5).

Rationale: The behavioral health needs of the Dallas population outweigh the available supply of behavioral health providers, which is confounded by the fact that funding for behavioral health services is highly inadequate.⁸ This leaves many individuals with significant mental health and substance abuse disorders without sufficient access to needed services. As a result, their conditions go untreated and become exacerbated, often

⁷ Stein L, Test M., "Alternative to Mental Hospital Treatment I. Conceptual Model, Treatment Program, and Clinical Evaluation," *Arch Gen Psychiatry*. 1980;37(4):392-397.

⁸ The funding per person served in RHP 9 is among the lowest in the nation. National Alliance on Mental Illness. State Mental Health Cuts: The Continuing Crisis. March 2011.

requiring psychiatric emergency or acute care services, which are both costly and at capacity. Consequently, costs for this population continue to rise at the same time that outcomes are not necessarily improving, especially for those who are high utilizers of the psychiatric inpatient system⁹.

Partial hospitalization programs have been found to have the potential to become part of an evidence-based and recovery-oriented system; findings support that the partial hospitalization program studied has reasonable lengths of stay, provides recovery-oriented services, and has implemented evidence-based practices.¹⁰ Indeed, results of a controlled study have shown that use of a community program greatly reduced the need to hospitalize patients and enhanced the community tenure and adjustment of the experimental patients.¹¹ Partial hospitalization has been found as effective as inpatient treatment and is superior to outpatient treatment for patients with chronic mental illness.¹² The Timberlawn program would target high utilizers of inpatient mental health services and provide immediate treatment based on an assessment of the patient's individualized needs. Timberlawn will employ the use of cognitive behavioral therapy as it is now recognized as an effective intervention for chronic mental illness.¹³ Research has shown that a combination of Cognitive Behavioral Therapy and medication has resulted in positive treatment outcomes.¹⁴ Those receiving treatment in the partial hospitalization program will receive six hours of group therapy daily with at least two hours of group process. Patients will also receive skills groups, recreation group as well as daily goals groups. The patients will see the psychiatrist twice weekly and the nurse once weekly to address medication compliance and any potential side effects. Patients will be involved in the formulation and ongoing weekly review of their treatment planning allowing for patients to participate in their treatment and set formal goals. Patients will receive family therapy as needed as well as individual therapy to assist the patient in meeting their goals and stabilize their health. Patients will be involved in their discharge planning to successfully transition patients to community resources. Most patients will be referred to Metrocare services for continuity of care as well as community resources to assist with basic needs such as: housing, food and medications. As transportation is a barrier for many underinsured patients, transportation will be provided within a 15 mile radius to assist in getting much needed day treatment to decrease the need for crisis services.

This setting is less intensive and costly than an inpatient admission. At the same time, the care is also more appropriate and tailored to the patients' ongoing needs. Rather than

⁹ The DFWHC Foundation found that the top 10 most frequently admitted patients in RHP 9 cost most than \$26 million between 2007 and 2010. DFWHC Foundation, Information and Quality Services Data Warehouse, Mental Health and Substance Abuse Interactions with Readmissions Patients: Most Frequent 10 Patients (In and Outpatient) 2012.

¹⁰ Yanos PT, Vreeland B, Minsky S, Fuller RB, Roe D., Partial hospitalization: compatible with evidence-based and recovery-oriented treatment?, *J Psychosoc Nurs Ment Health Serv.* 2009 Feb;47(2):41-7.

¹¹ Stein L, Test M., "Alternative to Mental Hospital Treatment. Conceptual Model, Treatment Program, and Clinical Evaluation," *Arch Gen Psychiatry.* 1980;37(4):392-397.

¹² Saginaw County Community Mental Health Authority, September 2005, v.10

¹³ Kingdon, D., Turkington, D., "The ABC's of Cognitive-Behavioral Therapy for Schizophrenia," *Psychiatric Times.* 20 June 2006.

¹⁴ Saginaw County Community Mental Health Authority, September 2005, v. 10.

the same small cohort of patients going in and out of the mental hospital, the program can facilitate integration with ongoing care and patients can learn how to self-manage their conditions. We expect this program to provide better, more longitudinal and patient-centered treatment so that these patients do not continue to fall through the cracks. We expect patients to develop ongoing relationships with mental health professionals as well as receive increased peer support through group sessions. As a result, we would expect patients to have an improved experience of the mental health system.

In fact, the mentally ill patient population tends to cost the system disproportionately high amounts compared to the size of the population, often times because patients tend to present with chronic and acute conditions.¹⁵ We believe this project can target frequent users and patients at risk of hospitalization and improve their ongoing mental health care, thereby bending the cost curve related to state mental hospital admissions. In fact, an assessment found that partial hospitalization program treatment costs were offset by lower costs of inpatient and outpatient care, medication, or emergency room treatment, with annual costs significantly lower for the partial hospitalization study group.¹⁶ Accordingly, we expect that as a result of this project, admissions to the state mental hospital in the Dallas area can be reduced by about 16-18%. Based on 2012 Dallas transfers to the state mental hospital at \$500/per inpatient day with an average length of stay of 10 days, we estimate an annual savings of \$1,250,000.

Thus, rather than receiving episodic treatment for acute conditions, program enrollees will be receiving ongoing multi-therapeutic sessions oriented to serve a multitude of the patient's mental health needs. Patients will be connected to ongoing treatment in outpatient centers so that post-program, they can continue to receive needed, longitudinal treatment focused on self-management.

Milestones & Metrics: The following milestones and metrics were selected based on the needs of the target population:

- Process Milestones and Metrics: P-4 (P-4.1) to evaluate and continuously improve interventions based on qualitative and quantitative metrics; and P-X (P-X.1) to hire additional personnel to support the expansion of the program.
- Improvement Milestones and Metrics: I-6 (I-6.1) to enroll and serve individuals with targeted complex needs.

This project addresses the following community needs:

- CN.5 – Behavioral Health: Timberlawn will be increasing access to behavioral health services in order to provide better treatment in a more appropriate setting and reduce preventable hospitalizations.

¹⁵ For example, the costs of treating a mentally ill Medicare patient is \$43,792, versus \$8,649 for a non-afflicted beneficiary according to the SCAN Foundation Data Brief, "Medicare Spending for Beneficiaries with Severe Mental Illness and Substance Use Disorder," (February 2013, No. 38). Medicaid and indigent populations with mental illnesses also tend to cost the system more than their non-afflicted peers.

¹⁶ Bateman A, Fonagy P., "Health Service Utilization Costs for Borderline Personality Disorder Patients Treated With Psychoanalytically Oriented Partial Hospitalization Versus General Psychiatric Care," *Am J Psychiatry* 2003;160:169-171.

- CN.6 – Behavioral Health and Primary Care: The program will target high utilizers of inpatient mental health services and provide immediate treatment based on an assessment of the patient’s individualized needs (such as an overnight stay, a doctor’s visit or a medication review). Beyond the immediate needs of the patient, the program will include expanded transportation capabilities (two to three vans), physician involvement and a series of group therapy and individual therapy sessions that in general consist of six hours/day, five days/week.
- CN.12 – Emergency Department Usage and Readmissions: Timberlawn proposes to expand its partial hospitalization program to adolescent and adult medically indigent recipients who are high utilizers of services in order to reduce costly and preventable inpatient and ED utilization for mental health needs.

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

This is a new initiative with no related activities that are funded by the U.S Department of Health and Human Services.

Customized Milestones: This project includes a customized milestone to hire personnel to support the expansion of the partial hospitalization program (P-X.1). In DY3, Timberlawn will hire six personnel with the addition of two therapists, one nurse, a project manager/director and two mental health technicians.

Project Core Components:

This project addresses the required core components:

- a) *Assess size, characteristics and needs of target population(s) (e.g., people with severe mental illness and other factors leading to extended or repeated psychiatric inpatient stays).* - Timberlawn plans to review and analyze available data regarding the size, diagnostic categories and homelessness rates for the seven counties associated with the NorthSTAR targeted expanded population for the partial hospitalization services.
- b) *Review literature / experience with populations similar to target population to determine community-based interventions that are effective in averting negative outcomes such as repeated or extended inpatient psychiatric hospitalization, decreased mental and physical functional status, nursing facility admission, forensic encounters and in promoting correspondingly positive health and social outcomes / quality of life.* - We are reviewing the literature; as part of this project submission in DY 3, we have referenced reports related to partial hospitalization (see project narrative footnotes). We have found that little has been researched about partial hospitalization. We will continue to monitor the literature as the project progresses.
- c) *Develop project evaluation plan using qualitative and quantitative metrics to determine outcomes.* - As a milestone in our plan (P-4.1), we are evaluating and continuously improving interventions. This will be based on qualitative and quantitative metrics.
- d) *Design models which include an appropriate range of community-based services and residential supports.* - The documentation model to address patients’

community-based needs has already been developed. As such, the facility will collect data that reflects community support services needed and referrals made during the course of care under the partial hospitalization program. The discharge planning process will reflect community-based referrals made following the completion of treatment at Timberlawn.

- e) *Assess the impact of interventions based on standardized quantitative measures and qualitative analysis relevant to the target population.* - Our project goal is to reduce state psychiatric hospital utilization for the targeted NorthSTAR population treated under the partial hospitalization program. In addition, Timberlawn already uses a standardized Global Assessment of Functioning (GAF)¹⁷ scoring assessment on admission, and is considering doing another assessment upon discharge of partial hospitalization to measure functional improvement over the course of the program.

Related Category 3 Outcome Measures:

The Category 3 measure being considered is:

- IT-3.14: Behavioral Health /Substance Abuse 30-day Readmission Rate – (SA).

Relationship to other Projects:

This project can support population health improvements such as potentially preventable admissions and readmissions (Category 4). This project meets the community needs and operates in conjunction with the RHP-wide initiatives.

The related Category 1 and 2 projects are:

- 121758005.1.1, 121988304.1.1, 137252607.2.5, 135234606.2.3 and 020943901.2.1 New Behavioral Health Crisis Stabilization Programs
- 137252607.1.1 Behavioral Health Training
- 121988304.1.2 and 020943901.1.2 Tele-Behavioral Health
- 121790303.2.2, 121776204.2.2, 139485012.2.2, 137252607.2.1 and 135234606.2.2 Integration of Physical and Behavioral Health Services
- 137252607.2.2 Behavioral Health Wrap-Around Treatment
- 135234606.2.1 24-Hour Psychiatric Triage
- 121988304.2.1 Therapeutic Application of A Neurodevelopmental Approach To Recovery From Schizophrenia

Additionally, new RHP 9 projects proposed for DYs 3-5 include:

- A new behavioral health outpatient clinic (Metrocare),
- Integration of physical and behavioral health services for children (Metrocare and Children’s Dallas) and for women (Parkland),
- Patient navigation (Metrocare),
- Prevention of post-discharge suicide attempts (Parkland), and
- Use of rapid assessment to prevent psychiatric readmissions (Metrocare).

¹⁷ Global Assessment of Functioning (GAF) is a scoring system for the severity of illness in psychiatry.

Our project is the only partial hospitalization program proposed for the Dallas area. As such, this meets the needs of specific populations and will not duplicate services of other Performing Provider projects in the RHP.

Plan for Learning Collaborative: We plan to play an active role in the development and ongoing content of RHP9 Learning Collaborative, appropriate to our project. We will also participate in any Improvement Collaboratives that are associated with the outcomes of this project to obtain additional perspectives that may enable us to improve this project. We believe that the exchange of best practices and shared learning contributes significantly to continuous quality improvement and will advance the success of this project.

Project Valuation: This project aligns with the goals of the Texas waiver. We expect as a result of the program:

- *Improved quality:* Program enrollees' medications will be reviewed and reconciled, and patients will receive both individualized and group therapy. In fact, Yanos et al find that partial hospitalization is compatible with evidence-based and recovery-oriented treatment.¹⁸
- *Improved health status:* For the patients we are providing these services, we expect to see a 16-18% reduction in admissions to the state mental hospital, signifying that patients who had frequently utilized inpatient services or who would have been at risk of being admitted were appropriately treated in the outpatient setting and are better able to self-manage their conditions. Indeed, results of a controlled study have shown that use of a community program greatly reduced the need to hospitalize patients and enhanced the community tenure and adjustment of the experimental patients.¹⁹
- *Improved patient experience:* We expect this program to provide better, more longitudinal and patient-centered treatment so that these patients do not continue to fall through the cracks. We expect patients to develop ongoing relationships with mental health professionals as well as receive increased peer support through group sessions. As a result, we would expect patients to have an improved experience of the mental health system.
- *Better care coordination:* Rather than receiving episodic treatment for acute conditions, program enrollees will be receiving ongoing multi-therapeutic sessions oriented to serve a multitude of the patient's mental health needs. Patients will be connected to ongoing treatment in outpatient centers so that post-program, they can continue to receive needed, longitudinal treatment focused on self-management.
- *Increased cost-effectiveness:* The mentally ill patient population tends to cost the system disproportionately high amounts compared to the size of the population,

¹⁸ Yanos PT, Vreeland B, Minsky S, Fuller RB, Roe D., "Partial hospitalization: compatible with evidence-based and recovery-oriented treatment?" *J Psychosoc Nurs Ment Health Serv.* 2009 Feb;47(2):41-7.

¹⁹ Stein L, Test M., "Alternative to Mental Hospital Treatment. Conceptual Model, Treatment Program, and Clinical Evaluation," *Arch Gen Psychiatry.* 1980;37(4):392-397.

often times because patients tend to present with chronic and acute conditions.²⁰ We believe this project can target frequent users and patients at risk of hospitalization and improve their ongoing mental health care, thereby bending the cost curve related to state mental hospital admissions. In fact, an assessment found that partial hospitalization program treatment costs were offset by lower costs of inpatient and outpatient care, medication, or emergency room treatment, with annual costs significantly lower for the partial hospitalization study group.²¹ Accordingly, we expect that as a result of this project, admissions to the state mental hospital in the Dallas area can be reduced by about 16-18%. Based on 2012 Dallas transfers to the state mental hospital at \$500/per inpatient day with an average length of stay of 10 days, we estimate an annual savings of \$1,250,000.

²⁰ For example, the costs of treating a mentally ill Medicare patient is \$43,792, versus \$8,649 for a non-afflicted beneficiary according to the SCAN Foundation Data Brief, “Medicare Spending for Beneficiaries with Severe Mental Illness and Substance Use Disorder,” (February 2013, No. 38). Medicaid and indigent populations with mental illnesses also tend to cost the system more than their non-afflicted peers.

²¹ Bateman A, Fonagy P., “Health Service Utilization Costs for Borderline Personality Disorder Patients Treated With Psychoanalytically Oriented Partial Hospitalization Versus General Psychiatric Care,” *Am J Psychiatry* 2003;160:169-171.

Project Summary

Project Option: 1.9.2 – Improve access to specialty care

Project Title: Establish a Sickle Cell Patient Day Treatment Program

Unique Project ID: 126686802.1.100

Performing Provider Name/TPI: UT Southwestern Medical Center - Faculty Practice Plan/126686802

Provider

The University of Texas Southwestern Medical Center (“UTSW” or “UT Southwestern”) operates 452 inpatient beds 452-beds in the St. Paul and Zale Lipshy buildings and 40 hospital-based and ambulatory-based clinics on its Dallas campus. Faculty and Residents provide care to more than 100,000 hospitalized patients and oversee nearly 2 million outpatient visits a year. UT Southwestern physicians also provide a majority of the physician services within RHP 9 safety-net hospitals, specifically Parkland Memorial Hospital and Children’s Medical Center at Dallas.

Intervention

The project proposes to establish a Sickle Cell Disease Day Treatment Program that would provide access to trained staff that could provide immediate assessment and treatment of the patients’ problems. The Day Treatment Program would start with 3 exam rooms and 3 infusion chairs, since these patients often need an infusion to control their pain

Need for the Project

Sickle Cell Disease patients have a disproportionate rate of ED visits and hospital admissions. They also have the highest 30-day readmission rate of any diagnosis at 31.9%. UT Southwestern has approximately 460 Sickle Cell Disease patients currently being managed. Annual readmission rates for Sickle Cell patients at UT Southwestern range from 38% to 43%. The most common reason for the ED visits, admissions and readmissions is severe pain. Of the 460 patients, 117 averaged 5.1 ED visits per year. 90 of those visiting the ED were admitted and used 1,115 inpatient days.

Target Population

The target population is all Sickle Cell Disease patients within the Region and North Texas. UT Southwestern has approximately 460 Sickle Cell Disease patients currently being managed. That population is expected to grow substantially with this innovative project. 60% of the Sickle Cell patients who visit the UTSW ED or experience hospital admissions do not have insurance, and 10 % are expected to have Medicaid. Many of the ED visits and hospital admissions could be prevented if these patients had an easily accessible clinic where the providers fully understand their needs and have the resources to address them in a more appropriate setting and in a more appropriate manner.

Expected Patient Benefits

UT Southwestern averaged 224 Sickle Cell patient admissions/year over the past four years, with an average Length of Stay (ALOS) of 5.4 days. By DY5, the project will decrease hospital admissions by 50% in DY5, decrease hospital ALOS by 0.5 days, and reduce ED visits by 50%.

Description of QPI

The UTSW Registry of Sickle Cell Patients contains 460 patients who are being managed. The most relevant measures are hospital LOS, IP admissions, and ED visits. By DY5, the project will reduce LOS by 10%, reduce IP admission by 50% and ED visits by 50% by increasing ambulatory visits to the project's Day Treatment Program. In DY3, the QPI goal is 200 encounters in new SCD Clinic. DY4 QPI goal is 1840 encounters, 2040 in total for DY3-4. DY5 QPI goal is 2000 encounters, 4040 in total for DY3-5.

Description of Category 3 Measure:

The Category 3 measures being considered are:

- IT-2.25 Pain Admission Rate
- IT-9.2.d ED Diversions for Sickle Cell Patients.

Specialist Projects Needing Medicaid/Uninsured Impact Information

1) Are selected specialty areas in high need for the Medicaid/Uninsured Population?

- Sickle Cell Disease is a chronic, genetic condition usually treated by hematologists. Hematology is a subspecialty of Internal Medicine. Hematologists are generally part of the Hematology/Oncology sub-specialty group who treat the various cancers that are blood-related. Only a very few of the Hematologists actively practicing have the training, experience and interest in treating Sickle Cell Disease patients. Sickle Cell Disease is a genetic disorder seen mainly in African-American populations. 60% of patients with the disease are uninsured.

2) Are high-intensity specialties in areas of high need for the Medicaid/Uninsured population?

- This project will provide access to specially-trained hematologists and specially-trained clinical support staff to give urgent care access to Sickle Cell patients who would otherwise have to go to the ED to have their acute medical needs addressed. The clinic also will take care of the routine, primary care needs of these patients in order to prevent exacerbation of the recurring acute care needs, which most often relate to severe pain.
- Sickle Cell Disease is treated best by Internal Medicine physicians who are advanced trained in hematology, then subspecialized in treating Sickle Cell Disease. There are very few specialists in this arena. Since these subspecialists are so few in number, and since Sickle Cell patients are usually uninsured, access to appropriate care is extremely difficult, resulting in the highest rate of hospital readmissions for any disease category.

3) Does the project include a clear description of specialties that the initiative is focusing on?

- Yes. The specialty for Sickle Cell Disease is primarily the Internal Medicine – Hematologist who is Fellowship trained in Sickle Cell Disease. Patients at UT Southwestern are currently seen in the Hematology/Oncology Clinic at our Simmons Cancer Center, requiring Sickle Cell patients to have their appointment with cancer patients suffering from one of the blood cancers. Hematology/Sickle Cell physicians have a much greater understanding of how to manage the unique forms of pain management due to the causes of Sickle Cell Disease.

Project Option: 1.9.2 – Improve access to specialty care

Project Title: Establish a Sickle Cell Patient Day Treatment Program

Unique Project ID: 126686802.1.100

Performing Provider Name/TPI: UT Southwestern Medical Center – Faculty Practice Plan/126686802

Project Description:

Sickle Cell Disease patients have a disproportionate rate of ED visits and hospital admissions. They also have the highest 30-day readmission rate of any diagnosis at 31.9%. UT Southwestern has approximately 460 Sickle Cell Disease patients currently being managed. Annual readmission rates for Sickle Cell patients at UT Southwestern range from 38% to 43%. The most common reason for the ED visits, admissions and readmissions is severe pain. The project proposes to establish a Sickle Cell Disease Day Treatment Program that would provide access to trained staff that could provide immediate assessment and treatment of the patients' problems. The Day Treatment Program would start with 3 exam rooms and 3 infusion chairs, since these patients often need an infusion to control their pain. ED physicians and staff would be educated about the triage and treatment of Sickle Cell patients, with a seamless transfer/referral process developed for those patients that could more appropriately be seen at the Sickle Cell Disease Day Treatment Program. As the program volume grows due to patient awareness and trust in the care being provided, hours would be extended into the evening.

The clinic would initially operate 12 hours per day, five days per week. The hours would expand as warranted by the increased awareness of the clinic in the community and increasing volume. Programs like this around the country typically growth rapidly. Initial staffing would include at least 1 specially-trained mid-level provider, 2 SCD experienced RN coordinators, a medical assistant/phlebotomist, an infusion nurse, a social worker, and a front desk/scheduler/utility staff person. Physicians who specialize in treating SCD patients would supervise the program and staff, and provide on-call coverage during normal hours. In addition, physicians would rotate through the clinic to directly supervise care, as appropriate. Initial space requirements are projected to be 3 exam rooms and 3 infusion chairs, with offices and support space.

Goals and Relationship to Regional Goals

Project Goals:

1. Acute care of all patients in order to avoid ED visits and inpatient admissions.
2. Targeted care for "high utilizers".

Like many other programs around the country, high ED utilization and high readmission rates are generated by a small proportion of patients. We will identify a list of the "Top 10%" or "Top 20%" patients for whom we need to generate focused care plans in order to minimize the admissions in this population. The Program would use and expand Sickle Cell Patient Support Groups, in addition to social and psychological services to help these patients with "non-sickle cell" issues that often translate into active Sickle Cell

admissions. The clinic would also help assure that these patients were also receiving their routine healthcare needs met as part of assuring that their symptoms remain under good control and management.

This project meets the following Region 9 goals:

- **Capacity - Primary and Specialty Care:** This project will provide access to hematologists and specially-trained clinical support staff to give urgent care access to Sickle Cell patients who would otherwise have to go to the ED to have their acute medical needs addressed. The clinic also will take care of the routine, primary care needs of these patients in order to prevent exacerbation of the recurring acute care needs, which most often relate to severe pain.
- **Behavioral Health - Adult, Pediatric and Jail Populations:** Psychological support services will also be available due to the stressful nature of the problems associated with a chronic disease like Sickle Cell.
- **Chronic Disease - Adult and Pediatric:** Sickle Cell Disease affects primarily African-Americans. Once patients are too old to receive care at Children's Medical Center, their access to hematologists and urgent care are limited. This project will provide them with a unique access to specially trained staff whose focus is to avoid ED visits and their inevitable admission to the hospital.
- **Emergency Department Usage and Readmissions:** Sickle Cell patients often have recurring episodes of extreme pain that usually results in a visit to the ED. Lack of training and uncertainty often result in SCD patients being admitted to the hospital because the ED is not equipped to do routine infusions for pain. This project will make treatment for most of the SCD patient's problems easily accessible, allowing for ED visits to be significantly reduced.

Challenges: Making Sickle Cell patients aware that a new, urgent care and ongoing care service is available and getting them to use it and trust it will likely be the first major challenge. Initially, the clinic will be open for 5-days per week, 10-hours per day, with the goal to expand access to 7-days per week, 16-hours per day. 23-hours per day services are possible if the demand is there. Because 60% of patients do not have insurance, DSRIP support for the program in the first several years will be critical. Several regional consultants have suggested that once news of the clinic spreads, the current registry of 460 could double within 18-24 months. The challenge will then be assuring adequate staff and space.

3-Year Expected Outcome for Providers and Patients: The projected outcomes for this innovative approach to this chronic disease is a 50% reduction in ED visits and hospital admissions, with a lower Length of Stay when patients are admitted. When patients do visit the ED at UT Southwestern, the ED staff will be trained to triage and send them to the Sickle Cell Day Treatment Program if their condition allows. If they are admitted, the Sickle Cell Day Treatment Program staff will follow these patients through their inpatient staff and transfer their ongoing care to the Program at discharge. The range of services provided will improve the quality of life for these patients, who are primarily African-American and 60% lack insurance.

Specialty Care Information: Sickle Cell Disease is a chronic, genetic condition usually treated by hematologists. Hematology is a subspecialty of Internal Medicine. Hematologists are generally part of the Hematology/Oncology sub-specialty group who treat the various cancers that are blood-related. Only a very few of the Hematologists actively practicing have the training, experience and interest in treating Sickle Cell Disease patients.

Hematologists and other specialties that are willing to care for this condition are under-represented in North Texas, in general, and in Dallas, in particular. Access to hematologists for routine appointments has a predictable lag-time. This project will provide a unique combination of urgent care, ongoing care, inpatient transitional care, and outpatient care coordination in one location with specially-trained providers and support staff that can support the subspecialist Hematologists that will provide care to this population. The program will have two infusion chairs initially, growing in number as demand warrants. This will allow patients to have their pain episodes treated sooner and more easily.

Referring primary care and specialist physicians who will be targeted as potential referral sources will be other Internal Medicine physicians, ranging from General Internal Medicine to all of the subspecialties that branch off of Internal Medicine. In addition, hospitalists and Emergency Medicine physicians in area and regional hospitals and Emergency Departments will be targeted for education about Sickle Cell Disease and the needs of these patients, will an aim to refer those patients to the UT Southwestern Sickle Cell Patient Day Treatment Program to avoid future ED visits and hospitalizations.

Starting Point/Baseline: This will be a new program. At present, patients are followed by care coordinators. However, the current infrastructure does not provide for readily available urgent care services, particularly at night and on the weekends. Some of the routine care management will be transferred from existing providers to the new clinic. However, the more comprehensive approach has no baseline.

Quantifiable Patient Impact: There are 460 patients in the current UT Southwestern database for Sickle Cell patients. There are approximately 1.9 encounters per patients based on reports from our records. We project that we will reduce the average of 225 hospital admissions by 25% in DY3, then 50% in DY4 and 75% in DY5, using DY1 and DY2 as a baseline. We also project that ED visits will be reduced by the same ratios over the same time period. We also project that the ALOS for Sickle Cell patients will be reduced by 10% or 0.5 days by the end of DY4. In DY3, the QPI goal is 200 encounters in new SCD Clinic. DY4 QPI goal is 1840 encounters, 2040 in total for DY3-4. DY5 QPI goal is 2000 encounters, 4040 in total for DY3-5.

Rationale: Sickle Cell Disease patients have a disproportionate rate of ED visits and hospital admissions. They also have the highest 30-day readmission rate of any diagnosis at 31.9% nationally. UT Southwestern has approximately 460 Sickle Cell Disease patients currently being managed. Annual readmission rates for Sickle Cell patients at UT Southwestern range from 38% to 43%. UT Southwestern averages 225 hospital

admissions annually, resulting in 1,165 patients days. The most common reason for the ED visits, admissions and readmissions is severe pain. Lack of prompt access to ambulatory care services when pain episodes begin to overcome the patients causes them to seek quick relief in the ED. Lack of ED staff experience with SCD protocols usually results in a hospital admission. The project proposes to establish a Sickle Cell Disease Day Treatment Program that would provide access to trained staff that could provide immediate assessment and treatment of the patients' problems, thus providing the opportunity to avoid preventable hospital admissions, preventable hospital readmissions, preventable ED visits, and more appropriate management of this chronic disease.

This project addresses the following community needs:

- CN. 9 Chronic Disease: Sickle Cell Disease (SCD) is one of three genetic chronic diseases affecting 1 in 500 African Americans;
- CN. 8 Specialty Care: Sickle Cell Disease patients are among the least likely to have access to multispecialty care, with most of their care being poorly managed in primary care settings;
- CN.12 Emergency Department Usage and Readmissions: SCD has the highest readmission rate of any disease, with a national average of 31.9% and a regional average of more than 38%.
- CN.13 Palliative Care: SCD ED usage and Inpatient Admissions are often due to severe pain caused by the disease.

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

UT Southwestern does not currently offer urgent care services, in general, or urgent care services for specific disease conditions. One pilot program was initiated several months ago for one of the Simmons Comprehensive Cancer Institute clinics. However, this program was internal to an existing clinic and did not have dedicated providers or support staff. The pilot program did not offer services after 5pm or on weekends. This initiative will have dedicated, easily accessible space with clinic hours extending into the evening. As the program grows through community awareness and several marketing and communication tactics, the schedule will be extended to weekend and nighttime hours.

Project Core Components:

The program addresses the required core components:

- a) *Increase service availability with extended hours* - This new program will increase availability of urgent care and ongoing care services by offering extended evening hours and weekend hours. The eventual goal is to offer services at least 16 hours/day, 7 days/week.
- b) *Increase number of specialty clinic locations* - No clinic currently exists. This is a new location with easy access and ample free parking.
- c) *Implement transparent, standardized referrals across the system* - Referral and transfer protocols will be created for the two hospitals that are part of the UT Southwestern campus, as well as the 40 clinics that are part of UTSW. In addition, referral protocols will be established with other acute care and

ambulatory providers in the region. The referral protocols will be electronic whenever possible.

- d) *Conduct quality improvement for the project using methods such as rapid cycle improvement* - The program will have regular meetings to review current policies, procedures and protocols to identify where improvements can be made in process and outcome measures. The program will involve the Office of Quality Improvement to guide these efforts. Projects will be designed and implemented, as needed. The program staff will participate in the RHP 9 Learning Collaborative in order to share lessons learned and to broaden the opportunities to share how the model was developed.

Additionally the project will offer new, immediate access to specialists trained to treat Sickle Cell Disease, primarily hematologists on the faculty of UT Southwestern or providers that will be recruited.

Related Category 3 Outcome Measures:

- IT-2.25 Pain Admission Rate
- IT-9.2d: ED Diversion for SCD Patients

Relationship to other Projects: On the one hand, this project directly relates to all projects in RHP 9 that deal with hospital transitional care, inpatient and outpatient care coordination, ED navigation, and improving access to primary care and specialty care. It also relates to RHP 9 projects that address palliative care. On the other hand, this is a unique project for UT Southwestern and for RHP 9. Only four other projects across the state appear to address 7-days/week urgent care services in general or for chronic conditions. However, none of those projects were approved.

The related Category 1 and 2 projects are:

- 126686802.1.11 Urgent Care Clinic for Cancer Center outpatients.
- 094154402.1.2 Freestanding ED in Westside of San Antonio
- 130959304.1.1 Establish Chronic Disease Specialty Clinic
- 162334001.1.1 Specialized Pain Management Clinic

Plan for Learning Collaborative: We plan to play an active role in the development and ongoing content of RHP9 Learning Collaborative, appropriate to our project. We will also participate in any Improvement Collaboratives that are associated with the outcomes of this project to obtain additional perspectives that may enable us to improve this project. We believe that the exchange of best practices and shared learning contributes significantly to continuous quality improvement and will advance the success of this project.

Project Valuation: The project was measured on the below values.

Transformational Impact (Weight = 25%): This unique project improves access; improves quality; avoids substantial costs by avoiding hospital admissions and ED visits; transformative (Innovative) by providing desperately needed urgent care to underserved

minority populations with a chronic disease, and collaborative due to affiliating with EDs and other acute providers.

This project's score for this criteria: 8

Population Served/Project Size (Weight = 25%): 60% of the patients with SCD are uninsured. There are 460 patients in the current database with a likelihood of doubling that number. While relatively small, the costs associated with this population are significantly out of proportion to that size. Hence the impact of this program will be equally significant.

This project's score for this criteria: 7

Aligned with Community Needs (Weight = 20%): Project addresses 4 out of 5 major community goals or priorities in more than a minor way. Pain is the second highest presenting reason for ED admissions. Sickle Cell Disease has the highest re-admission rate of any disease or disorder on a national scale. This project will reduce hospital admissions, readmissions, ED utilization and manage a serious chronic disease in minority adults.

This project's score for this criteria: 9

Cost Avoidance (Weight = 10%): With the reduction of 50% of hospital admissions and readmission, 50% reduction of ED visits, and decreased Length of Stay, this project can avoid \$5-\$6 million in costs annually.

This project's score for this criteria: 9

Sustainability (Weight = 10%): The need for this project, the support for this project, and the great need for the benefits of this project make it mandatory that it succeeds and is sustained.

This project's score for this criteria: 7

Alignment with other RHP 9 Projects: Project supports all projects wanting to creatively and effectively deal with care coordination, ED utilization, preventing hospital admissions and readmissions, and improved access to specialty care services for chronic disease.

Total Valuation Score for this project: 9

Project Summary

Project Option: 2.7.1 – Implement innovative evidence-based strategies to increase appropriate use of technology and testing for targeted populations

Project Title: The Use of Measurement Based Care to Enhance Identification and Treatment of Medicaid Patients with Major Depressive Disorder in Primary Care Practices

Unique Project ID: 126686802.2.100

Performing Provider Name/TPI: The University of Texas Southwestern Medical Center - Faculty Practice Plan / 126686802

Provider

The University of Texas Southwestern Medical Center (“UTSW” or “UT Southwestern”) operates 452 inpatient beds 452-beds in the St. Paul and Zale Lipshy buildings and 40 hospital-based and ambulatory-based clinics on its Dallas campus. Faculty and Residents provide care to more than 100,000 hospitalized patients and oversee nearly 2 million outpatient visits a year. UT Southwestern physicians also provide a majority of the physician services within RHP 9 safety-net hospitals, specifically Parkland Memorial Hospital and Children’s Medical Center at Dallas.

Intervention

The project will implement an innovative technology, iPad-based software designed to: 1) increase access to depression treatment for Medicaid patients through routine screening, and 2) increase the quality of depression treatment for Medicaid patients through the integration of Measurement Based Care (MBC) in primary care clinics.

Need for the Project

The shortage of behavioral health services has been well identified as a need in RHP 9. The under-identification and treatment of depression is a recognized problem, with research suggesting that less than half are identified for treatment and for those that are treated the majority are under treated. Thus it is not surprising that it is also specifically identified as a problem in RHP9. The project is designed to address both these issues in the primary care setting. The primary care setting is ideal for both Medicaid and Indigent patients since this may be their sole source of medical care. Implementing a standardized method of identifying patients with depression, and subsequently optimizing antidepressant treatment is a stated objective in RHP 9 and can make a profound impact in the lives of these patients.

Target Population

The target population is Medicaid/indigent care patients that are served by the 10 selected UTSW-affiliated primary care clinics. The clinics selected for this project are those that provide services for the targeted population with approximately 50% Medicaid and 20% uninsured between the ages of 18 and 65.

Expected Patient Benefits

We anticipate providing this service across 10 UTSW Primary Care clinics that serve a large number of Medicaid eligible/indigent care patients. More specifically, UTSW expects that by DY5 at least 16,000 patients will be screened for depression in clinics serving primarily Medicaid/low income patients.

Description of QPI

The number of unique individuals receiving services/intervention will be approximately 16,000 for the entire project period. The project expects to provide COMPASS MBC depression screening to 3000 individuals in DY3, 8000 individuals in DY4 (11,000 in total for DY3-4), 8000 individuals in DY5 (19,000 in total for DY3-5.)

Description of Category 3 Measure

The Category 3 measures being considered are:

- IT-1.8 Depression management: Screening and Treatment Plan for Clinical Depression
- IT-1.9 Depression management: Depression Remission at Twelve Months

Project Option: 2.7.1 – Implement innovative evidence-based strategies to increase appropriate use of technology and testing for targeted populations

Project Title: The Use of Measurement Based Care to Enhance Identification and Treatment of Medicaid Patients with Major Depressive Disorder in Primary Care Practices

Unique Project ID: 126686802.2.100

Performing Provider Name/TPI: The University of Texas Southwestern Medical Center - Faculty Practice Plan / 126686802

Project Description:

UT Southwestern Depression Center proposes to expand access to depression treatment in primary care practices to significantly impact the needs of RHP 9 patients and the community.

The University of Texas Southwestern Medical Center (“UTSW or “UT Southwestern”) is affiliated with a number of primary care practices in RHP 9 through its UT Southwestern Clinical Affiliates Program. We aim to implement this proposal in 10 of these affiliated clinics that also serve a large number of Medicaid, Medicaid-eligible and indigent patients. These primary care serve 50-80% Medicaid and an additional 10-25% self-pay patients.

This proposal is designed to implement a Measurement Based Care (MBC) program that utilizes a web-based platform in improving the identification and quality of care for patients with Major Depressive Disorder (MDD) in primary care settings. First, it will extend the development of an electronic system (called COMPASS) that will provide the opportunity for eligible primary care clinics (i.e., Medicaid/Indigent care clinics) to systematically identify depressed patients, quantify the severity of their depression, and provide follow-up recommendations. The COMPASS software is designed to support the use of MBC by providing feedback to prescribers at the point of care. The concept of MBC for the treatment of depression includes: the systematic assessment of depressive symptoms, antidepressant treatment side effects, and antidepressant treatment adherence at defined intervals using validated rating scales. Each clinic will be provided with iPads loaded with the COMPASS software, which will be used by both patients and the medical staff.

This project will start with a depression symptom screening tool (based on the 9-item Patient Health Questionnaire (PHQ-9) that is presented through a customized web application (COMPASS). The first step will involve training primary care clinicians and designated staff in the use and interpretation of the PHQ-9 and the utilization of the COMPASS depression screening application at 5 initial clinics (Wave I). In addition, a needs assessment that includes best methods to address potential clinic barriers to implementation will be conducted. At the same time, training for clinic prescriber on the use of Measurement Based Care for the treatment of depression will also take place. This will be followed by customization of the COMPASS interface needed for the clinics and testing in the clinic settings.

At this time the Wave I clinics will began screening for depression using the COMPASS system. Specifically, eligible clinic patients will be asked to complete the initial screening on an iPad. This entails answering the first two items of the PHQ-9; patients with scores above 3 on the first two items will then answer the additional 8 items of the PHQ-9. Once completed, an e-mail is generated to appropriate clinic staff caring for the patient and the application screen will lock with a message to return the iPad to a clinic staff member. Patients identified by the PHQ-9 with depression will be further assessed to confirm a diagnosis of major depressive disorder (MDD) and exclude confounding diagnoses (i.e., bipolar disorder, psychotic disorders). Referral recommendations will be provided for patients found to have a diagnosis other than MDD.

The expected timeline will be software customization and testing in the first two quarters, with training of Wave I clinic staff and clinicians in the last 6 weeks of the second quarter. The first, testing and trial runs within the clinic will happen at this same time with full implementation expected to begin at the start of the third quarter. The Wave II clinics will begin training and testing the last 6 week of the third quarter, with full implementation by the beginning of the fourth quarter. This time line allows for the full implementation of depression screening and start of the use of the MBC model for depression treatment to be realized by the beginning for DY4.

Once a primary care clinic implements COMPASS continuous quality control will be provided through the use of weekly feedback reports on the number patients screened, and the follow-up action status for those that screened positive for depression. During DY4 we anticipate screening at least 8,000 unique patients for the target population, and we expect that about 6 to 10 percent will screen positive for depression. For DY5 again the target number of annual screens is 8,000 unique patients and while we expect a slight drop in positive screening due to those identified and treated in DY4 we still anticipated over 6 percent positive screens.

Goals and Relationship to Regional Goals

Project Goals:

All patients will be screened for depression utilizing the 9-item Patient Health Questionnaire (PHQ-9). The goals of this proposal are to:

1. To improve access to behavioral health care for Medicaid eligible/indigent patients by systematically identifying patients with depression in primary care settings
2. To improve care coordination and management of depression in primary care settings by training and guiding appropriate follow-up treatment, upon identifying depressed patients
3. To improve primary care provider performance and treatment outcomes in patients with depression, through the use of MBC.

As such, COMPASS is designed to optimize depressive symptom outcomes, minimize antidepressant treatment side effect burden, and ensure consistent treatment adherence.

This project meets the following Region 9 goals:

- **Capacity - Primary and Specialty Care:** This project will ameliorate some of the consequences of insufficient capacity of both primary and specialty care. By providing screening and measurement tools that allow depression to be more easily identified and treated in primary care settings, physicians will be able to more efficiently treat their patients' conditions. This may also lessen the demand for specialty psychiatric referrals for the most prevalent mental health condition.
- **Behavioral Health:** Behavioral health resources are likewise better used at capacity, despite a significant unmet need in the community. This project addresses the needs for both identification and treatment of the most common mental health condition.
- **Chronic Disease:** Individuals with depression are at greater risk for both cardiovascular diseases and type II diabetes. Adequately treating patients with depression and co-morbid chronic medical illnesses, like diabetes, can improve morbidity. Therefore it is expected that better identification and treatment of depression will lead to better outcomes for both the targeted disease and other costly medical conditions.
- **Emergency Department Usage and Readmissions:** By addressing depression in primary care settings through this project, the need for emergency departments to treat patients suffering from depression may be reduced. The earlier identification and treatment of depression may prevent patients from experiencing more severe depressive symptoms and also can improve the state of their co-morbid illnesses.

Challenges: The scope of this project is ambitious, in that we aim to screen all eligible patients in 10 UTSW affiliated primary care clinics for depression. With that in mind, we realize that we will identify a large number of patients whose depression was previously unrecognized. For busy primary care practitioners this will undoubtedly increase their workload. However, we look to offset this by training the practitioners and their clinic staff in evidence-based practices for treating depression, and through the use of the COMPASS software on the iPad. The software will systematically measure depressive symptoms through the well-validated PHQ-9, and then provide the practitioner with real-time feedback to guide them through treatment options. We have also budgeted to have 2 psychiatric consultants to support each of our clinics. We envision that these consultants will visit each clinic one day per week, during which time they will discuss difficult-to-treat cases with the physicians/clinic staff. While we expect that the vast majority of the identified depression cases can be handled in the clinics in this manner, we understand that some may need care beyond this paradigm. For these cases, the psychiatric consultants and UTSW research team will assist the clinics in facilitating referrals to appropriate entities (e.g., Dallas MetroCare).

3-Year Expected Outcome for Providers and Patients: At the end of the three-year project period we anticipate screening over 16,000 unique individuals for depression across 10 primary care clinics that serve Medicaid/indigent care populations. Based on prior research findings, we estimate that 10% (or 1600) of these patients will screen positively for depression. COMPASS will provide follow-up recommendations for all patients who screen positively for depression, and providers will be encouraged to

continue to routinely measure depressive symptoms through COMPASS at all follow-up visits for individuals screening positively.

Starting Point/Baseline: The project's aim is to screen all Medicaid eligible/indigent care patients for depression across 10 primary care clinics that are affiliated with UT Southwestern Medical Center. While we have already identified 15 primary care clinics that appear to be appropriate to satisfy the goals of this project, our starting point will be to visit each of these clinics and identify the 10 most appropriate (i.e., serve the greatest number of Medicaid/indigent patients and have a mutual interest in collaboration). Concurrently, we will work with our Information Technology consultants to develop, test, and ready the COMPASS software for deployment and implementation. We anticipate this step to take approximately 3 months.

Quantifiable Patient Impact:

The number of unique individuals receiving services/intervention will be approximately 16,000. The project expects to provide COMPASS MBC depression screening to 3000 individuals in DY3, 8000 individuals in DY4 (11,000 in total for DY3-4), 8000 individuals in DY5 (19,000 in total for DY3-5.)

Rationale: It is estimated that 10-14% of patients seen in primary care clinics at any given time has major depression (Pignone et al 2002). Unfortunately, some reports suggest that half of these patients will not be recognized as having depression (Coyne et al 1995). Furthermore, of those treated with antidepressants the evidence suggests that only 1 out of 5 patients will receive adequate dosing (Young et al 2001). Therefore, implementing a standardized method of identifying patients with depression, and subsequently optimizing antidepressant treatment through MBC can make a profound impact in primary care practices.

In addition, individuals with depression are at greater risk for both cardiovascular diseases and type II diabetes (Jiang et al, 1996; Lustman et al, 2006). Adequately treating patients with depression and co-morbid chronic medical illnesses, like diabetes, can improve morbidity (Lustman et al, 2000). Therefore it is expected that better identification and treatment of depression will lead to better outcomes for both targeted disease and other costly medical conditions.

This project addresses the following community needs:

- CN.3 Healthcare Capacity
- CN.5 Behavioral Health
- CN.6 Behavioral Health and Primary Care

How the project represents a new initiative for the Performing Provider or significantly enhances an existing delivery system reform initiative: This project represents a new, evidence-based initiative that is the first of its kind in this district, in that it aims to increase access to depression screening and treatment for RHP 9 Medicaid eligible patients. Since we aim for it to take place in primary care clinics it is also likely to improve the performance and care these clinics provide, as behavioral health experts

from UTSW will train and advise primary care physicians for their difficult-to-treat depressed patients. Furthermore, adequate depression management is likely to further reduce the morbidity of other comorbid medical illnesses (i.e., diabetes).

Project Core Components:

The program addresses the required core component:

- a) *Conduct quality improvement for project using methods such as rapid cycle improvement* - The project leaders will conduct regular staff meetings internally, and periodic meetings with primary care practice stakeholders to review policies, procedures, protocols, and general operating outcomes to identify opportunities to improve how the project is being carried out. Quality improvement initiatives will be defined and carried out using rapid cycle improvements and PDSA tools. Meetings will document project impacts, lessons learned, opportunities to scale the project to broader populations and different settings, and key challenges associated with developing, implementing and sustaining the program.

Related Category 3 Outcome Measures:

The Category 3 measures being considered are:

- IT-1.8 Depression management: Screening and Treatment Plan for Clinical Depression (PQR 2011)
- IT-1.9 Depression management: Depression Remission at Twelve Months (NQF#0710)

These Category 3 Outcome Measures were selected to address: 1) the impact of depression screening for all eligible patients in select RHP 9 primary care clinics, and 2) the impact of initiating treatment for patients who screen positive for depression, specifically as it relates to achieving and sustaining remission. Remission is defined as a PHQ-9 score of 5 or less (based on prior research this reflects an absence of depressive symptomatology). Furthermore, evidence shows that patients treated to remission have better functioning, a better prognosis, and a more enduring symptom-free state than those who improve but fail to achieve remission.

Relationship to other projects: This project relates to all projects that involve behavioral health screening and treatment for depression. It also relates to improving access to primary care because it provides an avenue for treating depression in the primary care setting without having to co-locate a behavioral health professional. It indirectly relates to projects dealing with chronic disease management because depression is known to have an adverse impact on the success of treating chronic diseases.

This project provides a unique resource that complements the other behavioral health projects in RHP9 (listed below). It expands screening and treatment options for the largest sample of the Medicaid/low-income population, whereas the other projects have goals that entail a more focused scope of impact. One project will open a new outpatient clinic, which will benefit a particular region of Dallas County. Three projects target child/adolescents and another will improve outcomes for women with postpartum depression. Three additional projects are aimed at specific interventions for severe

mental and behavioral health issues, specifically, to decrease subsequent suicide attempts, psychiatric hospitalizations, or total inpatient utilization of services for mental health needs. By increasing screening and early detection of depression, this project should also contribute to a reduction of the Medicaid/low-income population needing crisis intervention and possibly inpatient care.

The related Category 1 and 2 projects are:

- Unique RHP Project ID; Metrocare Outpatient Clinic
- Unique RPH Project ID; Integration of Child and Adolescent Behavioral and Primary Healthcare Services
- Unique RPH Project ID; Enhance Service Availability of Appropriate Levels of Behavioral Health Care
- Unique RPH Project ID; Intensive Applied Behavior Analysis Program
- Unique RPH Project ID; Post-Partum Mental Health Initiative
- Unique RPH Project ID; Develop a partial hospitalization program for high utilizers of mental health inpatient services to reduce inpatient utilization for mental health services
- Unique RPH Project ID; Prevention of Post-Discharge Suicide Attempts via Crisis Hotline Follow-Up Services
- Unique RPH Project ID; Metrocare Rapid Assessment and Prevention (RAP)

Plan for Learning Collaborative: We plan to play an active role in the development and ongoing content of RHP9 Learning Collaborative, appropriate to our project. We will also participate in any Improvement Collaboratives that are associated with the outcomes of this project to obtain additional perspectives that may enable us to improve this project. We believe that the exchange of best practices and shared learning contributes significantly to continuous quality improvement and will advance the success of this project.

Project Valuation: The project was measure on the values below:

Transformational Impact (Weight = 25%): We believe the proposed project should receive the highest rating for this criterion. The project is designed to increase access to healthcare for low-income populations by allowing a previously unrecognized illness, depression, to be identified. The program is also designed to improve treatment outcomes through the use of measurement-based care, an empirically based model that has demonstrated an ability to improve outcomes (i.e., remission of symptoms).

This project's score for this element of criteria: 9

Population Served/Project Size (Weight = 25%): income populations. We plan to screen all eligible patients at these specified primary care clinics to maximize outreach to the targeted population. In summary, our aim is to identify and subsequently treat all willing and eligible low-income patients in these 10 clinics.

This project's score for this element of criteria: 9

Aligned with Community Needs (Weight = 20%): The community needs assessment specifically states: “An inadequate supply of behavioral health services is one of the most significant unmet health needs of RHP 9.” In addition, as specified in the needs assessment for RHP9, the delivery of behavioral health care in primary care is well below the national average. This project provides both the means to identify persons in need of treatment for depression and to ensure that best practices are used to treat those individuals in primary care settings. By integrating behavioral health services within the context of primary care clinics, this program is specifically intended to expand access and availability for treatment of depression to patrons in RHP 9.

This project’s score for this element of criteria: 9

Cost Avoidance (Weight = 10%): The routine screening, identification, and effective treatment of depression are likely to result in significant cost benefits. The Community Needs Assessment specifically notes that Depression/Anxiety is in the top 5 for highest volume of Adult Outpatient Emergency Department Encounters amongst Medicaid patients. As such, early identification and treatment of these patients in primary care clinics is very likely to reduce ER encounters, and subsequently cost. In addition, it can reduce the morbidity associated with other chronic medical conditions, such as diabetes.

This project’s score for this element of criteria: 9

Sustainability (Weight = 10%): Based on evidence from prior research studies, the procedures and practices associated with a measurement based care approach for identifying and treating depression can easily be integrated into routine practice patterns. Many of the clinics will embrace these practices and adopt them as their standard of care, and thus sustain the project’s impact. However, we recognize that some clinics may only engage in the use of these procedures while there is external support and monitoring. Finally, the Compass system will continue to be available to any clinic that wishes to be a part of the UT Southwestern Medical Center Depression Center’s Mood Disorders Network.

This project’s score for this element of criteria: 9

Partnership Collaboration (Weight = 10%): This project fulfills a critical need that has not been addressed by other projects in the region: implementing technology-assisted services to support, coordinate, and deliver behavioral health treatments in primary care settings. As a proxy we anticipate that engaging primary care clinics in the systematic identification and treatment of patients with depression will thereby reduce the demand and strain on the RHP 9 behavioral health safety net (i.e., NorthStar). This project also intends to integrate behavioral health care services (depression screening, treatment, and consultation) in primary care clinics that serve large low-income populations.

This project’s score for this element of criteria: 9

Total Valuation Score for this project: **9.0**

References

1. Pignone MP, Gaynes BN, Rushton JL, et al. Screening for depression in adults: A summary of the evidence for the US Preventive Services Task Force. *Annals of Internal Medicine*. May 21 2002;136(10):765-776.
2. Coyne JC, Schwenk TL, Fechner-Bates S. Nondetection of depression by primary care physicians reconsidered. *Gen Hosp Psychiatry*. Jan 1995;17(1):3-12.
3. Young AS, Klap R, Sherbourne CD, Wells KB. The quality of care for depressive and anxiety disorders in the United States. *Archives of General Psychiatry*. Jan 2001;58(1):55-61.
4. Jiang W, Babyak M, Krantz DS, et al. Mental stress-induced myocardial ischemia and cardiac events. *Jama-Journal of the American Medical Association*. Jun 5 1996;275(21):1651-1656.
5. Lustman PJ, Clouse RE, Nix BD, et al. Sertraline for prevention of depression recurrence in diabetes mellitus - A randomized, double-blind, placebo-controlled trial. *Archives of General Psychiatry*. May 2006;63(5):521-529.
6. Lustman PJ, Freedland KE, Griffith LS, Clouse RE. Fluoxetine for depression in diabetes - A randomized double-blind placebo-controlled trial. *Diabetes Care*. May 2000;23(5):618-623.