**Category 2 Project Narrative**

**Scott & White Hospital--Llano 020840701.2.1   
(formerly Llano Memorial Hospital)**

**Project Area, Option and Title:** 2.8.1. Design, develop, and implement a program of continuous, rapid process improvement that will address issues of safety, quality, and efficiency

**RHP Project Identification Number:** 020840701.2.1

**Performing Provider Name:** Baylor Scott & White Health Llano

**Performing Provider TPI #:** 020840701 (New TPI: 220798701)

**Project Summary:**

* **Provider Description:** Scott & White Hospital-Llano is a 30‐bed hospital in Llano, TX, serving a 934 square mile area and a population of approximately 19,301. It is part of Baylor Scott & White Healthcare, a large integrated system in Central Texas.
* **Intervention:** This project will apply continuous process improvement strategies, guided by the Institute for Healthcare Improvement (IHI) Model, to identify causes of avoidable Emergency Medical System (EMS) and Emergency Department (ED) utilization, prioritize potential solutions, and launch PDSA cycles on chosen improvements.
* **Project Status:** This is a new project. At the start of this project, no team is dedicated to reducing avoidable EMS and ED visits at the hospital.
* **Project Need:** Llano County and the hospital identified a need for increased capacity in EMS services in the county. The group chose to work on rapid process improvement to improve the appropriate utilization of EMS and associated ED visits to address this need. This project addresses the following community need: CN.1.5 ‐ Limited access to emergent care and limited awareness of which levels of care are appropriate for different health needs places undue burden on the Emergency Department and Emergency Medical System in Llano County.
* **Target Population:** The target population within Llano County will be determined in DY2. A review of ED and EMS revenue and volume reports indicate 7,005 ED visits were completed in FY 2012; 1,981 EMS transports occurred. Approximately 16% of ED visits and 9% EMS transports were for Medicaid, uninsured and/or indigent populations. We expect to impact the majority of persons using EMS transport who are also Medicaid beneficiaries, uninsured patients and indigent care program members with process changes to improve the appropriateness of utilization for this group. Process changes introduced by the project will reach a cumulative total of 400 individuals in DY2‐5, including 150 in DY4 and 200 in DY5. While some will necessarily still utilize EMS and ED services, the process improvement work should improve decision‐making and utilization choices for the full population considering use of EMS services.
* **Category 1 or 2 Expected Project Benefit for Patients:** The project is designed to improve the appropriateness of EMS service utilization and the resulting ED utilization that comes from EMS utilization. Process improvements will work to better address unmet needs leading to inappropriate EMS and ED utilization for County residents (Improvement Milestone I‐13.1). Reducing inappropriate ED visits will help maintain timely and effective use of EMS and ED services for patients experiencing a true emergency.
* **Category 3 Outcomes:** IT‐9.2.a: Our goal is to reduce all‐cause ED visits by 5% over baseline by the end of DY4 and 10% over baseline by the end of DY5.

**Project** **Description:**

*Continuous Rapid Process Improvement for Emergent Services*

This project will apply continuous process improvement strategies, guided by the Institute for Healthcare Improvement (IHI) Model, to identify causes of avoidable Emergency Medical System (EMS) and Emergency Department (ED) utilization, prioritize potential solutions, and launch Plan, Do, Study, Act (PDSA) cycles to implement iterations of chosen improvements. The core project components include:

a) *Provide training and education to clinical and administrative staff on process improvement strategies, methodologies, and culture.* Staff members and other stakeholders on our quality improvement team will be trained in the IHI Model to establish common language and basic competency for group participation. Teams will be facilitated by system personnel trained and experienced in quality improvement, implementation and evaluation methodology.

b) *Develop an employee suggestion system that allows for the identification of issues that impact the work environment, patient care and satisfaction, efficiency and other issues aligned with continuous process improvement.* Solicitation of employee suggestions will be systematic and purposeful. It will be important to capture the suggestions of EMS personnel in particular. Quality improvement teams will be made up of local champions for change and staff members involved in key process steps (as identified by process mapping exercises). Informal discussions, surveys, and existing employee or patient feedback mechanisms will be utilized as appropriate to the teams’ work.

c) *Define key safety, quality, and efficiency performance measures and develop a system for continuous data collection, analysis, and dissemination of performance on these measures ((i.e. weekly or monthly dashboard).* Frequency of data feedback to the quality improvement team(s) and broader audiences will be determined by the nature of changes tested—some will require more frequent feedback than others. In all cases, we intend to measure for improvement *and* for unintended consequences (e.g., adding unintended barriers to care, adding unnecessary steps to processes) of all changes. A project manager will be responsible for documenting key actions in our PDSA cycles and collating data gathered to test each change. The nature of those data will depend on the change being tested. Data on the improvement target of ED utilization can be extracted from the hospital’s billing data. Data on volume of EMS calls will come from the EMS records, the format and frequency of which needs to be determined by teams to match their planned PDSA cycles.

d) *Develop standard workflow process maps, staffing and care coordination models, protocols, and documentation to support continuous process improvement.*

Implementation guides will be customized to process improvement iterations, as appropriate.

e) *Implement software to integrate workflows and provide real‐time performance feedback*.

Software will be integrated only if determined to be necessary for process improvement but not for the sake of adding software alone.

*f) Evaluate the impact of the process improvement programs and assess opportunities to expand, refine, or change processes based on the results of key performance indicators.* Key performance indicators must be selected for each test of change. This will largely be indicators of implementation—for example, number of people reached with the change, and potential unintended impacts of the change.

**Goals and Relationship to Regional Goals:**

The primary goals of this project are to reduce inappropriate utilization of EMS and reduce inappropriate utilization of ED services such that those services are more readily available for responding to emergencies and transferring patients to higher levels of care outside the county quickly when needed. Our goal is to reduce inappropriate utilization of these specific services. This fits within the regional goal of reducing inappropriate service utilization is a regional goal.

**Project Goals:**

* Reduce avoidable utilization of EMS services (e.g., for conditions that are not urgent); and
* Decrease ED utilization by reducing use of the ED for concerns that do not require urgent or emergency services.

**This Project meets the following Regional Goal:**

Reducing inappropriate utilization of services.

**Challenges:**

We expect our biggest challenge to be collaboration across stakeholder groups. While appropriate utilization of services is a shared goal, definitions of current problems and ideas for how to address those problems are likely to differ across groups. These differences are essential for choosing effective changes that can be sustained long‐term, but differences also require effective and mutually‐respectful strategies for collaboration. The team’s work will be facilitated by someone from Baylor Scott & White Health’s System Quality & Safety team. This person is trained and experienced in facilitating the QI process and will use facilitation strategies designed to engender trust and foster effective communication across stakeholder groups.

**5‐Year Expected Outcome for Provider and Patients:**

In five years, we expect to increase the availability of EMS services for timely patient transfers out of the County for higher levels of service when necessary because community members’ needs will be met in more appropriate ways that do not require EMS transfer to the ED. We also expect increased capacity in the ED because of a reduction in visits for conditions that are not urgent or do not require emergency care. Reduction in inappropriate ED use should represent a shift in the community’s ability to meet individuals’ needs at the right place and right time.

**Starting Point/Baseline:**

Baseline will be established in DY2 after the quality improvement team specifies the program targets and project‐ specific metrics.

**Rationale:**

**Community Need Addressed:**

* Community Need Area: CN.1 ‐ Limited access to primary care
* Specific Community Need: CN.1.5 ‐ Limited access to emergent care and limited awareness of which levels of care are appropriate for different health needs places undue burden on the Emergency Department and Emergency Medical System in Llano County.

The project will address RHP 8 community need listed above.

At the start of this project, no team is dedicated to reducing avoidable EMS and ED visits at the hospital. Locally, there is a belief that additional ambulance services would be useful for helping alleviate burdens on existing EMS teams, especially when transfers to sites of care out of the county require significant time for one or more teams at a time. Rather than adding capacity, the Performing Provider and Llano County have agreed to partner to try to reduce avoidable EMS utilization, freeing up existing EMS crews for out‐of‐county transfers and reducing avoidable ED utilization.

We selected continuous, rapid cycle improvement processes to address the problem because no solution is obvious. The iterative work of stakeholders will be required to identify key leverage points and launch tests of change to address the problem. All required project components will be employed (see Core Components in “Project Description”). The milestones chosen represent key steps in the Model for Improvement, the model to be deployed by the team. Before launching our first test of change, we need to identify the target metrics that would indicate a change is an improvement (P‐2). We then need to identify current processes and generate a list of potential changes to those processes that may lead to improvement.

Once that list is generated, the team can prioritize the potential changes and select at least one to launch [P‐1] [P‐1.1]. This pre‐work is planned for DY2. Completion of the pre‐work will position the team to launch its first test of change (PDSA cycle) in DY3 [P‐7]. Consistent with the Model for Improvement, the first test of change will lead to iterations of tests of change, informed by data gathered during PDSA cycles and by the pre‐work in DY2. We expect that iterations of test of change should have impact on the chosen metrics by DY4 and increasing impact by DY 5 [I‐13] [I‐13.1]. Progress toward the targeted process‐related metrics should be an indicator of progress toward achieving our Category 3 Outcome Measure—IT‐9.2.a Emergency Department (ED) visits per 100,000, the indicator of impact on the community need for reduced inappropriate ED utilization.

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

The project does not overlap with other initiatives funded by the U.S. Department of Health and Human Services.

**Related Category 3 Outcome Measure(s):**

IT‐9.2.a Emergency Department (ED) visits per 100,000

The project is designed to improve the appropriateness of EMS service utilization and the resulting ED utilization that comes from EMS utilization. Appropriate ED utilization is a priority because we need to maintain timely, effective ED services for individuals with urgent or emergency conditions but want to reduce use of EMS and ED services for other types of concerns. Doing so should free‐up EMS and ED provider time for meeting the needs each service was designed to address. The measure was chosen because it directly reflects the project goals, described above. We will meet our improvement targets by launching iterative rapid process improvement initiatives and monitoring their impact on our targets. Ineffective changes will be dropped or adjusted to better impact our targets.

**Relationship to Other Projects:**

The proposed Pass 2 project (#020840701.2.2 and #020840701.3.2) at Scott & White Hospital--Llano will also use rapid cycle improvement cycles to address the related problem of ED utilization as part of behavioral health transports. Both projects will follow the Model for Improvement and some of the same stakeholders will be represented on both projects. Depending on target populations selected by the teams and identified potential tests of changes, there may be opportunities to leverage the two improvement initiatives to more broadly address utilization of ED and transport services by serving the underlying community needs proactively.

The project is also related to our Category 4 for project #020840701.2.1 in that it has the potential to reduce potentially avoidable hospital admissions following ED visits for the same conditions even though hospital admissions are not the target of the project. As of November 1, ED utilization is not a listed metric for Category 4; this project is not expected to impact time to transfer in the ED.

**Relationship to Other Performing Provider’s Projects and Plan for Learning Collaboratives:**

This project is related to the Category 2 project (#137249208.2.1, #137249208.3.1, and #137249208.3.2) submitted by Scott & White Memorial Hospital for a patient navigator program in Bell County with one of its goals also being reduction of inappropriate ED utilization. The strategies in the two counties will be different, but each was selected in collaboration with the IGT partners and each is expected to best meet the local needs of residents in ways that reduce need or perceived need for ED services. This project is also related to a patient navigation project (#126936702.2.1 and #126936702.3.6) proposed by Williamson County and Cities Health Department. Scott & White Hospital--Llano will participate in a RHP 8 learning collaborative that meets semi‐annually to discuss local disparities in care and the ways they have successfully gathered relevant data and ultimately better served the populations in their projects.

**Project Valuation:**

The scope of this project was determined by the availability of funds from IGT entities to serve the residents of Llano County, who used local EMS services for 1,981 transports from Sept 2011 through August 2012. By the end of DY5, the process changes introduced through this project will reach at least 400 individuals in the target population in Llano County (Cat 2 Milestones 4 and 5). The value is the sum of a) direct costs of program implementation, measurement, and management to affect at least the processes for Medicaid beneficiaries, charity care program members, and indigent care program members (approximately 178 transports/year), and b) indirect costs of participation in this waiver and of administering the program (e.g., hiring, communication, offices, personnel management, and information technology). Because data collection and reporting is inextricably tied to process improvement, the project valuation was done across all four categories and four years then divided by 4 to estimate the per‐year value or divided by the minimum required percent allocation to each category to estimate the per‐ category value. When all activities are considered, the average per‐year direct program cost is expected to be $252,212. This value includes a process improvement “allowance” for the quality improvement team of $24,948 per year to implement selected changes.

An indirect cost of 19% was applied to average annual direct program costs to account for cost of communication, printing, personnel time for meeting, and other incidental costs of gathering the quality improvement team and conducting program activities. Estimated per‐year indirect costs are $40,269.