

Rider 55 Report
Medicaid Quality Initiative Pilot Project
Primary Care Case Management

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Rider 55 – Medicaid Quality Initiative Pilot Project Report

Executive Summary

The *Medicaid Quality Initiative Pilot Project* is pursuant to the 2006-07 General Appropriations Act (Article II, Health and Human Services Commission, Rider 55, S.B.1, 79th Legislature, Regular Session, 2005).

Rider 55 instructs HHSC to establish a pilot in one of the Medicaid Primary Care Case Management (PCCM) service areas to test mechanisms that reduce non-emergent use of the emergency department (ED), including higher payment to primary care physicians and providers who offer after-hours care; case management services for patients who frequently rely on the ED for routine care; or other mechanisms HHSC develops.

This report details the results of a pilot that evaluated whether increased case management services provided to 49 PCCM clients increased primary care provider visits and reduced ED usage for non-emergency conditions. HHSC directed its PCCM administrator, the Texas Medicaid & Healthcare Partnership (TMHP), to conduct the pilot with existing staff at no additional cost to the state. HHSC selected McLennan County for the pilot service area. The selection criteria were based on the area's high ED utilization and the presence of a rural health clinic within the county that provides an alternative site to EDs for patient care, along with other factors.

While staff experienced some study limitations and barriers during the pilot study, conclusions demonstrated that pilot participants visited their primary care provider more during and after the pilot period than before the pilot period, and that their increase in primary care provider visits was statistically significant compared to a control group. Pilot participants' visits to the ED also decreased both during and after the pilot, but the control group's ED visits also decreased over time, so it is difficult to quantify to what extent pilot interventions affected ED usage for non-emergency conditions.

HHSC cautions against generalizing the pilot conclusions across the PCCM population due to the following limitations of the study: small sample size, possible self-selection bias and Case/Control matching issues, age of participants, and unprocessed or unfiled provider claims.

Background Information on Rider 55

Emergency Department Use for Minor Conditions

Non-emergent use of the emergency department (ED) is an issue of significant concern at the national, state, and local levels. According to the National Center for Health Statistics, there was a 14 percent increase in ED cases between 1997 and 2000 in the United States. ⁽¹⁾

Texas Medicaid claims data from June 2004 indicates that many ED visits were associated with conditions that are potentially treatable in settings outside of the ED. Such conditions treated in the ED during that time period included fever, upper respiratory infections, asthma, vomiting,

diabetes, urinary tract infections, and high blood pressure. Settings where appropriate care could be provided include medical offices, clinics, and clients' homes.

Treatment of minor conditions within the ED setting is often inappropriate and can interfere with the operation of the department for life-threatening conditions. The cost for ED care is significantly higher than care provided in non-emergent care settings, such as the primary care provider office. It is also possible for the quality of overall patient care to be reduced because of any of the following factors:

- Lack of continuity with medical providers in the ED setting.
- Lack of opportunity to provide ongoing health education.
- Little follow-up with the patient to ensure adherence to the prescribed treatment plan.
- Difficulties in communication with the primary care provider, if one is available, about the patient's condition and treatment administered in the ED.

Who Decides?

The decision to seek care in the ED for conditions that are treatable in less intense and costly settings is made by the client or parent/guardian. PCCM provides Medicaid clients with access to a medical home; these clients should obtain non-emergent care from their primary care provider. Factors that may influence the decision by a client to obtain non-emergent care in the ED, rather than from the primary care provider, include: ⁽²⁾

- Lack of access (no relationship with primary care provider, primary care provider unavailable, lack of language interpretation, uncertainty about how to use managed care systems).
- Environmental (financial strain, lack of transportation or child care, no telephone, ED located closer than primary care provider office).
- Medical/educational (difficulty in understanding when/whom to call to arrange medical care, lack of knowledge to distinguish serious from non-serious symptoms of illness, inability to manage chronic illness).
- ED is considered as a "one-stop shopping" location by the client for services including immediate access to diagnostic tests (i.e. x-rays) and other testing services, prescriptions, medical specialists, etc.
- Psychosocial (lack of parenting skills, poor network of support, family dysfunction/violence).⁽³⁾

Medicaid Quality Initiative Pilot Project

Legislation

The *Medicaid Quality Initiative Pilot Project* is pursuant to the 2006-07 General Appropriations Act (Article II, Health and Human Services Commission, Rider 55, S.B. 1, 79th Legislature, Regular Session, 2005). Rider 55 directs HHSC to establish a pilot in one of the Medicaid Primary Care Case Management (PCCM) service areas to test mechanisms that reduce non-emergent use of the emergency department (ED), including higher payment to primary care

physicians and providers who offer after-hours care; case management services for patients who frequently rely on the ED for routine care; or other mechanisms HHSC develops.

Overview

This report details the results of the pilot, which evaluated whether enhanced case management services increased primary care provider visits and reduced ED usage and costs. HHSC instructed the Texas Medicaid & Healthcare Partnership (TMHP), the state-contracted PCCM administrator, to conduct the pilot with existing staff at no additional cost to the state.

The desired outcomes for the pilot project were as follows:

- Increase visits to primary care physicians.
- Reduce ED visits and ED costs.

Participants

HHSC selected McLennan County as the service area for the pilot because of the following:

- High ED utilization among Medicaid clients.
- The presence of a rural health clinic within the county as an alternative site to emergency departments for care.
- Racial/ethnic diversity across population.
- Relatively high rate of poverty in the general population.
- Relatively low education level in the general population.
- Large geographic region representation.
- Several medical centers with ED services.
- Large number of primary care providers contracted with PCCM.

From a PCCM Medicaid member population of 26,334, this county had 1,447 clients with more than three ED visits for non-emergent conditions between October 1, 2005, and June 31, 2006, of which 400 clients were randomly selected. Of the 400 clients, 49 volunteered to serve as pilot cases, and 49 matching controls were then randomly selected from this subset of clients for the Rider 55 Medicaid Quality Initiative Pilot Project. Of the 49 cases, 53 percent were age 3 or younger. Neither cases nor controls were compensated for their participation in the study.

The controls were matched to the cases by race, gender, county, zip code, and age group. There were 94 controls that met the matching criteria. Out of this group, 49 were randomly selected, keeping gender and race distributions intact.

Table 1: Rider 55 Case and Control Participant Demographics

Race/Ethnicity	Number	Percentage
White	15	30.50%
Black	19	39.00%
Hispanic	15	30.50%
Gender		
Male	16	32.70%
Female	33	67.30%
Age		
21 & Older (Adults)	9	18.40%
10-20 Years	6	12.20%
4-9 Years	8	16.30%
0-3 Years	26	53.10%

Designs, Definitions, and Implementation

Case management was provided to 49 clients in the pilot intervention project during a six-month period. Clients were initially contacted by telephone to recruit their participation in the pilot, in addition to setting up an appointment for a home visit. During the home visit, a health assessment was completed, and the pilot was explained in more detail. Participants choosing to participate in the study agreed to intensive case management interventions (at least an average of two contacts per month for 12 or more contacts during the six-month period). Unfortunately, by study end, many clients requested discontinuance of case management or no longer responded to contact attempts. New categories were developed to describe the levels of case management intervention participants actually received, since not all participants received intensive case management as originally intended. The categories of case management interventions received are defined below.

- Assigned case management - Five or fewer case management interventions during the six-month pilot period. Sixteen cases received assigned case management.
- Moderate case management – Six to 11 case management contacts during the 6-month pilot period. Twenty-one cases received moderate case management.
- Intensive case management - An average of 2 or more contacts per month during the pilot, or 12 or more contacts total. Twelve cases received intensive case management.
- Controls were blind to this study and received no case management assistance unless requested.

The study looked at ED visits for non-emergent conditions, based on a subset of International Classification of Diseases (ICD)-9 diagnosis codes. Case/control matches were based on ED utilization and not on diagnoses.

Treatment effects were reviewed in three six-month intervals (pre-pilot, pilot period, and post-pilot). For the purposes of the pilot study, treatment effects are defined as the number of participant ED and primary care provider visits.

Timelines

The study was divided into three stages according to the following time periods:

- Pre-pilot period – July 2006 to December 2006;
- Pilot period – January 2007 to June 2007; and
- Post-pilot period – July 2007 to December 2007.

Case Management Interventions

PCCM case management and coordination staff, called Community Health Services (CHS) staff, conducted telephone and face-to-face follow-ups with cases at least monthly. The staff's goal with each intervention was to:

- Assist clients with scheduling appointments with their primary care provider(s) for immediate needs.
- Assist clients with primary care provider changes as needed.
- Assist clients with primary care provider consultations to facilitate their health-care needs.
- Provide education on PCCM benefits and available resources (nurse helpline, primary care Provider after-hours services, Medical Transportation Program).
- Facilitate collaboration between primary care providers and other health-care team members with client/families.
- Provide counseling, education, and service coordination by telephone with individuals/families based upon need.
- Remind clients about appointments by phone or through appointment reminder letters.
- Discuss any concerns or barriers the client may have encountered, and assist with resolution of problems as appropriate.
- Provide telephone follow-up after the visit with clients to ensure successful linkage to their assigned primary care providers.

CHS staff conducted initial face-to-face encounters with 43 clients and telephone encounters with 6 clients. The clients were educated about the study and the participation requirements, which included case management and monthly contacts by a CHS coordinator. Through informed consent, cases agreed to participate in an assessment (screening questionnaire) about their health and commit to monthly follow-up in person or by phone. In most cases, a home visit was conducted to assess the client's needs and to provide education about Medicaid resources, appropriate use of ED, and disease-specific education, if applicable. If no home visit was conducted, the client's needs were assessed by phone.

The interventions from the CHS staff focused on the importance of the client's relationship with their primary care provider, who serves as their medical home. CHS staff encouraged cases to discuss their needs/concerns with their respective primary care providers. They also worked

with clients on how to be effective communicators. cases were educated on how to clearly inform their provider or the provider’s office staff of their health-care needs and how to best communicate during any interactions with their provider or the provider’s office staff.

Client Education

All cases received a “care kit” with the following information:

- Appropriate and safe home/self care methods.
- Signs and symptoms that require evaluation by a medical provider.
- Nurse helpline information.
- Information about PCCM CHS case managers/care coordinators.
- Disease-specific information (customized to clients’ needs).
- Guidelines for seeking ED care.

Results

The following table compares the number of primary care provider visits for cases with the number of case management contacts this population received.

**Table 2: Comparison of Primary Care Provider Visits
With Number of Case Management (CM) Contacts**

Case Management Contacts	Pre-Pilot (July 2006 – December 2006) Visits	Pilot Period (January 2007 – June 2007) Visits	Post-Pilot (July 2007 – December 2007) Visits
Assigned Case Management – Cases with 1-5 CM Contacts (16 Cases)	26	31	29
Moderate Case Management – Cases With 6-11 CM Contacts (21 Cases)	29	45	30
Intensive Case Management – Cases with 12 or More CM Contacts (12 Cases)	35	56	37
Totals	90	132	96

- For all levels of case management, the primary care provider visits for cases increased both during and after the pilot.

- The increase in primary care provider visits was greatest during the pilot period, then declined in the post-pilot period.

The following chart compares the level of case management received by the cases with the number of ED visits for non-emergent conditions before, during, and after the pilot.

**Table 3: Comparison of ED Visits
With Number of Case Management (CM) Contacts**

Case Management Contacts	Pre-Pilot (July 2006 – December 2006) Visits	Pilot Period (January 2007 – June 2007) Visits	Post-Pilot (July 2007 – December 2007) Visits
Assigned Case Management – Cases with 1-5 CM Contacts (16 Cases)	27	16	14
Moderate Case Management – Cases With 6-11 CM Contacts (21 Cases)	45	34	19
Intensive Case Management – Cases with 12 or More CM Contacts (12 Cases)	30	25	32
Totals	102	75	65

- ED visits for non-emergent conditions were lower for cases receiving assigned and moderate case management during and after the pilot compared to the pre-pilot period.
- ED visits also declined for cases receiving intensive case management during the pilot period, however, post-pilot ED visits by this group increased slightly compared to pre-pilot visits. Possible reasons for this increase are discussed later in the report.
- ED visits for non-emergent conditions decreased for the majority of cases during and after the pilot period.

The following chart compares ED visits for non-emergent conditions and primary care provider visits between cases and controls for the time period before, during, and after the study.

Table 4: Comparison of ED Visits for Non-Emergent Conditions and Primary Care Provider Visits Among Cases and Controls

Time Period	Number of ED Visits		Test Significance Difference Using $\alpha = 0.05$		Number of Primary Care Provider Visits		Test Significance Difference Using $\alpha = 0.05$	
	Cases	Controls	p-value (from χ^2 Statistics)	Inference	Cases	Controls	p-value (from χ^2 Statistics)	Inference
Pre-Pilot (July 2006 - December 2006)	102	77	0.062	Marginal Difference (Although this is $> .05$, still quite different from the difference in the pilot period)	90	82	0.542	No Statistically Significant Difference
Pilot Period (January 2007 - June 2007)	75	68	0.558	No Statistically Significant Difference	132	50	0.000	Cases had significantly higher Primary Care provider visits
Post-Pilot (July 2007- December 2007)	65	44	0.044	Cases had significantly higher ED visits	96	68	0.029	Cases had significantly higher Primary Care Provider visits

Compared to the Control group, the cases had significantly more primary care provider visits both during the pilot period and post-pilot period. The difference in primary care provider visits between cases and controls was greatest during the pilot period.

- ED visits for non-emergent conditions decreased for both cases and controls during the pilot period and post-pilot period.
- Cases had more ED visits than the control group for non-emergent conditions in the pre-pilot and post-pilot periods. During the pilot period, there was not a statistically significant difference in the ED visits for non-emergent conditions between the two groups.

Explanation of Cases with High ED Use Post-Pilot

There were four case participants who continued to have a high number of ED visits during the post-intervention period of the study. These cases experienced some health problems that required emergency care. The cases had a long history of chronic diseases or were diagnosed with a chronic disease during the intervention period of the pilot. The following bullets explain the health problems the cases faced.

- **Case Client #1** – Recently underwent heart valve replacement surgery and suffered complications that required the participant to be taken to the ED. Client also has history of chronic obstructive pulmonary disease (COPD) and heart conditions. The client was referred to hospice care by Community Health Services (CHS) staff during the intervention period of the pilot.
- **Case Client #2** – Suffered through years of gastroenterological problems. The client's local GI doctor could not diagnose the problem. With the assistance of CHS staff, the client was referred to the University of Texas Medical Branch in Galveston. The client's problem was diagnosed and treated. However, after surgery, the client developed a pulmonary embolism and was required to receive treatment several times per week to monitor/treat the condition. The client had to be rushed to the ED on several occasions for post-surgery problems.
- **Case Client #3** – Has COPD and lowered immune system due to chronic illness. The client received news that her immune system was not functioning properly and that her white blood cell count was extremely low. Client was triaged by the ED and later hospitalized.
- **Case Client #4** – Was diagnosed with breast cancer during the pilot intervention period. The client underwent surgery for a double mastectomy after the pilot intervention period ended. The client had problems with recurring infection in the incision site and was taken to the ED. The client was triaged by the ED and admitted to the hospital for infectious disease control. Additionally, the client also started chemotherapy and was taken to the ED (as suggested by provider) for severe dehydration and vomiting after treatment.

Rider 55 Pilot Project Limitations and Barriers

The CHS staff faced several pilot limitations and obstacles during the project. Maintaining contact with clients was a common barrier. Often, the clients' phone numbers were disconnected or changed. A few clients moved without reporting the address change. Another issue was the loss of Medicaid eligibility. The CHS staff assisted about four clients with the process of regaining eligibility during the project. Finally, a loss of interest in the project was common. After the CHS staff assisted the clients with their immediate needs (finding a primary care provider/specialty referrals), some clients no longer responded to contact attempts from the staff. The following is a list of additional study limitations and barriers.

- Difficulty with establishing phone contacts, scheduling home visits, and completing monthly follow-ups.
- Extreme health concerns, psycho-social concerns, and educational deficits.
- A lack of primary care providers accepting new Medicaid clients.
- Difficulty finding clients who were willing to commit to the pilot.
- Small sample size, age of participants, and unprocessed or unfiled provider claims limited the study and may not allow for pilot generalizations across the entire PCCM population.
- Because cases volunteered for the pilot, there may be a self-selection bias.
- Case/Control matches were based on ED utilization and not on diagnoses. Also, reliability for similar results in the overall population would be even more difficult to reproduce, because no risk adjustment methodology was incorporated in the design or analysis, and there were more than 350 ICD-9 codes associated with the ED claims for 49 cases and 49 Controls.

Throughout the pilot, the staff discovered that the clients with more needs were active participants in the project for the entire six-month pilot. The clients with minor concerns were willing to participate at the beginning of the project. However, many clients with few health concerns no longer answered phone calls or responded to letters/home visits from CHS staff after several months into the project. By April 2007, three months into the pilot, the CHS staff had lost contact with seven participants, and three participants had lost eligibility or moved out of McLennan County. Only 36 of the 49 participants completed the six-month project.

Rider 55 Pilot Project Summary

The study showed that the interventions provided to 49 PCCM clients (cases) in McLennan County were beneficial. Overall, the pilot project data indicates that case management intervention made a noticeable difference in case behavior, particularly regarding increased primary care provider visits. However, the small sample size, possible self-selection bias and case/control matching issues, age of participants, and unprocessed or unfiled provider claims limited the study and may not allow for pilot generalizations across the PCCM population.

Study Conclusions

Study conclusions demonstrated that pilot participants visited their primary care provider more during and after the pilot period than before the pilot period, and that their increase in primary

care provider visits was statistically significant compared to a control group. Pilot participants' visits to the ED also decreased both during and after the pilot, but the control group's ED visits also decreased over time, so it is difficult to quantify to what extent pilot interventions affected ED usage for non-emergency conditions.

Recommendations to Reduce Future ED Utilization

- Offer incentives to primary care providers whose clients show a 10 percent decrease in ED usage over a six-month period.
- Employ a staff member to work evenings and weekends at hospital EDs with frequent ED users. The staff member should have experience providing intensive case management and education. (Frequent ED users typically use the ED after 5:00 p.m., and on weekends.)
- Develop cultural and linguistic educational materials about the appropriate use of the ED. More specifically, the materials should focus on educating the adult population on how to define emergent and non-emergent health concerns.
- Partner with area health and community stakeholders to reduce inappropriate ED usage. The goal will be to raise awareness about the appropriate use of the ED.

References

1. Ullrich, Dan, "Upward Trend for ER Visits Levels Off," January 28, 2004, <http://healthlink.mcw.edu/article/1031002335.html>, accessed on July 28, 2005.
2. Ross, Judith W., et al., "Effects of Social Work Intervention on Non-emergent Pediatric Emergency Department Utilization," *Health & Social Work*, Vol. 29, No. 4, November 2004, pp. 263-73.
3. Seton, "Out of the Emergency Room," <http://www.careforall.net/AccessToHealthCare/HospitalERUse71/OutoftheEmergencyRo095C.asp>, accessed on July 8, 2005.