AltaMed Service Project:
PACE Performance on Post-Discharge
Primary Care Evaluations from
January – June 2012

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Introduction:

Established by the Joint Commission as a Primary Care Medical Home, AltaMed has served the underserved communities of Southern California for more than 40 years[1]. As a highly structured organization, AltaMed's vision is *to be the leading community-based provider of quality health care and human services*[1]. There are many challenges to attain such a goal. In order to effectively serve the needs of a community, it is imperative that Federally Qualified Health Centers such as AltaMed utilize government-funding resources wisely.

Because AltaMed provides an invaluable service to a population that would otherwise be medically underserved, both external and internal measures focusing on the effective use of limited resources are useful in optimizing healthcare delivery. As an example of external measures, Medicare, Medical, and the California Health Department, amongst others, mandate periodic careful examination of post-discharge events. Consequently, patient re-admission rates serve as a typical benchmark of patient care beyond the emergency department visit.

Reduction of readmission rates has also been shown to be a need at a national level. During the Care Continuum Alliance Forum 2009, it was mentioned that according to the Medicare Payment Advisory Commission, the government spends about $12 billion a year on "potentially preventable" readmissions for Medicare patients[2]. Moreover, the Secretary for the Department of Health and Human Services called for the reduction of readmissions as a target area for health reform[2]. Notwithstanding the amount of avoidable readmissions has not been determined yet, Benbassat and Taragin indicate in their retrospective chart review that a range of 9-50% of all readmissions were preventable[3].

One might conclude that a bigger challenge should exist when trying to reduce the readmission rates in the elder adult population, as they typically have more co-morbidities, chronic illnesses, poly-pharmacy, dementia and higher risk medications such as antipsychotics. Additionally, these patients either live alone or in a highly dependent state, in either case leaving them particularly vulnerable. According to Naylor et al.[4], elderly patients have a greater risk for poor outcomes in the transition from hospital to home. A predisposing explanatory factor appears to be the breakdown in communication between providers across varied health care organizations. Furthermore, Brown-Williams[5] suggests that because elders are released from the hospital after shorter stays and in weaker conditions, there is an even greater need for discharge planning and clarification of post-discharge goals in this group.

There is evidence in the medical literature that patients who have seen a primary care provider (PCP) for post-hospital follow-up are less likely to be readmitted[6,7]. Although there is no evidence in the literature regarding the optimal time window between hospital discharge and a primary care provider follow-up visit[8], different strategies have been proposed to improve patients' post-discharge care. Within The Program for All-inclusive Care for the Elderly (PACE), Center for Medicare and Medicaid Services (CMS) guidelines exist, for example, suggesting an optimum time of 72 hours from emergency

room discharge to follow-up visit with the patient's primary care provider[9].

According to Dr. Martin Serota, Chief Medical Officer for AltaMed, admissions-based clinics such as AltaMed must strive to ensure that internal quality controls are ideally suited for the specific population attended while still maintaining state and national standards[10]. Therefore, usage of these guidelines not only serve as a model to provide high standard care but also are important to consider when conducting an internal assessment of clinic performance. Additionally, CMS clearly indicates in the contract with AltaMed that: ***"PACE organization should use organizational data to identify and improve areas of poor performance. The PACE organization must take actions that result in improvements in its performance in all types of care"***[9].

This study aims to examine post-discharge time to primary care visits, taking into account whether or not the ED diagnosis was discussed and the resultant effects on readmission rates for the patients. Given the above-mentioned vulnerability of elder adults, it is especially crucial to ensure the adherence of PACE program participants to the CMS standard of a 72-hour window to primary care provider (PCP) evaluation, with the overall intention of reducing readmission rates. This assessment was accomplished by meaningful review of the electronic health records for patients within AltaMed's PACE program.

From a primary care leadership scholar perspective, this project is important as it attempts to determine the current performance for an outcome measurement, namely the time window between hospital discharge and PCP evaluation for the community center attended with the intention to further improve performance. Questions I specifically plan to address here include: (1) Is AltaMed meeting the current government standards? (2) If the AltaMed PACE program does not meet the standard, which addressable explanations exist? (3) What are the challenges to better follow-up care? The answers to these questions provide a substrate for clinics like AltaMed to continue improving the quality of care rendered to the local communities they serve.

BACKGROUND

Participating Community:
Being a Primary Care Medical Home, AltaMed is responsible for meeting the large majority of each patient's physical and mental health needs. Fitting this model, PACE is the program designated to care for the elders within AltaMed.
PACE provides comprehensive medical, health, and social services that integrate acute and long-term care for patients 55 years of age or older living in the community and proven to require nursing home care.

The Program for All-inclusive Care for the Elderly is a Medicare program that has been replicated in many clinics throughout the United States. It has its origins in the 1970's when On Lok developed a comprehensive community health project to serve frail elders with a grant from The Robert Wood Johnson Foundation. As the program became

reproducible it expanded to various states. By 1997 PACE was established as a permanent Medicare program by the Balanced Budget Act[9]. Currently, there are seventy-five PACE programs nationally and five in California (On Lok in SF and Fremont, CEI in East Bay, AltaMed Senior BuenaCare, Sutter Senior Care in Sacramento, St. Paul's in San Diego) [11]. This project focuses strictly on those patients who belong to PACE in AltaMed, East Los Angeles.

Readmission rates:
There are different ways to calculate hospital readmission rates. Rates can be calculated using different time lengths. The readmission rate most commonly reported in retrospective studies and used for policy making considers hospital readmission to be those admissions that occur during the 30-days after discharge. However, the time to readmission depends on the type of program. As an example, for proactive complex care programs working with predicted high-risk patients, 30 days represent a very short interval, with a 90-day readmission rate being a more useful parameter[2]. Additionally, readmission rates can be calculated on a "per admission" basis, using all the admissions that exist for a given patient. This measure is used most commonly in studies of chronic conditions. There is also the "patient-based calculation", which randomly selects one admission for each patient in the analysis. This approach is used most commonly in studies performed at the national level.
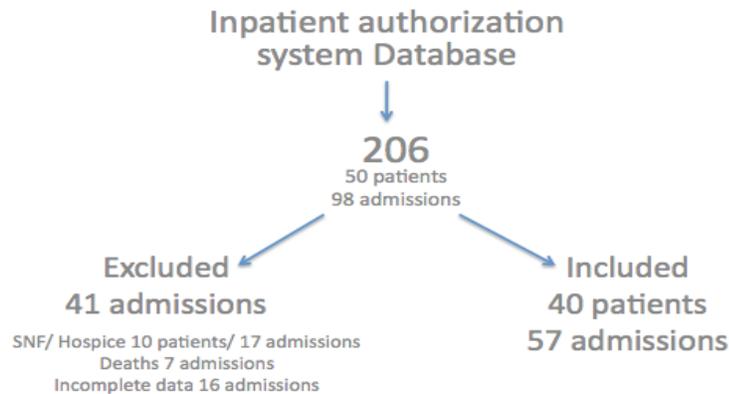

DESCRIPTION OF THE PROJECT

Goals:
• To determine performance for a 72-hour window between discharge and PCP.
• To determine hospital diagnosis follow up by the PCP.
• To assess clinical data from AltaMed in light of the current national data.
• To participate in AltaMed's vision of leading community health services by contributing to the continuous evaluation of performance set by PACE.

Methods:
This is a retrospective randomized chart review of patients enrolled in all AltaMed clinics with PACE.

Data from 206 hospital admissions was obtained from the inpatient authorization system database. This total data was randomized to 50 patients. All admissions for those selected patients were reviewed, with 98 admissions being examined in total.

The primary inclusion criterion involved selecting PACE patients for whom there is record of a hospital admission and discharge between January 2012 and June 2012. Patients who expired between the hospital admission and PCP visit were excluded. Also, patients who were discharged to other inpatient facilities and patients for whom there was incomplete data reported were similarly excluded from the study.

Inpatient authorization
system Database

206
50 patients
98 admissions

Excluded
41 admissions

SNF/ Hospice 10 patients/ 17 admissions
Deaths 7 admissions
Incomplete data 16 admissions

Included
40 patients
57 admissions

The study itself was performed as an independent effort, as I collected data using NextGen, the Electronic Health Record system utilized by AltaMed. The specific sections reviewed within NextGen were: Emergency Visit records, Telephone calls, and Progress Notes for the year of 2012.

For each admission the data collected included the following: date of admission; date of discharge; date of first contact made by AltaMed with the patient; type of first contact; date of first PCP visit after discharge; whether the discharge evaluation was addressed in the fist visit; the potential explanation for why the 72h window was not accomplished or why the diagnosis was not addressed in the first PCP visit. Readmission rates were calculated using the 30-day model, both per patient and per admission.

Total collection of data per admission as well as per patient was then analyzed using a Fisher's exact test to prove the significance of the relationship between 72-hr window rate and re-admission rate, hospital diagnosis follow-up by PCP and re-admission rate, and 72-hr window rate and diagnosis follow-up by PCP. The Fisher's test was utilized because the data set analyzed here is relatively small.

Results:

The data below represents a graphical and/or tabulated analysis of the included PACE program participants quality of care from the following perspectives: 72-hr window rate and re-admission rate; Hospital diagnosis follow-up by PCP and re-admission rate; 72-hr window rate and diagnosis follow-up by PCP. A comprehensive assessment of the implications of these findings follows in the Discussion and Conclusions section.

Graphic 1. Patient based readmission rate and readmission rate per admission in comparison to state and national values[12,13].
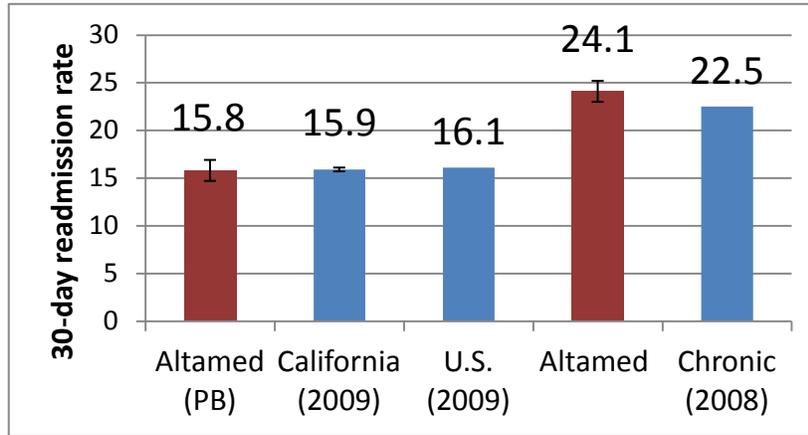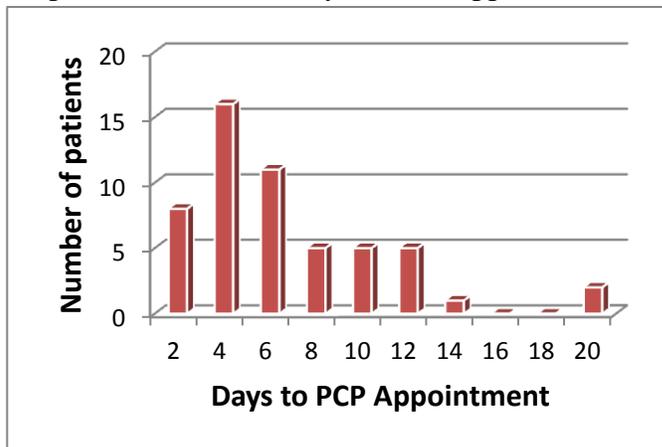

Table 1. Readmission rates for patients seen within 72 hours after discharge and for patients whose hospital diagnoses were addressed by PCP.

	Based on all admissions	Based on one admission per patient
Readmission rate	24.1%	15.8%
Patients seen within 72h	43.1%	40.6%
Visits where diagnosis was addressed	82.7%	81.3%

Graphic 2. Median for days to PCP appointment

Median: 4; Average: 5.3±0.61

Table 2. Contingency table for *admission based* readmission rates and time window period.

	% of patients	Readmitted	Not readmitted
< 72 hours	44%	5	20
> 72 hours	56%	9	23

P value: 0.54

Table 3. Contingency table for *patient based* readmission rates and time window period.

	% of patients	Readmitted	Not readmitted
< 72 hours	40%	2	14
> 72 hours	60%	5	19

P value: 0.68

Table 4. Contingency table for *admission based* readmission rates and diagnosis discussed at PCP visit

|	% of patients	Readmitted	Not readmitted
Diagnosis discussed	84%	10	38
Diagnosis not discussed	16%	4	5

P value: 0.2

Table 5. Contingency table for *patient based* readmission rates and diagnosis discussed at PCP visit

	% of patients	Readmitted	Not readmitted
Diagnosis discussed	82%	4	29
Diagnosis not discussed	18%	2	5

P value: 0.2

Graphic 3. Relationship time window and diagnosis addressed.

P value: 0.02
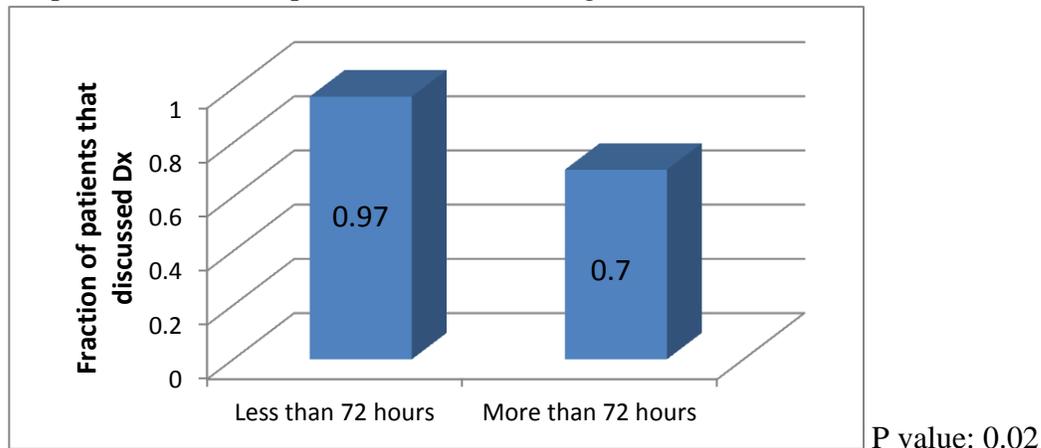
Discussion and Conclusions:

The readmission rates per patient and per admission are comparable to the readmission rates reported at a state and national levels (Graphic 1). While this particular study considers a relatively small pool of only 50 patients, the results are similar to those obtained from studies with more considerable sample sizes, validating the accuracy of the electronic health records found at AltaMed. The variation of almost 9% between the readmission rates per patient and per admission (Table 1) can be explained by understanding the chronic nature of the illnesses present in the PACE population.

Less than a half of PACE patients saw their primary care provided within 72 hours after discharge, with the median for patients to see the PCP being 4 days (Graphic 2.) This indicates that most patients are only one day away from the 72-hour goal. AltaMed has different strategies in place in order to accomplish the 72-hour window cut off. Namely, case managers follow patients' admissions and discharges in order to schedule timely appointments with the PCP. Also, patients are instructed to inform PCPs of their hospitalizations via phone so appointments can be arranged. Reasons why the 72-hour window is not reached by most patients include time delay in receiving the discharge date information and patient non-compliance. AltaMed currently has launched a live system, AltaNet, which permits access to hospital records from the clinics and vice versa. It is expected that this measurement will help to achieve the 72-h window benchmark.

For 17.3% of the admissions, the diagnosis made in the hospital was not followed up by the PCP. For the few patients that constitute this group, various reasons could have lead to these results. In most of these instances the explanation appears to be that the discharge summary was not accessed at the time of the PCP visit. This is particularly important as many of the PACE patients cannot be reliable sources for medical information both because of mental health deterioration and educational level. In other instances, patients consecutively rescheduled follow-up appointments, making it difficult to correlate hospital discharge with future PCP visits.

The data suggest that there is no statistical significance between the 72-h window and the readmission rate for both admission-based and patient-based readmission (Tables 2 and 3). There are no published studies on the significance of the 72-hour window between discharge and PCP. However, there are experts' opinions indicating that a 5-day window for moderate risk patients and 2-day window for high-risk patients is acceptable[10]. In the same vein, the Society of Hospital Medicine included a post discharge PCP evaluation within two weeks in the discharge list for patients[11]. Despite the fact that evidence-based studies do not yet exist to establish an ideal time window between hospital discharges and PCP visits, it is still important to comply with this important CHS benchmark.

The high p-values from Tables 4 and 5 indicate that there is no statistical significance between the discharge diagnosis being addressed by the PCP and the readmission rate for both admission-based and patient-based readmissions. A p-value of 0.2 indicates that there is an 80% chance that there is a relationship between the discharge diagnosis being addressed at the follow-up visit and the readmission rate. In view of the small sample size, it could be proposed that a bigger sample size could bring the p value even lower, making these results significant. If one considers that there is indeed a statistically significant relationship between the 72-hour window and the discharge diagnosis being addressed at the PCP visit (Graphic 3,) the time window can ultimately be shown to indirectly reflect readmission rates.

Limitations to the study include the retrospective nature of the data collection, the small sample size, and the intricacies of navigating the electronic health records system to find the necessary information during the limited duration of my service project.

The overall impression offered by my analysis here suggests that AltaMed has an opportunity to improve the 72-hour window for post discharge evaluation. Understanding the importance of competitively accomplishing this CHS benchmark is critical, not only because of the impact of those funding sources for CHCs, but also because coverage of a larger percentage of the population is anticipated once health care reforms settle in 2014. Further studies including a bigger sample size are necessary to determine the significance between the discharge diagnosis being addressed and the readmission rate. Future studies also could focus on relative readmission rates; that is, evaluating readmission rates in groups of patients with particular chronic diseases. This could offer more insight into how particular conditions are managed and how clinical care could be further refined.

From an NMF/GE PCLP scholar perspective the development of this project was particularly enriching, as it taught me the importance of addressing community health issues in a systematic, process-oriented manner. In this way, I had the opportunity to understand both the clinical and business value derived from the 72-hour window for PACE participants. By immersing myself in the clinical environment being assessed in this study, I was able to communicate with the doctors, nurses, patients, and case managers in an attempt to delineate numerous factors which might explain any current disparities between CHS benchmarks and the data for Altamed's included PACE clients. I was also afforded the opportunity to learn how to navigate through the different departments within AltaMed's infrastructure (IT, PACE clinical management, Human

Resources) This ultimately gave me a better understanding of the organizational model of AltaMed. Subsequently, I had the opportunity to assess performance that, from a managerial point of view, is crucial to direct and ongoing efforts to improve patient care.

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ACKNOWLEDGEMENTS

PHOTOS

AltaMed Senior Buena Care Building. PACE- East Los Angeles Location.

From left to right: Maria Maldonado, PA faculty member USC; Rocio Solano NMF scholar. PACE- East Los Angeles Location.

From left to right: Jhones Vergara, Manager PACE- East Los Angeles; Dr. Marting Serota, Chief Medical Officer Altamed; Dr. Esiquio Casillas, Clinical Director PACE-AltaMed; Rocio Solano NMF scholar. PACE- East Los Angeles Location.

From left to right: Lauren Buford, NMF scholar; Ulysses Garcia, Administrative Assistant to the Chief Medical Officer; Rocio Solano, NMF scholar; Natasha Kyte, NMF scholar. AltaMed Corporate Building Location.

From left to right: Dr. Adnan Akhtar, Dr. Susan Sulieman, Rocio Solano NMF scholar. PACE- East Los Angeles Location.

From left to right: Dr. Nazanin Parsaei, Dr. Lusine Soghbatyan, Rocio Solano NMF scholar. PACE- East Los Angeles Location.