

Transitions of Care: Investigating Patient experience in the Transition from Inpatient Hospitalization to Outpatient Follow-up.

A qualitative analysis of the experiences of recently hospitalized patients in a socioeconomically disadvantaged population at Centro-Med clinics in San Antonio, TX

Serena Michelle Okoronkwo

MD candidate 2014, University of Texas Health Science Center at San Antonio

Primary Care Leadership Program, National Medical Fellowships and GE

August 2013

Introduction

Given the challenges that underserved communities face, they need physicians to be committed to the values of primary care and viewing the individual as a whole person—understanding that their social and economic situation significantly impacts the way in which they respond to medicine. I decided to pursue a career in primary care because I believe it is the field designed to best respond to the needs of underserved communities. Within primary care, I have decided to pursue a joint career in Internal Medicine and Pediatrics. Within this field, I hope to become a hospitalist. I decided on the topic of transitions of care because it is something that I will face every day in my future career. I wanted to know how to improve communication between my outpatient colleagues, and most importantly I wanted to know the impact that these transitions of care have on our patients.

Background

The role of the primary care physician (PCP) has changed substantially in the last 20 years.

Traditionally, primary care physicians were able to provide the greatest continuity of care

because they admitted their own patients to the hospital and would then follow up with them in an outpatient setting.

However, within the field of medicine, the opportunity for greater specialization can often lead to increased efficiency and quality of care. With this in mind, the role of the primary care doctor now comes with a choice to focus on practicing medicine in the outpatient setting as a general practitioner (GP) or strictly in an inpatient setting as a hospitalist. While this new delegation of responsibility among primary care providers brings a tremendous advantage—hospitalists are extremely proficient at triage and performing lifesaving procedures in an acute setting. They provide an extensive knowledge base about the way a hospital functions and thus play a major role toward directing quality improvement.³⁻⁴

The other side of this change in the function of the primary care provider is the discontinuity of care that naturally arises when there are changes in providers over the course of a patient's illness. A plethora of literature suggests that these changes may adversely affect patient experience and outcome. As primary care providers choose a role in inpatient or outpatient medicine, the integrity of the communication that occurs during a patient's transition from these respective settings becomes a crucial part in providing quality care.

Perhaps the greatest tool of communication between hospitalists and general practitioners is the discharge summary. Unfortunately, there is no universal standardization for content or delivery of discharge summaries. This lack of standardization leads to two major problems: lack of appropriate information conveyed in the summaries and an increased length of time from the time of the patient's discharge from the hospital to the delivery of the discharge summary to the GP.³

Delays and absence of appropriate communication between providers have negatively impacted patient care. A 2007 review in the Journal of Hospital Medicine states that nearly half of patients experience a medical error at the time of discharge and that approximately 19-23 % of patients experience a bad outcome as a result of an error.³

There are many factors that contribute to these errors. In terms of communication between physicians, there are deficits that occur both as a patient is entering and leaving a hospital. Many outpatient providers are rarely notified when their patients have been hospitalized. Therefore, they are not able to provide hospitalist pertinent medical information that could be used to assist the creation of the patients care plan. Furthermore, many GP's often hear of a patient's hospitalization when the patient shows up for a follow up appointment.^{1,3,56}

In terms of communication between patients and physicians, the education and information given to patients at the time of discharge is often inadequate—patients leave without a clear understanding of reasons behind their hospitalizations, medication changes, and follow-up instructions. It can be concluded that one of the greatest barriers to proper communication in the hospital setting is patient understanding. Providers often overlook a patient's education level, and may provide information at a level that is inaccessible and thus useless to the patient.^{1,3,5-6}

Cumulative analysis of the highlighted communication impasses in the healthcare setting is the focus of the study, which aims to identify problems in the transition from inpatient to outpatient management and to investigate the impact of demographic differences in this transition.

Methods

A note on the study design:

When I initially began this project, there were three major objectives that I set to address. I had a proposed strategy of how I would address them. However, through the course of my project period, I had to make adjustments to these objectives based on the resources that were available to me.

My first objective was to assess the follow up communication timeline between hospitalists and outpatient PCP's. My plan was to search the medical records to determine the amount of time it takes for outpatient PCP's to receive discharge summaries from hospitalist, and whether these summaries are received before the patient is seen by the PCP. Unfortunately, I was not allowed to have access to the EMR, so I had to rely heavily on nurses to help me determine the status of the discharge summary as it related to each patient that participated in my study.

My second objective was to assess patient experience of the transition from inpatient to outpatient follow-up. My main tool for assessment was a 15 question survey (care transitions measure-CTM-15) that addressed various issues that arise as patient's transition. I was able to implement this objective during the course of my project.

My third objective was to investigate the role of a case manager in improving transition from inpatient to outpatient follow up and asses the financial implications of hiring a case manager to assist patients. My initial goal was to present data that would reflect the problems in transitions of care, and use this to promote the necessity of a case manager to help improve some of these problems. However, after interviews with various social workers as well as financial leadership at the Centro-Med clinics, I gained a new understanding of how community health centers

function. I realized that the institution of new policies and the creation of new job positions in community health centers are driven by government mandates. Therefore, regardless of my findings, Centro-Med could not institute a change or create a new job position unless it was a mandate by the federal government.

Though I abandoned my original goal to convince the Centro-Med clinic of the efficacy of hiring a case manager to assist with transitions of care; I found that the government had proposed a new strategy for delivering care called the “medical home model”.

Also known as the patient-centered medical home (PCMH), this model is designed around patient needs and aims to improve access to care (e.g. through extended office hours and increased communication between providers and patients via email and telephone), increase care coordination and enhance overall quality, while simultaneously reducing costs.

The medical home relies on a team of providers—such as physicians, nurses, nutritionists, pharmacists, and social workers—to meet a patient’s health care needs. Studies have shown that the medical home model’s attention to the whole-person and integration of all aspects of health care offer potential to improve physical health, behavioral health, access to community-based social services and management of chronic conditions.⁹

This new model indirectly addressed the issues in the transition of care by providing care coordinators to help patients organize all aspects of their healthcare. In the end, my project became primarily focused on surveying patients and gathering data about patient experience.

Setting:

The patients in this study receive care at Centro-Med clinics in San Antonio, Texas. Centro Med is a federally funded community health center that serves a primarily socioeconomically disadvantaged population. Many of the patients pay for their health care costs through an income based sliding scale that Centro-Med offers. Other patients seen at Centro-Med are Medicare patients, while others receive specific funding through grants.

The study patients were sampled after hospitalization from different private and public hospitals in the San Antonio area. The primary care physicians who see patients at Centro-Med have limited or completely restricted access to the electronic medical records in these hospitals. Accordingly, the primary care physicians at Centro-Med rely primarily on discharge summaries received through email or fax from hospitals or brought in directly by the patient.

The Downtown Centro-Med clinic also serves patients who received medical care under the Ryan White grant (a grant specifically for low income HIV+ patients). Approximately 70% of the patients seen in this clinic were seen for HIV related concerns.

Sample:

A sample of patients was obtained through four weeks of surveys at the Centro-Med clinic in downtown San Antonio. Because I did not have any access to the electronic medical record (EMR) at Centro-Med, I had to rely heavily on nurses who did have access to the EMR, and access to patients during triage to identify patients who had been recently hospitalized.

Eligibility criteria were as follows: age 18 years or older and recent hospitalization in the last three months. There was no primary diagnosis that patients needed to have in order to participate in the survey. Patients were able to participate if they spoke wither English or Spanish.

A total of nine patients were identified that met the eligibility criteria. Of those nine people, three chose not to participate in the survey.

Survey:

The Care Transition Measure (CTM-15) survey is a 15-question survey developed by the division of health care policy and research at University of Colorado. The CTM-15 addresses four major topics as it relates to transitions of care:

1. Discharge planning during patient's hospital course.
2. Discharge planning when patient was preparing to leave hospital.
3. Patient's understanding of follow up appointments.
4. Patient's understanding of medication regimen and any changes of the regimen that occurred during hospitalization.

Each question in the survey had a 4-point response scale: strongly agree; agree; disagree; and strongly disagree. (See Table 2 in Appendix for full survey questionnaire.)

In addition to the 15 question survey, I wanted to assess the method and timeline for receiving a discharge summary in the Centro-Med clinic. I asked that each nurse look through the chart and find out if the discharge summary was available for the GP at the time of the follow up appointment and if so, how the discharge summary was delivered to the GP (fax, electronic, brought in by patient). (Results summarized in Table 3 of Appendix)

Results

Demographics:

Analysis of the sample population revealed key findings regarding demographics of the population. Half of the patients included in the study completed the surveys in Spanish (Table 1). Further, there were a disproportionate number of females to males that participated in the survey.(Table 1).

I personally read the survey's allowed to 2/3 of the English speaking patients, while Spanish speaking patients were left to fill out survey's on their own because the Spanish speaking nurses would distributed these survey's to the patients and had to continue with patient care.

Scoring

I scored the CTM-15 surveys using a calculation established by the creators of the CTM-15 survey. (See Table 4 in Appendix for calculations guideline)

The 15 items were treated as one-dimensional measure and simple mean scores (1-4) on answered items were calculated for each patient and converted with a linear transformation to a 0-100 scale with the lowest possible score being zero and the highest possible score being 100. The higher the score, the better the quality of the care transition.⁷(See Figure1 Appendix for graph of results)

Demographic factors

As previously mentioned, there were a disproportionate number of male to female patient participants. The average score among female patients was 49.75(SD 16.85) and for males the average score was 100(SD 0)

From the data found at Centro-Med. There was no significant difference in CTM score found in patients who completed the form in English vs. Spanish (P value = 0.946).

There was poor correlation between CTM score and age. (Figure 2)

Discussion

Summary of Findings/Limitations

The power of this study was extremely limited by the sample size. I think that a big part of the problem regarding finding eligible patients to participate in the study had to do with the fact that the clinic served a large HIV+ population in San Antonio. Many of the patients came in strictly for their HIV related follow up appointments. There were a very limited number of patients with general primary care problems—chronic diseases that lead to acute exacerbations and hospitalization.

Because of this limitation, I believe that the result of my study severely underestimates the problems that patients face as they leave the hospital.

Recommendations

In the original literature regarding use of the CTM survey, they found that answering negatively to certain questions in the survey (question 9: "When I left the hospital, I had a good understanding of the things I was responsible for in managing my health" and question 11: "When I left the hospital, I was confident I could actually do the things I needed to do to take care of my health.") were both markers for long-term recidivism.⁷

I think that questionnaires like the CTM-15 if more heavily tested could be used in an inpatient setting to help identify patients at risk for re-hospitalization. Low scores on CTM-15 could

prompt a provider to use extra resources to ensure that a patient understands the important aspects of their hospital course, medication changes, and follow up plan.

Conclusions

Despite the errors that occur during transitions of care, it is necessary to point out the progress that has been made as technology and medicine become more intertwined. The widespread use of the electronic medical record has made standardization of documentation through the use of templates, data extraction (lab values, imaging etc.) and exchange of information between physicians much easier. Though this use of technology is a step in the right direction, there are still strides to be made in the area of transitions of care in the field of medicine.

One thing that struck me both in the literature regarding transitions of care, as well as in my own experiences, is that the communication that occurs between provider and patient is one of the most important factors that affect patient outcomes. It is also an area that each provider can individually focus on in order to create better outcomes for patients as they transition from one setting to another.

With health care reform slated to expand the number of community health centers (CHC), and the lower education levels inherent in the socioeconomically disadvantaged population served by these CHCs, we must do more to promote better communication. Improvement will require being in tune with the education level of the patient and creating inventive strategies of delivering information in a way that can be both simply understood by patients, and encouraging for them.

Appendix

Table 1: Demographics

CHARACTERISTICS	VALUE
Age	
18-30	1
31-45	1
46-60	2
61-75	1
>75	0
Gender	
Male	1
Female	5
Primary language spoken	
English	4
Spanish	2

Table 2: CTM-15 question survey:

CARE TRANSITIONS MEASURE® (CTM-15)

Patient Name: _____ Date: _____

Who completed interview? Patient Caregiver

The first few statements are about the time you were in the hospital . . .

1. Before I left the hospital, the staff and I agreed about clear health goals for me and how these would be reached.

Strongly Disagree Disagree Agree Strongly Agree Don't Know/ Don't Remember/ Not Applicable

2. The hospital staff took my preferences and those of my family or caregiver into account in deciding *what* my health care needs would be when I left the hospital.

Strongly Disagree Disagree Agree Strongly Agree Don't Know/ Don't Remember/ Not Applicable

3. The hospital staff took my preferences and those of my family or caregiver into account in deciding *where* my health care needs would be met when I left the hospital.

Strongly Disagree Disagree Agree Strongly Agree Don't Know/ Don't Remember/ Not Applicable

The next set of statements is about when you were preparing to leave the hospital...

4. When I left the hospital, I had all the information I needed to be able to take care of myself.

Strongly Disagree	Disagree	Agree	Strongly Agree	Don't Know/ Don't Remember/ Not Applicable
------------------------------	-----------------	--------------	---------------------------	---------------------------------------------------------------

5. When I left the hospital, I clearly understood how to manage my health.

Strongly Disagree	Disagree	Agree	Strongly Agree	Don't Know/ Don't Remember/ Not Applicable
------------------------------	-----------------	--------------	---------------------------	---------------------------------------------------------------

6. When I left the hospital, I clearly understood the warning signs and symptoms I should watch for to monitor my health condition.

Strongly Disagree	Disagree	Agree	Strongly Agree	Don't Know/ Don't Remember/ Not Applicable
------------------------------	-----------------	--------------	---------------------------	---------------------------------------------------------------

7. When I left the hospital, I had a readable and easily understood written plan that described how all of my health care needs were going to be met.

Strongly Disagree	Disagree	Agree	Strongly Agree	Don't Know/ Don't Remember/ Not Applicable
------------------------------	-----------------	--------------	---------------------------	---------------------------------------------------------------

8. When I left the hospital, I had a good understanding of my health condition and what makes it better or worse.

Strongly Disagree	Disagree	Agree	Strongly Agree	Don't Know/ Don't Remember/ Not Applicable
------------------------------	-----------------	--------------	---------------------------	---------------------------------------------------------------

9. When I left the hospital, I had a good understanding of the things I was responsible for in managing my health.

Strongly Disagree	Disagree	Agree	Strongly Agree	Don't Know/ Don't Remember/ Not Applicable
------------------------------	-----------------	--------------	---------------------------	---------------------------------------------------------------

10. When I left the hospital, I was confident that I knew what to do to manage my health.

Strongly Disagree	Disagree	Agree	Strongly Agree	Don't Know/ Don't Remember/ Not Applicable
------------------------------	-----------------	--------------	---------------------------	---------------------------------------------------------------

11. When I left the hospital, I was confident I could actually do the things I needed to do to take care of my health.

Strongly Disagree	Disagree	Agree	Strongly Agree	Don't Know/ Don't Remember/ Not Applicable
------------------------------	-----------------	--------------	---------------------------	---------------------------------------------------------------

The next statement is about your follow-up doctors' appointments . . .

12. When I left the hospital, I had a readable and easily understood written list of the appointments or tests I needed to complete within the next several weeks.

Strongly Disagree	Disagree	Agree	Strongly Agree	Don't Know/ Don't Remember/ Not Applicable
------------------------------	-----------------	--------------	---------------------------	---------------------------------------------------------------

The next statement is about your medications...

13. When I left the hospital, I clearly understood the *purpose* for taking each of my medications.

Strongly Disagree	Disagree	Agree	Strongly Agree	Don't Know/ Don't Remember/ Not Applicable
------------------------------	-----------------	--------------	---------------------------	---------------------------------------------------------------

14. When I left the hospital, I clearly understood *how* to take each of my medications, including how much I should take and when.

Strongly Disagree	Disagree	Agree	Strongly Agree	Don't Know/ Don't Remember/ Not Applicable
------------------------------	-----------------	--------------	---------------------------	---------------------------------------------------------------

15. When I left the hospital, I clearly understood the possible *side effects* of each of my medications.

Strongly Disagree	Disagree	Agree	Strongly Agree	Don't Know/ Don't Remember/ Not Applicable
------------------------------	-----------------	--------------	---------------------------	---------------------------------------------------------------

Table 3

Patient 1	Did not bring discharge summary to follow up visit- physician had access to hospital Electronic medical record
Patient 2	Brought Discharge summary to follow up visit
Patient 3	Brought Discharge summary to follow up visit
Patient 4	Brought Discharge summary to follow up visit
Patient 5	Brought Discharge summary to follow up visit
Patient 6	Brought Discharge summary to follow up visit

Table 4

Scoring the CTM®-15

Overall Quality of Care Transition Score: This score reflects the overall quality of the care transition, with lower scores indicating a poorer quality transition, and higher scores indicating a better transition.

Scoring Protocol

Step 1: Code responses as Strongly Disagree =1; Disagree =2; Agree =3; Strongly Agree =4.

Step 2: Assign code (e.g., 9) to missing responses, and a different code (e.g., 99) to Don't Know/Don't Remember/Not Applicable. These will not be counted as answered questions for Step 3a, as the 9 and 99 codes are not included in the 4 point Likert scale and therefore will not contribute to the CTM® score. You can, however, get a count of 99's in order to calculate a percentage of these responses relative to questions answered (step 3a.)

Step 3: Compute a mean score for each respondent based only on the questions answered. To do this:

- Step 3a: For each respondent count the number of questions answered. (In SPSS, Step 3a is accomplished with the Count command in the Transform menu and Step 3b by a Compute command).
- Step 3b: For each respondent obtain a summated score by adding Step 1 values across answered questions.
- Step 3c: Obtain **mean** for each respondent by dividing Step 3b result by Step 3a result. The name of this value is **mean**.

Step 4: Perform a linear transformation of the result of Step 3c to obtain a user-friendly 0-100 score. Use the following formula:

- 0-100 CTM® Score for each respondent = $[(\text{Step 3c result}-1)/3]*100$.

Figure 1:

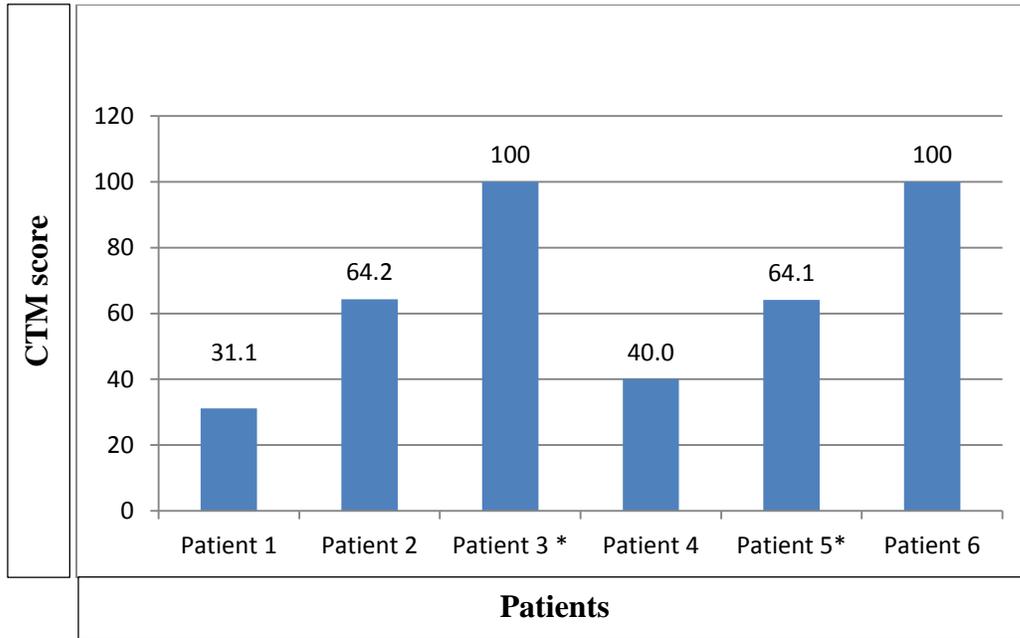
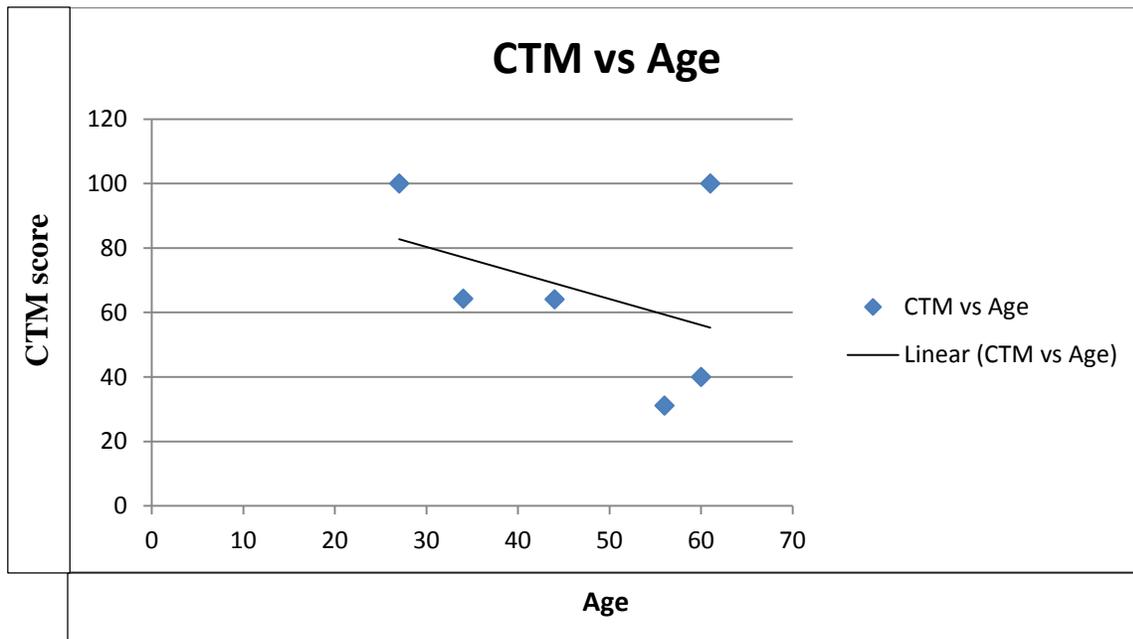


Figure 2:



References

1. Bergkvist A, Midlöv P, Höglund P, Larsson L, Bondesson A, Eriksson T. Improved quality in the hospital discharge summary reduces medication errors--LIMM: Landskrona Integrated Medicines Management. *Eur J Clin Pharmacol*. 2009 Oct;65(10):1037-46. doi: 10.1007/s00228-009-0680-1. Epub 2009 Jun 26.
2. Society of Hospital Medicine. Growth of hospital medicine nationwide. http://www.hospitalmedicine.org/Content/NavigationMenu/Media/GrowthofHospitalMedicineNationwide/Growth_of_Hospital_M.htm. Accessed July 22, 2013
3. Kripalani S, Jackson AT, Schnipper JL, Coleman EA. Promoting effective transitions of care at hospital discharge: a review of key issues for hospitalists. *J Hosp Med*. 2007 Sep;2(5):314-23. Review.
4. Bolton P, Mira M, Kennedy P, Lahra MM. The quality of communication between hospitals and general practitioners: an assessment. *J Qual Clin Pract*. 1998 Dec;18(4):241-7.
5. Kripalani S, LeFevre F, Phillips CO, Williams MV, Basaviah P, Baker DW. Deficits in communication and information transfer between hospital-based and primary care physicians: implications for patient safety and continuity of care. *JAMA*. 2007 Feb 28;297(8):831-41. Review.
6. Wilson S, Ruscoe W, Chapman M, Miller R. General practitioner-hospital communications: a review of discharge summaries. *J Qual Clin Pract*. 2001 Dec;21(4):104-8.
7. Coleman EA, Mahoney E, Parry C. Assessing the quality of preparation for posthospital care from the patient's perspective: the care transitions measure. *Med Care*. 2005 Mar;43(3):246-55.
8. Coleman EA, Mahoney E, Parry C. Care Transitions Measure-15. Care Transitions program, Denver, Colorado.
9. "The Medical Home Model of Care." *National Conference of State Legislatures Home*. N.p., n.d. Web. 9 Aug. 2013. <<http://www.ncsl.org/issues-research/health/the-medical-home-model-of-care.aspx>>.