UNIVERSITY of MARYLAND
SCHOOL OF PHARMACY

Documentation of Pharmacist Medication Reconciliation Services at Two Ambulatory Transitions of Care Clinics

UNIVERSITY of MARYLAND
MEDICAL SYSTEM

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Purpose

- **Transitions of care (TOC):**
  - The "movement of patients between health care locations, providers, or different levels of care within the same location as their conditions and care needs change"[1]
  - Patients are vulnerable to adverse drug events[2]
- **Medication reconciliation:**
  - Process of comparing a patient's medication orders to all of the medications that the patient has been taking[3]
- Clinical pharmacist involvement in medication reconciliation and other TOC services has been shown to have a positive impact on patient care[4,5].
- The University of Maryland Medical System (UMMS) established two brick-and-mortar outpatient TOC clinics in 2016.
  - Baltimore Washington Medical Center's Transitional Care Center (TCC)
  - University of Maryland Medical Center's Coordinated Care Center (C3)
- This study aims to characterize pharmacist-performed services and the extent to which they are electronically documented at TCC and C3.

Objectives

Primary Objective:

- Determine the proportion of patients at each site with documentation of both: (1) a complete medication review and (2) an assessment of medication-related discrepancies.

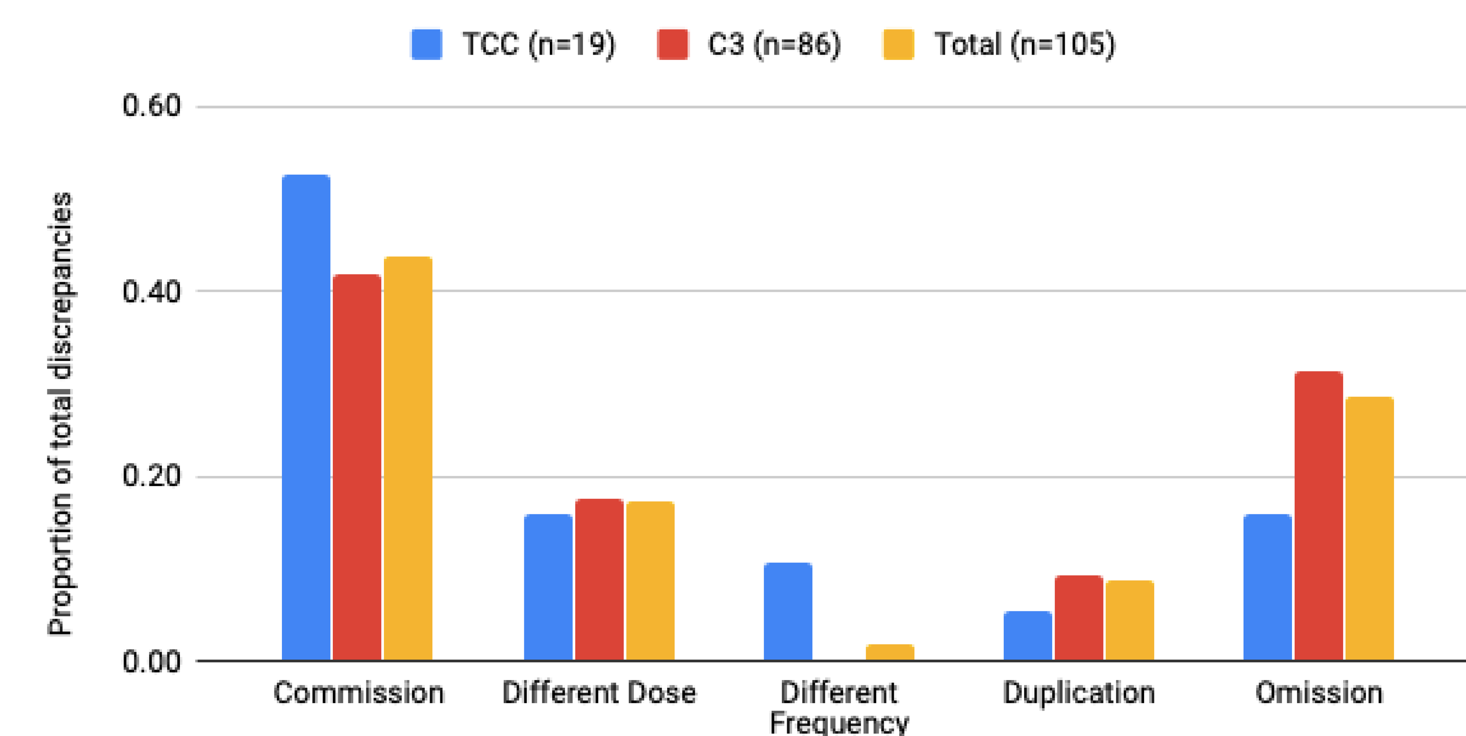
Secondary Objectives:

- Characterize and quantify common types of key issues (i.e., medication-related discrepancies, medication-related problems, barriers to medication adherence) identified by the clinical pharmacist.
- Characterize and quantify common clinical pharmacist interventions.
- Determine the proportion of patients with an assessment of key issues and the proportion of patients with interventions for key issues identified.

Methods

- **Study Design:** Retrospective chart review of patients age 18-89 years old, with a post-discharge pharmacist appointment at TCC or C3 between July 1 and October 1, 2017
- **Statistical Analysis:** Proportions were calculated to describe primary and secondary outcomes. The Chi-Square test of independence was used to compare outcomes for TCC vs. C3.
- IRB Approval of this study was obtained.

Figure 1. Discrepancies Documented by Pharmacists at TCC and C3



Results

Figure 2. Medication Related Problems Documented by Pharmacists at TCC and C3

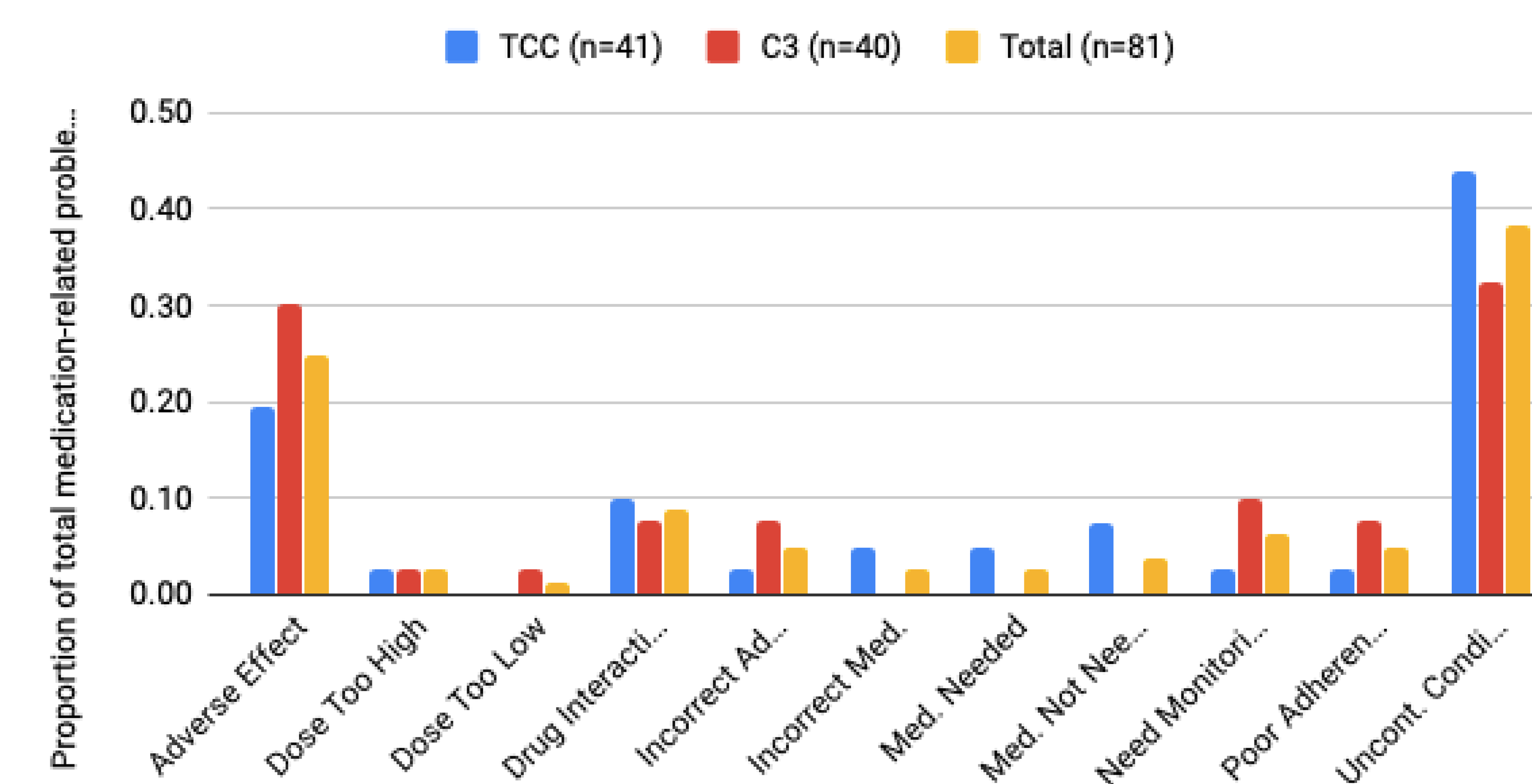


Figure 3. Barriers to Adherence Documented by Pharmacists at TCC and C3

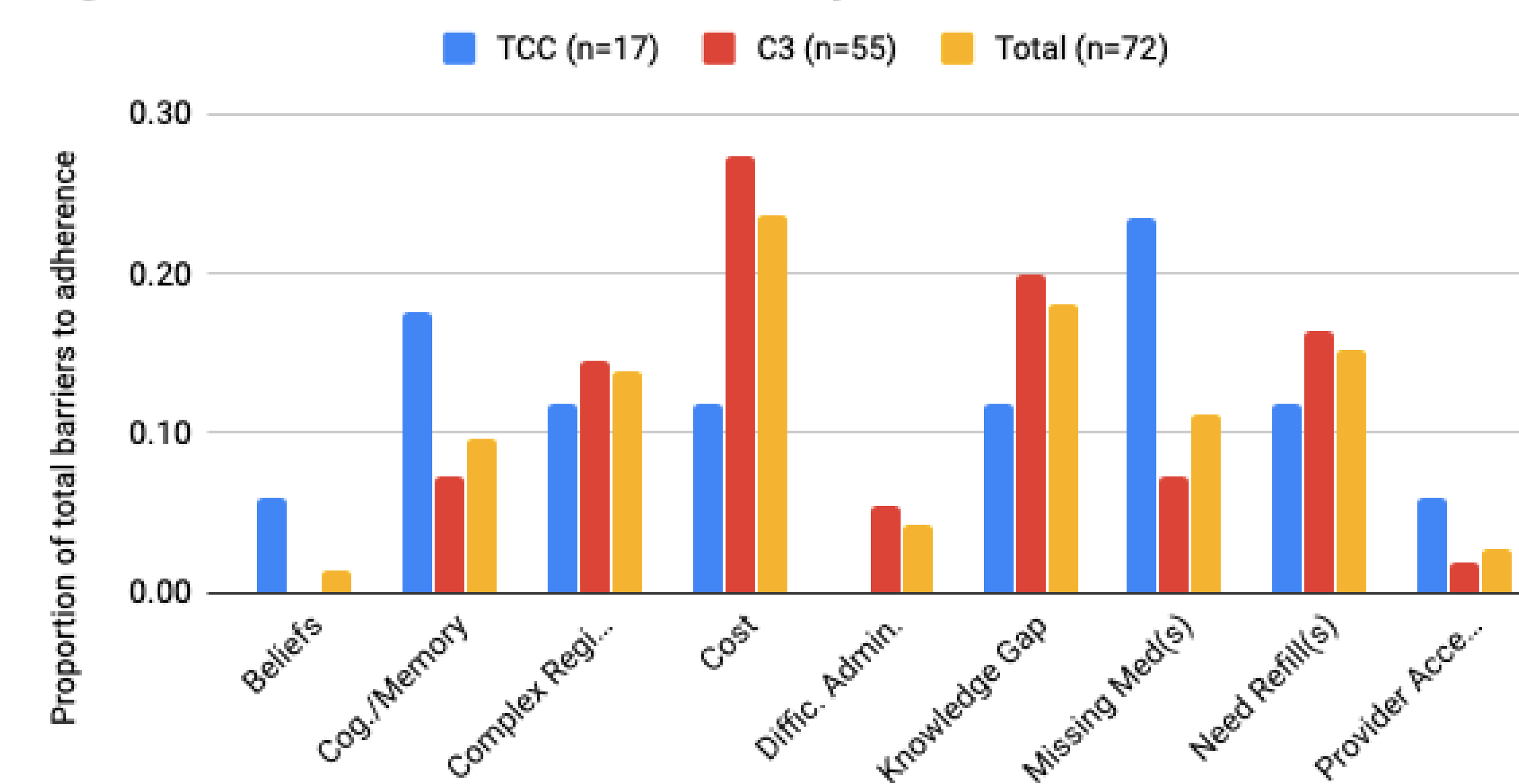
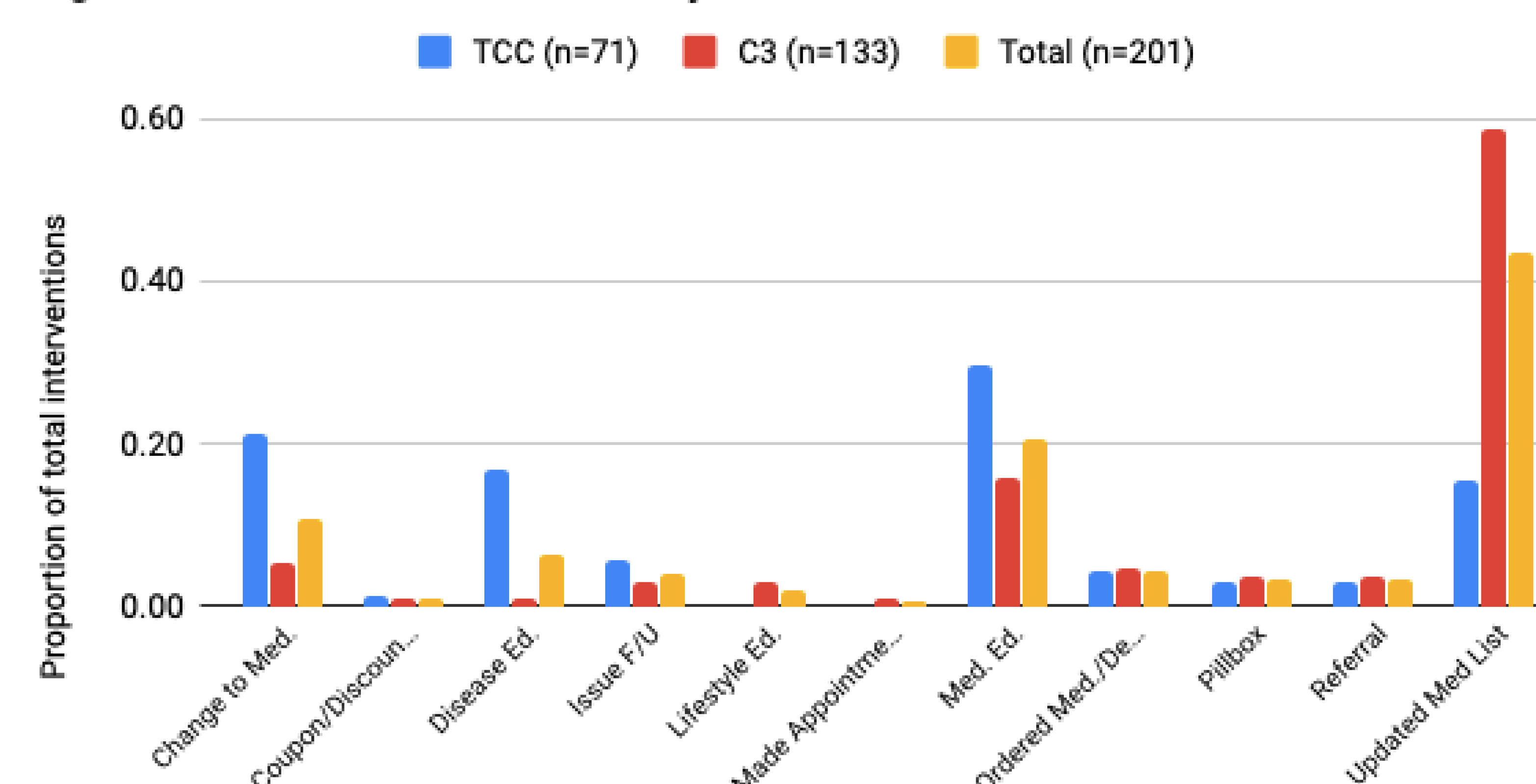


Figure 4. Interventions Documented by Pharmacists at TCC and C3



Results Continued

Table 1. Documentation of Pharmacy Services

Medication Reconciliation				
	Total (n=96)	**TCC (n=50)**	**C3 (n=46)**	***P***
Patients with a complete medication review, no. (%)	62 (65)	46 (92)	16 (35)	<0.001
Patients with an assessment of discrepancies, no. (%)	50 (52)	11 (22)	39 (85)	<0.001
Patients with both a complete medication review and an assessment of discrepancies, no. (%)	25 (26)	10 (20)	15 (33)	0.16
	Total (n=42)	**TCC (n=11)**	**C3 (n=31)**	
Among those with ≥1 discrepancy identified, patients with a documented intervention, no. (%)	35 (83)	6 (55)	29 (94)	0.003
Medication Therapy Management				
	Total (n=96)	**TCC (n=50)**	**C3 (n=46)**	***P***
Patients with an assessment for drug related problems, no. (%)	74 (77)	28 (56)	46 (100)	<0.001
	Total (n=52)	**TCC (n=26)**	**C3 (n=26)**	***P***
Among those with ≥1 drug related problem identified, patients with a documented intervention, no. (%)	31 (60)	21 (81)	10 (38)	0.002
Documentation of Barriers to Adherence				
	Total (n=96)	**TCC (n=50)**	**C3 (n=46)**	***P***
Patients with an assessment for barriers to adherence, no. (%)	67 (70)	21 (42)	46 (100)	<0.001
	Total (n=47)	**TCC (n=15)**	**C3 (n=32)**	***P***
Among those with ≥1 barrier to adherence identified, patients with a documented intervention, no. (%)	18 (38)	9 (60)	9 (28)	0.036

Conclusions

- Clinical pharmacists at TCC and C3 perform integral TOC services.
  - Services commonly include medication reconciliation, medication therapy management, and assessment of barriers to medication adherence.
  - Rates of documentation for these services and their resulting interventions are low at both sites.
  - Identifying common clinical activities, discrepancies encountered, and interventions performed will help pharmacists build documentation templates to best represent their patient care services.
- Novel ways to overcome the challenges with comprehensive documentation may reveal the full scope of the clinical pharmacist's essential role in an ambulatory transitions of care setting.
- Significant differences in documentation of pharmacy TOC services at TCC vs. C3 suggest an opportunity to standardize both TOC services offered and documentation practices within UMMS.

Disclosures and References

Authors of this presentation have the following to disclose concerning possible financial or personal relationships with commercial entities that may have a direct or indirect interest in the subject matter of this presentation.

- Quynh-Nhu Nguyen: Nothing to disclose.
- Kathleen Pincus: Nothing to disclose
- Amanda Schartel: Nothing to disclose.
- Andrew Forest: Nothing to disclose.

References:

1. NTOCC Measures Work Group. Transitions of Care Measures. 2008.
2. The American Society for Automation in Pharmacy. 2015 Midyear Conference. Transitional Care: How Pharmacists Can Impact Outcomes for Discharged Patients. June 26-28, 2014.
3. Barnsteiner JH. Medication Reconciliation. Patient Safety and Quality: An Evidence-Based Handbook for Nurses. Rockville (MD): Agency for Healthcare Research and Quality (US); 2008 Apr. Chapter 38.
4. American Society of Health-System Pharmacists. ASHP statement on the pharmacist's role in medication reconciliation. *Am J Health-System Pharm.* 2013; 70:453-6.
5. Phatak A. et al. Impact of pharmacist involvement in the transitional care of high-risk patients through medication reconciliation, medication education, and postdischarge call-backs (IPITCH Study). J Hosp Med. 2016 Jan;11(1):39-44.