ASHP BEST PRACTICES AWARD

Development and Outcomes of an Innovative Partnership between a Health-System Department of Pharmacy and External Community Pharmacies

Mary-Haston Vest, Pharm.D., M.S., BCPS; Jordan Rush, Pharm.D., M.S.; Tim Weber, R.Ph., M.B.A.; Scott Savage, Pharm.D., M.S.; Lauren McKnight, Pharm.D., CPP, BCACP; Debbie Zachary, R.N.; Judith Lovince, Pharm.D.; Patrick Brown, Pharm.D.

UNC Health
Chapel Hill, North Carolina

Not pictured: Tim Weber, Patrick Brown

Introduction

Healthcare Facility
- 11 hospital system
  - Hospital size varies from >900-bed academic medical center to 25-bed critical access hospital
- Pharmacy Services span across the 11 entities, as well as centralized shared services support

Background
- Patients freely float between hospitals and clinics and local pharmacies in the community for their healthcare needs
- The outcomes for these shared patients warrant integration between the community-based pharmacists and health-system, clinic-based pharmacists
- Positive outcomes from this collaboration have been achieved, but relationships between community-based pharmacies and health-system facilities have been sources of challenge and difficulty, as the care settings are traditionally viewed in silos and, for those health-systems with outpatient pharmacies, competitors[1-3]

Purpose
- Our organization has taken a purposeful approach to building a transitions of care (TOC) program between our department of pharmacy and 14 pilot community pharmacies within a larger statewide network, CPESN, to improve transitions of care across care settings
- Our organization recognizes the value community pharmacies bring to our patients and does not want to disrupt the care they provide but rather improve the handoff, communication, documentation, and ultimately the care of the patient in collaboration

Description of the Program

Innovation
- Community partners have acquired limited access to our electronic health record (EHR)
- This allows for secure communication about our shared patients to be sent between the providers, clinic-based teams, and our community pharmacy partners through a direct message within the EHR platform
- Additionally, we have been successful in partnering with our EHR to allow external community pharmacist documentation to be included in the patient's record as a note

Description (continued)

Workflow Overview
- Admitted patients identify one of our partnered community pharmacies as their primary pharmacy during the medication history process
- The medication history technician provides the patient with information on the TOC program
- Weekly analytics reports identify and communicate admitted status of shared patients to CPESN pharmacies
- CPESN pharmacists monitor patients in the EHR and reach out to patients following their discharge to enroll in the program and provide enhanced TOC services
- CPESN pharmacists communicate services provided, as well as any unresolved Medication Therapy Problems (MTPs) they need assistance triaging
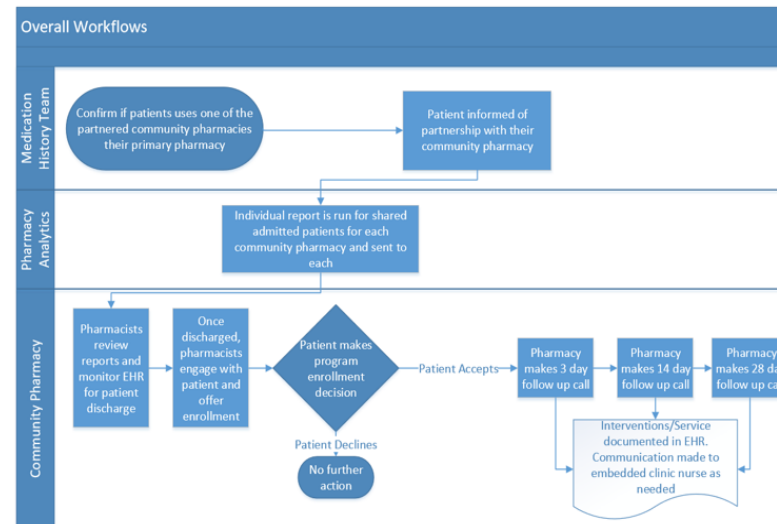- Workflow overview is shown in **Figure 1**

Figure 1. TOC Program Workflow

Experience with the Program

Interventions and Services Provided
- The MTP Categories Framework is a consensus-based document developed by Pharmacy Quality Alliance (PQA)
- Community pharmacists document MTP categories identified and resolved, as well as additional enhanced services provided
- **Table 1** and **Table 2** describe the MTPs identified and enhanced services provided by partnered community pharmacists

Patient Outcomes
- Patients engaged in the TOC program experienced a lower rate of 30-day, 60-day and 90-day readmissions to our medical center compared with patients who patronized non-participating external community pharmacies
- These reductions were statistically significant for 60-day and 90-day readmissions
- 180-day post discharge ED visits were statistically significantly lower for our TOC program patients

Experience with the Program

Table 1. MTPs Identified and Resolved

Medication-Related Needs	MTP Category	Number of Times Documented
Indication	Unnecessary medication	5
	Needs additional medication therapy	15
Effectiveness	Ineffective medication	N/A
	Dosage too low	5
	Needs additional monitoring	15
Safety	Adverse medication event	2
	Dosage too high	5
	Needs additional monitoring	21
Adherence	Adherence	19
	Cost	N/A

Table 2. Enhanced Services Provided

Enhanced Service	Number of Times Documented
Adherence counseling	6
Blister packaging	15
Comprehensive medication review	8
Home delivery	2
Immunizations	3
Medication synchronization program	11
Nutrition counseling	1
Transitional care management - 72-hour post-discharge follow-up call	50
Transitional care management - 14-day post-discharge follow-up call	31
Transitional care management - 28-day post-discharge follow-up call	30

Implementation Outcomes
- Implementation outcome variables describe the effects of deliberate actions to implement an intervention
- These variables assess how well implementation has occurred and how sustainable and scalable the program or interventions may be
- Outcomes evaluated were adoption, acceptability, appropriateness, and feasibility
- A validated retrospective pre-post survey was distributed to participants in the program, including the community pharmacists across all sites and our department's participating stakeholders
- This survey gauged perceptions of the program at the initiation of the partnership compared with current state
- For all outcomes except acceptability, there was a statistically significant increase in current state compared with the start of the partnership, demonstrating improved perceptions of the program among stakeholders over time and successful implementation

Experience with the Program (continued)

- Survey results are included in **Table 3**

Table 3. Implementation Outcomes

Outcome	Pre-Mean Score (Standard Deviation)	Post-Mean Score (Standard Deviation)	P Value
Acceptability	5.88 (0.83)	5.23 (0.81)	0.64
Appropriateness	3.90 (1.07)	4.22 (0.68)	0.002
Feasibility	4.59 (1.04)	4.82 (1.16)	0.01
Adoptability	4.75 (1.10)	5.08 (0.86)	0.04

EHR Access and Documentation
- A central achievement of our TOC program was enabling our community pharmacist partners access to our EHR and increasing this access to allow for their direct documentation into the EHR
- This allows our community pharmacist partners to communicate with our team via direct messages to triage issues with providers and, more importantly, to publish notes within the EHR documenting the patient's care
- According to our EHR vendor, we are the first organization in the country to develop capabilities for community pharmacist documentation in the patient's record

Discussion/Conclusion

- Our Department of Pharmacy has led a successful initiative to promote collaboration with local external community pharmacies
- This TOC program has demonstrated the ability to promote transitions of care services, leading to identification and resolution of MTPs following discharge and improved patient outcomes
- The program has led to innovative advancements in EHR capabilities, promoting transparency in the documentation of pharmacy services and making this documentation visible to all team members
- The program has been positively received by the care team members engaged, leading to a sustainable and scalable process

References

1. Bloodworth LS, Malinowski SS, Lirette ST et al. Pharmacist linkage in care transitions: from academic medical center to community. *J Am Pharm Assoc.* 2019; 59;896-904. Doi.org/10.1016/j.japh.2019.08.011

2. Heaton PC, Frede S, Kordahi A et al. Improving care transitions through medication therapy management: a community partnership to reduce readmissions in multiple health-systems. *J Am Pharm Assoc.* 2019; 59:319-28. Doi.org/10.1016/j.japh.2019.01.005

3. Wright EA, Graham JH, Maeng D et al. Reduction in 30-day readmission, mortality, and costs with inpatient-to-community pharmacist follow-up. *J Am Pharm Assoc.* 2019; 59:178-86. Doi.org/10.1016/j.japh.2018.11.005