2018

Evaluation of a hospital-based pharmacist-driven transitions of care service

Jordan Holder PharmD

Evaluation of a Hospital-Based Pharmacist-Driven Transitions of Care Service

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Background

- Readmissions account for about $26 billion dollars annually
- Studies suggest that though readmissions have decreased, total visits have increased by 23 visits per month per 100,000 discharges
- ~20% of readmissions are related to medications

This speaker nor any of the coinvestigators have no actual or potential conflicts of interest to disclose

HealthStream. The Economic & Emotional Cost of Hospital Readmissions. *Healthcare Management and Administration Blog*. June 2020.

HRRP

- Transitions of care (TOC)→movement of a patient from one care setting to another
- Centers for Medicare and Medicaid Services (CMS) Hospital Readmissions Reduction Program (HRRP)
- Established in 2012
- Goals:
  - Improve communication and care coordination
  - Decrease readmissions

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Hospital Readmissions Reduction Program (HRRP). CMS. Published August 24, 2020

HRRP

- CMS follows conditions and procedures for 30-day risk-standardized unplanned readmission measures

Acute myocardial infarction	Chronic obstructive pulmonary disease	Heart failure
Pneumonia	Coronary artery bypass graft surgery	Elective primary total hip arthroplasty and/or total knee arthroplasty

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Hospital Readmissions Reduction Program (HRRP). CMS. Published August 24, 2020

Regulatory Bodies

- Joint Commission and HCAHPS evaluate transitions of care measures with 3 questions

1	• The hospital staff took my preferences and those of my family or caregiver into account in deciding what my healthcare needs would be when I left the hospital
2	• When I left the hospital, I had a good understanding of the things I was responsible for in managing my health
3	• When I left the hospital, I clearly understood the purpose of taking each of my medications

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Transitions of Care: The need for a more effective approach to continuing patient care. Hot Topic in Healthcare. Published June 1, 2012.

Pharmacy's Role in TOC

Admission medication reconciliation	**Discharge medication reconciliation**
Patient-centered discharge education	Coordination for high-cost medications
Post-discharge transitions of care phone calls	Involvement in transitions of care office visits
Resolve medication access concerns	Develop education materials for staff and patients
Meds to beds programs	TOC rounding services

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Transitions of Care. ASHP. Published February 1, 2013.

Literature Review

"Real-world evidence on impact of a pharmacist-led transitional care program on 30- and 90-day readmissions after acute care episodes"

Study design	• Retrospective cohort study • Primary diagnoses: acute MI, COPD, HF, and PNA • Intervention group: 1776 • Control group: 2969
Primary Outcomes	• 30-day readmissions • 90-day readmissions
Secondary Outcomes	• Length of stay
Results	• 30-day readmission: OR=0.654, p=0.035 • 90-day readmission: OR=0.752, p=0.070 • LOS: OR= -0.15, p=0.662

Bae-Shaaw YH, Eom H, Chun RF, Steven Fox D. Real-World evidence on impact of a pharmacist-led transitional care program on 30-and 90-day readmissions after acute care episodes. American Journal of Health-System Pharmacy. 2020 Apr 1;77(7):535-45.

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Self Assessment Question #1

Which disease state is included in the CMS's HRRP?

A. COPD

B. UTI

C. Diabetes

D. Stroke

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Self Assessment Question #2

Which of the following is considered a pharmacy transitions of care task?

A. Dosing a vancomycin in the hospital

B. Completing patient education at discharge

C. Monitoring heparin aPTTs

D. Completing remdesivir preparation in the IV room

Self Assessment Question #2

Which of the following is considered a pharmacy transitions of care task?

A. Dosing a vancomycin in the hospital

B. Completing patient education at discharge

C. Monitoring heparin aPTTs

D. Completing remdesivir preparation in the IV room

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Purpose

- Assess if pharmacist involvement in transitions of care can impact readmissions rates and transitions of care measure scores
- Evaluate the number of interventions a pharmacist can make in a transitions of care role

Setting

- Parkview Health
  - Not-for-profit, community-owned organization
  - Northeast Indiana and northwest Ohio
  - 10 hospital health system
    - Over 900 inpatient beds
    - Over 200 primary care clinics
- 7 Medical
  - 36 beds

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Pharmacist Interventions

Inpatient Pharmacists

- Completion of clinical rounding
- Evaluating clinical consults, best practice/cost saving initiatives, antimicrobial stewardship grid, and AKI grid
- Answering questions from nursing about their patients

Transitions of Care Pharmacist

- Discharge medication reconciliation
- Patient discharge education
- Intervening in medication assistance needs

Ambulatory Pharmacists

- Office dependent
- Transitional care management phone calls
- Pharmacy visits for medication education
- Pharmacy visits for disease-state management

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Study Design

- Retrospective matched cohort study
  - Pre-intervention
  - Post-intervention
- Timeframe January 2019-November 2020

Pre-intervention	Post-intervention
N=178	N=178

IRB-approved exempt study design

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Outcomes

- Primary
  - 30-day all-cause readmission
- Secondary
  - 30-day ED visits independent of readmission
  - 3-item care transition measures
  - Number of pharmacist interventions
  - Physician acceptance rate
  - Physician rejection rate
  - Number of patient access interventions

Patient Population

- Total study population

Inclusion Criteria	Exclusion Criteria
Location of 7 medical	Death during index hospitalization
Age ≥18	

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Patient Population

- Intervention-specific counseling criteria

Inclusion Criteria	Exclusion Criteria
Location of 7 medical	Death during index hospitalization
Age ≥18	Discharge to long-term care facility
Patients discharged to home or rehabilitation units (without hospice level care)	Discharge to hospice level care
	Patients discharged outside of working hours

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Matching Criteria

Age

- 18-29
- 30-45
- 46-64
- 65+

Gender

- Male
- Female

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Matching Criteria

Length of Stay

- ≤7 days
- 8-14 days
- >14 days

Billing diagnosis-related group (DRG)

- Cardiac/coagulation/blood
- Respiratory
- Sepsis
- Other infections
- Endocrine
- Gastrointestinal
- Renal/urogenital/reproductive
- Nutrition/electrolytes
- Substance abuse
- Other

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Baseline Demographics

Pre-intervention

- Gender
  - 83 female
  - 95 male
- Average age: 66.9 ±16.6
- Average length of stay: 5.95 ± 4.5
- Most common billing DRG code: Septicemia

Post-intervention

- Gender
  - 83 female
  - 95 male
- Average age: 65.0 ±17.2
- Average length of stay: 6.57 ± 6.5
- Most common billing DRG code: Septicemia

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Baseline Demographics

- Ambulatory Care Sensitive Conditions (ACSC)

	Pre-intervention (n=178)	Post-intervention (n=178)	P-value
COPD	16	15	0.851
HTN	69	56	0.149
HLD	16	22	0.303
DM	40	44	0.618

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IBM Corp. Released 2020. IBM SPSS Statistics for Windows, Version 27.0. Armonk, NY: IBM Corp

Readmissions and ED visits

	Pre-intervention (n=178)	Post-intervention (n=178)	P-value	Reduction Rate
Readmission Rate	42 (23.6%)	34 (19.1%)	0.301	4.5%
Isolated ED Visit Rates	22 (12.4%)	21 (11.8%)	0.871	0.6%

- Of note: 18/34 readmissions and 12/21 isolated ED visits in the post intervention group received both discharge medication reconciliation and discharge education

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IBM Corp. Released 2020. IBM SPSS Statistics for Windows, Version 27.0. Armonk, NY: IBM Corp

HCAHPS Scores

- Unit level data is in process

Quarter 3

	Previous Quarter	
Staff took preferences into account	Null	46.4% 43.8%
Understood managing of health	Null	57.8% 52.5%
Understood purpose of medications	Null	54.8% 60.0%

Quarter 4

Staff took preferences into account	46.4%	45.6% 43.8%
Understood managing of health	57.8%	60.9% 52.5%
Understood purpose of medications	54.8%	63.5% 60.0%

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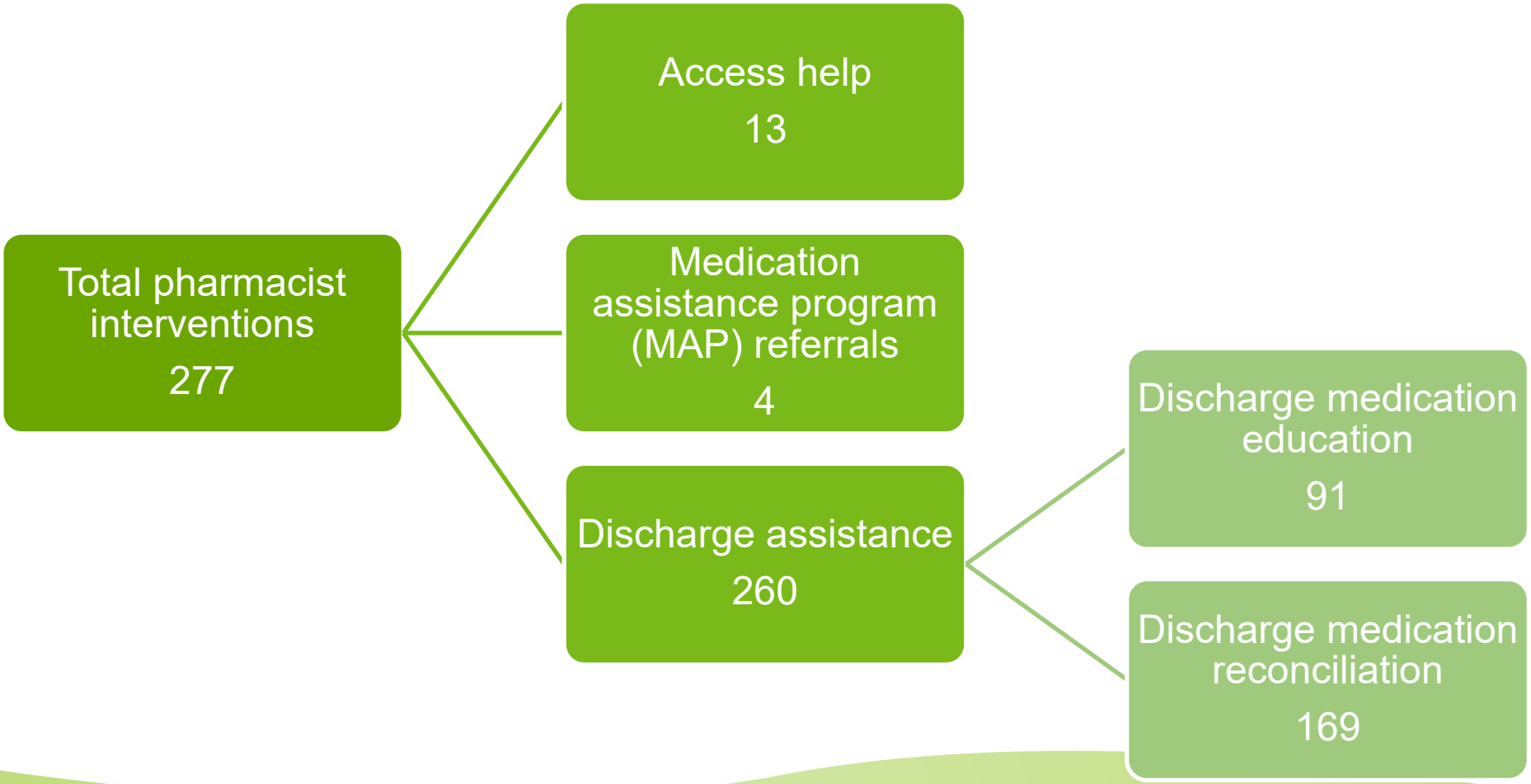
Pharmacist Interventions



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Discrepancies

Total Discrepancies

28

Physician Accepted

21

(75%)

Physician Rejected

7

(25%)

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Conclusions

- Transitions of care did not significantly change readmissions or isolated ED visits
- Pharmacists can make a wide variety of patient centered interventions
- There are additional opportunities for pharmacist involvement in transitions of care

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Limitations

- Time limitation
- Small sample size
- EHR optimization
- Human variability
- Communication to staff outside of the project team
- Prioritization strategies

Future Directions

- Expanding services into additional admission medication reconciliation
- Adding additional floors to the service
- Involvement in potential medication assistance issues where alternatives may be beneficial
- Creating better communication pathways to work with our outpatient providers
- Finding funding sources to support a pharmacist in a transitions of care role

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