



Effects of a Transitions of Care Focused Pharmacist Decentralization Program on Patient-Centered Outcomes

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MSHP Virtual Conference

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PGY-1 Pharmacy Resident

Cox Medical Center Branson, Branson, MO

Objective

Discuss implications of a TOC-focused decentralized pharmacy service model and describe its impact on:

- 90-day readmission rates
- LOS
- Frequency of ED visits

Cox Medical Center Branson



- 6 Hospital system
- Level 2 stroke center
- 140 beds
- Large tourist population

Background

Baseline readmission rate ~12%



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graph TD; A[Baseline readmission rate ~12%] --> B[Expansion of pharmacist decentralization to include a focus on TOC services]; B --> C[Process analyzation];
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Expansion of pharmacist decentralization to include a focus on TOC services

Process analyzation

Primary Literature

Study	BOOST Study	
Purpose	To study discharge	ven risk patients
Population	Adults > medical risk medi	an acute care ions or a high-
Methods	Prospect medical patients	al at a single living 669
Results	The reac counseli not rece	ing discharge 6% for those 0.04]
Conclusion	Pharmac facilitate resulted	e process tion and ns

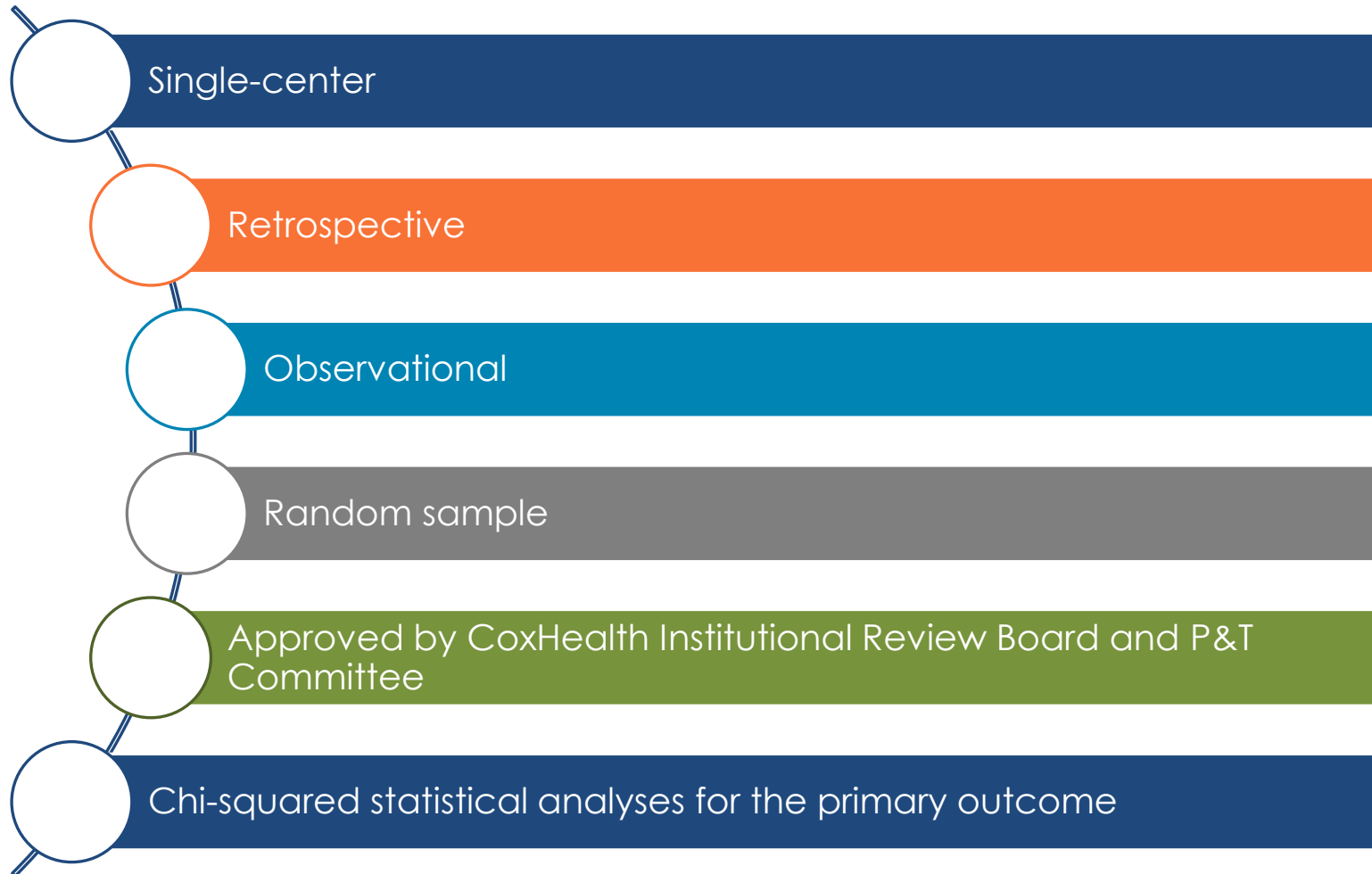
Interventions

Discharge counseling

Medication reconciliation

Provider support regarding medication-related issues

Study Design



Study Objectives

Primary outcome

- Frequency of readmission to CMCB within 90 days

Secondary outcomes

- Frequency of ED visits
- LOS

Methods

Study period: July 1, 2019 – September 30, 2019

Inclusion criteria

- Age > 18 years
- Discharged from CMCB within study period
- On at least 1 medication prior to admission
- Admitted for > 24 hours

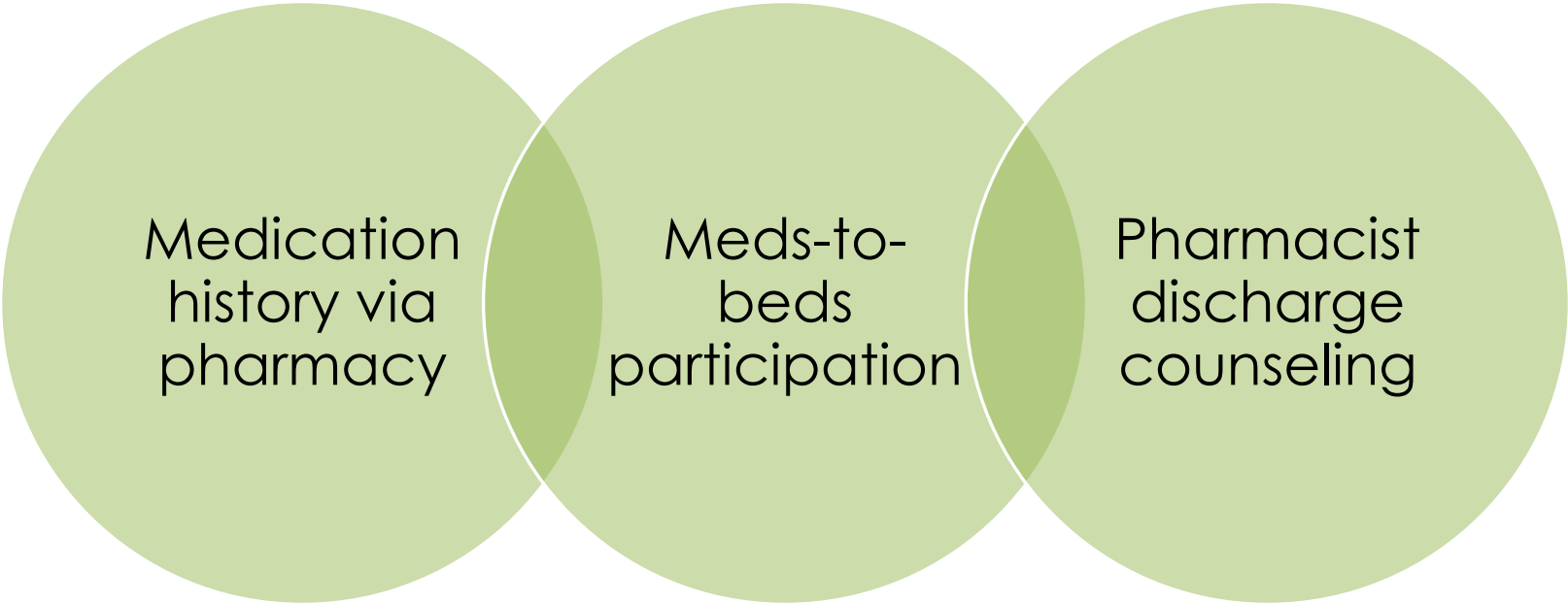
Exclusion criteria

- Discharge to SNF or nursing home
- Mentally incapable of making medical decisions/receiving education
- Admitted to CMCB for elective procedure
- Transferred to another healthcare facility

CMCB = Cox Medical Center Branson, SNF = Skilled nursing facility

Methods

INTERVENTIONS



Medication
history via
pharmacy

Meds-to-
beds
participation

Pharmacist
discharge
counseling

Defined as “Pharmacy touch-points”

Methods

Data collection

- Nov 2019 – Mar 2020

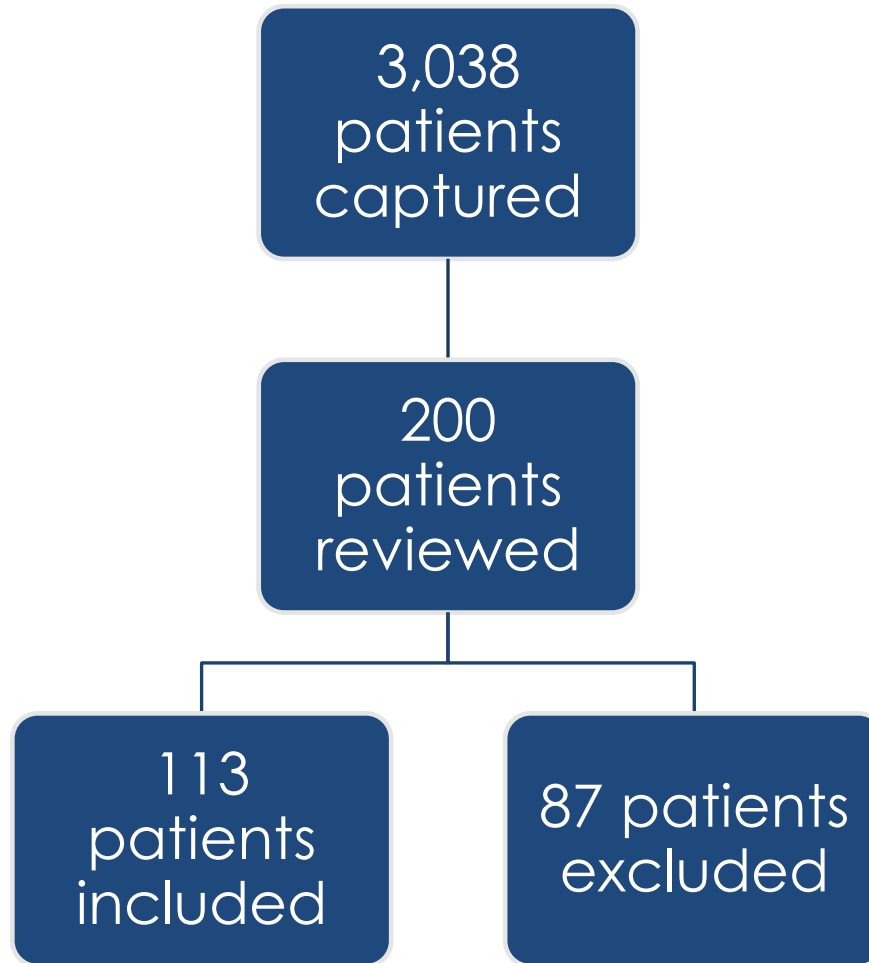
Data analysis

- Mar – Apr 2020

P&T Committee – Next steps

- June 2020

Results – Patient Selection



Baseline Characteristics

Touchpoints	Sex (Male)	Average age (years)	P-value Comparing Age
0	7 (50%)	57.4	-
1	25 (60%)	70.0	0.0482
2	19 (51%)	67.5	0.0913
3	9 (45%)	75.3	0.0091
OVERALL	60 (53%)	68.7	-

Results – Primary Endpoint

Touchpoints	Readmissions	P-value
0	1/13 (8%)	0.0058
1	2/42 (5%)	
2	7/37 (19%)	
3	8/21 (38%)	

Results – Primary Endpoint Post-hoc Analysis

Touchpoint Comparisons	Fisher's Exact P value
0 vs 1	0.562
0 vs 2	0.662
0 vs 3	0.107
1 vs 2	0.075
1 vs 3	0.00147
2 vs 3	0.129

Results – Subgroup Analysis

Touchpoints	Readmission	No Readmission	Fisher's Exact P-value
Med history	14 (31%)	31	0.0005
No Med history	4 (6%)	64	
Meds-to-beds	17 (18%)	77	0.3
No Meds-to-beds	1 (5%)	18	
Discharge education	9 (23%)	31	0.184
No Discharge education	9 (12%)	64	

Results – Secondary Endpoints

ED Visits w/in 90 days			
Touchpoints	0	≥ 1	P-value
0	11	2 (15%)	0.1129
1	38	4 (10%)	
2	29	8 (22%)	
3	13	8 (38%)	

Touchpoints	Avg LOS (days)	Fisher's Exact P-Value
0	1.91	-
1	2.99	0.217
2	3.31	0.155
3	4.88	0.015

Limitations

Single-center
study

Retrospective

Small patient
population

Limited to 3
pharmacy touch-
points

Did not consider
multiple
readmissions
within 90 days

Lack of additional
baseline
characteristics
data

Conclusions

No clear influence of the degree of pharmacy interaction on readmission rate or ED visits within 90 days

- In general, degree of pharmacy interaction increased with age
- Early efforts of TOC service emphasize the elderly/high-risk population (i.e. “sicker patients”)
- Sub-group analysis limited by small study population

Patients with longer LOS are more likely to experience higher degree of pharmacy interaction

Future Direction

Present to P&T
Committee



Additional data
collection to
increase study
sample size



Consider additional
pharmacy touch-
points and baseline
characteristics to
compliment data
collection

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- Cox Health Business/Healthcare Analytics department

References

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- Pal, Aroop, Stewart Babbott, and Samaneh Tavalali Wilkinson. "Can the targeted use of a discharge pharmacist significantly decrease 30-day readmissions?." *Hospital pharmacy* 48.5 (2013): 380-388.
- Wilkinson, Samaneh Tavalali, Pal Aroop, and J. Couldry Richard. "Impacting readmission rates and patient satisfaction: results of a discharge pharmacist pilot program." *Hospital Pharmacy* 46.11 (2011): 876-883.



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