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### Evaluation of pharmacist involvement in outpatient transitional care management

Katharine Lundy PharmD

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# **Evaluation of pharmacist involvement in outpatient transitional care management**

Katharine Lundy, PharmD  
PGY-1 Pharmacy Resident  
Parkview Health

# Disclosure

- The speaker has no actual or potential conflict of interest in relation to this presentation

# Transitional Care Management

Ni, et al. Am J Health Syst Pharm. 2018.  
Sanchez, et al. Pharmacotherapy. 2015.



# Transitional Care Management

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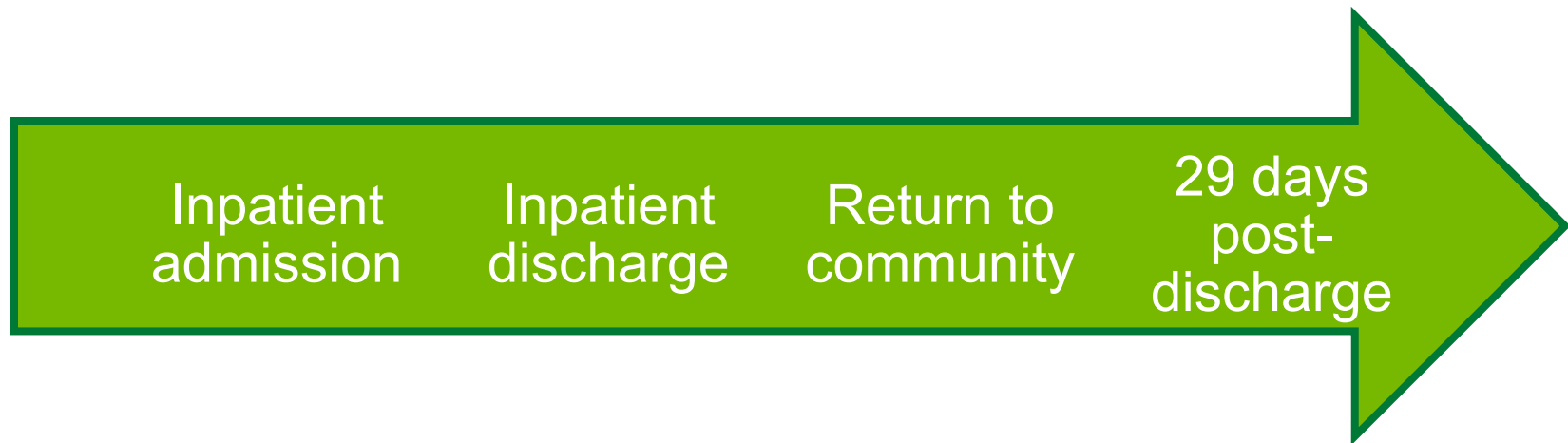
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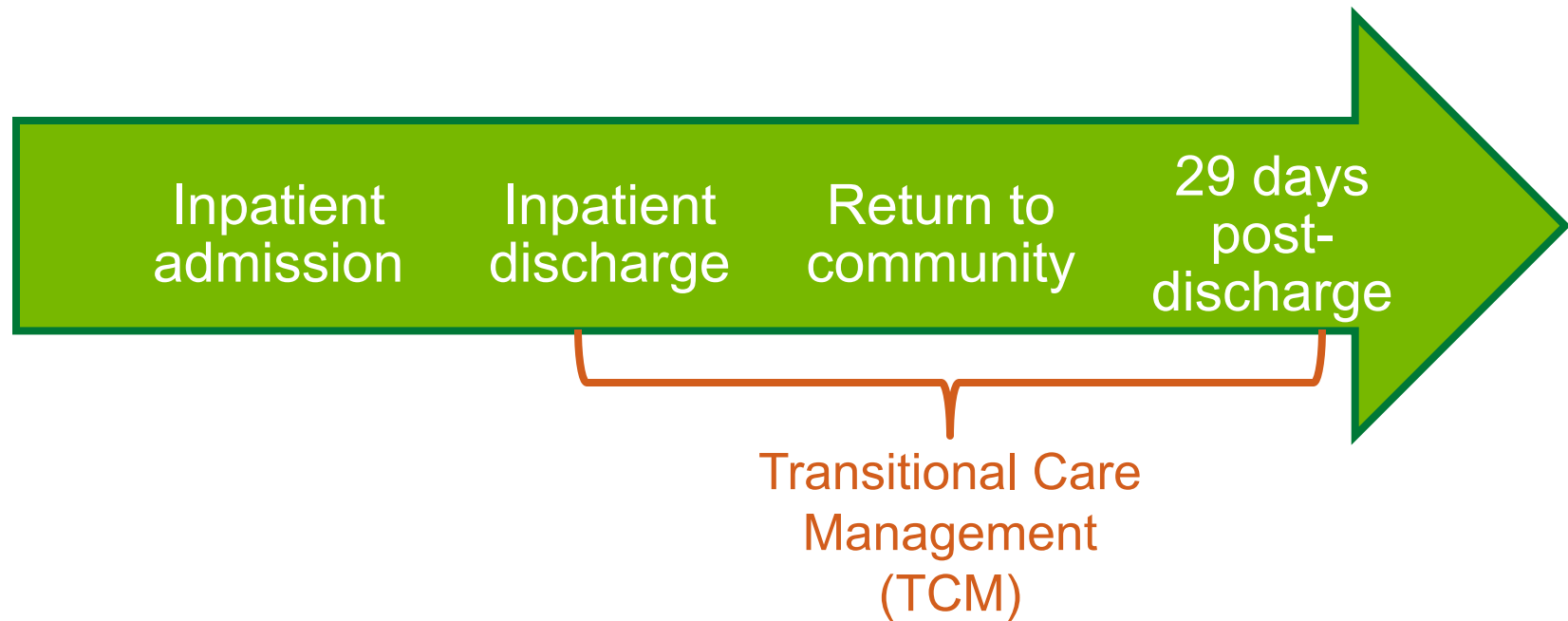
2013  
All-cause 30-day readmission for Medicare beneficiaries 17.5%



# Transitional Care Management



# Transitional Care Management



# Purpose of TCM

Reduce  
hospital  
readmissions

Ensure care  
coordination

Prevent gaps  
in care  
provision

# TCM Components

## Interactive Contact

- Within 2 days of discharge
- Telephone, email, or face-to-face

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## Non-face-to-face services

- Assess adherence & medication management
  - Provide education
- Assist with accessing care & services

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- Within 2 days of discharge
- Telephone, email, or face-to-face



## Non-face-to-face services

- Assess adherence & medication management
  - Provide education
- Assist with accessing care & services



## Face-to-face visit

- Physician or NPP
  - In 7 days if high complexity
  - Within 14 days if moderate complexity



# Assessment Question

Which of the following is a required component of TCM in order to obtain reimbursement?

- A. A face-to-face visit with a pharmacist
- B. A face-to-face visit with a physician or midlevel provider
- C. A face-to-face visit with a registered nurse
- D. A non-face-to-face visit with a physician or midlevel provider

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# Sanchez, et al.

Study	Population	Intervention	Results
Project Re-Engineered Discharge (RED)	401 patients discharged from Boston Medical Center	Education from discharge nurse educator (DNE) & phone call from pharmacist in 2-4 days	30% decrease in emergency room (ER) visits & 30 day readmissions

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Study	Population	Intervention	Results
Revisiting Project RED	401 patients discharged from Boston Medical Center & received education from DNE	Contacted by pharmacist; n=277	17.7% unplanned hospitalizations
		Unable to be contacted by pharmacist; n=124	33.9% unplanned hospitalizations



# Ni, et al.

Study	Population	Intervention	Results
Reduction of healthcare costs through a transitions-of-care program	1835 patients discharged from a local hospital in Kern County, California & members of a Medicaid managed health plan	Referred to ambulatory care pharmacy-based transitions of care program; n=830	\$2,139 decrease in total healthcare costs at 180 days post-discharge
		Received usual care; n=1005	

# Assessment Question

Which of the following is a potential benefit of providing Transitional Care Management (TCM) services as demonstrated in previous studies?

- A. Increased hospital readmission rates
- B. Increased pharmacist workload
- C. Decreased hospital readmission rates
- D. Decreased patient satisfaction

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Which of the following is a potential benefit of providing Transitional Care Management (TCM) services as demonstrated in previous studies?

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- C. Decreased hospital readmission rates
- D. Decreased patient satisfaction

# Parkview Health

- Not-for-profit, community-based health system
- Northeast Indiana & Northwest Ohio
- Parkview Physicians Group (PPG)
  - 237 locations for primary care and specialty clinics



# TCM at Parkview

## Nurse-driven office

Receive report of  
discharged  
patients

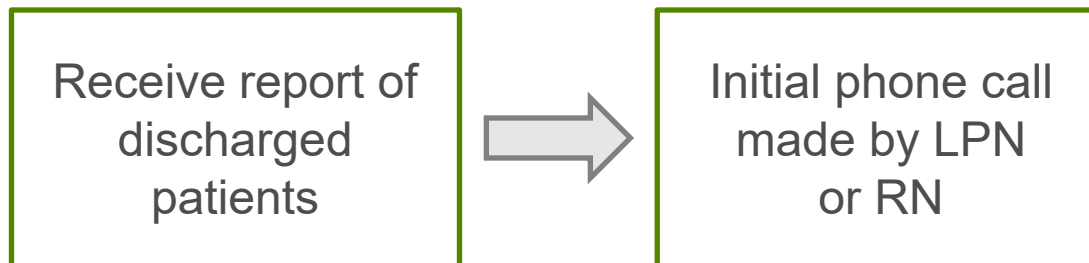
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LPN: Licensed Practical Nurse  
RN: Registered Nurse  
MA: Medical Assistant



# TCM at Parkview

## Nurse-driven office

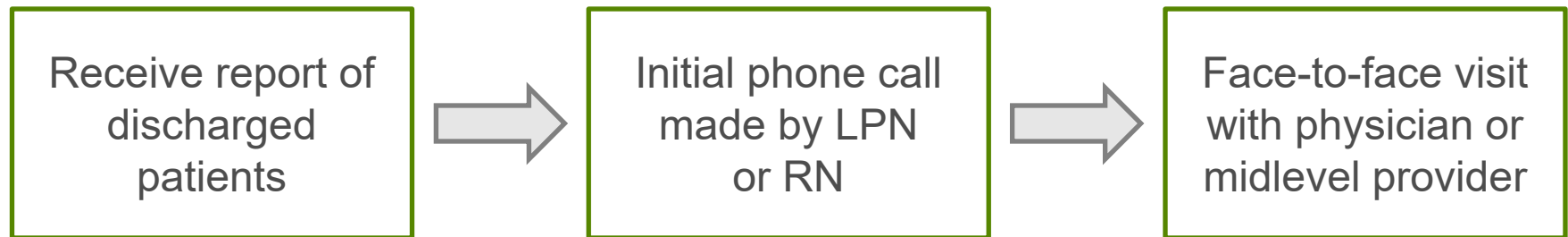


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# TCM at Parkview

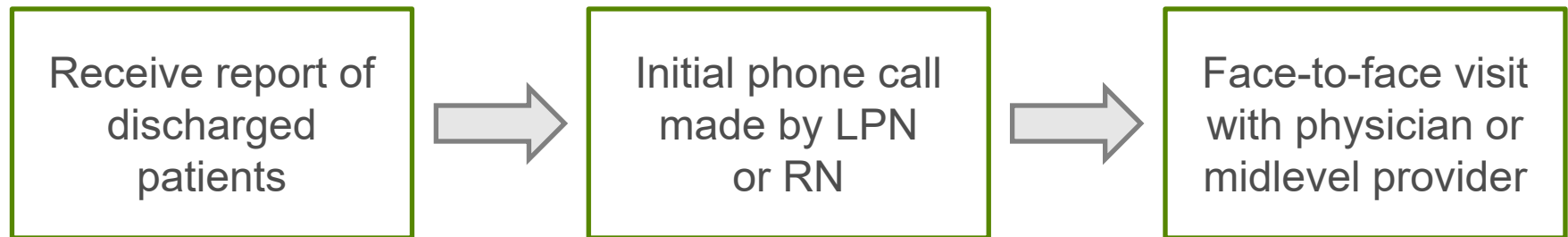
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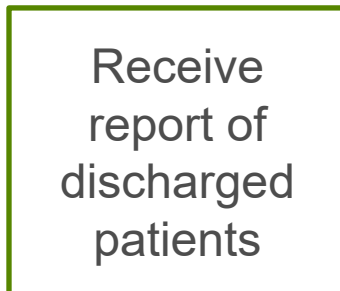
# TCM at Parkview

## Nurse-driven office



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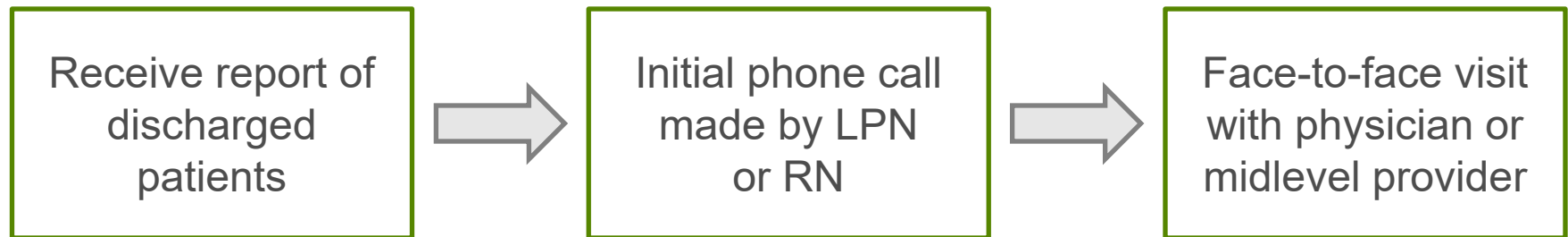
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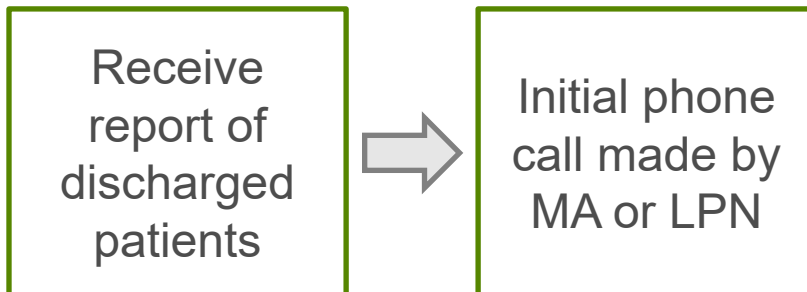
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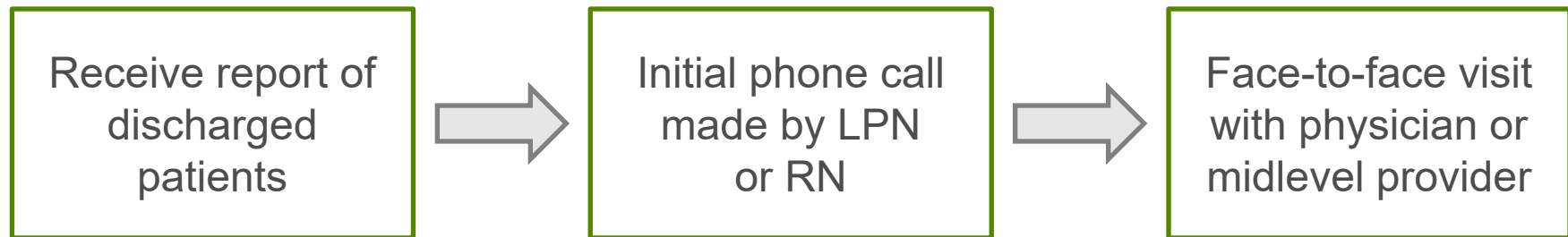
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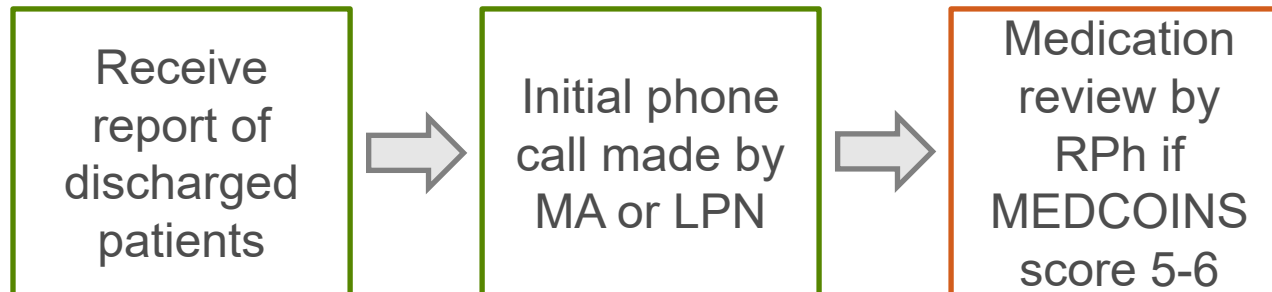
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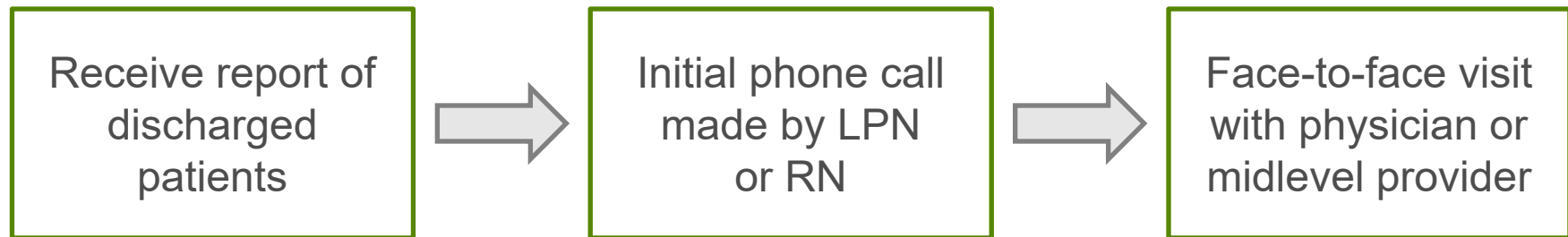
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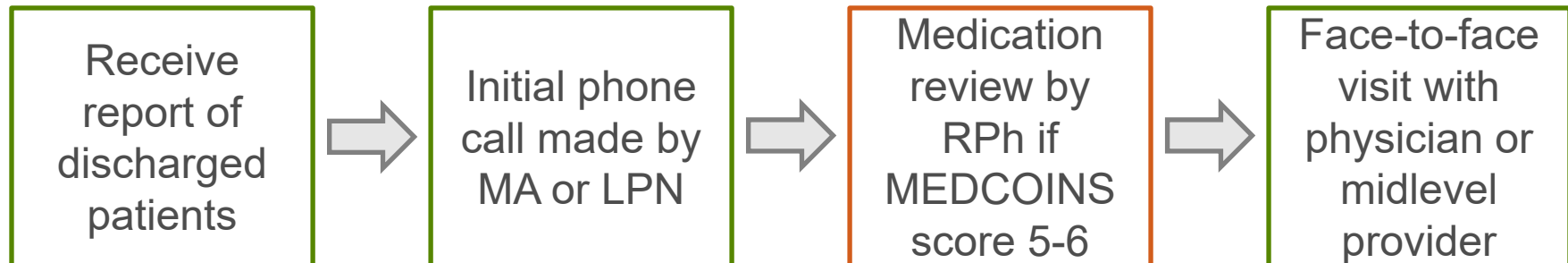
# TCM at Parkview

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# McAuliffe, et al.

- Development and validation of a transitions-of-care pharmacist tool

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- Development and validation of a transitions-of-care pharmacist tool
- MEDCOINS score:
  - Medication count
  - Comorbidity count
  - Health insurance status

### MEDCOINS Scoring Tool for Risk Assessment of Readmission

#### Step 1: Medication Count

- Number of medications at discharge: \_\_\_\_\_
  - o If  $\geq 10$  medications: **1 point**

Box 1

#### Step 2: Chronic Condition Count

- Number of chronic conditions at discharge: \_\_\_\_\_
  - o If  $\geq 6$  conditions: **2 points**

Box 2

#### Step 3: Health Insurance Coverage

- Type of health insurance (circle one): None Public<sup>a</sup> Private
  - o If None: **2 points**
  - o If Public: **3 points**

Box 3

Add the numbers in Box 1, Box 2, and Box 3 to calculate the MEDCOINS score, enter into box below,<sup>b</sup> and determine risk category using table:

MEDCOINS

Points	Risk Category	Estimated Risk (%) of Readmission
0–1	Low	5.7
2–4	Moderate	13.2
5–6	High	22.5

<sup>a</sup>Public health insurance includes Medicare, Medicaid, or a combination of both.

<sup>b</sup>Maximum score, 6 points



# Purpose


- Evaluate patient outcomes following implementation of a pharmacist in the TCM workflow
- Outcomes
  - Primary: percentage of patients with 30 day readmissions
  - Secondary:
    - Percentage of patients with 30 day ED utilizations
    - Percentage of patients who completed TCM appointment

# Study Design

- Retrospective quality improvement study
  - IRB approved
- Review of TCM contacts from October 2018 through January 2019

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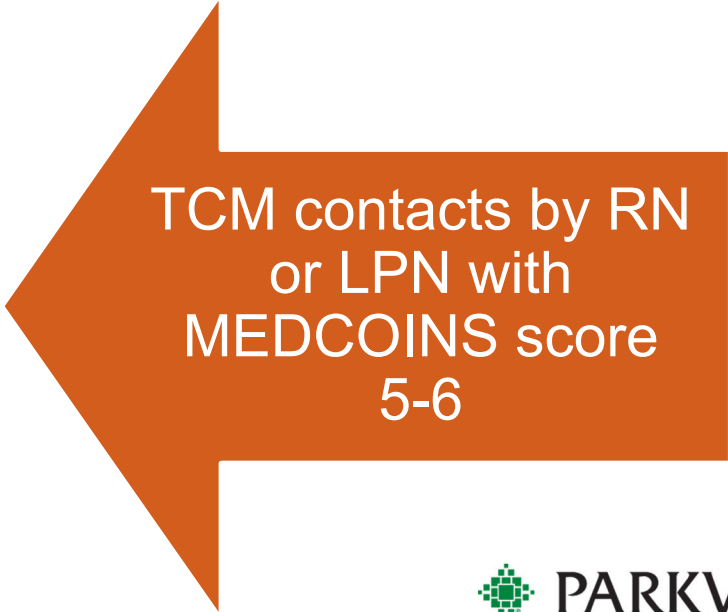
TCM contacts by  
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5-6

# Study Design

- Retrospective quality improvement study
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TCM contacts by  
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TCM contacts by RN  
or LPN with  
MEDCOINS score  
5-6

# Inclusion/Exclusion Criteria

## Inclusion

- Age 18-89
- Response to TCM phone call

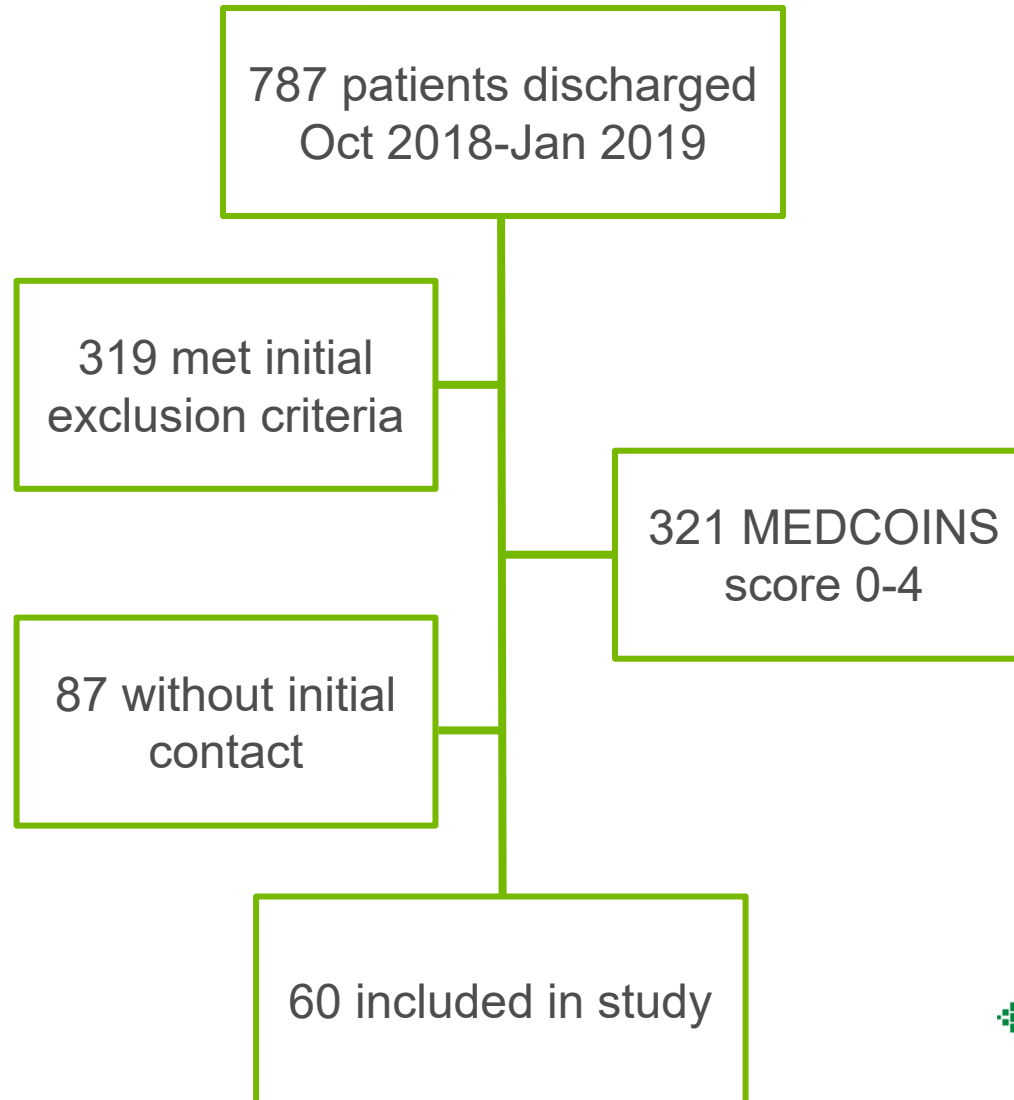
## Exclusion

- Age < 18 years old
- Prisoners
- Pregnancy
- Death within 30 days of discharge
- Discharged to SNF, ECF, or rehabilitation facility
- Discharged with hospice/palliative care
- Left AMA

SNF: Skilled Nursing Facility  
ECF: Extended Care Facility  
AMA: Against Medical Advice



# Selected Patients



# Demographics

	Pharmacist-driven N = 18	Nurse-driven N = 42
Median Age (IQR)	68 (62-78)	67.5 (61-78)
Sex	9 Male 9 Female	16 Male 26 Female
Race	17 White/Caucasian 1 Hispanic/Latino	42 White/Caucasian

# Results

	Pharmacist-driven N = 18	Nurse-driven N = 42	P Value
30-day readmission	6 (33.3%)	7 (16.7%)	0.151
30-day ED utilization	3 (16.7%)	6 (14.3%)	0.813

	Pharmacist-driven January N = 12	Nurse-driven January N = 17	P Value
30-day readmission	2 (16.7%)	4 (23.5%)	0.653
30-day ED utilization	1 (8.3%)	4 (23.5%)	0.286

# Results

	Pharmacist-driven office N = 18	Nurse-driven office N = 42
Median number of medications on discharge (IQR)	13.4 (12-21)	17 (12-22)
Median MEDCOINS (IQR)	6 (6-6)	6 (6-6)
Median LACE Index (IQR)	5 (2.75-8)	5 (3-7)

	Pharmacist-driven January N = 12	Nurse-driven office in Jan N = 42
Median number of medications on discharge (IQR)	16 (10.25-19)	16.5 (11.75-21.25)
Median MEDCOINS (IQR)	6 (6-6)	6 (6-6)
Median LACE Index (IQR)	5 (2.75-7.25)	5 (3-6.75)

# Results

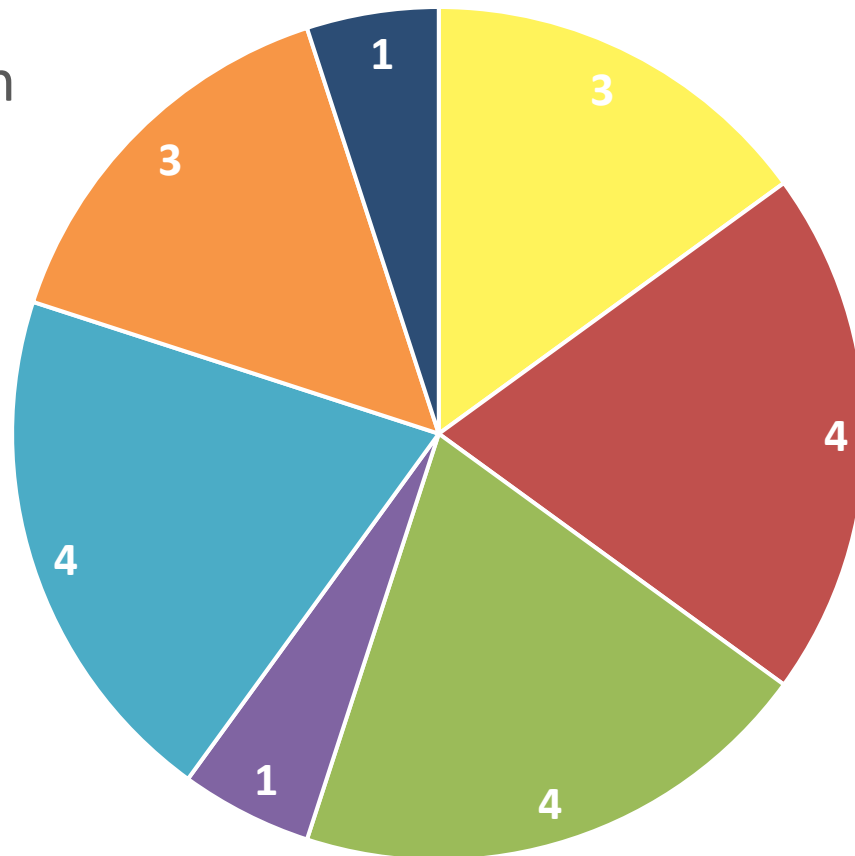
CMS Designated Condition High Risk for Readmission	Pharmacist-driven office; N = 18	Nurse-driven office; N = 42
Congestive Heart Failure	18 (100%)	42 (100%)
Pneumonia	3 (16%)	7 (17%)
Myocardial Infarction	1 (6%)	0 (0%)
Coronary Artery Bypass Graft	1 (6%)	7 (17%)
Hip/Knee Replacement	1 (6%)	4 (10%)

# Results

	Pharmacist-driven office; N = 18	Nurse-driven office; N = 42
Completed TCM Appointment	13 (72%)	41 (98%)
Billed for TCM After Completing Appointment	9 (69%)	39 (95%)

# Pharmacist Interventions

- Medication Reconciliation
- Coordinated Fill/refill
- Financial Assistance
- Drug Discontinuation
- Drug Change
- Enhance Compliance
- Referral



# Limitations

- Small patient population
- Comparison of two different workflows
- Number of providers involved
- Establishment of new service
- Patient report of medication use



# Future Direction

- Continue data collection
- Re-evaluation of workflow
- Further examination of readmitted patients
- Further examination of patient care handoff between pharmacists
- Publication

# Acknowledgements

- Ashley Parrott PharmD, MBA, BCPS, BCACP
- Rachel Steele PharmD, BCACP
- Tara Jellison, PharmD, MBA, FASHP
- Sarah Ferrell, PharmD

# References

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