Reducing Readmissions for Myocardial Infarctions with Early Access to Clinic: An Innovative Approach

Kathryn Ward, MSN, PHCNS-BC, DNPc

2016 Ninth Annual DNP Conference, Baltimore, MD

October 5-7, 2016

Agenda

- Brief Overview
- Statement of the Problem
- Purpose of the Study
- Theoretical Framework
- Review of Literature
- Innovative Approach
- Evaluation Metrics
- Preliminary Findings
- Questions

Brief Overview

Background & Significance

- Approximately 735,000 Americans each year have a heart attack, or 1 every 34 seconds and 1 in 4 deaths (1 every 60 seconds) is from a heart-related event (Center for Disease Control and Prevention, 2015)

- Hospital readmissions within the first 30 days of discharge after acute MI occur in 11% and result in a mean cost of $22,000 per readmission (Center for Disease Control and Prevention, 2015)

- Hospital readmissions negatively impact the quality of life for patients (Center for Disease Control and Prevention, 2015)

- Patients hospitalized for an MI become high risk for readmission within 30 days of discharge (Ben-Assa, et al., 2014)

Brief Overview (continued)

Background & Significance

- Redfern (2011), proposed that prompt access post discharge is important combined with lifestyle changes

- Medication adjustment and adherence presents an opportunity for improvement in every setting. 25% of patients in one study did not fill prescriptions post discharge from the hospital (Matthews, et al., 2015)

- In a study evaluating self-reported medication use and its impact on readmission, results illustrate that there is a correlation between subsequent readmissions suggesting early medication adjustment is critical to preventing re-hospitalization (Yang, et al., 2006)

- Cardiovascular disease knows no age or socioeconomic bias (Najafi, et al., 2014)

Definition of Terms

- An acute myocardial infarction (AMI), or more commonly referred to as a heart attack or MI, happens when blood supply carrying oxygen to the heart muscle is compromised or cut off entirely (American Heart Association, 2016)

- Re-admission to the hospital following an MI is defined as occurring within 30 days of discharge for any cause

- UHC readmission rate refers to the mean national readmission rate reported by University Health System Consortium (UHC), an organization comprised of 118 leading academic medical centers with a focus on quality and safety

Statement of Problem

- In the outpatient setting, early access to post-discharge care is variable among providers, specialties, and institutions (Hess, et al., 2014)

- Post MI patients have not historically been scheduled for an appointment within 7-10 day following the acute event

- Medication confusion about prescription regimens or cost barriers may contribute to non-adherence thus leading to unnecessary readmissions that early access could mitigate (Matthews, et al., 2015)

# Purpose of the Initiative

Purpose

- The reason for initiative was to examine whether early access to a multidisciplinary MI (MDMI) team clinic following discharge for an acute myocardial infarction reduces readmission rates within 30 days following discharge as there were few evaluations in the literature review that studied the impact of interventions addressing early complications

Rationale

- Timely access to care following an acute cardiac event can provide opportunity for early intervention to obviate re-hospitalization

Theoretical Framework

The Health Belief Model

Laurenhan/ Wikimedia Commons / Public Domain
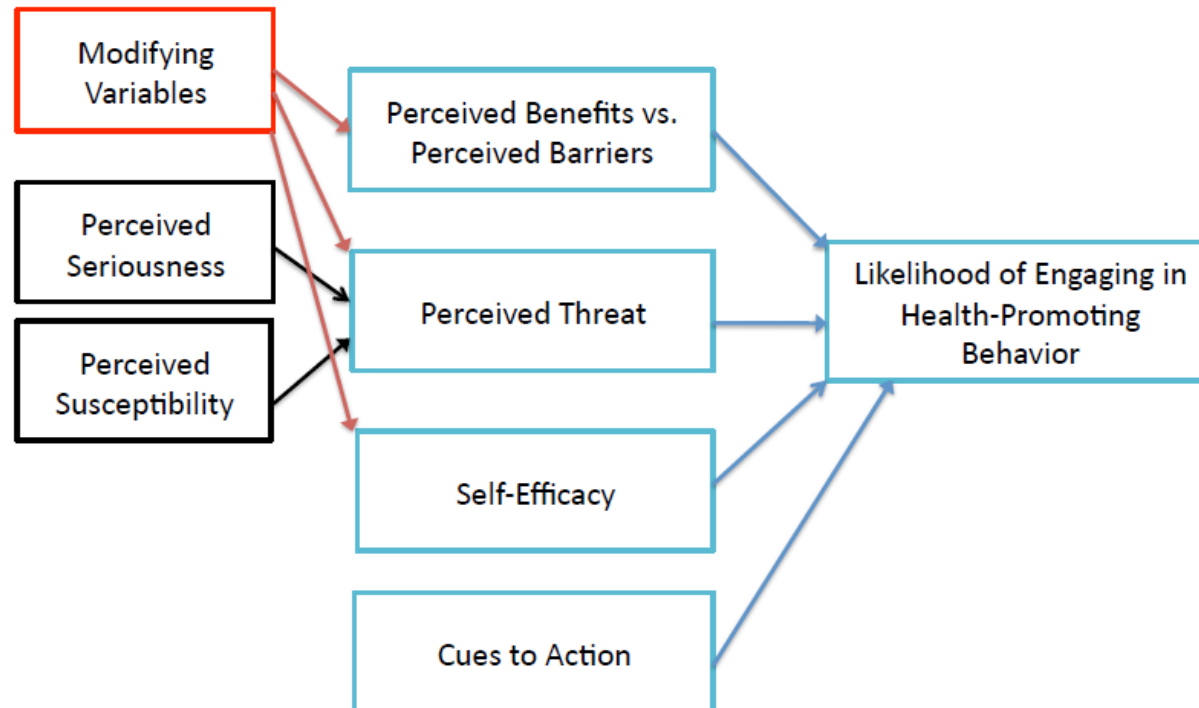
Literature Review

Findings

Gaps

No published evaluations of early post discharge interventions to reduce readmissions for the MI patient

3 Major Themes

- Medication adherence and management
- Multidisciplinary team care
- Early access to care following hospitalization

Literature Review

Relevant Study Finding Themes

- **Medication adherence**
  - Non adherence to medication regimens are considerable and vary in reasons following discharge
  - Medication adjustment made early after discharge can prevent readmission

- **Multidisciplinary Teams**
  - Intentional team approach to care prior to discharge removes barriers and addresses concerns to provide medication education and counseling with correct prescriptions at discharge can prevent readmissions

Summary cont'd

Relevant Study Findings

-Early Access

- One study illustrated no association between early single physician follow-up and lower readmission rates
- The researchers suggested finding other strategies that may reduce the readmission rate

Objectives

Early intervention utilizing a multidisciplinary team approach to optimize patient outcomes, reduce readmissions, and improve quality of life

Approach:

- Early access to care (clinic visit) following acute event (MI)

- Adherence to medication regimen

- Education about lifestyle modifications: exercise, smoking cessation, diet and medication

- Counseling/Resource procurement as indicated

Innovative approach

In April 2015, UVA Heart & Vascular Center initiated an early access post-discharge MI clinic. The clinic model incorporated a team approach not found in *any* of the literature to address the multi-faceted needs of the patient

In the MI clinic, patients are evaluated within 7-10 days of discharge by the multidisciplinary team to address medical and psychosocial needs in concert with recommended lifestyle changes

The clinic uses existing resources available, both data and personnel

The visit is an extension of the hospital stay and is only a one time visit…not meant to establish care but makes appropriate referrals to PCP's or Cardiologists

Implementation

Prior to clinic visit:

- MI clinic referral was added to the standard cardiology discharge order set

- Patient brochure explaining clinic team roles and the purpose of the clinic is provided to all MI patients upon discharge

- All scheduled patients receive a phone call prior to clinic visit to answer questions, assure attendance, inform them of duration of visit, and remind them to bring their medications

Implementation, cont'd

During clinic visit each member of the team sees each patient individually

Team consists of:

o   Cardiologist

o   Registered Nurse

o   Pharmacist

o   Dietician

o   Exercise Physiologist

o   Licensed Clinical Social Worker

Implementation, cont'd

Care provided to each patient:

- o Assessment of current status
- o Review of medications
- o Counseling for smoking cessation
- o Education about lifestyle modifications
- o Provision of resources, as needed
- o Establishment of short and long term goals
- o Receives written information packets
- o Telephone follow-up may occur
- o Visit summary and guideline recommendations provided to the patient and/or their care providers

Evaluation Metrics

- Hospital readmission rates: from records of all MI patients obtained from the EMR

- The 30-day readmission rate of all patients in the dataset will be compared to the mean readmission rate reported by UHC

- Medication: information on medication issues are evaluated for the patients that were seen in the clinic

- Patient satisfaction measured at the end of each visit and assessed internally
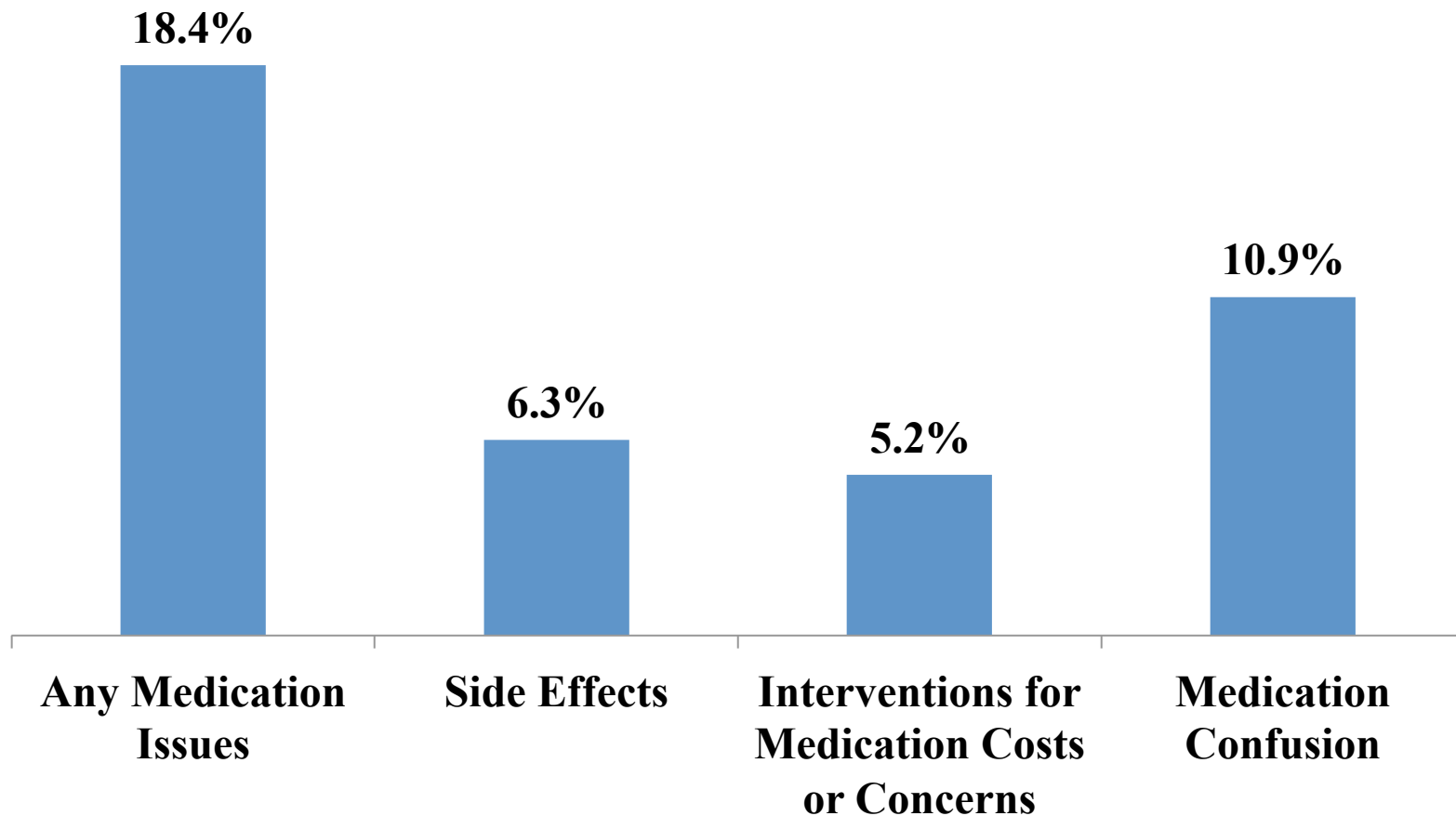
Preliminary Findings for first 9 months

Readmission following acute MI reflects a combination of:

- medical complications of the underlying disease
- errors in the process of care
- poor patient education
- psychological stress of transition from hospital to home for patients and families

Our data suggested that most complications resulting in readmission are potentially preventable if detected early. Medication issues were significant in 18.4% of the patients seen within 1 week of hospital discharge. We contend that these issues, if left unresolved could have led to hospital readmission.

Readmission rates
3 Quarters – July 1, 2015 to March 31, 2016

	30-day readmission rate
AMI Discharges from Hospital	13.3%
Discharged patients seen in MI Clinic	8.6%
UHC Academic Hospitals	13.5%

Patient Satisfaction Results
3 Quarters – July 1, 2015 to March 31, 2016

89% *	Satisfied with visit preparation from the phone call
96%	Satisfied with wayfinding instructions from the phone call
100%	Felt welcomed by phone call

* responses include 'Yes', 'No', and 'Not Sure' – 92 total responses

Concluding Remarks

- What worked well

- What have we learned

- Could we define it differently

- What is looming in the future

References

American Heart Association. (2016). About heart attacks. Retrieved from
http://www.heart.org/HEARTORG/Conditions/HeartAttack/AboutHeartAttacks/About-
Heart-Attacks_UCM_002038_Article.jsp#.Vsyo6q32bcs

Ben-Assa E, Shacham Y, Golovner M, Malov N, Leshem-Rubinow E, Zatelman A, . . .
Roth A. (2014). Is telemedicine an answer to reducing 30-day readmissionrates post-acute
myocardial infarction?. Telemedicine Journal & E-Health, 20(9), 816-821. doi:
http://dx.doi.org/10.1089/tmj.2013.0346

Centers for Disease Control and Prevention (CDC). (March 05, 2015). Heart disease.
Retrieved from http://ephtracking.cdc.gov/showHeartAttack.action

Hess, C. N., Shah, B. R., Peng, S. A., Thomas, L., Roe, M. T., & Peterson, E. D. (2014).
The association of early physician follow -up and 30-day readmission after non-ST-
segment elevation myocardial infarction among older adults. *US National Library of
Medicine National Institutes of Health, 128*(11), 1206.

References cont'd

Mathews R, Peterson ED, Honeycutt E, Chin CT, Effron MB, Zettler M, . . . Wang TY. (2015). Early medication nonadherence after acute myocardial infarction: Insights into actionable opportunities from the treatment with ADP receptor inhibitors: Longitudinal assessment of treatment patterns and events after acute coronary syndrome (TRANSLATE-ACS) study. *Circulation.Cardiovascular Quality & Outcomes, 8*(4), 347-356. doi: http://dx.doi.org/10.1161/CIRCOUTCOMES.114.001223

Najafi, F., Nalini, M., & Nikbakht, M. R. (2015). Changes in risk factors and exercise capacity after cardiac rehabilitation and its effect on hospital readmission. *Iranian Red Crescent Medical Journal, 16*(5), e4899. doi:10.5812/ircmj.4899

Redfern, J. (2011). Expanded cardiac rehabilitation reduces cardiac events over five years. *Journal of Physiotherapy, 57*(1), 57.doi:http://dx.doi.org/10.1016/S1836-9553(11)70010-8

Yang, Z., Olomu, A., Corser, W., Rovner, D. R., & Holmes-Rovner, M. (2006). Outpatient medication use and health outcomes in post-acute coronary syndrome patients. *American Journal of Managed Care, 12*(10), 581-587.