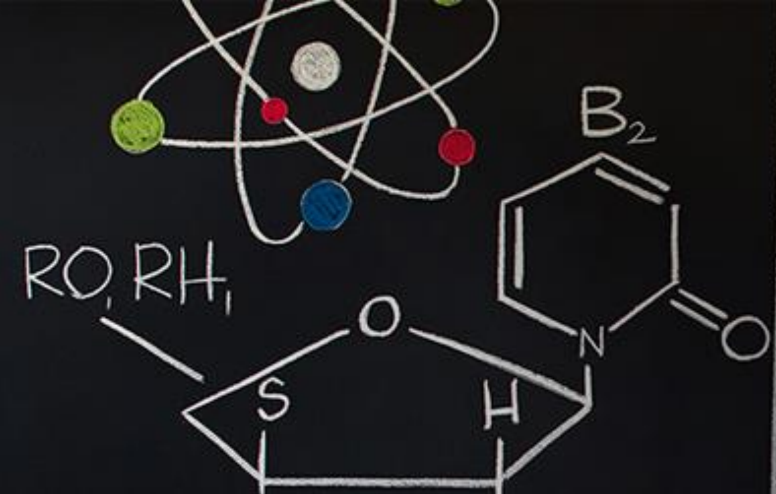

Heart to Heart:
Improving Outcomes and Decreasing Readmissions for Heart Failure Patients through an Integrated Pharmacist Home Visit Model

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BACKGROUND

- Average readmission rate is 24% nationally among patients hospitalized for heart failure
- At Virginia Mason Medical Center (VMMC), the readmission rate was 22% with medication issues cited as 3 out of 4 reasons for non-adherence with the discharge care plan, resulting in excessive readmissions[1]
- Positive outcomes have been demonstrated with high strength of evidence for home-based programs that included pharmacist interventions[2]

OBJECTIVE

To provide an in-home medication coaching program for patients with Heart Failure discharged from the hospital that identifies and resolves medication related problems in an effort to reduce readmissions.

METHODS

Patient Selection

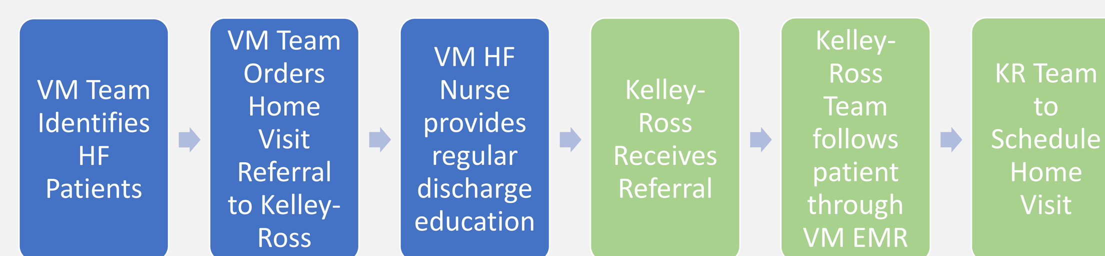
- Must be followed in outpatient setting by a VMMC cardiologist
- Taking >5 chronic medications
- Discharged from hospital to home with a primary diagnosis of heart failure
- Reside in the surrounding tri-county area

Outcomes

- 30-day heart failure readmissions
- 30-day all-cause readmissions
- Patient rating on usefulness of the program
- Provider satisfaction (post service score only)
- Process metrics for the service
- Medication-related problems & acceptance of recommended interventions

Transition of Care Process

- VMMC CHF Triage nurses identify and introduce program to patients
- Kelley-Ross integrated with read/write access to EMR system



- Each patient received up to 3 home visits and 3 follow-up calls over a 3 month period

RESULTS

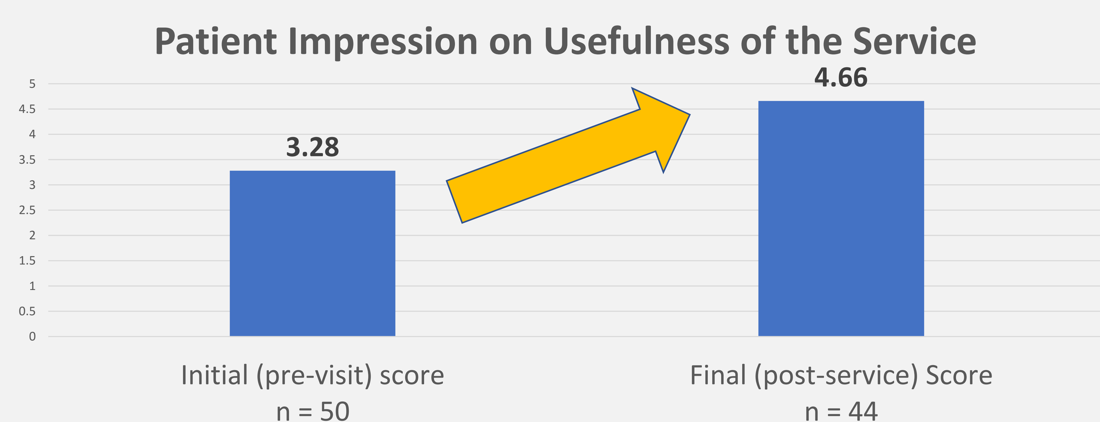
Patient Demographics

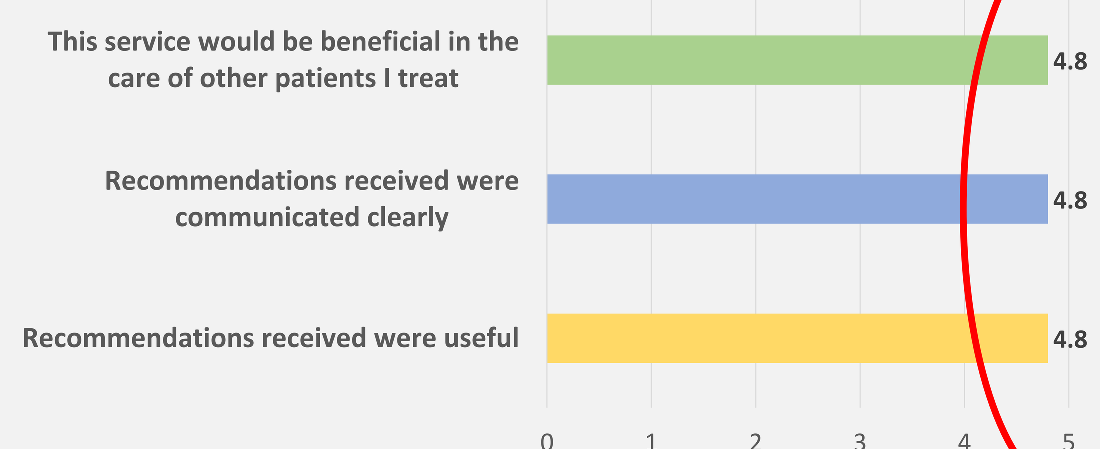
Number of Patients	50
Average Age of Patients	71.1
Male vs. Female	48.4% vs. 51.6%
Average number of Chronic Medical Conditions per patient	7.8
Average Number of Medications per patient	14.6
Percent of patients with high-risk medications	
Anticoagulants	77.4%
Hypoglycemics	35.5%
Opioids	27.4%
Percent of Patients with specific disease States	
Heart Failure (HFrEF & HFpEF)	100%
Diabetes	50%
Hypertension	86.9%
Depression/Anxiety	37.1%
Asthma/COPD	30.6%
Dementia	4.8%
Neurologic Disorder (Ex. Stroke, Multiple Sclerosis, Epilepsy, etc.)	9.7%
Post Myocardial Infarction	4.8%

Process Metrics

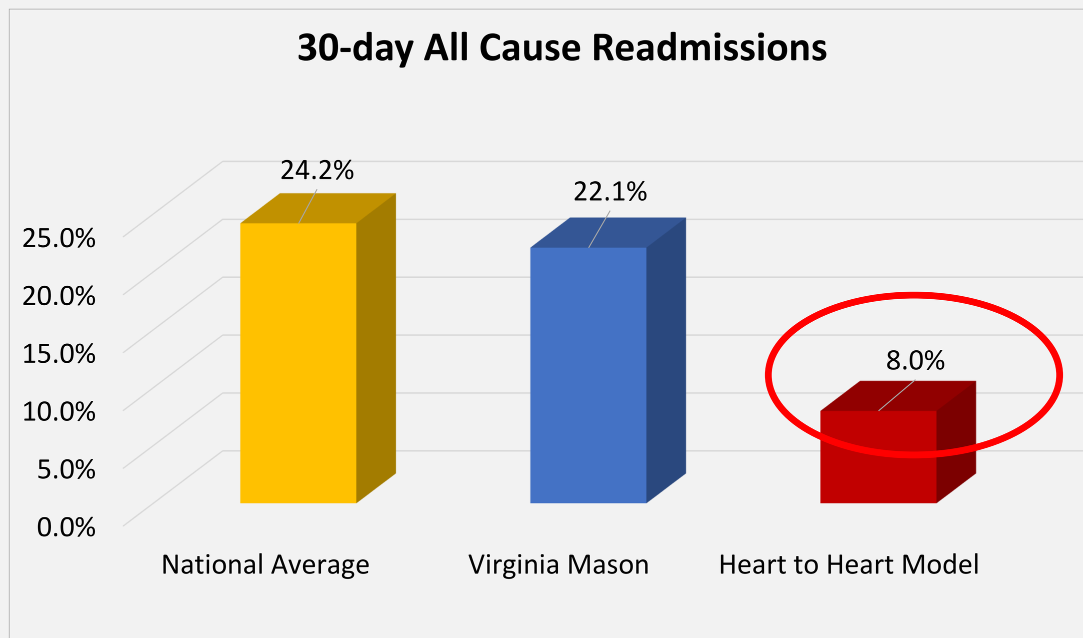
Average Distance from Kelley-Ross to Patient Home	11.5 Miles (Std Dev ± 8.96)
Average Time to Patient contact from Referral	1.23 Days (Std Dev ± 1.58)
Time to home visit from referral	11.3 Days (Std Dev ± 7.3)
Average length of service with patient	85.4 Days (Std Dev ± 32.3)
Average Number of Home Visits per patient	2.34 (Std Dev ± 0.84)

Satisfaction



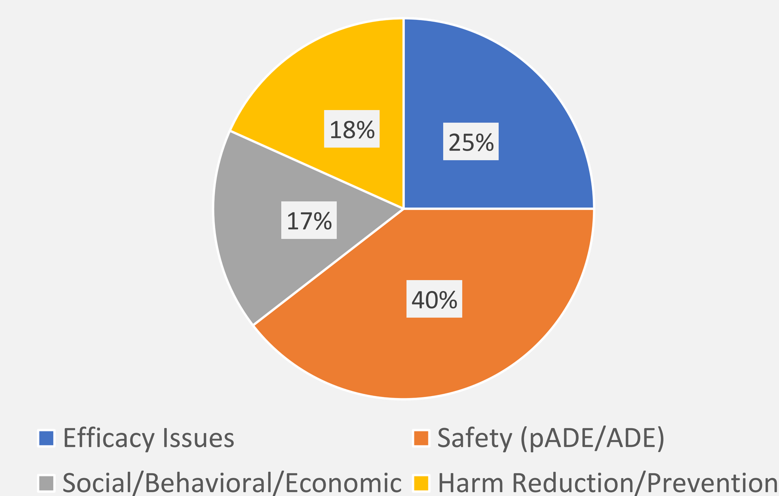


Outcomes

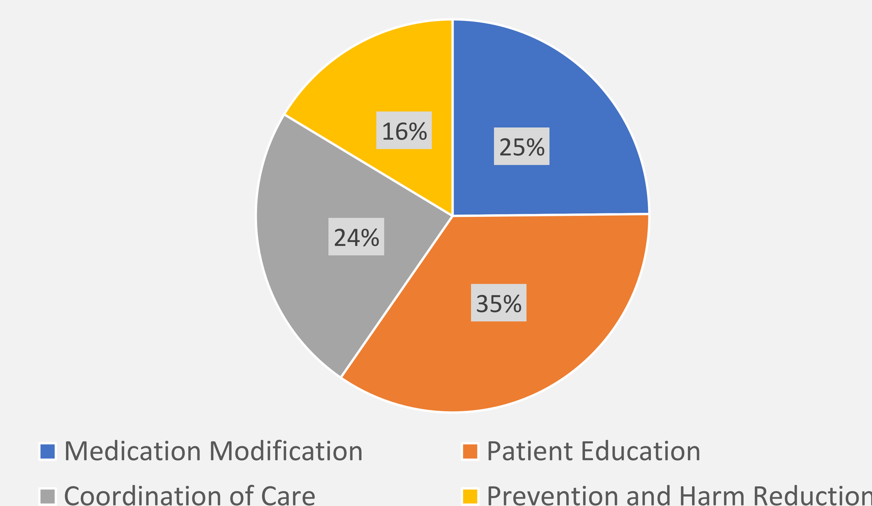


Interventions

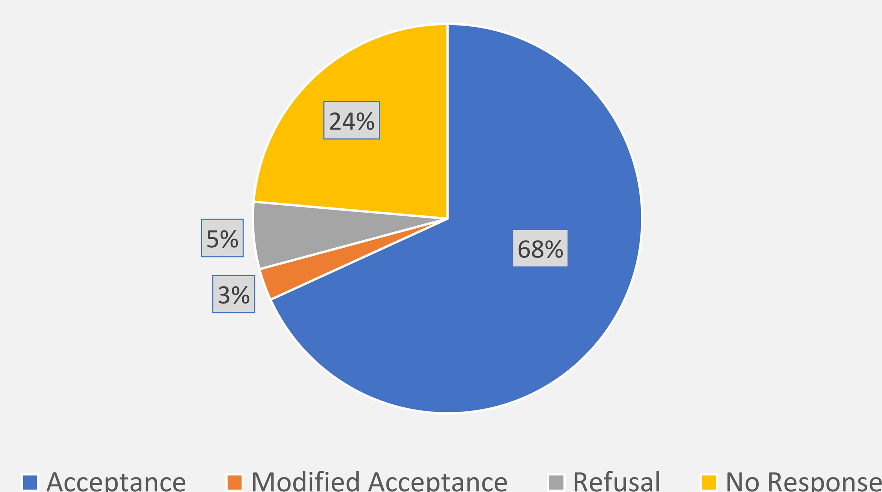
Breakdown of Medication/Therapy Related Problems



General Types of Interventions Provided



Acceptance of Interventions



IMPLICATIONS

Quadruple Aim

- **Better Care:** High patient satisfaction and positive patient experience. 100% of survey respondents would recommend this service to others (n = 22)
- **Healthy People:** Demonstrated improvement in patient outcomes and health
- **Provider Work Life:** High satisfaction for providers that improves their efficiency and experience working in healthcare
- **Lower Cost:** Cost analysis of the service reveals that total cost of care may be reduced, thus resulting in savings to insurers, employers, families, and individuals.

Item	Traditional Care	H2H Model
Cost of Hospital Readmission per patient[3]	$16,909	$16,909
Cost of H2H program per patient	n/a	$1,250
Number of readmissions	11 (Estimate based on 22% readmission rate)	4
Estimated cost for 50 patients	$185,999	$130,136
Total Savings		$55,863
Savings per Patient		$1,117.26

Challenges

- Identification of patient candidates during initial hospitalization continues to be the largest barrier to implementation of this system
- Scheduling patients post-discharge more difficult due to patient unavailability

Next Steps

- This program is now expanding to include patients moving from hospital to SNF to home
- Review payment models to continue to support this work, i.e. bundled payments, HRRP, pharmacist credentialing

Let's go...
Beyond The Poster.

kelley-ross.com/h2h

References

1. Get With the Guidelines HF (GWTG-HF) registry. 2010. The Advisory Board Company – 20332B https://www.heart.org/HEARTORG/Professional/GetWithTheGuidelines/GetWithTheGuidelines-HF/Get-With-The-Guidelines-Heart-Failure-Home-Page_UCM_306087_SubHomePage.jsp
2. Feltner C, et al. Transitional Care Interventions To Prevent Readmissions for People With Heart Failure. Comparative Effectiveness Review No. 133. (Prepared by the Research Triangle Institute–University of North Carolina Evidence-based Practice Center under Contract No. 290-2012-00008-I). AHRQ Publication No. 14-EHC021-EF. Rockville, MD: Agency for Healthcare Research and Quality; May 2014. www.effectivehealthcare.ahrq.gov/reports/final.cfm
3. Medicare Spending at Individual Hospitals. Kaiser Health News analysis of CMS data. May 9, 2012, http://khn.org/news/medicare-efficiency-by-hospital-chart/