

Providence St. Joseph Health

## Providence St. Joseph Health Digital Commons

---

Articles, Abstracts, and Reports

---

4-4-2019

### **Abstract 103: Clinical Process and Outcome Improvements Based on Within Site Communication: Insights from the Patient Navigator Acute Myocardial Infarction and Heart Failure Program**

Nancy M. Albert

Tyler J Gluckman

*Providence Heart and Vascular Institute, Portland, OR, USA.*

Robert McNamara

Gregg C. Fonarow

Adnan Malik

*See next page for additional authors*

Follow this and additional works at: <https://digitalcommons.psjhealth.org/publications>



Part of the [Cardiology Commons](#)

---

#### **Recommended Citation**

Albert, Nancy M.; Gluckman, Tyler J; McNamara, Robert; Fonarow, Gregg C.; Malik, Adnan; Brindis, Ralph G.; Lu, Di; Negi, Smita; Rogers, Susan; and Mobayed, Julie, "Abstract 103: Clinical Process and Outcome Improvements Based on Within Site Communication: Insights from the Patient Navigator Acute Myocardial Infarction and Heart Failure Program" (2019). *Articles, Abstracts, and Reports*. 3471. <https://digitalcommons.psjhealth.org/publications/3471>

This Abstract is brought to you for free and open access by Providence St. Joseph Health Digital Commons. It has been accepted for inclusion in Articles, Abstracts, and Reports by an authorized administrator of Providence St. Joseph Health Digital Commons. For more information, please contact [digitalcommons@providence.org](mailto:digitalcommons@providence.org).

---

**Authors**

Nancy M. Albert, Tyler J Gluckman, Robert McNamara, Gregg C. Fonarow, Adnan Malik, Ralph G. Brindis, Di Lu, Smita Negi, Susan Rogers, and Julie Mobayed

Nancy M. Albert PhD, RN, FAHA, FAAN<sup>a</sup>; Ty J. Gluckman MD, FACC, FAHA<sup>b</sup>; Robert L. McNamara MD, MHS, FACC, FAHA, FASE,<sup>c</sup>; Gregg C. Fonarow MD FACC<sup>d</sup>; Adnan Malik MD, FACC<sup>e</sup>; Ralph G. Brindis MD, MPH, MACC, FAHA<sup>f</sup>; Di Lu, MS<sup>g</sup>; Smita Negi, MD<sup>h</sup>; Susan Rogers MSN, RN, NE-BC, AACC<sup>i</sup>; Julie Mobayed, MPH, BSN, RN<sup>i</sup>

<sup>a</sup>Nursing Institute and George M. and Linda H. Kaufman Center for Heart Failure, Cleveland Clinic Foundation, Cleveland OH; <sup>b</sup>Providence Heart and Vascular Institute, Portland, OR; <sup>c</sup>Yale University School of Medicine, New Haven, CT; <sup>d</sup>Ahmanson-UCLA Cardiomyopathy Center, Ronald Reagan-UCLA Medical Center, Los Angeles, CA; <sup>e</sup>Medical Director, Heart Failure Services WellSpan Health, York PA; <sup>f</sup>Department of Medicine & the Philip R. Lee Institute for Health Policy Studies University of California, San Francisco; <sup>g</sup>Duke Clinical Research Institute, Durham, NC; <sup>h</sup>University Hospital and Clinics, Louisiana State University, Lafayette; <sup>i</sup>American College of Cardiology, Washington D.C.

## INTRODUCTION

- Acute myocardial infarction (AMI) and heart failure (HF) are prevalent conditions with substantial in-hospital and post-discharge morbidity and mortality
- In 2014, the American College of Cardiology (ACC) launched the **Patient Navigator Program (PNP)** to assist 35 acute care hospitals in the implementation of transition-care strategies aimed at improving in-hospital and post-discharge outcomes for AMI and HF
  - The program required hospitals to develop AMI and HF improvement goals based on facility-specific baseline measure results
  - The program facilitators at the ACC provided PNP support structures, processes and services to enhance hospital success
- Of hospitals, we previously reported variation in care delivery and in 30-day re-hospitalization rates; however, it is unknown if hospital-based communication methods and the number of methods used per site were associated with program outcomes (30-day rehospitalization and in-hospital risk adjusted AMI death) and AMI and HF process metrics.

**Purpose:** To prospectively examine if 2-year outcome and process metrics were based on hospital site communication methods and number of methods used to support program implementation.

## METHODS

### Design

- The ACC PNP engaged 35 acute care hospitals in setting goals and implementing strategies aimed at improving structures, processes, and outcomes of transition-care for a 2-year period
  - Outcome and process metrics were prospectively collected 24 months after program implementation
- After 2 years, sites prospectively completed surveys on 5 communication services.

### Communication Interventions (dichotomous survey responses; Yes vs No)

- 5 site-specific communication methods were assessed that were aimed at facilitating communication among different transition care team members, clinical unit personnel and leaders:
  - Sharing quality improvement/transition care meeting minutes
  - Regular team meetings
  - Regular conference calls
  - Use of shared checklist(s)
  - Use of the electronic medical record (EMR)
- Communication interventions used; number, by site

### Outcomes and Data Collection:

- All outcome and process performance metrics had standard inclusion and exclusion criteria.
  - Some data were derived from the Chest Pain - MI Registry.
- Sites provided data for HF measures via medical record review.

## METHODS

- Each hospital site had designated personnel responsible for submitting data to a Chest Pain - MI Registry web-based data collection tool.
- Each hospital provided a minimum of 60 patient-cases per quarter, 30 AMI and 30 HF.
- Baseline data were collected between July 2013 and August 2014, based on when hospitals entered the program.
- 24-month data were collected between October 2016 and March 2017, based on when hospitals completed 2-years of program participation.
- At each hospital, the site coordinator completed a survey in 2017.
- Specific Outcomes — Change at Year 2, Compared to Baseline in:**
  - Outcome Performance Metrics**
    - 30 day unadjusted readmission for AMI
    - 30 day unadjusted readmission for HF
    - Risk-adjusted in-hospital death, AMI
  - Process Performance Metrics**
    - Left-ventricular systolic dysfunction (LVSD) evaluation
    - HF patients identified prior to discharge
    - Beta-blocker for patients with LVSD
    - Angiotensin-converting enzyme inhibitor/angiotensin-receptor blocker (ACEi/ARB) for patients with LVSD
    - Medication reconciliation documentation on admission, for AMI and HF patients
    - Medication reconciliation documentation at discharge, for AMI and HF patients
    - Medication reconciliation documentation on admission and at discharge, for AMI and HF patients
    - Follow-up appointment scheduled in 7 days of discharge, HF patients
    - Self-care education provided to AMI and HF patients
    - Documentation on all prescribed medications
    - ST elevated myocardial infarction (STEMI) performance composite
    - NSTEMI (non STEMI) performance composite
    - Overall defect-free care, AMI
    - Risk-adjusted in-hospital death, AMI
    - Cardiac rehabilitation patient referral, AMI

### Statistical Analysis

- To examine the associations between use/nonuse of the communication themes and the change in 30-day unadjusted AMI and HF rehospitalization, in-hospital risk adjusted AMI death and 14 AMI-HF process metrics from baseline to 2-years, Fisher's exact test was conducted.
- All tests were 2-sided, and  $p < 0.05$  was used to determine statistical significance.
- All analyses were performed using SAS version 9.4 (SAS Institute Inc.; Cary, NC).

## RESULTS

### One-on-one quality improvement/transition care meeting minutes shared

- At year 2 assessment, compared to baseline, there was a trend toward delivery of more AMI and HF patient education on treatment regimen (self-care plan) and when to call the health care provider; yes, 100% versus no, 66.7%,  $p=0.08$ .

### Regular team meetings with physicians

- There were no differences in any process or outcome metrics at 2-year assessment, compared with baseline

### Regular conference calls with leaders

- There were no differences in any process or outcome metrics at 2-year assessment, compared with baseline

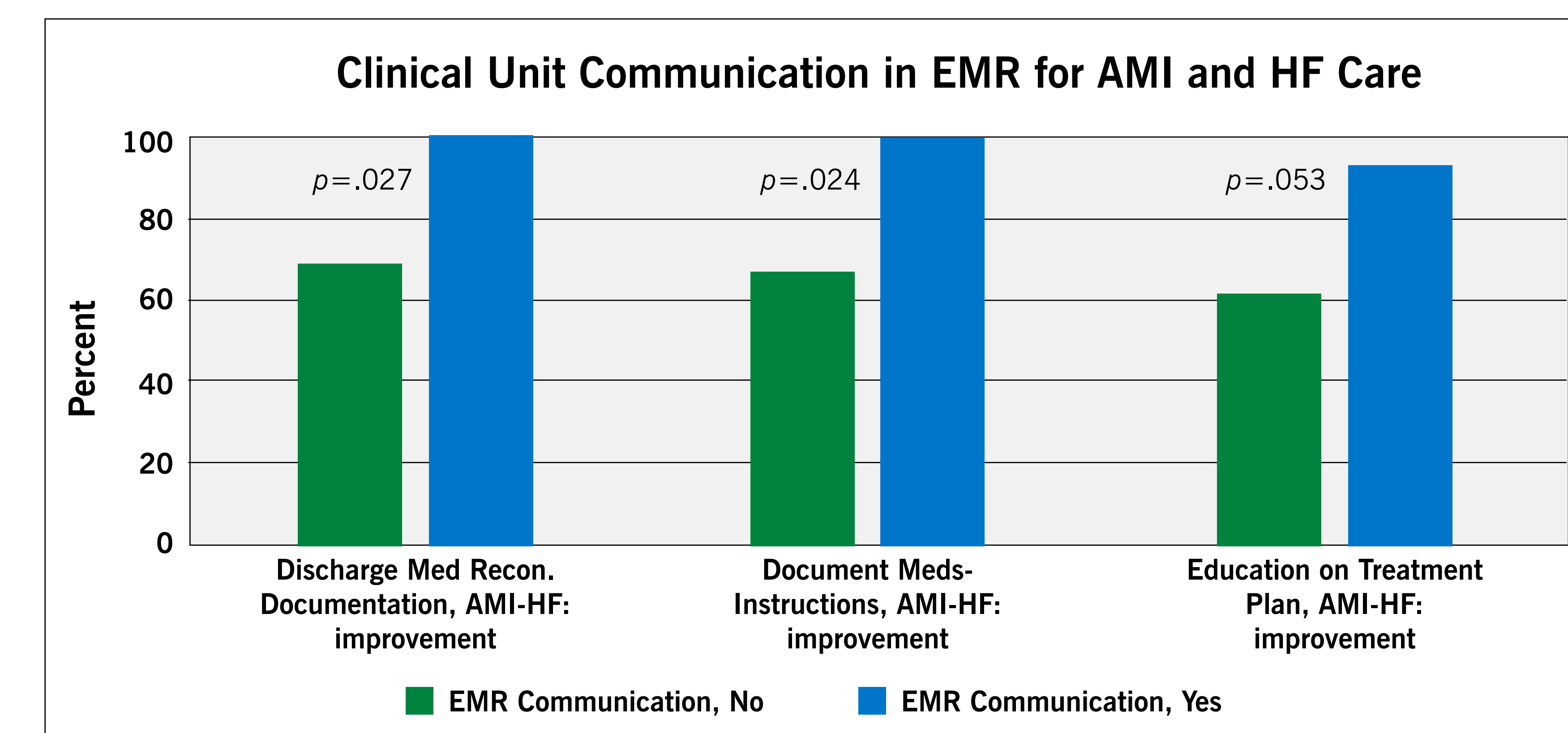
### Use of shared checklists

- There were no differences in any process or outcome metrics at 2-year assessment, compared with baseline

### Use of the electronic medical record (EMR)

- At year 2 assessment, compared to baseline, EMR-directed communication was associated with:
  - A greater likelihood of discharge medication reconciliation
  - A greater likelihood of prescribed medication documentation
  - A trend toward greater documentation of prescribed medication instructions, when and how they should be taken and about changes in medications; **Figure 1**

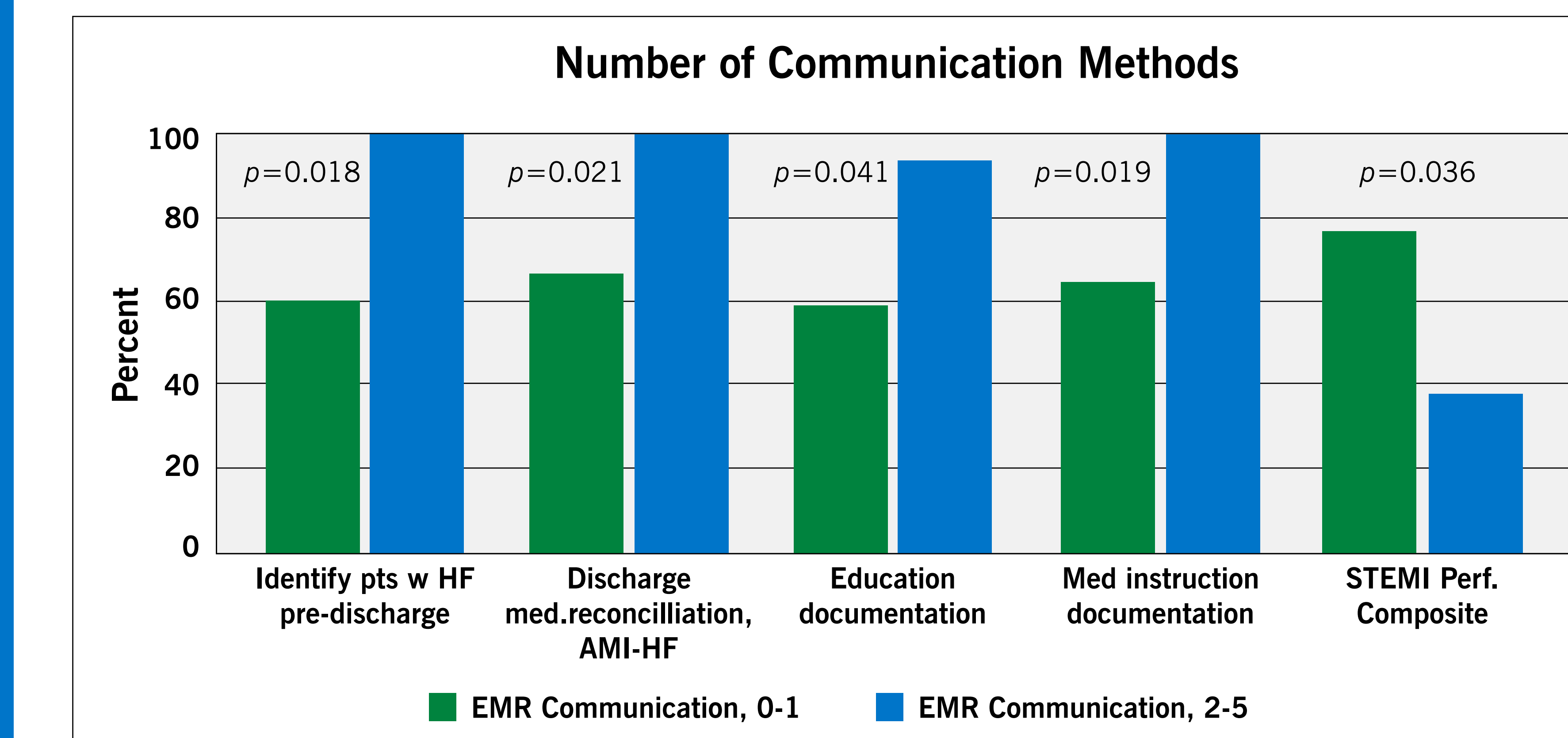
Figure 1



### Number of Communication Techniques

- Sites that used 2-5 vs 0-1 communication types were:
  - More likely to identify patients with HF pre-discharge
  - More likely to perform discharge medication reconciliation
  - More likely to complete education documentation
  - More likely to complete medication instruction documentation
  - Less likely to improve STEMI performance composite scores; See **Figure 2**

Figure 2



### Limitations

- The Patient Navigator Program was not a randomized clinical trial
- Reported data represent observational process/outcome metrics and site-coordinator perceptions to survey questions
  - Relationships are confounded by measured and unmeasured variables.
- Because there were not concurrent control hospitals, secular trends could account for some or all of the findings.
- Our findings reflect performance at only 35 hospitals that voluntarily participated in the Chest Pain - MI Registry and received funding to participate.
  - Findings should be interpreted cautiously since other hospitals might not be able to implement or maintain a similar program.

## CONCLUSIONS

- In a geographically diverse cohort of 35 hospitals treating patients with AMI and HF,
  - Communication methods may not have been adapted at the rate expected for a quality improvement transition care initiative steeped in team collaboration.
  - Use of 2-5 methods of communication (versus 0-1) by Patient Navigator program hospital teams was associated with greater likelihood of process performance metrics with higher completion rates; except for STEMI performance composite. More communication methods may reflect a need for improvements—with the hope that better team communication would lead to improvements.
- Process and outcome metrics that were unchanged may have been underpowered to detect differences.
- Many performance metrics of interest, especially outcome metrics, did not change from baseline based on communication methods or number of communications methods used. More research is needed to discern factors associated with transition care team communication.

**Funding:** The Patient Navigator Program was funded by a non-restrictive grant to the American College of Cardiology (Washington D.C.) by Astra-Zeneca.