Accelerator 2 SUSTAIN: a U.S. Regional Systems of Care Demonstration Project for Post-discharge STEMI patients: Preliminary Data, Methods and Design

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BACKGROUND

- Poor medication adherence is common among MI patients and it is associated with higher mortality rates
- STEMI guidelines include post-discharge systems of care as IA-IB recommendations
- The ACC has sponsored several initiatives such as the ACC patient navigator and ACC hospital to home (H2H) program to augment post-discharge care
- Little is known about the optimal approach to link current discharge practices to post-discharge systems of care in U.S. STEMI patients

SUSTAIN OBJECTIVE & DESIGN

- Primary Objective: To evaluate the efficacy of a pragmatic quality improvement (QI) initiative aimed at optimizing post-discharge care for STEMI patients
- SUSTAIN is a proactive, multi-center, QI initiative
- Unit of analysis: hospital
- 19 active hospitals participating, spanning 11 states in the United States
- QI processes will be deployed using the DMAIC methodology (Define, Measure, Analyze, Implement and Control)

Co-Primary Endpoints
1) Composite of 30 day hospital readmission or death
2) Improvement in persistence and adherence to P2Y12 medication over 12 month follow up

SUSTAIN POPULATION and FOLLOW UP

- Study Population:
  - Inclusion Criteria: ≥ 18 years & STEMI treated with stenting & planned discharge home with patient responsibility for adherence
  - Exclusion Criteria: absence of telephone access or primary language other than English or Spanish or discharge to rehabilitation or skilled nursing facility or severe dementia and/or hospice care
  - Study Follow Up Period: 12 months

SUSTAIN INTERVENTION

- Patients: provided access to Duke Pillbox, a patient centered, skill-based medication management tool
- Hospitals: providers given access to a web-based educational system that allows participating providers to assess information on evidence-based care, create personalized action plans and tracks individual and site-level quality metrics for STEMI care
- System of Care: direct engagement by the steering committee to provide intense feedback on QI efforts, care processes and patient outcomes

Figure 1: Sample Screen of Duke Pillbox App

Duke Pill box is a patient-centered interactive learning tool to empower patients to better identify and organize pills in a systematic manner

CONCLUSIONS

- The innovative design aims to overcome health literacy barriers
- The App captures and manages data from patient interactions in a continuous, reportable feedback loop to optimize patient knowledge and medication adherence

LIMITATIONS

- Co-intervention during the period of the study may impact effect estimates
- Observational methodology will likely lead to unmeasured confounders

DISCLOSURES

First Author: Ajar Kochar, None. Lead Author Bradi Granger, honoraria from AstraZeneca, BMSF, Daiichi Sankyo, Novartis, and Sanofi. Furthermore, has consulted or received research contracts with AstraZeneca, Novartis, BMSF and Sanofi. Authors have completed or received instructional courseware from Advarra, Biogen, Express Scripts, and S computer.

PRELIMINARY DATA

Table 1: A survey on STEMI post-discharge practices among 58 hospitals across 12 regions in the U.S. as part of the STEMI Accelerator 2 program

<table>
<thead>
<tr>
<th>Questions</th>
<th>Frequency (%) Responding Yes</th>
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<tbody>
<tr>
<td>Do you identify patients at high risk for readmission prior to discharge?</td>
<td>55%</td>
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<tr>
<td>Do you have a discharge process with a health care professional interaction that includes review and reconciliation of medications and patient teaching</td>
<td>73%</td>
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<td>Do you provide patients with a one month supply of a platelet inhibitor (clopidogrel, prasugrel, or ticagrelor) for patients discharged on these medications?</td>
<td>42%</td>
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<tr>
<td>Do you provide a scheduled follow up call within 2 days of discharge to assess medical stability and compliance?</td>
<td>42%</td>
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<tr>
<td>Do you employ the “teach-back” repeat demonstration process to describe disease and self-management skills</td>
<td>69%</td>
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<tr>
<td>Do you provide a follow-up appointment scheduled within 7 days of discharge?</td>
<td>96%</td>
</tr>
<tr>
<td>Do you have a dedicated outpatient clinic to which patients discharge with an MI are referred in the event of acute symptom onset</td>
<td>20%</td>
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