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B. High-Performing Clinical Systems and Microsystems Approaches to Improvement
C. Evidence-Based Quality Improvement and Best Practice
D. Learning Organizations and Culture of Quality and Safety


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Wrestling Readmissions to the Mat: Evidence and Efforts

Part 3: What Works in Readmission Reduction: How Hospitals Have Improved Performance

Presented by: Improvement Science Research Network
Co-sponsored by: BHP & Readmission Collaborative

Amanda Brewster
November 18, 2015
Readmissions

- Almost 16% of Medicare patients are readmitted within 30 days (all-cause).
- Costly for system, patients
- CMS penalties: 3% of Medicare reimbursements in 2015.
- HF, AMI, pneumonia, knee/hip replacement, COPD
- In 2015, 77% of eligible hospitals will receive some penalty

Risk-Standardized Readmission Rate

- RSRR
- Based on Medicare claims data; excludes elective admissions for staged procedures.
- Adjusts for:
  - Age
  - Sex
  - Comorbidities

How to reduce readmissions?

- Some complex interventions work in trials.
- Little evidence on which program elements consistently reduce readmissions because most trials test bundles (Hansen, 2011).

Poll Question 1

POLL Question #1

Some hospitals have reduced readmissions: how did they do it?

Prospective survey
- Large sample (478 hospitals)
- Statistical relationship between:
  - Take up of strategies
  - Change in RSRR

Qualitative study
- Small sample (10 hospitals)
- Understand process and context of strategy change at hospitals where RSRR decreased or increased.
### Participating collaboratives

**H2H**

**Recommended approaches:**
1. Post-hospital follow-up
2. Medication Management
3. Patient education
4. Real time handover communications

**Participating collaboratives**

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### Methods

- At two time points, hospitals reported whether they performed various practices recommended for readmissions reduction.

- At same time points, we used Medicare data to calculate RSRR for each hospital.
  - Heart failure – used as indicator condition

### Methods (cont)

- **2010-2011**
  - n=500
  - 91.0% response rate
- **2011-2012**
  - n=501
  - 83.6% response rate

### Analysis

- Weighted linear regression to estimate associations between:
  - Take-up of individual strategies and changes in RSRR
  - Number of strategies taken up and changes in RSRR

- Adjusted for:
  - Hospital characteristics (region, size, teaching status, urban location, ownership, multihospital affiliation)
  - Participation in STAAR vs H2H

### Question 2

**POLL Question #2**

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### Uptake of strategies

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### Reduction in RSRR?

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**9 strategies examined**

<table>
<thead>
<tr>
<th>Strategy Description</th>
<th>2010-2011</th>
<th>2011-2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Partnering with other hospitals in the local area to reduce readmissions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tracking % of patients discharged with a follow-up appointment already scheduled within 7 days</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tracking % of patients transferred to another hospital</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Extending monitoring of patients during hospitalization</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electronic medication reconciliation forms in place at time of discharge</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Using teach-back techniques for patient education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Providing patients with heart failure action plans for managing changes</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Regularly calling patients after discharge to follow up on post-discharge needs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discharging patients with a follow-up appointment already scheduled</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Results

- Uptake of only one strategy was associated with RSRR reduction.
  - Discharging patients with follow-up appointment scheduled.
- Hospitals that took up any 3 or more strategies had significantly greater reductions in RSRR compared with hospitals that took up only 0-2 strategies.
  - 93 different combinations of strategies

Number of strategies and reduction in readmission rates

Implications

- Not one size fits all.
- Improvement seems to require a critical mass of changes, tailored to local circumstances.
- But maybe the organizational context in which strategies are implemented matters too?

Organizational context

- How strategies are implemented, culture, background
- Known to affect other hospital outcomes
  - AMI (Curry 2011, Bradley 2012)
  - Surgical outcomes (Gittell 2000, Young 1997)
  - Patient satisfaction (Meterko 2004)
- Influence on readmissions reduction unknown

Qualitative study

Poll Question 3

POLL Question #3
Objectives

Examine hospitals where RSRR performance notably improved or worsened.

Understand how high performing hospitals improved

Changes to clinical practice

Changes to organizational context

Qualitative research

Systematic collection, organization, interpretation of textual information

Uses inductive approaches to generate novel insights into phenomena that are difficult to measure quantitatively

Good for:

- Understanding complex processes
- Explaining quantitative findings
- Learning about nuance of interpersonal relationships, culture

Sample

- Hospitals that participated in STAAR initiative
  - MA, MI, WA
  - Ran from 2009-2013
- Hospitals where RSRR had improved or worsened
- Heart failure – indicator condition
  - >1 percentage point increase or decrease in RSRR

Data collection

10 hospital site visits (April - October 2014)
  - 7 where RSRR improved (mean 4.2 % points)
  - 3 where RSRR worsened (mean 12.0 % points)

2-3 experienced qualitative interviewers on each site visit
  - Semi-structured interview guide with probes
  - What did hospital do to try to reduce readmissions during study period?

Site visits until theoretical saturation
  - No new information emerging from additional sites

<table>
<thead>
<tr>
<th>Hospital ID</th>
<th>Performance Change</th>
<th>No. of Beds</th>
<th>Teaching Status</th>
<th>No. of Interviewees</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Improved 200-300</td>
<td>Non-teaching</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Improved 500+</td>
<td>Teaching</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Improved 200-300</td>
<td>Teaching</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Deteriorated 100-200</td>
<td>Teaching</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Deteriorated 500+</td>
<td>Non-teaching</td>
<td>9</td>
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<tr>
<td>6</td>
<td>Improved 100-200</td>
<td>Non-teaching</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Improved 100-200</td>
<td>Non-teaching</td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Improved 100-200</td>
<td>Non-teaching</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Deteriorated 300-400</td>
<td>Non-teaching</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Improved 100-200</td>
<td>Non-teaching</td>
<td>8</td>
<td></td>
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</table>

Interviewees

<table>
<thead>
<tr>
<th>Administration</th>
<th>Physicians</th>
<th>16</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analyst</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Director / Manager</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>President / Vice President / CMO/ CNO</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Leaders of Partner Organizations (SNFs, physician organizations, Health iNO)</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Physicians</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>Emergency Medicine</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Geriatrics</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Hospital Medicine</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Palliative Care</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Primary Care</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Nursing</td>
<td>12</td>
<td></td>
</tr>
<tr>
<td>Analyst</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Director / Manager</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Middle</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>Director / Manager</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>82</td>
<td></td>
</tr>
</tbody>
</table>
Analysis
- Constant comparative method
- Strategies employed by each hospital
  - 18 strategy codes x 10 hospitals
  - Strategies = what staff reported doing to reduce readmissions
- Compared high / low performing hospitals
- Representative quotes to illustrate themes

Results
- High and low performing groups both used recommended clinical practices.
- High performers targeted organization too.
- Four specific approaches distinguished high performers
  - Collaboration across departments / disciplines
  - Working with post-hospital providers
  - Learning and problem solving
  - Senior leadership support

Poll Question 4
POLL Question #4

In-hospital clinical practices

<table>
<thead>
<tr>
<th>In-hospital clinical practices</th>
<th>RSRR improved</th>
<th>RSRR deteriorated</th>
</tr>
</thead>
<tbody>
<tr>
<td>Follow-up appointments at discharge</td>
<td>6 / 7</td>
<td>4 / 3</td>
</tr>
<tr>
<td>Medication management</td>
<td>5 / 7</td>
<td>2 / 3</td>
</tr>
<tr>
<td>Phone call after discharge</td>
<td>6 / 7</td>
<td>2 / 3</td>
</tr>
<tr>
<td>Risk of readmission / using in care</td>
<td>4 / 7</td>
<td>2 / 3</td>
</tr>
<tr>
<td>Patient education / teach-back</td>
<td>6 / 7</td>
<td>3 / 3</td>
</tr>
</tbody>
</table>

1. Collaboration across departments / disciplines

High Performing Hospitals
- Extensive efforts to span disciplinary / departmental boundaries.
- Dedication to effective multidisciplinary rounds.

Low Performing Hospitals
- Barriers to communication within hospital.
- Crossing departments - challenge to readmissions reduction.

(We have) daily multi-disciplinary rounds in the inpatient units, where we’re really working hard to do careful coordinated discharge planning...absolutely every day. They are attended by doctors, and nurses, and case managers, and social workers, and pharmacists, and physical therapists, and respiratory therapists, and occupational therapists.

-- Physician, Hospital 3
2. Working with post-hospital providers

High Performing Hospitals
- Systematic, in-depth collaboration with post-hospital providers.
- Hospitals shared data and expertise.

Low Performing Hospitals
- Relationships less well developed.

43 When I think about the depth of our work together, it was a remarkable process. We got to know nurses here in the hospital. We listened to each other’s perspectives…

-- SNF Administrator, Hospital 6

3. Learning and problem solving

High Performing Hospitals
- Extensive application of learning and QI techniques.
- Treated obstacles and failures as normal part of improvement.

Low Performing Hospitals
- Did not emphasize learning and problem solving.
- Some structural impediments.

45 [We use an] iterative process – if it’s not working, why is it not working? Then what are you doing differently the following time to try something different? It’s not just stopping and saying, okay, our hands are up here. It’s always going back.

-- Administrator, Hospital 7

4. Senior leadership support

High Performing Hospitals
- Concerned with readmissions to improve patient care.
- Directed additional resources to readmissions reduction.

Low Performing Hospitals
- Commitment from senior leaders not emphasized by interviewees.
- Responding to fines, pressure from umbrella systems.

47 Limitations
- Fewer interviewees at hospitals with declining performance.
- Could only analyze readmissions reduction strategies that interviewees discussed.

48
Four specific strategies distinguished high performers:

1. Collaboration across departments/ disciplines
2. Working with post-hospital providers
3. Learning and problem solving
4. Senior leadership support

More support for idea that a single set of clinical practices will not work everywhere.

Learning / problem solving techniques help tailor selection and application of strategies to local needs.

Summary: qualitative findings

What works?

Prospective survey

- Adding specific strategies generally not associated with improvement.
- Adding critical mass of strategies (3+) was.
- Perhaps needed mix depends on context.

Qualitative study

- Clinical practice changes may be necessary but not sufficient.
- Investment in figuring out what works for particular setting.
- Engaging broad cross-section of hospital & post-hospital partners.

References


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