NoCVA Preventing Avoidable Readmissions Collaborative

Pre-work: Assessing Risk

April 21, 2014
• Context
• Collaborative Overview
• Setting up to succeed
• Why assess risk of readmission
• Methods to assess risk of readmission
• Next steps
Readmissions

- Hospitalizations = 1/3 of the $2 trillion spent on health care
- 20% of US hospitalizations are readmissions within 30 days of discharge
- Up to 76% of those are avoidable
- Partnership for Patients goal to reduce readmissions 20%
Mission

To improve transitions in care and reduce avoidable hospital readmissions.
Goals: Reduce readmission rates by 20% from 2010 baseline

Readmissions: 1-30 days (NoCVA)

<table>
<thead>
<tr>
<th>% Readmissions (All Cause, All Payer)</th>
<th>Jan-10</th>
<th>Apr-10</th>
<th>Jul-10</th>
<th>Oct-10</th>
<th>Jan-11</th>
<th>Apr-11</th>
<th>Jul-11</th>
<th>Oct-11</th>
<th>Jan-12</th>
<th>Apr-12</th>
<th>Jul-12</th>
<th>Oct-12</th>
<th>Jan-13</th>
<th>Apr-13</th>
</tr>
</thead>
<tbody>
<tr>
<td>Measure</td>
<td>10.3%</td>
<td>10.5%</td>
<td>10.2%</td>
<td>10.2%</td>
<td>10.5%</td>
<td>10.4%</td>
<td>10.2%</td>
<td>10.4%</td>
<td>10.2%</td>
<td>10.0%</td>
<td>9.8%</td>
<td>9.9%</td>
<td>10.1%</td>
<td>10.0%</td>
</tr>
<tr>
<td>PforP Goal</td>
<td>8.3%</td>
<td>8.3%</td>
<td>8.3%</td>
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</tr>
<tr>
<td># Hospitals</td>
<td>104</td>
<td>104</td>
<td>104</td>
<td>104</td>
<td>104</td>
<td>104</td>
<td>104</td>
<td>104</td>
<td>104</td>
<td>104</td>
<td>104</td>
<td>104</td>
<td>102</td>
<td>103</td>
</tr>
</tbody>
</table>
Reduction in Readmission Rates is a national ‘race to the top’
Even a small reduction means big impact!

- 3% change in readmit rates
  - Estimated avoidance of 3,435 readmissions annually
  - Estimated savings: $33 million dollars
Goals

• Increase the number of patients in the pilot unit or population who undergo assessment for risk of readmission to 95%.

• Increase number of patients in the pilot unit or population who are assessed to be at high risk of readmission who are scheduled for a follow-up physician visit within 7 days of discharge from hospital to 95%.

• Increase the number of patients in the pilot unit or population who are assessed to be at high risk of readmission who receive a follow-up visit or telephone call to 95%.

• Test and implement process improvements in four key areas: enhanced assessment of post-hospital needs, effective teaching/enhanced learning, ensuring post-hospital care follow-up and providing real-time handover communications.

• 10% improvement or national 25th percentile in scores on four HCAHPS dimensions
Methods

• Pilot Unit / Spread to other units
• Multidisciplinary tiered project team
• Assessment of 5 recent readmissions
• Observations
• Process maps
• Risk assessment
• Follow up appointments and follow up calls or visits
Methods

• Test improvement in 4 key areas:
  – Enhanced assessment of patient post-hospital needs
  – Effective teaching and enhanced patient learning
  – Ensuring post-hospital care follow-up
  – Providing real-time handover communications

• Implement and spread improvements
• Community engagement readiness assessment
• Community cross continuum team
Pilot Unit

• Have you chosen a pilot unit or population/unit or population for spread?

  Yes
  No

If yes, type in which unit or population
Project Team

- What roles are represented on your project team?
Why assess risk of readmission?

- Limited resources, time and financial, available for care transitions interventions
- Reduce readmissions to improve population health, care experience, and costs (Triple Aim)
Poll / chat

Does your hospital use a tool to assess risk of readmission?

a. Yes, hospital-wide
b. On some units
c. No
What types of factors does your readmission risk assessment consider?

- a. Clinical factors only
- b. Psychosocial factors only
- c. Both clinical and psychosocial factors
- d. Clinical, psychosocial and utilization factors
- e. N/A (no readmission risk assessment)
Please chat in some of the predictors (clinical, psychosocial, or both) considered in your hospital’s readmission risk assessment.
Multiple, complicated risk factors

- “inconsistencies regarding which characteristics are most predictive” – STAAR How-to Guide, IHI
- “Efforts are needed to improve the ability to identify the likelihood of readmission…” – RED Toolkit, AHRQ

Diagnosis and Comorbidities
- Post-hospital Care Access
- Patient Activation
- Psychosocial Support
- High Utilization: >3 hospitalizations


## High Impact Target Population

<table>
<thead>
<tr>
<th>Metric</th>
<th>Virginia</th>
<th>North Carolina</th>
</tr>
</thead>
<tbody>
<tr>
<td># (%) of patients with ≥3 hospitalizations</td>
<td>23,682 (13%)</td>
<td>27,765 (12%)</td>
</tr>
<tr>
<td># (%) of hospitalizations used by H.U.</td>
<td>61,060 (22%)</td>
<td>108,814 (30%)</td>
</tr>
<tr>
<td># of readmissions among H.U.</td>
<td>36,998</td>
<td>42,204</td>
</tr>
<tr>
<td>% of readmissions that occur in H.U.</td>
<td>71%</td>
<td>68%</td>
</tr>
<tr>
<td>Readmission rate among H.U.</td>
<td>40%</td>
<td>39%</td>
</tr>
</tbody>
</table>

Amy Boutwell, 3/27/14 webinar, based on Medicare Data from QIOs
Characteristics of “good” readmission risk assessments

- Good predictive ability
  - Considers relevant predictors related to both clinical and psychosocial factors of readmission
- Easily interpreted results
  - Stratification of risk groups
  - Targeted interventions
- Time-manageable
- Cost-manageable
Stratification of outcomes

- Each tool analyzes differently
  - Some have two strata, high-risk or not
  - Some use stoplight, three-strata system using “scores”
- Beneficial to identify high-risk patients
  - Include in intensive programs i.e. home visits
How have these been measured?

- Readmission <30-Days
- Post-hospital Care Access
- Diagnosis and Comorbidities
- Patient Activation
- Psychosocial Support
- High Utilization
Variables considered

- Specific medical diagnosis or comorbidity index
- Mental health comorbidities
  - Mental illness
  - Alcohol or substance abuse
- Illness severity
  - Severity index (acuity of admission)
  - Lab results
- Prior use of medical services
  - Hospitalizations (non-elective) or ED visits
  - Clinic visits or missed clinic visits

Variables considered (cont.)

- Overall functional status
  - Functional status, ADL dependence, and mobility
  - Cognitive impairment
  - Visual or hearing impairment
  - Self-rated health or quality of life
- Sociodemographic factors
  - Age
  - Sex
  - Race/ethnicity

Variables considered (cont.)

- Social determinants of health
  - SES, income, and employment status
  - Insurance status
  - Education
  - Marital status or number of people in home
  - Caregiver ability/other social support
  - Access to care
  - Discharge destination (home, nursing home, SNF, etc.)

Some predictors used are affected by multiple factors:
- Polypharmacy and problem medications
- PCP access, relationship, or history
- Patient or caregiver activation
- Length of stay
LACE tool

- Length of Stay
- Acuity of Admission
  - Inpatient or outpatient
- Comorbidity
- ER Visits
  - Previous 6 months

HOSPITAL score

- Hemoglobin level
- Oncology
- Sodium level
- Procedure
- Index admission Type
- no. of Admissions in past year
- Length of stay

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**Table 3. HOSPITAL Score for 30-Day Potentially Avoidable Readmissions**

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low hemoglobin level at discharge (&lt;12 g/dL)</td>
<td>1</td>
</tr>
<tr>
<td>Discharge from an oncology service</td>
<td>2</td>
</tr>
<tr>
<td>Low sodium level at discharge (&lt;135 mEq/L)</td>
<td>1</td>
</tr>
<tr>
<td>Procedure during hospital stay (any ICD-9-CM coded procedure)</td>
<td>1</td>
</tr>
<tr>
<td>Index admission type: nonselective</td>
<td>1</td>
</tr>
<tr>
<td>No. of hospital admissions during the previous year</td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1-5</td>
<td>2</td>
</tr>
<tr>
<td>&gt;5</td>
<td>5</td>
</tr>
<tr>
<td>Length of stay ≥5 d</td>
<td>2</td>
</tr>
</tbody>
</table>


SI conversion factors: To convert hemoglobin to grams per liter, multiply by 10; conversion of serum sodium to millimoles per liter is 1:1.

* Maximum score, 13 points.
# The 8Ps:
Assessing Your Patient’s Risk For Adverse Events After Discharge

<table>
<thead>
<tr>
<th>Risk Assessment: 8P Screening Tool</th>
<th>Risk Specific Intervention</th>
<th>Signature of individual responsible for insuring intervention administered</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Problem medications</strong>&lt;br&gt;(anticoagulants, insulin, oral hypoglycemic agents, aspirin &amp; clopidogrel dual therapy, digoxin, narcotics)&lt;br&gt;☐</td>
<td>□ Medication specific education using Teach Back provided to patient and caregiver&lt;br&gt;□ Monitoring plan developed and communicated to patient and aftercare providers, where relevant (e.g. warfarin, digoxin and insulin)&lt;br&gt;□ Specific strategies for managing adverse drug events reviewed with patient/caregiver&lt;br&gt;□ Follow-up phone call at 72 hours to assess adherence and complications</td>
<td></td>
</tr>
<tr>
<td><strong>Psychological</strong>&lt;br&gt;(depression screen positive or h/o depression diagnosis)&lt;br&gt;☐</td>
<td>□ Assessment of need for psychiatric aftercare if not in place&lt;br&gt;□ Communication with aftercare providers, highlighting this issue if new&lt;br&gt;□ Involvement/awareness of support network insured</td>
<td></td>
</tr>
<tr>
<td><strong>Principal diagnosis</strong>&lt;br&gt;(cancer, stroke, DM, COPD, heart failure)&lt;br&gt;☐</td>
<td>□ Review of national discharge guidelines, where available&lt;br&gt;□ Disease specific education using Teach Back with patient/caregiver&lt;br&gt;□ Action plan reviewed with patient/caregivers regarding what to do and who to contact if worsening or new symptoms&lt;br&gt;□ Discuss goals of care and chronic illness model discussed with patient/caregiver</td>
<td></td>
</tr>
<tr>
<td><strong>Polypharmacy</strong>&lt;br&gt;(&gt;5 more routine meds)&lt;br&gt;☐</td>
<td>□ Elimination of unnecessary medications&lt;br&gt;□ Simplification of medication scheduling to improve adherence&lt;br&gt;□ Follow-up phone call at 72 hours to assess adherence and complications</td>
<td></td>
</tr>
<tr>
<td><strong>Poor health literacy</strong>&lt;br&gt;(inability to do Teach Back)&lt;br&gt;☐</td>
<td>□ Committed caregiver involved in planning/administration of all general and risk specific interventions&lt;br&gt;□ Aftercare plan education using Teach Back provided to patient and caregiver&lt;br&gt;□ Link to community resources for additional patient/caregiver support&lt;br&gt;□ Follow-up phone call at 72 hours to assess adherence and complications</td>
<td></td>
</tr>
<tr>
<td><strong>Patient support</strong>&lt;br&gt;(absence of caregiver to assist with discharge and home care)&lt;br&gt;☐</td>
<td>□ Follow-up phone call at 72 hours to assess condition, adherence and complications&lt;br&gt;□ Follow-up appointment with aftercare medical provider within 7 days&lt;br&gt;□ Involvement of home care providers of services with clear communications of discharge plan to those providers</td>
<td></td>
</tr>
<tr>
<td><strong>Prior hospitalization</strong>&lt;br&gt;(non-elective; in last 6 months)&lt;br&gt;☐</td>
<td>□ Review reasons for re-hospitalization in context of prior hospitalization&lt;br&gt;□ Follow-up phone call at 72 hours to assess condition, adherence and complications&lt;br&gt;□ Follow-up appointment with aftercare medical provider within 7 days</td>
<td></td>
</tr>
<tr>
<td><strong>Palliative care</strong>&lt;br&gt;(Would you be surprised if this patient died in the next year? Does this patient have an advanced or progressive serious illness? Yes to either)&lt;br&gt;☐</td>
<td>□ Assess need for palliative care services&lt;br&gt;□ Identify goals of care and therapeutic options&lt;br&gt;□ Communicate prognosis with patient/family/caregiver&lt;br&gt;□ Assess and address bothersome symptoms&lt;br&gt;□ Identify services or benefits available to patients based on advanced disease status&lt;br&gt;□ Discuss with patient/family/caregiver role of palliative care services and benefits and services available</td>
<td></td>
</tr>
</tbody>
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Risk Assessment Tool: the 8Ps. BOOSTing Care Transitions.

*Society of Hospital Medicine. 2008.*

http://www.hospitalmedicine.org/ResourceRoomRedesign/RR_CareTransitions/html_CC/06Boost/03_Assessment.cfm
8Ps

- Problem medications (warfarin, digoxin, insulin, etc.)
- Psychological (depression)
- Principal diagnosis (cancer, stroke, DM, HF, COPD)
- Polypharmacy (>5 medications)
- Poor health literacy (inability to TeachBack)
- Patient support (caregiver absence)
- Prior hospitalization (non-elective, prior 6 months)
- Palliative care (progressive serious illness)

http://www.hospitalmedicine.org/ResourceRoomRedesign/RR_CareTransitions/html_CC/06Boost/03_Assessment.cfm
## STAAR How-to Guide: Transitions from the Hospital to Community Setting to Reduce Avoidable Rehospitalizations


<table>
<thead>
<tr>
<th>High-Risk Patients</th>
<th>Moderate-Risk Patients</th>
<th>Low-Risk Patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient has been admitted two or more times in the past year</td>
<td>Patient has been admitted once in the past year</td>
<td>Patient has had no other hospital admissions in the past year</td>
</tr>
<tr>
<td>Patient or family caregiver is unable to Teach Back, or the patient or family caregiver has a low degree of confidence to carry out self-care at home</td>
<td>Patient or family caregiver is able to Teach Back most of discharge information and has a moderate degree of confidence to carry out self-care at home</td>
<td>Patient or family caregiver has a high degree of confidence and can Teach Back how to carry out self-care at home</td>
</tr>
</tbody>
</table>
Developing new approaches

Developing new approaches

CHECK ALL THAT APPLY:

- Lives at home with limited or no community support
- Requires assistance with medication management
- Polypharmacy (greater than 7 medications)
- History of mental illness
- Issues with health literacy
- Requires assistance with ADL’s/IADL’s
- Cognitive impairment
- End stage condition*
- Diagnosis of CHF/COPD/diabetes/HIV/AIDS
- Incontinent
- Acute/chronic wound or pressure ulcer
- History of falls
- Decreased adherence to treatment plan
- Repeat hospitalizations/ED visits
- Requires assistance in management of Oxygen and/or nebulizer

TOTAL # CHECKED = __________________________

SCORE ≥ 5
This patient is **HIGH RISK** for rehospitalization. Refer to home care services immediately.

SCORE of 2 – 4
This patient is at **MODERATE RISK** for rehospitalization. Refer to home care prior to discharge.

SCORE < 2
This patient is **LOW RISK** for rehospitalization. Discharge to community.

Readmission Risk Assessment Scale

April 21\textsuperscript{st}, 2014

Eva Pittman, MSN, RN-BC, CCRN
PDSA: Develop a Readmission Risk Assessment Scale

### Cycle 1:
- **Retrospective Study**
  - 90% success at predicting readmission
- **Concurrent study**
  - 91% accurate with clinical estimate
  - Almost all patients ruled in high risk

### Cycle 2:
- **Retrospective Study**
  - 71% success at predicting readmission
- **Concurrent study**
  - 92% accurate with clinical estimate
  - More Selective

### Cycle 3:
- **Retrospective Study**
  - 95% success at predicting readmission
PDSA Cycle 4: Test Readmission Risk Assessment Scale on Other Units

**Nephrology 3rd Floor:**
- Concurrent study
  - 84% accurate with clinical estimate
  - Percent of patient population identified as high risk 65%

**Cape Fear 2nd Floor:**
- Concurrent study
  - 100% accurate with clinical estimate
  - Percent of patient population identified as high risk 37%

**CMTU 8th Floor:**
- Concurrent Study
  - 86% success at predicting readmission
  - Percent of patient population identified as high risk 69%

**Staff Feedback:**
- Psychosocial is the biggest factor for readmissions
- Consider using a Likert Scale
- Add ESRD to scale
- Add Smoking and diet issues to psychosocial as it plays a big part in CHF patients
- Scale easy to use
Cascading Beyond the Pilot Unit & Transitioning from Paper Assessment to Electronic
Common pitfalls

• Unnecessary length / complication – is not feasible to incorporate into existing workflow
• Inappropriate stratification, too high or too low – too few or too many patients categorized as “high risk”
• Deficient criteria – does not cover both clinical and psychosocial factors
• Vagueness in definitions of predictors – affects repeatability and reproducibility
Suggested methods

• Work within feasibility constraints
  – Time, cost, existing workflow for assessment
  – Resources available for interventions from results of assessment

• Include both clinical and psychosocial factors

• Clarify definitions of predictors

• Identify high-risk and target interventions
Going forward…

- Choose, create, and/or reevaluate the pilot unit’s risk assessment tool to identify high-risk patients using the suggested methods.

- Apply risk assessment and appropriate process methods (follow up with primary care doc, etc.).

Remember:

- “best choice of model may depend on setting and the population…” (Kansagra et al)

- “assessment… is an ongoing process that requires the multidisciplinary team” (STAAR)


http://www.ihi.org/knowledge/Pages/Tools/HowtoGuidelImprovingTransitio
nstoReduceAvoidableRehospitalizations.aspx
Resources

<table>
<thead>
<tr>
<th>Task</th>
<th>Due Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complete leadership assessment and review on leadership 1:1 call</td>
<td>By May 19</td>
</tr>
<tr>
<td>Recruit and convene multidisciplinary, tiered, cross continuum project team</td>
<td>By May 5</td>
</tr>
<tr>
<td>Develop or review risk assessment; plan piloting or spread of risk assessment</td>
<td>By May 5</td>
</tr>
<tr>
<td>Prework Webinar #2: Observation of Patient Discharge Process and Process Mapping</td>
<td>May 5</td>
</tr>
<tr>
<td>Complete IHI Diagnostic Assessment of 5 recent readmissions</td>
<td>By June 18</td>
</tr>
<tr>
<td>Develop process map of patient discharge</td>
<td>By June 18</td>
</tr>
<tr>
<td>Prework Webinar #3: Data Overview</td>
<td>May 19</td>
</tr>
<tr>
<td>Develop plan to collect, submit and use your data</td>
<td>By June 18</td>
</tr>
<tr>
<td>In-person Learning Session</td>
<td>June 18</td>
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</tbody>
</table>
For more information, contact:

Laura Maynard, Director of Collaborative Learning, lmaynard@ncha.org 919-677-4121

Erica Preston-Roedder, Director of Quality Measurement, eroedder@ncha.org 919-677-4125

Dean Higgins, Project Manager, dhiggins@ncha.org