Understanding Readmission: Results of the Hospital Root Cause Analysis

Readmissions Quality Collaborative Midpoint Conference 2016

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Overview

- Background and Methods
- Patient and Caregiver Interviews Results
- Retrospective Chart Review Data Results
- Summary and Implications
Background of Root Cause Analysis

Purpose:
To identify frequent, actionable root causes of readmission among patients being served by participating hospitals.
Methods: Data Collection and Analysis

- Chart Reviews: 41 Hospitals, 421 Patients
- Patient Interviews: 39 Hospitals, 324 Patient/caregivers
- Over 2500 pages of data were entered!
- Summary statistics on quantitative data
- Qualitative analysis of quotes and text fields
Patient and Caregiver Interviews
Patient & Hospitalization Characteristics (n=324)

- **Age**
  - Average: 44.7
  - Range: 17-85
- **Gender** 60% Male
- **Interviewee Type**
  - 93% Patients
  - 2% Caregivers
  - 4% Patients & Caregivers
- **Hospital Characteristics**
  - Article 28/Health Home (HH): 76%
  - State Psychiatric Center (PC): 24%
- **Length of Stay (LOS) of Index hospitalization**
  - Article 28: 17.1 days (+/-31)
  - State PC: 350.8 days (+/-735)
- **Involuntary Admission**
  - Index: 69%
  - Readmission: 65%
Primary Diagnoses at Index Hospitalization

- Schizophrenia Spectrum
- Bipolar Disorders
- Depressive Disorders
- Mood Disorders
- Substance-Related Disorders
- Other Behavioral Health (BH) Disorders

Status:
- Voluntary Hospitalization
- Involuntary Hospitalization
- Unknown Hospitalization Status
## Discharge (DC) Plan: Patient Perspective

<table>
<thead>
<tr>
<th></th>
<th>Receive DC Plan?</th>
<th>If Yes, Understand DC Plan?</th>
<th>Did you have input on plan?</th>
<th>Did your family/caregiver have input?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Involuntary</td>
<td>82%</td>
<td>85%</td>
<td>68%</td>
<td>36%</td>
</tr>
<tr>
<td>Voluntary</td>
<td>87%</td>
<td>76%</td>
<td>78%</td>
<td>27%</td>
</tr>
<tr>
<td>Total</td>
<td>83%</td>
<td>83%</td>
<td>71%</td>
<td>33%</td>
</tr>
</tbody>
</table>
## DC Plan: Did you receive a follow up call?

<table>
<thead>
<tr>
<th></th>
<th>Involuntary (n = 176)</th>
<th>Voluntary (n = 78)</th>
<th>Total (N = 254)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>26%</td>
<td>27%</td>
<td>26%</td>
</tr>
<tr>
<td>Not Sure</td>
<td>20%</td>
<td>19%</td>
<td>20%</td>
</tr>
<tr>
<td>No</td>
<td>33%</td>
<td>40%</td>
<td>35%</td>
</tr>
<tr>
<td>No access to a phone</td>
<td>14%</td>
<td>5%</td>
<td>11%</td>
</tr>
</tbody>
</table>
Patient Follow-up on DC Plan: Appointments

Did you go to your appointments? 41% said NO

<table>
<thead>
<tr>
<th>If not, why not?</th>
<th>Therapist n = 125</th>
<th>Physician n=124</th>
</tr>
</thead>
<tbody>
<tr>
<td>I canceled or missed appointment</td>
<td>23%</td>
<td>9%</td>
</tr>
<tr>
<td>Unable to find transportation</td>
<td>6%</td>
<td>4%</td>
</tr>
<tr>
<td>Could not get an appointment</td>
<td>2%</td>
<td>3%</td>
</tr>
<tr>
<td>Office changed / canceled appointment</td>
<td>0%</td>
<td>1%</td>
</tr>
<tr>
<td>Too ill or weak</td>
<td>4%</td>
<td>2%</td>
</tr>
<tr>
<td>Re-hospitalized before apt date</td>
<td>39%</td>
<td>30%</td>
</tr>
<tr>
<td>Other</td>
<td>39%</td>
<td>56%</td>
</tr>
</tbody>
</table>
Patient Follow-up on DC Plan: Medications

Did you take your medications? 37% said NO

<table>
<thead>
<tr>
<th>If not, why not?</th>
<th>Involuntary n = 60</th>
<th>Voluntary n = 23</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unable to obtain</td>
<td>7%</td>
<td>4%</td>
<td>6%</td>
</tr>
<tr>
<td>Forgot / Too complicated</td>
<td>25%</td>
<td>13%</td>
<td>22%</td>
</tr>
<tr>
<td>Side effects</td>
<td>8%</td>
<td>17%</td>
<td>11%</td>
</tr>
<tr>
<td>Don’t think its working</td>
<td>23%</td>
<td>22%</td>
<td>23%</td>
</tr>
<tr>
<td>Too much medication</td>
<td>7%</td>
<td>9%</td>
<td>7%</td>
</tr>
<tr>
<td>Don’t need medication</td>
<td>22%</td>
<td>4%</td>
<td>17%</td>
</tr>
<tr>
<td>Other</td>
<td>37%</td>
<td>48%</td>
<td>40%</td>
</tr>
</tbody>
</table>
Why did you come back to the hospital?

- Internal distress
- Mental Health/Crisis Staff/ Police initiated/ motivated return
- Self-harm
- Family/ friends initiated or motivated return
- Concrete service needs
- Behavior-related symptoms
- Medical / “Feeling unwell”
- Substance use
- Stopped taking medications/engaging in treatment
- I don’t know /I did not want to come back
## Did anyone tell you to come to the hospital?

<table>
<thead>
<tr>
<th>Check all that apply</th>
<th>Involuntary N= 176</th>
<th>Voluntary N =78</th>
<th>Total N=254</th>
</tr>
</thead>
<tbody>
<tr>
<td>I decided on my own</td>
<td>39%</td>
<td>42%</td>
<td>40%</td>
</tr>
<tr>
<td>Family/caregiver</td>
<td>17%</td>
<td>22%</td>
<td>19%</td>
</tr>
<tr>
<td>Residence staff</td>
<td>15%</td>
<td>6%</td>
<td>13%</td>
</tr>
<tr>
<td>Therapist/psychiatrist</td>
<td>9%</td>
<td>15%</td>
<td>11%</td>
</tr>
<tr>
<td>Police</td>
<td>11%</td>
<td>6%</td>
<td>9%</td>
</tr>
<tr>
<td>Other (e.g. Emergency Medical Service (EMS) /crisis)</td>
<td>18%</td>
<td>22%</td>
<td>20%</td>
</tr>
</tbody>
</table>
What could the hospital have done better?

- Hospitalization, discharge planning & post-discharge follow-up
  - Longer LOS, more review of DC plan with staff, follow-up calls, sooner appointments

- Medication related
  - Med adjustments, more time with staff to review and clarify questions

- Concrete service needs
  - Housing—“Need help finding a place to live,” finances, employment, transportation

- Formal/informal supports
  - Referrals, more support: Partial Hospitalization, Narcotics / Alcoholics
    Anonymous “give me more support at home”

- Coping education/groups
  - “They should have a follow-up group for patients who are discharged from the hospital”

- Substance-related support
  - Rehab, “A better detox”
Interviewers’ Impressions

- Support/service needs not met: 56%
  - Needed high level of care: 38%
  - Needed treatment for co-occurring disorders: 30%
  - Psychosocial/concrete supports: 25%
  - Lacked resources: 24% (Housing: 67%, Financial: 42%, Insurance: 12%)

- Non-adherence: 50%
  - Didn’t adhere to oral medication: 61%
  - Didn’t attend Behavioral Health (BH) appointments: 41%

- Patient unable to follow the care plan: 44%
  - Inadequate understanding of how to self-manage illness: 53%
  - Transportation/logistics: 13%
  - Unable to keep track of appointment: 9%

- Previous discharge/post-discharge follow-up: 40%
  - Follow-up: 30% (No follow-up call: 69%; No follow-up on missed session 26%)
  - BH appointment: 26% (Not soon enough: 79%; None scheduled: 12%)
Retrospective Chart Review Data
Patient & Hospitalization Characteristics

- N= 421
- Age (Average 43, Range 18-85)
- Gender
  - 58% Male
- Language
  - 91% English
  - 5% Other Language
  - 4% Missing

Hospitalization Characteristics

- Article 28: 78%
- State PC: 22%

Involuntary Admission

- Index: 67%
- Readmission: 67%

LOS of Index hospitalization

- Article 28: 12.8 Days, +/- 14 days
- State PC: 241.3 Days, +/- 495 days
Living Situation at Index Hospitalization

- Home
- Shelter/ Street
- Transfer
- Residential Program
- Institutional / Nursing Home
- Other

- Voluntary Hospitalization
- Involuntary Hospitalization
- Unknown Hospitalization Status
Primary Diagnoses at Index Hospitalization

- Schizophrenia Spectrum / Psychotic Disorders
- Depressive Disorders
- Bipolar Disorders
- Substance-Related
- Other Mood Disorders
- Other BH Disorders

Percentage of Chart Reviews (N=421)
Co-Morbid Conditions

- 52% Co-occurring Mental Health (MH) and Substance Use Disorder (SUD)
- 63% Co-Morbid Medical
- 4% Intellectual / Developmental Disorder (I/DD)

**Medical Co-Morbidities**

- Hypertension
- Diabetes
- Asthma
- Hyperlipidemia
- Chronic Obstructive Pulmonary Disease (COPD)
- Other
Readmission Risk Factors

- Co-morbid Condition(s)
- Poor Med Adherence History
- Poor Treatment Engagement History
- History of High Utilization
- Previous 30 Day Readmission
- Non-adherence to Previous D/C Plan
- No Family/Social Support
- Homeless
- No Outpatient BH provider
- No Financial resources/ Insurance

Percentage of Chart Review

- Voluntary Hospitalization
- Involuntary Hospitalization
- Unknown Hospitalization Status
### Services in the Discharge Plan

<table>
<thead>
<tr>
<th>Services in discharge plan</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Check all that apply</td>
<td></td>
</tr>
<tr>
<td>N = 421</td>
<td></td>
</tr>
</tbody>
</table>

- **Outpatient MH**: 77%
- **Outpatient SUD**: 20%
- **Care Management (CM) / HH**: 22%
- **Medical**: 32%
- **Other**: 20%

### Observations

- 63% had a co-morbid medical condition, only 32% had medical outpatient service in discharge plan.
- 52% had a co-occurring SUD, only 20% had SUD service in discharge plan.
- 49% reported as high utilizers, only 22% had Health Home CM service in discharge plan.
Services in DC Plan: Post Discharge Appointments

<table>
<thead>
<tr>
<th>Services in Discharge Plan</th>
<th>Scheduled Appt.</th>
<th>Warm Handoff</th>
<th>Appointment Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>1 week of Discharge</td>
</tr>
<tr>
<td>Outpatient MH</td>
<td>94%</td>
<td>32%</td>
<td>95%</td>
</tr>
<tr>
<td>Outpatient SUD</td>
<td>81%</td>
<td>26%</td>
<td>92%</td>
</tr>
<tr>
<td>CM / HH</td>
<td>55%</td>
<td>53%</td>
<td>91%</td>
</tr>
<tr>
<td>Medical</td>
<td>77%</td>
<td>16%</td>
<td>58%</td>
</tr>
<tr>
<td>Other</td>
<td>82%</td>
<td>45%</td>
<td>91%</td>
</tr>
</tbody>
</table>

- Once service is in the plan, appt. is generally scheduled within 1 week of discharge.
- The challenge – patients aren’t showing up for appointments.
- Warm hand-offs could be increased, particularly CMs.
Opportunity: Improving Prescribing Practices

- Increase Use of LAIs: AP use is common, but only 13% are LAIs, despite low medication adherence.
- High levels of co-morbid SUD (52%), but low utilization of pharmacological approaches to support addiction treatment (~1%).

### Medications Prescribed on Discharge

- Antipsychotic
- Antidepressant
- Anticonvulsant
- Hypnotic / Sedative
- Antipsychotic Long Acting Injectable (LAI)
- Mood Stabilizers
- Anxiolytic
- Narcotic Antagonist
- Alcohol medication
- Other

<table>
<thead>
<tr>
<th>Medication</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antipsychotic</td>
<td>80%</td>
</tr>
<tr>
<td>Antidepressant</td>
<td>60%</td>
</tr>
<tr>
<td>Anticonvulsant</td>
<td>40%</td>
</tr>
<tr>
<td>Hypnotic / Sedative</td>
<td>20%</td>
</tr>
<tr>
<td>Antipsychotic Long Acting Injectable (LAI)</td>
<td>10%</td>
</tr>
<tr>
<td>Mood Stabilizers</td>
<td>5%</td>
</tr>
<tr>
<td>Anxiolytic</td>
<td>1%</td>
</tr>
<tr>
<td>Narcotic Antagonist</td>
<td>1%</td>
</tr>
<tr>
<td>Alcohol medication</td>
<td>1%</td>
</tr>
<tr>
<td>Other</td>
<td>1%</td>
</tr>
</tbody>
</table>
Opportunity: Discharge Planning, Follow-up, and High Risk Populations

- **Discharge Plan:**
  - Address comorbid conditions, educate patient
  - Higher level of supports, referrals, step down
  - Health Home / Care Management

- **Family and Caregivers:** Majority of people have someone pick them up post discharge - Did we involve them in the plan and follow-up?

- **Post Discharge Calls:** Only 25% of patients reported receiving

- **Involuntary Population/ High Utilizers - different strategies needed:**
  - Utilizing Assistive Outpatient Treatment or Assertive Community Treatment
  - Increasing Health Home Enrollment, Home Community Based Services
  - Long Acting Injectable (LAIs)
Questions?