

The Readmissions Quality Collaborative
Kick-Off Conference ♦ June 21, 2012

The Quality Concern: Behavioral Health Inpatient Readmissions

Molly Finnerty, MD
Director, Bureau of Evidence Based Services and
Implementation Science
New York State Office of Mental Health



Overview

- Behavioral Health Inpatient Readmissions:
Scope of the Problem
- Risk Factors for Readmission
- Strategies to Reduce Readmissions

**Behavioral Health
Inpatient Readmissions:
Scope of the Problem**

Reducing Hospital Readmissions: A National Quality Focus

- Hospital readmissions are common and costly
 - 19.6% of Medicare beneficiaries discharged were re-hospitalized within 30 days; cost to Medicare of unplanned readmissions estimated at \$17.4 billion (Jencks, 2009)
 - Medicaid enrollees aged 21-64 had 10.7% 30-day readmission rate (Healthcare Cost and Utilization Project (HCUP) Statistical Brief #89, 2010)
- National/multi-state initiatives to address preventable readmissions include:
 - Partnership for Patients Community-Based Care Transitions Program: national initiative to reduce unnecessary hospital readmissions by 20%
 - The Better Outcomes for Older adults through Safe Transitions initiative (Project BOOST), Society of Hospital Medicine: 60 sites in 26 states
 - The Institute for Healthcare Improvement State Action on Avoidable Rehospitalizations Initiative (IHI STAAR): 4-state collaborative in 148 hospitals
- While most attention nationally is on medical readmissions, behavioral health readmissions are an important component of the overall picture.

30-Day Readmission by Major Diagnostic Category (MDC) at Initial Hospital Stay for Medicaid Recipients Age 21-64, 2007

MDC at 1 st admission	Readmission rate	% of all non-obstetric readmissions
Circulatory System	10.4%	15.0
Mental	11.8%	12.0
Respiratory System	11.4%	10.7
Digestive	10.3%	9.6
Alcohol/Substance Abuse	13.0%	8.4

Among 15 states, behavioral health discharges ranked among the top 5 diagnostic categories for 30-day readmissions.

Agency for Healthcare Research and Quality (AHRQ) Health Care Utilization Project Statistical Brief #89, 2010

Potentially Preventable Readmissions (PPR), NYS Medicaid Program (2007)

Recipient Health Condition	PPR Rate	Total PPR Cost
Mental Health	8.0	\$202,842,118
Substance Abuse	10.3	\$90,714,989
Mental Health and Substance Abuse	17.9	\$370,272,653
All Others	4.8	\$149,116,486
Total	9.4	\$812,946,246

New York State (NYS) Dept. of Health, Division of Quality and Evaluation,
Office of Health Insurance Programs, Statistical Brief #3

30-day Behavioral Health Readmission Rates in the NYS Medicaid Behavioral Health (BH) Population, April 2011- April 2012

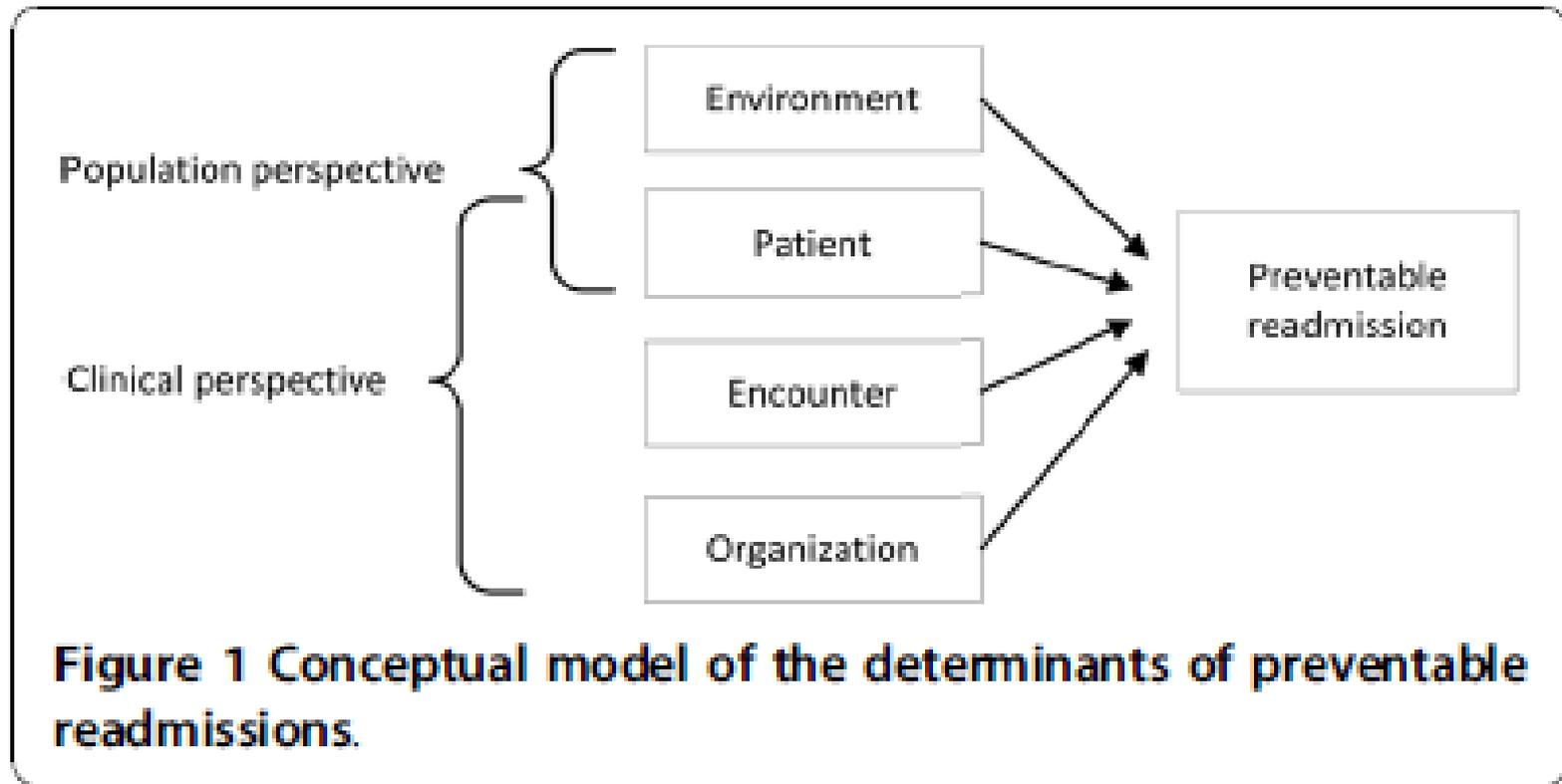
Region	Psychiatric	Detoxification	Rehabilitation
Central NY	12.2	11.3	4.8
Western NY	12.3	8.4	3.7
Hudson River	14.7	22.7	6.4
Long Island	14.8	12.4	5.9
New York City	16.0	24.8	8.4
New York State	14.6	20.0	6.1

Characteristics of NYS Medicaid BH Recipients with 30-day BH Readmissions

Characteristic	N	%
Male	5,205	63.6%
Age 25-54	5,512	67.4%
Primary psychiatric diagnosis		
Schizophrenia/ Schizoaffective	2,537	31.0%
Major Depression	1,672	20.4%
Bipolar	1,589	19.4%
Service billed in past 12 months		
Mental Health Clinic	3,738	45.7%
Outpatient Substance Abuse Services	3,055	37.3%
Assertive Community Treatment (ACT) / Day Treatment / Personalized Recovery Oriented Services (PROS)	1,669	20.4%
Case Management	1,393	17.0%

Factors Predicting Readmission

A Conceptual Model for Examining Readmissions



Research on BH Readmissions: Challenges

- No standard definition of time period: as long as two years
- Varying populations and treatment settings: few studies done for youth, comorbid mental health and substance use
- Varying methods: matched control, prospective cohort, retrospective review of administrative data
- Unclear how previous research applies in evolving healthcare environment

Key Factors in BH Readmissions: Previous Hospitalizations

- Multiple studies have found an association between previous inpatient admission and readmission
 - Prospective cohort study of 262 adult inpatients with schizophrenia found those readmitted within three months more likely to have had four or more previous hospitalizations (Olfson et al., 1999).
 - Retrospective study of 1,481 patients found number of previous admissions predicted readmission within six months (Thompson et al., 2003)
 - Prospective cohort study of 319 adult inpatients found number of previous psychiatric hospitalizations predicted readmission during eighteen-month follow-up (Klinkenberg & Calsyn, 1998).
- Prospective cohort study of 233 high utilizing psychiatric inpatients found number of inpatient days in previous year predicted readmission within two years (Bowersox et al., 2012).

Key Factors in BH Readmissions: Medication Nonadherence

- Cohort study of 477 patients with schizophrenia found those readmitted to inpatient within six months had an average of 2.7 medication refills compared to 6.8 refills in those not rehospitalized. (Laan, 2010)
- Retrospective analysis of Medicaid claims for 4,325 outpatients with schizophrenia found any gap in antipsychotic medication was associated with increased risk of hospitalization, with gaps as small as one to ten days associated with an Odds Ratio of 1.98 and gaps greater than 30 days with an Odds Ratio of 3.96. (Weiden, 2004)

Key Factors in BH Readmissions: Engagement in Outpatient Services

- Retrospective review of 3,113 inpatients found that those without an outpatient appointment after discharge were twice as likely to be rehospitalized in the same year compared to those with at least one outpatient appointment (Nelson, 2000)
- Retrospective analysis of 22,054 people in three states found those who attended two or more appointments after inpatient detoxification were less likely to be readmitted within twelve months and had longer time until second inpatient detoxification (Mark, 2008)

Key Factors in BH Readmissions: Substance Use

- Prospective cohort study of 262 adult inpatients with schizophrenia found those readmitted within three months were significantly more likely to have comorbid substance use disorder. (Olfson et al., 1999)
- A study of 50 Medicaid inpatients at high risk for readmission identified substance use or related conditions as the most common reason for admission. (Raven et al., 2008)

Strategies to Reduce Behavioral Health Readmissions

Priority Goals for Readmissions Quality Collaborative

- Improve medication practices
- Improve engagement in outpatient care
- Improve delivery of integrated treatment for co-occurring psychiatric and substance use disorders

Goal: Improving Medication Practices

Strategies to Improve Medication Practices

- Increase use of depot medications
- Increase use of clozapine
- Increase medication-assisted alcohol treatment
- Facilitate medication fill upon discharge
- Implement clinical interventions to increase treatment adherence

Use of Depot Medications

- Systematic review of ten studies with 1,700 participants found that significantly fewer on depot antipsychotics relapsed relative to oral medication (Risk Ratio=0.70, 95% Confidence Interval (CI) = 0.57-0.87). (Leucht et al., 2011)
- Retrospective analysis of 2,588 patients with schizophrenia in Finland found the risk of rehospitalization among those receiving depot antipsychotics was one-third (Adjusted Hazard Ratio=0.36, 95%, CI=0.17-0.75) compared to patients on oral medication. (Tiihonen, 2012)

Use of Clozapine

- Naturalistic observation study of 160 individuals discharged from United Kingdom (UK) inpatient service found time to subsequent admission within two years significantly longer for those discharged on clozapine compared to those registered to start on clozapine but discharged on another antipsychotic. (Nyakyoma & Morriss, 2010)
- Randomized open-label study of 227 patients discharged from state hospitals found those on clozapine less likely to be readmitted. (Essock, 1996)

Medication-Assisted Alcohol Treatment

- Secondary data analysis of claims for 20,752 patients found use of a Food and Drug Administration (FDA) approved medication for alcohol dependence is associated with reduced readmissions and cost. (Baser, 2011)
- Secondary analysis of claims data for 11,515 individuals with Alcohol Use Disorder (AUD) found those on Naltrexone XL (n=211) had lower nonpharmacy costs and utilization of acute services compared to acamprosate, disulfiram, oral naltrexone and psychosocial treatment. (Bryson, 2011)

Other Clinical Interventions

Retrospective analysis of secondary data for 861 individuals with first hospitalization for schizophrenia or schizoaffective disorder (DO) found that individuals without a fill of antipsychotics within one week post-discharge were 75% more likely to have a readmission within 28 days (Boden et al., 2011), suggesting opportunity for improvement by providing medications on discharge.

**Goal: Improve Engagement
in Outpatient Care**

Strategies to Improve Engagement in Outpatient Care

- Determine whether clients at risk are assigned to care management or other intensive services, connect those with existing services, and refer those who are not
- Implement peer services that contribute to reducing readmissions
- Implement clinical interventions to increase treatment adherence

Assertive Community Treatment (ACT)

- Cochrane Review (1998) found that ACT clients were less likely to be admitted to the hospital than those receiving standard community care (Odds Ratio=0.59, 99%CI 0.41-0.85).
- In a prospective trial with 144 people, clients receiving ACT team care had a significantly reduced rate of rehospitalizations (Salkever, 1999)

Intensive Case Management

- Cochrane Review (2010) concludes intensive case management reduces hospitalizations and increases engagement in outpatient care compared to standard care and non-intensive case management, particularly for individuals with high levels of hospitalization.
- Retrospective secondary data analysis of 164 clients found that clients assigned to Intensive Case Management (ICM) had fewer periods of hospitalization (longer community tenure) than those assigned to Case Management (CM). (Kuno et al., 1999)

Assisted Outpatient Treatment (AOT)

- Consumers who received court orders for AOT appeared to experience a number of improved outcomes: reduced hospitalization and length of stay, increased receipt of psychotropic medication and intensive case management services, and greater engagement in outpatient services.
(Swartz, 2010)
- Increased medication adherence and reduced readmissions continued after the end of the AOT order if it was for at least seven months.
(Van Dorn, 2010)

Peer to Peer Services

- In a randomized trial of peer mentor versus usual care for individuals currently hospitalized with major mental illness and three or more hospitalizations in previous eighteen months, those randomized to peer mentorship (n=38) had fewer rehospitalizations and fewer hospital days than those in usual care (n=36) at 9-month follow-up post-discharge. (Sledge, 2011)
- Longitudinal comparison group study of people with co-occurring Substance Use Disorder (SUD) and Mental Illness (MI) found those who participated in a peer support program (n=106) had lower dropout rates and readmissions than the treatment as usual group (n=378) (Min, 2007)

Other Clinical Interventions

- Randomized trial of 121 psychiatric inpatients showed that adding a one hour motivational interview prior to discharge was significantly associated with attendance at first outpatient appointment compared to Treatment as Usual (Swanson, 1999)
- Cognitive behavioral group therapy was introduced on an inpatient unit, with subsequent significant reductions in readmissions from 38% to 24% for patients with schizophrenia and bipolar disorder (Veltro, 2008)

**Goal: Improve Delivery of
Integrated Treatment for
Psychiatric and Substance
Use Disorders**

Why Integrated Dual Disorders Treatment (IDDT)?

- Twenty-six studies show integrated treatment is more effective than traditional separate treatment
Drake et al (2004), Psychiatric Rehabilitation Journal
- Conclusions from these 26 controlled studies:
 - Despite enormous variance in designs, interventions, and outcome measures, several consistent themes appear across the studies
 - These themes emerge as core critical components

Core Principles of IDDT

1. Integration of treatment
2. Assertive engagement
3. Comprehensiveness of services
4. Motivation-based treatment
5. Reduction of negative consequences
6. Time unlimited services
7. Multiple psychotherapeutic modalities

*On-line training available via Office of Mental Health
Focus on Integrated Treatment (FIT) Modules.*

IDDT Associated with Improved Outcomes in Several Areas

- Reduced institutionalization
- Reduced symptoms, suicide
- Reduced violence, victimization, legal problems
- Better physical health
- Improved function, work
- Improved relationships and family

IDDT Examples

- Randomized control trial of 129 clients with severe psychotic or affective disorders and drug dependence found those enrolled in a six month intervention including motivational interviewing and social skills training had lower rates of rehospitalization vs. manualized control. (Bellack, 2006)
- Retrospective pilot study of 44 clients receiving 24 weeks of integrated dual-diagnosis treatment found a 60% reduction in inpatient days in the year after treatment compared to the previous year. People with schizophrenia had a 74% reduction in hospital days. (Granholm, 2003)

Strategies by Settings

Goal 1: Improve medication practices.	Emergency	In-patient	Out-patient
Increase use of depot medications		√	√
Increase use of clozapine		√	√
Medication-assisted alcohol treatment		√	√
Medication fill upon discharge	√	√	√
Clinical interventions to improve adherence	√	√	√
Goal 2: Improve engagement in outpatient care.			
CM, ACT, AOT and/or Health Home	√	√	√
Peer services		√	√
Clinical interventions to improve adherence	√	√	√
Goal 3: Improve delivery of integrated treatment for psychiatric and substance use disorders.			
“Focus on Integrated Treatment”	√	√	√

Core Project Activities

- ***Case finding:*** Implement admission protocol to identify clients at risk of readmission, using Screening Tool and/or PSYCKES data.
- ***Identify and address risk factors:*** Assess for risk factors and implement policy that identified risks for readmission are addressed explicitly on treatment plan and discharge plan.
- ***Optimize discharge process:*** Implement a protocol or checklist to ensure best practices in discharge planning, including procedures for bridging time between discharge and first outpatient session. Coordinate discharge planning efforts with the Behavioral Health Organizations (BHOs).

Re-Engineered Discharge: Project RED

- Evidence-based intervention to reduce medical readmissions, with strong supporting data (randomized control trial, Jack, 2009).
 - Significantly reduced hospital utilization by 30%
 - Most effective for patients with high utilization rates in preceding six months
- Calls for Discharge Advocate (specially trained nurse) to oversee and implement activities
- Being implemented in several New York City hospitals

Project RED: Key Activities

- Educate patient about diagnosis throughout the stay
- Organize post-discharge services, make all appointments
- Confirm medication plan, reconcile with guidelines
- Give patient written discharge plan
- Assess patient's understanding of the plan
- Review what to do if a problem arises
- Expedite transmission of discharge summary to outpatient providers
- Call two to three days post discharge to reinforce plan, problem-solve