

Care Transitions

Engaging Psychiatric Inpatients in Outpatient Care

Mark Olfson, MD, MPH
Columbia University
New York State Psychiatric Institute
New York, NY

A physician is obligated to consider more than a diseased organ, more even than the whole man - he must view the man in his world.

Harvey W. Cushing
1869-1939

Overview

Importance of continuity of care – consequences of discontinuity

Predictors of discontinuity in treatment (inpatient to outpatient)

Assessment of risk

Strategies for engaging recently discharged inpatients in outpatient care

Themes in Continuity of Care

Transition management: Guiding across transitions

Information: Sharing clinical information across services/providers

Patient-provider relationship: Assisting with navigation of system

Service access: Ease of service access and response

Structural linkages: Policies oriented toward integration

Comprehensive services: Mental health, medical, housing, vocational.

Longitudinality: Long-term orientation of care plan

Collaboration: Team approach, inclusive of consumer perspective

Outpatient Appointments and Hospital Readmission

	Total (N)	Hospital Admissions (N)	Hospital Admissions (%)
No outpatient appointment	1853	406	21.9
Outpatient appointment	1260	136	10.8

Nelson et al., *Psychiatric Services* 2000 (United Behavioral Health Data, 8 Southern States). Diagnostically mixed sample, hospital admissions within study year.

Consequences of Treatment Disengagement Adult Schizophrenia

Hospital Admission (43.9% vs. 19.9%)

Emergency department admissions (38.5% vs. 17.6%)

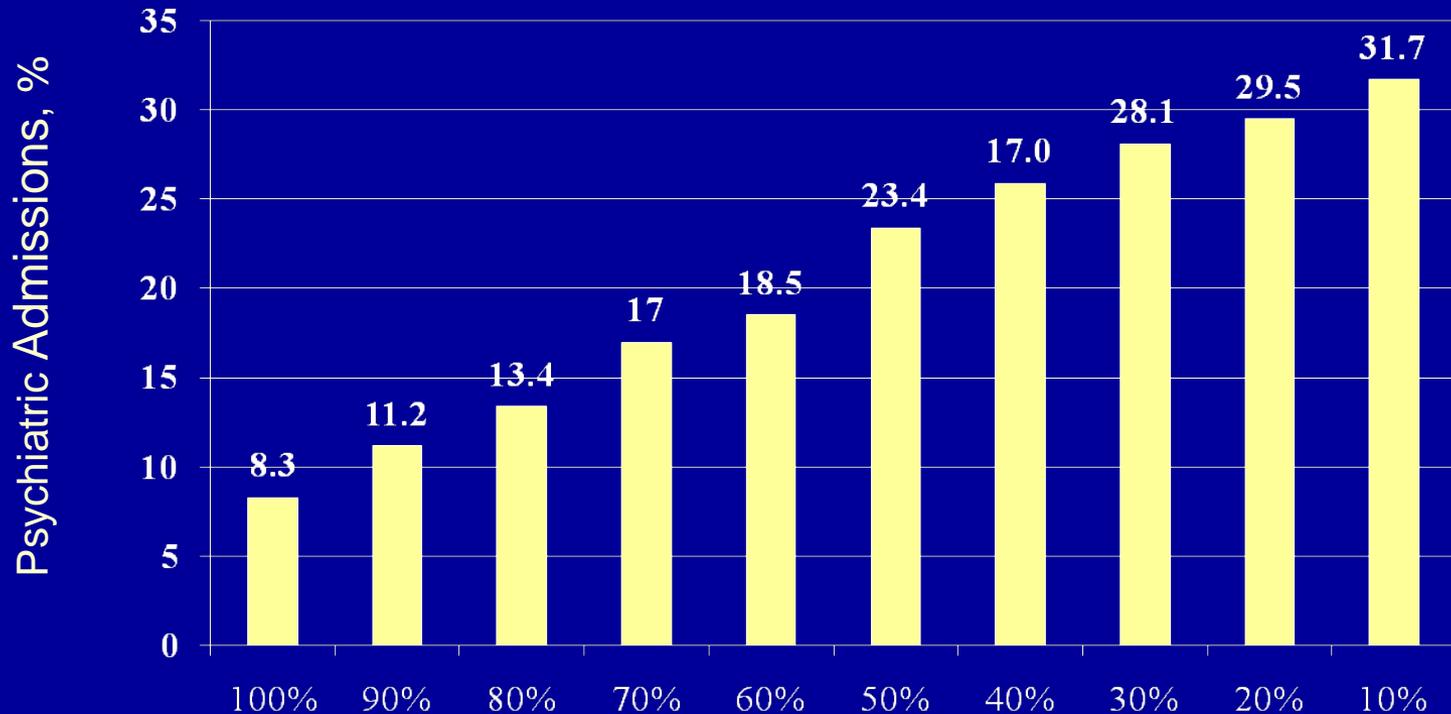
Homelessness (14.4% vs. 5.2%)

Psychotic Symptoms (+18.4%)

Global Function (-9.3%)

Olfson et al., 2000, N=219, 3-month index post-hospital follow-up.

Antipsychotics for Schizophrenia Medication Adherence & Hospital Admission



Medication Possession Ratio (MPR) N=48,418

Broader Concerns: Antipsychotic Treatment Adherence in Schizophrenia

Percentage of patients with schizophrenia, 19-63 years of age, during in 2013 who were dispensed antipsychotic medication for at least 80% of days:

60.1%

NCQA: 2014 State of Health Care Quality, Medicaid HMO

<http://www.ncqa.org/ReportCards/HealthPlans/StateofHealthCareQuality/2014TableofContents/AntipsychoticMedications.aspx>

Clinical Judgment May Be Unreliable – Medication Adherence

Non-Adherence

Clinician Rating

0 % (0 of 25)

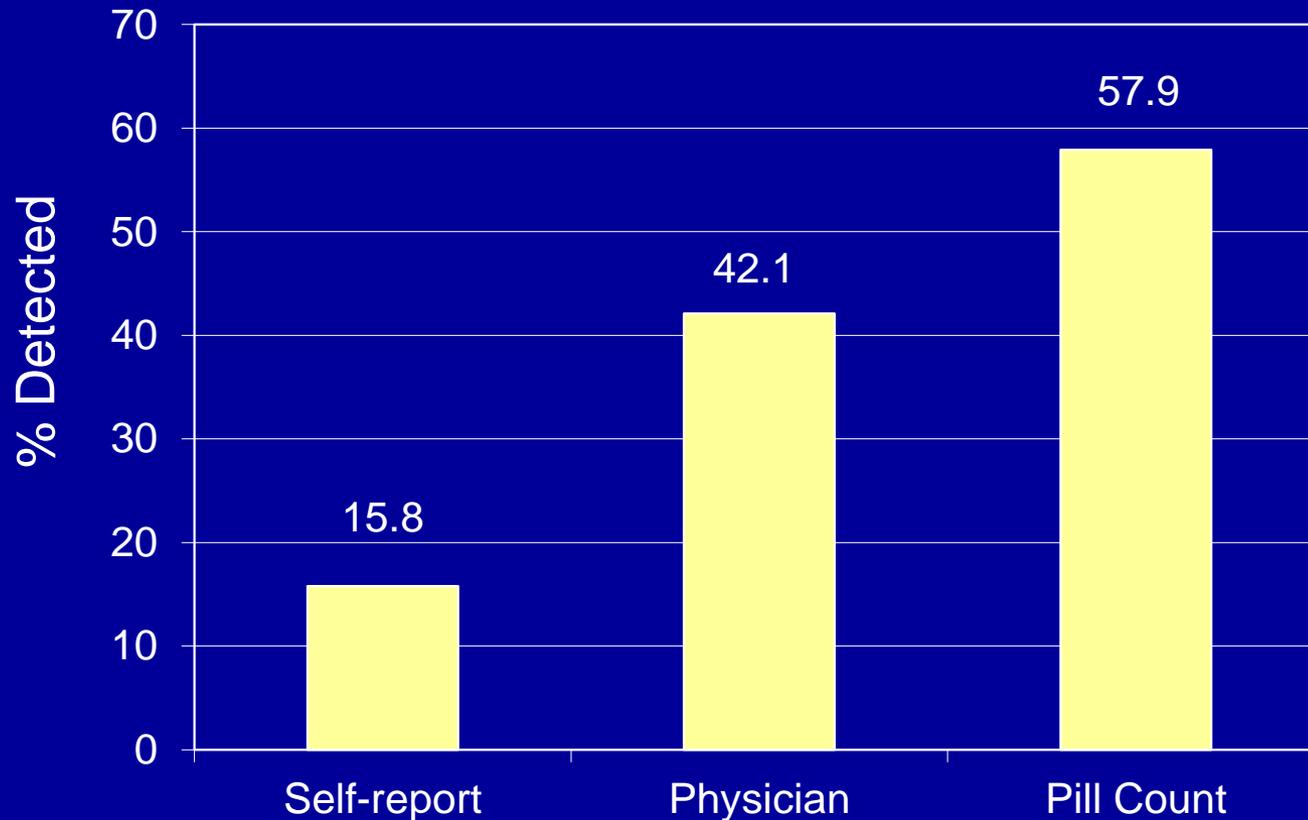
Non-Adherence

Medication Event Monitoring System (MEMS) Cap

48% (12 of 25)

Byerly et al., *Psychiatry Research* 2005. Non-adherence defined on Clinician Rating Scale of occasional or greater reluctance to take medications, and as <70% of doses on any one of three monthly evaluations of MEMS.

Detection of Antipsychotic Non-Adherence



Velligen et al., *Psychiatric Services* 2007. Criterion standard (n=19) is Medication Event Monitoring System (MEMS) / Medication Possession Ratio (MPR) \leq .80 over 12 weeks. Compared with patient self-report, physician impressions & unannounced in home pill counts. Patient and physician reports correlated with Brief Psychiatric Rating Scale BPRS.

Inpatient Staff Prediction of Outpatient Linkage in Schizophrenia

		Successful Linkage		
		Yes	No	Total
Staff Prediction of Linkage	Yes	61	74	135
	No	19	75	94
Total		80	149	229

kappa=0.06

Challenge to Improving Care

“To become comfortable with uncertainty is one of the primary goals in the training of a physician.”

- *Sherwin B. Nuland, MD*
(1930-2014)

Some Plausible Sources for Treatment Disengagement

Disease Factors	Symptoms - paranoia, grandiosity, denial, motivational deficits, cognitive factors
Client Factors	Fear of relapse, few perceived benefits, personality, substance abuse, history of service disengagement
Social Factors	Family attitudes, stigma, living environment, social support
Treatment Factors	Shared decision making in referral choice, side effects of medications, treatment effectiveness, therapeutic alliance
Service System	Financing, continuity of providers, range of services, access, costs to patients, information sharing

Outpatient Follow-Up of Medicaid Psychiatric Inpatients

	7 days	30 days
Total (N=6,730)	30.3%	48.7%
Treatment in prior 30 days		
Yes (N=2,899)	45.9%	68.0%
No (N=3,831)	18.5%	34.2%
Length of stay, days		
<4 (N=1,594)	26.4%	42.9%
4-6 (N=1,525)	28.0%	46.4%
7-9 (N=1,885)	31.6%	51.0%
10+ (N=1,726)	34.4%	53.8%

National Perspectives: Medicaid Health Maintenance Organization (HMO) Follow-Up (F/U) on Hospitalization for Mental Illness

Year	7 Day F/U	30 Day F/U
2013	42.0	60.9
2012	43.7	63.6
2011	46.5	65.0
2010	44.6	63.8

NCQA 2014 State of Health Care Quality Report

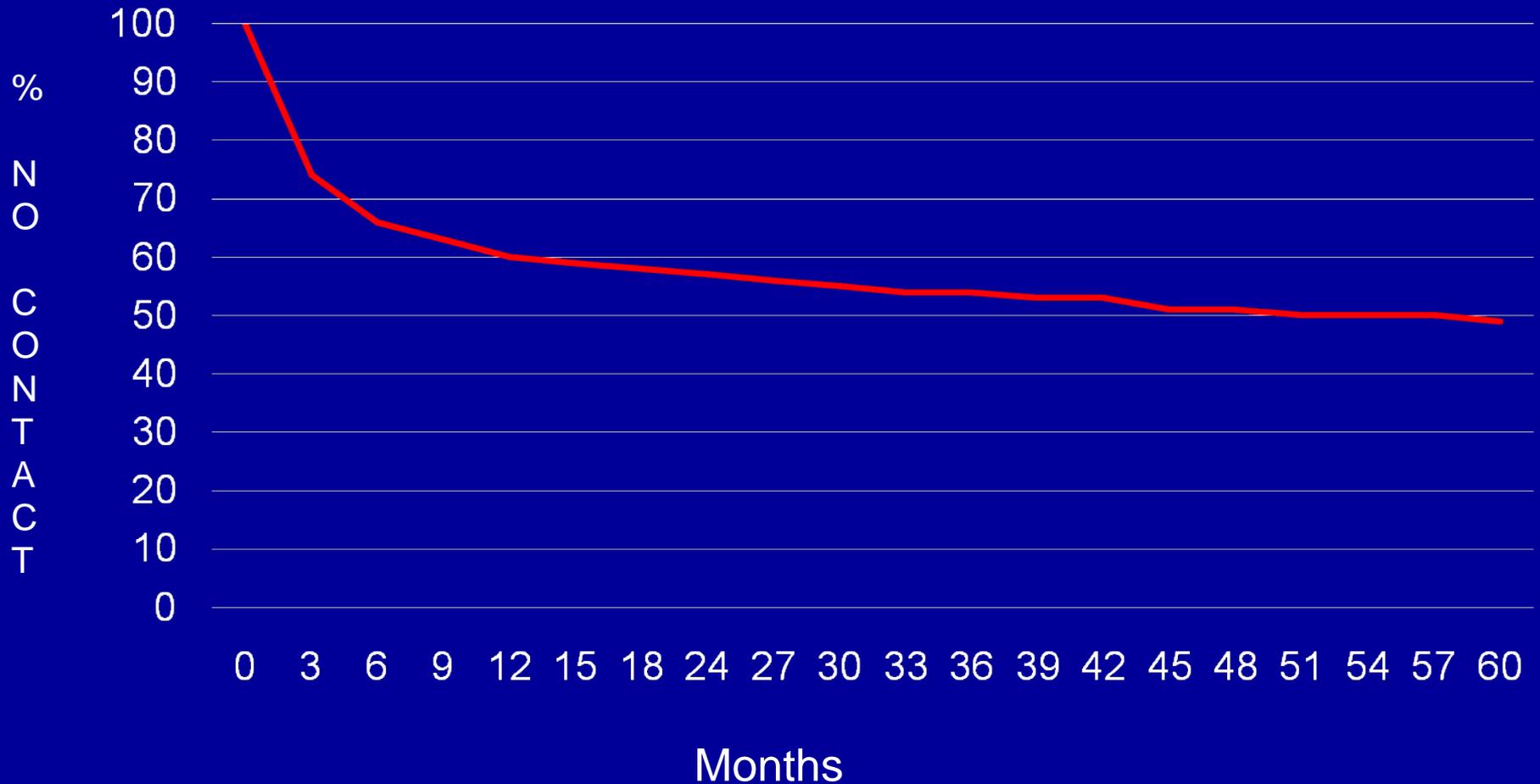
<http://www.ncqa.org/ReportCards/HealthPlans/StateofHealthCareQuality/2014TableofContents/Followup.aspx>

Significant Predictors of Missed First Appointments at a Community Mental Health Center after Psychiatric Hospitalization

	Odds Ratio (OR)	95% Confidence Interval (CI)
Involuntary admissions	2.7	(1.4-5.0)
No established outpatient clinician	2.4	(1.3-4.5)
Psychosocial stressor	1.8	(1.0-3.3)
Days from discharge to appointment (continuous)	1.04	(1.01-1.07)

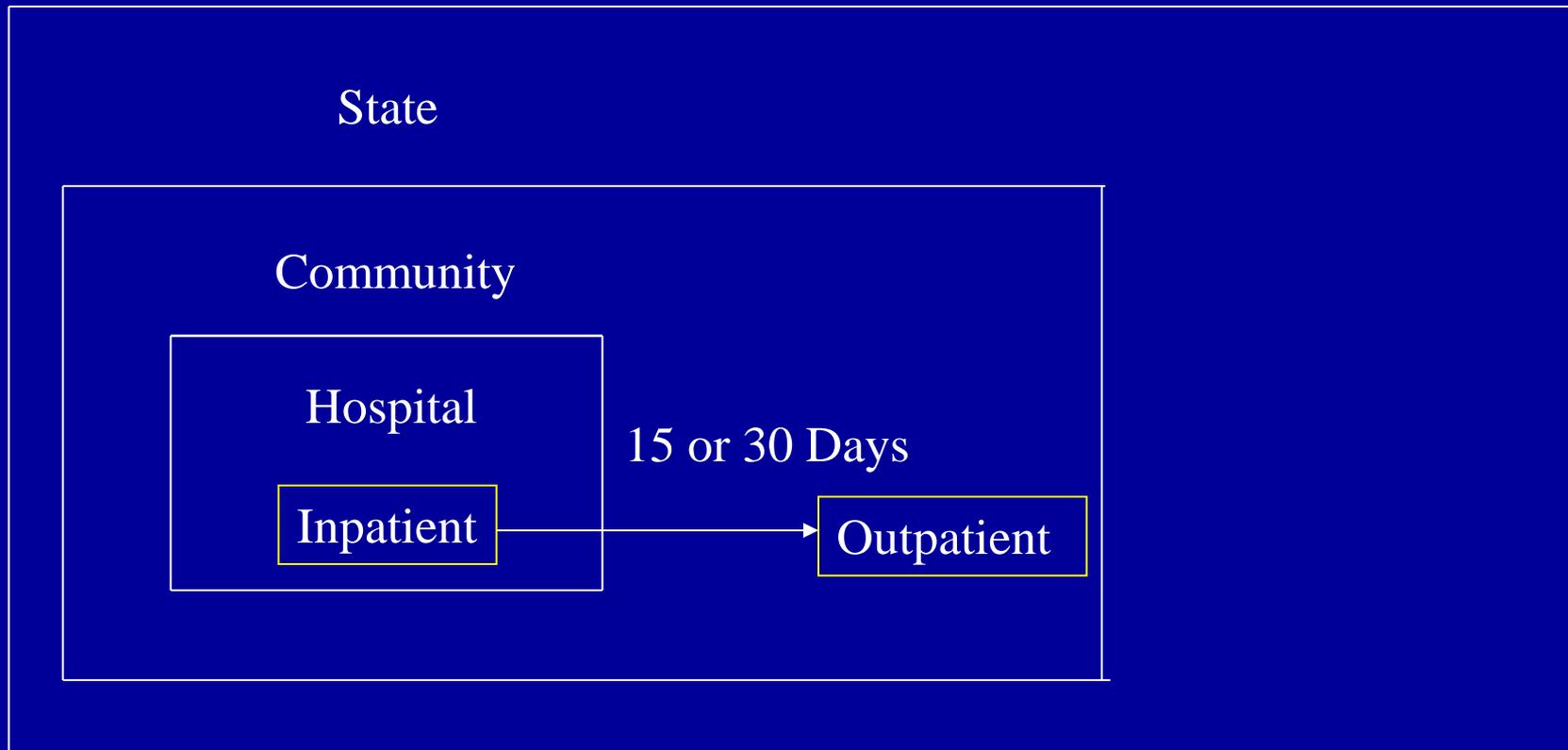
Compton MT et al., *Psychiatric Services* 2006, N=221 consecutive adult patients, 83.7% African American, diagnostically mixed, 64% schizophrenia, average length of inpatient stay 12 days, 64% non-adherent with appointment.

Survival curve for time to first contact with Veterans Affairs (VA) outpatient services following hospital discharge



Mojtabai et al., Psych Serv 2001 (N=2,861, diagnostically mixed)

A multidimensional perspective on continuity of care in schizophrenia



Rate of 30 day outpatient treatment following hospital discharge in schizophrenia by patient characteristics (n=59,567)

Patient characteristic	Rate %	<i>P</i>	Adjusted Odds Ratio AOR (99% CI)
Recent mental health care		<.0001	
Present	64.5		3.7 (3.4-4.0)
Absent	28.5		1.0
Prior antipsychotics		<.0001	
Depot	74.7		2.8 (2.5-3.2)
Oral	63.2		1.7 (1.6-1.8)
None	42.9		1.0
Prior substance use disorder		.23	
Present	58.8		0.7 (.7-.8)
Absent	59.4		1.0

Recent denotes 90 days prior to hospital admission. Model adjusts for wide range of demographic, prior service use, hospital, and community characteristics.

Rate of 30 day outpatient treatment following hospital discharge by hospital characteristics (n=59,567)

Hospital characteristic	Rate %	<i>P</i>	Adjusted Odds Ratio (AOR) (99% CI)
Outpatient psych services		.0002	
Present	61.3		1.0 (.9-1.0)
Absent	59.1		1.0
Hospital Control		<.0001	
Private, non-profit	61.7		1.0
Public	57.2		1.0 (.9-1.1)
Private, for-profit	54.7		1.0 (.9-1.1)
Hospital type		<.0001	
Psychiatric	49.5		1.0
General	60.1		1.3 (1.1-1.5)

Rate of 30 day outpatient treatment following hospital discharge by state Medicaid policy (n=59,567)

State Policy	Rate %	<i>P</i>	Adjusted Odds Ratio (AOR) (99% CI)
Prior authorization <12 annual outpatient mental health visits		<.0001	
Present	52.0		0.7 (.6-.7)
Absent	60.3		1.0
Mental health clinic coverage		<.0001	
Present	61.1		1.0 (1.0-1.2)
Absent	56.9		1.0

Role of Inpatient Service in Improving Long-term Outcomes

- Hospitalization for an acute psychotic episode provides opportunities to change illness trajectory
 - Assess problems/complications that might be amenable to intervention
 - Initiate a new intervention in a safe environment
- Challenges to inpatient approaches to changing illness trajectory
 - Focus is on immediate containment and safety
 - Additional workload and resources to implement post-discharge treatment interventions
 - Mindset of the inpatient service
- Inpatient staff receive feedback on failures, not successes
 - Discharged patients who do well do not come back
 - Discharged patients who do poorly come back

Psychiatrist Decisions in the Inpatient Treatment of Schizophrenia

Category of Decision	% Patients
Medication management	83%
Unit passes	52%
Psychosocial treatment	33%
Diagnostic evaluation	20%
Housing or employment following discharge	17%
Discipline	15%
Treatment after discharge	8%

Based on interviews with 30 inpatient psychiatrists about decisions that they made in the care of inpatients with schizophrenia during the past week.

Taking Action

Focusing on high risk patients:

- Not in treatment prior to admission
- Involuntary inpatient treatment
- History of medication non-adherence

System connections:

- Institutional relationships
- Shortening time to first appointment

Adequate coverage:

- Structure of benefits
- Options to receive “outpatient care” as “inpatients”

Common Sense Approaches Helping to Engage Patients to Outpatient Care Hospital Based Strategies

Before Discharge

- Set appointment
- Consider transportation
- Patient visit outpatient clinician
- Alert to management problems
- Refer to substance abuse treatment
- Motivational interviewing
- Telephone numbers

After Discharge

- Reminders of outpatient
- Check with patient or family to see if appointment kept
- Check with outpatient service to see if appointment kept

Helping to Engage Patients to Outpatient Care System Responsiveness

Outreach services

- telephone prompts
- letters/emails to remind clients about appointments
- outpatient referral coordinators
- home visits

Community/social support

- participation in self-help groups
- club house models (e.g., Fountain House)
- family engagement

Schizophrenia Inpatients Engaged and Not Engaged in Outpatient Care

Intervention	Engaged (N=80)%	Not Engaged (N=149) %	P
Patient met outpatient staff before discharge	45.0	27.5	.008
Started outpatient program before discharge	28.8	9.4	<.0001
Patient visited outpatient program before discharge	35.0	20.1	.01
Case manager assigned	21.5	20.0	0.91
D/C plan discussed with outpatient staff or clinician	81.3	57.7	0.001
Family meetings with inpatient staff	38.8	34.2	0.50
D/C plan discussed with family	53.8	51.7	0.77
Family member visited patient	68.8	58.4	0.12

Boyer et al., *American Journal of Psychiatry* 2000.

Some Service Interventions to Improve Outcomes Following Hospital Discharge

Increasing Level of Resources:

1. Data Sharing & Case Review
2. Telephone Case Management
3. Service Navigators
4. Critical Time Intervention

Data Sharing & Case Review

Behavioral Health Managers/Inpatient Staff

Quarterly data sharing: Behavioral health managers meet with leaders of 7 psychiatric hospitals review trends in admissions, LOS, and readmissions.

Case review: Focus on patients readmitted within 30 days of discharge, discuss factors that might have led to readmission – substance use, treatment non-adherence, premature discharge, etc.

Quality Improvement: Develop joint strategies to improve identified care processes: provider education about medication alternatives (long-acting injections), outpatient providers visit inpatients on day of discharge, case management initiated during admission, assign same inpatient physician to readmitted patients.

Data Sharing & Case Review

Selected Outcomes

Annual rate of readmissions:

- 17.7% pre-intervention
- 10.9% to 10.4% during intervention

Patients switched from oral to long-acting injectable medications: 38% reduction in readmissions over 27 months.

Patients receiving day of discharge outpatient visits: 20% reduction in readmissions over 17 months

Telephone Case Management

An intent-to-treat analysis with historical controls

Eligible patients: Inpatient discharge for psychiatric diagnosis, 18+ years, access to telephone, high risk for readmission based on past year service use (risk score).

Intervention: Telephone calls with master's level social workers who review discharge plans and try to link patients to community-based resources (housing assistance, transportation, clubs) and help patients to make follow-up appointments and fill medication prescriptions. Case managers serve as advocates, facilitate communication, monitor symptoms, and medication adherence. Services provided for up to 6 months. Four Full-time equivalent (FTE) social workers for six months managed 290 patients.

Andrew Kolbasovsky et al., *Case Management Journal* 2010 (Emblem Health).

Telephone Case Management Descriptive Statistics

	Intervention Group (N=306)	Baseline Group (N=290)
Age, mean, years	45.3 (16.6)	48.8 (18.0)
% Female	52.8	54.9
Disorder		
% Psychotic disorder	48.3	49.0
% Bipolar	33.1	33.3
% Depression	12.4	14.0
Insurance		
% Medicaid	26.9	22.9
% Medicare	46.8	57.8
% Commercial	24.5	19.3

Telephone Case Management Six Month Mean Utilization Outcomes

	Intervention Group (N=306)	Baseline Group (N=290)
Mental health inpatient days	5.2	13.3
Mental health inpatient costs	\$3,928	\$8,911
Mental health emergency visits	0.13	0.37
Mental health emergency costs	\$39	\$104
Mental health outpatient visits	11.20	9.20
Mental health outpatient costs	\$1,248	\$1,202
 Program Costs	 \$414	 --

Kolbasovsky et al., 2010. (Approximate \$5,000 per patient savings)

Indiana Behavioral Health Quality Improvement Project

Service Navigators

Setting: Four Community Mental Health Centers serving seven counties in northern Indiana

Intervention: Service navigators meet patients prior to inpatient discharge, talk to discharge planning teams and family members, provide transportation to appointments, and case loads 8-20.

Outcomes:

	Pre-Period (Historical Control)	Intervention-Period
7 day follow-up	42.0% (760/1808)	50.0% (235/468)
14 day follow-up	57.8% (959/1658)	70.4% (314/446)

Note: All Medicaid eligible members included in analysis whether or not they received any services from a services navigator.

Critical Time Intervention

Critical Time Intervention (CTI) clinical assesses needs and maintains high level of contact for 3 months following hospital discharge, sets goals, identifies barriers, home visits, accompanies patients to appointments, and use motivational interviewing.

	CTI Patients (n=64)	Usual Care (n=71)	P
Any outpatient visit, 30 days	96.9%	69.0%	<.001
Visit number, 30 days (mean)	6.67	1.97	<.001

Dixon et al., *Psychiatric Services* 2009 (Veterans, Serious Mental Illness (SMI) defined as schizophrenia, bipolar, major depression, psychosis not otherwise specified, excluded homeless patients and those in Assertive Community Treatment (ACT) teams.)

Other Intervention Modalities

Community Engagement: Align with local community resources

- community clinics
- self-help centers
- self-help groups

Data Exchange: Sharing information between sectors of care (mental health, general medical, substance abuse)

Payment Incentives: Incentives for evidence-based practices
Readmission penalties
Capitation and shared financial accountability across sectors

Closing Thoughts on Transition Management

Standardized information sharing between inpatient and outpatient providers

Early involvement of outpatient providers in discharge planning

Consumer and family involvement

Recovery orientation, personal treatment goals

Intensive telephone case management focused on high risk patients

Roles for improved health information technology and financial incentives