Improving the Continuity of Care for Patients With Schizophrenia: A Case Study Approach

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Disclosures

- D. Zubek is an employee of Otsuka America Pharmaceutical, Inc.

This presentation represents the opinions and research of the presenter only and not Otsuka America Pharmaceutical, Inc.
Won’t admit he has a problem. Won’t even admit he’s the patient.
Educational Objectives

- **Review current challenges** faced by case managers and treatment team members during the transition from hospital discharge to the community care setting for patients with schizophrenia.

- **Highlight published data on** outcomes related to patient relapse, outpatient visit attendance, re-hospitalization and the value of clinical bridging strategies.

- **Propose evidence-based interventions** to assist in discharge planning.

- **Discuss antipsychotic medications** and adherence issues.
Schizophrenia Background
Schizophrenia is a deteriorating and cyclical disease characterized by multiple psychotic relapses. Deterioration is most predominant during the early phase of the illness.

![Graph showing the progression of schizophrenia from premorbid to prodromal to onset, deterioration, and chronic/residual stages over age](chart.png)

A Variety of Symptom Clusters Contribute to Functional Impairment

**Positive symptoms**
- Delusions
- Disorganized thought
- Disorganized speech
- Hallucinations

**Negative symptoms**
- Flat or blunted affect and emotion
- Poverty of speech (alogia)
- Inability to experience pleasure (anhedonia)
- Lack of desire to form relationships (asociality)
- Lack of motivation (avolition)

**Cognitive impairment**
- Episodic memory
- Inappropriate affect
- Executive function
- Working memory

**Associated features**
- Lack of insight

**Functional impairment**
- Ability to work
- Coping with household tasks
- Establishing social relationships

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Every Relapse Can Negatively Impact a Patient With Schizophrenia

- Decreased response to medication\(^1\)
- Increased time to remission\(^1\)
- Worsening symptoms\(^2\)
- Increased health care costs\(^3\)

Lack of insight predisposes individuals to nonadherence, higher relapse rates, and increased hospitalization

“A majority of individuals with schizophrenia have poor insight regarding the fact that they have a psychotic illness”¹

Poor insight is a manifestation of the illness, rather than a coping strategy¹

Poorer insight was associated with missed medical appointments²:
• Patients were twice as likely not to adhere to medication and not to attend follow-up visits with HCPs

HCP=health care provider.
Patients with Schizophrenia have Comorbid Conditions that Increase Morbidity & Mortality

- Diabetes
- Metabolic syndrome
- Cardiovascular disease
- Other psychiatric conditions
- Infectious diseases
- Dental problems
- Alcohol abuse
- Substance abuse

Life expectancy ↓20%

Continuity of Care: Current State
Many Patients With Schizophrenia Fail to Transition From Inpatient Settings to CMHC*s

- Nearly two-thirds of patients did not attend their initial outpatient appointment
- ~40% of patients did not receive any outpatient visits within 30 days of discharge

CMHC=community mental health center.
Multiple Risk Factors Lead to Increased Risk of Missing CMHC* Appointments

- Lack of established outpatient clinician\(^1\)
- Lack of prior outpatient mental health care\(^2\)
- Short inpatient stay\(^2\)
- Ethnicity\(^2,3\)
- Involuntary patient admission\(^3\)
- Poverty\(^2\)
- Discharge against medical advice\(^3\)
- Substance abuse\(^3\)
- Lack of involvement in treatment decisions\(^4\)
- Lack of transportation\(^5\)

*CMHC = Community Mental Health Center

The Importance of Timely Outpatient Appointments

As the wait time for outpatient appointments increases, the attendance rate decreases.

Rehospitalization Within 30 Days for a Psychiatric Condition Is Common

Additionally, patients with shorter hospitalization (≤4 days) were associated with a 25% higher rate of 30-day readmission.

The Discharge Plan
Working Toward Recovery

Recovery could be defined as the development of new meaning and purpose as one grows beyond the catastrophe of mental illness.¹

- Self direction²
  - Patient defines his or her own life goals and designs a path to these goals
- Individualization²
  - Based on an individual’s unique strengths, needs, and preferences
- Empowerment²
  - Patients have authority to choose from a range of options
- Holistic²
  - Encompasses an individual’s whole life, including mind, body, and spirit
- Nonlinear²
- Strengths based²
- Peer support²
- Respect²
- Responsibility²
- Hope²
  - People can and do overcome the barriers and obstacles that confront them

The Discharge Plan Starts at Hospital Admission

- Creates a strong therapeutic alliance between patient, caregiver, and staff\(^1\)
- Improves patient quality of life\(^2\):
  - Secures adequate housing
  - Helps with financial planning
  - Refers patients for educational and/or social activity programs
- Provides patient with sense of involvement in his or her own care
  - Improves compliance\(^3\)
- Establishes continuity of care from the acute setting to the community setting\(^1\)

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Components of the Discharge Plan

**Living arrangements**
- Housing, food, clothing, transportation (bus passes), social support

**Financial needs, legal requirements**
- Financial aid, contact numbers for social services
- Possible justice system issues

**Daily activities**
- Employment, cooking, cleaning, budgeting

**Medication plan**
- Prescription information, medication options, contact information at CMHC

**Community treatment plan**
- Appointments with case manager, contact numbers, patient’s attitude toward adherence, follow-up psychiatric and vocational rehabilitation services, assessment for other nonpsychiatric medical services

Effective Communication Will Improve the Clinical Bridging of Patients from Acute to Outpatient Settings

Patients whose discharge plans were discussed by inpatient and outpatient clinicians were more than twice as likely to keep their initial outpatient appointment (43% vs 19%)

# Sample Checklist for Hospital Discharge Plan

**Discharge plan for:**

<table>
<thead>
<tr>
<th>At hospital discharge</th>
<th>Date:</th>
</tr>
</thead>
<tbody>
<tr>
<td>√ Patient understands why he/she is taking each medication, how to take it, timing</td>
<td></td>
</tr>
<tr>
<td>and dose of medication</td>
<td></td>
</tr>
<tr>
<td>√ Next appointment is:</td>
<td></td>
</tr>
<tr>
<td>√ Patient living arrangements:</td>
<td></td>
</tr>
<tr>
<td>√ Does the patient need a bus pass? Is it valid?</td>
<td></td>
</tr>
<tr>
<td>√ Need and eligibility for financial aid</td>
<td></td>
</tr>
<tr>
<td>√ Name and phone number of patient’s family member or caregiver</td>
<td></td>
</tr>
<tr>
<td>√ Case manager name and phone number</td>
<td></td>
</tr>
<tr>
<td>Y N Need referrals to day programs, support groups, alcohol/drug abuse programs?</td>
<td></td>
</tr>
<tr>
<td>Y N Need referrals to additional medical services?</td>
<td></td>
</tr>
<tr>
<td>Y N Need to meet with parole officer?</td>
<td></td>
</tr>
<tr>
<td>√ Assess work situation</td>
<td></td>
</tr>
</tbody>
</table>

Direct Patient Involvement in the Discharge Plan Improved Patient Follow-up

Implementing a discharge plan, providing education, and ensuring follow up increased the self-care abilities of patients with schizophrenia\(^1\)

- Patient met outpatient staff prior to discharge
- Discharge plan discussed with outpatient staff
- Patient visited outpatient program before discharge
- Patient started outpatient program before discharge

Increased patient follow up\(^2\)

Effective Transitioning Decreases Risk of Rehospitalization

Patients attending a single outpatient appointment were 6 times less likely to be readmitted to the hospital within 90 days.
This case study does not represent a single patient, but is based on a collection of patient data.
Bob Davis—Profile and History

- Bob Davis, age 25 years, diagnosed at age 17 with paranoid schizophrenia
- Lives with his family, who is afraid of him, and has little understanding of his illness
- Mr. Davis required 16 previous admissions to local crisis units
- Delusions have become increasingly more bizarre and fixed over past 2 years
- Employment unstable
- Several drug regimens tried, minimal success
  - Current medications include: quetiapine (Seroquel®), haloperidol (Haldol®), benztropine (Cogentin®), and trazodone (Desyrel®) for sleep
- Mr. Davis is now hospitalized, stable on a new antipsychotic medication and will be discharged soon

This case study does not represent a single patient, but is based on a collection of patient data.
Questions:

What is most important to include in Mr. Davis’s discharge plan from the nursing and case manager perspectives?

Would you advocate for Mr. Davis to initiate a long acting injectable antipsychotic? Why or why not?
## Interventions for Bob Davis

### Inpatient Hospital Nurse
- New medication education:
  - Role, actions, adverse effects, dosing, administration, adherence issues
- Education on medical health concerns and pertinent lab results
- Focus on Family education:
  - Disease state: symptom recognition to identify when Mr. Davis starts to relapse (indicators), role of medication
- Reinforce need for follow-up visit in community
- Contact outpatient nursing staff at CMHC

### Inpatient Case Manager
- Determine living situation—Is the patient returning to home with family?
- Communicate discharge instructions with outpatient staff (fax/phone); inc. initial visit, assess transportation needs
- Coordinate outpatient services: Have Mr. Davis meet outpatient staff prior to discharge – set specific goals
- Provide peer support contacts, list of anger management groups, client-centered social and work groups
- Include family members in plan
- Provide educational materials; refer family to support groups (NAMI)
- Medication access check – insurance, where/when fill Rx?

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This case study does not represent a single patient, but is based on a collection of patient data.

NAMI=National Alliance on Mental Illness.
Patient Case Study II

This case study does not represent a single patient, but is based on a collection of patient data.
Maria Lopez- Profile & History

- Maria Lopez, age 45 years; diagnosed at age 24 with schizophrenia
- Former teacher; was married with 2 children
- Currently divorced, unemployed for 5 years, on SSDI; children were removed
- Ms. Lopez has had 40 crisis unit admissions and multiple arrests
- History of alcohol & drug abuse
- Type II diabetes
- History of non-adherence
- Limited financial resources; lacks support
- Pays rent in a rooming house
- Hospital admission medications: risperidone, metformin, trazodone

This case study does not represent a single patient, but is based on a collection of patient data.

SSDI=social security disability insurance.
Clinical Question:

What actions can you put into the discharge plan to help improve Ms Lopez’ quality of life?

How can her adherence be increased to minimize future hospital admissions?

This case study does not represent a single patient, but is based on a collection of patient data.
Interventions for Maria Lopez

Switch the patient to a long-acting injectable antipsychotic and stabilize in hospital setting

**Inpatient Hospital Nurse**
- Administer first long acting antipsychotic injection
- Coordinate with case manager and reinforce next steps for follow-up community care for her injections
- Injectable medication education (actions, potential adverse side effects, dosing regimen, interactions, importance of adherence)
- Assess knowledge on diabetes course, metformin use, adherence, diet, exercise, general wellness, diabetes management and outcomes

**Inpatient Case Manager**
- Explore available supports—health coach or consider moving Ms. Lopez to a higher level of integrated case management, such as ACT (Assertive Community Team)
- Discharge plan discussed with CMHC and have community staff review with Ms. Lopez
- Order home health care visits
- Arrange meeting with substance abuse program personnel while in hospital
- Investigate local diabetes-specific and/or weight management programs

This case study does not represent a single patient, but is based on a collection of patient data.
Pharmacotherapy and Adherence
My meds spoke to me this morning.
What did they say?
"The meds aren't working."
Poor Adherence Is Prominent in Patients With Schizophrenia

- The average rate of adherence in schizophrenia is 51%-70%
- 75% of patients are nonadherent within 2 years of discharge

Nonadherent patients were more likely to be hospitalized

<table>
<thead>
<tr>
<th>Adherence Status</th>
<th>Hospitalized Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;70% Adherence</td>
<td>22%</td>
</tr>
<tr>
<td>&gt;70% Adherence</td>
<td>14%</td>
</tr>
</tbody>
</table>

Even Small Gaps in Antipsychotic Medication Increases The Risk of Hospitalization

Missing medication for as little as 1-10 days significantly raised the risk of hospitalization

<table>
<thead>
<tr>
<th>Duration of Medication Gap</th>
<th>Odds Ratio (OR)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-10 Days</td>
<td>2.0†</td>
</tr>
<tr>
<td>11-30 Days</td>
<td>2.8‡</td>
</tr>
<tr>
<td>&gt;30 Days</td>
<td>4.0‡</td>
</tr>
</tbody>
</table>

* Risk of hospitalization relative to patients with no medication gap; †P=.004; ‡P<.001.
The Need for Lifelong Medication

Relapsing nature of illness + Residual symptoms = Lifelong therapy requirements

Therapy

Antipsychotic classifications

Typical antipsychotics
- Chlorpromazine
- Haloperidol

Atypical antipsychotics
- Clozapine
- Olanzapine
- Risperidone
- Aripiprazole
- Ziprasidone
- Quetiapine

Formulation and administration choices

Oral and long-acting injectables (LAIs)

Long Acting Injectables
- Haloperidol decanoate
- Fluphenazine decanoate
- Risperdal® Consta® (risperdal)
- Invega® Sustenna® (paliperidone)
- Zyprexa® Relprevv™ (olanzapine)
Considerations for Oral Antipsychotic Utilization

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Patient feels control over treatment&lt;sup&gt;1&lt;/sup&gt;</td>
<td>• Potential for accidental or deliberate overdose</td>
</tr>
<tr>
<td>• Medication can be discontinued relatively quickly</td>
<td>• Administration is more “public”&lt;sup&gt;2&lt;/sup&gt;</td>
</tr>
<tr>
<td>• Some may find oral more convenient and easily taken</td>
<td>• Monitoring adherence is a challenge&lt;sup&gt;2&lt;/sup&gt;</td>
</tr>
<tr>
<td>• Historical standard of medication delivery</td>
<td>• Potentially lost or stolen&lt;sup&gt;3&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

Considerations for LAI Antipsychotic Utilization

### Long-acting injectable antipsychotics

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eliminates covert nonadherence(^1,2)</td>
<td>Requires longer time to steady state(^3)</td>
</tr>
<tr>
<td>Convienence(^1)</td>
<td>Acute treatment requires rapid dose titration(^3)</td>
</tr>
<tr>
<td>Reduced variability in absorption(^1)</td>
<td>Oral supplements may add to complexity of titration process(^3)</td>
</tr>
<tr>
<td>Enable a lower effective dose to be used(^1)</td>
<td>Discomfort at injection site(^3)</td>
</tr>
<tr>
<td>Reasons for nonadherence can be instantly addressed(^2)</td>
<td>Side effects may persist beyond treatment termination(^3)</td>
</tr>
<tr>
<td>Type of administration enhances confidentiality(^2)</td>
<td>Potential logistic challenges(^4)</td>
</tr>
<tr>
<td>Distinguishes between nonadherence and nonresponse(^3)</td>
<td>Cost of branded atypical LAI are higher than generic options</td>
</tr>
<tr>
<td>Regular contact with clinician(^3)</td>
<td></td>
</tr>
</tbody>
</table>

Clinicians Overestimate Medication Usage in Their Patients With Schizophrenia

What proportion of patients take >80% of their doses?

N=47

* Please indicate the proportion of patients with schizophrenia you believe to be adherent, based on your reading of the treatment literature.

† What proportion of your patients with schizophrenia are adherent?

Patients Overestimate Their Medication Usage

- N=255 patients with mental illness, of which 154 (58%) patients were diagnosed with schizophrenia.
Poor Medication Adherence Is Common Following Hospital Discharge

25% of patients missed medication doses in the first 2 weeks following hospital discharge.
Adherence Barriers to Overcome

**Patient-Related**
- Cultural and religious beliefs
- Language skills
- Stigma
- Cognitive deficits
- Lack of social support
- Comorbidities
- Lack of insight

**Medication-Related**
- Poor therapeutic alliance
- Complex medication regimen
- Lack of perceived benefits
- Lack of disease and medication education
- Side effects
- Medication efficacy

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Conclusions

- Patients with schizophrenia transitioning from the acute psychiatric care setting to the community possess unique and individualized challenges for case management.

- Many may fail to effectively connect to community care due to various disease state, clinical practice and socioeconomic issues, increasing the risk of re-hospitalization and decreasing quality of life.

- The most meaningful and successful linkage strategies involve patient engagement in discharge planning.

- Antipsychotic therapy is the cornerstone of the modern management of schizophrenia and is a key component of the discharge plan; however, non-adherence is extremely common and solving this problem is multi-faceted.
Contact Information

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Questions to Pose to the Group
Discussion

What are some characteristics of continuity of care successes—that you have seen?
What do you think are the most important elements of a discharge plan?
What can you do to improve a discharge plan when the patient does not have a caregiver?