Schizophrenia Relapse Reduction Program

Schizophrenia and Relapse: Key Issues and Concerns for Payers

This resource is provided for informational purposes only and is not intended as reimbursement or legal advice. You should seek independent, qualified professional advice to ensure that your organization is in compliance with the complex legal and regulatory requirements governing health care services, and that treatment decisions are made consistent with the applicable standards of care.

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Schizophrenia
Enduring and Costly

Schizophrenia affects roughly

1.1%

of the US population

(approximately 2.6 million adults).[2,3]

Millions Are Affected

Schizophrenia is a chronic, relapsing, and disabling disorder characterized by symptoms such as hallucinations, disorganized thinking, affective flattening (lack of emotion), apathy, and social withdrawal.[1]

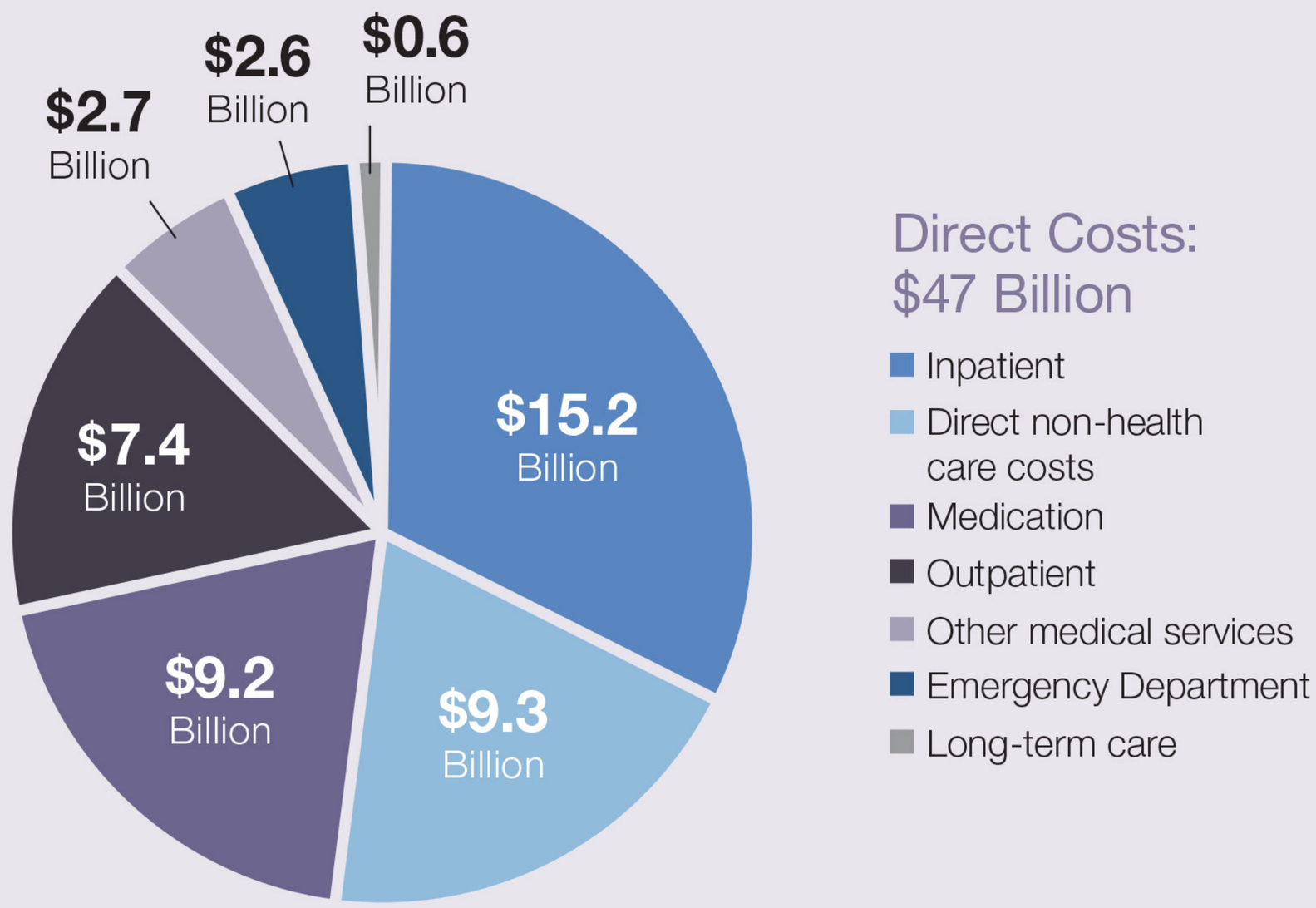
Characteristics of Schizophrenia

Schizophrenia is characterized by recurrent episodes of psychosis.[1] Abnormalities in neurocognition, such as learning and memory deficits and slower processing speed, are also considered to be a core aspect of schizophrenia affecting relationship development, medication adherence, and employment status.[1] In addition, patients may also present with some of the following comorbidities[1,4]:

- Cardiovascular disease such as hypertension and hyperlipidemia
- Diabetes, which may be associated with some second-generation antipsychotic medications
- Respiratory disease such as chronic obstructive pulmonary disease (COPD)
- Infectious disease (HIV and hepatitis C) as a result of at-risk behavior
- Other psychiatric disorders including depression, anxiety, and substance use (smoking, alcohol, and other drug use)

In 2010, there were over 397,000 hospital stays for schizophrenia and other psychotic disorders, and of those, approximately 1 in 4 (22%) were readmitted within 30 days.[5]

Estimated Annual Direct Costs Are Approximately $47 Billion (in 2013 U.S. dollars)[6]



Excess annual direct non-health care costs were estimated for law enforcement, homeless shelters, and research/training related to schizophrenia.

Reducing Relapse
A Measure of Treatment Success

Treatment goals focus on eliminating symptoms, maximizing quality of life and functioning, and preventing relapse.[4]

Relapse May Lead to Patient Decline and Expanding Costs

Relapses can be associated with:

- Worsening symptoms (psychosis, cognitive impairment, social deficits) or rehospitalization[7,8]
- Decreased response to medication[9]
- Failure to return to prior level of functioning[7]

Past relapses may predict an increased risk of future relapses and higher costs.[10,11] The risk of relapse is great, with the 1-year rate as high as 50% and the 5-year rate as high as 80%.[8,12]

Along with psychosocial interventions such as family and community interventions and cognitive behavior therapy, the basis of treatment for schizophrenia is antipsychotic medication.[4]

In one analysis, poor adherence to antipsychotic medications was associated with a higher risk of relapse and rehospitalization, and the US national rehospitalization costs related to having low antipsychotic adherence were estimated at approximately $1.5 billion.[13]

Patients with recurrent relapse related to low adherence are candidates for a long-acting injectable (LAI) antipsychotic medication.[4] LAIs may reduce the risk of relapse. Even though the relapse criteria varied, a meta-analysis revealed that fewer patients taking LAIs (22%) relapsed as compared with those taking oral medications (33%).[14]

Low medication adherence can result in increased risk of relapse[13]

Medication Adherence Is Critical but Difficult to Achieve

Low adherence is prevalent in patients with schizophrenia. In an analysis of patients in a large commercial database, 73% were identified as having low adherence (as defined by a medication possession ratio of <70%)[15]:

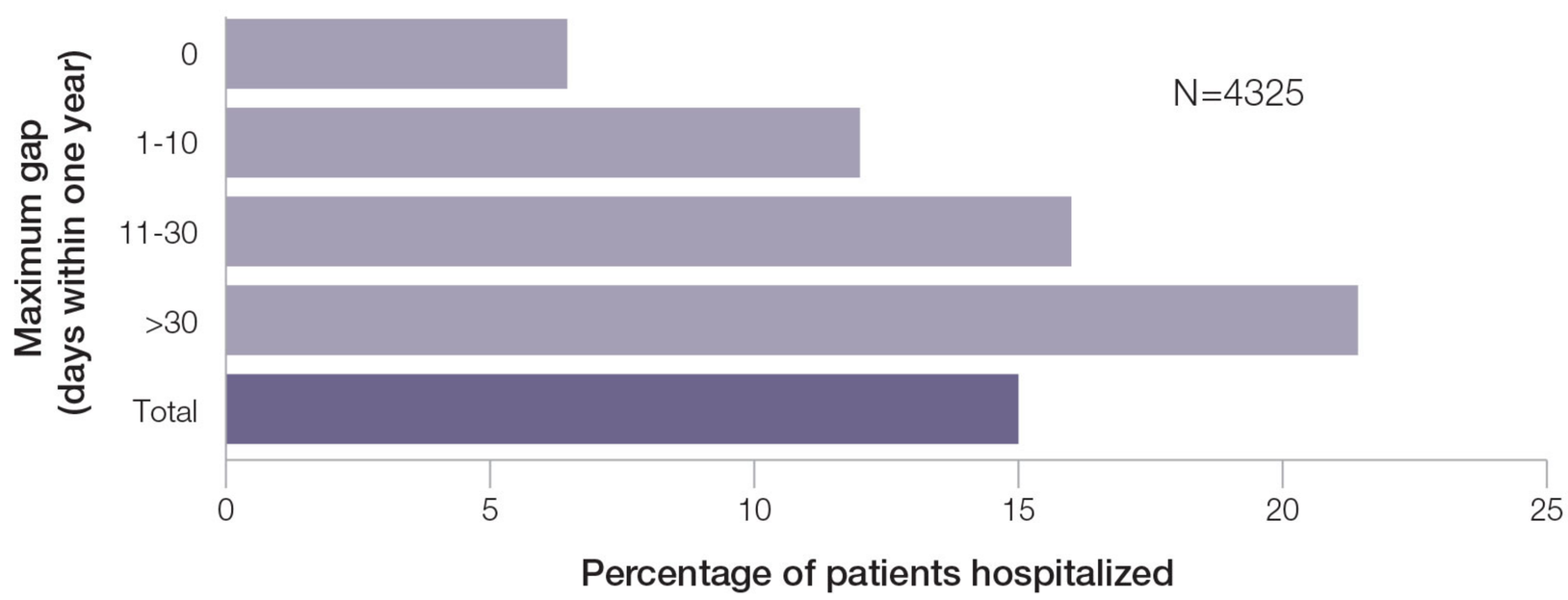
- Low adherence can result in increased risk of relapse, increased resource use, and increased costs to the health care system[13]
- Low adherence resulting in even a few days' gap in therapy increases the risk of rehospitalization[16]

The most-common reasons for having low medication adherence can include lack of efficacy or symptom worsening and side effects.[17] Other reasons include delusional thinking, lack of insight concerning the disorder, co-occurring substance abuse, and lack of supportive help from family/caregivers and providers. Overcoming these barriers to adherence is thought to be critical to improving outcomes.[18]

In a retrospective review of California Medicaid claims, therapy gaps of (Figure)[16]:

- 1-10 days resulted in nearly 2 times the risk of rehospitalization
- 11-30 days resulted in nearly 3 times the risk of rehospitalization
- More than 30 days resulted in nearly 4 times the risk of rehospitalzation

Percentage of Patients With Schizophrenia Hospitalized by Maximum Gap in Therapy[16,a]



[a] All pairwise comparisons were significant at $P<0.005$.

The Case for Improvement

Though utilization of behavioral health services has increased over time, a gap still remains. Over 60% of adults with a diagnosable disorder do not receive mental health services.[19]

The Case for Improvement (Cont'd)

The Affordable Care Act (ACA) seeks to improve care coordination and patient safety in the mental health setting.[20] Appropriate follow-up care after a hospital discharge for patients with mental illness may help improve health outcomes, yet, according to the National Committee for Quality Assurance (NCQA) follow-up in the form of outpatient visits, intensive outpatient encounters, or partial hospitalization with a mental health provider is lagging.[21]

Payers should be cognizant of issues relating to schizophrenia and the risk of relapse and rehospitalization. Prevention of future relapse is a crucial goal of long-term therapy that is dependent on a coordinated effort between payers, community mental health centers, mental health organizations, pharmacists, and primary care physicians.

Schizophrenia and Relapse Reduction

Managing Schizophrenia

Reducing Relapses

Addressing Medication Adherence

Impacting Outcomes

References: 1. American Psychiatric Association (APA). Schizophrenia spectrum and other psychotic disorders. In: *Diagnostic and Statistical Manual of Mental Disorders,* Fifth Edition. Arlington, VA: APA; 2013:87-122. **2.** Regier DA, Narrow WE, Rae DS, et al. The de facto US mental and addictive disorders service system: epidemiologic catchment area prospective 1-year prevalence rates of disorders and services. *Arch Gen Psychiatry.* 1993;50(2):85-94. **3.** US Census Bureau. 2010 Census Briefs. Age and Sex Composition: 2010 (C2010BR-03). Issued May 2011. http://www.census.gov/prod/cen2010/briefs/c2010br-03.pdf. Accessed December 6, 2013. **4.** Lehman AF, Lieberman JA, Dixon, LB, et al, for the Work Group on Schizophrenia, American Psychiatric Association. *Practice Guideline for the Treatment of Patients with Schizophrenia*. II. Formulation and Implementation of a Treatment Plan. Arlington, VA: American Psychiatric Publishing, Inc.; 2004. **5.** Elixhauser A, Steiner C. Readmissions to U.S. Hospitals by Diagnosis, 2010. HCUP Statistical Brief #153. April 2013. Agency for Healthcare Research and Quality, Rockville, MD. http://www.hcup-us.ahrq.gov/reports/statbriefs/sb153.pdf. Accessed January 27, 2014. **6.** Data on File: ABIMAI–1010. **7.** Lieberman JA, Perkins D, Belger A, et al. The early stages of schizophrenia: speculations on pathogenesis, pathophysiology, and therapeutic approaches. *Biol Psychiatry.* 2001;50(11):884-897. **8.** Robinson D, Woerner MG, Alvir JMJ, et al. Predictors of relapse following response from a first episode of schizophrenia or schizoaffective disorder. *Arch Gen Psychiatry.* 1999;56(3):241-247. **9.** Lieberman JA, Alvir JM, Koreen A, et al. Psychobiologic correlates of treatment response in schizophrenia. *Neuropsychopharmacology*. 1996;14(3 suppl):13S-21S. **10.** Ascher-Svanum H, Zhu B, Faries DE, et al. The cost of relapse and the predictors of relapse in the treatment of schizophrenia. *BMC Psychiatry.* 2010;10:2 [Additional file 3: Table S3. Logistic regression analyses of relapse predictors for the 1557 participants and by relapse status]. **11.** Ascher-Svanum H, Zhu B, Faries DE, et al. The cost of relapse and the predictors of relapse in the treatment of schizophrenia. *BMC Psychiatry*. 2010;10:2. **12.** Schennach R, Naber D, Ruther E, et al. Predictors of relapse in the year after hospital discharge among patients with schizophrenia. *Psychiatr Serv*. 2012;63(1):87-90. **13.** Sun SX, Liu GG, Christensen DB, Fu AZ. Review and analysis of hospitalization costs associated with antipsychotic nonadherence in the treatment of schizophrenia in the United States. *Curr Med Res Opin*. 2007;23(10):2305-2312. **14.** Leucht C, Heres S, Kane JM, et al. Oral versus depot antipsychotic drugs for schizophrenia—a critical systematic review and meta-analysis of randomised long-term trials. *Schizophr Res*. 2011;127(1-3):83-92. **15.** Wong B, Offord S, Mirksi D, Lin J. Characteristics associated with antipsychotic drug adherence among schizophrenic patients in a US managed care environment. Presented at: 2012 Meeting of the American Psychiatric Association; May 5-9, 2012; Philadelphia, PA. Poster NR6-25. **16.** Weiden PJ, Kozma C, Grogg A, Locklear J. Partial compliance and risk of rehospitalization among California Medicaid patients with schizophrenia. *Psychiatr Serv.* 2004;55(8):886-891. **17.** Liu-Seifert H, Adams DH, Kinon BJ. Discontinuation of treatment of schizophrenic patients is driven by poor symptom response: a pooled post-hoc analysis of four atypical antipsychotic drugs. *BMC Med*. 2005;3(21):1-10. **18.** Wilder CM, Elbogen EB, Moser LL, Swanson JW, Swartz MS. Medication preferences and adherence among individuals with severe mental illness and psychiatric advance directives. *Psychiatr Serv.* 2010;61(4):380-385. **19.** Kaiser Family Foundation (KFF). *Mental Health Financing in the United States: A Primer*. Menlo Park, CA: KFF; April, 2011. http://kaiserfamilyfoundation.files.wordpress.com/2013/01/8182.pdf. Accessed November 22, 2013. **20.** Kaiser Family Foundation. Focus on Health Reform: Summary of the Affordable Care Act. Menlo Park, CA: Kaiser Family Foundation; April 23, 2013. http://kaiserfamilyfoundation.files.wordpress.com/2011/04/8061-021.pdf. Accessed December 6, 2013. **21.** National Committee for Quality Assurance. *Improving Quality and Patient Experience: The State of Health Care Quality 2013*. Washington, DC: National Committee for Quality Assurance; 2013.

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