

# Schizophrenia and Hospital Re-admissions

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# Agenda

## Schizophrenia and Re-admissions

- **Economic Burden of Relapse**
  - *Cost of treating patients with schizophrenia who have illness-related crisis events.* Zhu et al.
  - *Health Care Utilization and costs among Medicaid-enrolled patients with schizophrenia experiencing multiple psychiatric relapses.* Karve et al.
  - *Patterns of relapse and associated cost burden in schizophrenia patients receiving atypical antipsychotics.* Lafeuille et al.
- **Current quality measures in schizophrenia**
- **Performance against select quality measures**
  - *Predicting factors of HEDIS quality measure achievement in Medicaid adults with schizophrenia.* Lafeuille et al.
  - *Factors related to receiving psychiatric follow-up care post-discharge among Medicaid patients with schizophrenia treated with antipsychotic therapy.* Cao et al.

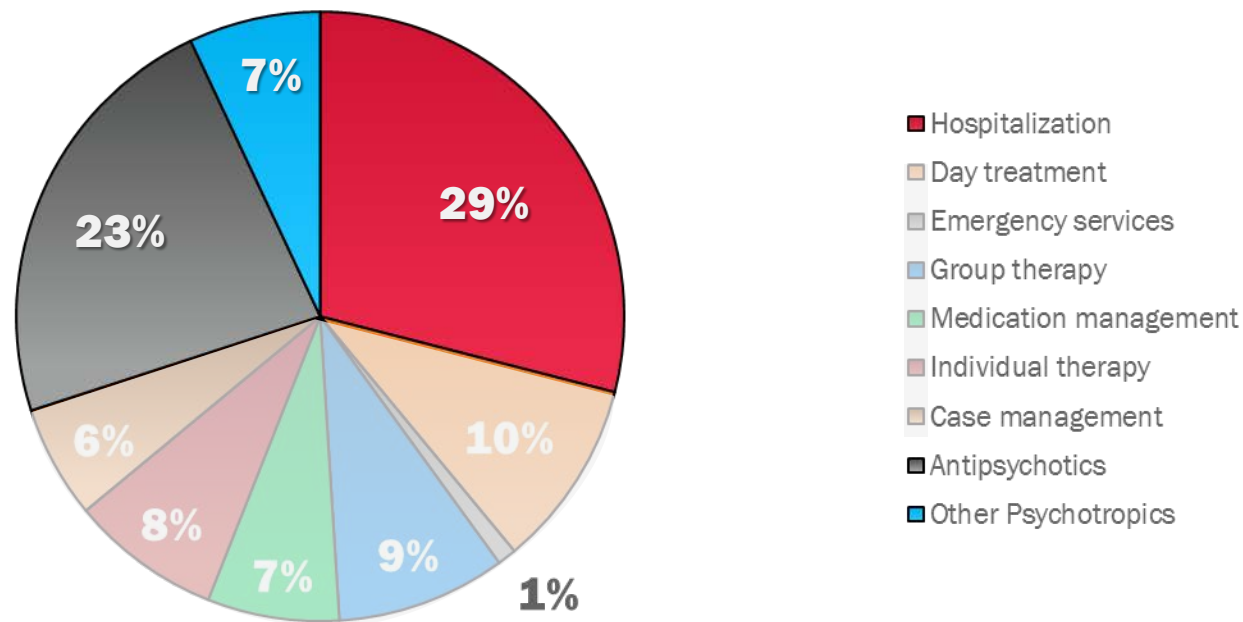
# Economic Burden of Relapse

# Cost Drivers for Patients With Schizophrenia-related Crisis Events

**Total mental health treatment costs per patient, per year, total \$16,098 (1997–2003)<sup>1</sup>**

**Crisis events were defined as:**

- Psychiatric hospitalization in prior 6 months
- Arrested in previous 6 months
- Violent behavior in previous 4 weeks
- Concurrent substance abuse diagnosis
- Attempted suicide in past 4 weeks



n=1557 patients

**Hospitalization and Pharmacotherapy are the largest contributors to cost**

Source: Zhu B, et al. *BMC Psychiatry*. 2008;8(72):doi:10.1186/1471-244X-8-72.

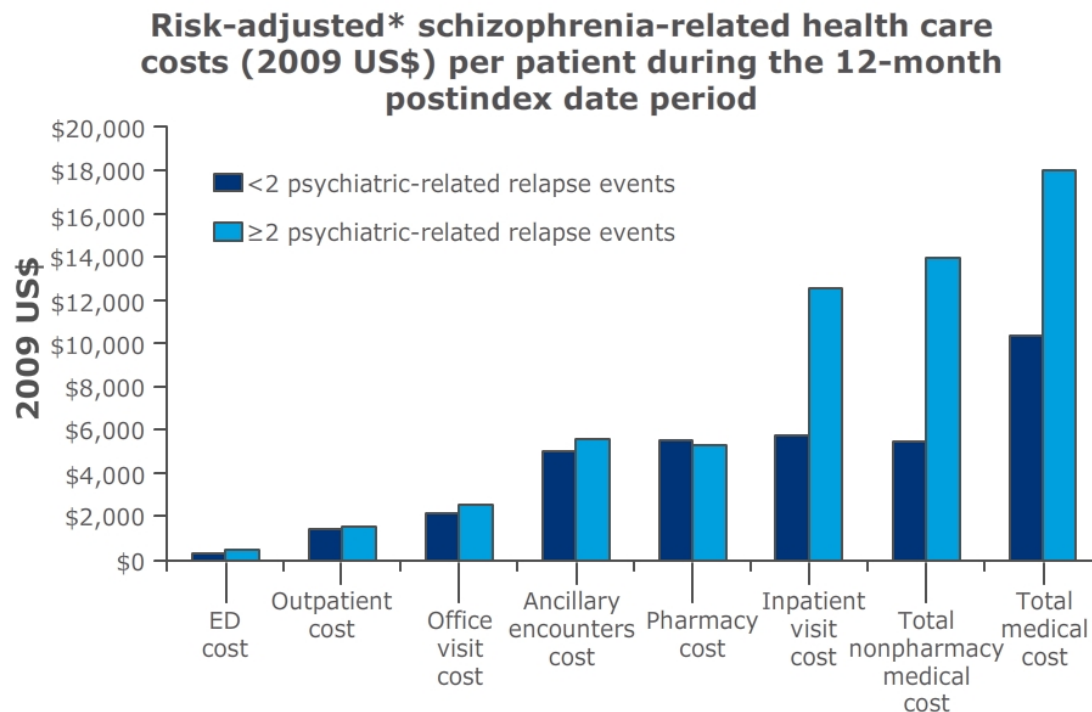
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# Economic Consequences of Relapse

- Examined data from 19,813 patients with schizophrenia taking SGOA
- Patients with  $\geq 2$  relapse events had significantly higher rates of schizophrenia-related inpatient, outpatient and ED visits vs patients with  $< 2$  relapses
- Schizophrenia-related total medical costs per patient were  $\sim 1.7$  times higher among patients with  $\geq 2$  relapses vs patients with  $< 2$  relapses



## Schizophrenia-related cost ( $P < 0.001$ ) by care setting

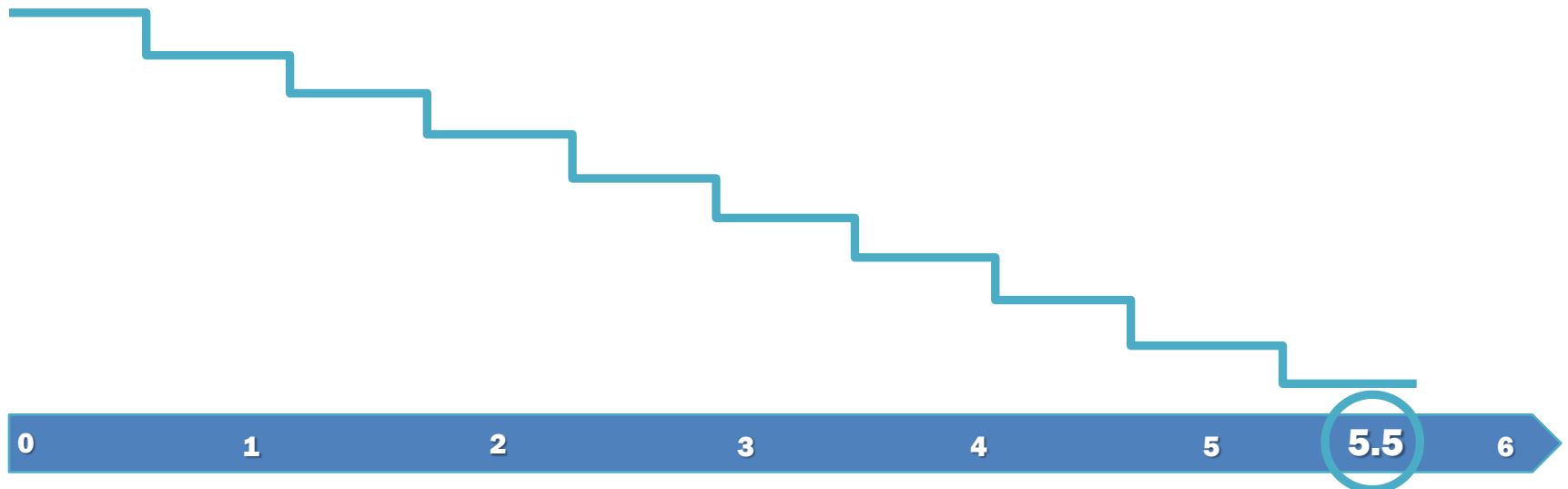
\*Predicted cost based on GLM, adjusted for gender, race, health coverage, eligibility status, mental health substance abuse coverage, age, CCI score, and occurrence of psychiatric-related relapse events.

SGOA = Second generation oral antipsychotics

Source: Karve SJ et al. Health Outcomes Research in Medicine, Volume 3, Issue 4, November 2012, Pages e183-e194, ISSN 1877-1319, 10.1016/j.ehrm.2012.06.003.

# Each Relapse Has Significant Economic Consequences

**In a recently reported study, newly treated patients with schizophrenia had a mean of 9 relapse episodes over a mean observation period of ~5.5 years<sup>1</sup>**



**A cost-based algorithm from a payer's perspective was developed to identify relapsers and relapse episodes based on weeks associated with high cost increase from baseline and high absolute weekly cost**

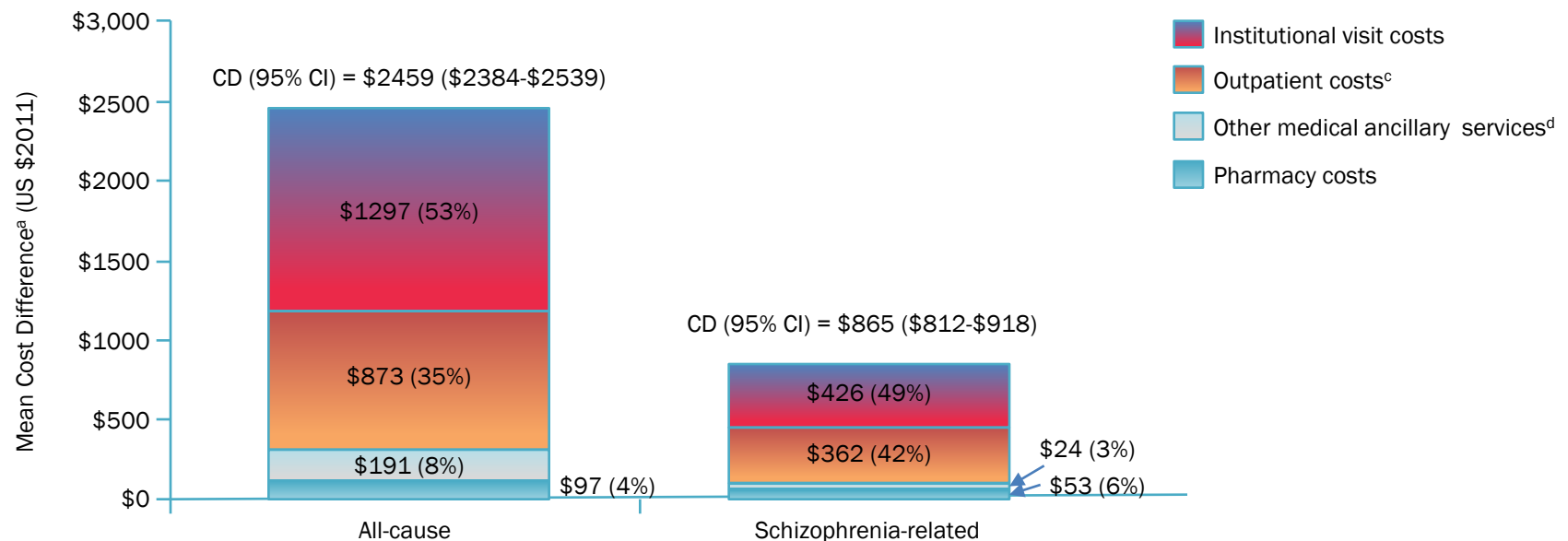
**The mean total healthcare cost per episode is \$35,725**

**The mean duration of each relapse episode is 10.6 weeks**

Source: Lafeuille MH et al. Journal of Medical Economics Vol. 16, No. 11, 2013, 1290–1299. 1369-6998 Article 0095.R1/841705 doi:10.3111/13696998.2013.841705.

# Consequences of Relapse May Be 6 Times More Costly Than the Weekly Baseline Maintenance Costs

**Relapses were shown to cost nearly 6 times the baseline weekly maintenance cost (\$2,459 vs \$425)<sup>1</sup>**



**The majority of this cost was associated with institutional visits and hospitalization**

Source: Lafeuille MH et al. Journal of Medical Economics Vol. 16, No. 11, 2013, 1290–1299. 1369-6998 Article 0095.R1/841705 doi:10.3111/13696998.2013.841705.

# Current Quality Measures in Schizophrenia



# Quality Measures in Schizophrenia

- **Inpatient**

- Hours of physical restraint use
- Hours of seclusion use
- Multiple antipsychotics at discharge
- Multiple antipsychotics at discharge with justification
- Continuing care plan created
- Continuing care plan transmitted

- **Outpatient**

- Diabetes screening for people with schizophrenia or bipolar disorder who are using antipsychotic medications
- Diabetes monitoring for people with diabetes and schizophrenia
- Cardiovascular monitoring for people with cardiovascular disease and schizophrenia
- Adherence to antipsychotic medications for individuals with schizophrenia

- **Care Transitions**

- Follow-up after hospitalization for schizophrenia (7- and 30-day)

Sources: Agency for Healthcare Research and Quality; Centers for Medicare & Medicaid Services; National Committee for Quality Assurance; National Quality Forum endorsed measures; The Joint Commission National Quality Measures hospital based inpatient psychiatric services

# Performance Against Select Measures

# Performance Against Schizophrenia HEDIS Measures

- **OBJECTIVE**

- To identify the predictive factors of goal achievement for HEDIS quality measures based on claims data and to determine the role of AP adherence in particular

- **METHODS**

- Data Source
  - Health claims from Medicaid databases for Florida (1997Q3-2011Q2), New Jersey (1997Q1-2012Q1), Iowa (1998Q1-2012Q1), Missouri (1997Q1-2012Q1), and Kansas (2001Q1-2012Q1)
- Study Design and Population
  - A retrospective longitudinal cohort design was used
  - Medicaid patients with schizophrenia
  - 25 to 64 years of age
  - Continuous Medicaid enrollment
  - Additional inclusion/exclusion criteria applied for each HEDIS measure

HEDIS Measure	Achievement Definition
Continuity of AP Medications	Achieving a proportion of days covered (PDC) of at least 80% for AP during the measurement year
Diabetes Screening	A glucose test or an HbA <sub>1c</sub> test performed during the measurement year
Diabetes Monitoring	An HbA <sub>1c</sub> test and an LDL-C test performed during the measurement year
Cardiovascular Health Monitoring	An LDL-C test performed during the measurement year

- **RESULTS**

- Goal achievement percentages (M1: 46.3%; M2: 75.4%; M3: 50.5%; M4: 52.6%) were consistent with previous NQF analyses (M1: 61.4%; M2: 12.1%; M3: 57.3%; M4: 54.5%), with the exception of M2 for which the measure definitions were not identical
- For all measures CCI was found to be a significant predictor of goal achievement
- Demographic characteristics were predictive of achievement status for some of the measures, for example, female gender was significantly associated with achievement status for M2 and M4, but not for M1 and M3
- For the medication-related measure (M1), baseline AP use was associated with a 2-fold increase in the likelihood of adherence goal achievement as compared with no AP use (OR, 2.34; 95% CI, 1.99, 2.74;  $P < 0.0001$ )
- Among comorbidity-related measures (M2 through M4), AP use was predictive only of M2 achievement, whereas AP use was associated with a 33% reduction in the likelihood of goal achievement (OR, 0.67; 95% CI, 0.59, 0.76;  $P < 0.0001$ ). AP use was not associated with achievement on M3 ( $P = 0.8306$ ) or M4 ( $P = 0.6812$ )

- **CONCLUSION**

- This information may help health plans manage the health of Medicaid populations to better address the quality of care for their patients with schizophrenia

Source: Lafeuille M et al. PREDICTING FACTORS OF HEDIS QUALITY MEASURE ACHIEVEMENT IN MEDICAID ADULTS WITH SCHIZOPHRENIA. Presented at the American Psychiatric Association 65th Institute on Psychiatric Services (IPS), October 10–13, 2013, Philadelphia, PA, USA

# Performance Against Care Transition Measures

- **OBJECTIVE**

- Identify demographic, clinical, treatment, and hospital-related factors associated with lack of follow-up outpatient care within a 30-day period post-discharge and lack of subsequent antipsychotic medication within a 45-day period post-discharge among Medicaid enrollees with schizophrenia who were hospitalized

- **METHODS**

- Data Source
  - Truven Health MarketScan® Hospital Drug Database linked to health insurance claims from the MarketScan® Multi-State Medicaid Database
- Patient Selection
  - Hospitalization between 7/01/2005 and 5/15/ 2011 with a diagnosis of schizophrenia
  - Age ≥18 years at admission
  - Continuous medical and prescription coverage
  - A Discharge to a community setting

- **RESULTS**

- 1312 met inclusion criteria
- 701 (53.4%) did not have a follow-up visit within 30 days after hospital discharge;
- 427 (32.5%) did not have subsequent antipsychotic medication use within 45 days of hospital discharge
- Differences were noted between patients with a follow-up visit within 30 days after discharge compared with patients who did not have a follow-up visit within 30 days after discharge with respect to race ( $P < 0.001$ ), proportion with capitated insurance ( $P = 0.035$ ), and year of admission ( $P < 0.001$ )
- Race was the only variable that was significantly different between patients with subsequent antipsychotic medication use within 45 days of hospital discharge and those without subsequent medication use within 45 days of hospital discharge ( $P < 0.001$ )

- **CONCLUSION**

- More than half did not have a follow-up visit within 30 days after hospital discharge
  - Individuals diagnosed with a substance-related disorder had a decreased likelihood of receiving follow-up care
  - More likely to have a follow-up care if they had received care from a psychiatrist/psychologist during their hospitalization
- Approximately one-third did not receive subsequent antipsychotic medication within 45 days after hospital discharge
- Enrollment in a capitated insurance plan was positively associated with follow-up visits but was negatively associated with subsequent antipsychotic medication use
- Compared with 2005, patients hospitalized in 2010/2011 were almost 3 times more likely to receive follow-up care within 30 days of discharge, indicating possible improvement in follow-up care post-discharge

Source: Cao, Z et al. Psychiatric Follow-up Care Post-Discharge among Medicaid Patients with Schizophrenia Treated with Antipsychotic Therapy. 166th Annual Meeting of the American Psychiatric Association, May 18–22, 2013, San Francisco, CA