

# Medication Access Economics: Michigan Data and Implications

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# Background

- In 2008 Ohio considered adoption of a prior authorization requirement for atypical antipsychotic drugs for mental health patients in the Medicaid fee-for-service program.
- Driscoll & Fleeter, an Ohio-based economics and public policy consulting firm, was contracted by NAMI Ohio to study the impact of this proposal.
- The study, whose findings are summarized here, was completed in August 2008.
- Ohio's Prior Authorization policy was adopted later in August 2008.

# Rationale for Prior Authorization

- Prior Authorization and step therapy protocols require that a patient first use a “preferred” drug (and have it prove ineffective) before they are allowed to use a non-preferred drug.
- Savings can be found because preferred drugs are typically older and less costly than newer drugs.
- Prior authorization is fairly common for treatment of physical ailments, but less common for mental health patients.

# Estimated Savings from Prior Authorization in Ohio

- Ohio produced a series of estimates beginning at \$47 million annually and ending up at \$6 million.
- The final \$6 million estimate also included drugs other than atypical antipsychotics.
- There was no documentation of how the state computed any of the estimates.
- Estimated savings only accrue to the pharmacy portion of the state Medicaid budget.
- Costs of prior authorization typically occur outside of the pharmacy budget.

# Issues Regarding the Cost-Effectiveness of Prior Authorization for Mental Health Drugs

- Are older “first generation” antipsychotic drugs less effective in controlling symptoms?
- Are newer “second generation” atypical antipsychotic drugs typically better tolerated by patients and have fewer side effects?
- How might the answers to the first two questions affect patients’ ability to remain stabilized on their medications?
- How might these considerations impact the cost effectiveness of newer drugs?

# But Prior Authorization Is Often Used for Physical Ailments Isn't it?

- Just because Prior Authorization and Step Therapy policies are commonplace for physical ailments does not mean they are equally appropriate for treatment of mental health patients.
- There are 4 main differences in the impact of prior authorization policies on mental health patients as compared to physical health patients.

# Differences Between Prior Authorization for Physical vs. Mental Health Conditions

1. There is often less predictability in the effectiveness of mental health drugs on any given patient.
  2. There is often less predictability in the side effects of mental health drugs on any given patient.
- These two factors can influence the likelihood that mental health patients will stay on their medication.

# Differences Between Prior Authorization for Physical vs. Mental Health Conditions

3. The negative impact of a drug that is ineffective or poorly tolerated may be more immediate for a severely mentally ill patient than for many patients with physical ailments.
4. Mental health patients are generally less able to manage their own care (e.g. make follow up appointments) than physical health patients.
  - These two factors imply a smaller margin for error with initially prescribed antipsychotic drugs (potentially resulting in more costly outcomes) than is typically the case for physical health drugs.

# Ohio's Prior Authorization Program for Mental Health Drugs

- Ohio “grandfathered” patients who were established and stable users of single therapy atypical antipsychotics (these patients could stay on their current medication).
- Ohio exempted from Prior Authorization any prescriptions written for patients by a psychiatrist (allowed to prescribe non-preferred antidepressants in the standard tablet/capsule dosage forms without prior authorization).

# Ohio's Prior Authorization Program for Mental Health Drugs

- Ohio placed some atypical antipsychotics on the Medicaid fee-for-service Preferred Drug List (PDL).
- Prior Authorization in Ohio only applied to Medicaid Fee-for-Service patients (not to Managed Care patients).
- These 4 features mitigated the adverse impact of the Prior Authorization program in Ohio upon its implementation.

# Methodology for Estimating the Impact of Prior Authorization in Ohio

- Completion of this project required both the *collection of data* and an extensive *review of existing literature* on Prior authorization.
- In order to estimate the cost of implementing Prior Authorization in Ohio it was necessary to estimate the number of patients for which the policy would apply and then the number expected to have “adverse outcomes”, as well as the cost of such outcomes.
- Throughout the course of this project, care was taken to err on the side of being conservative when estimating costs.

# Literature Review

- The literature review included studies of the impact of Prior Authorization policies in other states, as well as studies examining specific effects, including:
  - A. The likelihood of severely mentally ill patients going off their medication
  - B. The cost of adverse outcomes resulting from patients going off their medication
- Virtually all of the academic studies found focused on patients with schizophrenia

# General Logic of Our Study

- Prior Authorization Policies which require patients to start with less expensive first generation drugs before they are approved for more expensive second generation drugs will lead to patients going off their medication.
- Patients who go off their medication suffer relapses of mental illness symptoms.
- Relapses of symptoms lead to adverse outcomes including hospitalization, job loss, homelessness and incarceration.
- Adverse outcomes impose costs on the system<sub>13</sub>

# Data Collection

- Driscoll & Fleeter requested data from the Ohio Department of Jobs & Family Services (ODJFS) detailing the number of Medicaid recipients with diagnoses of schizophrenia, bipolar disorder and severe depression.
- Because this data took a long time to arrive (and then did not clearly account for patients with multiple diagnoses), estimates of the number of schizophrenic and bipolar patients in the Ohio Medicaid program were made from national data sources and published research.

# Estimated Number of Persons in the Ohio Medicaid Population with Severe Mental Illness

**Table 2: Estimated Number of Persons in the Ohio Disabled Medicaid Population with Schizophrenia and Bipolar Disorders**

	<b>Schizophrenia</b>	<b>Bipolar</b>	<b>Total</b>
# of ODJFS Disabled	249,000	249,000	
Percent of Population	6%	12%	
# of Medicaid Clients	14,940	29,880	44,820

- This table provides an estimate of the number of schizophrenic and bipolar Ohio Medicaid patients.
- 6% schizophrenia incidence rate is from a study in Georgia, and 12% bipolar rate is based on national data showing bipolar disorder is 2.5 times more prevalent than schizophrenia.
- Data from ODJFS showed roughly 48,000 Medicaid clients with severe mental illness in 2007.

# Estimated Number of Ohio Medicaid *Fee-for-Service* Patients with Severe Mental Illness

**Table 3: Estimated Number of Persons in the Ohio Disabled Medicaid Population with Schizophrenia and Bipolar Disorders by Program**

	<b>Schizophrenia</b>	<b>Bipolar</b>	<b>Total</b>
Total # of Medicaid Clients	15,000	30,000	45,000
<b># in Fee for Service (80%)</b>	<b>12,000</b>	<b>24,000</b>	<b>36,000</b>
# in Managed care (20%)	3,000	6,000	9,000

- Figures from Table 2 were rounded to 15,000 and 30,000.
- ODJFS data indicated that 80% of the severely mentally ill Medicaid population is served in fee-for-service setting while 20% are served in a managed care setting.
- Prior Authorization of atypical antipsychotics was only applied to fee-for-service patients in Ohio.

# Estimated Number of Michigan Medicaid Fee-for-Service Patients with Severe Mental Illness

Category	# of Persons with Bipolar Disorder or Schizophrenia
Michigan Population Age 18+	278,964
Total # of Medicaid Clients	56,638
<b># in Fee for Service (100%)</b>	<b>56,638</b>
# in Managed care (0%)	0

- Data from Cost Calculator based on our study developed by Discovery Chicago for Bristol-Myers Squibb.
- Data sources are 2010 census and most recent (2008) Kaiser Family Foundation Michigan Medicaid population figures.
- Michigan serves 100% of Medicaid clients in a Fee for Service setting.

# Study of the Effects of Prior Authorization in Maine

- Perhaps the single most important study found was an evaluation of Maine's experience with Prior Authorization in 2003 and 2004. (*"Use of Atypical Antipsychotic Drugs for Schizophrenia in Maine Following a Policy Change", Health Affairs, April 2008*)
- Research team was led by Harvard Medical School professor Stephen Soumerai.
- Main finding was that there is an 18% greater risk of a patient having a "treatment discontinuity" (more than 30 days without taking medication) as a result of Prior Authorization
- This translates into an additional 6% of patients experiencing a treatment discontinuity.

# Design of Maine Study

- Soumerai study examined the experience of patients in Maine prior to the advent of Prior Authorization and under Prior Authorization
- Experience of patients in New Hampshire over the same time frame was also studied in order to assure that any effects found in Maine were not due to some other influence besides the implementation of Prior Authorization.

# Similarities Between Maine and Ohio Prior Authorization

- Both states grandfathered established users of single therapy atypical antipsychotics
- Both states placed some atypicals on the preferred drug list
- Ohio also permitted psychiatrists to prescribe non-preferred anti-depressants in the standard tablet/capsule dosage forms without prior authorization. (Application of the findings from the Maine study were adjusted for this difference when the Ohio estimates were made.)

# Other Important Studies

- “*Clinical Outcome Following Neuroleptic Discontinuation in Patients with Remitted Recent-Onset Schizophrenia*”, Michael Gitlin, et. al., American Journal of Psychiatry, November 2001.
- “*The Cost of Relapse in Schizophrenia in the United States*”, Ascher-Svanum, et. al., International Society for Pharmaceutical and Outcomes research, 2005.

# Key Findings Regarding Patient Relapses and Costs

1. Prior Authorization will lead to an additional 6% of mental health patients suffering treatment discontinuities. (Sumerai)
2. 80% of those patients who go off of their medication for more than 30 days suffer a relapse. (Gitlin)
3. The marginal cost of a schizophrenia patient suffering a relapse is roughly \$21,500. (Ascher-Svanum)
4. Assumption that Bipolar patient costs are 75% of schizophrenics (\$16,125)

# Estimated Cost of Relapses Due to Prior Authorization in Ohio

	<b>Schizophrenia</b>	<b>Bipolar</b>	<b>Total</b>
# of Fee for Service Patients	12,000	24,000	36,000
# Off of Medication (6%)	720	1,440	2,160
# Relapse (80%)	576	1,152	1,728
Relapse Cost per Patient	\$21,500	\$16,125	
Total Cost of Relapse	\$12,384,000	\$18,576,00	\$30,960,000
<b>Adjust ment for Psychiatric Exemption (40% of patients)</b>	<b>\$7,430,400</b>	<b>\$11,145,600</b>	<b>\$18,576,000</b>

- Relapses by Ohio schizophrenia patients are estimated to cost \$7,430,400
- Relapses by Ohio bipolar patients are estimated to cost \$11,145,600
- Total cost of relapses due to prior authorization in Ohio = \$18,576,000
- Cost of relapses by severely depressed patients not calculated

# Estimated Cost of Relapses Due to Prior Authorization in Michigan

	<b>Schizophrenia</b>	<b>Bipolar</b>	<b>Total</b>
# of Fee for Service Patients	18,879	37,758	56,638
# Off of Medication (6%)	1,133	2,265	3,398
# Relapse (80%)	906	1,812	2,718
Relapse Cost per Patient	\$21,500	\$16,125	
<b>Total Cost of Relapse</b>	<b>\$19,479,000</b>	<b>\$29,218,500</b>	<b>\$48,697,500</b>

**Source:** Discovery Chicago Cost calculator prepared for BMS

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- Relapses by Michigan bipolar patients are estimated to cost \$29,218,500
- Total cost of relapses due to prior authorization in Michigan = \$48,697,500
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# Other Costs Related to Patient Relapses

- Lost wages when mentally ill patients relapse and lose their jobs (\$16,000 per person)
- Cost of emergency shelter for a homeless person for one year (\$12,000)
- Average cost of providing mental health services in a correctional institute for 1 year (\$10,000)
- Average cost of housing an inmate for 1 year (\$25,000)

# Administrative & Compliance Costs

- Prior Authorization will impose additional costs on medical providers in the form of documentation of appeals to use non-preferred drugs (\$10 to \$25 per review).
- In order to make Prior Authorization seem more palatable, ODJFS stated that they expect 90% of appeals to be approved.
- This means that for each potential instance of savings through prior authorization, there will be 9 other instances where additional administrative and compliance burdens will occur for patients whose physicians could establish an appropriate basis for using the more expensive drug.

# Net Cost of Prior Authorization In Ohio

**Summary Table: Estimated Net Cost of Prior Authorization**

Category	Annual Cost Savings	Annual Additional Cost
Savings in Medicaid Pharmacy Cost	Less than \$6 Million	
Additional Administrative Cost (reviewing PA requests)		Positive but Unclear
Additional Compliance Cost by Providers (time spent by providers)		Positive but Unclear
Medical costs of fee-for-service patients under proposed ODJFS change to PDL		\$18,576,000
Medical costs of managed care patients if prior authorization plan extended to them		\$4,644,000
Cost of lost wages of the severely mentally ill		\$16,000 per person
Average cost of emergency shelter for a homeless person for one year		\$12,000 per person
Average cost of providing mental health services in correctional facility for one year		\$10,000 per person
Average cost of housing an inmate in a correctional institute for a year		\$25,000 per person
<b>Total</b>	<b>Less than \$6 Million</b>	<b>\$23,220,000</b>

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Medical costs of fee-for-service patients under proposed ODJFS change to PDL		\$48,697,500
Cost of lost wages of the severely mentally ill		\$16,000 per person
Average cost of emergency shelter for a homeless person for one year		\$12,000 per person
Average cost of providing mental health services in correctional facility for one year		\$10,000 per person
Average cost of housing an inmate in a correctional institute for a year		\$22,650 per person
<b>Total</b>	<b>Approximately \$6 Million</b>	<b>\$48,697,500</b>

**Source:** Discovery Chicago Cost calculator prepared for BMS