

Chapter 4

Pharmacy Utilization

Background

This chapter describes pharmacy use among veterans with psychosis using VA treatment services during FY02. The primary focus remains on antipsychotic medication use among patients with schizophrenia, although future reports will include more detail about the use of other psychotropic agents and an increased emphasis on patients with bipolar disorder.

Antipsychotic medications are an essential component of the treatment of patients with schizophrenia, and are now being used more frequently for patients with bipolar disorder. Treatment guidelines recommend long-term use for patients with schizophrenia who have more than one episode of psychosis (American Psychiatric Association Work Group on Schizophrenia, 1997). Recommendations regarding the long-term use of antipsychotic medication among patients with bipolar disorder are in flux, although at least one randomized controlled study suggests that olanzapine may reduce relapse among bipolar patients when taken longer-term (Tohen et al., 2003).

This report describes in depth the use of oral antipsychotics among 95,875 veterans with a schizophrenia or schizoaffective disorder (ICD-9 codes for 295.x, excluding 295.5) who had and one or more VA treatment contacts during FY02. We also briefly describe antipsychotic use among the 70,345 veterans with bipolar disorder. (Please recall that patients were assigned the diagnostic classification that they received in the majority of treatment encounters during FY02.)

Percent of patients with any outpatient pharmacy fill/ and Percent receiving an oral antipsychotic fill

Table 4 reports the percentage of patients with schizophrenia/schizoaffective disorder, bipolar disorder, or other psychoses who received any outpatient medications and the percentage receiving oral antipsychotics.

As would be expected from our selection criteria, (veterans with a psychotic diagnosis and treatment visits), the use of outpatient medications was high. Fully 95% of all patients in the Registry, 95% of veterans with schizophrenia or schizoaffective disorder, and 97% of veterans with a bipolar diagnosis filled at least one outpatient prescription during the year.

Approximately 78% of veterans with schizophrenia filled at least one oral antipsychotic prescription during the year as did 43% of veterans with bipolar disorder. Because data from the VA Pharmacy Benefits Management group do not consistently include depot antipsychotics, another 10-20% of veterans with schizophrenia may have received antipsychotics in depot format (Valenstein, Copeland, Owen, Blow, & Visnic, 2001). Thus, the large majority of patients with schizophrenia treated in the VA, receive antipsychotic medication.

The use of antipsychotic medication among patients with bipolar disorder appears to be increasing over time, with 32% receiving an antipsychotic medication in 1999 and 43% receiving an antipsychotic medication in FY02.

% Receiving Atypicals

Table 4 reports the overall percentage of patients who received atypical agents in FY02 and the percentages of patients who received each of the following atypical agents: clozapine, olanzapine, risperidone, quetiapine, and ziprasidone (new for FY02). Aripiprazole use will be tracked in future years.

The percentage of patients receiving second-generation rather than first-generation antipsychotics continues to increase with time. In FY02, 82% of patients with schizophrenia and 90% of patients with bipolar disorder received atypical antipsychotics. (In contrast, in FY99, just 59% of veterans with schizophrenia received second generation agents.)

Olanzapine and risperidone continued to be the most frequently used antipsychotic medications, with 39% of patients with schizophrenia receiving olanzapine and 37% receiving risperidone during FY02. (Because patients may be exposed to more than one atypical agent during the year, the percentages of patients exposed to the individual agents sums to larger percentage than patients receiving any antipsychotic during the year.) The use of quetiapine has continued to increase rapidly, with 21% of all patients now receiving this medication. Absolute increases in quetiapine use have ranged from 4% to 8% each of the last four years.

Although there is variation among VISNs in the use of first-generation antipsychotics, overall, there appears to be reasonable levels of access to the newer antipsychotic agents. The use of atypical agents in the VA health system is similar to the use of these agents in other settings (Hermann et al., 2002; Vanelli, Burstein, & Cramer, 2001). The recent GAO report on antipsychotic use in the VA confirmed that VA psychiatrists believe they have reasonable levels of access to these newer medications (VA Health Care: Implementation of Prescribing Guideline for Atypical Antipsychotic Drugs Generally Sound. [GAO-02-579](#) April 29, 2002).

% Receiving Clozapine

Clozapine use deserves particular scrutiny, as clozapine is the only antipsychotic agent that has proven effective in patients with refractory schizophrenia. In FY02, only 3.0 % of veterans with schizophrenia received clozapine. Although clozapine use has had a small absolute increase of 0.5% over the last 4 years, increasing from 2.5% of patients with schizophrenia in FY99 to 3.0 % of these patients currently, rates of use remains low, given that approximately 20-25% of patients with schizophrenia are refractory to treatment with other agents. Clozapine use also continues to vary considerably across VISNs (by a factor of 5). Reasons for low overall use of clozapine and the variation in use across VISNs are unclear, but this remains an area of interest.

% Receiving Concurrent Treatment with Two or More Antipsychotics

Because psychiatrists may cross-taper antipsychotics when switching medications, our measure of concurrent antipsychotic treatment includes only those individuals receiving two different antipsychotics concurrently for more than 60 days.

While undoubtedly helpful for some patients, the overall effectiveness of concurrent antipsychotics is unclear. Nevertheless in FY02, 11% of all patients in the registry and 15% of patients with schizophrenia were receiving concurrent antipsychotic treatment.

For patients with schizophrenia, this represents an absolute increase of approximately 1% for each of the last four years, or a relative increase of 36% since FY99. (In FY99, 11% of patients with schizophrenia received concurrent antipsychotic treatment compared to 15% currently.) Substantial use of concurrent antipsychotics has also been reported in other treatment settings (Clark et al., 2002). However, the increasing practice does raise a concern that patients who are refractory to antipsychotic treatment might be preferentially receiving an “add-on” antipsychotic agent rather than a clozapine trial. Closer monitoring and examination of treatment pathways may be warranted.

Average # of Prescriptions and Medication Possession Ratio (MPR)

These measures assess the continuity of antipsychotic use among patients with schizophrenia. Interruptions in antipsychotic use increase the risk of relapse, rehospitalization and admission rates among patients with schizophrenia (Valenstein et al., 2002).

We report the average number of antipsychotic prescriptions fills for patients with schizophrenia filling at least one antipsychotic prescription during FY02. We also report the average medication possession ratio (MPR) and the percentage of patients who have MPRs <0.8, for patients who received only one antipsychotic medication during the year.

The MPR is the ratio of the “number of days supply” of medication that a patient *has received* divided by the “number of days supply” that they *should have received* had they been taking medication as prescribed. An MPR of 1 indicates that the patient has received all the medication needed to take their antipsychotic medication as prescribed; whereas, a MPR of 0.5 indicates that the patient has received medication sufficient to take only half of the prescribed dose. We calculate the MPR for patients who received only one type of antipsychotic during the year, as calculations are more straightforward for these patients than for patients receiving multiple antipsychotics. The majority of patients 78% receive just one antipsychotic medication. This year, the first-generation antipsychotics were considered separately instead of together, resulting in a slightly more restrictive definition of patients receiving one antipsychotic and a small decrease in mean MPR values (from 0.83 to 0.82).

In FY02, we found that patients with schizophrenia filled an average of 8.3 antipsychotic prescriptions. The average MPR was 0.82 using the new methodology, with approximately 38% of veterans with schizophrenia having MPRs below 0.8, indicating poor antipsychotic adherence. The percentage of poorly adherent veterans has decreased over time; 44% of patients with schizophrenia were poorly adherent in FY99. The decrease in poor adherence may be the result of increased use of second-generation agents. Nevertheless, poor adherence continues to be a substantial problem among veterans with schizophrenia.

We do not report MPRs for antipsychotic medications for bipolar patients because physicians may prescribe antipsychotic medications intermittently rather than continuously for these patients. However, we note that with an average of 6.1 antipsychotic refills, many bipolar patients appear to be receiving antipsychotic medications long term.

The Pharmacy Benefits Management Strategic Health Group, at Hines VA Medical Center, provided data on all outpatient prescriptions for Registry patients in this report.

All medications in class CN701, "Phenothiazines/related, Antipsychotics" and CN709 ("Antipsychotics, other") were included in the analyses of antipsychotic agents. Atypicals were

identified in the prescription data by their generic names: clozapine, olanzapine, quetiapine, risperidone, and ziprasidone.

Findings

- The large majority of patients with schizophrenia (78%) seen in the VA receive at least one oral antipsychotic prescription. (PBM data do not consistently include depot antipsychotics, so the percentage of patients receiving depot antipsychotics cannot be determined.)
- Over 40% of patients with bipolar disorder received an oral antipsychotic prescription during the year, with the average number of refills being 6.1. This suggests that a substantial minority of bipolar patients may be on long-term antipsychotic medication.
- The percentage of veterans with schizophrenia receiving second-generation antipsychotics continues to increase. The large majority (82%) of patients with schizophrenia receiving now antipsychotics, now take second-generation agents.
- Olanzapine and risperidone remain the most commonly used atypical antipsychotics but the % of patients receiving quetiapine continues to increase rapidly (from 3.2% to 20.6% between FY99-FY02).
- Clozapine use has increased slightly among patients with schizophrenia but remains low, at just 3.0%.
- Concurrent use of two or more antipsychotic medications continues to increase among patients with schizophrenia (from 10.6% in FY99 to 14.9% currently.)
- Pharmacy data indicate that the percentage of poorly adherent veterans with schizophrenia has decreased, from 44% in FY99 to 38% in FY02.

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