

# Clozapine: Underused and misunderstood

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"Why Not Clozapine?" asked Kelly and colleagues over four years ago in a *Clinical Schizophrenia* article.<sup>1</sup> Apparently, few heard the question and still fewer answered. In 2011, over 20 years since clozapine was marketed in the U.S., its use is at an all-time low. In 1999, 11% of second generation antipsychotic prescriptions in the U.S. were for clozapine. Today, only 2-3% of antipsychotic prescriptions are for clozapine.<sup>1</sup> This is despite overwhelming evidence of its effectiveness for treatment-resistant schizophrenia, suicide prevention in schizophrenia, reductions in hospitalizations, and other pharmaco-economic data supporting the use of clozapine. Dr. Herbert Meltzer stated, "leading economists have cited the underuse of clozapine for treatment resistance and suicide as one of the two greatest failures of mental health providers to practice evidence-based medicine."<sup>2</sup> Most experts feel the use of clozapine in the U.S. is currently far below the estimated need.

Some presume the underuse of clozapine is due to the monitoring required for use of the drug; however, clozapine is utilized far more extensively in other countries. Use in Scandinavia is nearly 20%, in China 16%, and in Australia as many as 38% of outpatients with schizophrenia receive clozapine. This suggests that other factors are involved in its underuse in the U.S.<sup>3</sup> Some cite that besides the adverse effects and required monitoring, there is a lack of training of providers on the appropriate use of clozapine or perhaps a lack of understanding of its benefits. Still others feel that perhaps marketing of other second generation antipsychotics has led to the decline in use of clozapine.

Recently, Essock and colleagues presented data from their study of clozapine use in New York at the NCDEU 51<sup>st</sup> Annual Meeting in Boca Raton, Florida. They studied over 7,000 Medicaid patients regarding their antipsychotic use in 2009 and found that only 2% of antipsychotic prescriptions were for clozapine. They also found that those hospitalized in state hospitals were more likely to be treated with clozapine compared to those in other settings. Clozapine patients also had higher overall Medicaid costs than those on other medications (\$58,861 vs \$16,687). The author commented that the benefit of clozapine still outweighs the extra effort

required to monitor patients appropriately and the extra cost.

These patterns of clozapine use can be changed, but how? What role can pharmacists play in helping to improve the use of clozapine? In this issue of the *Mental Health Clinician*, Farhadian, et al, at the Veterans Health Administration (VHA) in San Diego describe how they are paving the way to increasing the use of clozapine for U.S. veterans. VHA developed an Academic Detailing Service (ADS), which seeks to educate providers on best practices without the industry influence. The ADS developed a survey to determine what the barriers are to the use of clozapine in the VHA and have developed ways in which to overcome them. Providers suggested in the survey that they need assistance with patient registration, monitoring, and management of clozapine patients. The survey results also indicated a need in educational materials for both patients and prescribers.

In response to the survey, the ADS created educational materials for providers about clozapine and its place in therapy. These materials included a pamphlet that describes the benefits of clozapine as well as safety and cost data. The ADS provided in-services to providers and psychiatry residents regarding clozapine use, too. In addition, the ADS has helped providers by expanding the number of providers with clozapine prescribing privileges in the VHA. The ADS is requesting that VHA consider expanding these privileges to other mental healthcare providers such as nurse practitioners, physician's assistants, psychiatry residents, and pharmacists. In addition, a clozapine order set was created to assist providers with initiation of clozapine. Lastly, a Clozapine Dashboard was created so providers can easily identify patients who may be clozapine candidates.

The results of the ADS efforts have been overwhelmingly positive. In just over a year, the number of clozapine providers has increased and so has the number of new clozapine starts. There has been a reduction in polypharmacy and suprathreshold dosing of antipsychotics. The creation of the ADS has realized great success and the group is hopeful that other regions of the VHA may achieve similar results. This model serves as a great example of the tremendous impact pharmacists can

have in improving the lives of those who suffer with chronic and severe mental illness.

## REFERENCES

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