State of Vermont *Agency of Human Services*
Department of Vermont Health Access [Phone] 802-879-5900
280 State Street, NOB 1 South
Waterbury, VT 05671-1010
http://dvha.vermont.gov

Act 172, Sec. E.306.11
Prescribing Practices; Drug Utilization Review Board; Report

Report to:
House Committees on Appropriations, on Health Care and on Human Services
and
Senate Committees on Appropriations and on Health and Welfare
Pursuant to Act 172, Sec. E.306.11

Al Gobeille, Secretary
Vermont Agency of Human Services

Cory Gustafson, Commissioner
Nancy Hogue, Pharm.D. Director of Pharmacy Services
Department of Vermont Health Access

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OVERVIEW

On behalf of the Department of Vermont Health Access (DVHA), this report is submitted to satisfy the legislative reporting requirement described in Act 172, Sec. E.306.11 – PRESCRIBING PRACTICES; DRUG UTILIZATION REVIEW BOARD; REPORT.

> "The Drug Utilization Review Board in the Department of Vermont Health Access shall analyze data from prescriptions dispensed to Medicaid beneficiaries, including prescriptions written to treat mental health conditions, to determine whether health care providers routinely follow the U.S. Food and Drug Administration's recommended dosage amounts. The Drug Utilization Review Board shall report its findings and any recommendations to the House Committees on Appropriations, on Health Care, and on Human Services and the Senate Committees on Appropriations and on Health and Welfare."

DATA ANALYSIS DESCRIPTION

DVHA, with the assistance of the department's prescription benefit manager (Change Healthcare), analyzed six medications based on their rank in the list of top 10 drugs. The analysis was conducted by cost and/or volume for State Fiscal Year 2017. The data on utilization is based on paid, non-reversed Medicaid pharmacy claims from 7/1/16-12/31/16.

Drug databases "Clinical Pharmacology" and "Micromedex Solutions" were used to determine the maximum recommended FDA doses, which are listed below in Table 1. Since the prescriber's directions are not available via the claims data, we used a proxy for determining the total daily dose of a prescribed medication. The methodology used for defining a claim as exceeding the maximum FDA recommended dose was one prescription's quantity divided by its days supply. For example, if a member filled ninety (90) Sertraline 100mg tablets for a thirty (30) days supply, it was assumed that the member was using three (3) tablets per day for a total daily dose of 300mg. Because this is above the FDA maximum of 200mg/day, the claim would be flagged as exceeding the threshold. Claims were also examined over the six-month period looking for overlapping dates of service to capture members on more than one strength of the same medication at the same time.

TABLE 1- FDA MAXIMUM RECOMMENDED DOSES

Drug name	FDA-Approved Indication(s)	FDA Maximum Recommended Dose	Duration of therapy (if applicable)
Harvoni®	Treatment of chronic hepatitis C virus (HCV) genotype 1, 4, 5 or 6 infection	90mg/day Ledipasvir; 400mg/day Sofosbuvir	24 weeks

Abilify®	Oral formulations indicated for schizophrenia, acute treatment of manic and mixed episodes associated with Bipolar I, adjunctive treatment of Major Depressive Disorder, irritability associated with Autistic Disorder, treatment of Tourette's disorder; Injection indicated for agitation associated with schizophrenia or bipolar mania	30mg/day	n/a
ProAir® HFA	Treatment or prevention of bronchospasm in patients with asthma	12 puffs/day	n/a
Sertraline	Treatment of major depression, obsessive-compulsive, panic, post-traumatic stress, social anxiety, & premenstrual dysphoric disorders	200mg/day	n/a
Clonazepam*	Treatment of seizure disorders, panic disorders	20mg/day seizures/nystagmus; 4mg/day panic disorder	n/a
Suboxone® Films	Treatment of opioid dependence	24mg/day Buprenorphine, 6mg/day Naloxone	n/a

*NOTE: Although some indications support higher daily doses, 4mg/day was used for Clonazepam analysis.

RESULTS

Of the six drugs analyzed, three drugs (Abilify, clonazepam, and sertraline) are classified as mental health drugs. Abilify is an "atypical antipsychotic" indicated for schizophrenia, bipolar disorder, adjunctive treatment of depression, irritability associated with autism, and Tourette's

disorder. Clonazepam is a drug indicated or various types of seizure disorders, and panic disorders. Sertraline is a "selective serotonin re-uptake inhibitor" indicated for major depression, and obsessive-compulsive, panic, post-traumatic stress, social anxiety, and pre-menstrual dysphoric disorders. Suboxone® is a partial-opioid agonist indicated for the treatment of opioid dependence, and represents DVHA's number one drug spend and highest volume drug. Harvoni is a newer oral "direct acting antiviral" used to treat Hepatitis C genotypes 1, 4, 5, or 6 infections, and ProAir HFA is a short-acting beta agonist inhaler indicated for the treatment and prevention of bronchospasm in patients with asthma.

Table 2 below outlines the total number of claims analyzed, and what percent of those claims exceeded the maximum FDA recommended doses. It also details how many patients received the drug during the time period analyzed and how many patients were on doses that exceeded the maximum FDA dose.

Table 2 – Dosing Trends

Medication	FDA Maximum Recommended Dosage	Total # Paid Claims	Total # Paid Claims Over FDA Approved Maximum Dose	Percentage of Claims Above the Maximum Dose	Total Number of patients	Total Number of Patients Above Maximum Dose	Percentage of Patients Above Maximum Dose
Abilify Tablets	30mg/day	2469	24	0.97%	591	7	1.18%
Clonazepam	4mg/day (panic disorder)	12795	365	2.85%	2951	83	2.81%
Harvoni	90mg/day Ledipasvir, 400mg/day Sofusbuvir	142	0	0.00%	46	0	0.00%
Proair HFA	12 puffs/day	20944	1301	6.21%	12683	912	7.19%
Sertraline	200mg/day	16035	162	1.01%	6010	53	0.88%
Suboxone	24-6mg/day	47803	28	0.06%	2810	20	0.71%

ABILIFY: During the period analyzed, there were 2469 paid claims for Abilify® dispensed to 591 patients. Twenty-four (0.97%) of these claims were over the FDA approved maximum dose. The claims that exceeded the FDA recommended dose were dispensed to 7 patients. These patients are 1.2% of the total patients receiving Abilify®.

CLONAZEPAM: There was a total of 12,795 claims for Clonazepam dispensed to 2951 patients. Of these claims, 365 (2.9%) exceeded the FDA recommended maximum dose which represents 2.8% of patients on clonazepam.

HARVONI: A total of 46 Medicaid patients received Harvoni®, consisting of 142 claims. None of these claims exceeded the FDA approved maximum dose.

PROAIR HFA: There was a total of 20,944 claims for ProAir® HFA dispensed to 12,683 patients. Of these, 1,301 (6.2%) claims exceeded the FDA recommended maximum dose. These claims resulted in 912 patients (7.2%) receiving ProAir® HFA at doses that exceeded the FDA recommended maximum dose.

SERTRALINE: There was a total of 16,035 claims for sertraline dispensed to 6,010 patients. Fifty-three of those patients (0.9%) received doses that exceeded the recommended FDA maximum resulting in 162 paid claims. This represents 1.0% of all sertraline paid claims.

SUBOXONE: There was a total of 47,803 claims for Suboxone® dispensed to 2810 patients. There were 28 claims for 20 patients that exceeded the FDA recommended maximum dose. Therefore, 0.7% of patients and 0.06% of claims exceed the FDA maximum recommended dose.

DISCUSSION AND RECOMMENDATIONS

DVHA's Drug Utilization Review Board (DURB) discussed this data and trends on February 21, 2017. The Board emphasized the importance of determining dosing on an individual basis. For example, a patient may be taking multiple medications that interact, resulting in a change in drug metabolism (i.e., CYP enzyme inhibitor/induction, etc). This type of scenario requires an increase in dose for a therapeutic effect to be obtained. Additionally, patients may have multiples of the same medication to keep at different places (i.e., inhalers for school, home, work, etc). The Board expressed the importance of utilizing clinical evidence when determining the appropriateness of prescribing doses above FDA recommendations. The Board believes that the total percentage of paid claims over the maximum FDA recommended doses are very low and, therefore, further research into this data is unnecessary. Additionally, the Board does not believe that prescribing over the FDA maximum recommendations is contributing to Medicaid drug costs in any meaningful way.

As part of the discussion on Suboxone®, the Board expressed a more general interest in evaluating the quantity limits on controlled substances, although concern was raised that overrides would be needed when proper clinical documentation was provided. DVHA currently has quantity limits on many, but not all controlled substances, and "dose-consolidation" limits on Suboxone®. Dose consolidation is the practice of using the least possible number of units of a drug. For example, if a physician prescribes Suboxone® 12mg, DVHA would ensure that a 12mg film was used, rather than 3x4mg films, or 1x4 and 1x8mg films. DVHA agreed to revisit quantity limits on controlled substances during 2017.

REFERENCES

Micromedex Solutions. Truven Health Analytics, Inc. Ann Arbor, MI. Available at http://www.micromedexsolutions.com. Accessed January 19, 2017.

Clinical Pharmacology. Gold Standard, Inc. Tampa, FL. Available at http://www.clinicalpharmacology.com. Accessed January 19, 2017.