

Buprenorphine Prescriptions in Mississippi, 2012-2018



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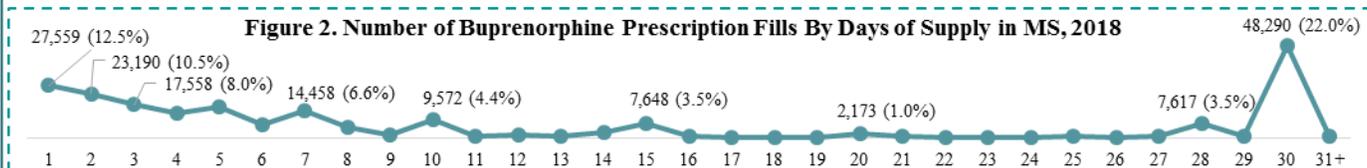
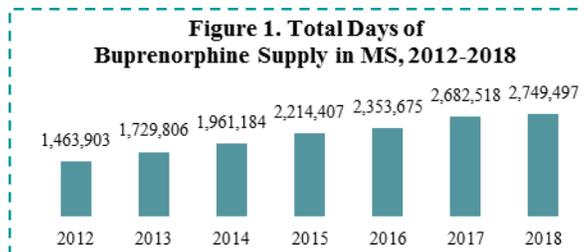
Epidemiological Brief

Background: Opioid use disorder (OUD) is a relapsing chronic disease involving the misuse of prescription pain relievers (e.g., hydrocodone) and illicit narcotics such as fentanyl and heroin. Because of the chronic nature of their illness, patients suffering from OUD are in need of comprehensive long-term treatment, including pharmacological and behavioral therapies. During 2015–2017, an estimated 26,000 Mississippians aged 12 and older suffered from opioid use disorder.¹ Yet despite this ongoing public health crisis, Mississippi lacks a surveillance system aimed at monitoring the outpatient-level of opioid substitution treatment.

Buprenorphine: Approved by the Food and Drug Administration in 2002, buprenorphine is a medication indicated for treatment of opioid dependency in office-based settings. Buprenorphine, an opioid itself, is used as a substitution treatment to relieve acute withdrawal symptoms and reduce cravings in opioid-dependent patients. Buprenorphine can be used alone or in combination with naloxone— an abuse-deterrent formulation developed to reduce the risk for intravenous abuse of buprenorphine.

Data and Objectives: Mississippi Prescription Drug Monitoring Program (PDMP) data contain information on prescribed medications, patients’ demographics, prescribers, and dispensing pharmacies. Analyzing these data, our first objective was to determine the number and duration of buprenorphine prescriptions dispensed in Mississippi between 2012 and 2018. Secondly, we analyzed buprenorphine data by type of prescription and evaluated prescription payer patterns. Lastly, we calculated the number of individual patients who filled buprenorphine prescriptions in 2018, described their demographic characteristics, and geocoded buprenorphine prescription data.

Number of Prescriptions and Days of Supply: The number of unique buprenorphine prescriptions dispensed in Mississippi spiked by 89.2%, from 50,318 scripts in 2012 to 95,190 scripts in 2018. The total days of supply almost doubled, increasing by 87.8% from 1,463,903 days in 2012 to 2,749,497 days in 2018 (Figure 1). An analysis of prescription duration revealed that only 22.0% of all buprenorphine prescription fills were for 30 days (long-term). In fact, 31.0% of all prescription fills were for 3 days or less, a treatment duration most likely indicating treatment of acute withdrawal symptoms (Figure 2).



Types of Buprenorphine Prescriptions: During 2018, over two-thirds (69.2%) of all buprenorphine prescription fills dispensed in Mississippi were for buprenorphine formulations with naloxone (Table 1). During that same year, 43.8% of all buprenorphine prescription fills were for generic buprenorphine (Table 1). The breakdown by days of supply demonstrated similar patterns regardless of the type of buprenorphine formulations used. One exception was the more frequent use of brand name buprenorphine for 30-day prescriptions. Subutex and Suboxone are brand name buprenorphine formulations.

Table 1. Days of Supply by Type of Buprenorphine Formulations in MS, 2018

	≤3 days	4-7 days	8-29 days	30 days	30+ days	Total
Combination Type						
Buprenorphine	9.8%	7.4%	7.6%	5.6%	0.3%	30.8%
Buprenorphine/naloxone	21.2%	15.8%	15.6%	16.4%	0.3%	69.2%
Brand Name Versus Generic						
Brand Name	16.5%	12.8%	12.4%	14.5%	0.2%	56.2%
Generic	14.5%	10.4%	10.8%	7.5%	0.4%	43.8%
Total Rx	31.0%	23.2%	23.2%	22.0%	0.6%	100.0%

Payers for Buprenorphine Prescriptions: Private insurance was used to cover the cost of half of all buprenorphine prescriptions (50.9%); self-paying patients were responsible for more than one-third (35.0%) of such prescriptions. In general, self-paying patients tended to fill buprenorphine prescriptions with short durations—such patients covered 36,152 buprenorphine prescriptions for ≤ 3 days (16.4% of total), but only 6,736 buprenorphine prescriptions for 30 days (3.1% of total) (Table 2). As expected, patients with private insurance were more likely to have 30-day buprenorphine prescriptions; in 2018, such patients received 32,374 buprenorphine prescriptions (14.7% of total). According to the reported data, Medicare and Medicaid covered a small percentage of buprenorphine prescriptions, 3.4% and 1.6% respectively.*

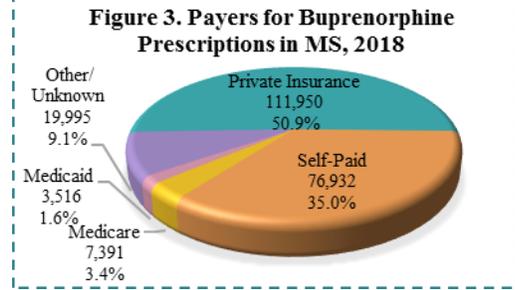


Table 2. Number and Percent of Buprenorphine Prescription Fills by Days of Supply in MS, 2018

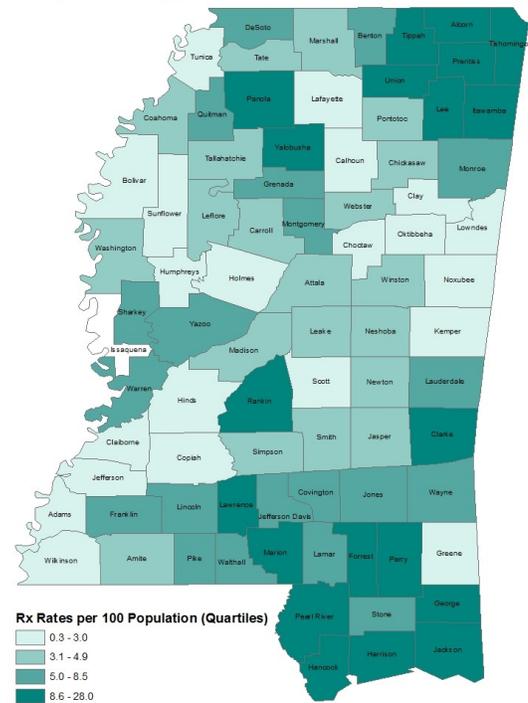
	≤ 3 days		4-7 days		8-29 days		30 days		30+ days	
	No	%	No	%	No	%	No	%	No	%
Private Insurance	24,079	11.0%	26,692	12.1%	28,292	12.9%	32,374	14.7%	513	0.2%
Self-Paid	36,152	16.4%	18,076	8.3%	15,310	7.0%	6,736	3.1%	658	0.3%
Medicaid	104	0.0%	356	0.2%	871	0.3%	2,162	1.0%	23	0.0%
Medicare	163	0.1%	536	0.2%	1,740	0.8%	4,886	2.2%	66	0.0%
Other	7,809	3.5%	5,253	2.4%	4,736	2.2%	2,132	1.0%	63	0.0%
Total	68,307	31.0%	50,913	23.2%	50,949	23.2%	48,290	22.0%	1,325	0.5%

Number of Individual Patients and Demographics: During 2018, the estimated number of state residents who filled buprenorphine prescriptions was 12,886. The average (mean) number of buprenorphine prescription fills per patient was 17.1. More males (55.0%) than females (45.0%) filled buprenorphine prescriptions. The majority of buprenorphine prescriptions (62.2%) were dispensed among the 25-44 age group. The mean age of patients using buprenorphine was 40.9 years.

Days Covered: As mentioned earlier, only 22.0% of all buprenorphine prescription fills were for 30 days; this measurement, however, does not account for patients who were treated continuously by using prescription fills with smaller duration. To estimate the number of patients on sustained buprenorphine treatment, we calculated the days of continuous medication coverage. Our analysis uncovered that half of all patients (52.4%) had a continuous 30-day buprenorphine supply during each month of 2018; however, only 7.3% of all patients had a 90-day continuous buprenorphine supply during each quarter of that same year.

Geography: Geographical analysis revealed two clusters of high buprenorphine prescription rates: south Mississippi and the northeastern corner of the state. On average, there were 7.3 buprenorphine prescription fills per 100 residents in 2018. In the south, residents in Harrison and Jackson counties accounted for 11.7% of the state population but for 22.3% of all buprenorphine prescriptions dispensed in 2018. Residents in Tishomingo had the highest buprenorphine use rate in the state: 28.0 prescriptions per 100 residents. Other northeastern counties with high buprenorphine prescription rates were Alcorn, Prentiss, and Union. Residents in these four counties accounted for 3.7% of the state population but for 10.5% of all buprenorphine prescriptions filled in 2018.

Buprenorphine Prescription Rates by County of Residence in MS, 2018



Source: Mississippi Prescription Drug Monitoring Program

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References and notes:

1. Substance Abuse and Mental Health Services Administration. Behavioral Health Barometer: Region 1, Volume 5: Indicators as measured through the 2017 National Survey on Drug Use and Health and the National Survey of Substance Abuse Treatment Services. HHS Publication No. SMA-19-Baro-17-R1. Rockville, MD: Substance Abuse and Mental Health Services Administration, 2019.

*Because Medicaid managed care plans may be coded as private insurers, the number of buprenorphine prescription fills covered by Medicaid may be underestimated in the PDMP data.