Nonmedical use of prescription drugs has been identified as a growing public health problem and increasingly common cause of accidental death. Drug overdose now kills more people than motor vehicle crashes in the United States. This brief highlights the impact of misuse and accidental overdose of prescription drugs in the state and outlines policy options to address the issue.

The death rate from drug overdose in the United States has tripled since 1991, and prescription drugs are cited as the primary cause of this increase.1 Of particular concern are opioid pain relievers (e.g., oxycodone, methadone, and hydrocodone). There are now more overdose deaths due to opioid pain medications than the total number caused by both cocaine and heroin.2 In 2008, opioid pain relievers were responsible for at least 40 percent of U.S. drug poisoning deaths.3 The problem may be even greater, as research indicates that unintentional poisoning death rates may be underreported by up to 61 percent.4

In 2011, 232 deaths in Mississippi were classified as resulting from unintentional poisoning by drugs.5 Of those deaths, 78 percent were caused by drugs that were not specified on the death certificate.6 Ninety percent of the decedents in this group were white, with an average age of 42.5 years (ranging from 16 to 86 years of age), and equally divided by male and female gender.7

Analysis of death rates by public health district (see Figure 2) shows variation in unintentional drug poisoning deaths around the state over a five year period. The highest death rate is on the Coast (District IX), which during 2007-2011 was 19.9 deaths per 100,000 population. This is 3.2 times higher than the average rate for all other districts and 5.2 times the lowest death rate over that same time period, which is in the Delta (District III) at 3.8 deaths per 100,000 population. Some of the geographic variation among these rates is attributable to racial distribution in the population, as it was noted earlier that death rates from unintentional drug poisoning are much higher for whites than blacks.
Prescription drug oversight

Prescription drug oversight is both a federal and state responsibility. Prescription drugs are controlled in the United States by the Comprehensive Drug Abuse Prevention and Control Act.\(^8\) The National All Schedules Prescription Electronic Reporting Act of 2005 (NASPER) was passed by Congress with the intent of making information on controlled substance prescriptions available to providers so that they might identify and treat patients at risk for drug abuse or addiction.

A primary mechanism of providing such information is a Prescription Monitoring Program (PMP), which maintains a database for tracking controlled substances and other designated drugs.\(^9\) As of June 2013, 49 states have laws establishing PMPs, and 46 programs are currently collecting and providing prescription data to authorized users.\(^10\)

Mississippi’s Board of Pharmacy began receiving grant funds to operate a PMP in the state in 2004, and began collecting records and providing information to law enforcement and providers throughout 2005. All prescriptions for controlled substances dispensed in or into Mississippi must be entered into the MS PMP system. The law establishing the Mississippi PMP (Miss. Code §73-21-127) outlines the purposes of the program:\(^11\)

- Be proactive in safeguarding public health and safety;
- Support the legitimate use of controlled substances;
- Facilitate and encourage the identification, intervention with, and treatment of individuals addicted to controlled substances and specified controlled drugs;
- Identify and prevent drug diversion;
- Provide assistance to those state and federal law enforcement and regulatory agencies investigating cases of drug diversion or other misuse; and
- Inform the public and healthcare professionals of the use and abuse trends related to controlled substance and specified noncontrolled drugs.
The Center for Mississippi Health Policy partnered with the Mississippi State Department of Health’s Office of Vital Records and the Mississippi State Board of Pharmacy’s Prescription Monitoring Program (MS PMP) to examine deaths in Mississippi related to drug use. In 2011, unintentional poisoning by drugs was listed as the cause of 232 deaths. These 232 records were compared with the MS PMP data to discern any patterns.

Of the 232 deaths, 52 decedents did not have records in the MS PMP. Of the 52 decedents without records, 40 were not listed in the system at all. Twelve decedents were in the system, but did not have any prescriptions recorded during the two years prior to death. There were 180 decedents who had at least one prescription in the MS PMP in the two years prior to death. Analysis of the 180 decedent records with MS PMP data available provided the following demographic information: 82 of the decedents with prescription history during the period two years prior to death were men, and 98 were women. The average age for women and men was 45 years and 40 years of age, respectively. Ninety-five percent of the decedents with MS PMP records were white.

More than half (53%) of the prescriptions recorded by the MS PMP for the decedent group were for pain killers, and 37 percent were for sedatives (Figure 3).

Decedents received controlled substances from 1-19 dispensers, with an average of 4 dispensers per decedent in the two years prior to death. Nearly half of the decedents received controlled substances from 3 or fewer dispensers in the two years prior to death (Figure 4).
Decedents received prescriptions from 1-29 prescribers, with an average of 7 controlled substance prescribers per decedent in the two years prior to death. More than half of the decedents had 5 or fewer controlled substance prescribers in the two years prior to death (Figure 5). A total of 905 unique prescribers wrote prescriptions for controlled substances included in the study. Of these prescribers, 82 percent wrote fewer than 10 of the controlled substance prescriptions recorded for the decedents over the two year study period, 15 percent wrote 11-49 prescriptions, and 3 percent wrote more than 50 prescriptions.

Prevalence and Cost of Prescription Drug Misuse

The National Survey on Drug Use and Health (NSDUH) documents that in 2011, approximately 2.4 percent of the U.S. population (6.1 million people) over 12 years of age were current nonmedical users of psychotherapeutic drugs. The type of drugs used by this group include pain relievers (4.5 million users), tranquilizers (1.8 million users), stimulants (970,000 users), and sedatives (231,000 users). Three out of four individuals over 12 years of age taking prescriptions for non-medical reasons are taking pain medication. Follow-up questions from the group using pain relievers non-medically revealed that more than half obtained the medication from a friend or family for free. The NSDUH survey indicated that 81.6 percent of those friends or family members had been prescribed the medication they gave away by one doctor.

Approximately 20 percent of providers write 80 percent of prescriptions for pain medication. Most of these pain medications are prescribed by primary care doctors and dentists, as opposed to specialists. For opioids in particular, national prescription data show that general or family practitioners, osteopaths, and internists write more than 40 percent of all opioid prescriptions.

There are social and financial costs associated with prescription drug abuse and misuse. Between 2000 and 2010, substance-abuse treatment program admissions for opiates other than heroin grew 400 percent in the United States. Emergency room admissions associated with “misuse or abuse of pharmaceuticals” increased 98.4 percent between 2004 and 2009. Drug diversion and subsequent abuse of opioid pain relievers costs health insurers $72.5 billion annually. A 2005 study showed that mean annual direct health care costs (both medical and drug) for opioid abusers was eight times greater, at $15,884, than non-abusers, at $1,830.
Policy Considerations

The National Governors Association recommends six strategies to address prescription drug abuse at the state level. Some of these strategies are being addressed by a variety of state agencies in Mississippi, both individually and in collaboration. Other strategies present opportunities for the state to reduce prescription drug abuse.

Using prescription monitoring programs (PMPs) more effectively

Prescription drug monitoring programs (PMPs) are a key strategy used by almost all states to address the issues involved with misuse of medication. Mississippi’s PMP has been operational since 2005, and collects information from dispensing pharmacies, practitioners, and veterinarians who distribute controlled and other specified medications. The system was initially developed with the goal of allowing prescribers to look up patient information to inform prescribing decisions. In addition to practitioners, pharmacists, law enforcement agencies, licensure boards, and other approved parties have access to the data.

A 2012 National Alliance for Model State Drug Laws (NAMSDL) work group reviewed state PMP programs around the country, and made recommendations for standardizing and improving PMP operations. Recommendations for improving state PMPs included policies such as disclosing de-identified data for research and analysis. Mississippi is one of the 38 states that currently allow the use of PMP data for these purposes, but because of the manner in which the data system was created to allow providers to look up individual patients, data can only be accessed on a case-by-case basis. This system structure has not allowed for the MS PMP data to be easily downloaded for trend analyses, making it difficult to monitor the problem statewide. The work of the MS PMP Advisory Board could be enhanced by the availability and summarization of data that can inform goal setting, monitoring, evaluation, and collaboration.

Another recommendation made by the NAMSDL is that state licensing agencies or boards establish standards for access to and use of PMP data by prescribers. As of July 2013, 16 states had mandatory utilization provisions in place requiring that providers run PMP reports on patients before prescribing certain medications. The specific requirements of mandated access vary from state to state. Mississippi does not require prescribers to look up patients on the PMP system prior to prescribing a controlled substance, but recently took action to increase the proportion of prescribers registered on the MS PMP system. A new regulation was imposed in late 2012 requiring physicians to show proof of registration with the MS PMP by December 31, 2013 in order to register for controlled substances.

Registrations, however, are still low compared to the potential: according to the DEA, there were 9,986 individuals authorized to write controlled substances in the state of Mississippi as of September 2013. This number includes physicians, physician assistants, dentists, veterinarians, and nurse practitioners.
Improve enforcement by coordinating operations, providing specialized training, and strengthening existing laws.

Opportunities exist for the law enforcement community and health care stakeholders to coordinate prevention of prescription drug diversion, misuse and abuse. In 2012, over 600 law enforcement and health care professionals convened at a Prescription Drug Summit to learn about the problem of prescription drug abuse and potential solutions.32 Sessions included information on state laws and regulations related to prescription drug abuse.33 To facilitate investigation, Mississippi state law requires health care providers, coroners and law enforcement officials to notify MBN within 24 hours of any drug overdose death.34 Mississippi also has a “doctor shopping” law, but enforcement depends on coordination between health care providers and law enforcement.35

Pharmacists, providers, and other health-related users of the MS PMP can inform law enforcement of potentially illicit activity, and law enforcement can reciprocate with information to prevent duplicative work. This type of collaboration, however, requires the development of standards, policies, and procedures so that all parties know their responsibilities and boundaries. Guidelines should be developed through stakeholder consensus to ensure that the laws and regulations are equally and judiciously applied and to maximize effect. Because of its broad representation, the MS PMP Advisory Board provides an appropriate venue to develop evidence-based guidelines for using the MS PMP system to prevent abuse.

Increase options for appropriate disposal of prescription drugs.

The Secure and Responsible Drug Disposal Act of 2010 outlined three expanded options for disposal of controlled substances: take-back events, mail-back programs, and collection receptacles.36 Mississippi’s Bureau of Narcotics (MBN) has participated in DEA take-back events, and the Bureau also recently installed collection receptacles in driver’s license stations around the state for individuals to dispose of excess prescription medication.37 A 2012 Mississippi law created an allowance procedure for drug task forces around the state to give the prescription drugs collected to MBN for incineration.38

Use state’s role as regulator and purchaser of services to influence the delivery of care.

The state can impact prescription drug policy by implementing regulations in health benefit plans it administers, such as the State and School Employees Health Plan and Medicaid. The Division of Medicaid (DOM) has used the MS PMP to identify beneficiaries suspected of abusing or diverting prescription drugs, and restrict their access. In 2011, for example, the DOM identified 494 beneficiaries who were obtaining prescriptions from 7 or more pharmacies or providers. Another program implemented by DOM used the MS PMP to identify and refuse prior authorization for narcotic opiate prescriptions to 226 beneficiaries concurrently receiving Suboxone for opioid addiction, saving an estimated $124,300.39
Facilitate partnerships between key stakeholders.

The National Governors Association recommends consulting a variety of stakeholders in addition to state agencies, such as the following: consumer groups, provider groups, pharmaceutical industry groups, local law enforcement, public health, private organizations, licensure boards, medical, hospital and health plan associations and community coalitions. The MS PMP Advisory Board accomplishes this goal by including a wide variety of stakeholder groups, but could add representation for community and consumer groups to broaden perspective. In addition, since one of purposes of the MS PMP outlined in state statute is to facilitate and encourage the identification, intervention and treatment of individuals addicted to controlled substances, including representation from the Department of Mental Health and/or a substance abuse treatment facility should be considered.

Promote public education about prescription drug abuse.

Education of providers and patients is key to any strategy for addressing prescription drug misuse. In 2013, the Mississippi Board of Medical Licensure added a regulation requiring five hours of prescription-related Continuing Medical Education (CME) hours for DEA licensees, which focus on controlled substances. The law that establishes the MS PMP mandates public education of health care professionals and consumers about trends related to use and abuse of substances tracked by the MS PMP. Given the potential for problematic outcomes such as diversion, abuse and addiction of medication, it is important that both providers and patients are educated on the potential for harm. Events such as the 2012 Prescription Drug Summit also help accomplish this goal.

Summary

Prescription drug abuse impacts Mississippi negatively in terms of both lives and money. Mississippi’s experience mirrors that of the nation, and strategies undertaken to address the issue by health care providers, law enforcement and state agencies also reflect national efforts. Mississippi has established a Prescription Monitoring Program, passed regulations to require physicians to register with the MS PMP and to receive continuing education, conducted educational events to raise awareness and knowledge, and created provisions for appropriate disposal of prescription drugs. The MS PMP Advisory Board is an active body that represents a wide range of stakeholders and provides a practical venue for the coordination and collaboration necessary to address the complex issues involved. The work of the Mississippi Board of Pharmacy and the MS PMP Advisory Board members could be enhanced significantly with the systematic reporting of deidentified aggregate data from the PMP that would allow for continuous monitoring and evaluation. These reports would help them assess the effectiveness of current efforts and make timely decisions regarding the need to take further action. Additional policy options include mandating MS PMP use by all controlled substance prescribers if current regulations prove insufficient; developing policies and procedures for coordination among prescribers, dispensers, and law enforcement personnel; promoting widespread use of prescription drug disposal options; and conducting additional educational programs and events.
References


2. Ibid.


14. Ibid.

15. Ibid.


23. Ibid.


27. Ibid.


29. Slide presentation of Deborah Brown, Director MS PMP Meeting, August 14, 2013.

30. Ibid.


34. Miss. Code Ann. 1972 § 41-29-159

35. Miss. Code Ann. 1972 § 41-29-144

36. 21 CFR Parts 1300, 1301, 1304 et. al (December 21, 2012).


39. Letter from David Dzielak, Executive Director of State of Mississippi’s Division of Medicaid, October 31, 2012.
