

# Preventing Liver Cancer in Mississippi

## by Promoting Vaccination and Screening Among Opioid Users

### Overview

Liver cancer can be caused by long-term infections with hepatitis C virus (HCV) or hepatitis B virus (HBV). The opioid epidemic has increased the number of people who inject drugs in the United States, which may lead to an increased risk of HCV and HBV transmission through use of shared equipment.<sup>1</sup> These factors may contribute to the increase in liver cancer in the United States.<sup>2</sup>

Although the risk of developing liver cancer is low, surviving liver cancer is very difficult. For every 100,000 people, 8 new liver and intrahepatic bile duct cancer cases are reported, and 7 people die of these diseases, according to 2019 data from United States Cancer Statistics.<sup>3</sup>

The [Mississippi State Department of Health](#) reported that opioid-related deaths accounted for 3 of 4 suspected overdose deaths in 2020.<sup>4</sup> From 2013 to 2016, HCV prevalence was estimated to be about 1 in 100 adults, or about 23,500 people living with HCV in Mississippi.<sup>5</sup> In addition, from 2015 to 2019, Mississippi was ranked 4th in the nation for liver cancer mortality, with a rate of 8.3 deaths per 100,000 people.<sup>6</sup> These data highlight the burden of opioid abuse, HCV, and liver cancer in the state.



### Demonstration Projects Help Promote Vaccination and Screening Among Opioid Users

CDC provides funding, guidance, and technical assistance to its [National Comprehensive Cancer Control Program](#) (NCCCP) recipients to create, carry out, and evaluate plans to prevent and control cancer. In 2019, CDC started a 3-year demonstration project, working with four NCCCP recipients to build sustainable partnerships with local organizations to improve knowledge and awareness of the link between injecting drugs and getting hepatitis and liver cancer.

### Mississippi Takes Action to Prevent Liver Cancer

The [Mississippi Comprehensive Cancer Control Program](#) at the state health department participated in a CDC demonstration project to put promising or proven liver cancer prevention strategies into action. The goal was to reduce the incidence of HBV and HCV infections and opioid overdose and decrease liver cancer rates among people who inject drugs.



## Demonstration Project Strategies for Mississippi



### Provider Education

Mississippi's cancer program partnered with **Communicare Haven House** (Haven House) and **Coastal Family Health Center, Inc.** to:

- Create and distribute three infographics on HBV risk and vaccination and HCV risk and screening to educate health care providers about the link between the opioid crisis and increased rates of viral hepatitis and liver cancer.
- Create and distribute a brief highlighting state data on opioid use, viral hepatitis, and liver cancer.
- Collect data to track changes in knowledge, awareness, ability, and intent of participating providers to talk to their patients about HBV and HCV.



### Patient Education

Mississippi's cancer program partnered with Haven House to:

- Distribute two infographics on HBV risk and vaccination and HCV risk and screening to educate residential patients at high risk about the link between the opioid crisis and increased rates of viral hepatitis and liver cancer.
- Conduct in-person educational sessions that included two videos about symptoms, risks, prevention, and treatment of HBV and HCV.
- Collect data to track changes in knowledge, awareness, ability, and intent of patients to be screened.



## Project Achievements



### Provider Education

**300** providers were sent 3 infographics and a data brief in a series of 4 emails.

**48** providers completed the pre-test and 53 providers completed the post-test.

- Statistically significant improvements were identified in providers' intent to talk to patients about HBV and HCV (significance was assessed at  $P < 0.05$ ).



### Patient Education

**2** in-person educational sessions were delivered.

**41** patients participated in the sessions.

- Statistically significant improvements were identified in patients' knowledge and awareness of HBV and HCV and in their intent to be screened (significance was assessed at  $P < 0.05$ ).

## Lessons Learned

- Getting providers to complete a pre-post assessment for the educational materials was challenging. Offering continuing medical education (CME) credits as an incentive, making completion of the assessment a requirement for receiving CME credits, and providing information on why the assessment is important may help boost response rates.
- Patients showed interest in the information being shared during the educational sessions. Providing onsite HBV and HCV screening, vaccination, and treatment services after the sessions could be an effective strategy to reach people at high risk.

## Materials Available

Mississippi's cancer program developed two resources as part of this demonstration project. Contact Catherine Young, Mississippi's cancer program director, to get a copy of these resources.

- *Hepatitis C: What You Should Know*
- *Connecting Opioid Use, Viral Hepatitis & Liver Cancer Prevention Profile*



## References

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3. Cancer Statistics at a Glance. U.S. Cancer Statistics Working Group. U.S. Cancer Statistics Data Visualizations Tool, based on 2021 submission data (1999-2019): U.S. Department of Health and Human Services, Centers for Disease Control and Prevention and National Cancer Institute. June 2022. Accessed June 30, 2022. <https://www.cdc.gov/cancer/dataviz>.
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5. Bradley H, Hall EW, Rosenthal EM, et al. Hepatitis C virus prevalence in 50 U.S. states and D.C. by sex, birth cohort, and race: 2013-2016. *Hepatology Communications*. 2020;4(3):355-370. doi: <https://doi.org/10.1002/hep4.1457>.
6. Death Rate Report by State, 2016-2020, Liver and Bile Duct. State Cancer Profiles. Centers for Disease Control and Prevention and National Cancer Institute. Accessed January 25, 2022. [State Cancer Profiles > Death Rates Table](#).

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