Driving to Doctors: Access to Primary Care Physicians in Mississippi

Nearly 18% of Mississippians are receiving healthcare through Medicaid. According to Kaiser Family Foundation, Mississippi has the 6th highest average annual growth rate of Medicaid enrollees. Access to care under the Medicaid program can be difficult to measure. Although many Mississippians are covered under the Mississippi Medicaid program, we do not have a clear understanding of how complicated it is for a Medicaid beneficiary to receive the care they need. Several issues in Mississippi are converging and creating a challenging environment for those who need to receive their health care through the Mississippi Medicaid program. So, it appears that ensuring access to care for Medicaid enrollees is a growing challenge in Mississippi—this brief quantifies one measure of that by estimating the time it takes to drive to physicians’ offices for office visits.

Mississippi is the fourth most rural state in the United States, with 51% of our population living in rural areas as of 2000. Although Vermont, Maine and West Virginia each have a larger proportion of their population living in rural areas, they have a smaller landmass than Mississippi does. Since we have the most rural area to cover and we have vast physician shortages, access to health care is a critical issue in the state.

Many physicians are choosing to limit their Medicaid enrollment due to skyrocketing malpractice premiums, combined with the limited income from Medicaid patients. There is research indicating that Mississippi physicians believe Medicaid patients have more medically complicated conditions and are more likely to sue. The supply of services may be decreasing at a time when the demand for services is increasing. These conditions, in isolation and in combination, can lead to a situation where low income Mississippians, despite the fact that they have health care coverage through Mississippi’s Medicaid program, have difficulty reaching providers who will serve their needs.

In this brief, we examine Mississippi’s Medicaid claims for calendar years 2001, 2002 and 2003. In these analyses we assess the physical location of the home of each Medicaid beneficiary (those who are not just eligible for Medicaid services, but who have actually filed claims for coverage) and the physical office location of each physician who filed claims for office visits in these same years. Once the location of the patient and the physician have been estimated (to the zip+4 or zip code location if an actual address was not located), a geographic information system (GIS) was used to estimate the length of time it would take a driver to reach the physician’s office from the patient’s home. The estimates in conjunction with the number of patient visits to that particular physician’s office were used to calculate county-level and state-level drive time means. The county mean drive times are compared to the state mean in Map One, illustrating the differences in access to primary care physicians in Mississippi for Mississippi Medicaid patients.

The state mean time for Mississippi Medicaid patients’ drive time to a primary care physician was 24.5 minutes. Those counties in the lightest shade of blue (Adams, Bolivar, Grenada, Hancock and Leflore) have drive times that were 10 or more minutes under the 24.5-minute state average. Another 16 counties had average drive times that were less than 24.5 minutes but more than 14.5 minutes. These counties include those closer to more urban areas, such as Biloxi, Columbus, Jackson, Meridian and Tupelo. There are 20 counties where Medicaid beneficiaries are driving between 24.5 minutes and 34.5 minutes.
for primary care office visits; they include a group of counties west of Tupelo and/or south of Memphis (DeSoto, Lafayette, Panola, Tate and Yalobusha), a second group located between Columbus and Tupelo (Chickasaw, Clay and Monroe), a third group east of Jackson, south of Meridian and/or north of Hattiesburg (e.g., Clarke, Jefferson Davis, Lauderdale, Smith, Wayne) and finally two counties in the Delta (Sunflower and Carroll). Medicaid beneficiaries in these areas are driving up to ten minutes longer to reach a primary care physician. In large part this indicates that patients are driving toward more densely populated areas of the state where medical care tends to be concentrated.

The final group of counties, depicted in the darkest shade of blue in Map One, has the longest drive time for primary care and includes half of Mississippi’s counties. The Medicaid beneficiaries living in these counties are driving more than 34.5 minutes to reach a primary care physician. Patterns depicted indicate that people in the southern part of Mississippi frequently drive down to the coast or up to Hattiesburg for primary care, while those who live in central Mississippi are driving into the Jackson metro area or Meridian for care. Finally, those in northeast Mississippi appear to be driving to Tupelo or Memphis for their health care.

For a population comparison, we assumed people went to the closest primary care physician—defined here as a family doctor, generalist, internist, pediatrician or gynecologist—and again estimated where the population lives (at the census block level) and where the physician offices were located. Using these locations, we calculated the driving time for each population point to reach the closest primary care physician. These drive time estimates were used to calculate county-level and state-level population drive time means. Map Two displays the comparison of the county-level population drive time means to the state drive time mean for Medicaid beneficiaries.

Only residents of Amite, Issaquena, Lawrence, Tunica and Wilkinson counties have to drive more than 34.5 minutes to seek primary care (see Map Two), although Medicaid beneficiaries in half of Mississippi counties are driving that distance for primary care (see Map One). Residents in 14 more counties are driving more than the mean drive time for the Medicaid population—Benton, Covington, Franklin, Greene, Humphreys, Itawamba, Jasper, Jefferson Davis, Kemper, Quitman, Smith, Walthall, Webster, and Yalobusha. In the other 63 counties, drive times for residents seeking primary care are shorter than the average Medicaid drive time.

The final analysis of primary care physician access examined the total amount of time Medicaid beneficiaries are estimated to spend driving to and from primary care appointments each year. These results are shown in Map Three. On average, Mississippi Medicaid beneficiaries spend just over 7 hours per year driving to primary care physicians’ offices (425 minutes on average), with those around the center of the state, those just south of Memphis and those just north of the Mississippi Gulf Coast averaging more than 9 hours in travel each year. Keep in mind that for a single mother of three children this would mean that she would average spending almost a full-time workweek in the car each year (9 hours per family member or 36 hours total) just traveling to primary care physician appointments.

When providing health care to poor rural residents, access to care is a critical factor. Medicaid beneficiaries—given their financial status—are less likely to have their own personal transportation and more likely to live in areas without public transportation. Medicaid covers some non-emergency transportation; however these expenses can become burdensome for the program, as noted by Texas whose non-emergency transportation program has been transferred to its Department of Transportation. Mississippi could consider changes to the non-emergency transportation program as one means to increase access among Medicaid patients. Perhaps a more promising change would be to encourage more physicians to participate in the Medicaid program. Future analyses will consider this possibility by examining the rate at which both rural and urban primary care physicians
are participating in the Mississippi Medicaid program.

Although these numbers indicate the possibility of substantial challenges in accessing primary care physicians, there are some limitations that should be noted. First, physicians who travel to more rural areas of the state may be billing through their primary office, resulting in a longer calculated travel time for some patients. If this is in fact occurring, then we are overestimating drive time from claims data in these analyses. On the other hand, the population’s drive time is underestimated here, as we made the assumption that the population would choose to visit the closest doctor. There is a vast literature on “drive by” behavior of patients—that is, we know that the population does not go to the most proximate provider; however, there is no population database for comparison so this is the most appropriate comparison to make.

6 See http://www.dot.state.tx.us/PTN/mtp/mtphome.htm
**MAP THREE: ANNUAL TRAVEL TIME TO PRIMARY CARE PROVIDERS FOR MISSISSIPPI’S MEDICAID PATIENTS**

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For a related policy brief, please see Driving to Doctors: Access to Specialists in Mississippi, which is available on-line at www.healthpolicy.msstate.edu/publications/