Driving to Doctors: Access to Specialists in Mississippi

Medicaid is required by law to provide equal access for Medicaid patients, which is determined by comparing Medicaid patient access to the privately insured population’s access. In Mississippi, this is an especially difficult challenge given the largely rural, poverty-stricken, minority population that Medicaid is serving. Additionally, Mississippi’s physicians are facing lower income from capitated patients and higher premiums on malpractice insurance, leading to difficulties in physician recruitment and increased physician interest in relocating out-of-state. The confluence of these characteristics may result in an access crisis in the near future. The effects of medical malpractice are of particular concern for patients trying to see physicians in certain specialties—some specialists (e.g., obstetricians and neurosurgeons) are limiting their care of patients. This is due, at least in part, to the beliefs that Mississippi physicians have concerning Medicaid patients. Specifically, Mississippi physicians believe that Medicaid patients have more medically complicated conditions and are more likely to sue.

Given Mississippi’s recent struggles with medical malpractice insurance, the funding crises that the Mississippi Division of Medicaid has experienced, and the physician shortages that the state faces, access to specialty care for Medicaid beneficiaries is a concern. One way to assess whether Medicaid beneficiaries are receiving care is by comparing how far they have to drive to see a specialist—by our definition this is anyone who is not a primary care provider (e.g., family practitioner, gynecologist, generalist, internist or pediatrician)—to how far the general population would have to drive to see a specialist. Although this Policy Brief groups all specialists together, future research could focus on a specified population (e.g., cancer patients) and their appropriate specialists (in this case, oncologists).

Here, we examine Mississippi’s Medicaid claims for calendar years 2001, 2002 and 2003. In these analyses we estimate the physical home location 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 unavailable), 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 drive time 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. County mean drive times are compared to the state mean in Map One to illustrate differences in access to Mississippi’s specialists for Medicaid patients.
Map One indicates that the average drive time in the state of Mississippi for Medicaid beneficiaries to receive specialist care is 39.8 minutes. Ten counties have a drive time of less than 30 minutes. These counties are Alcorn, Harrison, Hinds, Jackson, Lauderdale, Leflore, Lincoln, Lowndes, Madison and Rankin. The cities and towns encompassed in these counties are Brookhaven, Columbus, Corinth, Greenwood, Gulfport-Biloxi, Jackson, and Meridian. Medicaid beneficiaries who live in these counties have the shortest drives for specialty care.

Nineteen counties have an average drive time to specialist care for Medicaid beneficiaries that is between 30 and 40 minutes: Adams, Claiborne, Clay, Copiah, DeSoto, Forrest, Franklin, Hancock, Holmes, Jefferson Davis, Lamar, Lee, Monroe, Oktibbeha, Pike, Prentiss, Scott, Stone, and Washington. Many of these counties are on the outskirts of larger cities where specialists are concentrated.

The longest average drive time to a specialist’s office occurs in the remaining 53 counties. Medicaid beneficiaries in 15 counties drive an average of 40 to 50 minutes to see a specialist. In the remaining 38 counties, the Medicaid beneficiaries’ drive times to specialists average more than 50 minutes. These counties tend to be more remote from population centers, are located either in the north central part of the state—between Jackson, Columbus, Tupelo and Greenwood—or are scattered across the bottom half of the state—in areas surrounding the coastal cities, Hattiesburg or Meridian. Medicaid beneficiary drive times to a specialist are starkly contrasted with the population’s estimated drive time.

For a population comparison, we assumed people went to the closest specialist, as defined above, and again estimated where the population lives (at the census block level) and where physician offices were located. Using these locations, we calculated the drive time for each population point to reach the closest specialist. We used these drive time estimates 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. There are two clear limitations to this methodology. First, there is a vast literature on the “drive by” behavior of patients—that is, we know that the population does not necessarily go to the most proximate provider; however, there is no population database for comparison so this is the most appropriate comparison to make. Additionally, the Medicaid beneficiaries would be limited by the type of specialist they need to see, whereas in these analyses we cannot limit the population to a particular type of specialist. Medicaid beneficiary drive times to a specialist (Map One) are starkly contrasted with the population’s estimated drive time (Map Two).

Map Two indicates that the vast majority of the Mississippi population can reach a specialist faster than the Medicaid population can. In fact, only 9 counties in the state fall above the state mean of nearly 40 minutes to a specialist: Claiborne, Greene, Issaquena, Sharkey, Simpson, Smith, Tishamingo, Wayne and Wilkinson. According to the Census Bureau, together these counties hold just over 125,000 Mississippians—roughly 4% of the state’s population. Thus, nearly the entire general population can reach a specialist in less than 40 minutes of driving time, the basic average drive time for Medicaid beneficiaries.

Map Three displays the total drive time that Medicaid beneficiaries spend in the car over the course of a year driving to and from specialists. On average, Medicaid beneficiaries are in their cars for 8 hours per year just driving to their specialists’ office. However, in many areas of the state (largely those highlighted as having the longest drive times from Map One), Medicaid beneficiaries are spending more than 10 hours per year driving for specialty care. Only Medicaid beneficiaries in the Jackson area and five other counties are spending less than four hours per year driving for specialty care.

Clearly there is variation across the state in the amount of time it takes someone to get to his or her specialist. Some limitations of the population numbers were outlined above, but for Medicaid beneficiaries the entire population of claims data were used to estimate drive time; so we are confident that our estimate of the time spent in the car for Medicaid beneficiaries is valid. However, if a Medicaid beneficiary also needs to spend time arranging for transportation—whether from friends, family or organizations providing trans-
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MAP THREE: **ANNUAL TRAVEL TIME TO SPECIALISTS FOR MISSISSIPPI’S MEDICAID PATIENTS**

Annual Travel Time to Specialists

Time compared to State Mean

- Greater than 2 Hours Shorter
- Up to 2 Hours Shorter
- State Mean (500-6 Minutes)
- Up to 2 Hours Longer
- Greater than 2 Hours Longer

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