

Racial and Ethnic Disparities in Medicaid: An Annotated Bibliography

Racial and ethnic disparities persist even after controlling for socioeconomic factors in a range of health issues and outcomes throughout the U.S. health care system (IOM 2003). Such disparities are particularly relevant to Medicaid given that more than half (61.1 percent) of the program's 73 million beneficiaries identify as Black, Hispanic, Asian American, or another non-white race or ethnicity (MACPAC 2020a).

The racial justice protests during the summer of 2020 and the COVID-19 pandemic have placed a new spotlight on disparities in health care and health outcomes. COVID-19 has disproportionately affected communities of color. Black, Hispanic and Asian American people had higher overall rates of infection, hospitalization, and death due to COVID-19 than white people (Rubin-Miller et al. 2020). When compared to those insured by Medicare only, individuals who are dually eligible for Medicare and Medicaid have higher rates of infection and hospitalization across multiple demographics, and Black, Hispanic and American Indian and Alaska Native (AIAN) dually eligible beneficiaries have greater infection and hospitalization rates than their white counterparts (CMS 2020). Women of color also experience greater risks of maternal morbidity, mortality, and giving birth to a preterm or low-birthweight infant (MACPAC 2020b).

To inform efforts to address such disparities, we reviewed studies on disparities in Medicaid that have appeared in peer-reviewed journals as well as those published by policy and research organizations and government agencies. Studies were identified between August and December of 2020 using multiple methods, including searches of Google Scholar, PubMed, and other research search engines, and reviews of cited references in the search results. We focused primarily on articles published from 2010 to 2020, including a few earlier studies. We also included original work published by MACPAC plus a few literature reviews that summarize findings from older studies.

The studies annotated below document that Black, Hispanic, and AIAN Medicaid beneficiaries experience poorer outcomes and experience more barriers to care than white beneficiaries. They provide a useful overview across a broad range of policy targets (e.g., coverage, access to specific types of services, data) and across multiple age and racial and ethnic groups.

Coverage

The vast majority of recent analyses of coverage changes in Medicaid have centered around expansion of coverage to the new adult group under the Patient Protection and Affordable Care Act (ACA, P.L. 111-148, as amended). In general, the studies have found that although disparities in coverage persist, these have narrowed in expansion states relative to non-expansion states.



Angier, H., D. Ezekiel-Herrera, M. Marino, et al. 2019. Racial/ethnic disparities in health insurance and differences in visit type for a population of patients with diabetes after Medicaid expansion. *Journal of Health Care for the Poor and Underserved* 30, no. 1:116-130. <https://doi.org/10.17226/10260>.

This study used electronic health records (EHRs) from a clinical data research network of community health clinics to examine racial and ethnic insurance disparities and differences in disparities before and after Medicaid expansion for diabetes patients. Using a difference-in-differences model, the study found that visits insured by Medicaid increased in expansion states, privately insured visits increased in non-expansion states, and uninsured visits decreased in all states for all racial and ethnic groups. The study also found that Hispanic individuals had the smallest decrease in uninsured visits. This disparity was most pronounced in expansion states, although expansion states had greater decreases in uninsured visits for all racial and ethnic groups than did non-expansion states.

Blewett, L.A., C. Planalp, & G. Alarcon. 2018. Affordable Care Act impact in Kentucky: Increasing access, reducing disparities. *American Journal of Public Health* 108, no. 7: 924-929. <https://doi.org/10.2105/AJPH.2018.304413>.

This study looked at data from the American Community Survey (ACS) to examine disparities in health insurance in Kentucky before and after implementation of the ACA. The study found that the uninsurance rate declined overall from 14.4 percent to 6.1 percent as well as across all racial and ethnic groups. After implementation of the ACA, Black individuals were no longer overrepresented among the uninsured population and had the greatest decline in uninsurance. However, there was no significant improvement in insurance disparities among Hispanic, Asian American, and mixed-race individuals.

Baumgartner, J.C., S.R. Collins, D.C. Radley, et al. 2020. How the Affordable Care Act has narrowed racial and ethnic disparities in access to health care. New York, NY: The Commonwealth Fund. https://www.commonwealthfund.org/sites/default/files/2020-01/Baumgartner_ACA_racial_ethnic_disparities_db.pdf.

This brief used data from two federal surveys, the ACS and the Behavioral Risk Factor Surveillance System (BRFSS) to determine the effect of coverage expansion on disparities. The gap between Black and white adult uninsurance rates dropped by 4.1 percent, and the gap between Hispanic and white uninsured rate decreased by 9.5 percent. The brief also found that disparities narrowed in both expansion and non-expansion states, but in expansion states, access to care increased for all racial and ethnic groups and disparities narrowed between white and minority adults.

Cross-Call, J. 2020. Medicaid expansion has helped narrow racial disparities in health coverage and access to care. Washington, DC: CBPP. <https://www.cbpp.org/sites/default/files/atoms/files/10-21-20health2.pdf>.

This brief used a variety of data sources including the ACS and the U.S. Census to examine how Medicaid expansion affected racial disparities in coverage and access. The brief noted that although there are still significant disparities in uninsurance rates and the share of adults avoiding care due to cost, expansion states have seen a greater reduction in disparities for these metrics than non-expansion states.



Guth, M., S. Artiga, & O. Pham. 2020. Effects of the ACA Medicaid expansion on racial disparities in health and health care. Washington, DC: Kaiser Family Foundation (KFF). <https://www.kff.org/report-section/effects-of-the-aca-medicaid-expansion-on-racial-disparities-in-health-and-health-care-issue-brief/>.

This brief reviewed the literature on the effects of Medicaid expansion on racial disparities in four areas: coverage, access to and use of care, health outcomes and quality, and payer mix. In health coverage, most studies found that expansion helped narrow but did not eliminate disparities. In access and use of care, most studies found that while expansion was generally associated with improvements, there was limited evidence of reduction in disparities. In outcomes and quality, studies found that expansion mostly narrowed disparities, particularly in infant and maternal health. Finally studies also suggested that expansion narrowed disparities in economic well-being and reimbursement patterns.

Howell, E., S. Decker, S. Hogan, et. al. 2010. Declining child mortality and continuing racial disparities in the era of the Medicaid and SCHIP insurance coverage expansions. American Journal of Public Health 100, no. 12: 2500-2506. <https://dx.doi.org/10.2105%2FAJPH.2009.184622>.

This study used data from the National Center for Health Statistics' multiple-cause-of-death files from 1985 to 2004 to examine trends in national childhood mortality and racial disparities in relation to Medicaid and CHIP eligibility expansions. The study found that although child mortality substantially declined, mortality ratios between Black and white children did not change. The study also found that eligibility expansions were significantly associated with declines in external cause mortality but did not affect racial disparities.

Langellier, B.A., J. Guernsey de Zapien, C. Rosales, et.al. 2014. State Medicaid expansion, community interventions, and health care disparities in a United States- Mexico border community. American Journal of Public Health 104, no. 8: e94-e100. <https://doi.org/10.2105/AJPH.2014.302013>.

This study used data from a local survey (Douglas Community Health Survey) in 1998 and 2010 to examine whether Arizona's pre-ACA Medicaid expansion in tandem with a number of community-level programs (such as diabetes education) affected access to and use of health care services in a primarily Mexican-American community. The study found that insurance coverage increased from 66 percent to 82 percent. Study participants in 2010 were also more likely to have a usual source of care, to have visited a provider in the past year, and to have been screened for diabetes and hypertension. Participants with the lowest education levels had the highest increases in health insurance coverage and use of services, largely eliminating the gap in coverage and use between themselves and participants with higher levels of education.

Lee, H. & F. Porell. 2020. The effect of the Affordable Care Act Medicaid expansion on disparities in access to care and health status. Medical Care Research and Review 77, no. 5: 461-473. <https://doi.org/10.1177%2F1077558718808709>.

This study used data from the BRFSS from 2011 to 2016 to estimate the effect of Medicaid expansion on racial and ethnic disparities on a number of variables. It found that while expansion increased coverage at a greater rate for Black individuals than white individuals, there are still noticeable disparities in access and quality. Expansion positively affected access and health outcomes for white childless adults but had few positive effects for their Black and Hispanic counterparts. Variables examined included having: no usual source of care, unmet needs due to cost, no annual checkup, self-perceived health status that was fair or poor, and how many of the past 30 days a respondent was not in good health.



Powell, W., L. Frerichs, R. Townsley, et al. 2020. The potential impact of the Affordable Care Act and Medicaid expansion on reducing colorectal cancer screening disparities in African American males. *PLoS One* 15, no. 1: e0226942. <https://doi.org/10.1371/journal.pone.0226942>.

This article used data from claims and the BRFSS to investigate the potential effect of the ACA expansion on colorectal cancer (CRC) outcomes between Black and white men. The authors developed a simulation model to measure three CRC outcomes, including screening, incidence, and deaths, as well as economic costs from 2013–2023. It found that the simulation predicted states with health exchanges and Medicaid expansion could prevent more CRC cases than states with health exchanges alone. The study also predicted that expansion had a greater effect on CRC prevention for Black men, reducing racial disparities between Black and white men.

Singh, K.A., & A.S. Wilk. 2019. Affordable Care Act Medicaid expansion and racial and ethnic disparities in access to primary care. *Journal of Health Care for the Poor and Underserved* 30, no. 4: 1543- 1559. <https://doi.org/10.1353/hpu.2019.0088>.

This study used BRFSS data from 2011 to 2016 to examine the effect of Medicaid expansion and race and ethnicity on access to primary care. It found that although low-income adults in expansion states were 13.9 percent more likely to have insurance, insurance gains were 6.4 percent lower for Hispanic adults than white adults. Baseline access disparities between white and minority non-white adults persisted post-expansion in expansion states.

Sohn, H. & S. Timmermans. 2019. Inequities in newborn screening: Race and the role of Medicaid. *SSM - Population Health* 9:100496. <https://doi.org/10.1016/j.ssmph.2019.100496>.

This article reviewed state infant mortality rates among white and Black children between 1959 and 1995 based on when states adopted Medicaid and implemented the Newborn Screening (NBS) program, which requires all newborns to receive certain medical screenings. The authors found that NBS alone was not associated with significant declines in infant mortality but was associated with increases in racial inequities within the state. When implementing NBS with Medicaid, states experienced declines in mortality rates and in racial inequities.

Stimpson, J., F.A. Wilson. 2018. Medicaid expansion improved health insurance coverage for immigrants, but disparities persist. *Health Affairs* 37, no. 10: 1656-1662. <https://doi.org/10.1377/hlthaff.2018.0181>.

This study used the ACS to examine the effect of Medicaid expansion and citizenship status on insurance coverage. The study found that while insurance coverage improved significantly across all citizenship status groups (U.S. natives, naturalized citizens, and noncitizens), uninsurance rates for noncitizens remained high compared to U.S. natives.

Xiao, D., C. Zheng, M. Jindal, et al. 2018. Medicaid expansion and disparity reduction in surgical cancer care at high-quality hospitals. *Journal of the American College of Surgeons* 226, no. 1: 22-29. <https://dx.doi.org/10.1016%2Fj.jamcollsurg.2017.09.012>.

This study used the New York State Inpatient Database to look at the effects of a New York State Medicaid expansion in 2001 on disparities by insurance type and by race in access to surgical cancer care at high-volume hospitals and low mortality hospitals. The study found that racial disparities in access to surgical cancer care at high-volume and low mortality hospitals increased after Medicaid expansion. Although



racial disparities increased after the state expanded Medicaid, the difference in access between those with Medicaid and those with private insurance decreased at high-volume hospitals and remained consistent at low-mortality hospitals.

Access

We identified 34 studies analyzing access to health care, including having a usual source of care, having unmet needs, provider acceptance of Medicaid, use of services, as well as access to certain types of care such as preventive and chronic services, maternal and infant health, and behavioral and substance use treatment.

Usual source of care or unmet needs

LaClair, M., D.S. Mandell, A.W. Dick, et al. 2019. The effect of Medicaid waivers on ameliorating racial/ethnic disparities among children with autism. Health Services Research 54, no. 4: 912-919.
<https://doi.org/10.1111/1475-6773.13176>.

The authors used data from the National Survey of Children's Health in 2003, 2007, and 2011 and data from the National Survey of Children with Health Care Needs in 2005 and 2010. It found that Medicaid waivers for home- and community-based services (HCBS) have the potential to significantly decrease disparities in unmet need among children with autism spectrum disorder (ASD), depending on waiver generosity. In this study, unmet need was defined as difficulties or delays in receiving needed medical care, which includes dental care, mental health services, and prescriptions. The study found that the presence of a waiver alone does not affect unmet need, but increased generosity in waivers (in terms of maximum expenditure limit for individuals and enrollment limit) was associated with significant decreases in rates of unmet need for Black children with ASD.

Medicaid and CHIP Payment and Access Commission (MACPAC). 2016. Access in brief: Adults' experiences in obtaining medical care. Washington, DC: MACPAC.
<https://www.macpac.gov/publication/access-in-brief-adults-experiences-in-obtaining-medical-care/>.

This brief examined 2014 National Health Interview Survey (NHIS) data to describe experiences of Medicaid beneficiaries in obtaining medical care. Black adults with Medicaid were less likely to report not having a usual source of medical care than white or Hispanic adults with Medicaid coverage. Hispanic adults also reported worrying more about paying medical bills than white or Black adults.

Medicaid and CHIP Payment and Access Commission (MACPAC). 2016. Access in brief: Children's difficulties in obtaining medical care. Washington, DC: MACPAC.
<https://www.macpac.gov/publication/access-in-brief-childrens-difficulties-in-obtaining-medical-care/>.

This brief examined National Health Interview Survey data to describe experiences of children with Medicaid coverage compared to privately insured and uninsured children in obtaining medical care. The brief found that among children in all three insurance groups, Hispanic children were more likely to lack a usual source of medical care and more likely to have problems getting a timely appointment than Black or white children.



Provider willingness to accept Medicaid as a source of payment

Daly, M.R. & J.M. Mellor. 2020. Racial and ethnic differences in Medicaid acceptance by primary care physician: A geospatial analysis. *Medical Care Research and Review* 77, no. 1: 85-95.

<https://doi.org/10.1177/1077558718772165>.

This study analyzed the availability of primary care physicians (PCPs) to Medicaid patients in Virginia. Physician availability was measured by determining if PCPs were accepting Medicaid patients and accessible within 30 minutes of a beneficiary's residence. The study found that Virginia's urban areas had lower rates of PCP acceptance of Medicaid patients than rural areas. Researchers also found that areas where higher proportions of the population are Black or Hispanic had lower rates of physician acceptance of Medicaid patients than areas where the population was more white. However, researchers found no association of PCP availability in rural areas to the proportion of the area that is Black or Hispanic. Urban areas with larger portions of Hispanic people had significantly lower rates of available PCPs.

Cummings, J.R., H. Wen, M. Ko, et. al. 2014. Race/ethnicity and geographic access to Medicaid substance use disorder treatment facilities in the United States. *JAMA Psychiatry* 71, no. 2: 190-196.

<https://doi.org/10.1001/jamapsychiatry.2013.3575>.

This study used data from the 2009 National Survey of Substance Abuse Treatment Services and the 2011-2012 Area Resource file to look at the availability of outpatient substance use disorder (SUD) treatment facilities accepting Medicaid by county characteristics. The study found that 60 percent of all U.S. counties have at least one outpatient SUD facility that accepts Medicaid, but the rate is lower in Southern and Midwestern states. Additionally, counties with higher percentages of Black or uninsured people are less likely to have at least one SUD facility accepting Medicaid.

Greene, J., J. Bluestein, & B.C. Weitzman. 2006. Race, segregation, and physicians' participation in Medicaid. *The Milbank Quarterly* 84, no. 2: 239-272. <https://doi.org/10.1111/j.1468-0009.2006.00447.x>.

This study used data from the 2000 to 2001 Community Tracking Survey conducted by the American Medical Association and American Osteopathic Association to explore the effects of physician and community characteristics on a physician's decision to accept Medicaid patients. Physician characteristics included gender, race, and type of practice; community characteristics included percentage of poor residents who are white, racial segregation, and poverty segregation. It found that physicians were significantly less likely to accept Medicaid in areas where poor residents were more likely to be non-white and were less likely to accept Medicaid in areas with high levels of racial segregation. The study also found that there was no link between poverty segregation in the community and physician acceptance of Medicaid.

Guerrero, E.G. 2013. Enhancing access and retention in substance abuse treatment: The role of Medicaid payment acceptance and cultural competence. *Drug and Alcohol Dependence* 132, no. 3: 555-561.

<https://doi.org/10.1016/j.drugalcdep.2013.04.005>.

The study used data from treatment programs funded by the Department of Public Health in Los Angeles County, California to examine the effect of whether a program accepted Medicaid as a form of payment and the program's level of cultural competence on patient access to and retention in substance abuse treatment. Cultural competence was measured by knowledge of and linkage to minority communities, personal involvement of staff in minority communities, staff diversity, and program policies. The study



found that programs that accepted Medicaid and had linkages with minority communities had lower client wait times. It also found that programs with culturally competent policies and procedures had greater treatment retention.

Guerrero, E.G., B.R. Garner, B. Cook, et al. 2017. Identifying and reducing disparities in successful addiction treatment completion: Testing the role of Medicaid payment acceptance. *Substance Abuse Treatment, prevention, and Policy* 12, no.1: 27. <https://doi.org/10.1186/s13011-017-0113-6>.

This study analyzed data from publicly-funded treatment programs to assess the effect of Medicaid acceptance on disparities in treatment completion between Mexican American and non-Latino white beneficiaries. The study found that there was a significant association between Mexican American beneficiaries completing the treatment and program acceptance of Medicaid.

Okunseri, C., R. Bajorunaite, A. Abena, et al. 2008. Racial/ethnic disparities in the acceptance of Medicaid patients in dental practices. *Journal of Public Health Dentistry* 68, no. 3: 149-153.

<https://doi.org/10.1111/j.1752-7325.2007.00079.x>.

This study utilized data from the 2001 Wisconsin Dentist Workforce Survey to analyze provider factors associated with the acceptance of new Medicaid patients by dentistry practices. The study found that dentists identifying as racial and ethnic minorities were twice as likely to accept Medicaid patients than white dentists. It also found that dentists in larger practices were significantly more likely to accept Medicaid patients than dentists in smaller practices.

Use of services

Bilaver, L.A., S.A. Sobotka, D.S. Mandell. 2020. Understanding racial and ethnic disparities in autism-related service use among Medicaid-enrolled children. *Journal of Autism and Developmental Disorders*.

<https://doi.org/10.1007/s10803-020-04797-6>.

This study used 2012 MAX data to examine disparities in use of services among children with ASD. It found that Black, Asian American, and Native American/Pacific Islander children were less likely to receive outpatient services than white children, but Black and Asian American children were more likely to receive school-based services than white children.

Fabius, C.D., K.S. Thomas, T. Zhang, et. al. 2018. Racial disparities in Medicaid home and community-based service utilization and expenditures among persons with multiple sclerosis. *BMC Health Services Research* 18, no. 1: 773. <https://doi.org/10.1186/s12913-018-3584-x>.

This study used demographic and utilization data from the Medicaid Analytic eXtract (MAX) files and comorbidity data from the Medicare Chronic Condition Warehouse to examine racial disparities in HCBS use and expenditures, specifically among HCBS users with multiple sclerosis (MS). The study found that Black HCBS users were younger, more impaired, and less likely to receive case management, equipment, and other services compared to white HCBS users. White men had the highest HCBS expenditures, while Black men had the lowest.



Hu, T., K. Mortensen, & J. Chen. 2018. Medicaid managed care in Florida and racial and ethnic disparities in preventable emergency department visits. *Medical Care* 56, no. 6: 477-483.

<https://doi.org/10.1097/mlr.0000000000000909>.

This study used emergency department (ED) visit and inpatient discharge data in Florida from 2010–2015. The purpose of the study was to determine rates of preventable ED utilization for non-elderly Florida adults insured by Medicaid versus those who were privately insured before and after statewide implementation of mandatory managed care. The study found that implementation of this policy was significantly associated with greater reductions in preventable ED visits for Black and Hispanic Medicaid enrollees relative to white Medicaid enrollees. The study also found that racial and ethnic disparities were significantly reduced in counties that had a higher than median Medicaid managed care penetration rate before the statewide change.

Keet, C.A., E.C. Matsui, M.C. McCormack et al. 2017. Urban residence, neighborhood poverty, race/ethnicity, and asthma morbidity among children on Medicaid. *Journal of Allergy and Clinical Immunology* 140, no. 3: 822-827. <https://doi.org/10.1016/j.jaci.2017.01.036>.

This study used MAX claims data to examine the effects of geographic residence and race/ethnicity on asthma morbidity. The study found that children living in poor or urban areas and Black children were more likely to experience ED visits and hospitalization due to asthma.

Marton, J., A. Yelowitz, M. Shores, et. al. 2016. Does Medicaid managed care help equalize racial and ethnic disparities in utilization? *Health Services Research* 51, no. 3: 872-891.

<https://doi.org/10.1111/1475-6773.12396>.

This study used administrative data on children enrolled in Medicaid in Kentucky to examine the effects of two managed care programs on racial and ethnic disparities. It found that managed care reduced utilization overall but had an equalizing effect on utilization by race and ethnicity.

McConnell, K.J., C.J. Charlesworth, T.H.A. Meath, et al. 2018. Oregon's emphasis on equity shows signs of early success for black and American Indian Medicaid enrollees. *Health Affairs* 37, no. 3: 386-393.

<https://doi.org/10.1377/hlthaff.2017.1282>.

This study used claims data to determine the effect of Oregon's Medicaid reform on racial and ethnic disparities in utilization and quality. Utilization measures included primary care visits, ED visits, potentially avoidable ED visits, other outpatient visits, and behavioral health visits. Quality measures included 30-day all cause readmission rate, and preventable hospital admissions for chronic conditions. Oregon's Medicaid reform included restructuring into coordinated care organizations (CCOs) and a statewide strategy requiring CCOs to have transformation plans to reduce disparities, creation of regional health equity coalitions to provide guidance to CCOs, and investment in community health workers. The reforms were associated with reductions in disparities in primary care visits and access to care, but there was no change in disparities for ED utilization.



Medicaid and CHIP Payment and Access Commission (MACPAC). 2016. Access in brief: Adults' use of oral health services. Washington, DC: MACPAC. <https://www.macpac.gov/publication/access-in-brief-adults-use-of-oral-health-services/>.

This brief examined data from the 2011 to 2013 Medical Expenditure Panel Survey to analyze beneficiary access to oral health care among adults with Medicaid coverage. The brief found that white adults were more likely than Hispanic or Black adults to report having a dental visit in the past year.

Medicaid and CHIP Payment and Access Commission (MACPAC). 2016. Access in brief: Children's dental services. Washington, DC: MACPAC. <https://www.macpac.gov/publication/access-in-brief-childrens-dental-services/>.

This brief examined data from the 2011 to 2013 Medical Expenditure Panel Survey to describe characteristics of use of dental services among children. It found that while race was not a significant factor in likelihood of having a dental visit in the past year among children with Medicaid or CHIP coverage, white children were more likely than Black and Hispanic children to have had a dental visit in the past year among both the privately insured and uninsured groups.

Medicaid and CHIP Payment and Access Commission (MACPAC). 2016. Access in brief: Use of emergency departments by children. Washington, DC: MACPAC. <https://www.macpac.gov/publication/access-in-brief-use-of-emergency-departments-by-children/>.

This brief examined 2012–2014 NHIS data to describe characteristics of ED visits among children. It found that children enrolled in Medicaid or CHIP were more likely to visit an ED than those with private insurance across all race and ethnicity groups. Hispanic children had a lower overall rate of having at least one emergency department visit in the past year than Black and white children. Additionally, there were no significant differences in factors associated with an ED visit between Black children covered by Medicaid or CHIP and children with private insurance.

Ringwalt, C., A.W. Roberts, H. Gugelmann, et al. 2015. Racial disparities across provider specialties in opioid prescriptions dispensed to Medicaid beneficiaries with chronic noncancer pain. *Pain Medicine* 16, no. 4: 633-640. <https://doi.org/10.1111/pme.12555>.

This study used Medicaid claims data from North Carolina to analyze disparities in opioid prescriptions dispensed to beneficiaries for chronic pain by race and provider specialty. The study found that Black patients were significantly less likely to fill an opioid prescription and less likely to be written an opioid prescription from every physician specialty except otolaryngologists. This disparity was most notably seen among obstetrician-gynecologists.

Silber, J.H., P.R. Rosenbaum, S.R. Calhoun, et. al. 2017. Racial disparities in Medicaid asthma hospitalizations. *Pediatrics* 139, no.1: e20161221. <https://doi.org/10.1542/peds.2016-1221>.

This study looked at MAX claims to explore racial disparities in hospital practice and patient outcomes for children with asthma. The study found that on measures such as revisit rates and length of stay, there were no significant differences, but Black patients had significantly higher rates of intensive care unit use than white patients.



Zhang, S., C. Senteio, J. Felizzola, et. al. 2013. Racial/ethnic disparities in antiretroviral treatment among HIV-infected pregnant Medicaid enrollees, 2005–2007. American Journal of Public Health 103, no. 12: e46–e53. <https://doi.org/10.2105/ajph.2013.301328>.

This study used data from 2005 to 2007 MAX files for 14 southern states to examine differences in prenatal antiretroviral (ARV) treatment among pregnant women covered by Medicaid with HIV, stratified by race and ethnicity. ¹ The study found that Hispanic women were almost four times more likely to not receive ARV treatment than white women. It also found that being enrolled in Medicaid for less than 3 months was strongly associated with non-treatment and Hispanic women (43.6 percent) were much more likely than white women (3.9 percent) to be enrolled for less than 3 months.

Preventive care and chronic diseases

Brown, L.D., D. Vasquez, J.J. Salinas, et. al. 2018. Evaluation of Healthy Fit: A community health worker model to address Hispanic health disparities. Preventing Chronic Disease 15: 170347. <http://dx.doi.org/10.5888/pcd15.170347>.

This study looked at the effect of a Section 1115 waiver in Texas on addressing disparities in receipt of preventive care services such as screenings and immunizations, as well as access to services. Specifically, the program, Healthy Fit, used community health workers to educate Hispanic Medicaid enrollees and link them to preventive services. The study found that the program was effective in addressing disparities in cancer and cardiovascular diseases, leading, for example to increases in rates of cancer screening from 47 percent to 54 percent of women age 50–74.

Davis, M.M., S. Renfro, R. Pham, et al. 2017. Geographic and population-level disparities in colorectal cancer testing: A multilevel analysis of Medicaid and commercial claims data. Preventive Medicine 101, no. 1: 44–52. <https://doi.org/10.1016/j.ypmed.2017.05.001>.

This study looked at claims data to examine factors of colorectal cancer (CRC) testing rates in Oregon among individuals enrolled in Medicaid and commercial insurance. It found that Medicaid enrollees were less likely to receive CRC testing than their commercially insured counterparts. Researchers found that counties with higher socioeconomic deprivation had lower levels of CRC testing. They also found disparities in testing by gender, geographic residence, health coverage, and access to primary care. However, the study did not find race to be an important predictor of CRC testing rate, and researchers note that the lack of a race effect in the Medicaid population may be because racial disparities are less likely to be observed in settings with lower overall CRC testing.

Medicaid and CHIP Payment and Access Commission (MACPAC). 2016. Access in brief: Use of cervical, breast, and colon cancer tests among adult Medicaid enrollees. Washington, DC: MACPAC. <https://www.macpac.gov/publication/access-in-brief-use-of-cervical-breast-and-colon-cancer-tests-among-adult-medicaid-enrollees/>

This brief used 2013 data from the NHIS to examine trends in screening rates through colorectal tests, mammograms, and Pap smears by race and ethnicity and insurance status. The brief found that uninsured adults were less likely to have had a screening for cancer than those with Medicaid or private insurance. It also found that adult non-elderly Black women covered by Medicaid or private insurance had higher rates of receiving Pap smears than their white and Hispanic counterparts.



Staras, S.A.S., S.T. Vadaparampil, L.T. Haderxhanaj, et al. 2010. Disparities in human papillomavirus vaccine series initiation among adolescent girls enrolled in Florida Medicaid programs, 2006-2008. *Journal of Adolescent Health* 47, no. 4: 381-388. <https://doi.org/10.1016/j.jadohealth.2010.07.028>.

This study used claims data to assess human papillomavirus (HPV) vaccine initiation among 9- to 17-year-old, non-managed care Medicaid enrollees in Florida. The study found that Hispanic girls were more likely than non-Hispanic white and Black girls to have initiated the vaccine series but that there were differences in initiation between Medicaid programs. Compared to other Medicaid programs, girls on MediPass or Children's Medical Service network programs were more likely to have initiated the series.

Tangka, F.J., S. Subramanian, L.R. Mobley, et al. 2017. Racial and ethnic disparities among state Medicaid programs for breast cancer screening. *Preventive Medicine* 102, no. 1: 59-64. <https://doi.org/10.1016/j.ypmed.2017.06.024>.

This study used Medicaid claims and enrollment data from 2006 to 2008 to examine disparities in breast cancer screening by mammography in 44 states. Relative to white women, Black women were significantly less likely to receive mammograms in 13 states and American Indian women were significantly less likely to receive mammograms in 17 states.

Maternal and infant health care

Bocanegra, H.T., M. Braughton, M. Bradsberry, et al. 2017. Racial and ethnic disparities in postpartum care and contraception in California's Medicaid program. *American Journal of Obstetrics & Gynecology* 217, no. 1: 47.e1-47.e7. <https://doi.org/10.1016/j.ajog.2017.02.040>.

This team conducted a prospective cohort study to compare access and quality of care for pregnant women of different races and ethnicities age 15–44 covered by Medi-Cal, California's Medicaid program. It found that Black women were less likely than those in all other racial and ethnic categories to receive postpartum care. Women who were Black, Asian American/Pacific Islander, or reported their race or ethnicity as "other" were less likely to receive any contraception and less likely to receive highly effective contraception than white women. However, Latina women were more likely to receive postpartum care and more likely to receive any contraception when compared to white women, but less likely to receive highly effective contraception.

Medicaid and CHIP Payment and Access Commission (MACPAC). 2020. Chapter 5: Medicaid's role in maternal health. In *Report to Congress on Medicaid and CHIP*. June 2020. Washington, DC: MACPAC. <https://www.macpac.gov/publication/chapter-5-medicaids-role-in-maternal-health/>.

This chapter used data from the CDC WONDER database and from existing literature to investigate racial and ethnic disparities in pregnancy-related mortality and morbidity and infant birth outcomes. It reported that irrespective of insurance status Black and AIAN women have higher pregnancy-related mortality rates than white women, with Black women having mortality rates as high as two to three times higher. Additionally, the national rate of low birthweight infants declined for white women but rose for Black women between 2017 and 2018. Finally, the chapter found that pregnant women covered by Medicaid are more likely than privately insured women to have certain risk factors of maternal morbidity and mortality and also have higher rates of morbidity and mortality.



Parekh, N., M. Jarlenski, & D. Kelley. 2018. Prenatal and postpartum care disparities in a large Medicaid program. *Maternal and Child Health Journal* 22, no. 3: 429-437. <https://doi.org/10.1007/s10995-017-2410-0>.

This study used 2011–2015 Healthcare Effectiveness Data and Information Set (HEDIS) data to assess disparities in prenatal and postpartum care for Medicaid enrollees using measures of timeliness of prenatal care, frequency of prenatal care, and timeliness of postpartum care. The study found that white and Asian American women had higher likelihood of receiving prenatal and postpartum care than Black women. Hispanic women had higher frequency of prenatal care. The study also found that as a health plan's HEDIS performance diminished, racial disparities within the plan became more pronounced.

Behavioral health and substance use treatment

Creedon, T.B. & B.L. Cook. 2016. Access to mental health care increased but not for substance use, while disparities remain. *Health Affairs* 35, no. 6: 1017-1021. <https://doi.org/10.1377/hlthaff.2016.0098>.

This article used data from the 2005 to 2014 National Survey on Drug Use and Health (NSDUH) to examine changes in racial disparities in access to mental health care and substance use associated with the ACA. The article found that Medicaid expansion was associated with significant increases in mental health treatment among all racial and ethnic groups, but disparities persisted.

Heflinger, C.A., J. Chatman, & R.C. Saunders. 2005. Racial and gender differences in utilization of Medicaid substance abuse services among adolescents. *Psychiatric Services* 57, no. 4: 504-511. <https://doi.org/10.1176/ps.2006.57.4.504>.

This study used claims, encounter, and enrollment data from TennCare, Tennessee's Medicaid program, to examine use of SUD services among white and Black adolescents. It found that Black adolescents were less likely to receive SUD services and treatment was more likely to be delayed to an older age. When further stratified by gender, the study found while white and Black males were treated at equivalent rates, Black females experienced the greatest disparity in treatment.

Medicaid and CHIP Payment and Access Commission (MACPAC). 2016. Access in brief: Children's use of behavioral health services. Washington, DC: MACPAC. <https://www.macpac.gov/publication/medicaid-access-in-brief-adolescents-use-of-behavioral-health-services/>.

This brief examined NHIS data to describe characteristics of use of behavioral health services among children. It found that across all insurance types (Medicaid/CHIP, privately insured, and uninsured), white children were more likely to have received behavioral health care than Hispanic and Black children. The brief also found that white children were diagnosed with behavioral health disorders at higher rates, and Hispanic and white children were more likely to have alcohol or drug use disorders than Black children.

Samnaliev, M., M.P. McGovern, & R.E. Clark. 2009. Racial/ethnic disparities in mental health treatment in six Medicaid programs. *Journal of Health Care for the Poor and Underserved* 20, no. 1: 165-176. <https://doi.org/10.1353/hpu.0.0125>.

This study used Medicaid claims data for 1999 from six states to analyze disparities in mental health care between white, Black, and Hispanic beneficiaries. The study found that Hispanic and Black beneficiaries were less likely than white beneficiaries to be treated in community-based settings. Odds ratios for



community-based treatment ranged from 0.43 to 0.88 for Hispanic compared to white beneficiaries and 0.40 to 0.88 for Black compared to white beneficiaries.

Stein, B.D., A.W. Dick, M. Sorbero, et al 2018. A population-based examination of trends and disparities in medication treatment for opioid use disorders among Medicaid enrollees. Substance Abuse 39, no. 4: 419-425. <https://doi.org/10.1080/08897077.2018.1449166>.

This article used data from Medicaid claims to examine disparities in use of medication for opioid use disorders (MOUD). The article found that from 2002 to 2009, the rate of MOUD increased at a significantly higher rate for counties with lower poverty and lower concentrations of Black and Hispanic individuals.

Quality of care

Studies focusing on measures relating to quality of care found that while Black beneficiaries experienced lower quality of care, Black beneficiaries reported better experiences with care than white beneficiaries. Payment reform initiatives tied to quality had mixed results.

Blustein, J., J.S. Weissman, A.M. Ryan, et. al. 2011. Analysis raises questions on whether pay-for-performance in Medicaid can efficiently reduce racial and ethnic disparities. Health Affairs 30, no. 6: 1165-1175. <https://doi.org/10.1377/hlthaff.2010.1022>.

This study used data on hospital performance from Massachusetts' Medicaid program to investigate the effect of a pay-for-performance policies on racial and ethnic disparities in hospital care. It looked specifically at the quality of care given to different race and ethnicity groups within each hospital rather than between hospitals. The study found no racial and ethnic disparities in quality of care but also noted that every hospital's patient population was not sufficiently diverse to justify the statewide payment intervention policy that was implemented.

Campbell, L.J., X. Cai, S. Gao, et al. 2016. Racial/ethnic disparities in nursing home quality of life deficiencies, 2001 to 2011. Gerontology & Geriatric Medicine 2: 1-9. <https://dx.doi.org/10.1177%2F2333721416653561>.

This study used 2000–2011 data from LTCFocus, a database on nursing facilities maintained by Brown University, to examine the effect of concentration of minority residents on quality of life as well as the effect of state Medicaid payment policies on racial and ethnic disparities in quality of life. The study found that disparities in quality of life between high-minority concentration (greater than or equal to 35 percent) and low-minority concentration (less than 5 percent) nursing homes decreased over time but were not eliminated. The study also found that case mix payment policies adjusting payments to nursing homes based on patient care needs were associated with increased disparities in quality of life between high and low minority concentration nursing homes.

Cole, M.B., O. Galarraga, I.B. Wilson, et al 2017. At federally funded health centers, Medicaid expansion was associated with improved quality of care. Health Affairs 36, no. 1: 40-48. <https://doi.org/10.1377/hlthaff.2016.0804>.

This study used 2011–2014 data from the Uniform Data System, a federal database on community health centers, to examine difference in quality of care before and after Medicaid expansions. The study found



that expansion was positively associated with improved quality in four of eight quality measures studied. The study also found that the magnitude of improvement varied by race and ethnicity for some measures. For example, hypertension control for Hispanic individuals improved by almost twice as much as for white individuals.

Horvitz-Lennon, M., R. Volya, R. Garfield, et. al. 2015. Where you live matters: Quality and racial/ethnic disparities in schizophrenia care in four state Medicaid programs. *Health Services Research* 50, no. 5: 1710-1729. <https://doi.org/0.1111/1475-6773.12296>.

This study looked at Medicaid claims data from four states (California, Florida, New York, North Carolina) from 2002 to 2008 to examine racial and ethnic and geographic disparities in quality of care for patients with schizophrenia. The study found that quality (a composite measure constructed from 14 indicators) was lower for Black beneficiaries than white in every state. Quality was lower for Hispanic beneficiaries than white in every state except North Carolina. Variation between counties by race and ethnicity varied by state, but all four states had variation in race and ethnicity-stratified quality of care by county.

Jacobson, J.O., P.L. Robinson, & R.N. Bluthenthal. 2007. Racial disparities in completion rates from publicly funded alcohol treatment: Economic resources explain more than demographics and addiction severity. *Health Services Research* 42, no. 2: 773-794. <https://dx.doi.org/10.1111%2Fj.1475-6773.2006.00612.x>.

This study used intake and discharge records for publicly funded alcohol treatment programs in Los Angeles County to analyze racial differences in treatment completion rates. The study found that Black individuals were significantly less likely to complete treatment programs compared to white individuals. Even after controlling for differences in employment, homelessness, and Medicaid enrollment, the disparity remained.

Le Cook, B. & M. Alegria. 2011. Racial-ethnic disparities in substance abuse treatment: The role of criminal history and socioeconomic status. *Psychiatric Services* 62, no. 11: 1274-1281. https://doi.org/10.1176/ps.62.11.pss6211_1273.

This article used data from NSDUH to examine disparities in substance abuse treatment. The article found that Black and Latino individuals have significantly lower odds of treatment than white individuals when controlling for criminal history. The article also found that having a criminal history and being enrolled in Medicaid were positive predictors of treatment receipt.

Li, Y., C. Harrington, H. Temkin-Greener, et. al. 2015. Deficiencies in care at nursing homes and racial/ethnic disparities across homes fell, 2006-11. *Health Affairs* 34, no. 7: 1139-1146. <https://www.healthaffairs.org/doi/full/10.1377/hlthaff.2015.0094>.

This study linked 2005–2011 data from the federal Online Survey Certification and Reporting System maintained by the Centers for Medicare & Medicaid Services (CMS) to 2005–2010 LTCfocus data to examine the relationship between racial and ethnic makeup of nursing facility residents and number of reported deficiencies (citations are issued by state surveyors if a set of the 180 federal service standards are not met). It found that the average annual number of deficiencies declined from 10.6 in 2006 to 9.4 in 2011 for facilities with more than 35 percent minority residents. The percentage of facilities with serious deficiencies also decreased over time.



Martino, S.C., M. Mathews, D. Angel, et al. 2019. National racial/ethnic and geographic disparities in experiences with health care among adult Medicaid beneficiaries. *Health Services Research* 54, Suppl. 1: 287-296. <https://doi.org/10.1111/1475-6773.13106>.

This study used data from the 2014 to 2015 Consumer Assessment of Healthcare Providers and Systems survey to investigate trends in health care experiences of adult beneficiaries by race and ethnicity and geography. Measures of experience included getting needed care, getting care quickly, how well doctors communicate, and health plan information and customer service. The study found that compared to white beneficiaries, AIAN and Asian American/Pacific Islander beneficiaries reported worse experiences (by 6–8 points and 13–22 points, respectively, on a 0–100 scale) and Black beneficiaries reported better experiences (by 3–5 points on a 0–100 scale). The study also found that beneficiaries in large urban areas had the worst experiences relative to those in all other geographic categories.

Zhang, S., K. Cardarelli, R. Shim, et al. 2013. Racial disparities in economic and clinical outcomes of pregnancy among Medicaid recipients. *Maternal and Child Health Journal* 17, no. 8: 1518-1525. <https://dx.doi.org/10.1007%2Fs10995-012-1162-0>.

This study used MAX data to examine racial and ethnic disparities in pregnancy outcomes among Medicaid enrollees in 14 states. The study found that Black women had a higher rate of adverse pregnancy outcomes than white or Hispanic women, and racial disparities in adverse outcomes cost Medicaid \$114 to \$214 million annually.

Expenditures

The studies we identified found that racial and ethnic disparities in outcomes are associated with increased costs and that states with higher perceived racial bias spent less on Medicaid enrollees than states with lower rates of racial bias.

Buescher, P.A., T. Whitmire, & B. Pullen-Smith. 2009. Medical care costs for diabetes associated with health disparities among adult Medicaid enrollees in North Carolina. *North Carolina Medical Journal* 71, no. 4: 319-324. <https://schs.dph.ncdhhs.gov/SCHS/pdf/SCHS160.pdf>.

This study used paid claims and enrollment data from North Carolina to look at costs associated with racial and economic disparities in diabetes care among adult Medicaid enrollees in North Carolina. The study estimated that \$225 million in expenditures for diabetes can be attributed to racial and economic disparities in diabetes prevalence.

Cantor, J.C., S. Chakravarty, J. Nova, et al 2020. Medicaid utilization and spending among homeless adults in New Jersey: Implications for Medicaid-funded tenancy support services. *The Milbank Quarterly* 98, no. 1: 106-130. <https://doi.org/10.1111/1468-0009.12446>.

This study used data from New Jersey's Medicaid Management Information System (MMIS) and Homeless Management Information System (HMIS) to examine Medicaid spending for individuals experiencing homelessness who were potentially eligible for Medicaid-funded tenancy support services. The study found that a disproportionate portion of such adults were male and Black. The study also found that Medicaid spending for this population was 10–27 percent greater than Medicaid spending for individuals considered housing secure, controlling for demographic and clinical factors.



Leitner, J.B., E. Hehman, & L.R. Snowden. 2018. States higher in racial bias spend less on disabled Medicaid enrollees. *Social Science & Medicine* 208: 150-157.

<https://dx.doi.org/10.1016/j.socscimed.2018.01.013>.

This study examined data on payment and enrollees per state for Medicaid beneficiaries with disabilities to determine the association between statewide racial bias and spending. The study found that higher rates of explicit or implicit racial bias, based on the Harvard Implicit Association Test, were correlated with lower spending per enrollee. The study also found that the correlation was highest among states where white individuals had lower income or where conservatism was high, as assessed based on data from the Pew Research Center Religious Landscape Study.

Waidmann, T. 2009. Estimating the cost of racial and ethnic health disparities. Washington, DC: Urban Institute. <https://www.urban.org/research/publication/estimating-cost-racial-and-ethnic-health-disparities>.

This policy brief examined the financial cost of racial and ethnic disparities on public programs, using 2003–2005 Medical Expenditure Panel Survey to analyze the estimated cost of disparities for four common chronic conditions (diabetes, hypertension, stroke and renal disease, and poor general health) by comparing spending associated with chronic conditions for Black and Hispanic populations to those for white populations. The study found that disparities in prevalence of chronic conditions between Black and white beneficiaries results in \$2 billion in excess costs for Medicaid. It also estimates that the total cost of racial and ethnic disparities to Medicaid would be about \$27 billion from 2009 through 2018.

Data

Several studies looked at the role of data collection and standardization methods in identifying and studying racial and ethnic disparities.

Lee, W., S.P. Veeranki, H. Serag et al. 2016. Improving the collection of race, ethnicity, and language data to reduce healthcare disparities: A case study from an academic medical center. *Perspectives in Health Information Management* 13:1g. <https://pubmed.ncbi.nlm.nih.gov/27843424/>.

This article examined an effort to improve EHRs for race, ethnicity, and language (REAL) data collection, financed by a Section 1115 research and demonstration waiver in Texas. The study found that after one year, data collection increased from 71.7 percent to 75.9 percent. It also found differences in rates of self-reports of racial and ethnic identity. For example, 5.9 percent of patients with Hispanic ethnicity did not report race, compared to less than 1 percent of non-Hispanic patients.

Moskowitz, D., B. Guthrie, & A.B. Bindman. 2012. The role of data in health care disparities in Medicaid managed care. *Medicare & Medicaid Research Review* 2, no. 4: E1-E14.

<https://dx.doi.org/10.5600%2Fmmrr.002.04.a02>.

This study evaluated how Medicaid managed care plans address disparities using data that were standardized according to ACA provisions. It found that while plans used standardized metrics to set goals and measure progress for overall quality improvement, they generally did not rely on measurement of standardized data for evaluating disparity reduction initiatives. It also found that managed care plans often only examined data stratified by race and ethnicity when overall performance was low. The authors



concluded that this may be the case because there are few regulatory or financial incentives to standardize data on disparities.

Sitapati, A. M., B. Berkovich, A. M. Arellano, et al. 2020. A case study of the 1115 waiver using population health informatics to address disparities. JAMIA Open 3, no. 2: 178-184.

<https://dx.doi.org/10.1093/jamiaopen/ooaa019>.

This case study looked at efforts to improve demographic data collection, quality measures stratified by demographic, and reporting of quality measures under a Section 1115 demonstration waiver. The article finds that of the 17 hospitals in California participating in the program, 16 met or exceeded targets for REAL documentation. Of those meeting the target, the complete documentation rate increased from 27 percent to 94 percent. Notably, participation in the program eliminated a baseline health disparity in tobacco screening and follow up.

Endnotes

¹ MACPAC uses the term pregnant women as this is the term used in the Medicaid statute and regulations. However, the term birthing people is being used increasingly, as it is more inclusive and recognizes that not all individuals who become pregnant and give birth identify as women.

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Institute of Medicine (IOM). 2003. *Unequal treatment: Confronting racial and ethnic disparities in health care*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/10260>.

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Medicaid and CHIP Payment and Access Commission (MACPAC). 2020b. Chapter 5: Medicaid's role in maternal health. In *Report to Congress on Medicaid and CHIP*. June 2020. Washington, DC: MACPAC. <https://www.macpac.gov/publication/chapter-5-medicaids-role-in-maternal-health/>.

Rubin-Miller, L., C. Alban, S. Artiga, et al. 2020. *COVID-19 racial disparities in testing, infection, hospitalization, and death: Analysis of Epic patient data*. Washington, DC: Kaiser Family Foundation. <https://www.kff.org/report-section/covid-19-racial-disparities-in-testing-infection-hospitalization-and-death-analysis-of-epic-patient-data-issue-brief/>.

