

Medicaid expansion plus PrEP and antivirals could lower HIV transmission in Houston, model projects

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Enacting Medicaid expansion in Texas and increasing the use of preventive and antiviral medications could result in a decline of new

HIV infections among young Black gay, bisexual, and other men who have sex with men (MSM) in Houston, reports a study in the January issue of *Medical Care*.

"Expanding Medicaid, as a number of states have already done, may help substantially reduce the burden of HIV among underserved populations in Houston and throughout Texas," according to the social network modeling and computer simulation study by lead author Francis Lee, Ph.D., of the University of Chicago and colleagues. However, the researchers note that additional strategies—focused on increasing the use of antiretroviral therapy (ART) and pre-exposure prophylaxis (PrEP) for HIV—would be needed to meet the ultimate goal of eliminating HIV [transmission](#) in the city.

Medicaid expansion could reduce high rates of HIV transmission among young Black gay, bisexual, and other MSM

The analysis focused on HIV transmission among young (18 to 34 years) Black gay, bisexual, and other MSM—a disproportionately affected group that accounts for 19% of all newly diagnosed people in Houston. Along with other interrelated social determinants of health factors such as race, [sexual identity](#), and medical distrust, lack of medical coverage is a key contributor to the high rate of HIV transmission among young Black gay, bisexual, and other MSM, according to other published research cited in the paper.

Expansion of Medicaid coverage under the Affordable Care Act has led to numerous population health benefits, including increased use of effective ART drugs for treatment of HIV infection and PrEP drugs to prevent HIV transmission among people at risk, according to other published research cited in the paper. Texas is one of 11 states that have

not adopted Medicaid expansion. That leaves the state as a whole as well as Houston—the most populous city in the southern United States—with "massive coverage gaps that disproportionately burden people of color," according to the authors.

Dr. Lee and colleagues used a technique called "agent-based network modeling" to simulate the effects of alternative Medicaid expansion strategies on HIV transmission among young Black gay, bisexual, and other MSM in Houston. Simulations projected the effects of Medicaid expansion alone and with the addition of two further strategies that have shown promise in increasing engagement with ART and PrEP.

Study model projects possible decrease of HIV incidence rate by almost 50%

In the study models, all three Medicaid expansion scenarios were projected to lead to considerable declines in HIV transmission among young Black gay, bisexual, and other MSM. With Medicaid expansion alone, the HIV incidence rate (new cases per 100 uninfected) was projected to decrease by 17.5% in the tenth year, while the number of new infections would decrease by 14.9%.

The most ambitious strategy examined for increasing the use of ART and PrEP, according to the modeling, would reduce the HIV incidence rate by 48.7% within 10 years, while reducing the number of new infections by 44.0% over the same period. "While Medicaid expansion alone may not get Houston to the goal of zero incidence, expanding PrEP and ART interventions in combination may help achieve this goal," Dr. Lee and coauthors write.

The researchers note that Houston has made "substantial strides" closer to goals aimed at ending the HIV epidemic, focused on increasing the

uptake of PrEP and ART. "Improved ART and PrEP engagement have shown promise in reducing HIV transmission in a number of US populations that bear a disproportionate burden of the epidemic," Dr. Lee and colleagues write.

In another sign of progress, the researchers cite a recent federal mandate requiring nearly all insurance plans to provide coverage for PrEP without cost-sharing. "[H]owever," Dr. Lee and colleagues add, "without concerted efforts to reach the uninsured, this change has the potential to increase rather than to decrease the disparities in HIV incidence that disproportionately affect Black MSM."

Aditya S. Khanna, Ph.D., of Brown University was an equally contributing author with Lee. Kayo Fujimoto, Ph.D., of the University of Texas Health Science Center at Houston, was senior author of the study. Other researchers were from Houston Health Department, Argonne National Laboratory, University of California Los Angeles, and University of Chicago.

More information: Francis Lee et al, Expanding Medicaid to Reduce Human Immunodeficiency Virus Transmission in Houston, Texas, *Medical Care* (2022). DOI: [10.1097/MLR.0000000000001772](https://doi.org/10.1097/MLR.0000000000001772)

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