Oral Abstract C8b – Examining the Impact of Federally-Funded Syphilis Elimination Activities

Data from 28 States Suggest Federal Syphilis Elimination Efforts Have Had Significant Impact on Syphilis Rates

In 1998, following a decade of declining syphilis rates, CDC provided the first funding for syphilis elimination to 25 states and three cities[1] with the highest remaining syphilis rates or with a high probability for a resurgence of the disease. One year later, CDC formally launched its *National Plan to Eliminate Syphilis from the United States* to guide the nation's efforts to end the sustained transmission of syphilis. Now, a new study suggests that federal syphilis elimination funding significantly impacted syphilis rates in the areas that first received funding in 1998 or 1999 and have continued to receive funding over the past decade.

Led by CDC's Harrell Chesson, researchers first compared syphilis trends in the 28 initially funded states[2] to trends in other states. The analysis focused specifically on rates of early syphilis (primary, secondary, and early latent syphilis), which were obtained from CDC's annual STD surveillance reports (2000-2005). They found that the initially funded states had larger decreases, or smaller increases, in syphilis rates from 2000 to 2005 compared to states that received no syphilis elimination funding or that did not receive such funding until later years. In aggregate, the annual change in syphilis rates for the 28 initially funded states ranged from a decline of 16 percent to an increase of 6 percent. In states that did not initially receive funding, the rates increased in every year, with increases ranging from 1 percent to a high of 43 percent.

To examine whether these trends might be attributable to federal syphilis elimination funding, the researchers developed two related mathematical models. One model estimated the impact of funding levels on the magnitude of states' syphilis rates, and the second estimated their impact on year-to-year *changes* (increases or decreases) in state syphilis rates. Inputs to the models included funding allocations to the 28 individual states from 1998 through 2005, as well as state-specific syphilis data from CDC's annual surveillance reports.

Both models found an association between funding levels and changes in syphilis rates. In the 28 initially funded states, syphilis elimination funding in a given year was associated with subsequent declines (over the following two years) in state-level syphilis rates. The greater a state's per capita syphilis elimination funding in a given year, the greater the decline in syphilis rates in subsequent years. While this type of analysis cannot confirm a causal relationship between syphilis elimination funding and declining syphilis rates, the results suggest that such funding is having a notable impact.

In assessing the significance of their findings, Dr. Chesson and colleagues point out that syphilis rates among African Americans and women of all races have generally declined since the onset of syphilis elimination activities. Since 2001, however, overall syphilis rates have increased due to substantial increases in syphilis among men who have sex with men (MSM), who now account for the majority of syphilis cases. The researchers believe that the overall increases in syphilis rates nationally would have been greater in the absence of federal syphilis elimination funding. They also note that in 2006, CDC launched an updated *National Plan to Eliminate Syphilis* in order to sustain progress in the populations traditionally at risk and to reverse the recent syphilis increases among MSM.

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[1] The initially targeted states are: Alabama, Arizona, Arkansas, California, Connecticut, Florida, Georgia, Illinois, Indiana, Kentucky, Louisiana, Maryland, Massachusetts, Michigan, Mississippi, Missouri, New Jersey, New York, North Carolina, Ohio, Oklahoma, Pennsylvania, South Carolina, Tennessee, Texas, Virginia, and Wisconsin. Washington, DC is also included as an initially targeted "state." Pennsylvania and New York are included as "initially-targeted states" because cities in these states (Philadelphia and New York City, respectively) received funding beginning in 1998 and 1999.

[2] Note: For the three funded cities, this analysis examined their respective state-level syphilis rates.