INTRODUCTION OF RAPID SYPHILIS AND HIV TESTING IN PRENATAL CARE IN COLOMBIA: QUALITATIVE ANALYSIS

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Introduction Interpret perceptions of Colombian health professionals concerning factors that obstruct and facilitate the introduction of rapid syphilis and HIV testing in prenatal care services.

Methods A qualitative study based on semi-structured interviews was carried out. A convenience sample was selected with 37 participants, who included health professionals involved in prenatal care services, programs for pregnant women, clinical laboratories, and directors of health care units or centres, as well as representatives from regional departments and the Ministry of Health.

Results Colombia does not do widespread screening with rapid syphilis and HIV tests in prenatal care. The professionals interviewed stated they did not have prior experience in the use of rapid tests—except for laboratory staff—in the course of action in response to a positive result. The insurance system hinders access to timely diagnosis and treatment. Health authorities perceive a need to review existing standards, strengthen the first level of care, and promote comprehensive prenatal care starting with contracts between insurers and health service institutional providers. Participants recommended staff training and integration between health-policy-making and academic entities for updating training programs.

Conclusion The market approach and the characteristics of the Colombian health system constitute the main barriers to implementation of rapid testing as a strategy for elimination of mother-to-child transmission of syphilis and HIV. Measures identified include making changes in contracts between insurers and health service institutional providers, adapting the timing and duration of prenatal care procedures, and training physicians and nurses involved in prenatal care.

MODELLING THE IMPACT OF A HYPOTHETICAL VACCINE THAT PREVENTS HSV-2 BUT INCREASES SUSCEPTIBILITY TO HIV

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Introduction An HSV-2 vaccine could reduce the health and economic burden of HSV-2, including neonatal herpes. However, such a vaccine might increase susceptibility to HIV infection through immune cell recruitment to genital tissues. If so, HSV-2 vaccination may decrease HSV-2 incidence but also increase HIV incidence.

Methods We explored these tradeoffs in a mathematical model of HSV-2 transmission dynamics and vaccination that includes static HIV incidence using ordinary differential equations. We modelled scenarios relating the United States in terms of HSV-2 and HIV transmission. We examined scenarios where HSV-2 vaccination either did or did not increase HIV susceptibility. We assumed that HSV-2 infection led to increased HIV susceptibility, but no other interactions between HSV-2 and HIV.

Results Assuming vaccine efficacy against infectiousness of 0.5, vaccination may decrease HSV-2 incidence by 22%. However, when vaccination increases HIV susceptibility, this benefit comes at the cost of increased HIV incidence: 1.6, 2.0, or 2.5% in populations with low, moderate, and high HIV exposure rates, respectively. When vaccination does not increase HIV susceptibility, HIV incidence decreased by 7.0, 6.1, and 4.9%, respectively. The magnitude of these effects depend on additional factors such as the degree to which HSV-2 vaccination increases HIV susceptibility, HSV-2 vaccine coverage, and baseline HSV-2 prevalence.

Conclusion Our analysis shows how models can describe tradeoffs of public health interventions offering substantial benefits and possible harms. Models can be used to weigh the relative benefits and costs of a specific intervention, or to examine whether an intervention results in a net gain or net loss in quality adjusted life years. Our analysis illustrates the need for updated estimates of the quality-of-life impact of HSV-2 in different individuals in order to weigh the public health benefits of HSV-2 vaccination against potentially adverse outcomes. More research is needed to better describe the interaction between HSV-2 and HIV infection and transmission.