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## Scientific and Programmatic Gaps in STD Prevention: A 2020 Assessment

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In every field of research, it is important to periodically assess the areas of focus and the gaps that exist. Such assessment allows the leaders in the field to consider necessary interventions that may help fill the knowledge gaps that are observed, and synthesize existing information in areas of focus. Although a range of approaches may be used to conduct such assessments, periodic conferences provide a unique opportunity for scanning a field and its coverage. Abstracts submitted to a conference may not constitute a strict random sample of all research taking place in the field. However, a biannual national epidemiology and prevention conference may come close. The 2020 Sexually Transmitted Disease (STD) Prevention Conference constituted just such an event and provided an opportunity for scanning the coverage of research in STD epidemiology and prevention. In this article, we describe the patterns of gaps in STD research reflected in the gestalt of research abstracts submitted to the 2020 STD Prevention Conference.<sup>1</sup>

As part of the standard conference debriefing session, we typically ask the scientific committee about gaps in the scientific program. This year, we also asked a convenience sample of 10 individuals who were the Track and Domain Chairs for the 2020 STD Prevention Conference Scientific Committee and members of the Division of STD Prevention Senior Leadership Team, Centers for Disease Control and Prevention, to provide their thoughts on current gaps in the STD prevention field. They constituted a multidisciplinary group of experts. The Track and Domain Chairs for the 2020 STD Prevention Conference Scientific Committee were asked to solicit input from their Track and Domain Committee members in composing their responses.

The responses on “gaps” were organized into 7 areas: (1) clinical and health services, (2) partner services, (3) racial/ethnic disparities, (4) adolescents–young adults, (5) program and implementation sciences, (6) leveraging technology, and (7) nonclinical interventions and research.

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Gaps in clinical and health services for STD prevention covered several areas:

- a. Access to point-of-care testing and reaching people in need where they are emerged as important current gaps in the field. These gaps extend beyond point-of-care testing to treatments and vaccines, as well as research focusing on screening and other prevention services. Findings supported expanded research on how to incentivize providers, including primary care providers, to follow current recommendations and to build the evidence base for interventions such as expedited partner therapy and extragenital screening, which currently are not reimbursable services.
- b. Telehealth was noted as a promising but underutilized service for sexually transmitted infections (STIs) that could make it easier for individuals to interact with providers. Increased use of telehealth could be particularly helpful in places with provider shortages such as rural areas.
- c. Issues surrounding reimbursement of providers' time remain salient for STD prevention. Reimbursement for screening for asymptomatic STIs is still problematic. Moreover, shifts in Medicaid from a fee-for-service to capitated care model (e.g., paying a fixed amount per patient regardless of services) may necessitate the development of incentives for preventive services such as STI screening. For Medicaid plans that are contracted with managed care organizations, incentives to reduce STIs and associated morbidity may be useful. Finally, when determining capitated rates for a population, underlying health conditions of that population (e.g., rates of heart disease and diabetes) are considered. It may be useful to explore whether STI rates could also be included.

Partner services emerged as another important current gap in STD prevention. Whether partner services are effective and cost-effective remains unanswered to this day. Specifically, for what populations and diseases are traditional partner services, such as contact tracing, effective? An additional issue was raised in relation to partner services: the possibility that disease intervention specialists could perform some of the functions conducted by community health workers as both tend to operate in communities rather than in clinics.

Sexually transmitted disease racial/ethnic disparities still exist, and this was another area where gaps in STD prevention were identified. Emergent consensus suggests that interventions to reduce disparities that focus on the social environment, health care access, and improving health care–social services linkages would be helpful for STDs and other diseases. Furthermore, research that addresses the impact of systemic racism on STIs is also needed. It is important to examine how public health and clinics could help mitigate effects of social and structural factors that lead to disparities. Finally, identifying the best demographic measures of STI risk to replace race/ethnicity could potentially help avoid reinforcing stigma through STI surveillance and research.

Another issue that emerged as important was adolescents and young adults as special populations. Lack of research that goes beyond adolescents who already show up for screening or treatment was notable. Specific foci suggested were: creation of links between adolescents and STD prevention activities based on the large volume of work that has

been done in schools; research on the development of innovative strategies for addressing sexual health needs of adolescents who are not necessarily at the age where they can seek out screening and treatment on their own; partnerships where providers give resources and messages to parents about the needs of their kids for STD services; and research on adolescent men who have sex with men and access to HIV preexposure prophylaxis.

Program and implementation science questions were also noted as current important gaps in STD prevention. More specifically, suggestions included increased focus on the following: the effective delivery of HIV/STI and preexposure prophylaxis services including a focus on implementing routine screening recommendations in primary care and federally qualified health center settings; implementation of successful screening programs including reimbursement, health insurance, and healthcare policy issues; and the multifaceted approach effective delivery of recommended services relies on.

Another important gap in the field mentioned by the respondents was the leveraging of technology to meet STD prevention needs. Interesting GPS testing applications have been developed to improve access for STD care such as testing and treatment. Also, technology has evolved to where it may be possible to use it to understand the epidemiology of STDs in real time—as in artificial intelligence.

Lastly, a number of nonclinical, multidisciplinary research and intervention ideas emerged as current important gaps in STD prevention. These ideas included the following: population health ranging from additional STD-related population health measures similar to the chlamydia Healthcare Effectiveness Data and Information Set measure to the development of nationally representative sexual health and sexual behavior measures for transgender women and men; community engagement, which is more common in HIV prevention, in the way STD professionals engage communities to help address STD burden; and interventions for persons who have sex with both men and women.

As a final point, research on substance misuse and its impact on sexual transmission, use of existing “big data” in understanding STD epidemiology and prevention, and lack of funding, which would allow for the implementation and further improvement of proven efficacious interventions such as “Project Respect” and “Project Connect,” were mentioned as gaps.<sup>2,3</sup>

## CONCLUSIONS

Our findings revealed many specific areas as gaps in STD prevention programs and STD prevention science. We hope these results guide future efforts in programmatic and research efforts. However, for attention to be focused in all of these areas, two structural issues need to be resolved first. These interrelated issues are adequate funding and adequate research and program personnel. Unfortunately, both financial and human resource allocation to the STD prevention field has been on the decline for several decades. If these trends do not change direction, the gaps we have identified may not be filled.

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