

Improving Clinical Operations: Can We and Should We Save Our STD Clinics?

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For those of us who work in US sexually transmitted diseases (STD) clinics, times are bad, very bad. Forty-eight states currently face significant budget shortfalls; in November of 2009, the Center for Budget and Policy Priorities estimated that the gap between state government revenue and projected expenditures for the year 2009–2010 is approximately \$300 billion.¹ The anticipated 2010 shortfall represents almost 28% of states' combined \$109 billion budget, and recent projections look more dire still. Few state and local government programs are likely to go unaffected by the need for cutbacks, and STD clinics, which are funded almost entirely by nonfederal sources of revenue, are clearly vulnerable.

Indeed, we are already feeling the effects of the fiscal crisis. A survey by the National Coalition of STD Directors found that 69% of STD programs experienced budget cuts in 2008, and that the number of categorical STD clinics in the United States declined by 10% over the last decade.² The current budget situation is likely to accelerate that trend.

Given our predicament, it is a good time to consider the implications of this change and what we might do about it. First, how important are STD clinics? Table 1 shows the proportion of different reportable STDs diagnosed in categorical STD clinics in different cities and counties in the United States. The areas shown are a convenience sample of jurisdictions, and the presented data may be affected by reporting bias, but Table 1 demonstrates that in many areas of the country, STD clinics diagnose roughly 25% to 50% of primary and secondary syphilis cases, 15% to 35% of gonorrhea cases, 10% to 35% of HIV cases, and 5% to 20% of chlamydia cases. For bacterial STDs, these numbers are substantially higher than estimates based on patient reports, and suggest that STD clinics may be more important in the control of these infections, particularly syphilis and gonorrhea, than is generally thought.³ Contemporary national data on the proportion of all HIV cases diagnosed in STD clinics are not available, but the information presented in Table 1 demonstrates that these clinics play a critical role in diagnosing HIV infection in many parts of the country. We have little empirical data on how closing STD clinics might affect rates of sexually transmitted infections in the population,⁴ but case-finding and treatment are central to the control of STD, including HIV. Insofar as closing STD clinics leads infected persons to go undiagnosed or to be diagnosed later in the course of their infections, decreasing the health system's capacity to provide care is likely to initiate a vicious cycle of increasing STD incidence, morbidity, and cost.⁵

Of course, there are other reasons why these clinics are important. They often serve uninsured persons and socially marginalized populations, such as men who have sex with men and racial and ethnic minorities, and they disproportionately provide services to young men, who often have little other access to STD care or HIV testing. They allow patients to receive services that they might be reluctant to receive through their usual medical providers, and they provide subspecialty services (e.g., dark field testing, testing of rectal and pharyngeal sites, HIV RNA testing) that are not readily available in other settings. Also, CDC and health departments use STD clinics as sentinel surveillance sites to monitor antimicrobial resistance and risk behaviors within priority populations. The clinics provide needed clinical backup for community-based HIV/STD testing efforts, and are training sites for medical providers. Finally, STD clinics are a central component of the US national infrastructure for studying the diagnosis, treatment, and prevention of STD.

We can probably develop alternative ways to provide at least some of these services if STD clinics disappear, but doing so will involve new costs, and our success is in no way certain. Proposed health care reform may decrease the demand for care in STD clinics, but it may not. High-income countries other than the United States have had universal health insurance for decades, and many (e.g., the Netherlands, United Kingdom, Australia) have elected to continue to support categorical STD clinics. We should

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TABLE 1. Number and Percent of HIV/STD Cases Diagnosed and/or Treated in STD Clinics in 2008, by Jurisdiction

Jurisdiction	HIV N (%)	Primary and Secondary Syphilis N (%)	Gonorrhea N (%)	Chlamydia N (%)
King County, WA	56/315 (18)	45/125 (36)	348/1294 (27)	531/5962 (9)
San Francisco, CA	78/434 (18)	103/342 (30)	682/2008 (34)	801/4120 (19)
Los Angeles, CA	438/2616 (17)	331/714 (46)	2,124/8,406 (25)	4155/43,533 (10)
Denver, CO	85/242 (35)	10/40 (25)	505/1239 (41)	1328/4751 (28)
Chicago, IL	163/1557 (10)	132/425 (31)	2217/10,509 (21)	2797/25,465 (11)
Baltimore, MD	155/1098 (14)	63/197 (32)	236/1771 (13)	670/8452 (8)
San Diego, CA	123/365 (34)	153/342 (45)	491/2017 (24)	798/14,106 (6)
Maricopa and Pima Counties, AZ	NA	137/283 (48)	734/2681 (27)	2164/17,395 (12)
New York, NY	505/3732 (14)	251/1065 (24)	2477/10,434 (24)	8491/56454 (15)
St. Louis County, MO	17/100 (17)	3/21 (14)	400/1103 (36)	909/4405 (21)
Total	1620/10,459 (16)	1228/3554 (35)	10,214/41,462 (25)	22,644/184,643 (12)

Data are provided by Dr. Julia Schillinger, Dr. William Wong, Dr. Melanie Taylor, Dr. Kyle Bernstein, Dr. Kenneth Katz, Dr. Emily Erbeling, Dr. Bradley Stoner, and Dr. Cornelis Rietmeijer.

carefully consider why these countries decided to maintain these clinics before we conclude that we will not need them in the future.

One can make a strong argument supporting a continued role for STD clinics, but there is no denying that our financial challenges are real. Business as usual will not be good enough, not in the current fiscal environment. With that reality in mind, Ling et al's report in this issue of Sexually Transmitted Diseases suggests what may be an important concrete step clinics can take to increase efficiency.⁶ Working in the Denver STD clinic, the investigators found that routine use of an Internet-based system for providing patients with their test results decreased the proportion of persons calling the clinic for results by 46% with no change in the total proportion of persons who received their results or in the total proportion of infected persons treated. The study did not include a formal cost-effectiveness analysis, but it seems likely that the online system will be cost saving over the long-term.

More broadly, Ling et al's report highlights how technology may be one mean to drive down costs. An increasing number of STD clinics are offering patients testing-only visits during which they do not see a clinician. In Denver, the introduction of such visits decreased the demand for clinician time.⁷ STD clinics in New York City and Chicago have likewise introduced "express visits" for persons without symptoms, allowing 20% to 30% of their patients to be served without seeing a clinician.^{8,9} The Melbourne STD clinic in Australia currently uses a computer-assisted self-interview to collect patient sexual histories, and investigators there plan to adapt their system to triage patients for testing only visits. We are developing a similar computer-based system in Seattle that we hope to have operational in 2010. These sorts of approaches should decrease costs though, like other efforts to improve clinic efficiency, that has yet to be proven. The paucity of formal economic evaluations in this area is a problem and, optimally, future assessments of STD clinical operations should be more rigorous.

Many clinics do not have time to wait for formal evaluations before instituting at least some changes, but it seems likely that the cuts we face this year will not be the last. Given that reality, we need to get organized. Important goals include the following: (1) a rapid assessment of clinic procedures that can enhance efficiency; (2) development of guidance and perhaps computer programs to facilitate changes in clinic operations; (3) evaluations of the effect of changes in procedures on clinical care and costs; (4) ongoing monitoring of the nations' STD clinical infrastructure; (5) evaluations of how clinic closings affect HIV/STD related outcomes such as numbers of cases reported, prevalence of infection, where cases are diagnosed, and delays in

diagnosis and care; and (6) creative thinking and operational research to develop and evaluate systems to increase the provision of high quality and comprehensive STD care outside of STD clinics. The overarching goal of this work should be to better define the role of STD clinics and how we can maximize their cost-effectiveness.

We do not think that the United States should dismantle its already inadequate STD control infrastructure by accelerating the trend toward closing STD clinics. It is a perilous undertaking developed with little advanced planning. It is also completely at odds with the national objectives of syphilis elimination, decreasing racial and ethnic disparities in health, and increasing HIV testing. However, many clinics are likely to close. Given that reality, we should at least use the experience as a natural experiment to estimate how the change effects the public health and to think broadly about new models for providing care. More immediately, we need to coordinate our efforts to improve how we provide care, minimize the public health impact of the budget crisis, and advocate for the importance of our work.

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