

Toward Integration of STD, HIV, TB, and Viral Hepatitis Surveillance

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Public health surveillance is “the ongoing systematic collection, analysis, and interpretation of outcome-specific data for use in the planning, implementation, and evaluation of public health practice.”¹ While the fundamental activities of surveillance include data collection, analysis, and dissemination, the value of surveillance is measured through its impact on public health practice. The integration of surveillance data on sexually transmitted diseases (STDs), human immunodeficiency virus (HIV), tuberculosis (TB), and viral hepatitis is important insofar as an understanding of the intersection of these diseases geographically, in different populations, and by risk behaviors impacts the ability of public health programs to operate more efficiently and effectively. As Jennings et al.² recommend in this special supplement of *Public Health Reports*, surveillance systems should be patient-based rather than case-based because program services themselves are most effective when they are patient-based. As many of the articles in this supplement illustrate, it is at the local and state levels where duplication and inefficiencies are felt most. These inefficiencies are felt by the patients who do not get the care they need in a timely fashion or who get fragmented care, by the programs that are being asked to accomplish more with diminished resources, and by the public, who are often provided fragmented rather than comprehensive summaries of problems of importance to their communities.

This special supplement highlights approaches to the integrated use of data by STD epidemiologists in the Outcome Assessment through Systems of Integrated Surveillance (OASIS) workgroup. OASIS was originally funded in 1998 by the Centers for Disease Control and Prevention’s (CDC’s) National Center for HIV, STD, and TB Prevention (the name was changed to the National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention [NCHHSTP] in 2007) to promote the integrated interpretation and use of surveillance data across disease programs. The work of OASIS, only partially reflected in this supplement, demonstrates that state and local health departments, which have the most to gain from program integration, truly are the laboratories

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for creatively engineering more integrated surveillance and information systems. A system such as the Patient Reporting Investigation Surveillance Manager (PRISM), developed by the Florida Bureau of STD Prevention and Control and supported by OASIS, is one such example, as Shiver et al. describe in this issue.³ Groups like OASIS, consisting of local and state STD epidemiologists, can provide the energy and ideas to develop these efforts locally, but CDC must facilitate this work through leadership, coordination, funding, and dissemination of best practices,

As many of these articles demonstrate, important side benefits of efforts to develop more integrated systems result from the processes themselves. Such benefits include greater collaboration across disease programs and the ability to see problems and possible solutions in affected populations more comprehensively, sharing of technical expertise and innovative tools, and development of common standards for ensuring confidentiality and data security.

As Dowell et al. note in their article,⁴ CDC can facilitate integration efforts by helping to minimize barriers to data sharing that currently exist and by providing incentives for creating more comprehensive systems. Efforts to integrate surveillance systems often involve creating complicated matching algorithms, negotiating within health departments with various “owners” of the data, and creating temporary linkages. Removing the barriers—and changing the culture—that have made these kinds of efforts necessary in many health departments is a priority. Because integrating surveillance information systems requires agreement on data access, data sharing, and confidentiality policies and procedures, NCHHSTP, as an initial step, is working to develop common confidentiality and security standards across its disease programs. Hopefully, this effort will provide data standards for some programs that have never had them and facilitate data sharing across programs that have been reluctant to do so in the past.

In 2008, NCHHSTP published its first annual Disease Profile, bringing annual surveillance data published by each of the four Divisions within NCHHSTP together under one cover.⁵ This publication was the first in a series of planned annual profiles, but it illustrates how far we have to go. There is little national surveillance information, for example, on comorbidity, even on those conditions such as HIV and syphilis that have a similar epidemiology, overlapping prevention approaches, and biologic synergies wherein each modifies natural history and transmission dynamics of the other. Even less is known about trends in comorbidity. It is hoped that state and local disease programs will produce this type of combined report as well, which will help facilitate the identification of emerging and overlapping disease patterns that will encourage the collection and analysis of data on co-infections in the future at both the local and national levels. Only in this way can our surveillance systems be used most efficiently and productively to inform and enhance public health practice and improve population health impact.

REFERENCES

1. Thacker SB. Historical development. In: Teutsch SM, Churchill RE, editors. *Principles and practice of public health surveillance*. New York: Oxford University Press; 2000. p. 1-16.
2. Jennings JM, Stover JA, Bair-Merritt MH, Fichtenberg C, Munoz MG, Maziad R, et al. Identifying challenges to the integration of computer-based surveillance information systems in a large city health department: a case study. *Public Health Rep* 2009;124(Suppl 2):39-48.
3. Shiver SA, Schmitt K, Cooksey A. Use of a business approach to improve disease surveillance data management systems and information technology process in Florida's Bureau of STD Prevention and Control. *Public Health Rep* 2009;124(Suppl 2):98-102.
4. Dowell D, Gaffga NH, Weinstock H, Peterman TA. Integration of surveillance for STDs, HIV, hepatitis, and TB: a survey of U.S. STD control programs. *Public Health Rep* 2009;124(Suppl 2):31-38.
5. Centers for Disease Control and Prevention (US), National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention. 2006 disease profile. Atlanta: CDC; 2008.