Abstract

The talk considers statistical approaches for measuring the scope of the HIV/AIDS epidemic, and their strengths and weaknesses. In recent years, various public health agencies have revised statistical estimates of the scope of the HIV pandemic. We consider the reasons underlying these revisions. New data sources for estimating HIV prevalence have become available such as nationally representative probability-based surveys. New technologies such as biomarkers that indicate when persons became infected are now used to determine HIV incidence rates, along with new statistical methods. The talk will consider the main sources of errors and problems with these and other approaches and discuss opportunities for improving their reliability.

Changing methodologies and data sources present new challenges because disease incidence and prevalence estimates produced at different points in time are not directly comparable to each other which complicate the assessments of time trends. The changes in methodologies help explain the changes in global statistics. As methods and data sources continue to improve, development of statistical tools to better assess to what extent changes in HIV/AIDS statistics can be attributed to changes in methodology versus real changes in the underlying epidemic, is an important challenge.

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