Methodologies for Collecting Data on HIV/AIDS Epidemic in sub-Saharan Africa

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Introduction: HIV which develops into AIDS has severely affected sub-Saharan Africa for almost two decades now. The major contribution of statisticians in understanding, preventing and controlling the spread of the disease is in the collection and analysis of data that policy makers can use to formulate strategic plans to stop the spread of the disease. Various methodologies have been used by researchers to collect information on the disease in sub-Saharan Africa. This paper makes a critique of some of the available methodologies.

Methods of data collection: Nine different methods of data collection used in sub-Saharan Africa can be identified here. Perhaps the most widely used method is sentinel surveillance system involving antenatal clinics where pregnant women go for regular check up of their pregnancies and for advice from medical personnel. Blood of the women is screened and tested for HIV status. This method targets pregnant women who recently were among the most sexually active persons in the population and the results can be used to infer the serostatus of the sexual partners and babies of these women. The estimates of HIV prevalence derived from the data of this method are likely to be higher than those of the population.

Secondly, population-based serosurveys with representative sample have been conducted in several African countries to determine the HIV status of the population. While these surveys are representative of the population and the estimates obtained reflect the situation in the country, the methodology is expensive to researchers.

In addition, multiround and longitudinal surveys have been employed in collecting data on trends and impact of the disease from communities. This type of surveys generates high quality data but is costly and causes survey fatigue among respondents and interviewers.

Also single round surveys in Africa, such as the Demographic and Health Surveys have asked questions on knowledge and attitudes towards HIV/AIDS. Responses to these questions have been used to study awareness of the disease and changes in the attitudes towards the disease. Surveys of this nature if not paid for by the researchers are a cheap source of secondary data. However, the researchers may not have a say on what questions to ask.

Similarly, population and housing censuses have included questions on deaths, orphanhood and widowhood that have been used to estimate HIV/AIDS mortality in different age groups of the population. Although this is a less expensive way of collecting data since some one else pays (government or/and UNFPA), researchers have to wait for a long time (about 10 years) for a census to take place.

Many testing and counselling centres for persons living with AIDS have gathered a lot of confidential information on individuals which has been analyzed in aggregate form and used to study strains and
stresses of the disease on individuals and their reaction to news of positive serostatus. Such data tends to be reliable because counsellors gain the confidence of their clients who would give them intimate information that is rarely told researchers.

Also blood banks located in many parts of African countries have collected blood from voluntary donors and tested it for HIV status before allowing it to be used for transfusion purposes. Being secondary data, such information is not costly for the researchers to collect, but it is not representative of the whole population.

Both public and private medical clinics are involved in testing blood of their clients for diagnosis purposes and the results are kept confidential. On the aggregate basis, such data can be available to researchers who may use it in estimating AIDS morbidity and mortality in the population. Unfortunately, like most of medical data in Africa, this information is not organized for analysis purpose and is hard for researchers to get from the source because of medical ethics and confidentiality.

Further, researchers have conducted their own focused studies using qualitative and quantitative methods in order to study specific aspects of HIV/AIDS such as orphanhood, widowhood, sexual behaviour and attitudes. These studies have been used to investigate various aspects of HIV/AIDS in the region and perhaps form the majority of the published work on the subject. The major advantage of this source is that the researchers have control over the data they want to collect and decide the questions they think would meet study objectives.

**Conclusion:** The above shows that existing methodologies have been adapted and extensively used for the collection of HIV/AIDS data, but the problem of sample representation still exist. It is the responsibility of statisticians to develop appropriate methodologies that would ensure maximum representation of the estimates on HIV/AIDS epidemic.