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HIV: consensus indicators are needed for concurrency

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Concurrent sexual partnerships are hypothesised to be the distinguishing factor behind the severe HIV epidemics in sub-Saharan Africa,[1,2] where 71% of new HIV infections globally in 2008 occurred.[3] Although concurrency is informally recognised as overlapping sexual partnerships,[4] a precise definition and agreed indicator have not emerged. Several studies of sexual behaviour suggest that concurrent partnerships are more common and accepted in sub-Saharan Africa than elsewhere,[5,6] and mathematical models show that concurrent partnerships could increase the size and growth rate of HIV epidemics.[7] Unfortunately, the empirical evidence is weakened by the proliferation of measures for concurrency used in different studies,[8] some of which do not even capture whether or not partnerships overlap.[9] In part, the various definitions and indicators reflect the complex range of sexual behaviours that create concurrency.[10] However, to compare the role of concurrency across populations, a standard measure is necessary.

Currently, several countries are planning or implementing HIV-prevention strategies that specifically target the reduction of concurrent sexual partnerships.[11] To provide the consensus primary indicator of concurrency at the population level needed to evaluate and compare these programmes, the UNAIDS Reference Group on Estimates, Modelling, and Projections convened a meeting of international experts in the measurement of sexual behaviour to agree on a definition, indicator, and method for measuring concurrent sexual partnerships.

The definition for concurrent sexual partnerships that we suggest is: overlapping sexual partnerships in which sexual intercourse with one partner occurs between two acts of intercourse with another partner. This definition embodies the generally understood meaning of concurrency,[4] and makes explicit the importance of sex with two different partners in temporally overlapping partnerships.

The main indicator of concurrency in a population that we recommend is the point prevalence of concurrency in the adult population, defined as the proportion of all adults in the population having more than one sexual partnership at a point in time. To calculate the indicator from data, we recommend that the point in time be 6 months before the interview (figure) so that, in most cases, it is clear whether the respondent did have sex again with a previous partner after forming a new partnership. This indicator emphasises the occurrence of sustained overlapping partnerships as opposed to individuals having a single long-term partnership with an occasional one-off sexual encounter, which is in line with the theoretical development of the concurrency

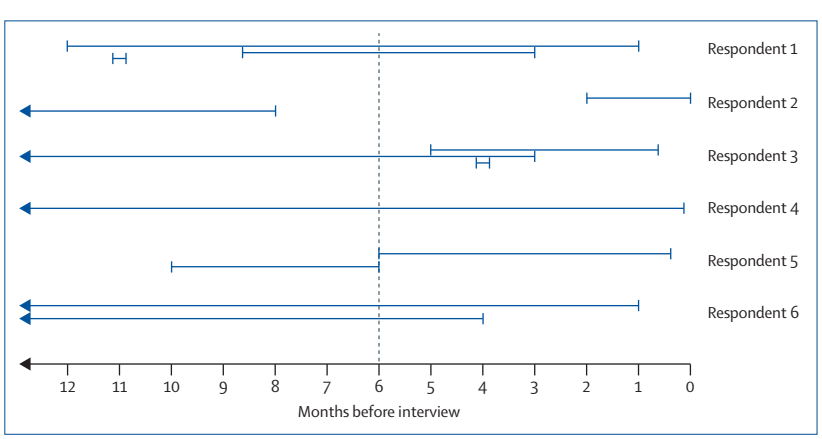

Figure: **Hypothetical sexual-partner histories**
Dates of first and last sex with up to three partners in past year in survey of six respondents. Point prevalence of concurrency 6 months before interview date is 33·3% (respondents 1 and 6 had concurrent partners 6 months before interview). Cumulative prevalence of concurrency is 50% (1, 3, and 6 had concurrent partnerships in past year). Proportion of individuals with multiple partnerships in past year who had concurrent partnerships in past year is 60% (1, 3, and 6 had concurrent partnerships in past year, while 2 and 5 had multiple partnerships that were not concurrent). Respondent 5 reported both one partnership ending and another beginning 6 months before interview date. Consensus of meeting participants was that this should not be included in numerator for calculation of these indicators, as it is not possible to tell whether these partnerships are serial or concurrent.

hypothesis.[1,7] We recommend that any study about the frequency of concurrent partnerships in a population should include this indicator.

Other indicators that might also provide useful summaries of concurrency in a general population are the cumulative prevalence of concurrent partnerships (the proportion of all adults that have had concurrent partnerships at any point in the past year), and the proportion of individuals with multiple partnerships in the past year that had concurrent partnerships in the past year (figure). The latter indicator is intended to distinguish between the risk of concurrent sexual partnerships from that of having multiple sexual partnerships, a well-established risk factor for HIV transmission in several settings.[12]

The method through which these indicators can be measured is a survey of sexual-partner histories from a random sample of adults. In these surveys, individuals are asked the following questions about each of up to their three most recent sexual partners in the past year. First, how long ago did you last have sexual intercourse with this person? Second, how long ago did you first have sexual intercourse with this person? Third, are you still having sex with this person? The phrasing of these questions should refer specifically to acts of sexual intercourse to avoid ambiguities with culturally specific notions of relationships.

Further details about the calculation and interpretation of the recommended indicators, the collection of data for measuring concurrency, and areas requiring further methodological and epidemiological research are in the meeting report.[13]

Considerable efforts, which include attempting to reduce concurrency, are being made to prevent HIV spread in high-prevalence settings—efforts that require monitoring and evaluation. Adoption of the common set of tools and indicators that we propose will accelerate research into understanding the relation between concurrency and HIV transmission, and enable the evaluation and promotion of successful programmes that target concurrent partnerships.

UNAIDS Reference Group on Estimates, Modelling, and Projections: Working Group on Measuring Concurrent Sexual Partnerships
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Paper of the year 2009: results

2009 is the first time that the entire process of nominations and voting for paper of the year has been open to anyone with access to the internet. The results of the 3521 votes cast online highlight research that struck a chord with readers, and excited them about new directions in practice and investigation. Surprisingly, the big health story of 2009, pandemic Influenza A H1N1, was not even nominated. Among nominations,[1] studies dealing with clinical medicine tended to receive more votes than those addressing public health or investigating the scientific basis of disease.

The most popular paper was from A Coruña, Spain, published in the *Journal of the American College of Cardiology*: "Prediction of mortality and major cardiac