Reviewer’s report

Title: Changes in Sexual Behaviour among Young People associated with HIV Prevalence Decline in Zambia

Version: 4 Date: 9 December 2006

Reviewer: Basia Zaba

Reviewer’s report:

General
The paper is much improved by the re-focus on 15-24 age group and by a more critical approach to the evidence of behaviour change

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Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)
None

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Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)
The essential revisions listed below are not strictly "minor", they do go into substantive and conceptual areas, but I have included suggested ways of re-phrasing some contentious statements (all of them in the discussion section) if the authors agree to re-phrase along these lines the manuscript would not need to be referred back to me again.

Discussion, page 15
“… This supports the interpretation that delaying the first pregnancy may be an effective preventive strategy [20-25] ...”
Delaying first pregnancy is not in itself an effective prevention strategy, but it can be the by-product of such a strategy, if the delay is due to abstinence, or consistent condom use, or more careful choice of marital partner (if first pregnancy occurs mainly within marriage). So delays in first pregnancy can be “associated with” or “indications of” effective prevention strategies, but do not constitute a prevention strategy in their own right. The sentence could read:
“… Delays in first pregnancy may be interpreted as strong evidence for the use of an effective preventive strategy [20-25], such as abstinence, or condom use, or avoidance of marriage to high risk partners ...”

Discussion, page 16
“… The finding that the proportion of those postponing the first birth did not differ by HIV status …”
This statement implies that “birth postponement” has been defined and measured as an individual level variable, enabling the proportion with this characteristic to be measured. The intention was probably to make a more general statement describing the direction of change, e.g. “... The finding that proportions with first birth before age 20 declined for both HIV positive and negative …” and figure 2 should have a second panel showing how the proportions ever given birth changed among HIV positive women to substantiate this claim. It is likely that the proportions ever giving birth are higher all round for the HIV positive (there are no virgins in this group), so any stronger statement about the fall in this proportion being independent of HIV status would need to clarify whether the fall was measured in absolute or relative terms.

Discussion, page 16
insert the capitalised words to clarify the meaning of "frequency"
“... Condom use at the last sexual intercourse is often employed as a POPULATION LEVEL indicator of frequency, ...”

Discussion page 17
“… In a society where people from different educational levels are part of the same social networks, distinct infection patterns reflect ...”
What is the basis for this implied claim about Zambian society? Does it in fact refer to social networks or sexual networks, or both? Do the surveys include questions about friendship networks or partner networks to ascertain whether most of an individual’s social and sexual contacts go across educational class
boundaries or stay within these? The implied claim can be avoided by simply re-phrasing:
“… If people from different educational levels are part of the same social and sexual networks, distinct infection patterns reflect …”

Discussion page 19
Incorrect use of the concept of linearity is something I previously commented on.
“… such inconsistencies disturbing trend linearity may indicate …”
It is not linearity that is the cause for concern, it is the reversal in the direction of change. Non-linearity includes, for example, a slow increase followed by a fast increase, and almost every change described in the two inter-survey intervals in this paper is non-linear. This phrase should read something like:
“… such inconsistencies in the direction of change may indicate …”

Furthermore, reversal of trend direction can only be identified if information is available from 3 data points, you cannot “blame” the middle point – if the first point had been much higher there would be a consistent downward trend, if the last point was much lower there would be a consistent upward trend. So the next sentence should not single out 1999, it should simply say:
“… these inconsistencies are unlikely to be due to misunderstandings of the questions as they were formulated in the same way in all three surveys …”

And the last sentence should say
“… for most indicators we observed consistent direction in trends or stability, which increases the likelihood that these reflect real behaviour patterns …”

Discretionary Revisions (which the author can choose to ignore)
Needs some attention to grammar - e.g. "data" is a plural word; check for missing prepositions and correct prepositions following certain verbs

What next?: Accept after minor essential revisions
Level of interest: An article whose findings are important to those with closely related research interests
Quality of written English: Needs some language corrections before being published
Statistical review: No
Declaration of competing interests:
I declare I have no competing interests