Reviewer’s report

Title: The quality of antenatal care in rural Tanzania: what is behind the number of visits?

Version: 1 Date: 5 March 2012

Reviewer: Bettina Utz

Reviewer’s report:

Thanks for sending me the paper for review.

Aim and objectives: assess quality of ANC services and underlying factors in a broader view

Methods

Major compulsory revision 1:

I am not clear about the tools used in this study. The author stated a “review of ANC Cards” for parameters and risk factors assessment. Then he explains that ANC clients were interviewed for satisfaction with the services. He mentions also the use of a “semi-structured instrument” (is that a semi-structured questionnaire?) for collecting information on staffing levels, equipment and drugs and the same instrument used to interview in-charges for factors affecting ANC services.

Apparently not only quantitative data was collected from ANC cards but it seems that also qualitative methods were applied using interviews with providers and clients. There needs to be more elaboration on the different methods and tools. Also would be interesting to know if the client interviews were exit interviews.

Sample size & Sampling technique:

Minor essential revision 1:

Why of all facilities 25% sampled? Why 2 hospitals, 2 HCs and 7 dispensaries? Needs justification. More clarity about stratified sampling: what are the strata: hospital, HC and dispensaries?

Data analysis:

Apparently interviews with clients and with in-charges of the facilities have been conducted. As the tools used (see method section) are not clear to me, I am not sure, how the open-ended/unstructured the questions for providers and clients were. For the analysis of qualitative data SPSS would not be an adequate software.

Minor essential revision 2:

For looking at the relationship between quality of ANC at first visit and the total
number of visits he uses correlation analysis. Quality of ANC, that according to information in the background section is "a wide range of interventions including education, counselling, screening, treatment, monitoring and promoting the well-being of the mother and fetus" is reduced by the author to the measurement of parameters. I do not think that the mere measurement of parameters such as BP etc is reflecting the quality of services a women receives and therefore it seems wrong to me to make a statement such as “correlation of between “quality” and total number of visits. Therefore would rename this rather as “relation between parameters measured at first ANC visit and total number of visits”.

Discretionary revisions 1:
The author states that women after 20 weeks gestation, abortion complications, ectopic pregnancies were excluded from the study. But in the results section the authors informs the reader that women with severe maternal morbidities were studied. I would expect in the method section a list of inclusion- and exclusion criteria and a definition of severe maternal morbidities. Does the author include only mothers at term or about to deliver or also expectant mothers who have a complication during the antenatal period?

Ethics:
Major compulsory revision 2:
In addition to my concerns that there is no statement cc. approval by a national ethics committee (and I am not sure that ethical approval by the DMO is sufficient) there is only the statement of "Verbal consent from clients whose ANC cards were reviewed". What about consent of clients interviewed? Also not mentioned: anonymity and privacy during the interviews; no information about consent of interviewed in-charges.

Results
Findings from the audit phase:
Minor essential revision 2 above related to correlation

Minor essential revision 3:
“During audit it was not clear whether the substandard assessment of these parameters was due to poor supply of essential ANC equipment, drugs and consumables or because of poor performance of care providers”.

The second part of the study this paper discusses is not comprehensively addressing the question of poor performance. There is no further explanation for poor performance and the explanation at the end of the paragraph stating a missing correclation between parameters measured during 1.ANC visit and total number of visits does not make it clear what the author wants to say regarding performance. In addition the fact that in more than 60 % haemoglobin measurement was available but only in about half the cases performed, is not necessarily due to poor performance and could have other reasons this study fails to examine.
Discussion

Discretionary revision 2:

“20% attributed to substandard ANC”- not clear what is meant by substandard ANC. Definition of substandard care? 20% of severe maternal morbidities audited said to have had substandard ANC. But it is not clear if there have been other factors that contributed to the patients’ final bad condition (e.g. first, second, third delay?)

Discretionary revision 3:

“Findings from this audit program suggest substantial adverse impact on maternal wellbeing resulting from poor quality of ANC. These results suggest urgent response from those in control of the health systems to invest more resources in antenatal care to avert the situation in order to enhance maternal health in Tanzania.”

Quality is more than having specimen tested and having some specific examinations – but in this article quality is primarily related to exams and tests performed (see my comments above). Nurses said, equipment is not good (what is true, as in many facilities MSD supplies the less durable “Chinese” BP cuffs, that are not made for longevity). Also Hb measurement was only done in 37% although Hb-measurement devices have been available in 64% of these facilities. But did they study examine how many of these available Hb devices were really functioning? Often material is present but not working.

Blood grouping was done in only 7%: why? In some larger facilities patients might have to pay for this service. Sometimes there is no reagens and in smaller facilities this test is often not available. There needs to be a separation between the three different types of facilities when making the statements.

Observation of ANC visits using a checklist, that does not only include the provision of tests and examinations, but would also check what the patients are told, how they are treated etc. would have revealed more about the quality of ANC in the facilities but this aspect of quality has not been examined in this study.

Discretionary revision 4:

I think more space in the discussion should be given to the fact that 27 percent of interviewed providers stated lack of staff motivation, as the usually reported “lack of equipment & supplies” and “shortage of staff” is a repeated sermon and as an external factor beyond staff control.

Discretionary revision 5:

“These results could partly be explained by lack of alternative and the presence of high degree of ignorance which was manifested by high satisfaction in the circumstance of poor quality of ANC services. These findings suggest also that improvement of ANC may not necessarily improve attendance”

We do not know what quality means for the clients and it would have been
helpful to know what they have been asked by the interviewer. Further research need to look more at the client perspective of “what is quality” before judging them as ignorant.

Limitations

Minor essential revision 4:
Client interviews: The fact that all clients said they were happy with the service they received should also be addressed under limitations related to potential bias. Not clear who did the interviews, how the question was addreses and what was asked (e.g. “were you satisfied with the service you received” would probably not give as clear picture. What does satisfaction mean? What is expected?)

Tables

Minor essential revision 5:
Why no separation between HC and dispensaries (differ in equipment and supply)

Reviewer’s conclusion:

Decision after the authors have responded to the major compulsory revisions, would like to review script again after changes have been made by the authors.