Reviewer’s report

Title: Dissatisfaction with the Laboratory Services among Public and Private Medical Personnel in Tanzania

Version: 1 Date: 28 January 2008

Reviewer: Wilson Pace

Reviewer’s report:

This manuscript reports on health care personnel satisfaction with laboratory services in Tanzania. The study evaluated satisfaction in both public and private laboratories. It appears that a paper based survey proceeded interviews at participating facilities. The topic is clearly an important one for Tanzania to consider and for laboratory administrative staff to review. The generalizability of the information for an international audience is less clear. Improved methods reporting or using this model to find exemplar laboratories may provide more general interest in the results. One use of this data is to focus laboratory users and personnel on potential quality improvement activities. Unfortunately, it is not always clear from the presentation of results who should address specific problem areas.

Overall this is a fairly confusing paper to track given the apparent variability of ‘health professionals’ interviewed and potentially very different roles as providers of or users of laboratory services. Therefore, the relative weighting is difficult between minor and major revisions.

Minor Essential Revisions

1. The number of people interviewed per health care professional group per facility (presumably approximately 4 since there were 3 groups interviewed and approximately 12 interviews per facility) appears low. The authors need to justify why this number of individuals would be expected to provide a stable result for questions that appear to be relevant to only subsets of interviewees.

2. Given the nested nature of the data collection - people clustered under labs - is it relevant to analyze data only at the individual respondent level or should lab level data be reported as well. Tables 2 and 3 appear to be lab level data collected from a single individual so Tables 1 versus 2 and 3 are harder to put into perspective without some analytical crosswalks such as lab level analysis of Table 1 data.

3. How was the universe of potential interviewees identified for each of the three groups and what percentage of the potential universe was interviewed for each group? Was there a replacement protocol for non-responders, particularly among nurses and clinicians? Please clarify the recruitment process.

4. Neither the actual questions nor the anchors for either the baseline survey or
the interviews are not reported on thus making interpretation of the Tables very
difficult. All outcomes are reported as dichotomous either satisfied or
dissatisfied. I suspect the actual anchors were actually a Likert like scale and the
results collapsed into the reported outcomes. It would help with interpretation of
the results by reporting on the actual anchors so that the data aggregation
decision can be reviewed.

Major revisions
1. No information on the response rates for any of the steps within the process is
included thus it is not possible to evaluate the representativeness of the
responders. It appears there was a general survey sent to some number of
laboratories across Tanzania.

2. The data collection method of the general survey- phone, paper, on-line, other
is not specified. The purpose of the general survey and how it relates to the
selection process for collection of interview data is not clear.

3. No information concerning the general survey or references to other
manuscripts where this data can be found is included. If the general survey was
not sent to all Tanzania laboratories what was the sampling strategy? This
information needs to be provided in the document as well as a rationale for the
sampling approach.

4. The next level of data collection involves interviews with apparently up to 13
individuals in 21 labs. The exact number of expected interviews per lab is not
clear the manuscript indicates 12 people per lab but then mentions that the
individual who was responsible for supervising the sending or receiving of
specimens between labs. This appears to be a 13th interview for some, but
perhaps not all labs.

5. This means that the total number of expected interviews for 21 labs would
have been between 252 and 273 depending on how many 13th interviews were
expected. The actual number of interviews was 235 this discrepancy is not
discussed. Also, the reason these interviews were conducted in 21 labs and not
24 is not clear.

6. This reviewer is very confused on the roles of the individuals interviewed. This
may be because of not being familiar with how lab services are provided in
Tanzania- but this confusion is likely to be present for others around the world.
From the text it appears that three different types of health care personnel were
interviewed- nurses, physicians and laboratory personnel. These appear to
be very disparate roles and why their results should be grouped for analysis is
not clear. Presumably, nurses and physicians are ordering lab tests for patients
and receiving lab results. Lab personnel are handling these orders, dealing with
completing tests, sending specimens to reference labs or receiving specimens
from other labs and then reporting results back to clinicians. These are very
different functions and various groups have control of very different aspects of
this chain of events. Thus, grouping their responses across similar questions is
not intuitively logical. For instance, how is the question about timely results
interpreted by nurses and physicians (who ordered the test) compared to lab
personnel who conduct the test? If patients have to travel to the lab to have specimens collected (which appears to be the case at least some of the time from a companion manuscript) then do the nurses and clinicians account for a potential lag in when a patient presents for the lab test? It would seem the lab personnel would only be dealing with the delay from when they receive or collect a specimen to when they report the results. These are very different perspectives and grouping them under a single response needs to be justified.

7. Likewise for the response to â##clear, complete resultsâ## is confusing. Presumably if the lab personnel thought their results were not clear and complete they would change the way results are reported.

8. Finally, the beliefs around whether a test result is â##correct or accurateâ## are also very different from a clinicianâ##s perspective than lab personnel. Presumably lab personnel run controls and various tests to assess the accuracy and reliability of test results, which are more likely to be affected by specimen handling than by test performance. Clinical personnel question results when they donâ##t make clinical sense â## which is very different than true validity and reliability.

9. In Table 2 and 3 it appears that the universe being reported on, who provided the results and data missingness is very different than for Table 1, but these differences are not explained either in the methods section or the results section. Presumably Table 2 and 3 data comes only from the 13th interviewee who oversees the shipping and receiving of lab tests since the N is either 15 or 14 for all response categories. Why should this table not include other lab personnel who deal with this issue even if they are not supervisors?

10. The intent of the response options in Table 2 are not clear and who actually has the ability to deal with poorly handled specimens and therefore dissatisfied customers is not at all clear. For instance, does availability of equipment mean within the sending lab or within the receiving lab for either table? This is not clear at all. What was intended to be collected from the question â##result generated from referral laboratoriesâ## in Table 2 is not clear to this reviewer compared to â##Clear result reportâ## in the same table.

11. Table 3 identifies â##poorly identified specimenâ## as a concern among a large number of receiving labs. But, it is not clear from the manuscript if this is a problem with the ordering physician/office not providing the necessary information or is this a problem at the sending lab level. This data is impossible to use for QI activities or considerations with out greater detail.

12. The results indicate there are differences in dissatisfaction levels in selected areas between private and public laboratories for health care personnel (presumably these differences are driven by nurse and physician dissatisfaction but that is not possible to tell.) Overall, the levels of dissatisfaction appear high in a number of areas, (over 20% for 12 of 15 areas and over 30% for 4 areas). Inter-laboratory transfer of specimens appears particularly troublesome. The concept that work of this kind can be used to drive quality improvement activities is generically accurate, but as reported in this manuscript it is difficult to
understand how any of the groups involved could use the data to undertake an improvement process.

**What next?:** Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Not suitable for publication unless extensively edited

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I declare that I have not competing interests.