PEER REVIEW HISTORY

BMJ Open publishes all reviews undertaken for accepted manuscripts. Reviewers are asked to complete a checklist review form (see an example) and are provided with free text boxes to elaborate on their assessment. These free text comments are reproduced below. Some articles will have been accepted based in part or entirely on reviews undertaken for other BMJ Group journals. These will be reproduced where possible.

ARTICLE DETAILS

TITLE (PROVISIONAL)	How Accurate Are Medical Record Data in Afghanistan's Maternal Health Facilities? An observational Validity Study
AUTHORS	Broughton, Edward; Ikram, Abdul; Sahak, Ihsanullah

VERSION 1 - REVIEW

REVIEWER	Saeid Shahraz MD, PhD candidate Heller School of Social Policy and Management Brandeis University
REVIEW RETURNED	30-Jan-2013

GENERAL COMMENTS	This study is important in many aspects. Evaluation of accuracy of patient medical chart is rarely done in developing countries esp. in countries such as Afghanistan. Also, the study deals with a very important public health issue. So, I suggest publication of the manuscript with some changes esp. reporting the missing observations on medical records and adding them to the tables. This can be interpreted as minor revision. However, I selected 'major revision' button a bit arbitrary. Here are my comments. Please let me know if my understanding on some of the points I raised is not right. Thanks and good luck. Saeid Comments: line 43 of introduction (second research question) needs paraphrasing. It is not clear to me and I am not sure if it is adequately addressed through analysis and results. line 16/17 of method reg. sample size? What was the calculated sample size? You mention later on that you completed 600 observations? Was 600 the calculated sample size? If not, you need to explain why the number of observations and number of sample size were different. line 24 and after under method: The authors have selected a set of criteria for active observations (their gold standard) and compared the medical record with the criteria. A couple questions should be answered here: medical record accuracy is a relative concept. Hence, by changing the gold standard, the accuracy level will change. It is important for the authors to explain how the 17 criteria (tasks) were selected. Secondly, it is not reported in the manuscript the completeness of medical records for each of the selected indicators. For example, from the total of 600 observations , how

	many missing information for each of 17 criteria existed. In a similar research that we have recently published we reported , for instance, that significant portion of values for one of the quality variables we were interested in was missing from the medical records. In this case, reporting sensitivity/specificity statistics may not be quite meaningful. line 7 of the results: I was not able to resolve a conflict in the results and their interpretation. The authors found and reported a high compliance on many factors they were seeking. However, they reported a poor accuracy of the results. The natural question is how one can make sure the 'high compliance' is a reliable result if the results are not that accurate? Could you help me understand this piece? Discussion: The authors probably need to give their interpretation of the differences across the three hospitals on some of the results. This will be useful and can help explain some hospital-level factors affecting the results for future analyses. The study also suffers from a quality benchmark. For instance, how other hospitals perform on the desired indicators and how they record their patient information. I understand that these studies are rare but it might be useful that the authors suggest such a benchmark study by which one can compare the quality of medical records in one setting against other settings. In other words, this study quantifies quality against a gold standard and not relative to the quality of other hospitals. In general, the authors need to tell the reader more about their expectations from these three hospitals and how these hospitals can be compared (in their opinion) with other hospitals in Afghanistan.

REVIEWER	Lakhwinder P Singh, D Phil(Oxford) Director International Institute of Health Management Research (IIHMR)
REVIEW RETURNED	16-Feb-2013

THE STUDY	Since the data relates only to three hospitals, I am not sure if this adequately represent the region from which the study is being reported. The maternity hospitals in Kabul alone have many more deliveries and this sample represents only a small fraction. it will not allow interpretations with statistical robustness.
REPORTING & ETHICS	An over whelming majority of women living in Afghanistan are illiterate and written consent does not matter much. The paper does not describe how the consent form was read and how comprehensible was the consent form. Further weather the observers were men or women, a male observer could be serious cultural issue in Afghanistan. this needs to be explained further.

VERSION 1 – AUTHOR RESPONSE

Comments:

line 43 of introduction (second research question) needs paraphrasing. It is not clear to me and I am not sure if it is adequately addressed through analysis and results.
"We agree. The second research question has been divided into two separate questions and reworded to improve clarity"

line 16/17 of method reg. sample size? What was the calculated sample size? You mention later on that you completed 600 observations? Was 600 the calculated sample size? If not, you need to explain why the number of observations and number of sample size were different.
"Additions to the explanation of the sample size are provided in the methods section"

line 24 and after under method: The authors have selected a set of criteria for active observations (their gold standard) and compared the medical record with the criteria. A couple questions should be answered here: medical record accuracy is a relative concept. Hence, by changing the gold standard, the accuracy level will change. It is important for the authors to explain how the 17 criteria (tasks) were selected. Secondly, it is not reported in the manuscript the completeness of medical records for each of the selected indicators. For example, from the total of 600 observations , how many missing information for each of 17 criteria existed. In a similar research that we have recently published we reported , for instance, that significant portion of values for one of the quality variables we were interested in was missing from the medical records. In this case, reporting sensitivity/specificity statistics may not be quite meaningful.
"We clarified that we included missing data and inaccurate data the same way because the purpose of the study is to determine to what degree we can trust what is in the written record. Whether data were missing or erroneous was not the point of the study. Our overarching goals was to determine if the medical record represents reality and can therefore facilitate the highest level of care possible."

line 7 of the results: I was not able to resolve a conflict in the results and their interpretation. The authors found and reported a high compliance on many factors they were seeking. However, they reported a poor accuracy of the results. The natural question is how one can make sure the 'high compliance' is a reliable result if the results are not that accurate? Could you help me understand this piece?
"Yes. Compliance is based solely on the observations. If the Ob/Gyn doctor/researcher did not observe it to happen during the delivery, then we assumed that it did not happen. Our observers were well trained and had experienced in this kind of research and had extensive clinical experience themselves in delivery. We trusted their observationbs to be the gold standard and therefore a valid indication of compliance with treatment standards."

Discussion: The authors probably need to give their interpretation of the differences across the three hospitals on some of the results. This will be useful and can help explain some hospital-level factors affecting the results for future analyses.
"Agree: A paragraph was added to the Discussion section"

The study also suffers from a quality benchmark. For instance, how other hospitals perform on the desired indicators and how they record their patient information. I understand that these studies are rare but it might be useful that the authors suggest such a benchmark study by which one can compare the quality of medical records in one setting against other settings. In other words, this study

quantifies quality against a gold standard and not relative to the quality of other hospitals.
"Agree. Two more references were added on previous results from similar studies. However, we could find none that used this methodology in Ob/gyn. A paragraph was added to the Discussion section on this."

In general, the authors need to tell the reader more about their expectations from these three hospitals and how these hospitals can be compared (in their opinion) with other hospitals in Afghanistan.
"Agree. We added a section in the Discussion explaining this."

Reviewer: Lakhwinder P Singh, D Phil(Oxford) Director International Institute of Health Management Research (IIHMR) Plot # 3, Sector 18 A Dwarka, New Delhi- 110 075 India competing interest : none

Since the data relates only to three hospitals, I am not sure if this adequately represent the region from which the study is being reported. The maternity hospitals in Kabul alone have many more deliveries and this sample represents only a small fraction. it will not allow interpretations with statistical robustness.
"A paragraph was added to the Discussion section"

An over whelming majority of women living in Afghanistan are illiterate and written consent does not matter much. The paper does not describe how the consent form was read and how comprehensible was the consent form. Further weather the observers were men or women, a male observer could be serious cultural issue in Afghanistan. this needs to be explained further.

"It was already stated in the manuscript that the MD observers were all female. We added a sentence to better explain the informed consent process. IRBs, particularly the local IRB in the Ministry of Public Health in Afghanistan, check to make sure that consent forms are understandable. This study obtained the appropriate Afghanistan and US approvals. As such, it was found to abide by all ethical standards for medical research, including those you state and many more."

VERSION 2 – REVIEW

REVIEWER	Saeid Shahraz, MD, PhD candidate, Brandeis University, USA
REVIEW RETURNED	20-Mar-2013

- The reviewer completed the checklist but made no further comments.