Reviewer’s report

Title: The contribution of non-physician clinicians to the provision of surgery in rural Zambia - a Randomised Controlled Trial

Version: 0 Date: 30 May 2019

Reviewer: Staffan Bergstrom

Reviewer's report:

1. Hospital selection bias?

a) Unclear how the final 30 are repr. or not of the existing 84 (out of which 54 responded initially). In anyone (of the 30), before intervention, were there not a single ML deployed? - On page 8, line 33: "a selection bias, because the 30 hospitals out of the 84 sampled for the situation analysis did not provide information on their capacity to deliver surgery". How could the 30 be included without this basic information?

b) hugely different no. of MDs (Choma 12 MDs = intervention hosp. but unclear how many MDs in Itezhi-Tezhi = control). Staff number should be presented for all control hospitals.

c) On P. 4, LINE 6: "Findings from the situation analysis (reported elsewhere[22]) were used to identify facilities suitable to participate in this study, and to facilitate randomised allocation of DLHs to intervention and control groups." How was "identification" performed?

d) On P. 5, LINE 36: "At the end of the intervention, COST-Africa researchers visited all intervention and control hospitals, to validate the data". What is meanst by "validation"?

e) Was there no interaction within pairs, e.g. public communiction (gossip) leading to patients' preference of intervention hospitals rather than control ones? The pairs were geographicly reasonably close?

2) Other points

a) page 7, line 56: NCPs should be NPCs.

b) page 8, line 59: you should not use "task-sharing" at all, since it is unclear (occurs all over the world also in university hospitals) while "task-shifting" means delegation of surgery in the (physical) absence of an MD.
c) Table 3: For CSs Serenje (intervention) has a change of 1185 % (!) in two years, while Liteta (control) has minus 39%. Correct? Comments?

d) Table 4: only intervention clinics; controls should be there also!

e) This must be commented: "There was a significant increase in the numbers of Caesarean Sections (CS) in the intervention hospitals (+15.2%) and a drop BY ALMOST HALF in the control group (- 47%)". This indicates a dramatic shift with non-identified cause, casting a shadow over this study.

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