Author's response to reviews

Title: Assessment of the uptake of neonatal and young infant referrals by community health workers to public health facilities in an urban informal settlement, KwaZulu-Natal, South Africa

Authors:

Duduzile Nsibande (duduzile.nsibande@mrc.ac.za)
Tanya Doherty (tanya.doherty@mrc.ac.za)
Petrida Ijumba (petrida.ijumba@mrc.ac.za)
Mark Tomlinson (markt@sun.ac.za)
Debra Jackson (debrajackson@mweb.co.za)
David Sanders (sandersdav5845@gmail.com)
Joy Lawn (joylawn@yahoo.co.uk)

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Author's response to reviews: see over
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“Assessment of the uptake of neonatal and young infant referrals by community health workers to public health facilities in an urban informal settlement, KwaZulu-Natal, South Africa”

Dear Editor

Thank you for the opportunity to revise this research article. We found the reviewer comments very helpful in assisting us to strengthen the article. The reviewers’ comments are responded to in detail below:

- The reviewer comments are in **bold**.
- Responses to them are in normal font below (not bold).

**Editor's comments:**

- **Please provide the Trial Registration Number of the original trial at the end of your abstract so the studies can be linked.**
  The trial registration number has been added at the end of the abstract.

- **After reading through your manuscript, we feel that the quality of written English needs to be improved before the manuscript can be considered further. We advise you to seek the assistance of a fluent English speaking colleague, or to have a professional editing service correct your language. Please ensure that particular attention is paid to the abstract.**
  The paper has been edited by a fluent English speaking colleague and all grammatical errors have been corrected.

- **Please note that we are unable to display vertical lines or text within tables, no display merged cells: please re-layout your table without these elements. Tables should be formatted using the Table tool in your word processor. Please ensure the table title is above the table and the legend is below the table. For more information, see the instructions for authors on the journal website.**
  The tables have been formatted according to the journal requirements.

**Reviewer 1:**

1. **Objectives** – One of the objectives is to describe the ‘process of referral’ and ‘factors’ responsible for it. Was it a kind of self-review for improvement of your program?

   The purpose of monitoring compliance with community health worker referrals during this trial was to inform the national Department of Health who at the time was planning a national scale up of community health workers and little data existed regarding referral compliance from community to health facilities in South Africa. The purpose of this sub study has been clarified on page 3 of the methods section.

2. **Methods** – The methods of information collection related to the ‘process of referral’ needs more clarity – was it collected by the review of existing documents only OR interview of field staff interview of community members were done. Who did this review? (Internal or external faculty) Was it an equity focused review? (Where different stakeholders and community perspectives were taken into account? Was it based on ‘secondary data from
the existing program’ or ‘primary data was collected’? Somehow, objectives and methods
do not seem in alignment.

Primary data was collected for this study from mothers who received a referral by a CHW during the
course of the trial. Infants’ Road to Health Charts were also reviewed to confirm referral completion.
Data collection was done by an independent person, not involved in the main Good Start Study. No
data was collected from other stakeholders. Additional information has been added in the methods
section under ‘study design’ and ‘data collection to clarify the design of this study on pages 3 and 4.

3. Analysis – It is mentioned that chi-square and ANOVA was used, but it is not reflected in
Tables anywhere. What analysis was done to identify ‘factors’ (determinants) of those
who followed the advice?

Basic descriptive analysis was undertaken to compare mothers who did and did not complete
referrals. Chi square tests were performed for categorical data and ANOVA for continuous data. Only
one variable was found to be of statistical significance (identification of danger signs). Further
analytical analysis (logistic regression) was limited by the small sample. This section has been
amended under data management and analysis on page 5.

4. Quality of written English: Needs some language corrections before being published.

The article has been re-read to check and correct English grammatical errors by a first language
English speaker.

Reviewer 2:

1 The background is a bit long but clearly describes the background to the study. The
information given in the background section is relevant. The study objectives are clearly spelt out.

We have shorted the background section where appropriate.

Methods

2 The description of how the data collected by the open ended questions was managed to
reach the conclusions is not clearly described. Was it the open ended questions that were grouped
into themes as portrayed in the manuscript? What was done with this information after entering it
into Excel?

Response: The reasons for delays in referral completion included an ‘other’ category which was an
open ended field. These textual reasons were combined into common groups and then entered into
the excel database. This data is presented in table 3. The description of the analysis of the open
ended fields has been amended on page 5 to make this clearer.

Results

Referral completion

3 In the first part of this paragraph, the denominator used for referral completion is 110 but
in the later part of the same paragraph, the denominator is changed to 108. It is not clear how this
comes about and nothing is said about it.

Two mothers were unsure of their infants’ age at the time of the referral. These two have been
included in the denominator and the results revised accordingly on page 6.
4 Table 1: Characteristics of the mothers

The numbers given for the various characteristics of the mothers do not add up to the figure given at the top row of the table ie 104. Instead they add up to 97, this needs clarification.

Missing responses were not included in the table. Table 1 has been revised and the total missing responses included for each variable so that totals add up to 104.

5 What do the numbers in brackets refer to?

Numbers in brackets are percentages. Tables 1 and 2 have been reformatted with a legend below to indicate what the numbers mean.

6 Table 2: Characteristics of infants

The numbers given for the infant characteristic of breastfed in the 24 hours before the interview, do not add up to the total number given in the topmost row and it is not clear what happened to the missing ones.

Missing data for this variable has been included now in Table 2.

Discretionary Revisions

Table 3: Delay in completing referral

7 A total of 78 reasons for delay in completing referral is given in table 3. Did any of the mothers give more than one reason for their delay? Were those that delayed in completing referral only 78?

This question was asked from mothers who delayed (more than one hour) to go to health facilities. Out of 104 mothers that completed referral, 79 mothers did not go immediately. 78 of these gave a reason for the delay. This has been clarified in the text on page 7 and in a legend below table 3.

Figure 1: Age of infant at last referral

8 The information presented in Figure 1 can be stated in a sentence so the figure can be left out without losing much information.

We agree with the reviewer. Figure 1 has been deleted and the information in Figure 1 included on page 6.