Author’s response to reviews

Title: Taking stock of 10 years of published research on the ASHA program: examining India’s national community health worker program from a health systems perspective

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HRPS-D-18-00253: Taking stock of 10 years of published research on the ASHA program: examining India’s national community health worker program from a health systems perspective

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Health Research Policy and Systems

Dear Editors,

Thank you very much for the opportunity to revise and resubmit our manuscript. We greatly value the comments from you and the two reviewers. In addressing these comments we feel we’ve been able to strengthen the manuscript. Please find our detailed response to the reviewer comments below. We have also uploaded a revised manuscript – both a tracked and clean version.

Warm wishes,

Kerry

On behalf of the co-authors.

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RESPONSE TO REVIEWERS

Reviewer #1:

COMMENT 1: The authors may quote any similar studies (systematic review) undertaken for CHW programs from other developing or developed countries to add on to the significance of the work undertaken?

RESPONSE TO COMMENT 1: Thank you for this comment. We have added the following sentence in the introduction (second paragraph), which highlights existing reviews on CHW programs to orient readers:

“Reviews of the literature on CHW programs have provided valuable insight into health system considerations of CHW programs [3,13,14], including on supervision strategies [15,16], the influence of context and program features on CHW productivity [17–19], the extent to which CHW programs provide equitable health care [20], cost effectiveness [21], and considerations for operating national, scaled up programs [22,23]. Country-specific literature reviews have been carried out on Brazilian [24–26] and Ghanaian [27] CHW programs; these reviews identified policy and research gaps and explored how CHW roles and identities bridge the gap between community and health services. The only existing review on CHW programs in India focuses on the rights of CHWs themselves [9], identifying shortcomings in terms of remuneration and labor rights.”

COMMENT 2: The authors may use the term NHM instead of NRHM from 'methods' section onwards.

RESPONSE TO COMMENT 2: We have made this change by writing “National Health Mission” in full whenever required, rather than using an acronym.

COMMENT 3: Since the manuscript is examining India’s CHW program from a health systems perspective - it would be interesting to mention what do the authors conclude about the overall success/ failure of the program?

RESPONSE TO COMMENT 3: We have added the following comments on program success in the discussion section on evaluation outcomes:

“Both positive and negative outcomes associated with ASHAs at scale occurred in the context of the National Health Mission and can thus rarely be attributed to any single health system input.”
Nonetheless, research findings from specific states have shown that ASHAs have been selected across most villages [146] according to recruitment norms [112], have received most or all of their training [47,62] and a majority have reasonable grasp of core health concepts [38,44,73,97,104,131,136], are reasonably well known and trusted in as a source of health information and referral in their communities [51,56], and are providing a subset of households with health information and services, [44,47,50,52,54,72,101,140], particularly by encouraging antenatal care, institutional delivery [49,60,132] and childhood immunization [116]. The ASHA program at scale has been associated with improvements in neonatal health, some aspects of careseeking, some immunization, and health-related awareness in some areas [36,86,135,141,142,146]. Negative research results from specific states identified ASHA knowledge gaps [36,104,105,114,119,131], inadequacies in ASHA training or supervision [50,51,63,93,105,109,139,142,147], low community engagement with and awareness of ASHAs [134], challenges related referrals (limited transportation, coordination and health facility resources) [49,100,111,136,140], dissatisfaction among ASHAs with their remuneration or support [9,60,61,89,102,140], lack of supplies [54,62,89,142], and sub-par performance or coverage [44,54,69,70,72,103,112,116,146]. Chhattisgarh’s Mitanin program emerged as particularly strong success story, wherein Mitanins performed as socio-political actors on the social determinants of health [126,128,130]. However, in other states, ASHAs have generally been more successful in performing a link-worker role, without significant action on community mobilization or the social determinants of health [46,47,98,100,154].”

COMMENT 4: Though the authors have covered it in different places in the manuscript but a separate section suggesting a 'future road map' for addressing the concerns and issues pertaining to the ASHA program to the policy makers (explaining the ideal research design for a state level and a national level study) will be helpful for the readers.

RESPONSE TO COMMENT 4: Thank you for this suggestion. We have discussed the idea of adding a specific section on a “future research road map” for policy makers. However we are hesitant to be prescriptive and to focus only on the research needs of policy makers. Some of the more critical work (on gender, remuneration and volunteerism, on modernity and statecraft) is unlikely to have been invited by policymakers but is nonetheless vital to understanding the program. In addition, a complex programme such as a CHW intervention at scale, implemented as part of a larger system reform agenda cannot really be studied through a single research design at state or national levels. Different facets of the programme require different designs. The ASHA program is an evolving and dynamic program, so we feel unable to forecast or prescribe research designs. Finally, we note that the research agendas at state and national levels are likely to be different.

To this end, we have added the following on page 18: “Ultimately, a complex, evolving and dynamic intervention such as the ASHA program, which is implemented at scale as part of a larger system reform agenda, cannot be studied through a single research design. Research agendas at state and national levels are likely to be different and different facets of the program require different designs.”
Reviewer #2: A highly informative "stock-taking" of the ASHA programme. Detailed and descriptive background information is provided which is particularly useful for those wishing to become familiar with the ASHA programme.

RESPONSE: We thank reviewer #2 for these comments.

However, the manuscript would benefit from reviewing and revising the following:

METHOD

COMMENT 1. The authors should provide justifications for limiting the number of databases to three. Considering that some articles on ASHA are grey literature, what measures did the authors put in place to include grey literature.

RESPONSE TO COMMENT 1: We decided to limit the research to published academic articles to ensure we captured a focused picture of the current academic field – grey literature was beyond the scope of this review. The three databases searched are widely considered to be the most comprehensive indexes of academic publications for the social and health sciences. We have now noted these considerations in the text.

“We searched the electronic databases PubMed, Embase, and Scopus, which index the largest number of publications and most prominent journals in public health, biomedicine and the social sciences [30–32],…”

“Grey literature on the ASHA program was beyond the scope of this review, as we were seeking to understand and synthesis the current academic research published on the program.”

COMMENT 2. The authors stated that "One author reviewed all titles and abstracts." To this end, the readers would benefit from knowing how the authors avoided reviewer's selection bias.

RESPONSE TO COMMENT 2: We have added the following text:

“Potential bias was mitigated in two ways. First, the reviewing author took an inclusive approach in terms of article format and content, accepting article formats including research abstracts and commentaries, and only excluding articles that clearly had no meaningful content on the ASHA program. Second, all borderline or unclear cases were discussed with the other authors to reach consensus on inclusion.”

COMMENT 3. The readers would benefit from a detailed description of the inductive CHW health systems interface framework and how it was applied to this review.

RESPONSE TO COMMENT: Thank you for this comment. We note in the methods section how the framework was developed and list its overall components. Figure 1 presenting the exact
components or the Framework, and these components are listed again and supplemented with descriptive information of how each component applies to the ASHA program in Table 2. Due to article length considerations, we decided not to describe each domain in the framework again.

RESULT & DISCUSSION

COMMENT 1. The authors should consider comparing findings from the first and second half of the concluded decade in a way that shows a trend (or lack of it). For example, trends in health condition focus and evaluation outcomes. This trend may present a useful roadmap for guiding stakeholders on the likely priority areas for the second decade of ASHA programme.

RESPONSE TO COMMENT 1: We welcome this suggestion and in fact initially considered a similar analysis ourselves. However, when attempting to analyze the articles according to publication date within the decade we encountered key challenges that led us to abandon this line of inquiry. The time elapsed between research conduct and article publication varied greatly, and the 10-year time period is relatively short to look for trends over time. We worry that it would be misleading to compare publications from 2005-2010 and from 2010-2015, when, for example, some work published in 2010, 2011, or 2012 was conducted in 2007, 2008 or 2009. We attempted to examine the date of research conduct, rather than date of publication, but many articles did not specify when the work was carried out. Finally, the ASHA program itself was rolled out on a state-by-state basis at different times. An “early adopter” state could have a fairly mature program by 2010 while a “late adopter” state may still be in the early stages of selecting and training ASHAs. Once the program has been in existence for a longer duration, we think it will become more feasible to look for trends over time. But at this early stage, we are unable to comment on temporal trends over the first decade.

COMMENT 2. Further, the manuscript would benefit from situating the findings within the broader literature on CHWs (transcending India) to describe the implication of these findings for the second decade of ASHA programme.

RESPONSE TO COMMENT 2: In the discussion (page 17) we have edited the paragraph on research needs for the future to the following:

“In the first decade of the program, research assessing ASHA capacity and performance has played a valuable role in understanding early challenges and successes. However, as the ASHA program enters its next decade, research on other aspects of the CHW-health system framework will be increasingly important to the program’s capacity to adapt, sustain and achieve its broader goals around empowerment, community engagement and change across the social determinants of health. Future research should consider the upcoming challenges of running a mature CHW program at scale, including recruitment and training for expanded roles in NCDs, ASHA social security, retention, aging, and ongoing knowledge retention and skills upgrade. Furthermore, echoing global gaps in research on CHW programs [13], ongoing research is required on meeting the rights and needs of ASHAs, effective approaches to training and supervision, on realizing the
ASHA role as community change agent, and on the influence of health system decentralization, social accountability, and governance.”

Additional comments from editors;

COMMENT 1: Please make sure you add take home message re the success and failures of ASHA program.

RESPONSE TO COMMENT 1: Thank you. We have added a paragraph in the discussion section (page 16) presenting take home messages on the program’s successes and failures. We hope this is sufficient.

COMMENT 2: Please detail more about the sources of grey literature.

RESPONSE TO COMMENT 2: We considered grey literature beyond the scope of this review.