Author's response to reviews

Title: Association of programmatic factors with low contraceptive prevalence rates in a rural area of Bangladesh

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Author's response to reviews: see over
May 23, 2013

To: Editor-in-Chief
The Reproductive Health Editorial Team

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Subject: Response to the Reviewers’ Comments in the revised manuscript “Association of Programmatic Factors with Low Contraceptive Prevalence Rates in a Rural Area of Bangladesh” MS: 2256745778371646

Thank you very much for reviewing our manuscript. The comments and suggestions made by the reviewers’ were very useful for improvement of the manuscript. The manuscript has been revised according to the comments of the reviewers. We are resubmitting herewith a revised version for your kind consideration.

Please find attached responses to reviewer’s comments. We are looking forward for a possible publication of our manuscript in your journal.

**Response to the Reviewers’ comments:**

**Response to the comments of first Reviewer (Roger Rochat)**

1. Is the question posed by the authors new and well defined? YES, but the authors do not use the words of the title “programmatic factors” in tables.

**Response:** We have revised the title in tables 2, 3 & 4. Please see pages 16, 17 & 18.

2. Are the methods appropriate and well described, and are sufficient details provided to replicate the work? MOSTLY
   • Methods should define “hard to reach unions” independent of findings

**Response:** Now we have defined “Hard to reach areas” in the method section page 6, Para I.
   • Methods should define “programmatic factors”; do they include private vs. public sector delivery of contraceptives?

**Response:** Programmatic factors have been defined in the method section (Analysis of data) that includes service uptake from public or private sector.
   The study covered following programmatic factors; contact with outreach workers which has been defined as home visit by an FWA in the last six months, source of FP methods (public sector that includes public hospitals and centres, Government Satellite clinics, and field workers), NGO sector includes clinics run by NGOs and
private sector includes pharmacy and other private clinics and practitioners, distance to the nearest health facility was assessed in two criteria (Within 1 km or more than 1 km). Please see page 7 and para 1.

- For non-programmatic factors, such as age and education, what strategies may be needed to overcome the low acceptance by young and least well educated women? Are they equally responsive to strategies that work for older and better educated women?

**Response:** As per BDHS 2007 report, Contraceptive use rate (CPR) varied by different age groups. CPR was 42 percent among married women at age 15-19, while it ranged from 61-67 percent among women of age group 25 to 39 years. It has been also reported by previous studies that use of contraceptive methods is associated with education [29], these issues have been incorporated in the discussion section, page 12, para 2.

3. Are the data sound and well controlled? YES

Author should examine roles of private and public sector in reaching hard to reach unions. Recommendations for improving services in hard to reach unions should be guided by evidence on what works best for them.

**Response:** There are some examples of innovative approaches to address needs of people in hard to reach areas, particularly for child immunization and maternal and neonatal care. For instance, a study done in Bangladesh to improve child immunization in hard to reach areas, offered a package of interventions and finally reported a higher rates of full immunization coverage at the end of the intervention period [37]. In Bangladesh, the first nationwide mobile phone health information service “Aponjon” under Mobile Alliance for Maternal Action (MAMA) has been started through United States Agency for International Development (USAID) in 2012 which is free for the poorest 20% of its subscribers [38]. The objective of the MAMA is to help pregnant women, new mothers and their families for pregnancy and delivery care. MAMA has already been carried good impact in South Africa, Indonesia and Bangladesh, where new mothers have access timely, and culturally relevant health information. These issues have been incorporated in the discussion section, page 13, para 2.

Does the manuscript adhere to the relevant standards for reporting and data deposition? YES

p. 4 I’m not persuaded this statement is supportable by evidence: “Although the socio-cultural environment in Nabiganj sub-district is not remarkably different from other parts of the Bangladesh”. Does Nabiganj have higher proportion of hard to reach unions than rest of Bangladesh [“More than half of the unions (the smallest local government entities in Bangladesh) in Nabiganj are considered hard to reach”]? Certainly they are less likely to use bicycles.

**Response:** This statement has been rephrased. Description added on contextual situation of Nabiganj, page 3, para 3
1. Are the discussion and conclusions well balanced and adequately supported by the data? Overall good, but incomplete (see comment 3)

**Response:** Now relevant information has been incorporated as per suggestions made by the reviewers.

Do the title and abstract accurately convey what has been found? YES

2. Is the writing acceptable? Overall yes, but a few details need correcting. P. 10 “confine” should be “confirm” ; 6th “sentence” is incomplete: “In which their objective…” . Table 1 title should spell Nabiganj correctly and should indicate that the statistics are percentages. Figure 2 title should delete s at end of Contraceptive .

**Response:** Corrections done accordingly. Please see page 7 (para 4), page 12 (para 3), page 19

**Level of interest:** An article of importance in its field

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

**Response:** Language corrections are done.

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

**Reviewer’s Declaration of competing interests:**

I declare that I have no competing interests

**Response to the second Reviewer’s (Tariq Azim) comments**

This is an important study which is done at a time when the TFR in Bangladesh has remained stagnant for quite some time. The study attempts to associate some of the programmatic factors with low CPR in a hard-to-reach sub-district of Bangladesh. However, if the study is trying to prove that low contacts with field workers is contributing or associated with the low CPR, that's nothing new. Other studies mentioned in this report have already found that.

Nevertheless, the study has some very important findings which the authors should try to analyze further (I am sure there's sufficient data collected during this study to do that).

Firstly, Nabiganj is not socioeconomically same as the rest of the country. The study reports that in Nabiganj (in comparison to the national average):

- there's low education rate :
- people are more like to be richer :
- families are more likely to have mobile phone accessibility :
- and possibly, there's a changing trend in having higher age at marriage. Probably less percentage of women are married in Nabiganj ages 15-19yrs (6.6%) and 20-24yrs (17.2%).

**Response:** Nabiganj is a low performing Upazila under Sylhet Division. We have incorporated in the manuscript the contextual information based on Sylhet Division particularly on educational and economic status (wealth quintile) as relevant indicators/information on Nabiganj was not available. Similarly information on mobile phone use and change in age at marriage was not available for Nabiganj. There were regional variations in educational attainments [14]; the highest percentage of women had never attended school in Sylhet division among six administrative divisions compared to Barishal Division. People living in Sylhet had second highest wealth quintiles (22.2%) among the six administrative divisions while Dhaka had the highest wealth quintile (28.0%). In Bangladesh, almost one in three households had a mobile telephone, while urban households were twice as likely to own a mobile telephone as rural households [14].

The highest percent of women of Chittagong and Sylhet divisions got married after legal age (18+ years) among six divisions [23]. In Bangladesh, the median age at first marriage for women aged 20-49 was 16 years [14]. Women in Khulna and Rajshahi had the lowest age at marriage [24]. Again, Khulna and Rajshahi Divisions had the lowest TFRs. All these contextual information are added in page 3, para 3 and page 4, para 1 & 2.

Secondly, the study has found that in Nabiganj the main source of contraceptive is the private sector and which is significantly higher than the national average. Thus, the investigators need to revisit their data and analysis plan and thereby the conclusion drawn from this study. Instead of recommending to increase contacts with FWAs (and that nothing innovative), the study can point towards exploiting the private sector as the source of contraceptive and how the private sector source can be made more accessible, exploiting the mobile phone connectivity for reaching out to MWRA in hard to reach areas and encouraging higher age at marriage which probably is becoming an acceptable norm in Nabiganj.

**Response:** Now, we have added new analysis and modified the recommendation section based on our findings and other successful interventions in similar settings. Please see page 12, para 2 and page 13, para 2.

Thus, the analysis and discussion sections need rethinking. Even analyzing and trying to explain the differences (or no difference) between hard to reach and not hard to reach areas within Nabiganj can be helpful in understanding the determinants.

**Response:** Now, we have presented results comparing hard to reach and non-hard to reach in Table: 4 titled “Programmatic factors of Family planning services utilization: difference between hard to reach and Non-hard to reach unions of Nabiganj”. Please see page 9, para 2 & page 18.

In Table 3: the authors need to recheck the data and the analysis done. For example, the
crude OR for frequency of contacts is near or above 2 but after adjustments it goes down below 1.

Response: We have checked but it is OK

Minor essential revisions:

Fig 2: need to clarify that the bars are representing unions of Nabiganj.

Responses: Revision done.

It would be good to put a rationale for the study.

Response: We have added rationale for the study. Please see page 5.

Discretionary revisions

• Operational definition of hard to reach and not hard to reach areas

  Response: Now, operational definition of “hard to reach areas has been given” in the methods section. Please see page 6, para 1.

• Reorganizing the flow of the Introduction and Discussion sections, putting various arguments in a coherent manner - (For example see the attachment)

  Response: We have followed it and revised the introduction and discussion sections as per suggestions made by the reviewers.

Level of interest: An article of importance in its field

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

Response: Language corrections are done.

Statistical review: Yes, but I do not feel adequately qualified to assess the statistics.

Reviewer’s Declaration of competing interests:

I declare that I have no competing interests
Response to the third Reviewer’s comments

1. Is the question posed by the authors new and well defined?

   a. The question is not new but very important for present Family Planning Program of Bangladesh as current DHS survey indicated that the CPR is low compared to DHS 2007.

   b. In the introduction part two low performing sites were mentioned but why only Nabiganj was considered for analysis was not told.

   **Responses:** The present study was part of a large community based study that included two low performing rural areas. However, in the current investigation we were interested to explore the situation of a hard to reach area, so we purposively presented results from one area that is Nabiganj as the other area was not considered as hard to reach area. Please see page 4, para 3

   c. Description of Nabiganj was given. Please add the number of unions of this sub-district. Also mention, what do you mean by hard to reach area for this paper.

   **Response:** Eight unions out of twelve (the smallest government administrative unit in rural areas of Bangladesh) in Nabiganj are considered as hard to reach; now, mentioned in method section. Also, definition of ‘hard to reach area” has been provided in the method section. Please see page 6, para 1.

2. Are the methods appropriate and well described, and are sufficient details provided to replicate the work?

   **Study design:** This paragraph is clear.

   **Analysis of data:**

   a. Please add operational definition of dependent variable ‘current contraceptive use’, independent variables: frequency of contacts with an FWA, utilization of health facility and distance of health facility in the text.

   **Response:** Now we have included operational definitions of dependent and independent variables in the method section of analysis of data. Please see page 6 & 7.

   b. Define satellite clinic.

   **Response:** Satellite clinic -an outreach activity – was introduced by government to deliver primary level of Maternal Child Health and Family Planning (MCH-FP) services by female paramedics which is being held 8 days in each month in each union in the rural areas commonly at the households of elite/elected representative of local government. Please see page 6, para 2.
Here the author described the analysis in two parts:

1. Association of current contraceptive use with programmatic variables
2. Comparison of selected FP indicators between study area and BDHS survey

In result section another part was mentioned, comparison of CPR between hard to reach area and non-hard to reach area of Nabiganj (Figure 2). This is important and should be mentioned in ‘analysis part’.

**Response:** We have included additional analysis comparing hard to reach and non-hard to reach areas (Table 4). Please see page 9, page 2 & page 18.

1. In result part (table 3) another two variables were included, age and education which was not mentioned in the text. The variable ‘source of FP method’ was not included in the regression model but mentioned in the text. So, this should be excluded from the text.’

**Response:** Age and education are considered as non programmatic factors. However, we tried to cover these issues in discussion section. Please see page 12, para 2.

**Result:**

a. The result should be presented with the chronology of ‘analysis of data’ part. Currently these two sections are confusing for the reader.

**Response:** These sections have been rearranged chronologically.

b. Here the data was presented under ‘health service utilization’ (Table 2) but it was not mentioned under ‘analysis of data’ that this has three components.

**Response:** Now, it has been mentioned under analysis of data.

c. The Table 2: Is it ‘Health and FP services utilization’? Then the title of the text under result section should be similar.

**Response:** Revision has been done accordingly.

d. Interpretation of table 3: Logistic regression: The interpretation is incomplete. The results should be described with odds ratio. The variable ‘frequency of visit to MWRA’ was associated with contraceptive use. It should also be mentioned that the variable was not a significant predictor.

**Response:** We have interpreted it in the result section. Please see page 9, para 1.

3. Are the data sound and well controlled?
   Yes, the data is sound but it was not mentioned how the quality of data was checked during data collection in the study site and during data entry.
Response: We have added the activities on quality of data collection in the method section. Please see page 6, para 1.

4. Does the manuscript adhere to the relevant standards for reporting and data deposition? The standard for reporting was maintained. In the result section there was no descriptive data on frequency of FWA visit at household level in last 6 months.

Response: We have described as per comments. Please see page 9, para 1.

5. Are the discussion and conclusions well balanced and adequately supported by the data?
Yes, supported by the data but need further explanation.

The author should justify clearly why increase family welfare assistant’s visit is needed in the hard to reach area, because Government of Bangladesh is spending huge amount of money to provide services through community clinic. FWAs are giving the services.

Response: During the study period, Community Clinic (CC) was not fully functioning. CC can be made functional in hard to reach unions to provide FP services. Please see discussion section, page 13, para 1.

☐ Author should mention about CHCP and about community clinic. This will justify the community volunteer approach and association of distance of health facility and contraceptive use.

Response: Modifications done as per suggestion of the reviewer. Please see discussion section, page 12, para 1.

☐ Please be consistent on using the terms like sub-district (introduction) or upzilla (discussion).

Response: Revision done.

☐ 5th paragraph: Number of satellite sessions was mentioned. Please add the time frame.

Response: Information on time frame had been added. Please see method section, page 6, para 2

☐ In this paper the ‘supervision and monitoring’ variables were not examined. Please drop the last sentence.

Response: It has been dropped.

6. Do the title and abstract accurately convey what has been found?
Title: Ok
Abstract: The results of multivariate analysis should be mentioned properly with odds ratio.

Response: Done.

7. Is the writing acceptable?

Need language editing. There are typographical errors like problem with space during writing (24% and 81%) in first paragraph of Introduction and other parts of the paper.

Response: Language editing done.

Discussion Part: First and fourth paragraph.

Response: We have revised the paragraph and modified as per reviewer’s suggestion.

Major compulsory revisions

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- families are more likely to have mobile phone accessibility
- and possibly, there's a changing trend in having higher age at marriage. Probably less percentage of women are married in Nabiganj at ages 15-19yrs (6.6%) and 20-24yrs (17.2%).

Response: Nabiganj is a low performing Upazila under Sylhet Division. We have incorporated in the manuscript the contextual information based on Sylhet Division
particularly on educational and economic status (wealth quintile) as relevant indicators/information on Nabiganj was not available. Similarly information on mobile phone use and change in age at marriage was not available for Nabiganj.

There were regional variations in educational attainments [14]; the highest percentage of women had never attended school in Sylhet division among six administrative divisions compared to Barishal Division. People living in Sylhet had second highest wealth quintiles (22.2%) among the six administrative divisions while Dhaka had the highest wealth quintile (28.0%). In Bangladesh, almost one in three households had a mobile telephone, while urban households were twice as likely to own a mobile telephone as rural households [14].

The highest percent of women of Chittagong and Sylhet divisions got married after legal age (18+ years) among six divisions [23]. In Bangladesh, the median age at first marriage for women aged 20-49 was 16 years [14]. Women in Khulna and Rajshahi had the lowest age at marriage [24]. Again, Khulna and Rajshahi Divisions had the lowest TFRs. All these contextual information are added in page 3, para 3 and page 4, para 1 & 2.

Secondly, the study has found that in Nabiganj the main source of contraceptive is the private sector and which is significantly higher than the national average.

Thus, the investigators need to revisit their data and analysis plan and thereby the conclusion drawn from this study. Instead of recommending to increase contacts with FWAs (and that nothing innovative), the study can point towards exploiting the private sector as the source of contraceptive and how the private sector source can be made more accessible, exploiting the mobile phone connectivity for reaching out to MWRA in hard to reach areas and encouraging higher age at marriage which probably is becoming an acceptable norm in Nabiganj.

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Thus, the analysis and discussion sections need rethinking. Even analyzing and trying to explain the differences (or no difference) between hard to reach and not hard to reach areas within Nabiganj can be helpful in understanding the determinants.

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In Table 3: the authors need to recheck the data and the analysis done. For example, the crude OR for frequency of contacts is near or above 2 but after adjustments it goes down below 1.

Response: We have checked but it is OK

Minor essential revisions:

Fig 2: need to clarify that the bars are representing unions of Nabiganj.

Responses: Revision done.

It would be good to put a rationale for the study.

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Discretionary revisions

- Operational definition of hard to reach and not hard to reach areas

  Response: Now, operationa definition of “hard to reach areas has been given” in the methods section. Please see page 6, para 1.

- Reorganizing the flow of the Introduction and Discussion sections, putting various arguments in a coherent manner - For example (see the following):

  Response: We have followed it and revised the introduction and discussion sections as per suggestions made by the reviewers.

Introduction: (Accept changes)

In 2000, more than 190 nations declared to achieve the Millennium Development Goals (MDGs) by 2015. The family Planning (FP) program addressed under MDG 5 is targeted to achieve desired family size, reduce total fertility, and slow population growth [1]. The use of modern contraceptive methods are increasing in the Eastern Europe and Central Asia but many less developed countries still face significant challenges in achieving desired family size, and reduce total fertility [2]. According to UN report, contraceptive prevalence rate varies widely between developed and developing countries [3]. For instance, low contraceptive prevalence rates are reported in Cambodia (24 %) and Africa (27 %) compared to United Kingdom (82%) and Spain (81%) [4, 5]. Various studies have found programmatic factors to be associated with low contraceptive prevalence rates [6, 7]. For example, the study done in Cambodia highlighted that outreach activities by FP field workers and accessibility to FP related information to married women of reproductive age were significantly associated with use of modern contraceptives [6].

The FP program of Bangladesh is considered as a success story in the field of population [8]. During the last 25 years, fertility among women of reproductive age in Bangladesh
declined dramatically [9]. The decline was rapid from the mid-1970s, when the total fertility rate (TFR) was 6.3 children per women, to the early 1990s, when the TFR was 3.4 [10]. However, since the 1990s, the TFR has remained almost constant. Four successive Bangladesh Demographic and Health Survey (BDHS) showed a TFR of 3.4 in 1993-1994, 3.3 in 1996-1997, 3.3 in 1999-2000, and 3.0 in 2004 [10-13]. This plateau of TFR for over a decade has puzzled the nation’s policy makers and program implementers. In such a situation it is duly recognized to come up with evidence-based innovative strategies to encourage further decline of fertility in the country.

Available evidences indicate towards wide geographic variation within the country with high TFRs in Sylhet (3.7) and Chittagong (3.2) and low TFR in Khulna (2.0) and Rajshahi (2.6) [14]. This commensurate with the high contraceptive prevalence rate (CPR) in Rajshahi division (66 %) & Khulna division (63%) and low CPR in Sylhet division (32 %) & Chittagong division (44%) [14]. Investigating the reasons for such geographic variations in fertility rates might provide important clues to designing innovative strategies for increasing contraceptive use in low performing areas of Bangladesh. Previous studies have been identified a number of factors which may lead to low use of contraception. These include uneven distribution of population among FWAs (Government outreach workers who provide FP services in the form of motivation and distribution of oral pills and condoms, referral of clients for intrauterine device (IUD) and sterilization, in addition to other health services) [15, 16], low motivation of the field workers, poor counseling on contraceptive methods [17], and inaccessibility of hard to reach areas for service provision [18]. Andaleeb et al and others found that women are more likely to use contraception in areas with low population to FP worker ratios and when they receive more visits from the [19, 20] workers. The average travel time from the fieldworker’s home to the client’s home is also associated with use of contraception [20]. Neaz et al reported that 22 % of FWAs contacted married women for FP services in densely and easily accessible areas compared to less than 10% in hard-to-reach areas [18]. All these findings add up to point towards the association of contacts with FP field workers with the level of contraception use by MWRA.

The low performance of the FP program is also attributable to poor supervision [20]. In addition, work planning, supervision, and performance-based rewards and punishment systems for FP workers are lacking where management systems are weak [19]. Such inadequacies are thought to limit the effective delivery of FP services in Bangladesh. Nabiganj is a sub-district under Sylhet division that is a low performing Division [14]. Although the socio-cultural environment and indicators in Nabiganj sub-district are remarkably different from National indicators; the CPR is low, maternal and infant mortality rates are high, the TFR is high and health-seeking behavior is low, it represents many other low performing areas of Bangladesh. In Nabiganj, the population has increased by 15 % in the last 10 years from 247,000 in 1991 to 285,000 in 2001 [21, 22]. There were regional variations in educational attainments [14]; the highest percentage of women had never attended school in Sylhet division among six administrative divisions compared to Barisal Division. People living in Sylhet had second highest wealth quintiles (22.2%) among the six administrative divisions while Dhaka had the highest wealth quintile (28.0%). In Bangladesh, almost one in three households had a mobile telephone, while urban households were twice as likely to own a mobile telephone as rural households [14].
The highest percent of women of Chittagong and Sylhet divisions got married after legal age (18+ years) among six divisions [23]. In Bangladesh, the median age at first marriage for women aged 20-49 was 16 years [14]. Women in Khulna and Rajshahi had the lowest age at marriage [24].

In 2005-2008, the United Nations Population Fund (UNFPA), in collaboration with the National Institute of Population Research and Training (NIPORT) implemented the “Demand-based Reproductive Health Commodity Project (DBRHCP).” The goal of the project was to improve the capacity for increased access to and utilization of client-centred quality reproductive healthcare. The project was implemented in two low-performing sub-districts: Nabiganj in Habiganj district of Sylhet division and Raipur in Lashmipur district of Chittagong division. However, in the current investigation we were interested to explore the situation of a hard to reach area, so we purposively presented results from Nabiganj as the other area was not considered as hard to reach area. A household survey of MWRA was conducted in the project areas to obtain data for eventual assessment of programme impact. In an initial assessment for the DBRHCP, it was found that, in Nabiganj the coverage of population by the FWAs is low. While the Government recommends that each FWA covers a population of 5,000, in Nabiganj 52.5 % of FWAs surveyed covered larger populations. Likewise, although each FWA is mandated to cover 450 eligible couples, only 6.6 % of them do so. The majority (57.4 %) of FWAs covers 451-900 couples, and 36 % cover more than 900 couples. More than half of the unions (the smallest local government entities in Bangladesh) in Nabiganj are considered hard to reach.

Thus, understanding the key factors influencing contraceptive use in low-performing areas like Nabiganj can throw light on innovative policy and strategic decisions that Bangladesh can make to reduce TFR from its current stagnant level of 3.0.

Minor Compulsory revisions

- Is the question posed by the authors new and well defined? YES, but the authors do not use the words of the title “programmatic factors” in tables.

Response: We have revised the title in tables 2, 3 & 4. Please see pages 16, 17 & 18.

- Are the methods appropriate and well described, and are sufficient details provided to replicate the work? MOSTLY

Methods should define “hard to reach unions” independent of findings

Response: Now we have defined “Hard to reach areas” in the method section page 6, Para 1.

Methods should define “programmatic factors”; do they include private vs.
Response: Programmatic factors have been defined in the method section (Analysis of data) that includes service uptake from public or private sector. The study covered following programmatic factors: contact with outreach workers which has been defined as home visit by an FWA in the last six months, source of FP methods (public sector that includes public hospitals and centres, Government Satellite clinics, and field workers), NGO sector includes clinics run by NGOs and private sector includes pharmacy and other private clinics and practitioners, distance to the nearest health facility was assessed in two criteria (Within 1 km or more than 1 km). Please see page 7 and para 1.

For non-programmatic factors, such as age and education, what strategies may be needed to overcome the low acceptance by young and least well educated women? Are they equally responsive to strategies that work for older and better educated women?

Response: As per BDHS 2007 report, Contraceptive use rate (CPR) varied by different age groups. CPR was 42 percent among married women at age 15-19, while it ranged from 61-67 percent among women of age group 25 to 39 years. It has been also reported by previous studies that use of contraceptive methods is associated with education [29], these issues have been incorporated in the discussion section, page 12, para 2.

Response: There are some examples of innovative approaches to address needs of people in hard to reach areas, particularly for child immunization and maternal and neonatal care. For instance, a study done in Bangladesh to improve child immunization in hard to reach areas, offered a package of interventions and finally reported a higher rates of full immunization coverage at the end of the intervention period [37]. In Bangladesh, the first nationwide mobile phone health information service “Aponjon” under Mobile Alliance for Maternal Action (MAMA) has been started through United States Agency for International Development (USAID) in 2012 which is free for the poorest 20% of its subscribers [38]. The objective of the MAMA is to help pregnant women, new mothers and their families for pregnancy and delivery care. MAMA has already been carried good impact in South Africa, Indonesia and Bangladesh, where new mothers have access timely, and culturally relevant health information. These issues have been incorporated in the discussion section, page 13, para 2.
Does the manuscript adhere to the relevant standards for reporting and data deposition? YES

p. 4 I’m not persuaded this statement is supportable by evidence: “Although the socio-cultural environment in Nabiganj sub-district is not remarkably different from other parts of the Bangladesh”. Does Nabiganj have higher proportion of hard to reach unions than rest of Bangladesh [“More than half of the unions (the smallest local government entities in Bangladesh) in Nabiganj are considered hard to reach”]? Certainly they are less likely to use bicycles.

Response: This statement has been rephrased. Description added on contextual situation of Nabiganj, page 3, para 3

1. Are the discussion and conclusions well balanced and adequately supported by the data? Overall good, but incomplete (see comment 3)

   Response: Now relevant information has been incorporated as per suggestions made by the reviewers.

2. Do the title and abstract accurately convey what has been found? YES

3. Is the writing acceptable? Overall yes, but a few details need correcting. P. 10 “confine” should be “confirm” ; 6th “sentence” is incomplete: “In which their objective…”. Table 1 title should spell Nabiganj correctly and should indicate that the statistics are percentages. Figure 2 title should delete s at end of Contraceptive…. 

   Response: Corrections done accordingly. Please see page 7 (para 4), page 12 (para 3), page 19

Please make your report as constructive and detailed as possible in your comments so that authors have the opportunity to overcome any serious deficiencies that you find and please also divide your comments into the following categories:

- Major Compulsory Revisions (which the author must respond to before a decision on publication can be reached)
- Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)
- Discretionary Revisions (which are recommendations for improvement but which the author can choose to ignore)

Once you have done this, there are also some questions for you to answer, including one that asks your advice on publication

Kind regards.