

PEER REVIEW HISTORY

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ARTICLE DETAILS

TITLE (PROVISIONAL)	Assessing of the Readiness of Health Facilities for Diabetes and Cardiovascular Services in Bangladesh: A Cross-sectional Survey
AUTHORS	Biswas, Tuhin; Haider, M Moinuddin; Das Gupta, Rajat; Uddin, Jasim

VERSION 1 – REVIEW

REVIEWER	Hari Iyer Harvard T. H. Chan School of Public Health, USA
REVIEW RETURNED	15-Mar-2018

GENERAL COMMENTS	<p>To the BMJ Editorial Office: Thank you for the opportunity to review the paper by Biswas et al. describing the readiness of health facilities in Bangladesh to provide diabetes and cardiovascular disease services. Overall, the study makes an important contribution to the growing body of research on health systems inputs at primary care facilities in low and middle income countries. Understanding the current state of health system readiness to provide care for non-communicable disease is essential to inform policy aimed at combatting the dual burden of disease in low and middle income countries. The design, exposure and outcome variables in this study are clearly described, and the results are clearly presented and interpreted. However, there are several major clarifications that must be made before this paper is suitable for publication:</p> <ul style="list-style-type: none"> □ Target population of facilities <ul style="list-style-type: none"> o There is a discrepancy between the sample size quoted in the abstract (n=1596), and the sample size described in the results (n=319). How were these 319 facilities selected? If these resulted from exclusions of facilities below subdistrict level and those with missing values, this is a considerable reduction and needs to be explicitly stated. Reassurance also must be provided that this exclusion did not result in selection bias. An approach could be to compare facility characteristics among facilities that were excluded to those that remained in the study – hopefully there are no major differences. o Are the authors making an inference about care delivery for diabetes and CVD services
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	<p>at primary care facilities, or all types of facilities? If primary care facilities, this should be made explicit.</p> <ul style="list-style-type: none"> <input type="checkbox"/> Analytic approach <ul style="list-style-type: none"> o The authors must provide more information about how the facility readiness scores were calculated and more details about what specific facility inputs are used in producing the summary score. o While the analytic approach the authors have taken is simple and clear, it does not account for sampling variability or precision of their estimates. The mean scores presented fail to provide any information about the distribution of readiness scores in the study sample. The authors should accompany each readiness score in tables and text with a standard deviation (if the facility readiness scores are normally distributed), a median and interquartile range (if the facility readiness scores are not normally distributed), and/or a 95% coverage bound to account for sampling variability and precision of these estimates. o In addition, several statements are made regarding different readiness scores by facility type – the authors should present the appropriate variance estimate accompanying their facility specific estimates along with results of statistical tests comparing these facility-specific scores. o Figure 1 and 2 are tied to a potential policy intervention, which strengthens the utility of this manuscript. Have the authors simply recalculated the scores, setting each domain (guidelines, skilled workforce) to 100% for each scenario? If so, they should add a line to the methods section stating this is what was done. <p>Specific minor comments (major comments in bold):</p> <p>Abstract</p> <ul style="list-style-type: none"> <input type="checkbox"/> Line 26 – Please capitalize (bhfs) for consistency with use of other acronyms <input type="checkbox"/> Line 32 – Remove the comma after SARA <input type="checkbox"/> Line 34 – should this be 58% and 24.1%? Please use either written numbers or numeric type for consistency and clarity. I would use 58% and 24.1% to be consistent with reporting of the rest of the results <input type="checkbox"/> Results – these percentages are difficult to interpret for two reasons, 1) they are such small fractions that the absolute number is difficult to ascertain and 2) the metrics used to quantify “shortage of trained staff”, “meager medicine supply,” and the four “service-readiness items” are unclear unless the reader already has familiarity with SARA. Consider adding some information to the “Primary and secondary outcome measures” section to provide information
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	<p>on how these readiness domains were produced. I assume they are derived from a summary score of some kind?</p> <ul style="list-style-type: none"> □ Conclusions – It can be helpful to discuss performance metrics with respect to a target to contextualize the facility performance in your study. Are there targets set by the Government of Bangladesh that health facilities are expected to meet? What about neighboring South Asian countries (India, Nepal, Bhutan, Pakistan)? How far from the targets were these facilities, and what specific readiness areas would you suggest should be prioritized? Improving all of them may not be feasible in resource-limited settings. <p>Strengths and Limitations</p> <ul style="list-style-type: none"> □ Line 47 – If facilities are selected to cover all of Bangladesh, may help with generalizability, but selection bias may be a concern if facility selection was related in some way to quality of chronic disease care provision – may consider rephrasing to say “generalizability with respect to administrative and geographic characteristics” □ Line 49 – Isn’t collecting data on diabetes and CVD a requirement for this study on readiness to provide these services, rather than a strength? I think this point aims to point out that the study sample contains a mix of public and private facilities, leading to greater generalizability to an array of facility types? If so, consider discussing this in combination with your first point about administrative and geographic contexts, as it’s a broader comment on generalizability □ Line 52 – Defining the target study population is critical. Until now, I had assumed this target population was primary care facilities but realized this was not made explicit. Are you hoping to make an inference about diabetes and CVD care delivered at tertiary care facilities as well? My understanding from other contexts is that in general, more invasive procedures are delivered at tertiary facilities, requiring surgery, additional laboratory and diagnostic capabilities, which are quite different from the services provided at primary care facilities. You may consider explicitly stating that your study aims to understand drivers of facility readiness for diabetes and CVD care delivery at primary care facilities, rather than all facilities. Then, this point about tertiary care is no longer a limitation (because the types of services offered are quite different). □ A major limitation of all facility readiness analyses is that important aspects of care, such as adherence to guidelines, level of skilled workforce, medicine availability, infrastructure readiness, are all assessed using many survey questions that inevitably get lumped together to reduce dimensionality. This makes it more challenging to identify the specific drivers within each
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	<p>broader health system area that requires intervention. Consider adding a sentence about this.</p> <ul style="list-style-type: none"> <input type="checkbox"/> Were your survey instruments validated (if done by WHO, I assume yes?) <p>Introduction</p> <ul style="list-style-type: none"> <input type="checkbox"/> Several proposed grammar and stylistic edits (please refer to attached) <p>Methods</p> <ul style="list-style-type: none"> <input type="checkbox"/> Line 86 – How were facilities sampled in BHFS? Cluster randomization? <input type="checkbox"/> Line 90 – Please state that this is a cross-sectional study. <input type="checkbox"/> Line 90 – What was the purpose of the BHFS? <input type="checkbox"/> Line 206 – 210 – this description of the Bangladeshi health system would be useful here <input type="checkbox"/> Line 94 – “stratified random sample” – what was the stratification variable? Administrative unit? <p>BHFS sampling cluster?</p> <ul style="list-style-type: none"> <input type="checkbox"/> Line 96 – a limitation above was that the study did not assess care at tertiary centers – are none of these facilities tertiary centers? <input type="checkbox"/> Line 102 – how many facilities were excluded? A key point that needs to be explained is how the sample size went from 1596 to 319 – were 1277 facilities excluded? If so, this needs to be stated, and a sensitivity analysis needs to be done comparing characteristics of facilities that were excluded vs those that remain. You may also consider whether the high volume of missingness precludes some questions from being asked using this dataset. <input type="checkbox"/> Line 116 – More detailed description of the domains and questions that compose each summary domain score are needed. Please refer to Kruk et al. 2017, Table 2 (references listed at the end of this document) for an example of how to present the domains and questions in a table. Consider a single table for general, diabetes, and CVD domains, or separate tables for each. <input type="checkbox"/> Line 124 – “weighted” by what? Administrative cluster? Administrative division? <input type="checkbox"/> None of the analyses appear to take into account catchment population size. This is an important consideration, particularly when comparing hospitals to lower level facilities. Please comment on the relative numbers of patients served by each facility type, either in a table or in the text (could present mean population served by each facility type, along with standard deviation, for example). <p>Results</p> <ul style="list-style-type: none"> <input type="checkbox"/> Please include standard deviation (means) or interquartile range (medians) for all readiness scores presented in tables and text. See table 1 and 2 in Leslie et al. 2017 (PLoS Med) for examples. <input type="checkbox"/> In tables and text, for comparisons of readiness scores between facility types, please present the score along with the corresponding measure of dispersion (IQR or coverage bound), as
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	<p>well as the results of the appropriate hypothesis test for difference (Wilcoxon Rank Sum test for non-parametrically distributed outcome data, or independent two-sample t-test for normally distributed outcome data)</p> <ul style="list-style-type: none"> □ Figures 1 and 2 – please add the IQR to each figure using error bars □ Line 189 - Please provide the number of facilities along with the percentage □ The authors may consider estimating standardized changes in overall facility readiness score using the general domain scores for the total study population as the standard (as then the estimated changes would reflect the joint distribution of other health facility readiness factors as covariates). □ Perhaps beyond the scope of the proposed study, I wonder if the authors might consider estimating these differences in diabetes and CVD readiness scores by facility type controlling for overall domains in facility readiness (table 1). If there are still differences in diabetes and CVD readiness after controlling for other aspects of facility readiness, that would speak to a broader deficiency in health care service readiness with respect to chronic disease. On the other hand, if after adjusting for general domains of facility readiness there is no longer a facility-specific difference in diabetes and CVD readiness, this could speak to an inequitable distribution of resources among types of facilities. I say this because the latter finding would suggest that better resourced health facilities are better able to provide chronic disease care than lower resourced facilities. <p>Discussion</p> <ul style="list-style-type: none"> □ Line 202 – please provide number of facilities along with percentages □ Line 219 – Please contextualize this statement about lack of integration of NCD services with your findings. I think your study does support this statement, in finding that general domain readiness was quite high, whereas readiness for diabetes and CVD care was quite low, but this link should be explicit. □ Line 232 – You cite studies from sub-Saharan Africa, but are there not studies closer to Bangladesh? It would be helpful to discuss the reasons why you consider results from subSaharan African studies to be informative (could be similarities in resource constraints, for example). □ Line 239 – What was the policy implication of your findings? It appeared that your results suggest that guideline availability would lead to a greater increase in readiness than skilled provider availability (and presumably at a lower cost). □ Line 258 – Please see notes above regarding strengths and limitations <p>References</p>
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	<p>□ Leslie HH, Malata A, Ndiaye Y, et al. Effective coverage of primary care services in eight highmortality countries. <i>BMJ Glob Health</i> 2017; 2:e000424. doi:10.1136/bmjgh-2017-000424</p> <p>□ Leslie, H., Spiegelman, D., Zhou, X., & Kruk, M. (2017). Service readiness of health facilities in Bangladesh, Haiti, Kenya, Malawi, Namibia, Nepal, Rwanda, Senegal, Uganda and the United Republic of Tanzania. <i>Bulletin of the World Health Organization</i>, 95(11), 738-748.</p> <p>□ Kruk, M., Chukwuma, A., Mbaruku, G., & Leslie, H. (2017). Variation in quality of primary-care services in Kenya, Malawi, Namibia, Rwanda, Senegal, Uganda and the United Republic of Tanzania. <i>Bulletin of the World Health Organization</i>, Kruk, Margaret E, Adanna Chukwuma, Godfrey Mbaruku, and Hannah H Leslie. 2017. "Variation in quality of primary-care services in Kenya, Malawi, Namibia, Rwanda, Senegal, Uganda and the United Republic of Tanzania." <i>Bulletin of the World Health Organization</i> 95 (6): 408-418. doi:10.2471/BLT.16.175869. http://dx.doi.org/10.2471/BLT.16.175869.</p> <p>□ Leslie, H., Sun, Z., & Kruk, M. (2017). Association between infrastructure and observed quality of care in 4 healthcare services: A cross-sectional study of 4,300 facilities in 8 countries. <i>PLoS Medicine</i>, Leslie, Hannah H., Zeye Sun, and Margaret E. Kruk. 2017. "Association between infrastructure and observed quality of care in 4 healthcare services: A cross-sectional study of 4,300 facilities in 8 countries." <i>PLoS Medicine</i> 14 (12): e1002464. doi:10.1371/journal.pmed.1002464. http://dx.doi.org/10.1371/journal.pmed.1002464.</p>
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REVIEWER	Adam Timmis Barts Heart Centre, London, UK
REVIEW RETURNED	08-May-2018

GENERAL COMMENTS	Very nicely presented data that are clearly important for healthcare in Bangladesh. My main concern relates to the data collection which was by questionnaire without it seems any attempt to validate the responses. This needs mentioning as a limitation.
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VERSION 1 – AUTHOR RESPONSE

Submitted Title: Assessment of the Readiness of Health Facilities for Diabetes and Cardiovascular Services in Bangladesh: Analysis of Data from Nationwide Survey

Manuscript ID: bmjopen-2018-022817

Target population of facilities

There is a discrepancy between the sample size quoted in the abstract (n=1596), and the sample size described in the results (n=319). How were these 319 facilities selected? If these resulted from exclusions of facilities below subdistrict level and those with missing values, this is a considerable reduction and needs to be explicitly stated. Reassurance also must be provided that this exclusion did not result in selection bias. An approach could be to compare facility characteristics among facilities that were excluded to those that remained in the study – hopefully there are no major differences.

Response: In our study, we used secondary data from Bangladesh Health Facility Survey-2014 (BHFS). In the context of Bangladesh, health care systems focusing of maternal and child health. In BHFS, survey included in total 1596 facilities and from them only 319 facilities provide diabetes and CVD services. In our study, we assessed the readiness of health facilities for diabetes and cardiovascular services in Bangladesh. That's why our total sample size was 315. Now we made the consistency whole paper (page number-2, line number 28).

Are the authors making an inference about care delivery for diabetes and CVD services at primary care facilities, or all types of facilities? If primary care facilities, this should be made explicit.

Response: We are making an inference about care delivery for diabetes and CVD services at the primary and secondary care level facilities.

Analytic approach

The authors must provide more information about how the facility readiness scores were calculated and more details about what specific facility inputs are used in producing the summary score.

Response: Thank you for your good suggestion. Now, we added details how facility readiness scores were calculated in data analysis section. Please see page number-8, line number 134-138.

While the analytic approach the authors have taken is simple and clear, it does not account for sampling variability or precision of their estimates. The mean scores presented fail to provide any information about the distribution of readiness scores in the study sample. The authors should accompany each readiness score in tables and text with a standard deviation (if the facility readiness scores are normally distributed), a median and interquartile range (if the facility readiness scores are not normally distributed), and/or a 95% coverage bound to account for sampling variability and precision of these estimates.

Response: Thank you for this valuable comment. Now we added the standard deviation (SD) in table-1 and table-2.

In addition, several statements are made regarding different readiness scores by facility type – the authors should present the appropriate variance estimate accompanying their facility specific estimates along with results of statistical tests comparing these facility-specific scores.

Response: Thanks! Now we added SD.

Figure 1 and 2 are tied to a potential policy intervention, which strengthens the utility of this manuscript. Have the authors simply recalculated the scores, setting each domain (guidelines, skilled workforce) to 100% for each scenario? If so, they should add a line to the methods section stating this is what was done.

Response: Thank you for your suggestion. In method section, we now added details of how we did the projection (page number-8, line number 137-138).

Specific minor comments (major comments in bold):

Abstract

Line 26 – Please capitalize (bhfs) for consistency with use of other acronyms.

Response: Revised according to advice.

Line 32 – Remove the comma after SARA.

Response: Removed according to advice.

Line 34 – should this be 58% and 24.1%? Please use either written numbers or numeric type for consistency and clarity. I would use 58% and 24.1% to be consistent with reporting of the rest of the results.

Response: Revised according to advice.

Results – these percentages are difficult to interpret for two reasons, 1) they are such small fractions that the absolute number is difficult to ascertain and 2) the metrics used to quantify “shortage of trained staff”, “meager medicine supply,” and the four “service-readiness items” are unclear unless the reader already has familiarity with SARA. Consider adding some information to the “Primary and secondary outcome measures” section to provide information on how these readiness domains were produced. I assume they are derived from a summary score of some kind?

Response: Thank you for your suggestion. Now, we added details how facility readiness scores were calculated in data analysis section. Please see page number-8, line number 134-138.

Conclusions – It can be helpful to discuss performance metrics with respect to a target to contextualize the facility performance in your study. Are there targets set by the Government of Bangladesh that health facilities are expected to meet? What about neighboring South Asian countries (India, Nepal, Bhutan, Pakistan)? How far from the targets were these facilities, and what specific readiness areas would you suggest should be prioritized? Improving all of them may not be feasible in resource-limited settings.

Response: Actually, In Bangladesh Government still not fixed any target. That's why we didn't discuss anything about performance metrics.

Strengths and Limitations

Line 47 – If facilities are selected to cover all of Bangladesh, may help with generalizability, but selection bias may be a concern if facility selection was related in some way to quality of chronic disease care provision – may consider rephrasing to say “generalizability with respect to administrative and geographic characteristics”

Response: Revised according to advice.

Line 49 – Isn't collecting data on diabetes and CVD a requirement for this study on readiness to provide these services, rather than a strength? I think this point aims to point out that the study sample contains a mix of public and private facilities, leading to greater generalizability to an array of facility types? If so, consider discussing this in combination with your first point about administrative and geographic contexts, as it's a broader comment on generalizability

Response: Agree. Revised according to advice.

Line 52 – Defining the target study population is critical. Until now, I had assumed this target population was primary care facilities but realized this was not made explicit. Are you hoping to make an inference about diabetes and CVD care delivered at tertiary care facilities as well? My understanding from other contexts is that in general, more invasive procedures are delivered at tertiary facilities, requiring surgery, additional laboratory and diagnostic capabilities, which are quite different from the services provided at primary care facilities. You may consider explicitly stating that your study aims to understand drivers of facility readiness for diabetes and CVD care delivery at primary care facilities, rather than all facilities. Then, this point about tertiary care is no longer a limitation (because the types of services offered are quite different).

Response: Thanks! We now revised line 52.

A major limitation of all facility readiness analyses is that important aspects of care, such as adherence to guidelines, level of skilled workforce, medicine availability, infrastructure readiness, are all assessed using many survey questions that inevitably get lumped together to reduce dimensionality. This makes it more challenging to identify the specific drivers within each broader health system area that requires intervention. Consider adding a sentence about this. Were your survey instruments validated (if done by WHO, I assume yes?)

Response: We have revised our limitation please see page number 20, line number 273-277.

Introduction

Several proposed grammar and stylistic edits (please refer to attached)

Response: Revised according to advice.

Methods

Line 86 – How were facilities sampled in BHFS? Cluster randomization?

Response: Described it in line numbers 94-95.

#Line 90 – Please state that this is a cross-sectional study.

Response: Added according to advice.

#Line 90 – What was the purpose of the BHFS?

Response: Revised according to advice.

Line 206 – 210 – this description of the Bangladeshi health system would be useful here

Response: Thank you for your suggestion. We added it please see line number 232-233.

Line 94 – “stratified random sample” – what was the stratification variable? Administrative unit? BHFS sampling cluster?

Response: Stratification was done according to administrative unit and type of facilities.

Line 96 – a limitation above was that the study did not assess care at tertiary centers – are none of these facilities tertiary centers?

Response: Thank you for your question. None of these facilities are tertiary center.

Line 102 – how many facilities were excluded? A key point that needs to be explained is how the sample size went from 1596 to 319 – were 1277 facilities excluded? If so, this needs to be stated, and a sensitivity analysis needs to be done comparing characteristics of facilities that were excluded vs those that remain. You may also consider whether the high volume of missingness precludes some questions from being asked using this dataset.

Response: In Bangladesh, health facilities up to the sub district level (upazila health complex) provide services for NCDs. Considering this; we excluded the facilities below sub district level and also excluded those with missing values. According to inclusion criteria in total 319 facilities included. Our study partially represent the country scenario.

Line 116 – More detailed description of the domains and questions that compose each summary domain score are needed. Please refer to Kruk et al. 2017, Table 2 (references listed at the end of this document) for an example of how to present the domains and questions in a table. Consider a single table for general, diabetes, and CVD domains, or separate tables for each.

Response: Now we added it. Please see Table-1.

Line 124 – “weighted” by what? Administrative cluster? Administrative division?

Response: Weighted by administrative cluster and type of facilities.

None of the analyses appear to take into account catchment population size. This is an important consideration, particularly when comparing hospitals to lower level facilities. Please comment on the

relative numbers of patients served by each facility type, either in a table or in the text (could present mean population served by each facility type, along with standard deviation, for example).

Response: It is a big question but unfortunately, Bangladesh Health Facility Survey did not capture this information.

Results

Please include standard deviation (means) or interquartile range (medians) for all readiness scores presented in tables and text. See table 1 and 2 in Leslie et al. 2017 (PLoS Med) for examples.

Response: We now added SD in tables and as well as text.

In tables and text, for comparisons of readiness scores between facility types, please present the score along with the corresponding measure of dispersion (IQR or coverage bound), as well as the results of the appropriate hypothesis test for difference (Wilcoxon Rank Sum test for non-parametrically distributed outcome data, or independent two-sample t-test for normally distributed outcome data)

Response: Actually, in this paper we are going to test any hypothesis. We want to present the current health facilities readiness for diabetes and CVD using simple analysis.

Figures 1 and 2 – please add the IQR to each figure using error bars

Response: Now we added it

Line 189 - Please provide the number of facilities along with the percentage

Response: Added it. Please see line number 210-2012.

The authors may consider estimating standardized changes in overall facility readiness score using the general domain scores for the total study population as the standard (as then the estimated changes would reflect the joint distribution of other health facility readiness factors as covariates).

Response: General readiness comparatively high in all facilities. That's why we didn't standardized changes in overall facility readiness score using the general domain scores.

Perhaps beyond the scope of the proposed study, I wonder if the authors might consider estimating these differences in diabetes and CVD readiness scores by facility type controlling for overall domains in facility readiness (table 1). If there are still differences in diabetes and CVD readiness after controlling for other aspects of facility readiness, that would speak to a broader deficiency in health care service readiness with respect to chronic disease. On the other hand, if after adjusting for general domains of facility readiness there is no longer a facility-specific difference in diabetes and CVD readiness, this could speak to an inequitable distribution of resources among types of facilities. I say this because the latter finding would suggest that better resourced health facilities are better able to provide chronic disease care than lower resourced facilities.

Response: Actually, in the context of Bangladesh health systems is trying to combating NCDs and trying to improve NCDs services in all health facilities, which is still not ready for it. In our paper we are trying to present the scenario using simple history. Table-1 present the general service-readiness

indicators of the facilities. However, service for diabetes and CVD are quite different from general service readiness. That's why we skip it.

Discussion

Line 202 – please provide number of facilities along with percentages

Response: Thank you. Now we added the facility numbers along with percentage.

Line 219 – Please contextualize this statement about lack of integration of NCD services with your findings. I think your study does support this statement, in finding that general domain readiness was quite high, whereas readiness for diabetes and CVD care was quite low, but this link should be explicit.

Response: We now revised it please line number 218.

Line 232 – You cite studies from sub-Saharan Africa, but are there not studies closer to Bangladesh? It would be helpful to discuss the reasons why you consider results from sub-Saharan African studies to be informative (could be similarities in resource constraints, for example).

Response: Good comment. Actually, we did not find any studies near to Bangladesh. That's why used sub-Saharan African studies as a reference.

Line 239 – What was the policy implication of your findings? It appeared that your results suggest that guideline availability would lead to a greater increase in readiness than skilled provider availability (and presumably at a lower cost).

Response: Actually, it's very easy to develop guideline for resource poor country like Bangladesh. Our projected information inform policy makers how ensuring guideline increases the health facilities readiness for diabetes and CVD.

Line 258 – Please see notes above regarding strengths and limitations

Response: We now revised the limitation

Reviewer comment-2

Comment-1: Can you provide a specific example of why this is commendable? For example, how quickly did rates of immunization expand, or MCH mortality reduce. Consider replacing this sentence with a short one that states the improvement using cited statistics.

Response: Made the sentence correcting according to your suggestion see line numbers-60-66.

Actually to achieve MDG target government of Bangladesh took necessary cation as result Bangladesh had made progress in expanding immunization, improving maternal and child health, and in reducing malnutrition.

Comment-2: How were the facilities sampled? Cluster randomization?

Response: The 2014 BHFS is a cross-sectional study with a stratified random sample of 1,596 health facilities selected from all formal-sector health facilities in Bangladesh. Revised it main file see line numbers 94-95.

Comment-3: Should state this is a cross-sectional survey here. What was the purpose of the BHFS?

Response: Thank you for your suggestion. Now added details survey design and as well, as purpose of the BHFS. See line numbers 94-101.

Comment-3: What was the stratification variable?

Response: Actually facility stratified by administrative division.

Comment-4: Are these not tertiary referral centres?

Response: No

Comment-5: Requires much more detail - what questions go into each of the four domains? Do all domains have the same # of questions?

Response: Now we added it. Please see Table-1.

Comment-6: Data were weighted by the cluster? By administrative division?

Response: Data were weighted by the cluster.

Comment-7: Better to write out the numbers of facilities along with %

Response: Now we added it. See line numbers 2010-212.

Comment-8: This would be helpful in methods - description of the health system should inform selection of facilities. Consider moving to methods.

Response: We revised it in method section see line number 94-101

Comment-9: Would be helpful to discuss how your results inform a lack of integration? I think you could argue that despite relatively high "general" readiness, poor CVD and diabetes.

Response: In discussion section, we discuss it. See line numbers 217-224.

Comment-10 : As above - should comment on sample size as well as reducing information from questionnaires by creating summary score

Response: We revised it in method section

VERSION 2 – REVIEW

REVIEWER	Hari Iyer Harvard T. H. Chan School of Public Health
REVIEW RETURNED	19-Jul-2018

GENERAL COMMENTS	Dear authors, Please review slight edits in the attached before publication - a few typos/grammatical issues. - The reviewer provided a marked copy with additional comments. Please contact the publisher for full details.
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VERSION 2 – AUTHOR RESPONSE

Reviewer's Comments to Author:

Reviewer: 1

Please state any competing interests or state 'None declared': None Declared

Response: Revised as per suggestion.

See file attached

Response: Revised as per suggestion.