## Survey documentation for the National Health and Morbidity Status Survey

***Bangladesh Bureau of Statistics***

***January 2022***

***D R A F T***

The documentation consists of three parts: 1. Reference metadata 2. Releases 3. Process documentation (details about goals, methodology, roles, processes and evaluation)

The main audience for the survey documentation is the staff working on the survey on a daily basis. In addition, the documentation can be used a) when introducing new staff, and b) when preparing overall plans, conducting quality audits and functional reviews. Finally, the survey documentation can be used when preparing changes, e.g., new IT solutions.

**1. Reference metadata (for internal and external users)**

**1.1 Contact information**

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| Contact organization | Bangladesh Bureau of Statistics (BBS) |
| Contact organization unit | Demography and Health Wing |
| Contact name | Mr. Md. Mashud Alam, Director |
| Contact mail address | Parishankhyan Bhaban, E-27/A, Agargaon, Dhaka-1207, Bangladesh |
| Contact email address | [mashud2003@yahoo.com](mailto:mashud2003@yahoo.com) |
| Contact phone number | 02-8127937; 01712105769 |

**1.2 Statistical presentation**

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| Data description | International health statistics cover a wide range of health-related topics. These include life expectancy, health status, health and safety, health determinants (including lifestyle, nutrition, smoking, alcohol abuse), health resources and expenditure, health care systems, morbidity and mortality (including infant and child mortality), hospital admission, causes of illness and death, specific diseases (e.g. AIDS), disabilities, pharmaceutical consumption and sales, health personnel, remuneration of health professions, environmental health status, health inequality, health accounts.  The Health and Mortality Status Survey (HMSS) 2014 of Bangladesh covers information on morbidity, treatment and treatment expenditures, health behavior, maternal and child health care, use of tobacco/intoxicating substance, impairment and accident/injury. It has also collected information about the conception on HIV/AIDS and TT. |
| Classification system | The International Classification of Diseases (ICD) is the standard to categorize diseases. <https://www.who.int/standards/classifications/classification-of-diseases>  The World Health Organization (WHO) has developed a Handbook on monitoring and evaluation of human resources for health and several other tools for monitoring and developing human resources for health (HRH). WHO uses 9 occupational categories for the health workforce.  The International classification for health accounts (ICHA) is a nomenclature managed by the OECD. Its purpose is to define, within the context of the system of national accounts: healthcare financing agents: who is paying?; healthcare by function: for which services and goods?; healthcare service provider industries: who provides the services? <https://unstats.un.org/unsd/classifications/Family/Detail/1035>  The SCL-International Classification of Health Accounts (ICHA) is the Eurostat standard code list for categorizing health accounts according to the source of funding, the categories of providers, and the functions of health care services and goods.  <https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Glossary:International_classification_for_health_accounts_(ICHA)> |
| Sector coverage | The main objective of the survey is to use health and demographic indicators to monitor the progress of the various initiatives taken by the Government of Bangladesh to achieve the health-related issues in MDG. The specific objectives of the survey are:   * To show current morbidity and health status specially for infants, adolescents, youths, reproductive ages and elderly persons; * To watch health behavior of morbidity, impairments and treatment expenditure; * To extend the coverage of maternal health care facilities, vaccination and Vitamin A; * To develop a database on health situation in the country regarding the burden of diseases; * To know about tobacco & intoxicating substance use and of injury/accident. |
| Statistical concepts and definitions | Health statistics are numbers that summarize information related to health. Researchers and experts from government, private, and non-profit agencies and organizations collect health statistics. They use the statistics to learn about public health and health care. The National Health and Morbidity Status Survey uses the following concepts and definitions:  Household: A household is defined as a single person or group of persons related or unrelated normally living together and taking food from the same kitchen.  Household Head: The member of the household who is responsible for managing the family and is recognized by the members of the household to be their head.  Sex Ratio: The ratio of males to females in a given population usually expressed as the number of males per 100 females.  Primary Sampling Unit (PSU): The initial area defined and selected for enumeration is called the first stage sample or primary sampling unit.  Prevalence: Prevalence is defined as the number of affected persons present in the population at a specific time divided by the number of persons in the population at that time.  Period Prevalence: Period prevalence is defined as how many people have had the disease at any time during a certain period. In this report prevalence refers to period prevalence.  Period Prevalence of morbidity per 1000: (Number of cases of a disease at any time during a certain period in the population /Number of persons in the population at that specified time) x 1000.  Proportion: A part considered in relation to the whole.  Comorbidity: Existence of two or more diseases or conditions in the same individual at the same time. |
| Statistical unit | Private household |
| Statistical population | All private households in Bangladesh |
| Reference area | The HMSS-2014 covered the whole country including all administrative divisions. |
| Time coverage | The HMSS-2014 survey was conducted throughout the country from 19 June 2014 to 23 June 2014 using Integrated Multi-Purpose Sample (IMPS) design of BBS |
| Base period | The reference period for morbidity, injury/accident, physically or mentally impairment was the last 90 days. As the reference period covers only summer season, morbidity data are dominated with summer season related morbidity. |

**1.3 Statistical processing**

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| Source data | The HMSS-2014 survey design comprised 1500 Primary Sampling Units (PSUs) of which 801 are in the rural and 699 are in the urban areas. Each PSU comprised about 107 households. Twenty-five households were selected from each of the PSU following systematic random sampling technique. The HMSS-2014 covered a total number of 37,500 HHs where 20,025 were from the rural and 17,475 from the urban areas. The size of population captured is 163057 nationally including rural (88188) and urban (74869).  Bangladesh Bureau of Statistics (BBS) has developed an Integrated Multi-Purpose Sample (IMPS) design based on Population and Housing Census 2011 to conduct various demographic and socio-economic surveys. The Health and Morbidity Status Survey-2014 (HMSS-14) has been conducted throughout the country using IMPS design of BBS. IMPS design comprised 1500 Primary Sampling Unit (PSU) of which 801 are in the rural areas and 699 in the urban areas, each PSU comprises about 100 households. The sample size needed to provide data representative at the national and divisional level for the HMSS- 2014 is calculated using the following formula: n = z² [P(1-P)/d²]\* D eff Where n = sample size z = two-sided normal variate at 95% confidence level (1.96) p = indicator percentage d = precision D eff = design effect |
| Frequency of data collection | Ad-hoc survey |
| Data collection | The data was collected by employing direct interview method. Only the selected 25 households of each PSU were interviewed by the enumerators. The enumerators collected information from the head of the household, eligible, responsible members, selected male or female persons of the respective sections. Field operation of the survey was carried out throughout the country during 19 June to 23 June 2014.  The reference period for morbidity, injury/accident, physically or mentally impairment was the last 90 days. As the reference period covers only summer season, morbidity data are dominated with summer season related morbidity. The previous survey was conducted in the winter season so that the current survey data prove helpful for differentiating the seasonal variation of related morbidity. |
| Data validation | Strong measures of rigorous supervision and control were taken during the field work to ensure quality of enumeration. To supervise the work of every district one supervisor was engaged. The required numbers of supervisors were selected from the officers of Bangladesh Bureau of Statistics both from headquarters and fields. Moreover, senior officers like Directors, Program Director from the HQ of BBS visited and supervised the data collection and the Divisional Coordinators were also responsible for ensuring quality of data in their respective divisions. All the filled-in questionnaires were received and then edited and coded. Data processing work was completed by Computer Wing using Customized Software (CSpro), SPSS, STATA. The survey questionnaire is a long type questionnaire, consisted of interlinked four sections and twelve sub-sections which needed to cross inter relational consistency checking. |

**1.4 Quality dimensions**

**Relevance**

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| User Needs | Not yet available |
| User Satisfaction | Not yet available |
| Data completeness rate | Not yet available |

**Accessible and clarity**

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| Release calendar access | According to BBS workplan, the survey is continuous process and must be conducted periodically to develop and update a database that could provide indicators to monitor and evaluate the progress of the latest development of HPNSDP and MDG. However, household surveys are conducted on an ad-hoc basis pending on funding availability. |
| News release | Information not yet available |
| Publications | Survey reports are available on BBS website |
| On-line database | Survey results are accessible on BBS website |
| Micro-data access | Not yet available |
| Other | NA |
| Documentation on methodology | Included in Survey report published in September 2015: [Survey report](https://bbs.portal.gov.bd/sites/default/files/files/bbs.portal.gov.bd/page/4c7eb0f0_e780_4686_b546_b4fa0a8889a5/Health%20and%20Morbidity%20Status%20Survey%20-%202014.pdf%20%3C/td%3E) |
| Quality documentation | Not yet available |

**Timeliness and punctuality**

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| Timeliness and time lag - final results | Included in Survey report published in September 2015 |
| Punctuality | NA |

**Coherence and comparability**

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| Comparability - geographical | Not yet available |
| Comparability over time | Comparable to previous health-related household surveys, such as Health and Demographic Survey was conducted in 2012. |
| Coherence - cross domain | Not yet available |
| Coherence - internal | Not yet available |

**Accuracy and reliability**

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| Overall accuracy | Not yet available |
| Sampling error | Not yet available |
| Non-sampling error | Not yet available |

**2. Releases**

| **ReleaseTitle** | **PlannedReleaseDate** | **ActualReleaseDate** |
| --- | --- | --- |
| Report on Health and Morbidity Status Survey 2014 | 2015-01-01 | 2015-01-01 |

**3. Process documentation (for internal users)**

**3.1 General information**

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| Goals/objectives in workplan/strategy | The main objective of the survey is to use health and demographic indicators to monitor the progress of the various initiatives taken by the Government of Bangladesh to achieve the health-related issues in MDG.  The specific objectives of the survey are:   * To show current morbidity and health status specially for infants, adolescents, youths, reproductive ages and elderly persons; * To watch health behavior of morbidity, impairments and treatment expenditure; * To extend the coverage of maternal health care facilities, vaccination and Vitamin A; * To develop a database on health situation in the country regarding the burden of diseases; * To know about tobacco & intoxicating substance use and of injury/accident |
| Other goals | NA |
| Statistical program type | Sample based survey program |
| Methodology (general) | **1. DESIGN OUTPUTS**  Summary information  Press release  Publication  The report was put on the website.  Dimensional data  NA  Unit data  NA  **2. DESIGN VARIBABLE DESCRIPTIONS**  NA  **3. DESIGN COLLECTION**  Data collection  The data was collected by employing direct interview method. Only the selected 25 households of each PSU were interviewed by the enumerators. The enumerators collected information from the head of the household, eligible, responsible members, selected male or female persons of the respective sections. Field operation of the survey was carried out throughout the country during 19 June to 23 June 2014. The reference period for morbidity, injury/accident, physically or mentally impairment was the last 90 days. As the reference period covers only summer season, morbidity data are dominated with summer season related morbidity. The previous survey was conducted in the winter season so that the current survey data prove helpful for differentiating the seasonal variation of related morbidity.  Questionnaire  The questionnaire consists of four sections and each section comprises sub-sections. In section one demographic characteristics of the household members like tobacco and narcotics consumption, accident and injury, death due to accident and knowledge of HIV/AIDS were included with five sub-sections. Section two consists of socio-economic characteristics of households with ten questions. Section three comprises two sub-sections with information regarding impairment of the household members during 30 days prior to the survey. Section four covers information related to morbidity and illness, type of treatment with treatment expenditure, vaccination of children who received vitamin A capsule, maternal health care and expenditure of other medical products. The questionnaire used for the survey is presented at appendix-E & F.  Enumerators, Supervisors and trainers  The local register of the Sample Vital Registration System (SVRS) of BBS was engaged as enumerators for the survey. BBS officials were appointed trainers of the enumerators as well as district coordinator/supervisors of a district. The training of the trainers was held during 13 June 2014 to 15 June 2014 at the divisional Statistical office from a group of master trainers who consisted of the high officials of BBS. After receiving training, the trainers provided training to the enumerators for each enumeration area at district headquarters during 16-06-2014 to 18-06- 2014. During training at each level it was strictly followed practices of interview directly at the household through field visit.  Supervision and quality control  Strong measures of rigorous supervision and control were taken during the field work to ensure quality of enumeration. To supervise the work of every district one supervisor was engaged. The required numbers of supervisors were selected from the officers of Bangladesh Bureau of Statistics both from headquarters and fields. Moreover, senior officers like Directors, Program Director from the HQ of BBS visited and supervised the data collection and the Divisional Coordinators were also responsible for ensuring quality of data in their respective divisions.  Data entry, processing and validation  All the filled-in questionnaires were received and then edited and coded. Data processing work was completed by Computer Wing using Customized Software (CSpro), SPSS, STATA. The survey questionnaire is a long type of questionnaire, consisted of interlinked four sections and twelve sub-sections which needed to cross inter relational consistency checking. A comprehensive data entry program with necessary validity check was developed and tested for data entry by the computer wing of BBS. A team of well-trained and experienced data entry operators was engaged to capture data into computer. The entered data were edited manually from the filled in questionnaire and also by a computer edit program and made error free and consistent for cross-classification. Tabulations were produced and inter-table consistency was verified.  **4. DESIGN FRAME AND SAMPLE**  Scope and coverage  For enumeration in Health and Morbidity Status Survey-2014 (HMSS-14), 25 households (HHs) were selected from each PSU by using systematic random sampling method. Thus, a total number of 37,500 HHs was covered in the survey where 20025 were from the rural areas and 17475 from the urban areas. Using the data of the Population Census-2011, projected households for the survey period (June, 2014) is estimated. With this estimated households, sample households and sampling weights are calculated for rural, urban and divisions. Accordingly rural, urban and division level estimates are produced  Sample design  Bangladesh Bureau of Statistics (BBS) has developed an Integrated Multi-Purpose Sample (IMPS) design based on Population and Housing Census 2011 to conduct various demographic and socio-economic surveys. The Health and Morbidity Status Survey-2014 (HMSS-14) has been conducted throughout the country using IMPS design of BBS. IMPS design comprised 1500 Primary Sampling Unit (PSU) of which 801 are in the rural areas and 699 in the urban areas, each PSU comprises about 100 households.  The sample size needed to provide data representative at the national and divisional level for the HMSS- 2014 is calculated using the following formula: n = z² [P(1-P)/d²]\* D eff Where n = sample size z = two-sided normal variate at 95% confidence level (1.96) p = indicator percentage d = precision D eff = design effect  **5. DESIGN PROCESSING AND ANALYSIS**  Data editing  The entered data were edited manually from the filled in questionnaire and also by a computer edit program and made error free and consistent for cross-classification. Tabulations were produced and inter-table consistency was verified.  Data analysis and report  A draft tabulation plan was prepared and developed through several meetings with a Technical Working Group, chaired by Deputy Director General of BBS. The members of this group were all Directors and senior level resource persons of BBS. After conducting the survey and getting the data, tables were generated accordingly. After receiving the final tables, data was properly analyzed, and a draft survey report was presented before the Technical Committee (TC). The composition of the Technical Committee is shown Appendix-B  **6. DESIGN PRODUCTION SYSTEM AND WORKFLOW**  See roles and processes below. Each process describes who is doing what, input, output, tools and specific methodology aspects. See also description of IT solution (general) |
| IT solution (general) | NA |

**3.2 Roles and human resources**

| **Name** | **Description** | **Number of staff allocated in one instance of the survey (man-months)** |
| --- | --- | --- |
| Top management - HQ | Director general | NA |
| Subject matter specialist HQ | Subject matter staff allocated to survey | NA |
| Dissemination staff | Staff allocated to dissemination and data storing | NA |
| Other roles HQ (IT etc.) | Staff allocated for data capture tasks | NA |
| District office staff | Enumerators  Supervisors ensuring quality of enumeration | NA |

**3.2 Collection, Processing, Analysis and Dissemination**

**Data collection**

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| Who is doing what | 1. Subject matter specialist prepares data collection: questionnaires, plans etc. 2. District office staff uses paper questionnaire to collect data. 3. District office staff and send questionnaire by post / transport to the headquarters for data transcription? (Or is the data transcription done at the district level). 4. HQ staff do data capture |
| Input | Sample, directory, questionnaires, and tools for data capture designed and tested in the design and build phase |
| Output | Directory information, completed paper questionnaires, Input data in CSPro / Stata / SPSS |
| Methodology | See general information |
| Tools | Customized Software (CSpro), SPSS, STATA |

**Data processing**

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| --- | --- |
| Who is doing what | Subject matter specialists do data editing, create weights |
| Input | Input database: Data file in CSPro |
| Output | Clean database: Stata/SPSS files |
| Methodology | See general information |
| Tools | Customized Software (CSpro), SPSS, STATA |

**Data analysis**

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| --- | --- |
| Who is doing what | Subject matter specialists prepare tables, do analysis  Technical committee reviews  Top management approves |
| Input | Output from processing phase, draft tabulation plan from design phase |
| Output | Output database: file, report etc. |
| Methodology | See general information |
| Tools | Stata and word |

**Data dissemination**

The process documentation is general. The name and publication dated of the products produced can be found in **Section 2: Releases** of each documentation.

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| --- | --- |
| Who is doing what | Subject matter specialist prepares press release with highlights and invite press for presentation of results  Meeting with press  Dissemination staff release report and update release calendar  Press publishes press release |
| Input | Output from analysis phase |
| Output | Approved report, pdf file at the website, press release etc. |
| Methodology | See general information |
| Tools | General purpose office tools and web tools |

**3.3 Evaluation**

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| Evaluation: results compared to goals | Limitations The data was collected during 19 June to 23 June 2014 using the reference period of previous 90 days from the day of interview. As the reference period covers only summer season, morbidity data are dominated by illnesses related to hot weather. Since the disease pattern varies from season to season over the year. Conducting the survey was done through the whole year like Household Income and Expenditure Survey to overcome the effect of seasonal variation. Interviewers had no medical knowledge to identify the symptoms of morbidity properly, but there was an effort to overcome it by incorporating some supplementary questions in the questionnaire. Estimation of mortality due to accident is not found accurately as it is a rare event, and the sample size is not enough to be representative. Options in some questions (for example, nature of accidents, types of transport by which accidents occurred) are not sufficient to cover most of the probable answers and as a result, big figures came in the category of „others‟. To collect data on smoking and intoxicating substance abusing as the sensitive issues, some special arrangements needed to be adopted and in front of other family members the data might be underestimated. As the prevalence of intoxicating abusers is very low, the sample size should be larger. There are big limitations in the survey that infant (<1 year) morbidity found a small number for which it does not reflect the actual situation. |
| Evaluation: results compared to indicators for processes | NA |
| Issues based on evaluation | NA |
| Recommendations | NA |