Government of the People's Republic of Bangladesh
Ministry of Health & Family Welfare (MOHFW)

Report of the Comprehensive Assessment & Strategic Action Plan on Civil Registration & Vital Statistics (CRVS) System in Bangladesh

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Introduction

Civil Registration is an administrative system used to record vital events such as births and deaths. Civil registration can be defined as the "continuous, permanent, compulsory, and universal recording of the occurrence and characteristics of vital events (e.g. live births, deaths, fetal deaths, adoptions, marriages, and divorces) and other civil status events "pertaining to the population as provided by decree", law or regulation, in accordance with the legal requirements in each country" (United Nations, 2001, p.4).

"A vital statistics system" can be defined as the total process of (a) collecting information by civil registration or enumeration on the frequency or occurrence of specified and defined vital events, as well as relevant characteristics of the events themselves and the person or persons concerned, and (b) compiling, processing, analyzing, evaluating, presenting and disseminating these data in statistical form" (United Nations, 2001, p.3).

As a legal document, a birth certificate serves to define and protect a person's human and civil rights in society. United Nations Children's Fund (UNICEF) has documented the importance of registration of births and the impacts of no registration. Further UNICEF identifies birth registration as the first legal recognition of the child (UNICEF 2002).

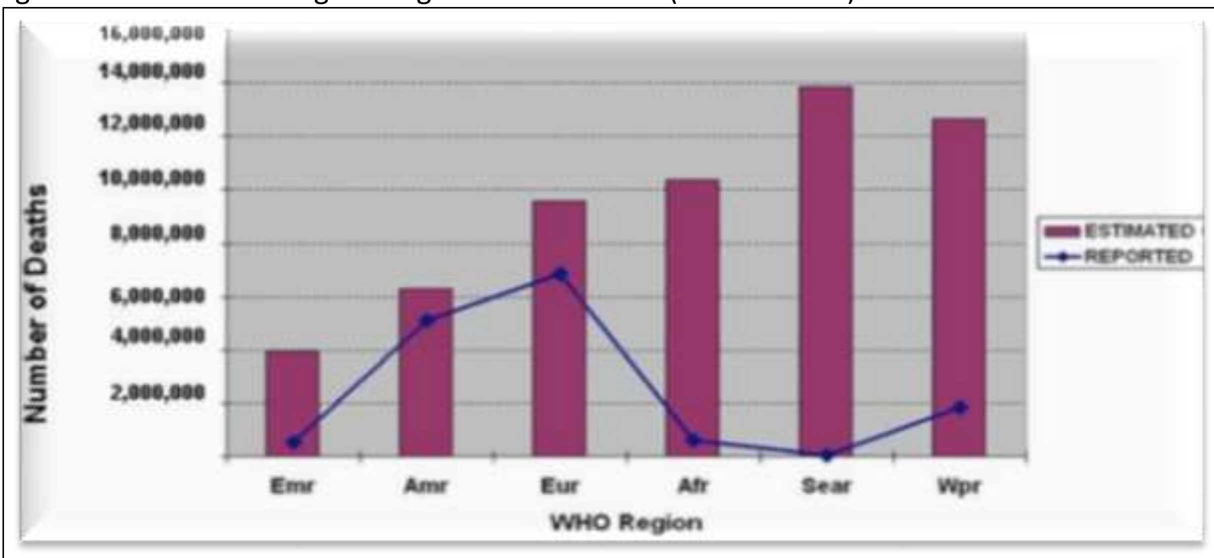

Figure-1: Reported vs. estimated deaths in different WHO Regions (2007)

Unfortunately, there remains a huge gap between the estimated deaths and reported deaths particularly in the South-East Asia Region (SEAR) of World Health Organization (WHO 2007) (Figure-1). The fact that the SEAR region of WHO is one with the highest estimates of deaths and lowest reporting, points towards the importance of strengthening civil registration and vital statistics systems. This gap between reported and estimated deaths currently renders less accurate estimates for various mortality indicators and inevitably these estimates are used for decision-making on public health interventions and budgets. The SEAR of WHO also produces

low quality of cause-of death data, which requires urgent attention. Only 120 of the 194 WHO member countries produce cause-of-death data. Of these only 70 countries produce cause-of-death data of an acceptable quality; 50 countries produce some cause-of-death data, but of poor quality rendering it of no use for public health purposes. The remaining countries do not regularly produce cause-of-death data.

In a properly functioning vital registration system, all births and deaths of the population are recorded. In cause-of-death statistics, the "gold standard" is complete civil registration where every death has the underlying cause assigned by a medically qualified doctor and coded by a coder trained in International Classification of Diseases (ICD). The collaboration and compliance of health practitioners and hospitals is crucial for the proper attribution of cause of death, and for assessing whether a death can be considered natural or due to some external cause. When a death occurs in a hospital or other setting where a doctor is present to certify the cause of death, the process is initiated when the doctor fills out the death certificate. Even where medical certification of the cause-of-death is a common practice, it does not necessarily mean that the correct cause of death is recorded on the death certificate. Lack of diagnostic facilities, human error, inexperience and lack of awareness of the importance of the data may result in an incorrect cause of death.

Bangladesh is a small country in the South-East Asia with a land area of 147,570 sq. km. and population of approximately 150 million. The population density per square sq. km. is 964. One quarter of the population lives in urban area. The country has 7 divisions, 64 districts, 483 upazilas, 4,501 unions, 40,509 wards and 85,000 villages. Thirteen (13.3%) of the population belong to age group ≤14 years, 53% belong to age group 14 to 49 years, 7.2% belong to age group 50 to 59 years and 6.8% belong to age group 60+ years. The current U-5 mortality rate is 53 per 1,000 live births, infant mortality rate is 43 per 1,000 live births, and maternal mortality rate is 194 per 100,000 live births. Percentage of child births attended by skilled personnel is 27.7%. The contraceptive prevalence rate is 56% and rate of antenatal care (at least one visit) is 61.2%.

The following box gives a background of the CRVS system in Bangladesh:

Background of CRVS system in Bangladesh

Full coverage of civil registration is still absent in Bangladesh. There are three players, viz. Ministry of Local Government, Ministry of Planning and Ministry of Health and Family Welfare to carry out a kind of civil registration. Ministry of Local Government is historically responsible for civil registration. But, the ministry itself designates its past achievement as a failure. Since 1873 there was a "Birth & Death Registration Act" existing in the country. The district administrators were responsible for birth and death registration. In 131 years (1873-2004), only 8% births were registered. In 2004, a new law was enacted designating the local government bodies and Bangladesh Missions abroad as registrars. A project has been undertaken to ensure hundred percent registrations of all births and deaths. Ministry of Planning has a Bangladesh Bureau of Statistics (BBS) which is the national body for carrying out different types of statistical data collection and reporting. This body is also responsible for decennial census. BBS has 1,000 primary sampling units, each comprising of 250 households, for conducting routinely vital registration. The system called "Sample Vital Registration System (SVRS)" was established in 1980. Data are collected by the local registrars and the quality of the data checked by supervisors. Filled-in schedules are then sent to headquarters on monthly basis. Rechecking is done by Regional Statistical Officers and other officers and staff members. Internal validation and close supervision of data-collection is done to improve the quality of

data. The surveys are conducted throughout the year and dissemination is done every 2-3 years. The Ministry of Health & Family Welfare had a historical system of collecting population data annually since 1961. Popularly abbreviated as GR, the Geographical Reconnaissance was once a good source of population data for local-level planning. GR was literally a kind of annual health census, carried out to collect population data by visiting every household each year in the month of January and February (winter as free from flooding). Health workers used to visit the households in the rural areas and collect socio-demographic data on family-size, age and sex distribution, death(s) in the past year, pregnancy, immunization information, drinking-water source, etc. GR was done every year until 2008. However, due to lack of proper supervision and for using manual system of data-collection and entry, GR data lost their credibility; therefore, no report was published after 2004. In 2009, it was felt that GR should not be abandoned as it provides local-level up-to-date health data. The DGHS, due to its large number of health workers spread throughout the rural areas of Bangladesh, has the capability to conduct GR. Moreover, field workers of the DGHS, with experience built over many years to collect the GR data, may be considered to have inherent strength, which should not be allowed to die down. Experts in several workshops of stakeholders have worked out that the use of ICT in the GR process may minimize repetitive work and help develop a computer-based permanent population health database. Accordingly, a machine-readable data form has been designed, printed, and distributed in all divisions for use in the GR data-collection procedure in rural Bangladesh. Data on over 26 million households were collected and already processed to enter into database. Currently the data are awaiting for further cleaning. The Bangladesh Bureau of Statistics with Access to Information of the Prime Minister's Office of Bangladesh is preparing to establish a "National Population Register (NPR)". A joint pilot progress MOVE-IT (Measurement of Vital Event through IT) is also undergoing through a public-private initiative. Supported by Health Metrics Network (HMN), this project is working to test community based real time tracking system of mothers' and children's vital events and of service logs through use of mobile devices.

According to legal provision, for birth registration of a newborn, the parents will have to take measure to register the newborn within 45 days of birth through demonstrating medical birth certificate or immunization card. For other age group, parent, children, nearest relatives or person himself/herself will have to take measure to register at any time. Medical birth certificate or any other proof of date of birth will have to be produced. After verification, the registrar will issue an official birth certificate. Family members, hospital authority, police, or village police will be responsible for registering the death within 30 days of the occurrence. Medical death certificate issued by a qualified doctor will have to be produced. The cause of death will have to be recorded in the death register. A web based database has been developed in the Ministry of Local Government. Online forms are being filled up from about 5,000 locations of registrars. The "Birth & Death Registration Act 2004" endorses that official birth certificate will be required to produce for acquiring a assport or driving license, marriage registration, enrolement in school, appointment in job, voter enrolement, and land registration. Rules (Birth & Death Registration Rules 2006) were issued by the Ministry of Local Government under the 2004 Act. It creates binding for producing official birth certificates for opening bank account, acquiring export license, import license, contractor license and trade license; getting utility connection in home, tax identification number, approval of building plan, registration of car, and National ID card. The SVRS (Sample Vital Registration System) provides estimation of civil registration information and is used to estimate (i) annual birth rate; (ii) annual death rate; (iii) other demographic and socio-economic changes in population; (iv) migration situation; (v) proportion disabled population; and (vi) contraceptive prevalence rate (CPR). The sampling procedure follows an integrated multi-purpose sample design comprised of one thousand Primary Sampling Units (PSUs) including both rural and urban clusters, each PSU consisting of 250 households (HHs). A local salaried person collects data quarterly or annually depending on the variable and a HQ person also visits same HHs and collects same data for verification, cross-checking and validation. The geographical reconnaissance (GR) form has the provision of providing a unique identification number to each household and to each household member. The form is designed in a way that each individual will have a life time online record to be updated every month by domiciliary health workers. Historical data of the individual will also be preserved. For national population register, the Cabinet Division of the Government of Bangladesh adopted information block for citizens' core data structure. It has been planned that NPR will have three kinds data, viz., textual data (citizen's

core information; citizen's additional information like Important document numbers; basic household information); biometric data (photograph; facial bio-metric; 10-finger print; IRIS); and service logs (audit trials; service requests; service logs). The MOVE-IT system has been designed for purpose of improving maternal and child health service through unified electronic information system that tracks vital events (births, deaths, cause of death); non-fatal health events (complications); coverage of priority services (antenatal, natal, postnatal care); continuous updating and reporting of priority indicators; reminders and alerts; community ownership; participation of TELCOs in public good; and incentives, such as, free talk time for families that report pregnancies, births, deaths and emergencies.

The efforts mentioned above are in different stages of development. There is duplication of efforts. Of the five programs mentioned above, Birth and Death Registration Project and SVRS are producing data; but data quality remain questioned. The coordination and sharing of data between stakeholders is weak. In nutshell, there is both need and room for improvement of CRVS system in Bangladesh.

Full coverage of civil registration is still absent in Bangladesh. Different stakeholders, viz., Ministry of Local Government, Rural Development and Cooperatives (MOLGRD), Ministry of Health and Family Welfare (MOHFW) and Ministry of Planning (Bangladesh Bureau of Statistics) are engaged in collection fertility and mortality data; but no agency can provide reliable and complete vital statistics which represent the whole population. In addition, administrative requirement of civil registration also remain unfulfilled. With this background in mind, it was decided to undertake an assessment of the Civil Registration and Vital Statistics (CRVS) system in Bangladesh to identify gaps and recommended actions. The United Nations Economic and Social Commission for Asia (UNESCAP) and WHO-SEAR provided technical assistance to conduct the assessment. Following this process, a CRVS Strategic Action Plan has also been developed. The activities were carried out from September 2012 to December 2013. Under the Bangladesh Country Accountability Framework (CAF) developed based on the basis of WHO global template in relation to recommendations of the Commission on Information and Accountability (COIA) for Women's and Children's Health, the CRVS Assessment Report and Strategic Action Plan were further reviewed in December 2013 to align them with the COIA-CAF. This document is the final version of the work.

Methodology

The assessment of the CRVS system in Bangladesh was conducted from September 2012 to March 2013 with technical assistance from the United Nations Economic and Social Commission for Asia (UNESCAP) and World Health Organization (WHO-SEAR). The assessment used two WHO Tools, viz., (a) Rapid assessment of national civil registration and vital statistics systems; and (b) Improving the quality and use of birth, death and cause-of-death information: guidance for a standards-based review of country practices. The assessment process comprised of two phases: (a) Phase 1: Leadership coordination and review; and (b) Phase 2: Priority setting and planning. The roadmap is shown below:

Phase-1: Leadership coordination and review

- **Identifying a lead agency:** The MIS-DGHS of MOHFW was identified as the lead agency (1st week of September 2012).
- **Establishing a review committee:** A review committee comprised of representatives from major stakeholder ministries, development partners and organizations was constituted (2nd week of October 2012). The representing ministries included Ministry of Health and Family Welfare (MOHFW);Ministry of Planning (Bangladesh Bureau of Statistics-BBS); Ministry of Local Government, Rural Development and Cooperatives (MOLGRD); and Prime Minister's Office (PMO). The representing development partners included country offices of WHO, United Nations Children's Fund (UNICEF), United Nations Population Fund (UNFPA), and Japan International Cooperation Agency (JICA). In addition, there were representatives MOVE-IT (Measurement of Vital Events through use of Information Technology) of the James P. Grant School of Public Health (JPGSPH) under BRAC University in Dhaka, Bangladesh. Several subgroups were formed to work on different thematic areas.
- **Undertaking a rapid assessment through review committee meeting/workshop:** The review committee met in several meetings/workshops and conducted a rapid assessment of the Bangladesh CRVS system using the WHO Tool as provided in the book called "Rapid assessment of national civil registration and vital statistics systems" (3rd week of October to 2nd week of November 2012). The "WHO Rapid Assessment Tool" consists of 25 questions, grouped into 11 areas, which correspond to the main elements of the full assessment framework. Each question in the rapid assessment allows countries to select one of four scenarios describing a typical range of hypothetical situations. A numeric value (0–3) is attached to each scenario, allowing a total score to be obtained. Table-1 shows the interpretation and recommended action of the different scoring range of rapid assessment as suggested by the WHO.

Score (%)	Rating	Action Required
<34	Dysfunctional	System requires substantial improvement in all areas
35–64	Weak	Many aspects of the system do not function well, and multiple issues require attention
65–84	Functional but inadequate	System works but some elements function poorly and require attention; specific weaknesses of the system should be identified by completing the comprehensive review
85–100	Satisfactory	Minor adjustments may be required in an otherwise well-functioning system

Table-1: Scores, ratings and actions required for rapid assessment as suggested by WHO

The rapid assessment identified Bangladesh's CRVS system as week (a score of 44%). As revealed in Table-1, a score of 44% means that many aspects of the CRVS system do not function well, and multiple issues require attention. Annex-2 shows a matrix report of the Rapid Assessment. According to WHO guidelines, given the situation it is needed to conduct a comprehensive assessment to correctly identify the weak areas, which require intervention.

Conducting a launch meeting (to make case to the government, establishing subgroups and orientation of subgroups in national consensus workshop): The review committee decided, based on the evidence from the rapid assessment, to proceed with conducting the comprehensive assessment. Therefore, a launch meeting was organized with broad participation from those involved in the collection, production and use of vital statistics. During the launch meeting, subgroups for conducting the comprehensive assessment were also formed and the subgroups participated in an orientation about the purpose and process of doing comprehensive assessment in each area. The launch meeting (1 December 2012) was facilitated by Ms. Harumi Shibata Salazar from UNESCAP (Bangkok, Thailand) and Ms. Chikersal Joytsna (WHO-SEARO, New Delhi, India). The launch meeting was inaugurated by Mr. Md. Humayun Kabir, Senior Secretary of the MOHFW and was also attended by the Project Director of Birth and Death Registration Project of the MOLGRD and Director of SVRS or BBS. In the closing ceremony of the launch meeting, Dr. Captain (Retd.) Mozibur Rahman Fakir, MP, the Honorable State Minister for Health and Family Welfare of the Government of Bangladesh was present as the Chief Guest. Other dignitaries present were Project Director of Access 2 Information Program of the Prime Minister's Office; Additional Secretary of BBS; Project Director of Birth and Death Registration Project of MOLGRD; Director General of Family Planning, and WR of Bangladesh. The launch meeting served following purposes: (i) raising awareness of the importance of civil registration and vital statistics and the need to improve the current system for the policy makers and participants; (ii) sharing the findings of the rapid assessment and explaining why comprehensive assessment is needed; (iii) getting collaboration to undertake the comprehensive assessment; (iv) informing stakeholders about the assessment framework and explaining the assessment process; (v) formalizing the membership of

the review committee; and (vi) forming subgroups along with their orientation to carry out the comprehensive assessment work.

Following eight subgroups were constituted:

i. Subgroup to assess legal basis and resources (A1, A2)
ii. Subgroup to assess forms used for birth and death registration (B2)
iii. Subgroup to assess coverage and completeness of registration (B3)
iv. Subgroup to assess organization and functioning of the vital statistic system, data storage and transmission (B1, B4)
v. Subgroup to assess death certification and cause of death (C1, C2, C3, C4)
vi. Subgroup to assess ICD coding practices (D1, D2, D3)
vii. Subgroup to assess data quality and plausibility checks (E1)
viii. Subgroup to assess data tabulation, access and dissemination (E2, E3)

Conducting an initial committee meeting: Following the launch meeting, the formalized review committee met (without the subgroups) to develop a work plan and tentative schedule for the work of the subgroups. The committee prepared some guidelines and outlined what the subgroups' reports will contain. This facilitated the subgroups' work and was useful for the general discussion at the results meeting (national consultation workshop for creating consensus on situation analysis, i.e., comprehensive assessment).

Conducting work sessions with subgroups: The subgroups carried out comprehensive reviews of specific aspects of the civil registration and vital statistics systems, using the assessment framework from the WHO assessment tools. Each subgroup, led by one member with sufficient expertise in the subject matter, coordinated and guided the subgroup's discussion, and reported the findings and recommendations to the review committee. In the subgroup meeting(s), the members had the opportunity to review and adjust the answers to the questions suggested for assessing the specific area, considering the country context in the legal, organizational and technical aspects of civil registration and vital statistics systems. Each of the subgroups met several times to complete the assigned tasks, and then prepared a report on their findings. Each subgroup's report critically examined the issue(s) arising out of the review question, and summarized the discussion for each question, as appropriate, rather than providing a simple response to the questions and found a potential solution for the problem by including recommendation(s). The subgroups often met on same days, in a common venue, although separately. This design enabled different subgroups to interact and resolve issues or get clarification from each other.

Phase-2: Priority setting and planning

Conducting a results meeting (national consultation workshop to create consensus for situation analysis, i.e., comprehensive assessment): After preparing the reports by the subgroups, the project office compiled all the subgroups' reports for the review

committee and to organize a meeting to share the results. In the results meeting, all the subgroups' reports including findings and recommendations for improvement were presented and discussed. The aim was to arrive at a set of agreed recommendations for priority activities covering the entire civil registration and vital statistics systems. After detailed discussion and review, some of the recommendations were prioritized by listing all the recommendations and scoring them as high, medium or low priority, according to appropriate criteria, such as, urgency (needs to be done within 12 months), feasibility, cost and availability of funding, time, etc.

Conducting a review committee meeting to draft a strategic plan: Shortly after the results meeting, the review committee met to complete the details of the rough suggestions for improvement agreed on at the results meeting with the subgroups. The aim of this meeting was to begin drafting a detailed strategic plan for improving the civil registration and vital statistics systems, with costs estimates, a time schedule and clear responsibilities assigned to each stakeholder for implementing the actions. The committee outlined whether there is a need for technical assistance for specific tasks and funding from external donors.

Conducting a final stakeholders' meeting: After the review committee prepared the strategic improvement plan, a final meeting was organized. The meeting was attended by a broad range of stakeholders, including international organizations and donors. Through the meeting the report was finalized and broad approval and support for the strategic plan were received so that implementation of improvements to the current vital statistics system can begin.

Date	Name of CRVS meeting	Name of CRVS meeting
22-10-12	1st Review Committee Meeting	
12-11-12	2nd Review Committee Meeting	
30-11-12	3rd Review Committee Meeting	
1-12-12	Launch Meeting	
10-12-12	Subgroup 2 Meeting	
12-12-12	Subgroup 7 Meeting	
16-12-12	Subgroup 6 Meeting	
17-12-12	Subgroup 1 Meeting	Subgroup 5 Meeting
19-12-12	Subgroup 2 Meeting	Subgroup 3 Meeting
22-12-12	Subgroup 1 Meeting	Subgroup 8 Meeting
23-12-12	Subgroup 5 Meeting	
24-12-12	Subgroup 5 Meeting	
29-12-12	Subgroup 6 Meeting	
30-12-12	Subgroup 8 Meeting	
12-1-13	4th Review Committee Meeting	
	5th Review Committee Meeting	
	Final stakeholders' Meeting	

Table-2. Dates of different CRVS meetings held

Findings

The detail matrix of the situation analysis questions, Bangladesh CRVS situation, gaps and recommendations is shown in Annex-1. Below is the list of gaps identified in the comprehensive assessment process.

Gaps in CRVS system

Legal basis and resources for CRVS system

1. No penalty is imposed for failure of birth registration of child; but BDT 50.00 (64 US Cents) is charged for failure of birth registration of adult. Currently, there is no penalty is for the failure of registration of death.
2. Strict enforcement of the law or regulation requiring hospitals and health facilities to report births and deaths is absent.
3. Enforcement of reporting births and deaths within 45 days needs improvement.
4. Funding is yet not fully secured, therefore putting the sustainability of CRVS system at risk. Birth and Death Registration program is run still under project. Additional funding is required for human resource, monitoring and supervision, public awareness campaigns, logistics and training.

Registration practices, coverage and completeness

5. Coordination of MOLGRD with BBS needs improvement for improving vital statistics system.
6. There is a need for an integrated and inter-operable population register between all stakeholders' organizations.
7. There is a need for harmonization, standardization, inter-operability among stakeholder agencies; campaigns and public awareness building; in addition, political commitment is needed.
8. Communication mechanisms between registration authority and others are inadequate.
9. The MOLGRD conducts birth and death registration for all citizens irrespective of age and sex. The Bangladesh Election Commission registers citizens to vote who are 18 years or older. The BBS collects data routinely on CRVS from 1000 primary sampling units, each unit comprises of 250 households. The MOHFW registers children for routine immunization program. The MOHFW is also preparing a comprehensive population register to efficiently run current and future health programs. Other ministries also have social security programs which require a person to be registered. Coordination is key move forward with these activities.

10. In MOLGRD project, there are discrepancies between paper registration of births and deaths and their computer entry. Duplicate entries for the same individual is not uncommon. The current verification mechanism for date of birth is not ideal.
11. Absence of an effective and strong community-based system that can ensure each birth and death is registered.
12. The Birth and Death registration project aims for full coverage of the whole population, but only captures birth and death data. The Sample Vital Registration System conducted by BBS captures 10 events, viz., Birth, Death, Marriage, Divorce, Immigration, Emigration, Contraceptive use, and Disability; but only on limited primary sampling units comprised of 1,000 sentinel sites each consisting of 250 households. The system should be integrated so that throughout the country these vital events are recorded.
13. There is an absence of a legal provision which includes cause of death as per ICD-10 on the death registration form. In medically attended deaths, certification, in most cases does not use ICD-10 coding of cause-of-death.
14. There is no system to facilitate data sharing between different government agencies.
15. It is yet to be decided how information will flow between the national population register and CRVS system will take place.
16. There is no widespread use of BIN (Birth Identification Number). There is no provision as of yet that citizens will be identified by a single unique identification number, although the national election commission use a national identification number (NID) for citizens 18 years and older.
17. Data validation is not done in the existing electronic birth and death registration database. Therefore, duplicates and/or wrong entries for the same individual are possible.
18. Limited IT access is available at the grassroots levels. There is no standard procedure for checking completeness and consistency of information collected at the points of registration.
19. There is no system checking monthly or quarterly registration data routinely to ensure that it is comparable with previous years. At the central level, the expected numbers of births and deaths that should occur each year are not routinely estimated for each registration area, and are not compared to the actual numbers of registered events.
20. Some of the UN recommended items are missing in the birth and death registration forms. It is not determined yet which of the UN recommended items would be useful to include in the birth and death registration forms.
21. As the FWA (Family Welfare Assistant) register is a paper-book, there is no mechanism to share that information collected through FWA register, about births and children's health links to information collected from the birth registration form.
22. The public is not adequately aware of their obligations to register births and deaths.

23. The birth registration reporting system for different age, sex and geographic groups is inadequate. There is lag between the paper registration and the computer entry.
24. No attempt has been undertaken to examine BRIS (Birth Registration Information System) data about the completeness of birth registration forms. There is a lack of consistency in birth registration coverage.
25. Populations living in slums, hard to reach areas, hill tracts, coastal areas, islands, tea gardens and Rohingya refugee camps has poor coverage of birth and death registration.
26. There is the need to expand the purpose of birth and death registration project of MOLGRD beyond issuing birth and death certificates only. Although an integrated and robust CRVS system is currently absent, when in place it would help promote effective coordination between MOLGRD, BBS and MOHFW.
27. There are no mechanisms to track and monitor late registration. No information is available whether or not late registration is more common in some area than others.
28. There is no available data on the proportion of registered deaths that take place in health facilities. Health facility authorities are not fully aware that they will have to actively serve as informants to birth and death registration offices for births and deaths occurring in the respective health facility.
29. The Midwives and health assistants do not report home births to birth registration authorities because there is no mechanism to do so. With no existing system to track birth and death information from nongovernmental health facilities, there are no reliable data on the proportion of births and deaths taking place in nongovernmental health facilities.
30. The law keeps provision that to receive certain social services and benefits, one will have to show birth certificate. However, enforcement of this legal provision is weak. Although there is a provision in the law that states a death certificate will have to be produced for inheritance transfers and life insurance claims, these provisions are not enforced.
31. Citizens need to possess both a birth certificate and a National ID card for casting votes in national and local government elections. Citizens, who are 18 and older are eligible to receive a National ID card. One multi-purpose card could be issued following birth registration.
32. Obstacles to improving civil registration may vary from one geographic location to another. However, a coordinated effort may help to improve coverage.
33. The observation of national birth registration day each year on 3rd July is a good example. However, the campaign should be much more visible country-wide and should include death registration also.
34. There are no requirements for an evaluation of the annual national birth registration day campaign.

35. There is no committee at national level as well as at upazila and community levels to monitor and evaluate civil registration completeness.
36. A scanned copy of birth and death registration form and other supporting papers are not stored securely.
37. Main and backup servers are not kept in different locations. Birth and death records are not archived electronically in a secured manner. The lack of an electronic archive, creates a risk for all records being lost or damaged. An automated archive would help prevent fraudulent or multiple registrations, multiple registrations may occur using different date of birth. So, existing cross-checking procedures are inadequate. At some registration points, the electronic system is not efficient, which causes lag in the transfer of data from the paper forms to electronic format. The monitoring mechanism is weak to boost minimizing lag in transfer of data from paper forms to electronic format. Many paper forms of birth registration have not yet been entered in database. Until this lag is minimized, there is no room for putting a procedure in place to deal with late or non-reporting from local civil registration points. Current confidentiality practices are inadequate and need to be revised, for example who to see the information on birth and registration forms or database records.
38. Sufficient vital statistics are not compiled as data is not consolidated from the birth and death registrations at local or national level. There is no provision for multi-stakeholders' access to use and share the data.
39. Communication between staff in regional and central offices and staff in field offices is not adequate, for example when clarification and guidance are needed. Web based discussion forums, task management system and email communications are usually not used. The existing two-way communication and data transfer between central and peripheral offices is not so interactive. Regional registration authorities do not routinely receive reports on how the characteristics of their populations compare with the national average.

Death certification and cause of death

40. The percentage of death registration out of total deaths is very low. Currently death registration does not require cause-of-death certification by physician according to ICD-10 code. In the birth and death registration system, there is no requirement of registering cause of death. ICD-compliant practices for death certification in the country is at the initial stage. There are no mandatory provisions in CRVS system to certify death as per ICD-10 coding. The standard international medical certificate for cause-of-death is not used in the country for deaths occurring either in a hospital or in any other place. Most doctors working in public or private hospitals and NGOs do not have training on how to fill-in the WHO standard cause-of-death certificate form, assign ICD-10 codes and use the handbook on medical certification of cause-of-death. There is no administrative and/or legal binding and enforcement to use standard International form for medical certificate of cause of death. Most doctors do not know how to correctly

complete the death certificate, including the causal sequence and the underlying cause. It will be difficult to ensure compliance in a short span of time.

41. There is no practice in the country as of yet that can provide sufficient data to generate statistics on the proportions of death certificates which have a single cause, mode of death instead of underlying cause or no information on the interval between onset of the disease and death.

42. WHO standard cause-of-death certificate is not being used in a reasonable proportion. So, almost all death certificates do not contain information on the interval between onset of disease and death.

43. A hospital's legal responsibility as per the law is to inform the CRVS authority on any birth and death events which occur in the hospitals, but this responsibility is not upheld due to the lack of awareness of staff and weak enforcement mechanism. For people who die at home, it is not mandatory to issue a death certificate with the cause-of-death indicated.

44. The death certificate issued by a civil registrar is different from the death certificate issued from the hospitals.

45. There is lack of uniformity when doctors are filling out a medical certificate, further reinforcing the need for standard guidelines on how to write a medical certificate of death. There is no mechanism to monitor whether they are following standard practice and as a result, there is variation between medical certificates issued by different doctors.

46. Issuance of a proper medical death certificate is not legally binding for burial, but if it was, it might be instrumental in increasing the coverage of death registration.

47. In addition to physician, the MOHFW's local community health workers may be given authority to issue medical death certificate. The later can also be recognized as a proof of death for death registration.

48. Due to the lack of issuing WHO standard cause of death certificates by physicians, the patients' general practitioner does not feel need to accessing the patients' medical records following death. Obtaining medical records from hospitals also appears to be a difficult task. Through the use of electronic health records, it might help address this issue.

49. Verbal autopsy is not routinely used to obtain the cause of death for any non-medically certified deaths in the country.

50. There remains likelihood that some sensitive cases of deaths (e.g. due to suicide or HIV/AIDS) would be assigned to a more socially acceptable cause of death.

51. Neither the death certificate form nor the death registration form in practice has field to include information on the death of a woman to state whether or not she was pregnant or had recently been pregnant.

52. Review of maternal deaths is not universal in all areas of Bangladesh or for all maternal deaths.
53. The WHO recommends a special death form to monitor perinatal death, which is not being used for perinatal death auditing and reporting.
54. Pre-service training of doctors on ICD-compliant death certification is also absent in the country. Proper on the job training has just started. Compliance may suffer due to absence of strict enforcement.
55. Due to the absence of formal training, most doctors are not aware of the important public health uses of the information they provide on the death certificate.
56. There has been no systematic evaluation of the quality of medical certification in either public, private and/or NGO hospitals. The medical certification does not follow WHO recommended standard format.
57. Hospital medical records are often incomplete and therefore not fully reliable and their accessibility is also not professionally handled. However, in certain private hospitals, medical records are handled in a proper manner.
58. Health records, such as from health clinics, general practitioners or family doctors are often incomplete and therefore not fully reliable. General practitioners and family doctors usually do not maintain medical records in their office. Patients maintain their own medical documents. Finding a certifier is often difficult as they are often absent.
59. Currently, the doctors who certify death follow the legal requirement. They are not aware of the international standard procedure of reporting deaths from injuries and external causes according to the ICD rules.

ICD coding practices

60. Recording cause of death as per ICD standards has just been initiated. But, statistics on hospital deaths is published based on diagnoses made using conventional way.
61. Only in hospitals, the initiative of decentralized ICD coding system has just been started. In communities, gradually verbal autopsy system will be introduced. There is no plan as of yet on how to communicate the information from MOHFW to civil registration points.
62. Due to financial limitations, the length of training cannot be prolonged. However, for an initial introduction of ICD-10, two days' training is more efficient.
63. There is no WHO-FIC trained local trainers in the country.
64. MIS-DGHS could not provide sufficient number of ICD-10 manuals and guidelines to each health organization due to limited number of copies being printed and supplied by WHO.

Data access, use and quality checks

65. Despite having multiple agencies for collecting various kind of maternal and child data, a routine and reliable system is not yet available to produce fertility indicators (e.g., crude birth or fertility rate, age–specific fertility rate and total fertility rate).

66. The birth and death registration system did not as of yet produce any statistics from the data it has. The BBS's report is often questioned. The NIPORT produces indicators only for under-5 children from survey every 3 to 5 years. The BMMS produces every 5 to 10 years for maternal death. There exists considerable lack of coordination between stakeholders.
67. Conflicts exist in data between these two organizations (BBS vs. NIPORT).
68. No effective measures were observed to see minimize differences between rates of common indicators between the two organizations.
69. The last census (2011) did not include any question on birth and death except one question on age of last alive child.
70. The coverage of birth and especially of death registration is still not enough.
71. The birth and death registration project did not publish a statistical report.
72. WHO age groups are not used in estimation by all stakeholders, viz., by MOLGRD and BBS.
73. None of the 4 standard ICD standard mortality tabulation lists are used for data presentation purposes.
74. Data for non-hospital deaths or morbidity are not available.
75. Data from private health facilities and home mortalities are not available as yet. The CRVS system does not include data on cause of death according to ICD coding.
76. Due to weak quality of diagnosis, ill-defined causes of mortality may be included in mortality categorization by cause.
77. Data on all mortalities both in home, health facilities, and elsewhere separated by cause according to ICD 10 are not available.
78. Vital statistics data are inadequate, sometimes unreliable, and not easily available to the public.
79. An engagement strategy to regularly discuss data needs with the main data users does not exist.
80. Vital statistics data use is limited to guide policy and practice. Unavailability of adequate, timely and reliable data is one reason.
81. The birth and death registration project of MOLGRD does not produce analytical report.
82. There is no data-release-schedule.
83. MOLGRD does not provide data to user.

Conclusion

A comprehensive assessment of the Bangladesh CRVS system has been conducted with assistance from the UN ESCAP and WHO-SEARO following standard tools prescribed by the WHO. Gaps have been identified in in specific areas and recommendations have been formulated. A draft strategic plan has also be developed to be finalized in broader national stakeholders' consultation.

Recommendations

Input

A: Legal basis and resources for civil registration

A.1: National legal framework for vital statistics

1. Take initiative for minor revision or formulation of regulations to accommodate provisions of reporting requirement on cause of death according to ICD-10. Expedite promulgation of the vital statistics law. Raise awareness of the public about the law and penalties through social communication program. Determine a timeline for full enforcement of the provision. Frame regulations under the law to define clearly what is fetal death or still birth.
2. Align definitions of fetal death or still birth with the international standards in the Glossary.
3. Publish a birth and death registration manual to provide guidance to the field staffs. Manual should include a list of the informants: such as legally responsible informants, in case of birth: parents, guardians, local public representatives, community polices, police, health workers, school teachers, NGO workers, etc.; In case of death: children's guardians, local public representatives, community police, police, health workers, NGO workers, graveyard authorities, etc.
4. Improve enforcement of births and deaths reporting by hospitals and health facilities including enforcement of birth and death reporting within 45 days.
5. Create permanent and sustainable funding mechanism. In addition, improve coordination with other ministries, viz. with MOHFW and MOPL, which will help to improve efficiency, avoid duplication, and work with limited resources.

A.2: Registration infrastructure and resources

1. Expedite process of establishing a Registrar General with provision of an adequate revenue budget.
2. Also improve coordination between MOHFW and BBS.
3. Improve monitoring and supervision, campaign, logistics and training.

Process

B: Registration practices, coverage and completeness

B1: Organization and functioning of the vital statistics system

1. Strengthen the process for an integrated and inter-operable population register between all stakeholders' organization. Expedite process of preparing the national

population register. The data collected by MIS-DGHS on rural population may be used as basic data to start with. Determine how information will flow between national population register (if prepared) and CRVS system. Make provision that each citizen will be given a number during birth registration (PIN, BIN or whatever) and this same number will be utilized across all government's administrative databases.

2. Act to establish a harmonized, standardized, inter-operable and sharable database between stakeholder agencies. Create an integrated collaborative mechanism across MOLGRD, MOHFW and BBS so that CRVS system captures data on all vital events without much delay. Initiate a process so that existing and all future ICT resources between stakeholder agencies can be utilized for CRVS system to improve efficiency, coordination, data harmonization and sharing. Improve IT access at the grassroots levels and coordination between various agencies.
3. Improve campaign and awareness building; and gain political commitment. Create a strong community mechanism so that each birth or death is registered. Improve communication mechanisms between registration authority and others.
4. In MOLGRD project, speed up the processing of paper records of birth and death registration and their addition into the computer system. Improve coordination with MOHFW and other agencies to use their ICT resources. Clean up duplicate entries for the same individual. Use MOHFW's immunization cards of MOHFW as a verification mechanism for accuracy of date of births.
5. Make a legal provision to include cause of death as per ICD-10 in death registration form and make it a binding for every death. Also set up a detail procedure for death registration in addition to the legal provision.
6. Introduce a system of data validation in the birth and death registration database so that duplicate and/or wrong entries can be identified and corrected. Introduce a standard procedure for checking the completeness and consistency of information at the points of birth and death registration. Introduce a routine system to check registration data monthly or quarterly to ensure that they are comparable with previous years. Introduce a system at the central level that the expected numbers of births and deaths that should occur each year are routinely estimated for each registration area, and compared to the actual numbers of registered events.

B.2: Review of forms used for birth and death registration

1. Organize consultative workshop to determine whether or not any of the missing UN COIA recommended items should be included in the birth and death registration forms and take follow up actions accordingly.
2. Improve coordination between birth registrars and FWAs and make a mechanism so that data collected by both parties are computerized and linked through online system. Starting with UN COIA indicators may be considered.

B.3: Coverage and completeness of registration

1. Increase people's awareness about the importance and implications of birth and death registration. Create a provision making registration of births and deaths obligatory. Make a system for the active community based searching mechanism to remain and to capture information on every birth or death. Improve monitoring and supervision system so that local administrative bodies ensure full coverage of birth and death registration within their jurisdiction. Introduce an effective cross checking mechanism.

2. Introduce tracking and monitoring mechanisms for late registration. Make provision for a reporting output from BRIS to determine whether or not late registration is more common in particular areas. Establish a system so that proportion of registered deaths that take place in health facilities as well as in homes may be estimated accurately. Develop an effective communication system with the health facilities so that they play their roles of active informants for all new births and deaths taking place in the respective health facility. Create a coordination system between midwives and health assistants with the birth registration authority so that birth information is communicated for registration purposes. Introduce a mechanism of routine for health staff to report to the registration authority and compare information on birth with health authority with birth registration authority. Make a mechanism to also track births taken place in non-governmental health facilities and report the information to the birth registration authority. Make a provision that all deaths which have taken place in non-governmental health facilities are reported to the national health information system and birth and death registration authority using ICD-10 coding system. Improve access to coverage for birth and death registration in slums, hard to reach areas, hill tracts, coastal areas, islands, tea gardens and Rohingya refugee camps.

3. Keep a close watch on local factors that may work as barriers for improving civil registration. Improve coordination between stakeholders both centrally as well as locally to improve coverage of civil registration.

4. Minimize the lag period between paper registration and computer data entry. Examine the data entry directly, once it is in computer database, if possible.

5. Undertake the task to generate report from the BRIS computer system to find out the status of completeness of all birth registration forms. Maintain national campaigns and outreach programs.

6. Use the lessons learned from success stories.

7. Enhance enforcement of the law for producing birth certificate for receiving certain social services and benefits, for inheritance transfers and life insurance claims.

8. Explore the possibility of introducing one multi-purpose ID card as substitute of birth certificate and also serving purpose of voter ID card.

9. Continue observing the national birth registration day with much more visible campaigns and also include a death registration campaign. Make a provision for the evaluation of campaigns held to increase awareness about civil registration.

10. Establish committees both at national level as well as upazila and community levels to monitor and evaluate civil registration completeness, which will include representatives from major stakeholders.

B.4: Data storage and transmission

1. Consider the possibility of preserving scanned copies of births and deaths registration application forms and of other supporting papers.
2. Establish remote disaster recovery system. A second back-up can be stored at data center of MIS-DGHS.
3. Create and maintain a secured electronic archive of all birth and death records.
4. Exercise caution to prevent fraudulent or multiple registrations of births and enforce the law strictly. Increase registration staff's awareness to protect from such malpractice. Introduce a more robust authentication procedure and legal measures to avoid fraudulent and multiple registrations.
5. Introduce a vital statistics system which will use centrally available electronic data with all possible disaggregation with assistance from BBS.
6. Strengthen existing ICT infrastructure to minimize the lag of transferring birth and death registration data from paper form to the electronic database which will be verified by a monitoring mechanism.
7. Establish clear guidelines about level of confidentiality and who can view the information from birth and registration forms or database records.
8. Create a provision for multi-stakeholders' access to use data for sharing.
9. Consider options so that regional and central offices adequately communicate (electronically) when clarifications and guidance are needed by field offices. Make the existing two-way communication and data transfer between central and peripheral offices more interactive.
10. Make a provision so that regional registration authorities routinely receive reports on how the characteristics of their populations compare with the national average.

C: Death certification and cause of death

C1: ICD-compliant practices for death certification

1. Enhance campaigns and other measures to increase percentage of death registration out of total deaths. Use multi-stakeholders' collaboration especially with MOHFW and BBS to improve coverage. Make a mandatory provision for death registration with cause of death certification by physician according to ICD-10 code. Also create mechanism to identify medically certified deaths and those certified by a layperson.
2. Make a provision for compiling separately medically certified deaths and those certified by a layperson for cause of death statistics.
3. Introduce and adapt the standard international form of medical certificate of cause of death for all deaths occurring in the country. Train doctors in public, private and NGO sector hospitals on how to correctly complete the death certificate, including the causal sequence and the underlying cause. Continue the training. Create awareness among medical teachers to emphasize on teaching students the curricular content on proper

death certification. Ensure compliance with existing administrative and legal systems and their enforcement as well as to use the standard International medical certificate of cause-of-death so that all required internationally suggested statistics can be generated.

4. Publish additional copies of ICD-10 book to ensure there are sufficient copies at each hospital or clinic.

C2: Hospital death certification

1. Improve awareness of hospitals' staff and enforce the legal provisions for hospitals to inform the CRVS authority on birth and death events occurring there.

C3: Deaths occurring outside hospital

1. Make it mandatory to issue a death certificate with the cause of death indicated for people who die at home, using verbal autopsy procedure and ensuring quality as far as possible.
2. Review the existing death certificate forms issued by death registrar and hospital to find whether any or both require any modification or improvement. Undertake measures so that all doctors follow common standards in issuing death certificates. Ensure that electronic health recordings are introduced both in public and private hospitals.
3. Examine the possibility of medical death certificates to be issued by any competent authority (not necessarily by a physician) a legal pre-requisite for burial of any deceased individual. In addition to physician, the MOHFW's local community health workers may be given authority to issue a medical death certificate. The later can also be recognized as a proof of death for death registration.
4. Establish a system for medical death certificates to be needed for the burial of deceased individuals and easy access to the required documents. Ensure that the planned electronic health records are electronically portable across geographic locations.
5. Introduce a system so that verbal autopsy is routinely used to obtain the cause of death for any non-medically certified deaths in the country. The MOHFW's community health workers may be trained and assigned for this job.
6. Introduce a mechanism so that the civil registration authority always correctly records cause of death managing various kinds of social issues and privacy protection.
7. Consider making a provision for the death certificate form or the death registration form to include information on death of a woman to state whether or not she was pregnant had recently been pregnant.
8. Make provision for use of the WHO recommended special death form for perinatal death for audit, monitoring and reporting.
9. Ensure that proper pre-service training of doctors on ICD-compliant death certification is implemented and there is on the job training on this topic. Produce some competent trainers through external training.

10. Introduce a class for doctors about the importance of public health and the impacts of the information they provide on death certificate.
11. Introduce WHO recommended standard format for medical certification of death and periodic formal evaluation system to improve existing practice.
12. Expedite implementation of electronic health records of all citizens in electronically portable format so that registrars can access this information.
13. Train the certifying doctors on international standard procedure of reporting deaths from injuries and external causes according to the ICD rules.

D: ICD coding practices

D1: Mortality coding practices

1. Expedite scaling of hospital death recording and reporting as per ICD to gather and publish statistics as per ICD-10. Ensure monitoring and supervision so that ICD-10 introduction progresses in a planned manner and data are fed to online central server routinely.
2. Ensure that a quality control mechanism exists at each facility which is reviewed by national formal evaluation and feedback about the ICD coding practice (morbidity and mortality reporting).
3. Take measures to make a decentralized ICD coding system in hospitals successful. Introduce verbal autopsy system in communities, with the help of MOHFW's community health care workers. Introduce a clear guideline and procedure of communicating ICD-10 death coding to civil registrars from MOHFW.

D2: Mortality coder qualification and tracing

1. Expedite the training to scale introduction in all public and private hospitals within reasonable time.
2. Continue the ICD-10 training both on morbidity and mortality.
3. Request WHO-FIC to provide training to local trainers in WHO-FIC training course.
4. Keep the provision for providing refresher training to the doctors and staffs who are engaged in ICD coding.

D3: Quality of mortality coding

1. Request WHO to provide a sufficient supply of ICD-10 manuals and guidelines for distribution among all health organizations adequately.
2. Continuing the work of the dedicated current team in MIS-DGHS to keep a watch on the development of ICD coding practices globally and accordingly update the website and training and implementation according to local context.
3. Create a standing operating procedure of periodic assessment of the quality of the ICD compliant death coding.

4. Strengthen and continue using the MIS-DGHS's built-in mechanism to provide feedback to local statistical staff to improve their work quality and also to improve the newly introduced ICD compliant death coding system.

Output

E: Data access, use and quality checks

E1 – Data quality and plausibility checks

1. Ensure strong coordination between stakeholders to find a solution to provide data on fertility indicators routinely. Support and coordinate with MOHFW's current initiative surrounding COIA initiative, to make it a good routine and an effective sustainable procedure to generate data for these indicators.
2. Create a robust system for calculating all mortality indicators from routine data increasing strong and effective coordination between different stakeholders engaging MIS-DGHS's and PMO's effort to develop national population register.
3. Increase monitoring to ensure a decrease of inconsistencies among the reported figures. Engage joint experts both from BBS and NIPORT in such checks.
4. Request BBS to consider inclusion of questions on births and deaths, like number of children ever borne alive or still alive, date of birth of last child borne alive, whether the last birth was registered, whether the last death was registered, death in the household in the past 12 to 24 months, etc. However, a CRVS system with full coverage provides the most reliable information.

E2 – Data tabulation

1. Undertake measures to enable birth and death registration project of MOLGRD to publish statistical report.
2. Make a provision so that all stakeholders use WHO age groups.
3. Use the four ICD standard mortality tabulation lists for data presentation purposes.
4. Try to improve quality of diagnosis in ascertaining causes of death in death reporting and registration. Exclude ill- defined causes in categorization.

E3 - Data access and dissemination

1. Undertake measures for making available adequate vital statistics data, reliably and is easily accessible publicly.
2. Develop an engagement strategy to regularly discuss data needs with the main data users.
3. Conduct advocacy so that vital statistics data are used to guide policy and practice. Make available adequate, timely and reliable vital statistics data.
4. Make a provision for the birth and death registration project of MOLGRD to produce analytical report on its data at least annually.

5. Develop a data release schedule by MOLGRD, MIS-DGHS and BBS.
6. Make provision so that MOLGRD provides data to users, on request based on a guideline.

Bangladesh CRVS Strategic Action Plan

<table>
<tr><th rowspan="2">Recommendations</th><th rowspan="2">Urgency (High=3)</th><th rowspan="2">Timeliness (High=3)</th><th rowspan="2">Cost (affordable=3)</th><th rowspan="2">Feasibility (High=3)</th><th rowspan="2">Action plan</th><th rowspan="2">Responsibility</th><th rowspan="2">Total years</th><th rowspan="2">Estimated cost (BDT)</th><th colspan="10">Year</th></tr>
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<tr><td colspan="19">Input</td></tr>
<tr><td colspan="19">A: Legal basis and resources for civil registration</td></tr>
<tr><td colspan="19">A.1: National legal framework for vital statistics</td></tr>
<tr><td>A1.1. Take initiative for minor revision or formulation of regulations to accommodate provisions of reporting requirement on cause of death according to ICD-10.</td><td>3</td><td>3</td><td>2</td><td>3</td><td>Advocacy workshop(s) will be held to sensitize MOLGRD policy makers for minor revision or formulation of regulations to accommodate provisions of reporting requirement on cause of death according to ICD-10.
Active liaison will be maintained with MOLGRD and other stakeholders to make the same to happen.</td><td>MOLGRD, MOHFW & BBS</td><td>1</td><td>400000</td><td>Y</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>A1.2. Expedite promulgation of the VS law.</td><td>1</td><td>1</td><td>3</td><td>3</td><td>BBS will follow up with relevant authority to so that its effort to promulgate a law that would define VS system is enacted in due time.
BBS to prepare appropriate rules based on the law in coordination with other stakeholders.</td><td>BBS</td><td>2</td><td>200000</td><td>Y</td><td>Y</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>A1.5. Raise awareness of people about such penalty through social communication program. Determine a timeline for full enforcement of the provision.</td><td>3</td><td>3</td><td>1</td><td>2</td><td>Social communication program will be launched and continued through using local community channels and community based government organizations, and electronic and print media.
Effort will be made for Full enforcement of the legal provision of penalty for failure of birth and death registration of child.</td><td>MOLGRD</td><td>5</td><td>10000000</td><td>Y</td><td>Y</td><td>Y</td><td>Y</td><td>Y</td><td></td><td></td><td></td><td></td><td></td></tr>
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Recommendations	Urgency (High=3)	Timeliness (High=3)	Cost (affordable=3)	Feasibility (High=3)	Action plan	Responsibility	Total years	Estimated cost (BDT)	Year									
									1	2	3	4	5	6	7	8	9	10
A1.7. Frame regulations under the law to define clearly fetal death or still birth.	3	3	3	3	Rules/regulations will be framed under the birth and death registration act 2004 to define clearly fetal death and still birth.	MOLGRD, MOHFW	2	200000	Y	Y								
A1.8. Align these definitions with the international standards in the Glossary.	3	3	3	3	Definitions of fetal death and international standards will be aligned in the glossary.	MOLGRD, MOHFW	2	50000	Y	Y								
A1.9. Publish a birth and death registration manual to provide guidance to the field staffs.	3	3	3	3	A birth and death registration manual will be published to provide guidance to the field staffs. Also make the manual available in electronic form through web and email.	MOLGRD with assistance from UNICEF	2	2000000	Y	Y								
A1.10. Include in the manual as mentioned above the list of these informants.	3	3	3	3	In the birth and death registration manual as mentioned above, will be included, the list of these informants (In case of birth: parents, guardians, local public representatives, community polices, polices, health workers, school teachers, NGO workers, etc. In case of death: children’s guardians, local public representatives, community police, polices, health work).	MOLGRD with assistance from UNICEF	2	200000	Y	Y								
A1.11. Improve enforcement of births and deaths reporting by hospitals and health facilities.	3	3	2	3	Enforcement will be improved of births and deaths reporting by hospitals through workshop, publication, legal actions and other means.	MOLGRD & MOHFW	2	1000000	Y	Y								
A1.16. Improve enforcement of birth and death reporting within 45 days.	3	2	2	2	The manual to be published will include content to motivate staffs to enforce registration of births and deaths within 45 days of the occurrence.	MOLGRD with assistance from MOHFW	3	10000000	Y	Y	Y							

Recommendations	Urgency (High=3)	Timeliness (High=3)	Cost (affordable=3)	Feasibility (High=3)	Action plan	Responsibility	Total years	Estimated cost (BDT)	Year									
									1	2	3	4	5	6	7	8	9	10
					Social communication program will be launched.													
A1.21. Create permanent funding mechanism for sustainability. Improve coordination with other ministry, viz. with MOHFW and MOPL to improve efficiency that would help better work within limited resources.	2	2	1	1	CRVS system will be incorporated under revenue set up. Improve coordination with other ministries, viz., with MOHFW and MOPL to improve efficiency that would help better work in limited resource setting.	MOLGRD, MOHFW, MOPL	5	1000000000	Y	Y	Y	Y	Y					
A.2: Registration infrastructure and resources																		
A2.1. Expedite process of establishing Registrar General with provision of adequate revenue budget. Improve coordination with MOHFW and BBS.	3	3.	2	3	Process of establishing Registrar General with provision of adequate revenue budget will be expedited. Improve Coordination of MOLGRD with MOHFW and BBS will be improved.	MOLGRD, MOHFW, BBS	3	2000000	Y	Y	Y							
A2.4. Expedite process of establishing Registrar General with provision of adequate revenue budget. Improve coordination with MOHFW and BBS. Improve monitoring and supervision, campaign, logistics and training.	3	3	2	3	Advocacy will be strengthened for expediting process of establishing Registrar General with provision of adequate budget in revenue head. Strengthen supervision, monitoring, campaign, logistics and training.	MOLGRD, MOF, MOHFW, MOPL	5	100000000	Y	Y	Y	Y	Y					
Process																		
B: Registration practices, coverage and completeness																		
B1: Organization and functioning of the vital statistics system																		
B1.1. Improve coordination with BBS to	3	3	3	3	Coordination of MOLGRD with BBS will be improved about vital	MOLGRD, BBS	2	10000000	Y	Y								

Recommendations	Urgency (High=3)	Timeliness (High=3)	Cost (affordable=3)	Feasibility (High=3)	Action plan	Responsibility	Total years	Estimated cost (BDT)	Year									
									1	2	3	4	5	6	7	8	9	10
improve vital statistics system.					statistics system through workshops, meetings, etc.													
B1.2. Strengthen process for an integrated and inter-operable population register between all stakeholders' organization.	3	3	1	3	Advocacy with policy makers and stakeholders. Hiring consultancy service. Setting up secretariat Setting up data updating mechanism.	MOLGRD, MOHFW, MOPL, PMO (A2I), ECB	5	100000000	Y	Y	Y	Y	Y					
B1.3. Improve speed of harmonization effort between organizations.	3	2	3	2	Speed of harmonization effort between organizations will be improved.	MOLGRD, MOHFW, BBS, A2I of PMO, ECB	3	800000	Y	Y	Y							
B1.4. Improve harmonization, standardization, inter-operability among stakeholder agencies; campaign and awareness building; political commitment.	3	2	3	2	Alignment of effort of harmonization for standardization, inter-operability among stakeholder agencies through campaign and awareness building and ensuring political commitment.	MOLGRD, MOPL	4	2000000	Y	Y	Y	Y						
B1.5. Improve communication mechanisms between registration authority and others.	3	2	2	2	Communication mechanisms between registration authority and others will be improved.	MOLGRD, MOHFW, BBS, , ECB	5	500000	Y	Y	Y	Y	Y					
B1.6. Act to establish an integrated sharable database system between all agencies.	3	2	2	2	Action will be undertaken to establish an integrated sharable database system between all agencies.	ECB, MOLGRD, MOPL	3	10000000	Y	Y	Y							
B1.8. In MOLGRD project, speed up computer entry of paper records of birth and death registration. Improve coordination	3	2	2	2	The MOLGRD project will (i) speed up computer entry of paper records of birth and death registration; (ii) improve coordination with MOHFW and other agencies to use their ICT resources; (iii) clean up duplicate	ECB, MOLGRD, MOPL	3	10000000	Y	Y	Y							

Recommendations	Urgency (High=3)	Timeliness (High=3)	Cost (affordable=3)	Feasibility (High=3)	Action plan	Responsibility	Total years	Estimated cost (BDT)	Year									
									1	2	3	4	5	6	7	8	9	10
with MOHFW and other agencies to use their ICT resources. Clean up duplicate entries for same individual. Use Immunization cards of MOHFW as a verification mechanism for accuracy of date of births. Develop process to clean up the Birth Registration Database					entries for same individual; and (iv) use immunization cards of MOHFW as potential information source as these cards appear to show accuracy in death of birth information.													
B1.9. Make a strong community mechanism so that each birth and death are registered. Develop Process for each citizen to have One stop service for Birth Registration.	3	3	1	2	A strong community mechanism will be tried to develop through engagement of local government bodies, community clinic management committee and other grassroots level government and NGO workers so that each birth and death are registered.	MOLGRD, MOHFW, BBS,	4	50000000	Y	Y	Y	Y						
B1.11. Create an integrated collaborative mechanism across MOLGRD, MOHFW and BBS so that CRVS system captures data on all vital events without much delay.	3	2	2	2	An integrated collaborative mechanism will be created across MOLGRD, MOHFW and BBS so that CRVS system captures data on all vital events without much delay.	MOLGRD, MOHFW, BBS,	3	1000000	Y		Y							
B1.13. Establish a national coordination mechanism for vital statistics standardization and coordination.	3	3	3	3	A national coordination mechanism for vital statistics standardization and coordination will be established.	MOHFW, MOLGRD, BBS,	5	600000	Y	Y	Y	Y	Y					
B1.14. Make a legal provision to include cause of death as per	2	2	3	2	A legal provision will be made through rules/regulations to include cause of death as per ICD-	MOLGRD, MOHFW, BBS, A2I of PMO	3	500000	Y	Y	Y							

Recommendations	Urgency (High=3)	Timeliness (High=3)	Cost (affordable=3)	Feasibility (High=3)	Action plan	Responsibility	Total years	Estimated cost (BDT)	Year									
									1	2	3	4	5	6	7	8	9	10
ICD-10 in death registration form and make it a binding for every death.					10 in death registration form and make it a binding for every death.													
B1.15. Set up a detail procedure to death registration in addition to legal provision.	3	3	3	3	National consultation workshop will be held to set up a detail procedure to death registration in addition to legal provision.	MOLGRD, MOHFW, BBS	2	300000	Y	Y								
B1.16. Improve coordination between MOLGRD, MOHFW and BBS to decide what details to collect on births and cause of death.	3	3	3	3	National consultation workshop and coordination meetings will be held between MOLGRD, MOHFW and BBS to decide what details to collect on births and cause of death.	MOLGRD, MOHFW, BBS	2	300000	Y	Y								
B1.17. Establish a data sharing mechanism between all stakeholder agencies as a routine procedure.	3	3	3	2	A data sharing mechanism between all stakeholder agencies as a routine procedure will be established.	MOLGRD, MOHFW, BBS, ECB	3	5000000	Y	Y	Y							
B1.19. Expedite process of preparing a national population register. The data collected by MIS-DGHS on rural population may be used as basic data to start with.	2	2	1	2	Process of preparing a national population register will be expedited. The data collected by MIS-DGHS on rural population may be used as basic data to start with.	BBS, MOHFW, MOLGRD, ECB	4	5000000000	Y	Y	Y	Y						
B1.20. Determine how information will flow between national population register (if prepared) and CRVS system.	3	3	2	2	Determine how Information will flow mechanism between national population register (if prepared) and CRVS system will be determined through national consultation workshop and policy meetings.	BBS, MOHFW, MOLGRD, BEC	2	500000	Y	Y								

Recommendations	Urgency (High=3)	Timeliness (High=3)	Cost (affordable=3)	Feasibility (High=3)	Action plan	Responsibility	Total years	Estimated cost (BDT)	Year									
									1	2	3	4	5	6	7	8	9	10
B1.21. Make provision that each citizen will be given a number during birth registration (PIN, BIN or whatever) and this same number will be utilized across all government's administrative databases.	2	2	1	1	Provision for providing to each citizen a number during birth registration (PIN, BIN or whatever) to use this same number across all government's administrative databases will be tried to be made.	BBS, A2I, MOLGRD, MOCabinet, MOHFW, BEC	5	1000000000	Y	Y	Y	Y	Y					
B1.24. Introduce a system of data validation in the birth and death registration database so that duplicate and/or wrong entries can be identified and corrected.	3	3	2	2	A system of data validation in the birth and death registration database will be introduced so that duplicate and/or wrong entries can be identified and corrected.	MOLGRD, MOHFW, A2I, BBS	2	1800000	Y	Y								
B1.25. Initiate a process so that existing and all future ICT resources between stakeholder agencies can be utilized for CRVS system to improve efficiency, coordination, data harmonization and sharing.	3	2	2	2	Initiate a process so that existing and all future ICT resources between stakeholder agencies can be utilized for CRVS system to improve efficiency, coordination, data harmonization and sharing.	MOLGRD, MOHFW, MOPME, A2I, BBS, ECB	3	2000000	Y	Y	Y							
B1.27. Introduce a standard procedure for checking the completeness and consistency of information at the points of birth and death registration.	3	3	2	2	A standard procedure for checking the completeness and consistency of information at the points of birth and death registration will be introduced.	MOLGRD, MOHFW, BBS, A2I, ECB	3	8000000	Y	Y	Y							

Recommendations	Urgency (High=3)	Timeliness (High=3)	Cost (affordable=3)	Feasibility (High=3)	Action plan	Responsibility	Total years	Estimated cost (BDT)	Year									
									1	2	3	4	5	6	7	8	9	10
B1.29. Introduce a routine system to check monthly or quarterly registration data to ensure that they are comparable with previous years.	3	3	2	2	A routine system to check monthly or quarterly registration data to ensure that they are comparable with previous years will be introduced.	MOLGRD, MOHFW, BBS, A2I	3	10000000	Y	Y								
B1.30. Introduce a system at the central level that the expected numbers of births and deaths that should occur each year are routinely estimated for each registration area, and compared to the actual numbers of registered events.	2	2	2	2	MOLGRD will develop an ICT based solution at the central level to check that the expected numbers of births and deaths that should occur each year are routinely estimated for each registration area, and compared to the actual numbers of registered events.	MOLGRD with assistance from MOHFW, BBS, A2I	3	100000000	Y	Y	Y	Y	Y					
B.2: Review of forms used for birth and death registration																		
B2.1. Organize consultative workshop to determine whether or nor any of the missing UN items should be included in the birth and death registration forms and take follow up actions accordingly.	3	3	3	3	Consultative workshop will be organized to determine whether or not any of the missing UN items should be included in the birth and death registration forms and take follow up actions accordingly.	MOLGRD, MOHFW, BBS, A2I	1	500000	Y									
B2.4. Improve coordination between birth registrars and FWAs, HAs and CHCPs and make a mechanism so that data collected by both parties are computerized and linked	3	3	2	2	Coordination between birth registrars and FWAs will be improved to make a mechanism so that data collected by both parties are computerized and linked through online system. To start with COIA indicators will be considered.	MOLGRD, MOHFW, A2I, BBS	3	200000000	Y	Y	Y							

Recommendations	Urgency (High=3)	Timeliness (High=3)	Cost (affordable=3)	Feasibility (High=3)	Action plan	Responsibility	Total years	Estimated cost (BDT)	Year									
									1	2	3	4	5	6	7	8	9	10
through online system. To start with COIA indicators may be considered.																		
B.3: Coverage and completeness of registration																		
B3.1. Increase awareness of people about birth and death registration. Make provision for obligation to register births and deaths. Make a system so that there remains an active community based searching mechanism to capture information on every birth or death event.	2	2	2	2	Media and social communication to increase awareness of people about birth and death registration will be done. Provision will be made for obligation to register births and deaths. A system will be made so that there remains an active community based searching mechanism to capture information on every birth or death	MOLGRD, MOHFW, BBS, A2I	3	10000000	Y	Y	Y							
B3.2. Minimize the lag period between paper registration and computer data entry. Examine data entry directly into computer database, if possible.	2	2	2	2	MOLGRD with assistance from MOHFW, A2I and MOPME will try to minimize the lag period between paper registration and computer data entry and will try to do data entry directly into computer database, if possible.	MOLGRD, MOHFW, MOPME, BBS, A2I	4	10000000	Y	Y	Y	Y						
B3.3. Improve monitoring and supervision system so that local administrative bodies ensure full coverage of birth and death registration within their jurisdiction. Introduce an effective cross checking mechanism.	3	3	3	2	Monitoring and supervision system will be improved so that local administrative bodies ensure full coverage of birth and death registration within their jurisdiction. An effective cross checking mechanism will be introduced.	MOLGRD, MOHFW, BBS, A2I	3	10000000	Y	Y	Y							

Recommendations	Urgency (High=3)	Timeliness (High=3)	Cost (affordable=3)	Feasibility (High=3)	Action plan	Responsibility	Total years	Estimated cost (BDT)	Year									
									1	2	3	4	5	6	7	8	9	10
B3.6. Undertake attempt to generate report from BRIS computer system to find out status of completeness of all birth registration forms. Maintain national campaigns and outreach programs.	3	3	3	3	MOLGRD will undertake attempt to generate report from BRIS computer system to find out status of completeness of all birth registration forms and maintain national campaigns and outreach programs.	MOLGRD with assistance from MOHFW, BBS, A2I	2	1000000	Y	Y								
B3.7. Improve access to coverage for birth and death registration in slums, hard to reach areas, hill tracts, coastal areas, islands, tea gardens and Rohingya refugee camps.	2	2	2	2	National workshops will be held to explore how to improve coverage for birth and death registration in slums, hard to reach areas, hill tracts, coastal areas, islands, tea gardens and Rohingya refugee camps. Measures will be undertaken to implement the recommendations.	MOLGRD, MOHFW, BBS, A2I	3	2000000	Y	Y	Y							
B3.8. Expanding the purpose of birth and death registration project of MOLGRD beyond issuing birth and death certificates only. Establish an integrated and robust all answers CRVS system through effective coordination between MOLGRD, BBS and MOHFW.	3	2	2	2	MOLGRD will establish an integrated and robust all answers CRVS system through effective coordination between MOLGRD, BBS and MOHFW and expanding the purpose of birth and death registration project of MOLGRD beyond issuing birth and death certificates only.	MOLGRD, MOHFW, BBS, A2I	3	20000000	Y	Y	Y							
B3.9. Use the lessons from the success stories.	2	2	3	3	MOLGRD and partners will review the success and failure stories of birth and death registration project in Bangladesh and other relevant projects/programs both in home and abroad in planning and	MOLGRD, MOHFW, BBS, A2I	3	500000	Y	Y	Y							

Recommendations	Urgency (High=3)	Timeliness (High=3)	Cost (affordable=3)	Feasibility (High=3)	Action plan	Responsibility	Total years	Estimated cost (BDT)	Year									
									1	2	3	4	5	6	7	8	9	10
					decision making.													
B3.10. Introduce tracking and monitoring mechanisms for late registration	3	3	2	2	MOLGRD will introduce tracking and monitoring mechanisms for late registration.	MOLGRD with assistance from MOHFW, BBS, A2I	3	500000	Y	Y	Y							
B3.11. Make provision for a reporting output from BRIS to know whether or not late registration is more common in some area than others.	3	3	3	3	MOLGRD will make provision for a reporting output from BRIS to know whether or not late registration is more common in some area than others.	MOLGRD	2	1000000	Y	Y								
B3.13. Establish a system so that proportion of registered deaths that take place in health facilities as well as in homes may be estimated accurately.	2	2	2	2	MOLGRD and Public Private partners will establish a system so that proportion of registered deaths that take place in health facilities as well as in homes may be estimated accurately.	MOLGRD, MOHFW, BBS	5	10000000	Y	Y	Y	Y	Y					
B3.14. Develop an effective communication system with the health facilities so that they play their roles of active informants for all new births and deaths taking place in the respective health facility.	2	2	2	2	MOLGRD and MOHFW will develop an effective communication system with the health facilities so that they play their roles of active informants for all new births and deaths taking place in the respective health facility.	MOLGRD and MOHFW	3	1000000	Y	Y	Y							
B3.15. Make coordination system between midwives, CSBAs and health assistants with birth registration authority so that birth information is communicated for	3	3	2	2	MOLGRD and MOHFW will make coordination system between midwives and health assistants with birth registration authority so that birth information is communicated for registration purpose.	MOLGRD and MOHFW	3	10000000	Y	Y	Y							

Recommendations	Urgency (High=3)	Timeliness (High=3)	Cost (affordable=3)	Feasibility (High=3)	Action plan	Responsibility	Total years	Estimated cost (BDT)	Year									
									1	2	3	4	5	6	7	8	9	10
registration purpose.																		
B3.16. Introduce a routine mechanism to report by health staff to registration authority and compare information on birth with health authority with birth registration authority.	2	2	2	2	MOLGRD and MOHFW will introduce a routine mechanism to report by health staff to registration authority and compare information on birth with health authority with birth registration authority.	MOLGRD and MOHFW	3	10000000	Y	Y	Y							
B3.17. Make a mechanism to also track births taken place in nongovernmental health facilities and report the information to the birth registration authority.	2	2	2	2	MOLGRD and MOHFW will find a mechanism to track births taken place in nongovernmental health facilities and report the information to the birth registration authority.	MOLGRD and MOHFW	3	2000000	Y	Y	Y							
B3.18. Make a provision that all deaths taken place in the nongovernmental health facilities are reported to the national health information system and birth and death registration authority using ICD-10 CODING System	3	3	3	3	In context with B3.18, MOLGRD and MOHFW will make a provision that all deaths taken place in the nongovernmental health facilities are reported to the national health information system and birth and death registration authority using ICD-10 coding System	MOLGRD and MOHFW	3	2000000	Y	Y	Y							
B3.20. Enhance enforcement of the law for producing birth certificate for receiving certain social services and benefits.	2	2	2	2	MOLGRD will conduct advocacy to enhance enforcement of the law for producing birth certificate for receiving certain social services and benefits.	MOLGRD, MOHFW, BBS, A2I, MOCabinet	5	5000000	Y	Y	Y	Y	Y	Y				
B3.22. Explore possibility of introducing one	2	1	1	1	MOLGRD with partners will explore through policy advocacy possibility	MOLGRD, BEC, A2I, MOCabinet,	5	2000000	Y	Y	Y	Y	Y					

Recommendations	Urgency (High=3)	Timeliness (High=3)	Cost (affordable=3)	Feasibility (High=3)	Action plan	Responsibility	Total years	Estimated cost (BDT)	Year									
									1	2	3	4	5	6	7	8	9	10
multi-purpose ID card as substitute of birth certificate and also serving purpose of voter ID card.					of introducing one multi-purpose ID card as substitute of birth certificate and also serving purpose of voter ID card.	BBS, MOHFW												
B3.23. Keep on watch on local factors that may work as barriers for improving civil registration. Improve coordination between stakeholders both centrally as well as locally to improve coverage of civil registration.	2	2	2	2	MOLGRD will keep on watch through regular feedback from peripheral registrars on local factors that may work as barriers for improving civil registration and will try to remove these barriers or take alternate approach for success. MOLGRD will also improve coordination between stakeholders both centrally as well as locally to improve coverage of civil registration.	MOLGRD, MOHFW, BBS, A2I	5	5000000	Y	Y	Y	Y	Y					
B3.24. Continue observing the national birth registration day with much more visible campaigns and also include death registration campaign.	3	3	2	2	MOLGRD will continue observing the national birth registration day with much more visible campaigns and also include death registration campaign through also engaging other partners like MOHFW, BBS, and A2I.	MOLGRD, MOHFW, BBS, A2I	5	50000000	Y	Y	Y	Y	Y					
B3.25. Make provision of evaluation of campaigns held to increase awareness about civil registration.	2	2	3	3	MOLGRD will make provision of evaluation of campaigns held to increase awareness about civil registration.	MOLGRD, MOHFW, BBS, A2I	5	10000000	Y	Y	Y	Y	Y					
B3.26. Scale committees both at national level as well as upazila and community levels to monitor and evaluate civil registration completeness. Include	2	2	2	2	MOLGRD with other partners will scale committees both at national level as well as upazila and community levels to monitor and evaluate civil registration completeness, through including representatives from major	MOLGRD, MOHFW, BBS, MOPME	2	10000000	Y	Y								

Recommendations	Urgency (High=3)	Timeliness (High=3)	Cost (affordable=3)	Feasibility (High=3)	Action plan	Responsibility	Total years	Estimated cost (BDT)	Year									
									1	2	3	4	5	6	7	8	9	10
representatives from major stakeholders in the committees.					stakeholders in the committees.													
B.4: Data storage and transmission																		
B4.1. Consider possibility of preserving scanned copies of births and deaths registration application forms and of other supporting Papers.	1	2	2	2	MOLGRD will consider possibility of preserving scanned copies of births and deaths registration application forms and of other supporting papers and attach them in the BRIS database. In the UISC (Union Information Center), there is scanning machine. This advantage can be utilized. BRIS database customization will be required.	MOLGRD, A2I, MOHFW, BBS	3	10000000	Y	Y	Y							
B4.3. Establish remote disaster recovery system. Data center of MIS-DGHS may be used additionally.	1	1	3	3	MOLGRD will examine how data protection is ensured currently. It will establish or keep provision for protecting data from virus, hacking, and accidental and natural calamities. It will consider using data center including remote backup centers of MIS-DGHS.	MOLGRD, MOHFW, A2I, BBS	4	10000000	Y	Y	Y	Y						
B4.4. Make system for electronic archiving of birth and death records.	3	3	3	3	MOLGRD will make system for electronic archiving of birth and death records.	MOLGRD	2	2000000	Y	Y								
B4.8. Introduce extreme precaution to protect from fraudulent or multiple registrations of births and enforce law strictly. Increase awareness of registration staffs to protect from such malpractice.	3	2	2	2	MOLGRD will introduce extreme precaution to protect from fraudulent or multiple registrations of births and enforce law strictly and will also increase awareness of registration staffs to protect from such malpractice.	MOLGRD	3	10000000	Y	Y	Y							

Recommendations	Urgency (High=3)	Timeliness (High=3)	Cost (affordable=3)	Feasibility (High=3)	Action plan	Responsibility	Total years	Estimated cost (BDT)	Year									
									1	2	3	4	5	6	7	8	9	10
B4.10. Introduce system of vital statistics using the centrally available electronic data in all possible disaggregation with assistance from BBS.	3	3	3	3	System will be introduced generating vital statistics using the centrally available electronic data in all possible disaggregation with assistance from BBS.	BBS, MOLGRD, MOHFW	2	2000000	Y	Y								
B4.13. Strengthen monitoring mechanism to boost minimizing lag in transfer of data from paper forms to electronic format.	2	2	2	2	MOLGRD will strengthen monitoring mechanism to boost minimizing lag in transfer of data from paper forms to electronic format.	MOLGRD, MOHFW, A2I, BBS	3	10000000	Y	Y	Y							
B4.14. Expedite data entry of paper forms so that all the birth and death registration records are found in database. Then, put a procedure in place to deal with late or not reporting from local civil registration points.	3	3	2	2	MOHFW will expedite data entry of paper forms so that all the birth and death registration records are found in database, if needed through outsourcing the task and the will put a procedure in place to deal with late or not reporting from local civil registration points.		3	100000000	Y	Y	Y							
B4.16. Establish clear guidelines about level of confidentiality and who to see the information on birth and registration forms or database records.	3	2	3	3	MOLGRD with partners will establish clear guidelines about level of confidentiality and who to see the information on birth and registration forms or database records.	MOLGRD, MOHFW, BBS, A2I	2	1000000	Y	Y								
B4.18. Create provision for multi-stakeholders' access to use data for sharing.	3	2	3	3	Provision will be created for multi-stakeholders' access to use data for sharing.	MOLGRD, MOHFW, BBS, A2I	3	1000000	Y	Y	Y							
B4.20. Consider ways so that regional and central	3	2	3	2	MOLGRD will establish ways so that regional and central offices can	MOLGRD with assistance from	2	2000000	Y	Y								

Recommendations	Urgency (High=3)	Timeliness (High=3)	Cost (affordable=3)	Feasibility (High=3)	Action plan	Responsibility	Total years	Estimated cost (BDT)	Year									
									1	2	3	4	5	6	7	8	9	10
offices can make adequate communications for clarification and guidance to field offices efficiently.					make adequate communications for clarification and guidance to field offices efficiently through electronic system.	MOHFW, BBS, A2I												
B4.23. Make provision so that regional registration authorities routinely receive reports on how the characteristics of their populations compare with the national average.	3	3	3	3	Make provision so that regional registration authorities routinely receive reports on how the characteristics of their populations compare with the national average.	MOLGRD, MOHFW, BBS, A2I	2	1000000	Y	Y								
C: Death certification and cause of death																		
C1: ICD-compliant practices for death certification																		
C1.1. Enhance campaigns and other measures to increase percentage of death registration out of total deaths. Use multi-stakeholders' collaboration especially with MOHFW and BBS to improve coverage. Make mandatory provision for death registration with cause of death certification by physician according to ICD-10 code.	2	2	1	2	MOLGRD will enhance campaigns and other measures to increase percentage of death registration out of total deaths. Use multi-stakeholders' collaboration especially with MOHFW and BBS to improve coverage and will make mandatory provision for death registration with cause of death certification by physician according to ICD-10 code.	MOLGRD, MOHFW, BBS, A2I	4	50000000	Y	Y	Y	Y						
C1.2. Introduce in the birth and death registration system,	2	2	2	2	MOLGRD with assistance from MOHFW will introduce in the birth and death registration system,	MOLGRD, MOHFW, BBS, A2I	4	10000000	Y	Y	Y	Y						

Recommendations	Urgency (High=3)	Timeliness (High=3)	Cost (affordable=3)	Feasibility (High=3)	Action plan	Responsibility	Total years	Estimated cost (BDT)	Year									
									1	2	3	4	5	6	7	8	9	10
provision of registering cause of death according to ICD-10 code. Also create mechanism to identify medically certified deaths and those certified by a layperson.					provision of registering cause of death according to ICD-10 code and will also create mechanism to identify medically certified deaths and those certified by a layperson.													
C1.3. Make provision for compile separately medically certified deaths and those certified by a layperson for cause of death statistics.	2	2	2	2	Provision will be made for compile separately medically certified deaths and those certified by a layperson for cause of death statistics.	MOLGRD, MOHFW, BBS, A2I	3	2000000	Y	Y	Y							
C1.4. Scale ICD-compliant practices for death certification in the country. Make mandatory provision in CRVS system to certify death as per ICD-10 codes.	2	2	2		Both MOLGRD, MOHFW and BBS will try to scale ICD-compliant practices for death certification in the country and will make mandatory provision in CRVS system to certify death as per ICD-10 codes.	MOLGRD, MOHFW, BBS, A2I	4	5000000	Y	Y	Y	Y						
C1.5. Introduce and scale standard international form of medical certificate of cause of death for all deaths occurring in the country.	3	2	2	2	Introduction and scaling of standard international form of medical certificate of cause of death for all deaths occurring in the country.	MOHFW, MOLGRD, BBS, A2I	4	10000000	Y	Y	Y	Y						
C1.6. Train doctors of the hospitals in public, private and NGO sectors. Make mandatory administrative and legal	2	2	2	2	MOHFW will train doctors of the hospitals in public, private and NGO sectors and will make mandatory administrative and legal system and enforcement to use standard International form of medical	MOHFW, MOLGRD, BBS	5	20000000	Y	Y	Y	Y	Y					

Recommendations	Urgency (High=3)	Timeliness (High=3)	Cost (affordable=3)	Feasibility (High=3)	Action plan	Responsibility	Total years	Estimated cost (BDT)	Year									
									1	2	3	4	5	6	7	8	9	10
system and enforcement to use standard International form of medical certificate of cause of death.					certificate of cause of death.													
C1.8. Publish more copies of ICD-10 book for ensuring sufficient copies in each hospital or clinic. Continue training program and advocacy including monitoring and supervision to increase compliance of ICD-10 practice.	3	2	2	2	MOHFW will publish more copies of ICD-10 book for ensuring sufficient copies in each hospital or clinic and continue training program and advocacy including monitoring and supervision to increase compliance of ICD-10 practice.	MOHFW, WHO, MOLGRD, BBS, A2I	4	5000000	Y	Y	Y	Y						
C2: Hospital death certification																		
C2.4. Improve awareness of hospitals and enforcement of legal provision to make hospitals more responsive to inform the CRVS authority on birth and death event occurring in the hospitals.	3	2	2	2	MOHFW and MOLGRD together, through workshop and other communication, will improve awareness of hospitals and enforcement of legal provision to make hospitals more responsive to inform the CRVS authority on birth and death event occurring in the hospitals.	MOHFW, MOLGRD, BBS, A2I	4	10000000	Y	Y	Y	Y						
C3: Deaths occurring outside hospital																		
C3.1. Make it mandatory to issue a death certificate with the cause of death indicated for people who die at home.	2	2	2	2	MOLGRD will make it mandatory to issue a death certificate with the cause of death indicated for people who die at home.	MOLGRD, MOHFW	5	10000000	Y	Y	Y	Y	Y					
C3.3. Review the existing	3	3	3	3	MOHFW and MOLGRD together will	MOHFW,	2	2000000	Y	Y								

Recommendations	Urgency (High=3)	Timeliness (High=3)	Cost (affordable=3)	Feasibility (High=3)	Action plan	Responsibility	Total years	Estimated cost (BDT)	Year									
									1	2	3	4	5	6	7	8	9	10
death certificate forms issued by death registrar and hospital to find whether any or both require any modification or improvement.					review the existing death certificate forms issued by death registrar and hospital to find whether any or both require any modification or improvement.	MOLGRD, BBS												
C3.4. Review the existing death certificate forms issued by death registrar and hospital to find whether any or both require any modification or improvement. Undertake measures so that all doctors follow common standards in issuing death certificates. Ensure that electronic health recordings are introduced both in public and private hospitals.	3	3	3	3	MOHFW will undertake measures so that all doctors follow common standards in issuing death certificates and ensure that electronic health recordings are introduced both in public and private hospitals.	MOHFW, MOLGRD, BBS, A2I	4	5000000	Y	Y	Y	Y						
C3.5. Examine possibility of making availability of medical death certificate to be issued by any competent authority (not necessarily by a physician) a legal pre-requisite for burial of any deceased individual.	2	2	2	2	MOLGRD and MOHFW examine possibility of making availability of medical death certificate to be issued by any competent authority (not necessarily by a physician) a legal pre-requisite for burial of any deceased individual.	MOLGRD, MOHFW, BBS, A2I	3	2000000	Y	Y	Y							
C3.8. Make a system in the country that a medical death certificate would be needed for	2	2	2	2	MOLGRD will make a system in the country that a medical death certificate would be needed for burial of deceased individual and	MOLGRD, MOHFW, BBS, A2I, MOCabinet	5	10000000	Y	Y	Y	Y	Y					

Recommendations	Urgency (High=3)	Timeliness (High=3)	Cost (affordable=3)	Feasibility (High=3)	Action plan	Responsibility	Total years	Estimated cost (BDT)	Year									
									1	2	3	4	5	6	7	8	9	10
burial of deceased individual and create easy access to documents in do so. Make sure that the planned electronic health records are electronically portable across geographic locations.					create easy access to documents in do so and it will also make sure that the planned electronic health records are electronically portable across geographic locations.													
C3.9. Introduce system so that verbal autopsy is routinely used to obtain the cause of death for any non-medically certified deaths in the country. The MOHFW's community health workers may be trained and assigned for this job.	2	2	2	2	MOHFW will introduce system so that verbal autopsy is routinely used to obtain the cause of death for any non-medically certified deaths in the country through training of community health workers may be trained and assigned for this job.	MOHFW, MOLGRD, BBS	4	10000000	Y	Y	Y	Y						
C4: Practices affecting the quality of cause of death data																		
C4.3. Introduce a mechanism so that the civil registration authority always correctly records cause of death managing various kinds of social issues and privacy protection.	2	2	2	2	MOLGRD will make sure that a mechanism exists so that the civil registration authority always correctly records cause of death managing various kinds of social issues and privacy protection.	MOLGRD, MOHFW, BBS, A2I	4	5000000	Y	Y	Y	Y						
C4.4. Consider making provision in the death certificate form or in the death registration form to include information	2	2	3	3	MOLGRD and MOHFW will consider making provision in the death certificate form or in the death registration form to include information on death of a woman	MOLGRD, MOHFW, BBS, A2I	3	2000000	Y	Y	Y							

Recommendations	Urgency (High=3)	Timeliness (High=3)	Cost (affordable=3)	Feasibility (High=3)	Action plan	Responsibility	Total years	Estimated cost (BDT)	Year									
									1	2	3	4	5	6	7	8	9	10
on death of a woman to state whether or not she was pregnant had recently been pregnant.					to state whether or not she was pregnant had recently been pregnant.													
C4.6. Make provision for use of the WHO recommended special death form for perinatal death for audit, monitoring and reporting.	2	2	3	2	MOHFW and MOLGRD will make provision for use of the WHO recommended special death form for perinatal death for audit, monitoring and reporting.	MOHFW, MOLGRD, BBS, A2I	3	500000	Y	Y	Y							
C4.7. Ensure that proper pre-service training of doctors on ICD-compliant death certification is implemented. Scale on the job training on this topic. Produce some competent trainers through external training. Ensure ICD-10 compliant practice by strict enforcement.	2	2	2	2	MOHFW will ensure that proper pre-service training of doctors on ICD-compliant death certification is implemented and will scale on the job training on this topic. Produce some competent trainers through external training. Ensure ICD-10 compliant practice by strict enforcement.	MOHFW, MOLGRD, WHO, UNICEF, BBS, A2I	5	10000000	Y	Y	Y	Y						
C4.9. Introduce WHO recommended standard format for medical certification of death and periodic formal evaluation system for improvement of practice.	3	2	3	3	MOHFW will introduce formal periodic evaluation system for improvement of practice about use of WHO recommended standard format for medical certification of death.	MOHFW, MOLGRD, WHO, UNICEF, BBS	3	2000000	Y	Y	Y	Y						
C4.11. It is needed to start a systematic evaluation of the quality of medical records in	3	2	3	3	MOHFW will start a systematic evaluation of the quality of medical records in public, private and NGO hospitals with a view to provide	MOHFW, MOLGRD, WHO	4	2000000	Y	Y	Y	Y						

Recommendations	Urgency (High=3)	Timeliness (High=3)	Cost (affordable=3)	Feasibility (High=3)	Action plan	Responsibility	Total years	Estimated cost (BDT)	Year									
									1	2	3	4	5	6	7	8	9	10
public, private and NGO hospitals with a view to provide appropriate recommendations for improvement.					appropriate recommendations for improvement.													
C4.12. Expedite implementation of electronic health records of all citizens in electronically portable format so that registrars get information out of this resource.	2	2	1	1	MOHFW will expedite implementation of electronic health records of all citizens in electronically portable format so that registrars get information out of this resource.	MOHFW, MOHFW, WHO, WB, A2I	6	400000000	Y	Y	Y	Y	Y	Y				
C4.15. Train the certifying doctors on international standard procedure of reporting deaths from injuries and external causes according to the ICD rules.					MOHFW will include in the training as mentioned in C4.7 contents on international standard procedure of reporting deaths from injuries and external causes according to the ICD rules.		5	0	Y	Y	Y	Y	Y					
D1: Mortality coding practices																		
D1.1. Expedite scaling of hospital death recording and reporting as per ICD to perform and publish statistics as per ICD-10.	2	2	2	2	MOHFW will expedite scaling of hospital death recording and reporting as per ICD to perform and publish statistics as per ICD-10.	MOHFW, WHO	5	10000000	Y	Y	Y	Y	Y	.				
D1.9. Ensure monitoring and supervision so that ICD-10 introduction progresses in planned manner and data are fed to online central server routinely.	2	2	2	2	MOHFW will ensure monitoring and supervision so that ICD-10 introduction progresses in planned manner and data are fed to online central server routinely.	MOHFW, MOLGRD, BBS	5	5000000	Y	Y	Y	Y	Y					
D1.10. Ensure that a	2	2	2	2	MOHFW will create a quality	MOHFW	5	10000000	Y	Y	Y	Y	Y					

Recommendations	Urgency (High=3)	Timeliness (High=3)	Cost (affordable=3)	Feasibility (High=3)	Action plan	Responsibility	Total years	Estimated cost (BDT)	Year									
									1	2	3	4	5	6	7	8	9	10
quality control mechanism exist in each facility backed by national formal and normal evaluation and feedback about the ICD coding practice (morbidity and mortality reporting).					control mechanism in each facility backed by national formal and normal evaluation and feedback about the ICD coding practice (morbidity and mortality reporting).													
D1.11. Take measures to make decentralized ICD coding system in hospitals successful. Introduce in communities, verbal autopsy system with help of MOHFW's community health care workers. Introduce a clear guideline and procedure of communicating ICD-10 death coding to civil registrars from MOHFW.	2	2	2	2	MOHFW will take measures to make decentralized ICD coding system in hospitals successful and will introduce in communities, verbal autopsy system with help of MOHFW's community health care workers. MOHFW will also introduce a clear guideline and procedure of communicating ICD-10 death coding to civil registrars from MOHFW.	MOHFW, MOLGRD,	5	10000000	Y	Y	Y	Y	Y					
D2: Mortality coder qualification and tracing																		
D2.2. Expedite the training to scale introduction in all public and private hospitals within reasonable time.	2	2	2	2	MOHFW will expedite the training as mentioned in C4.7 to scale introduction in all public and private hospitals within reasonable time.	MOHFW	5	0	Y	Y	Y	Y	Y					
D2.7. Request WHO-FIC to provide training to local trainers in WHO-FIC training course.	3	3	3	3	MOHFW will request WHO-FIC to provide training to local trainers in WHO-FIC training course.	MOHFW, WHO	2	100000	Y	Y								
D2.8. Keep provision for providing refreshers'	3	2	2	2	MOHFW will keep provision for providing refreshers' training to the	MOHFW	5	20000000	Y	Y	Y		Y					

Recommendations	Urgency (High=3)	Timeliness (High=3)	Cost (affordable=3)	Feasibility (High=3)	Action plan	Responsibility	Total years	Estimated cost (BDT)	Year									
									1	2	3	4	5	6	7	8	9	10
training to the doctors and staffs who are engaged in ICD coding.					doctors and staffs who are engaged in ICD coding.													
D3: Quality of mortality coding																		
D3.1. Request WHO to provide supply of sufficient number of ICD-10 manual and guidelines for distribution among all health organizations adequately.	3	3	2	2	MOHFW will request WHO country office to provide supply of sufficient number of ICD-10 manual and guidelines for distribution among all health organizations adequately.	MOHFW, WHO	3	3000000	Y	Y	Y							
D3.3. Keep continuing the current dedicated team in MIS-DGHS to keep watch on development of ICD coding practices globally and accordingly update own website and training and implementation according to local context.	3	3	2	2	MOHFW will keep continuing the current dedicated team in MIS-DGHS to keep watch on development of ICD coding practices globally and accordingly update own website and training and implementation according to local context.	MOHFW, WHO	5	5000000	Y	Y	Y	Y	Y					
D3.4. Create a standing procedure of periodic assessment of the quality of the ICD compliant death coding.	2	2	3	3	MOHFW will create a standing procedure of periodic assessment of the quality of the ICD compliant death coding.	MOHFW, WHO	2	200000	Y	Y								
D3.5. Create a standing procedure of periodic assessment of the quality of the ICD compliant death coding.					As in D3.4													
D3.7. Strengthen and	3	3	2	2	MOHFW will strengthen and	MOHFW, WHO	5	5000000	Y	Y	Y	Y	Y					

Recommendations	Urgency (High=3)	Timeliness (High=3)	Cost (affordable=3)	Feasibility (High=3)	Action plan	Responsibility	Total years	Estimated cost (BDT)	Year									
									1	2	3	4	5	6	7	8	9	10
continue using the MIS-DGHS's in-built mechanism to provide feedback to locally working statistical staffs to improve their work quality for also improving the newly introduced ICD compliant death coding system.					continue using the MIS-DGHS's in-built mechanism to provide feedback to locally working statistical staffs to improve their work quality for also improving the newly introduced ICD compliant death coding system.													
Output																		
E: Data access, use and quality checks																		
E1 – Data quality and plausibility checks																		
E1.1. Ensure strong coordination between stakeholders to find a solution to provide data on fertility indicators routinely. Support and coordinate with MOHFW's current initiative surrounding COIA initiative, to make it a good routine and effective sustainable procedure to generate data for these indicators.	3	3	2	2	MOHFW, MOLGRD, BBS, A2I will ensure strong coordination between stakeholders to find a solution to provide data on fertility indicators routinely and will support and coordinate with MOHFW's current initiative surrounding COIA initiative, to make it a good routine and effective sustainable p	MOHFW, MOLGRD, BBS, A2I, WHO, DFID, UNICEF	5	5000000	Y	Y	Y	Y	Y					
E1.3. Create a robust system for calculating all mortality indicators from routine data increasing strong and effective coordination between different	2	2	2	2	A robust system will be tried to be created for calculating all mortality indicators from routine data increasing strong and effective coordination between different stakeholders engaging MIS-DGHS's and PMO's effort to develop	MOLGRD, MOHFW, BBS, A2I	5	10000000	Y	Y	Y	Y	Y					

Recommendations	Urgency (High=3)	Timeliness (High=3)	Cost (affordable=3)	Feasibility (High=3)	Action plan	Responsibility	Total years	Estimated cost (BDT)	Year									
									1	2	3	4	5	6	7	8	9	10
stakeholders engaging MIS-DGHS's and PMO's effort to develop national population register.					national population register.													
E1.6. Increase monitoring for ensuring decreasing the inconsistencies among the reported figures. Engage joint experts both from BBS and NIPORT in such checks of any of the two organizations.	2	2	2	2	MOLGRD, MOHFW and BBS will increase monitoring for ensuring decrease in the inconsistencies among the reported data on vital statistics before release for use and will also engage joint experts both from BBS and NIPORT in such checks of any of the two organizations.	MOLGRD, MOHFW, BBS	5	2000000	Y	Y	Y	Y	Y	Y				
E1.8. Establish a full coverage CRVS system to find all data for vital statistics.	2	2	1	1	MOLGRD and other partners will establish a full coverage CRVS system to find all data for vital statistics.	MOLGRD, MOHFW, BBS, A2I, MOCabinet	6	100000000	Y	Y	Y	Y	Y	Y				
E1.10. Request BBS to consider inclusion of questions on births and deaths like number of children ever borne alive or still alive, date of birth of last child borne alive, whether the last birth was registered, whether the last death was registered, death in the household in the past 12 to 24 months, etc.. However, a full coverage reliable CRVS system is the most desirable.	2	2	3	3	MOLGRD and MOHFW will request BBS to consider inclusion of questions on births and deaths like number of children ever borne alive or still alive, date of birth of last child borne alive, whether the last birth was registered, whether the last death was registered, death in the household in the past 12 to 24 months, etc. until a full coverage reliable CRVS system is in place.	MOLGRD, MOHFW, BBS, A2I	6	0	Y	Y	Y	Y	Y	Y				

Recommendations	Urgency (High=3)	Timeliness (High=3)	Cost (affordable=3)	Feasibility (High=3)	Action plan	Responsibility	Total years	Estimated cost (BDT)	Year									
									1	2	3	4	5	6	7	8	9	10
E2 – Data tabulation																		
E2.1. Undertake measures to enable birth and death registration project of MOLGRD to publish statistical report.	3	2	2	2	MOLGRD will undertake measures to publish statistical report on birth and death registration data.	MOLGRD, MOHFW, BBS	4	5000000	Y	Y	Y	Y						
E2.5. Make provision so that all stakeholders use WHO age groups.	3	3	3	3	Provision will be made so that all stakeholders use WHO age groups.	MOLGRD, MOHFW, BBS, WHO	3	500000	Y	Y	Y							
E2.7. Use the 4 (FOUR) ICD standard mortality tabulation lists for data presentation purposes.	3	3	3	3	Stakeholders will use the 4 ICD standard mortality tabulation lists for data presentation purposes.	MOLGRD, MOHFW, A2I, WHO	3	500000	Y	Y	Y							
E2.10. Undertake measures to collect data from private health facilities and on home mortalities. Include in CRVS system collection of cause of death data according to ICD 10 coding system.	2	2	2	2	MOLGRD and MOHFW will undertake measures to collect data from private health facilities and on home mortalities and will include in CRVS system collection of cause of death data according to ICD 10 coding system.	MOLGRD, MOHFW, BBS	4	2000000	Y	Y	Y	Y						
E2.11. Try to improve quality of diagnosis in ascertaining causes of death in death reporting and registration. Exclude ill- defined causes in categorization.	2	2	2	2	MOHFW will try to improve quality of diagnosis in ascertaining causes of death in death reporting and registration and will exclude ill-defined causes in categorization.	MOHFW, MOLGRD, BBS, WHO	4	10000000	Y	Y	Y	Y						
E3 - Data access and dissemination																		
E3.1. Undertake measures for making available adequate vital statistics data, reliably	3	3	3	3	Stakeholders will undertake measures for making available adequate vital statistics data, reliably and in easily accessible	MOLGRD, MOHFW, BBS	4	2000000	Y	Y	Y	Y						

Recommendations	Urgency (High=3)	Timeliness (High=3)	Cost (affordable=3)	Feasibility (High=3)	Action plan	Responsibility	Total years	Estimated cost (BDT)	Year									
									1	2	3	4	5	6	7	8	9	10
and in easily accessible publicly.					publicly.													
E3.2. Develop an engagement strategy to regularly discuss data needs with the main data users.	3	3	3	3	Stakeholders will develop an engagement strategy to regularly discuss data needs with the main data users.	MOLGRD, MOHFW, BBS, A2I, WHO, UNICEF	2	500000	Y	Y								
E3.3. Conduct advocacy so that vital statistics data are used to guide policy and practice. Make available adequate, timely and reliable vital statistics data.	3	2	3	3	MOLGRD and other stakeholders will conduct advocacy so that vital statistics data are used to guide policy and practice. Make available adequate, timely and reliable vital statistics data.	MOLGRD, MOHFW, BBS, A2I, WHO, UNICEF	4	2000000	Y	Y	Y	Y						
E3.5. Make provision for the birth and death registration project of MOLGRD to produce analytical report on its data at least annually.	3	3	2	2	MOLGRD will produce analytical report on its birth and death registration data annually.	MOLGRD, BBS, MOHFW, UNICEF, WHO	5	5000000	Y	Y	Y	Y	Y					
E3.6. Develop a data release schedule by MOLGRD, MIS-DGHS and BBS.	3	3	3	3	Stakeholders will develop a data release schedule for respective data.	MOLGRD, MOHFW, BBS, WHO, UNICEF	2	500000	Y	Y								
E3.7. Make provision that MOLGRD provides data to users, on request based on a guideline.	3	2	3	3	MOLGRD will make provision to provide data to users, on request based on a guideline.	MOLGRD, UNICEF, BBS	2	500000	Y	Y								

Annex-1

Matrix of Comprehensive Assessment of CRVS system in Bangladesh and recommendations

Question	Bangladesh situation	Gap	Recommendation
Input			
A: Legal basis and resources for civil registration			
A.1: National legal framework for vital statistics			
A1.1. Does the country have a law defining a civil registration system?	Yes.	There is a birth and death registration law under Ministry of Local Government.	Take initiative for minor revision or formulation of regulations to accommodate provisions of reporting requirement on cause of death according to ICD-10.
A1.2. Does the country have a law defining a vital statistics system?	No. Bangladesh Bureau of Statistics is making an effort to promulgate a law that would define VS system.		Expedite promulgation of the vital statistics law.
A1.3. Does the law clearly state that birth and death registration is compulsory?	Yes.		Not applicable
A1.4. Is there a penalty for non-registration of: births? deaths?	Yes.		Not applicable
A1.5. If yes, please indicate the nature of the penalty. If there is a financial penalty, specify the current amount.	According to the law, due to delay in registration of either birth or death for more than 2 years, parents are supposed to pay BDT 5.00 per year in rural area and BDT 10.00 in urban area.	In practice, currently relaxation is shown. No penalty is imposed for failure of birth registration of child; but BDT 50.00 is charged for failure of birth registration of adult. For death no penalty is imposed as yet.	Raise awareness of people about such penalty through social communication program. Determine a timeline for full enforcement of the provision.
A1.6. Is the penalty routinely applied?	Described above.		Raise awareness of people about such penalty through social communication program. Determine a timeline for full enforcement of the provision.
A1.7. Does the birth registration law give clear and unambiguous definitions to be used for live birth? fetal death or stillbirth?	The law gives a clear definition of live birth; but not of fetal death or stillbirth.		Frame regulations under the law to define clearly fetal death or still birth.
A1.8. Are these definitions aligned with the international standards in the Glossary?	Fetal death or still birth not defined.		Align these definitions with the international standards in the Glossary.
A1.9. Is it stated in law who is responsible for registering births or deaths and who should declare or	Yes.		Publish a birth and death registration manual to provide guidance to the field staffs.

Question	Bangladesh situation	Gap	Recommendation
report births or deaths?			
A1.10. If yes, provide details of all possible informants.	In case of birth: parents, guardians, local public representatives, community polices, polices, health workers, school teachers, NGO workers, etc. In case of death: children's guardians, local public representatives, community police, polices, health workers, NGO workers, graveyard authorities, etc.		Include in the manual as mentioned above the list of these informants.
A1.11. Is there a law or regulation requiring hospitals and health facilities to report births and deaths?	Yes.	Strict enforcement is absent.	Improve enforcement of births and deaths reporting by hospitals and health facilities.
A1.12. If yes, to what authorities do they report the births and deaths?	They usually require to report to the nearest Birth and Death Registrar.	Strict enforcement is absent.	Improve enforcement of births and deaths reporting by hospitals and health facilities.
A1.13. Does the law or regulation cover private sector? Does the law or regulation also include social security and other nongovernmental facilities?	The law covers private sector including nongovernmental facilities. Social security facilities are non-existing in Bangladesh.		Not applicable
A1.14. Does the law state the time within which births and deaths should be registered?	Yes.		Not applicable
A1.15. If yes, how long is the reporting period?	Reporting period is 45 days.		Not applicable
A1.16. Is the reporting period suitable and is it respected throughout the country?	The reporting period is suitable; but enforcement is yet inadequate.	Enforcement of reporting needs improvement.	Improve enforcement of birth and death reporting within 45 days.
A1.17. Does the law make provision for: late registration? delayed registration?	Yes.		Not applicable
A1.18. Are there clear procedures for dealing with these cases?	Yes.		Not applicable
A1.19. Is it stated where births or deaths should be registered; for example, according to place of occurrence or place of usual residence?	Yes.		Not applicable
A1.20. Does the law clearly	Yes.		Not applicable

Question	Bangladesh situation	Gap	Recommendation
designate the functions, duties and responsibilities of each government department involved?			
A1.21. Does the law establish how the civil registration and vital statistics systems are to be funded?	No. The CRVS is still funded under a project. However, a recent amendment of the law made provision of Registrar General office to create provision for revenue funding.	Funding is yet not ensured for sustainability.	Create permanent funding mechanism for sustainability. Improve coordination with other ministry, viz. with MOHFW and MOPL to improve efficiency that would help better work within limited resources.
A1.22. Does the law stipulate that registration should be free of charge for all?	No, birth registration is free for children within 2 years of birth. For adults, birth registration requires a fee. For death registration, no fee is required.		Not applicable.
A1.23. If registration is not free, what is the fee to register: a birth? a death?	For birth registration of adult it is BDT 50.00 (1 USD=BDT 80).		Not applicable.
A1.24. Is the population covered by civil registration laws clearly defined? Is it, for example: the entire population living in the country? only citizens living in the country? some other subsets of the population?	Applicable for the entire population either living inside the country or abroad.		Not applicable.
A1.25. What does the law require in relation to registering births and deaths of citizens living abroad?	According to law, the birth or death certificate provided by office, court, school, college or government or non-government organization will be used as proof of age and/o birth or death of a person. The ambassador or his designated officer in Bangladesh Mission abroad will be registrar of birth and death.		Not applicable
A.2: Registration infrastructure and resources			
A2.1. What is the annual national operating budget for civil registration?	Not specified.	At present this is being done through a project.	Expedite process of establishing Registrar General with provision of adequate revenue budget. Improve coordination with MOHFW and BBS.
A2.2. Can this budget be separately	The current project budget is not		Not applicable.

Question	Bangladesh situation	Gap	Recommendation
identified at state and municipal levels? Can the budgets for national, state and municipal levels be separately identified?	adequate, which does not specify distribution between different levels.		
A2.3. Are these funds adequate to ensure the proper functioning of the system?	As above.		Not applicable.
A2.4. Where would additional funding be likely to make the most difference?	Monitoring and supervision, campaign, logistics and training.	Additional funding is required for monitoring and supervision, campaign, logistics and training.	Expedite process of establishing Registrar General with provision of adequate revenue budget. Improve coordination with MOHFW and BBS. Improve monitoring and supervision, campaign, logistics and training.
Process			
B: Registration practices, coverage and completeness			
B1: Organization and functioning of the vital statistics system			
B1.1. What are the organizational and administrative arrangements of the civil registration and vital statistics systems (reviewed using the prepared diagrams)?	The local government division of MOLGRD is responsible for CRVS. The organizational structure from national to subnational level is well-defined including in foreign countries. For vital statistics, coordination with BBS may help.	Coordination with BBS needs improvement for improving vital statistics system.	Improve coordination with BBS to improve vital statistics system.
B1.2. What have been the main changes in the functioning of the systems over the last 10 years?	Enactment of law. Increase in registration rate. BBS releases sample vital registration report each year. Decennial census takes place. National Election Commission prepared electronic voter rolls. MOHFW collected individual records with machine readable forms for each citizen living in rural area (70% population).	There is a need for an integrated and inter-operable population register between all stakeholders' organizations.	Strengthen process for an integrated and inter-operable population register between all stakeholders' organization.
B1.3. How have these changes affected functioning of the system of systems?	The development created increased awareness among the policy makers and stakeholders for improvement of CRVS system. Need for harmonization is being strongly felt.	Harmonization effort is not moving very fast.	Improve speed of harmonization effort between organizations.
B1.4. What areas need improvement?	Harmonization, standardization, inter-operability among stakeholder	Harmonization, standardization, inter-operability among stakeholder	Improve harmonization, standardization, inter-operability

Question	Bangladesh situation	Gap	Recommendation
	agencies; campaign and awareness building; political commitment.	agencies; campaign and awareness building; political commitment need attention.	among stakeholder agencies; campaign and awareness building; political commitment.
B1.5. What are the current communication mechanisms between the civil registration authority and others involved in the collection and production of vital statistics?	Communication mechanisms between civil registration authority and others are inadequate. Recently MOHFW started dialogue to improve communications.	Communication mechanisms between registration authority and others are inadequate.	Improve communication mechanisms between registration authority and others.
B1.6. Are there any areas where the responsibilities for specific functions overlap or are unclear?	Yes. The MOLGRD conducts birth and death registration for all citizens irrespective of age and sex. The Bangladesh Election Commission registers voters on citizens aged ≥18 years. The BBS collects data routinely on CRVS from 100 primary sampling units each comprising of 250 households. The MOHFW registers children for routine immunization program. The MOHFW is also preparing population register for efficiently running health programs. Other ministries also have social security programs which require registration of target population. These are being done in isolated.	All these activities are being done without coordination.	Act to establish an integrated sharable database system between all agencies.
B1.7. Are national, state or provincial and local responsibilities clearly defined?	Yes, it is clearly defined.		Not applicable
B1.8. Are there any areas where bottlenecks regularly occur?	In MOLGRD project, there is a lack between paper registration of births and deaths and their computer entry. Duplicate entries for same individual is not uncommon. Verification mechanism for accuracy of date of births is not full proof.	In MOLGRD project, there is a lack between paper registration of births and deaths and their computer entry. Duplicate entries for same individual is not uncommon. Verification mechanism for accuracy of date of births is not full proof.	In MOLGRD project, speed up computer entry of paper records of birth and death registration. Improve coordination with MOHFW and other agencies to use their ICT resources. Clean up duplicate entries for same individual. Use Immunization cards of MOHFW as a verification mechanism for accuracy of date of births.

Question	Bangladesh situation	Gap	Recommendation
B1.9. Review in detail the country's practices for birth and death registration. Which types of births and deaths are likely to escape the civil registration system?	Births within the low-income, low-education/illiterate families are expected to escape the birth registration system. Death registrations are usually done if a certain outcome is needed (e.g. inheritance of land or property). Deaths are usually not registered since there is no real incentive to do so. Fetal deaths or still births are also escaped.	Absence of effective and strong community mechanism that can ensure each birth and death to be registered.	Make a strong community mechanism so that each birth and death are registered.
B1.10. Are these types of births and deaths also missed by the vital statistics system?	The vital statistics, being done by BBS, are calculated based on a sample of population in specific sentinel sites. A local employee goes to find out about local births and deaths. A supervisor also cross checks the households to verify the information. Due to dual recording system, the VS obtained by this entity is more likely to pick up information on new births and new deaths.		Not applicable.
B1.11. Are there some vital events that cannot be registered through the normal system?	The Birth and Death registration project aims at full coverage of whole population, but captures only birth and death data. The Sample Vital Registration System done by BBS captures 10 events, viz., Birth, Death, Marriage, Divorce, Immigration, Emigration, Contraceptive use, and Disability; but only on limited primary sampling units comprised of 1,000 sentinel sites each consisting of 250 households.	The system should be integrated so that throughout the country these vital events are recorded.	Create an integrated collaborative mechanism across MOLGRD, MOHFW and BBS so that CRVS system captures data on all vital events without much delay.
B1.12. Are the same data on births and deaths collected across the country and at every level of the system (including state or provincial,	Yes, definitions and fields are similar across country.		Not applicable

Question	Bangladesh situation	Gap	Recommendation
national and local levels)?			
B1.13. Is there an entity responsible for national vital statistics standards and coordination?	According to the rules of business, national statistics should be generated by National Statistics Office (BBS). But, it does not coordinate the work with other organizations.	Absence of national coordination mechanism for vital statistics standardization and coordination.	Establish a national coordination mechanism for vital statistics standardization and coordination.
B1.14. Is cause of death included on the death registration form?	The legal system does not require it. However, MOHFW is emphasizing on recording in case of hospital deaths.	Absence of legal system to include cause of death as per ICD-10 in death registration form. Practice is also inadequate.	Make a legal provision to include cause of death as per ICD-10 in death registration form and make it a binding for every death.
B1.15. If not, is information about the cause of death collected at the same time as the death is registered but using a different form? Also discuss what happens with coronial cases and deaths from suspected non-natural causes.	Please refer to B1.14	Please refer to B1.14	Set up a detail procedure to death registration in addition to legal provision.
B1.16. Who decides what details to collect on births and on causes of death?	MOLGRD, MOHFW, BBS	Needs better coordination	Improve coordination between MOLGRD, MOHFW and BBS to decide what details to collect on births and cause of death.
B1.17. How is medical information on births and deaths exchanged among the different government agencies involved?	Currently there is no system for exchange of medical information between different stakeholder agencies. Only published reports are exchanged.	No data sharing system between different government agencies exists.	Establish a data sharing mechanism between all stakeholder agencies as a routine procedure.
B1.18. Is this process currently working well or does it need improvement?	No, it needs major improvement. In fact, a system needs to be established.	No data sharing system between different government agencies exists.	Establish a data sharing mechanism between all stakeholder agencies as a routine procedure.
B1.19. Is there a national population register?	A national population register does not exist at this moment. However, initiative to prepare on has been started by Prime Minister’s Office (A2I), BBS and MOHFW.		Expedite process of preparing a national population register. The data collected by MIS-DGHS on rural population may be used as basic data to start with.
B1.20. If so, how does information flow between the national population register and the civil registration system, and which government agency is responsible	There is no population register as yet. It is being discussed that the BBS should be given the responsibility for maintaining the national population register.	It is not decided yet how information flow between the national population register and CRVS system will take place.	Determine how information will flow between national population register (if prepared) and CRVS system.

Question	Bangladesh situation	Gap	Recommendation
for maintaining the national population register?			
B1.21. Is each individual assigned a PIN at birth registration or at the time of receiving identity papers, and is this PIN used throughout the government's administrative databases?	When a birth is registered, each individual is assigned a PIN called BIN (Birth Identification Number). However, it is not utilized throughout the government administrative databases. A unique single ID number is being considered in connection to the national population register.	There is no widespread use of BIN. There is no provision as yet that the citizens will be identified by a single unique identification number, although national election commission used a national identification number (NID) for citizens 18 years and above.	Make provision that each citizen will be given a number during birth registration (PIN, BIN or whatever) and this same number will be utilized across all government's administrative databases.
B1.22. If a PIN is not given, how are records from various data systems linked, and how is the population register updated?	Not applicable		Not applicable
B1.23. Are computers used at any stage of the birth and death registration process?	Yes. Computer is used from the field level (Union Parishad, Municipality, etc.)		Not applicable
B1.24. Are computers used for any or all of: data compilation? data transmission? data validation? data storage?	Data compilation: yes; data transmission: yes; data validation: no; data storage: yes	Data validation is not done in the existing computer based birth and death registration database. Therefore, duplicate and/or wrong entries for same individual are possible.	Introduce a system of data validation in the birth and death registration database so that duplicate and/or wrong entries can be identified and corrected.
B1.25. Are there any plans for further computerization in the near future?	Yes		Initiate a process so that existing and all future ICT resources between stakeholder agencies can be utilized for CRVS system to improve efficiency, coordination, data harmonization and sharing.
B1.26. If so, what are the priorities?	IT access should be the first priority at grassroots levels. Coordination between various agencies.	Limited IT access at the grassroots levels. Limited coordination between various agencies.	Improve IT access at the grassroots levels and coordination between various agencies.
B1.27. What procedures for checking the completeness and consistency of information collected at points of registration are currently being carried out at the points of registration?	No system for checking the completeness and consistency of information exists. However, an online database form makes sure that all data for birth or death registration follow a uniform standard.	There is no standard procedure for checking completeness and consistency of information collected at the points of registration.	Introduce a standard procedure for checking the completeness and consistency of information at the points of birth and death registration.

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B1.28. What procedures for checking completeness and consistency of information are carried out at central and other levels?	Same as B1.27	There is no standard procedure for checking completeness and consistency of information collected at the points of registration.	Introduce a standard procedure for checking the completeness and consistency of information at the points of birth and death registration.
B1.29. Are monthly or quarterly registration data routinely checked to ensure that they are comparable with previous years?	No	There is no system checking monthly or quarterly registration data routinely to ensure that they are comparable with previous years.	Introduce a routine system to check monthly or quarterly registration data to ensure that they are comparable with previous years.
B1.30. At the central level, are the expected numbers of births and deaths that should occur each year routinely estimated for each registration area, and compared to the actual numbers of registered events?	No	At the central level, the expected numbers of births and deaths that should occur each year are not routinely estimated for each registration area, and not compared to the actual numbers of registered events.	Introduce a system at the central level that the expected numbers of births and deaths that should occur each year are routinely estimated for each registration area, and compared to the actual numbers of registered events.
B.2: Review of forms used for birth and death registration			
B2.1. Which of the UN-recommended items are collected on birth and death registration forms? Use Box 3.2 and tick off all items collected.	Type of birth (single, twin, triplet, etc.): no; Birth weight: no; Date of birth and age (derived) of both parents: no; Marital status of both parents: no; Educational attainment of both parents: no; Children born alive to mother during her entire life (to date): no; Children born to mother and who are still living: no; Fetal deaths to mother: no; Date of last previous live birth: no; Date of marriage and duration (derived): no.	Some of the UN recommended items are missing in the birth and death registration forms.	Organize consultative workshop to determine whether or nor any of the missing UN items should be included in the birth and death registration forms and take follow up actions accordingly.
B2.2. Which of the UN-recommended items that is not collected on the birth and death registration forms would be useful?	Not determined yet.	It is not determined yet which of the UN recommended items would be useful to include in the birth and death registration forms.	Organize consultative workshop to determine whether or nor any of the missing UN items should be included in the birth and death registration forms and take follow up actions accordingly.
B2.3. What additional items are collected on the birth and death registration forms? List and discuss these items.	The “name” in form should be both in Bangla and English.	Not applicable.	Not applicable.
B2.4. Are any medical details	During birth registration, there is no	There is no mechanism that	Improve coordination between birth

Question	Bangladesh situation	Gap	Recommendation
collected (either on the birth registration form or a separate form) regarding the health of the child or the birth process?	provision for collecting information on child health or birth process. However, MOHFW through FWA (Family Welfare Assistant) register collects information of birth weight, sex, and place of birth, and the birth process. In the FWV register there is information of still birth additionally.	information collected through FWA register about health of child and birth process will be linked with information collected in birth registration form. The FWA register is a paper book.	registrars and FWAs and make a mechanism so that data collected by both parties are computerized and linked through online system. To start with COIA indicators may be considered.
B2.5. Review all the forms used for registering and certifying births and deaths and answer the following questions for each set of forms: Is all the information collected used? How long does it take, on average, to fill out each set of forms? Is the layout of the forms user-friendly? Explain why or why not. Is the form available in each of the main national languages? Which items come from the "declarant" and which are transcribed from other documents; for example, is the cause of death transcribed from the death certification form?	Only birth certificates are issued based on the information; It requires on average 10 minutes for filling out birth registration form; Layout of the form is user friendly and information is short and clear; Language is optional (Bangla- national language or English); the declarant needs to produce either of the birth certificate issued by doctor/hospital, EPI card, SSC certificate, passport (self), national ID card (self) to proof date of birth. Similarly death registration is done only for issuing death certificate. It does not record cause of death as per ICD-10 code; Time required is 10 minutes; the form is user friendly and simple; There is option for using either Bangla or English language; declarant needs to produce doctor's certificate to proof death.	Not applicable.	Not applicable.
B.3: Coverage and completeness of registration			
B3.1. What proportion of the population had access to civil registration in the area where they live?	According to 2011 census, current total population of Bangladesh is 149,772,364. There are 5,009 registration points spread across the country in Unions, City Corporations, Municipalities and Cantonments. Thus, on an average, one registration point serves 29,900 individuals or approximately 0.02 percent of the	The main problem is inadequate awareness of people and lack of obligations to register births and deaths.	Increase awareness of people about birth and death registration. Make provision for obligation to register births and deaths. Make a system so that there remains an active community based searching mechanism to capture information on every birth or death event.

Question	Bangladesh situation	Gap	Recommendation
	total population.		
B3.2. Has access over time: improved? If so, why? remained stable? If so, why? decreased? If so, why?	The access is improving over time. Because birth and death registration function has been embedded in the local administrative authorities, i.e., in union, city corporation, municipality and cantonment. Over 5,009 registration points are working across these places. These points are are connected with the centralized database through web-based application (known as Birth Registration Information System – BRIS).	There is lag between paper registration and computer entry of the data.	Minimize the lag period between paper registration and computer data entry. Examine data entry directly into computer database, if possible.
B3.3. If access has improved, what has led to the improvements?	Local administrative bodies are mandated by law to register birth and death events that occur within their jurisdiction.	There is inadequacy in monitoring and supervision and absence of effective cross checking mechanism.	Improve monitoring and supervision system so that local administrative bodies ensure full coverage of birth and death registration within their jurisdiction. Introduce an effective cross checking mechanism.
B3.4. How complete are the birth registration data (i.e., what is the percent of completeness level)? Please indicate what method you used to estimate completeness.	Total country population is 149,772,364 (2011 census) and Crude Birth Rate is 19.2 per 1,000 (SVRS 2010, BBS). Therefore, estimated annual birth is 2.875 million (7,876 on a daily average). It is difficult to know the actual number of registered births as there is a lag between paper registration and computer data entry. The MOLGRD's Birth Registration Information System (BRIS) reports 83,042 under-1 children entered in 2012 and 50,538 in 2011.They accounted for only 2.9% and 1.8% of the annual birth estimate in 2012 and 2011 respectively. These figures show very low rate of computer entry. However, it is not certain to what proportion the actual new	Reporting system on birth registration on different age, sex and geographic groups is inadequate. There is lag between paper registration and computer entry.	Introduce proper reporting system that can cover wider areas of information about CRVS. Minimize the lag period between paper registration and computer data entry.

Question	Bangladesh situation	Gap	Recommendation
	births were registered in paper book as there is no mechanism as yet for reporting such information. MOLGRD reported that since enactment of law in 2004, 149 million individuals requested for registration of their births, of whom 115.7 million received birth certificates.		
B3.5. How complete are the death registration data (i.e. what is the percent completeness level)?	Total country population is 149,772,364 (2011 census) and Crude Death Rate is 5.6 per 1,000 (SVRS 2010, BBS). Therefore, estimated annual death 0.838 million (2,295 per day). Similar to birth registration, there is no reliable data on actual number of registered deaths available for estimation. Data made available from BRIS shows 11,872 registered deaths from August to December 2012. These figures are most likely far lower than what is recorded in paper register.	Reporting system on death registration, birth registration, on different age, sex and geographic groups is inadequate. There is lag between paper registration and computer entry.	Introduce proper reporting system that can cover wider areas of information about CRVS. Minimize the lag period between paper registration and computer data entry.
B3.6. Has completeness over the last decade been: improving? If so, why? stable? If so, why? decreasing? If so, why?	Yes, it is improving over time. According to MOLGRD, following the enactment of Birth and Death Registration Act 2004, more than 149 million individuals have requested for registration of their births, of whom 115.7 million have received birth certificates. More than 56 million manually-registered birth records have been migrated to BRIS. The coverage of birth registration of children under-5 was increased to 53.6% in 2009 from 9.8% in 2006 (Multiple Indicators Cluster Survey 2009, BBS). The coverage improved due to the enactment of law, national	No attempt has been undertaken to examine from BRIS data about completeness of birth registration forms. Stability of birth registration coverage suffered inconsistencies.	Undertake attempt to generate report from BRIS computer system to find out status of completeness of all birth registration forms. Maintain national campaigns and outreach programs.

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	campaigns and outreach registration activities. Nevertheless, it is evident that the coverage is not sustained. The recent data (from question B3.4) indicates that the majority of newborn children are missed out even though the law requires registration within 45 days of birth. It is assumed that all the fields in the birth registration form are completed during registration.		
B3.7. What subpopulations are most likely to be undercounted in vital registration? (Note: undercounting may be different for births and deaths.)	Groups of population in slums and hard-to-reach areas including hill tracts, coastal areas, islands and tea gardens. Also Rohingya refugees are not counted in the birth and death registration system.	Population living in slums, hard to reach areas, hill tracts, coastal areas, islands, tea gardens and Rohingya refugee camps has poor coverage of birth and death registration.	Improve access to coverage for birth and death registration in slums, hard to reach areas, hill tracts, coastal areas, islands, tea gardens and Rohingya refugee camps.
B3.8. If only part of the country covered (e.g. urban areas), have alternative ways of obtaining a "sample registration system" (SRS) or a demographic surveillance system (DSS)?	The birth and death registration system by MOLGRD has the countrywide coverage. However, it mainly works for issuing birth and death certificates. Data are not used for vital statistics. BBS conducts sample vital registration system in 1,000 sentinel sites and produces report every year. There is regular conduction of Bangladesh Health & Demographic Survey at certain interval by MOHFW with report generated for national health planning.	There is need for expanding the purpose of birth and death registration project of MOLGRD beyond issuing birth and death certificates only. An integrated and robust all answers CRVS system is absent through effective coordination between MOLGRD, BBS and MOHFW.	Expanding the purpose of birth and death registration project of MOLGRD beyond issuing birth and death certificates only. Establish an integrated and robust all answers CRVS system through effective coordination between MOLGRD, BBS and MOHFW.
B3.9. What has been done in the last 10 years to increase: birth registration? death registration?	(a) Implementation of MOLGRD's Birth and Death Registration Project; (b) Enactment of the 2004 Birth and Death Registration Act making obligation for birth registration within 45 days and death registration within 30 days; (d) National and area targeted campaigns (e.g., national birth	Not applicable.	Use the lessons from the success stories.

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	registration day, campaigns in tea gardens in Sylhet, etc.); (e) Investment in ICT structure and facilities; and (f) Mandatory use of birth certificate as a proof of identity and age for different purposes.		
B3.10. Is late registration tracked and monitored over time and at the subnational level?	No mechanisms to track and monitor late registration	No mechanisms to track and monitor late registration	Introduce tracking and monitoring mechanisms for late registration
B3.11. Is late registration more common in some area than others?	No available information	No available information is available whether or not late registration is more common in some area than others.	Make provision for a reporting output from BRIS to know whether or not late registration is more common in some area than others.
B3.12. What proportion of registered births take place in health facilities?	Current health facility delivery rate is 28.8% (BDHS 2011).	Not applicable.	Not applicable.
B3.13. What proportion of registered deaths take place in health facilities?	It is derived that out total estimated deaths (n=0.838 million), about 4% (n=~33,000) take place in health facilities. It is uncertain what proportion of registered deaths take place in health facilities.	There is no available data on proportion of registered deaths that take place in health facilities.	Establish a system so that proportion of registered deaths that take place in health facilities as well as in homes may be estimated accurately.
B3.14. What proportion of hospitals or other health facilities have registration officers on the premises?	According to the law, the health facilities will serve as the informants for births or deaths. There is no provision for keeping registration officers on the health facility premises.	Health facility authorities are not fully aware that they will have to actively serve as informants to birth and death registration offices for births and deaths occurring in the respective health facility.	Develop an effective communication system with the health facilities so that they play their roles of active informants for all new births and deaths taking place in the respective health facility.
B3.15. Do midwives or other health personnel attending home births also report these births? If so, to whom?	They report new births to the health authority in their line of command. Similarly, community based health assistants report new births to the health authority for immunization administration purpose.	The midwives and health assistants do not report the home births to birth registration authority.	Make coordination system between midwives and health assistants with birth registration authority so that birth information is communicated for registration purpose.
B3.16. Are reported births from such sources routinely compared with registered births?	No, births reported by health staff are neither used for registration of birth by the local administrative bodies nor compared with registered births.	There is no mechanism to report birth information by health staff to birth registration authority.	Introduce a routine mechanism to report by health staff to registration authority and compare information on birth with health authority with birth registration authority.
B3.17. What proportion of births take place in nongovernmental	The Health Bulletin 2012 published by DGHS shows that about 36% of	No system is existing to track birth information from nongovernmental	Make a mechanism to also track births taken place in

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health facilities?	the reported institutional births take place in the private and NGO health facilities.	health facilities to birth registration authority.	nongovernmental health facilities and report the information to the birth registration authority.
B3.18. What proportion of deaths take place in nongovernmental health facilities?	No reliable data are available.	There are no reliable data on proportion of deaths taking place in nongovernmental health facilities.	Make a provision that all deaths taken place in the nongovernmental health facilities are reported to the national health information system and birth and death registration authority using ICD-1CODING SUSTEM.0
B3.19. Does registration involve any financial costs to the family or informant: for births? for deaths?	No fee is collected for registration of birth or issuance of certificate in case of newborn children and children under the age of 18. No fee is collected for registration of death and issuance of death certificate.	Not applicable.	Not applicable.
B3.20. What social services or benefits are linked to birth registration?	According to the 2004 Birth and Death Registration Act, birth certificate is required for school enrolment, registration of marriage, issuance of passport, issuance of driving license, registration of land ownership, recruitment into civil servant service, and preparation of national voter list.	The enforcement of the law for producing birth certificate for receiving certain social services or benefits is weak.	Enhance enforcement of the law for producing birth certificate for receiving certain social services and benefits.
B3.21. What social services, insurance benefits or inheritance transfers are linked to death registration?	Death certificate is required as a proof for inheritance transfers and life insurance claims although there are no explicit legal provisions requiring such proof.	Although there is provision in the law that death certificate will have to be produced for inheritance transfers and life insurance claims, these provisions are not enforced.	Ensure enforcement of law for producing death certificate for inheritance transfers and life insurance claims.
B3.22. If the country used identity cards, how does that system affect vital events registration?	An identity card is issued to individuals at the age of 18 by the Bangladesh Election Commission Secretariat. A birth certificate, among others, is required for such purpose.	Citizens need to possess both birth certificate and National ID card for casting votes in national and local government election. Citizens aged 18 and above are eligible for getting a National ID card. One multi-purpose card could be issued following birth registration.	Explore possibility of introducing one multi-purpose ID card as substitute of birth certificate and also serving purpose of voter ID card.
B3.23. What are the main obstacles to improving civil registration? For	In remote and hard to reach areas, the distance between communities	Obstacles to improving civil registration may vary from one	Keep on watch on local factors that may work as barriers for improving

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example: lack of registrars or places to register; lack of access to health facilities; lack of knowledge about the need to register births and deaths; social stigma of illegitimate children; cultural barriers; financial barriers; illiteracy; shortage of physicians and midwives; other obstacles (please specify).	and registration points may present barriers. It is difficult for the poorer families to bear associated costs e.g. travels and days off work to report birth and death. The recent data indicates that the communities lack knowledge and awareness about the need for timely registration of birth within 45 days of birth. People may also hesitate to report birth of children born out of wedlock due to social stigma. The weak enforcement of the law about need for producing birth certificate during seeking certain services and benefits is also responsible. The 2009 Multiple Indicators Cluster Survey results indicate that the education of mothers and care givers correlates with the rate of birth registration. There is no systematic coordination between community based health personnel and local administrative bodies. Shortage of workforce is also a barrier. Shortage of physicians and midwives also creates barrier to ascertaining cause of death.	geographic location to another. However, a coordinated effort may help improving coverage.	civil registration. Improve coordination between stakeholders both centrally as well as locally to improve coverage of civil registration.
B3.24. When did the country last have a campaign to increase public awareness of the need to register vital events?	The 3rd of July is marked national birth registration day. In 2012, birth registration campaigns targeting marginalized children took place in tea gardens in Sylhet.	Observation of national birth registration day each year on 3rd July is a good example. However, the campaign should be much more visible country-wide and should include death registration also.	Continue observing the national birth registration day with much more visible campaigns and also include death registration campaign.
B3.25. Were the results evaluated?	No.	There is no provision of evaluation of annual national birth registration day campaign.	Make provision of evaluation of campaigns held to increase awareness about civil registration.
B3.26. Is there a committee that regularly monitors and evaluates civil registration completeness?	There are committees at division and district levels.	There is no committee at national level as well as at upazila and community levels to monitor and evaluate civil registration	Scale committees both at national level as well as upazila and community levels to monitor and evaluate civil registration

Question	Bangladesh situation	Gap	Recommendation
		completeness.	completeness. Include representatives from major stakeholders in the committees.
	B.4: Data storage and transmission		
B4.1. Do local registration offices record and store the collected information on births and deaths by: Registry books? Electronic files? Other (please specify)?	Local registration offices record and store the collected information on births and deaths by Registry books as well as electronic file.	Scanned copy of application for birth and death registration and other supporting Papers are not preserved.	Consider possibility of preserving scanned copies of births and deaths registration application forms and of other supporting Papers.
B4.2. Are birth and death records files by: Date of registration? Name? A numbering system or other numerical index? Other (please specify)?	Birth and death records files are prepared by date of registration and a numbering system which is identified as BRN (Birth Registration Number)	Not applicable	Not applicable.
B4.3. What method of record backup is used and how frequently is this done?	Hard disk backup in different servers is used once daily. Main and Backup servers are not kept in different locations.	Main and Backup servers are not kept in different locations.	Establish remote disaster recovery system. Data center of MIS-DGHS may be used additionally.
B4.4. How are birth and death records archived?	Birth and death application forms and supporting papers are archived manually in each registration point.	Birth and death records is not archived electronically.	Make system for electronic archiving of birth and death records.
B4.5. Have records ever been lost or destroyed?	No, report is available as these are preserved in local registration points.	Lack of electronic archive may create risk for loss of birth and death records due to damage or being lost.	Make system for electronic archiving of birth and death records.
B4.6. How can the loss or destruction or records be avoided in the future?	By creating and maintaining a secured electronic archive of birth and death records.	No secured electronic archive of birth and death records exists.	Create and maintain a secured electronic archive of birth and death records.
B4.7. Can individual birth or death records easily be retrieved if needed?	Yes, birth or death records can easily be retrieved if needed	Not applicable.	Not applicable.
B4.8. Have there been instances of fraudulent or multiple registrations?	Due to lack extreme precaution fraudulent or multiple registrations of births may occur.	Lack extreme precaution to protect from fraudulent or multiple registrations of births. Registration staffs also have lack of awareness.	Introduce extreme precaution to protect from fraudulent or multiple registrations of births and enforce law strictly. Increase awareness of registration staffs to protect from such malpractice.
B4.9. What precautions are built into the system to avoid fraudulent or multiple registrations?	Name, parent's name and date of birth are cross checked with parents' BRN number.	Multiple registration may occur to use different date of birth. So, existing cross-checking procedure is inadequate.	Introduce more robust authentication procedure and legal measures to avoid fraudulent and multiple registrations.

Question	Bangladesh situation	Gap	Recommendation
B4.10. Using the flowcharts of data transmission prepared for birth and death records, explain where and how data are being consolidated before transmission.	Data are consolidated in the birth and death registration offices both manually and electronically.	Sufficient vital Statistics is not created to consolidate data from the birth and death registrations both locally or nationally.	Introduce system of vital statistics using the centrally available electronic data in all possible disaggregation with assistance from BBS.
B4.11. Reflecting on the data-flowchart prepared, is there a fixed schedule for transferring data in a timely manner?	Data are submitted either online instantly or from the manual stocks of forms without following any defined schedule.	In some registration points, electronic system is not efficient enough causing lag in transfer of data from paper forms to electronic format.	Strengthen ICT infrastructure to minimize lag of transfer of birth and death registration data from paper form to electronic database.
B4.12. Is this schedule strictly adhered to?	Not applicable.	Not applicable.	Not applicable.
B4.13. Is this schedule routinely monitored by those receiving the data?	Not applicable.	Monitoring mechanism is weak to boost minimizing lag in transfer of data from paper forms to electronic format.	Strengthen monitoring mechanism to boost minimizing lag in transfer of data from paper forms to electronic format.
B4.14. Is there procedure in place to deal with late and non-reporting from local civil registration offices?	The national project office of birth and death registration is now struggling to complete data entry for all paper forms of all birth registrations into database. No procedure is yet in place to deal with late or non-reporting from local civil registration points.	Many paper forms of birth registration are yet not entered in database. Until this lag is minimized, there is no room for putting a procedure in place to deal with late or non-reporting from local civil registration points.	Expedite data entry of paper forms so that all the birth and death registration records are found in database. Then, put a procedure in place to deal with late or not reporting from local civil registration points.
B4.15. If there are procedures in place, what are they?	Not applicable.	Not applicable.	Not applicable.
B4.16. Is the information on the birth and death registration forms kept confidential?	Yes, the information on birth and death registration forms are kept confidential. But, there should clear guidelines about level of confidentiality and who to see the information.	Guidelines are inadequate about level of confidentiality and who to see the information on birth and registration forms or database records.	Establish clear guidelines about level of confidentiality and who to see the information on birth and registration forms or database records.
B4.17. How is confidentiality maintained?	In the local registration office, registers are kept with registrars. Database is accessible only with login name and password and only by authorized persons.	Guidelines are inadequate about level of confidentiality and who to see the information on birth and registration forms or database records and also how to access the database.	Establish clear guidelines about level of confidentiality and who to see the information on birth and registration forms or database records and also how to access the database.
B4.18. Who can access the data and for what purposes?	Registrar for registration; data entry operator for data entry;	There is provision for multi-stakeholders' access to use data for	Awareness Should be created for Data Sharing

Question	Bangladesh situation	Gap	Recommendation
	administrator for system administration. There is no provision of multi-stakeholders access.	sharing.	
B4.19. What checks are made on individual birth and death records to ensure that they are accurate and complete when transferred?	Manual cross checking with birth or death registration application forms.	Not applicable.	The Monitoring System by the Local Authority Should be Strengthened.
B4.20. Are local registration offices routinely contacted for clarification about the statistics by the regional or central level?	Yes. But, regional and central offices do not have adequate manpower to carry on the communication activities.	Inadequate staff in regional and central offices to make communications for clarification and guidance to field offices.	Consider ways so that regional and central offices can make adequate communications for clarification and guidance to field offices efficiently.
B4.21. If so, how frequently is clarification sought?	Two monthly in district level and quarterly in divisional level in physical meeting.	Web based discussion forums, task management system and email communications are usually not used.	Introduce effective electronic communication system.
B4.22. Is there two-way communication and data transfer between central and peripheral offices?	Yes, there is two-way communication and data transfer between central and peripheral offices.	The existing two-way communication and data transfer between central and peripheral offices is not so interactive.	Make the existing two-way communication and data transfer between central and peripheral offices more interactive.
B4.23. Do regional registration authorities routinely receive reports on how the characteristics of their populations compare with the national average?	Regional registration authorities do not routinely receive reports on how the characteristics of their populations compare with the national average. The comparison is done from census data.	Regional registration authorities do not routinely receive reports on how the characteristics of their populations compare with the national average.	Make provision so that regional registration authorities routinely receive reports on how the characteristics of their populations compare with the national average.
C: Death certification and cause of death			
C1: ICD-compliant practices for death certification			
C1.1. How many registered deaths (as a percentage) have a medically certified cause of death?	All hospital deaths and deaths occurring in home and to be buried in any urban graveyard require to be certified by physician. But, cause of death is not required to be written as per ICD-10 codes. However, registration of death with civil registration offices is very low. The MIS-DGHS in its Health Bulletin 2012 published reports on cause of 39,781 out of 49,255 reported deaths occurred in public hospitals in 2011.	Percentage of death registration out of total deaths is very low. Death registration does not require cause of death certification by physician according to ICD-10 code.	Enhance campaigns and other measures to increase percentage of death registration out of total deaths. Use multi-stakeholders' collaboration specially with MOHFW and BBS to improve coverage. Make mandatory provision for death registration with cause of death certification by physician according to ICD-10 code.
C1.2. In the cause-of-death data, is it	In the birth and death registration	In the birth and death registration	Introduce in the birth and death

Question	Bangladesh situation	Gap	Recommendation
possible to separate medically certified deaths and those certified by a layperson?	system, there is no provision of registering cause of death.	system, there is no provision of registering cause of death.	registration system, provision of registering cause of death according to ICD-10 code. Also create mechanism to identify medically certified deaths and those certified by a layperson.
C1.3. Are these data compiled separately in the cause of death statistics for the country?	Not applicable.	Not applicable.	Make provision for compile separately medically certified deaths and those certified by a layperson for cause of death statistics.
C1.4. Are ICD-compliant practices used for death certification in the country?	No. MIS-DGHS started initiative to introduce and scale ICD complaint practices.	ICD-compliant practices for death certification in the country is at the initial stage. No mandatory provision in CRVS system to certify death as per ICD-10 codes.	Scale ICD-compliant practices for death certification in the country. Make mandatory provision in CRVS system to certify death as per ICD-10 codes.
C1.5. Is the standard international form of medical certificate of cause of death (Box 3.4) used for: all deaths? only deaths occurring in hospitals not for those taken place outside hospitals? only deaths occurring in some specific hospitals, such as university or regional hospitals? other deaths (please specify)?	No. MIS-DGHS has just started initiative in the country to initiate and scale standard international form of medical certificate of cause of death.	Standard international form of medical certificate of cause of death is not used in the country for deaths occurring either in hospital or in any other place.	Introduce and scale standard international form of medical certificate of cause of death for all deaths occurring in the country.
C1.6. If the country does not use the standard International form of medical certificate of cause of death, how could it be introduced (specify steps)? What potential actions (e.g. sensitization of medical establishment) would be required?	Train doctors of the hospitals in public, private and NGO sectors. Make mandatory administrative and legal system.	Most doctors of the hospitals in public, private and NGO sectors do not have training on how to fill-in the WHO standard cause of death certificate form, assign ICD-10 codes and use the handbook on medical certification of cause of death. There is no administrative and/or legal binding and enforcement to use standard International form of medical certificate of cause of death.	Train doctors of the hospitals in public, private and NGO sectors. Make mandatory administrative and legal system and enforcement to use standard International form of medical certificate of cause of death.
C1.7. Do doctors know how to correctly complete the death certificate, including the causal sequence and the underlying cause?	Most doctors do not know. Training has been started by MIS-DGHS impart such knowledge. Effort has been undertaken to include content	Most doctors do not know how to correctly complete the death certificate, including the causal sequence and the underlying cause.	Train doctors how to correctly complete the death certificate, including the causal sequence and the underlying cause. Create

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Yes, generally. Yes, always. No, they do not.	in new undergraduate medical curriculum.		awareness among medical teachers to emphasize on teaching students the curricular content on proper death certification.
C1.8. Is there a booklet, brochure or other guideline for doctors explaining how to certify the cause of death and complete the international form properly?	MIS-DGHS published and distributed a book on ICD-10 based morbidity and mortality reporting, which describes in detail all aspects including examples. Training with technical assistance from WHO has also been given to a number of health managers, doctors and staffs. Training is ongoing.	It will be difficult to ensure compliance in a short span of time.	Publish more copies of ICD-10 book for ensuring sufficient copies in each hospital or clinic. Continue training program and advocacy including monitoring and supervision to increase compliance of ICD-10 practice.
C1.9. If such material is not available, what would be involved in preparing it and how could it be distributed?	Not applicable.	Not applicable.	Not applicable.
C1.10. What proportion of death certificates list only one cause of death? (See Box 3.4 about the need to state not only the disease directly leading to death, but also the underlying conditions without which the person would not have died)	There is no practice as yet that can provide sufficient data to generate statistics on proportions of death certificates that have single cause, mode of death instead of underlying cause or no information on interval between onset and death. Except for accidental and early neonatal deaths that often die from a single cause, most deaths result from a sequence of events involving multiple diseases or conditions	There is no practice in the country as yet that can provide sufficient data to generate statistics on proportions of death certificates that have single cause, mode of death instead of underlying cause or no information on interval between onset and death.	Initiate effective measure to write death certificate according to WHO standard cause of death certificate form.
C1.11. What proportion of death certificates report the mode of death instead of the underlying cause of death?	There is no practice as yet that can provide sufficient data to generate statistics to understand mode of death instead of the underlying cause of death.	There is no practice as yet that can provide sufficient data to generate statistics to understand mode of death instead of the underlying cause of death.	Initiate effective measure to write death certificate according to WHO standard cause of death certificate form so that all required internationally suggested statistics can be generated.
C1.12. What proportion of death certificates do not indicate the interval between onset of disease and death?	As WHO standard cause of death certificate is yet not in use in reasonable proportion, almost all death certificates do not contain such information.	WHO standard cause of death certificate is yet not in use in reasonable proportion in the country. So, almost all death certificates do not contain information on interval between	Initiate effective measure to write death certificate according to WHO standard cause of death certificate form so that all required internationally suggested statistics can be generated.

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		onset of disease and death.	
C2: Hospital death certification			
C2.1. In hospitals, who completes the death certificate: the attending doctor? another doctor who did not treat the deceased person before death occurred? a nurse? a medical records officer? other (please specify)?	In case of death in a hospital, the last attending physician, in consultation with the consultant physician if needed, issues the death certificate with cause.	Not applicable.	Not applicable.
C2.2. How are cases of DOA certified?	For dead on arrival (DOA), hospital doctors do not certify the cause of death. They write “Brought dead” on the death certificate.		Need verbal autopsy
C2.3. How common are DOA deaths in hospitals? Do they constitute: less than 10% of deaths? 10–20% of deaths? more than 20% of deaths?	Less than 10%.	Not applicable.	Not applicable.
C2.4. Are the vital events that take place in hospitals registered in the country: at civil registration points in hospitals? by the hospital sending forms to the civil registration office? by the individual family registering after the birth or death has occurred?	It is the responsibility of the parents (person himself/herself in case of adult) to register birth in own responsibility. There is no registration points in hospitals. However, date of birth/death and sex of the individual are written in the discharge letter issued by the hospital, which can be used for registration. Normally, other vital events are not registered by birth and death registration system. The BBS, in its SVRS sites, tracks all vital events.	Hospitals’ legal responsibility as per the law to inform the CRVS authority on birth and death event occurring in the hospitals is not complied due to lack of awareness and weakness enforcement.	Improve awareness of hospitals and enforcement of legal provision to make hospitals more responsive to inform the CRVS authority on birth and death event occurring in the hospitals.
C3: Deaths occurring outside hospital			
C3.1. Is it mandatory to issue a death certificate with the cause of death indicated for people who die at home?	No	It is not mandatory to issue a death certificate with the cause of death indicated for people who die at home.	Make it mandatory to issue a death certificate with the cause of death indicated for people who die at home.
C3.2. If so, are there any quality problems with these certificates and are they ever reviewed?	Not applicable.	Not applicable.	Make it mandatory to issue a death certificate with the cause of death indicated for people who die at home, using verbal autopsy

Question	Bangladesh situation	Gap	Recommendation
			procedure and ensuring quality as far as possible.
C3.3. Is the same cause-of-death form used for deaths in and outside hospital?	Death certificate issued by civil registrar is different from the death certificate issued from the hospitals.	Death certificate issued by civil registrar is different from the death certificate issued from the hospitals.	Review the existing death certificate forms issued by death registrar and hospital to find whether any or both require any modification or improvement.
C3.4. If a different form is used for deaths outside hospital, what information is recorded about the cause of death?	Ideally medical doctors are required to examine the deceased persons before they have died. The certifying physician is usually the person who treated the patient last; s/he certifies the death based on history of final illness or conditions. Most deaths due to natural cause are preceded by a sequence of events involving multiple diseases or conditions, and many have had a number of medical consultations prior to death. Medical records in hospital are often found incomplete and are dumped in the store. Accessing hospital medical records by physician for certification at a later date would be quite difficult. The MOHFW is trying to introduce electronic patient records in hospitals which are expected to improve the situation.	There is lack in compliance among doctors to practice standard guideline to write a medical certificate of death. There is no mechanism to monitor whether they are following standard practice. As a result, there is variation between medical certificates issued by different doctors.	Review the existing death certificate forms issued by death registrar and hospital to find whether any or both require any modification or improvement. Undertake measures so that all doctors follow common standards in issuing death certificates. Ensure that electronic health recordings are introduced both in public and private hospitals.
C3.5. Who prepares the death certificate and certifies the cause of death for people dying outside of hospital: a general practitioner? a coroner or similar? a health official? a civil registrar? other (please specify)?	The family members or relatives provide death information to the civil registrar to get the death registered and receive a death certificate with proof of death by any competent document or certificate issued by competent authority. This formality can be observed within 45 days of death.	Issuance of proper medical death certificate is not a legal binding for burial, which might be instrumental for increasing the coverage of death registration.	Examine possibility of making availability of medical death certificate to be issued by any competent authority (not necessarily by a physician) a legal pre-requisite for burial of any deceased individual.
C3.6. If a doctor is needed, is that person required to examine the	For issuing evidence of death for registration purpose, a physician's	Not applicable.	Not applicable.

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deceased person before they have died?	medical death certificate is not required. However, when a physician issues one, s/he is usually the person who treated the patient last; s/he certifies the death based on history of final illness or conditions.		
C3.7. How are deaths certified in cases where the certifying physician is not the person who treated the patient?	According to law, any competent individual or government or non-government organization, such as, a physician, or local government representative or employer, etc. can issue a proof of evidence for registering death on an individual.	Issuance of proper medical death certificate is not a legal binding for burial, which might be instrumental for increasing the coverage of death registration. In addition to physician, the MOHFW's local community health workers may be given authority to issue medical death certificate. The later can also be recognized as a proof of death for death registration.	Examine possibility of making availability of medical death certificate to be issued by any competent authority (not necessarily by a physician) a legal pre-requisite for burial of any deceased individual. In addition to physician, the MOHFW's local community health workers may be given authority to issue medical death certificate. The later can also be recognized as a proof of death for death registration.
C3.8. Are hospital medical records usually accessible to general practitioners when one of their patients dies at home?	Medical records in hospital are often found incomplete and are dumped in the store. Accessing hospital medical records by physician for certification at a later date would be quite difficult, although not impossible. There is little evidence that Bangladesh doctors try accessing medical records of their patients after patients die. Portability of planned electronic health records may ease the situation.	Because of lack of practice of issuing WHO standard cause of death certificate by physician, patients' general practitioner do not feel need for accessing patients' medical records following death. Accessibility of medical records in hospitals also appear difficult. Portability of planned electronic health records may ease the situation.	Make a system in the country that a medical death certificate would be needed for burial of deceased individual and create easy access to documents in do so. Make sure that the planned electronic health records are electronically portable across geographic locations.
C3.9. Is verbal autopsy routinely used to obtain the cause of death for any non-medically certified deaths in the country?	Recording verbal autopsy (VA) in case of death outside the hospital is not in practice in the country. Initiative is underway to start pilot.	Verbal autopsy is not routinely used to obtain the cause of death for any non-medically certified deaths in the country.	Introduce system so that verbal autopsy is routinely used to obtain the cause of death for any non-medically certified deaths in the country. The MOHFW's community health workers may be trained and assigned for this job.
C3.10. If verbal autopsy procedures are routinely used, do they conform	Not applicable.	Not applicable.	Not applicable.

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to the WHO standards (31)?			
C3.11. Has the WHO standard procedure been modified in any way to make it more applicable to the country? (If so, please specify the modification.)	Not applicable.	Not applicable.	Not applicable.
C4: Practices affecting the quality of cause of death data			
C4.1. To whom, other than the family, is the cause-of-death information for individuals provided (including upon request)?	The cause of death (medical death certificate) is handed to family members or representatives. In case of unnatural death, post-mortem is mandatory, the report of which is also sent to the police or court.	Not applicable.	Not applicable.
C4.2. What information is provided to the family on the death certificate: all the information on the cause-of-death form? an extract for laypersons about the cause of death? other (please specify)?	The family is provided the medical death certificate which is written in the conventional style. If they ask for detail information, it is always determined by the physician how s/he will explain.	Not applicable.	Not applicable.
C4.3. Is it likely that many cases with a sensitive or stigmatizing cause of death (e.g. suicide or HIV/AIDS) would be assigned to a more socially acceptable cause of death?	Majority of the population follow Islam, which does not approve suicide and illegal sexual unions. Relatives of the deceased may request the doctors not to declare a cause such as suicide or HIV/AIDS for stigmatization. As a result, some unnatural deaths are likely to be missed or misclassified.	There remains likelihood that some sensitive cases of deaths (e.g. due to suicide or HIV/AIDS) would be assigned to a more socially acceptable cause of death.	Introduce a mechanism so that the civil registration authority always correctly records cause of death managing various kinds of social issues and privacy protection.
C4.4. Does the death certificate state whether a woman was pregnant, or had recently been pregnant?	Neither the death certificate form nor the death registration form in practice has specific instructions to doctor or the civil registrar to enquire about maternal condition. However, in certain pilot areas maternal death audit program is undergoing.	Neither the death certificate form nor the death registration form in practice has specific item to include information on death of an woman to state whether or not she was pregnant had recently been pregnant.	Consider making provision in the death certificate form or in the death registration form to include information on death of a woman to state whether or not she was pregnant had recently been pregnant.
C4.5. Are maternal deaths reviewed separately from other deaths?	Yes, in certain pilot areas maternal death audit program is undergoing.	Maternal death review is not universal in all areas of Bangladesh or for all maternal deaths.	Consider making provision in the death certificate form or in the death registration form to include information on death of a woman to

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			state whether or not she was pregnant had recently been pregnant.
C4.6. Are perinatal deaths monitored using a special form, as recommended by the WHO?	No, the WHO recommended special death form for monitoring perinatal death is not used for audit and reporting.	The WHO recommended special death form for monitoring perinatal death is not used for audit and reporting.	Make provision for use of the WHO recommended special death form for perinatal death for audit, monitoring and reporting.
C4.7. What training and practice do doctors receive in certifying the cause of death: none? one lecture in medical school or at the hospital? an ICD-compliant training course on certification? on-the-job training? other (please specify)?	Doctors learn about writing medical certificate of death while in internship or on the job from colleagues or superiors, but in conventional way. In medico-legal department, they learn on the job about writing post mortem report. Recently, an initiative has been taken to include teaching during 4th year of undergraduate medical course with Community Medicine and Family Health curriculum. MIS-DGHS started on the job training for doctors to orient them how to write WHO standard medical certificate of death.	Pre-service training of doctors on ICD-compliant death certification is as yet absent in the country. Proper on the job training has just started. Compliance may suffer due to absence of strict enforcement.	Ensure that proper pre-service training of doctors on ICD-compliant death certification is implemented. Scale on the job training on this topic. Produce some competent trainers through external training. Ensure ICD-10 compliant practice by strict enforcement.
C4.8. Would most doctors be aware of the important public health uses of the information they provide on the death certificate?	No. They were not formally taught about this importance. However, they use personal common sense while providing information on the death certificate.	Most doctors are not aware of the important public health uses of the information they provide on the death certificate due to absence of formal training.	Introduce formal teaching of doctors about public health importance of information they provide on death certificate.
C4.9. Has the country evaluated the quality of medical certification?	There has been no systematic evaluation of the quality of medical certification in either public hospitals and or in private and NGO hospitals. However, the medical certification does not follow WHO recommended standard format.	There has been no systematic evaluation of the quality of medical certification in either public hospitals and or in private and NGO hospitals. The medical certification does not follow WHO recommended standard format.	Introduce WHO recommended standard format for medical certification of death and periodic formal evaluation system for improvement of practice.
C4.10. If yes: When was the evaluation done? How was it done? What did it conclude? What follow-up was undertaken to improve certification practices?	Not applicable.	Not applicable.	Not applicable.

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C4.11. Are hospital medical records generally: complete? reliable? easily accessible to the certifier?	Hospital medical records are often incomplete and so not fully reliable. Accessibility is also not professionally handled. However, in certain private hospitals, there remains better situation.	Hospital medical records are often incomplete and so not fully reliable. Accessibility is also not professionally handled. However, in certain private hospitals, there remains better situation.	It is needed to start a systematic evaluation of the quality of medical records in public, private and NGO hospitals with a view to provide appropriate recommendations for improvement.
C4.12. Are other health records, such as from health clinics, general practitioners or family doctors: complete? reliable? easily accessible to the certifier?	Health records, such as from health clinics, general practitioners or family doctors are often incomplete and so not fully reliable. General practitioners and family doctors usually do not maintain medical records in their office. Patients maintain their own medical documents. Accessibility to the certifier is either absent or difficult.	Health records, such as from health clinics, general practitioners or family doctors are often incomplete and so not fully reliable. General practitioners and family doctors usually do not maintain medical records in their office. Patients maintain their own medical documents. Accessibility to the certifier is either absent or difficult.	Expedite implementation of electronic health records of all citizens in electronically portable format so that registrars get information out of this resource.
C4.13. Who certifies whether the cause of death is unnatural (i.e. accident, suicide or homicide)?	Forensic departments of the public hospitals certify the cause of death in cases of unnatural deaths or doubt about cause of death followed by a police case. In rural areas, civil registrars certify cause of accidental death due to drowning, fire, road accident, animal bite, etc.	Not applicable.	Not applicable.
C4.14. If there is a special system for certifying these deaths, please describe how this works and how well it works.	No.	Not applicable.	Not applicable.
C4.15. Are certifying doctors aware of how to report deaths from injuries and external causes according to the ICD rules?	The certifying doctors follow the legal requirement. They are not aware of the international standard procedure.	The certifying doctors follow the legal requirement. They are not aware of the international standard procedure of reporting deaths from injuries and external causes according to the ICD rules.	Train the certifying doctors on international standard procedure of reporting deaths from injuries and external causes according to the ICD rules.
D: ICD coding practices			
D1: Mortality coding practices			
D1.1. Is the ICD used for cause of death statistics?	Recording cause of hospital deaths as per ICD has just been started. Statistics on hospital deaths is published on diagnoses made using	Recording cause of death as per ICD has just been started. Statistics on hospital deaths is published on diagnoses made using conventional	Expedite scaling of hospital death recording and reporting as per ICD to perform and publish statistics as per ICD-10.

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	conventional way. Subsequent statistics will be done using ICD-10.	way.	
D1.2. If so, which revision and edition is currently being used?	ICD-10.	Not applicable.	Not applicable.
D1.3. Is a national language version of the ICD used?	No national language version is needed as concerned doctors, nurses and statisticians have English competency to work on ICD-10.	Not applicable.	Not applicable.
D1.4. Who is the responsible for coordinating the implementation of ICD?	MIS-DGHS of MOHFW.	Not applicable.	Not applicable.
D1.5. Who is responsible for training ICD coders?	MIS-DGHS of MOHFW.	Not applicable.	Not applicable.
D1.6. Are the codes selected for cause of death reporting chosen from the complete ICD list or is coding done from a summary tabulation list of the ICD?	ICD-10 is in initial stage of introduction. Considering the limitation in diagnosis, provisions have been made to record, Chapter No. Block No., ICD 3 digits code and ICD 4 digits code to whatever level possible. All diseases of ICD-10 lists are included.	Not applicable.	Not applicable.
D1.7. If a summary list is used, which list is it?	Not applicable.	Not applicable.	Not applicable.
D1.8. Are coding and ICD selection rules for underlying causes of death data applied?	Training has been given to a number of doctors to follow standard procedure and selection rules. Practice is yet to be seen.	Not applicable.	Not applicable.
D1.9. Is mortality coding centralized or decentralized?	Coding will be done at hospital or source level by the doctors. Because there are no ICD coders in Bangladesh health system and it is not feasible to create separate ICD coders. Data will be fed to online central server.	Not applicable.	Ensure monitoring and supervision so that ICD-10 introduction progresses in planned manner and data are fed to online central server routinely.
D1.10. If coding is decentralized, what quality measures and procedures are in place to ensure national consistency in the application of ICD coding rules?	The initiative of decentralized ICD coding system has just been started. Quality control will be done by local peer review. National formal and normal evaluation will be introduced.	Not applicable.	Ensure that a quality control mechanism exist in each facility backed by national formal and normal evaluation and feedback about the ICD coding practice (morbidity and mortality reporting).

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D1.11. Is cause of death coding done from a copy of the original death certificate or from a transcribed list provided by the civil registration office of from some other summary document?	The initiative of decentralized ICD coding system has just been started in hospitals only. In communities, gradually verbal autopsy system will be introduced. There is no plan as yet on how to communicate the information from MOHFW to civil registration points.	The initiative of decentralized ICD coding system has just been started in hospitals only. In communities, gradually verbal autopsy system will be introduced. There is no plan as yet on how to communicate the information from MOHFW to civil registration points.	Take measures to make decentralized ICD coding system in hospitals successful. Introduce in communities, verbal autopsy system with help of MOHFW's community health care workers. Introduce a clear guideline and procedure of communicating ICD-10 death coding to civil registrars from MOHFW.
D1.12. Is all the information on the death certificate coded or only the presumed underlying cause of death?	It is planned to code only underlying cause of death.	Not applicable.	Not applicable.
D1.13. Is there an established mechanism to query the certifier (doctor) in causes where the coder cannot understand or interpret the reported causes of death on the certificate?	The current procedure of MIS-DGHS for hospital deaths defines that the doctors will write the coding on case sheets and the statistical staff will enter then in database. In case, the statistical staff does not understand, s/he will discuss with the concerned doctor.	Not applicable.	Not applicable.
D1.14. If so, please describe these procedures and discuss their efficacy.	The current procedure of MIS-DGHS for hospital deaths defines that the doctors will write the coding on case sheets and the statistical staff will enter then in database. In case, the statistical staff does not understand, s/he will discuss with the concerned doctor. The process is still in initial stage to formal evaluation or interpret.	Not applicable.	Not applicable.
D2: Mortality coder qualification and tracing			
D2.1. What categories of staff (e.g., physicians, statisticians or health professionals) are doing mortality coding in the country?	Doctors and statistical staffs in hospitals and MIS-DGHS.	Not applicable.	Not applicable.
D2.2. What level of education do mortality coders typically have?	There is no specific cadres for mortality coding. Doctors and statistical staffs in hospitals are being given on-the-job-training.	Not applicable.	Expedite the training to scale introduction in all public and private hospitals within reasonable time.

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D2.3. Are specific training courses provided for mortality coders or do the team on-the-job?	On the job short training has been introduced with technical assistance from WHO.	Not applicable.	Not applicable.
D2.4. If coders are specifically trained to code: Are there sufficient local ICD trainers to meet the need? Who is responsible for delivering the training? What is the length of training and is there a standard curriculum? How often is coder training conducted?	At present there is no sufficient number of local ICD trainers. Professors and doctors in medical schools and hospitals are providing the training. Trainers of trainees are being produced to scale number of trainees. Length of training is 2 days for doctors. Standard training curriculum is used using WHO's 1990 ICD-10 version. The coder training is continuing batch after batch to increase number of trained staffs.	Due to financial limitation, length of training cannot be prolonged. However, to scale introduction of ICD-10 in short span of time, two days' training is more efficient.	Continue the ICD-10 training on morbidity and mortality.
D2.5. Is there a high turnover among coders?	As there is no designated cadre of ICD coders in Bangladesh, and the job will be done doctors and statistical staffs, turnover of coders will not be a problem.	Not applicable.	Not applicable.
D2.6. Are coders recognized within staffing structures as a separate cadre and are coding qualifications recognized separately to other administrative officers?	Separate cadre for ICD coding. It is also not planned or feasible to create such a cadre. Doctors and statistical staffs will do the job.	Not applicable.	Not applicable.
D2.7. Are there local senior trainers who have been trained at WHO-FIC supported training courses?	No. Such opportunity is required to produce local trainers through WHO FIC supported training courses.	There is no WHO-FIC trained local trainers in the country.	Request WHO-FIC to provide training to local trainers in WHO-FIC training course.
D2.8. Do coders have opportunities for ongoing education?	No special cadre of ICD coders exists. There is plan to provide refreshers' training to the doctors and staffs who are engaged in ICD coding.	Not applicable.	Keep provision for providing refreshers' training to the doctors and staffs who are engaged in ICD coding.
D3: Quality of mortality coding			
D3.1. Do all coders have a complete set of ICD volumes available to them when they code?	No, it financially beyond limit of MIS-DGHS to supply all the volumes to all coders. ICD-10 manuals produced locally have been distributed to each health organization. Short guidelines have been provided to trained doctors and staffs. They have been	MIS-DGHS could not provide sufficient number of ICD-10 manual and guidelines to each health organization due to limited number of copies being printed and supplied by WHO.	Request WHO to provide supply of sufficient number of ICD-10 manual and guidelines for distribution among all health organizations adequately.

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	informed links of online resources. More copies of manuals and guidelines are needed to provide sufficient copies to each health organization.		
D3.2. Do all coders have a set of the ACME decisions tables?	Not applicable.	Not applicable.	Not applicable.
D3.3. Do you regularly check: The ICD web site for update to codes and coding practices? The department of health has a web site for update on coding practices?	Yes. There is dedicated team in MIS-DGHS to keep watch on development of ICD coding practices globally and accordingly update own website and training and implementation however according to local context.	Not applicable.	Keep continuing the current dedicated team in MIS-DGHS to keep watch on development of ICD coding practices globally and accordingly update own website and training and implementation according to local context.
D3.4. What processes are in place to assess the quality of cause of death coding and how frequently is this assessed?	Such mechanism will be done in future as not required at this initial stage.	Not applicable.	Create a standing procedure of periodic assessment of the quality of the ICD compliant death coding.
D3.5. Has the quality of mortality coding ever been evaluated?	Requirement for evaluation of quality of ICD compliant mortality coding did not arise yet.	Not applicable.	Create a standing procedure of periodic assessment of the quality of the ICD compliant death coding.
D3.6. If so, was the level of accuracy deemed satisfactory? What systemic issues were identified?	Not applicable.	Not applicable.	Not applicable.
D3.7. What mechanisms are in place to provide feedback to coders on the quality of coding and to correct the problems and issues identified through evaluation and practice?	As ICD compliant death coding system has just been started, there was no need to provide feedback. However, MIS-DGHS has an in-built mechanism to provide feedback to locally working statistical staffs to improve their work quality. The same mechanism will be used in the newly introduced ICD compliant death coding system.	Not applicable.	Strengthen and continue using the MIS-DGHS's in-built mechanism to provide feedback to locally working statistical staffs to improve their work quality for also improving the newly introduced ICD compliant death coding system.
Output			
E: Data access, use and quality checks			
E1 – Data quality and plausibility checks			
E1.1. Are fertility indicators (e.g., crude birth or fertility rate, age – specific fertility rate and total	No. Currently the birth and death registration system of MOLGRDC collect only birth and death	Despite having multiple payers for collecting various kind of maternal and child data, routine reliable	Ensure strong coordination between stakeholders to find a solution to provide data on fertility indicators

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fertility rate) routinely calculated from the civil registration and vital statistics data?	registration data. BBS collects data and produce those indicators from Sample Vital Registration System from 1,000 primary sentinel sites to extrapolate for whole country. The NIPORT does these calculations from periodic DHS survey done earlier every 5 years; but decided to do every 3 years onward. The MOHFW is trying to initiate a mechanism of registering pregnant mothers and under-5 children under COIA initiative which may enable calculate these indicators.	system is yet unavailable to produce fertility indicators (e.g., crude birth or fertility rate, age –specific fertility rate and total fertility rate).	routinely. Support and coordinate with MOHFW's current initiative surrounding COIA initiative, to make it a good routine and effective sustainable procedure to generate data for these indicators.
E1.2. If so, which indicators are calculated?	From SVRS and BDHS data, all fertility indicators are calculated.	Not applicable.	Not applicable.
E1.3. Are mortality indicators (e.g. crude death or mortality rate, age-specific mortality rate, infant mortality rate, neonatal mortality rate and maternal mortality rate) routinely calculated from the civil registration and vital statistics data?	No. The BBS does those each year from SVRS data. However, data reliability is often questioned. The NIPORT does these from DHS data for under-5 children only. The Bangladesh Maternal Mortality Survey (BMMS) does calculate maternal mortality rate every 5 to 10 years.	The birth and death registration system did not as yet produce any statistics from the data it has. The BBS's report is often questioned. The NIPORT produces indicators only for under-5 children from survey every 3 to 5 years. The BMMS produces every 5 to 10 years for maternal death. There exists considerable lack of coordination between stakeholders.	Create a robust system for calculating all mortality indicators from routine data increasing strong and effective coordination between different stakeholders engaging MIS-DGHS's and PMO's effort to develop national population register.
E1.4. If so, which indicators are calculated?	The BBS calculates all the mortality statistics.	Not applicable.	Not applicable.
E1.5. What data sources are used as the denominators to calculate these rate?	The SVRS of BBS uses captures data on all the population living in the SVRS sentinel sites. The NIPORT uses surveys for DHS and BMMS.	Not applicable.	Not applicable.
E1.6. Describe the plausibility and consistency checks that are carried out on the data and indicators before they are released for use (see Box 3.9)	Only BBS and NIPORT perform the plausibility and consistency checks on the data before they release for use.	Conflicts exist in data between these two organizations (BBS vs. NIPORT).	Increase monitoring for ensuring decreasing the inconsistencies among the reported figures. Engage joint experts both from BBS and NIPORT in such checks of any of the two organizations.
E1.7. Are the civil registration and	No. Full coverage of CRVS system is	Not applicable.	Not applicable.

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vital statistics data used to investigate variations in fertility and mortality within the country? If so, describe how this is being done.	still non-existing in the country. The data from SVRS of BBS and BDHS and BMMS of NIPORT are used to investigate variations in fertility and mortality within the country. Variations with time and between geographic locations are investigated. Sometimes separate studies are conducted in low performing areas.		
E1.8. Are the fertility rate derived from civil registration and vital statistics compared with rates derived from other sources?	BBS and NIPORT compares estimation with each other -- and try to explore explanation why the differences occur.	No effective measures were observed to see minimize differences between rates of common indicators between the two organizations.	Establish a full coverage CRVS system to find all data for vital statistics.
E1.10. Did the last census include a question on birth or deaths; for example: Number of children ever born alive or still alive? Date of birth of last child born alive? Whether the last birth was registered? Whether the last death was registered?	No. The last census held on 2011 covered the age only of last alive child.	The last census (2011) did not include any question on birth and death except one question on age of last alive child.	Request BBS to consider inclusion of questions on births and deaths like number of children ever borne alive or still alive, date of birth of last child borne alive, whether the last birth was registered, whether the last death was registered, death in the household in the past 12 to 24 months, etc.. However, a full coverage reliable CRVS system is the most desirable.
E1.11. If so, have the data been analyzed and compared with the vital statistics data?	Not applicable.	Not applicable.	Not applicable.
E1.12. Are other sources used to complete and verify birth and death data?	No. The current Birth and Death Registration system under the MOLGRD verifies birth and death data before registering with those in immunization card or in passport or in SSC certificate.	Coverage of birth and specially of death registration is still not enough.	Undertake appropriate measures to improve coverage of birth and death registration.
E2 – Data tabulation			
E2.1. Are birth and deaths compiled according to date of occurrence or to date of registration?	Birth and deaths compiled according to date of occurrence.	Birth and death registration project does not publish statistical report.	Undertake measures to enable birth and death registration project of MOLGRD to publish statistical report.

Question	Bangladesh situation	Gap	Recommendation
E2.2. Are births and deaths compiled according to place of occurrence as well as place of usual residence?	Births and deaths compiled according to place of occurrence as well as place of usual residence both.	Same as E2.1	Same as E2.1
E2.3. At what level of disaggregation are the birth data tabulated? Report separately for: Sex; Sex, and age of mother; Sex, age of mother and sub region.	In birth and death registration system, disaggregation is possible by age and sex and also by sub region. However, as statistical reports are not published, it is not available for public. The project uses the data for project monitoring purpose. The other surveys, viz., SVRS and BDHS can also do disaggregation analysis.	Same as E2.1	Same as E2.1
E2.4. At what level of disaggregation are the deaths and cause-of-death data tabulated? Report separately for deaths and cause of death for: Sex; Sex and age;	Sex, age and sub region.	Same as E2.1	Same as E2.1
E2.5. Are standard WHO age groups used to tabulate mortality and cause-of-death data?	Only BDHS and BMMS use WHO age groups. MIS-DGHS also uses WHO age groups in all estimates.	WHO age groups are not used in estimation by all stakeholders, viz., by MOLGRD and BBS.	Make provision so that all stakeholders use WHO age groups.
E2.6. What is the smallest subnational level used for tabulation vital statistics? Is this appropriate given the potential uses for disaggregated data?	Union level is the lowest subnational level used for tabulation of vital statistics when done. This is appropriate for potential use of disaggregated data.	Same as E2.1	Same as E2.1
E2.7. Are any of the four standard mortality tabulation lists suggested by the ICD used for data presentation purposes?	No, the four WHO standard ICD mortality tabulation lists are not used for data presentation purposes.	None of the 4 standard ICD standard mortality tabulation lists is used for data presentation purposes.	Use the 4 ICD standard mortality tabulation lists for data presentation purposes.
E2.8. If not which condensed list is used? How was this list derived?	Local conventional system.	Same as E2.7	Same as E2.7
E2.9. Are data compiled into 10 leading causes (separately for men and women and children)?	MIS-DGHS publishes hospital based morbidity and mortality data for 10 leading causes disaggregated by sex and age groups.	Data for non-hospital deaths or morbidity are not available.	Undertake measures to collect data on all mortalities irrespective of where they take place, facility or home.
E2.10. From which list are the 10 leading causes selected?	Morbidity and mortality data collected from public hospitals of Bangladesh.	Data from private health facilities and home mortalities are not available as yet. The CRVS system does not include data on cause of	Undertake measures to collect data from private health facilities and on home mortalities. Include in CRVS system collection of cause of death

Question	Bangladesh situation	Gap	Recommendation
		death according to ICD coding.	data according to ICD 10 coding system.
E2.11. Are ill-defined causes included in the ranking as a category?	No. However, diagnosis quality is variable depending on type of health facilities.	Due to weakness in diagnosis quality, ill- defined causes of mortality may be included in mortality categorization by cause.	Try to improve quality of diagnosis in ascertaining causes of death in death reporting and registration. Exclude ill- defined causes in categorization.
E2.12. What proportion of deaths is accounted for by the 10 leading causes of death?	The MIS-DGHS hospital based statistics show that 85% of tertiary hospital deaths fall within top 10 causes, which is 88% in district hospitals and 85% in upazila hospitals in Bangladesh.	Data on all mortalities both in home, health facilities, and elsewhere by cause according to ICD 10 are not available.	Undertake measures through effective full coverage national CRVS system to capture all deaths under registration process according to ICD 10 and backed by verbal autopsy where a physician is not available or adequate diagnostic facilities are not available for making accurate diagnosis.
E3 - Data access and dissemination			
E3.1. Who are the main users of the vital statistics: within government? outside the government?	Within government: all ministries and respective sub-ordinate organizations; Outside government: academic institutions; development partners and organizations; media, researchers; business houses.	Vital statistics data are inadequate, sometimes unreliable, and not easily available publicly.	Undertake measures for making available adequate vital statistics data, reliably and in easily accessible publicly.
E3.2. Is there an engagement strategy to regularly discuss data needs with the main data users? If so, describe this.	No, an engagement strategy to regularly discuss data needs with the main data users does not exist.	An engagement strategy to regularly discuss data needs with the main data users does not exist.	Develop an engagement strategy to regularly discuss data needs with the main data users.
E3.3. Is it possible to provide an example of how vital statistics have been used to guide policy and practice?	Government use vital statistics data to guide policy and practice, in limited cases, viz., MDG data.	Vital statistics data use are limited to guide policy and practice. Unavailability of adequate, timely and reliable data is one reason.	Conduct advocacy so that vital statistics data are used to guide policy and practice. Make available adequate, timely and reliable vital statistics data.
E3.4. What is the time from the end of the reporting period (e.g. end of calendar year in which births and deaths occurred) to the dissemination of: birth and death statistics? cause-of-death statistics?	There is no such guideline or standing rule. However, generally the time from the end of the reporting period (e.g. end of calendar year in which births and deaths occurred) to the dissemination of: birth and death statistics, and cause-of-death statistics is one year.	Not applicable.	Not applicable.

Question	Bangladesh situation	Gap	Recommendation
E3.5. Are analytical reports about birth, deaths and causes of deaths derived from vital registration produced? If so, include examples.	Usually the birth and death registration project of MOLGRD does not produce analytical report. The MIS-DGHS and BBS produce relevant reports from their own data.	The birth and death registration project of MOLGRD does not produce analytical report.	Make provision for the birth and death registration project of MOLGRD to produce analytical report on its data at least annually.
E3.6. Is there a data-release schedule?	No, there is no data release schedule. But, MIS-DGHS and BBS release summary data annually.	There is no data-release-schedule.	Develop a data release schedule by MOLGRD, MIS-DGHS and BBS.
E3.7. Are vital statistics made available to users as: print? electronic files? web sites? pdfs? interactive tables?	Summary data from MIS-DGHS and BBS are made available on request through any format: print, electronic files, web sites, pdfs, interactive tables, etc. MOLGRD does not provide data to users.	MOLGRD does not provide data to user.	Make provision that MOLGRD provides data to users, on request based on a guideline.
E3.8. Are the vital statistics available free of charge or at a cost? Please explain.	BBS charges some money to provide raw data and it also sells printed publications. MIS-DGHS does not charge any money. MOLGRD does not provide data. Web based information and publications are free of charge.	Not applicable.	Not applicable.
E3.9. What agency publishes the official vital statistics?	BBS and MIS-DGHS.	Not applicable.	Not applicable.
E3.10. How regularly are the data published or released?	Annually. Web based data release is done more frequently.	Not applicable.	Not applicable.

Annex-2

Findings of Rapid Assessment of CRVS System in Bangladesh

Component	Question	Option	Answer Options	Country situation	Comments	Score
Legal Framework for Civil Registration and Vital Statistics	Does the country have legislation that states that birth and death registration is compulsory?	A	Yes – the country has adequate and enforced legislation on civil registration, stating that registration of births and deaths is compulsory	*A: Yes – the country has adequate and enforced legislation on civil registration, stating that registration of births and deaths is compulsory*	Birth and Death Registration Act 2004 exists in Bangladesh. However, the legislation needs further strengthening of enforcement. For birth registration of a newborn, the parents will have to take measure to register the newborn within 45 days of birth by producing medical birth certificate or immunization card. For other age group, parent, children, nearest relatives or person himself/herself will have to take measure to register at any time. Medical birth certificate or any other proof of date of birth will have to be produced. After verification, the registrar will issue an official birth certificate. The procedure of death registration is as follows: Family members, hospital authorities, police, or village police will be responsible for registering the death within 30 days of occurrence. A medical death certificate issued by a qualified doctor will have to be produced. There are penalties worth Tk. 500 or jail up to 2 months with failure to carry out above described responsibilities.	3
		B	Yes – the country has legislation on civil registration stating that registration of births and deaths is compulsory but it is in need of amendments			
		C	Yes – legislation exists but it is not enforced			
		D	No – there is no law that makes it obligatory to register births and deaths			
	Does the country have regulations that oblige all medical establishments to report all vital events to the vital statistics system within a given time?	A	Yes – all medical establishments (public, private, social insurance, others) report these events to the vital statistics system in a timely manner	*B: Yes – regulations exist but not all medical establishments report the events*	The Birth and Death Registration Act 2004 has provision that all medical establishments must report all vital events to the vital statistics system within a given time. However, communication of this information to concerned establishments is inadequate and practice is not satisfactory. There is no evidence that any establishment was penalized for failure to comply with provisions described above.	2
		B	Yes – regulations exist but not all medical establishments report the events			
		C	No - regulations only cover public medical establishments			

Component	Question	Option	Answer Options	Country situation	Comments	Score
		D	No – no regulations exist			
	Does the country have legislation that states that death has to be certified by cause, and specifies who can certify the cause of death?	A	Yes – cause of death must be indicated on the death certificate according to International statistical classification of diseases and related health problems (ICD) rules and procedures, and can only be certified by a medical doctor	*D: No – it is not necessary to indicate the cause of death on the death certificate or at any stage of the registration of death*	There is currently no legislation that states that death has to be certified by cause and how to record the cause of death. Most facilities provide death certificates but cause of death information is not provided in the death certificate according to International standard of certification of death.	0
		B	Cause of death must be indicated on the death certificate but it is not specified who can certify the cause			
		C	Cause of death must be indicated but only broad categories of cause are necessary, and the (non-medical) registrar or another local official is usually the certifier			
		D	No – it is not necessary to indicate the cause of death on the death certificate or at any stage of the registration of death			
Registration Infrastructure and Resources	Are there adequate numbers of civil registration offices	A	Yes – the country has sufficient places where citizens can register births and deaths	*A: Yes – the country has sufficient places where citizens can*	The Bangladesh local government has registration points that are well distributed throughout the country. The union parishad, municipality and city corporation offices, Cantonment Board and	3

Component	Question	Option	Answer Options	Country situation	Comments	Score
	or registration points to cover the whole country?	B	Urban areas are well covered but there is only partial coverage of rural areas	*register births and deaths*	Bangladesh Mission abroad are designated offices for birth and death registration. The Review Committee observed that children are registered near hundred percent by the immunization program of health service. If community clinics and domiciliary government health staffs are engaged in birth and death registration, immediate positive results may be achieved.However, the Review Committee recommended the existing infrastructure be evaluated and assessed radically since digital registration provides an opportunity for less dependence on physical infrastructure.	
		C	Only the urban areas are well covered			
		D	No – only the capital city has registration offices			
	Do civil registration offices have adequate equipment to carry out their functions (for example, forms, telephones, photocopiers and computers)?	A	Yes – necessary supplies such as forms, paper and pens are adequate, and equipment such as telephones, photocopiers, and computers is widely available	*A: Yes – necessary supplies such as forms, paper and pens are adequate, and equipment such as telephones, photocopiers, and computers is widely available*	The Review Committee largely agreed that Option A was the best choice to describe the current state of the civil registration points of Bangladesh. Weaknesses in the system along with weak monitoring and supervision mechanisms are more important than the issue of supplies. In a few months, community clinics located in almost every rural community of Bangladesh will be provided with a laptop and Internet modem. Internet connectivity already exists in all union parishad through Union Information & Service Centers (UISCs) and union parishad themselves. These are strong resources that can be incorporated into a good national CRVS system. The Review Committee agreed, however, that currently no systematic information system is in place to signal supply shortfalls. Such an information system can be introduced to further strengthen the system.	3
		B	Supplies such as forms, paper and pens are generally available everywhere, but there are widespread shortages of telephones, photocopiers and computers			
		C	In peripheral offices, supplies are often short, and only the central or provincial offices have telephones, photocopiers and computers			
		D	No – availability of both supplies and equipment is a problem in all civil registration offices			
	Have registrars received training to	A	Yes – all registrars have received adequate training	*B:All registrars receive some training but the*	The Birth and Death Registration project of the MOLGRD in Bangladesh provides technical support and continuous training to	2

Component	Question	Option	Answer Options	Country situation	Comments	Score
	carry out their functions?	B	All registrars receive some training but the training is insufficient, and skills and knowledge are largely acquired on the job	*training is insufficient, and skills and knowledge are largely acquired on the job*	local government staffs to carry out their functions. However, the quality and frequency of these trainings are yet to be determined. Although the MOHFW field staff (HAs and FWAs) registers births of children in immunization cards, these registrations are not used for the birth and death registration project or CRVS. The training provided to the HAs and FWAs by the MOHFW does not include methods of registering births and deaths, causes of deaths, and other data elements of CRVS. The Review Committee recommended that key staffs representing other ministries be included in CRVS efforts and future trainings.	
		C	Most registrars (particularly in smaller offices) receive only on-the-job training			
		D	No – lack of training is a serious problem and has a negative effect on the functioning of civil registration			
Organization and Functioning of the Vital Statistics System	How well do the different government agencies and departments responsible for civil registration and vital statistics systems collaborate? (These include departments of health, civil registration and local government, statistics, and others)	A	The involved agencies collaborate very well and there is an interagency committee to ensure that the civil registration and vital statistics systems interact seamlessly	*D: There is little interagency collaboration, with the various agencies functioning independently, resulting in problems such as duplication of work and inconsistencies in the estimates derived from vital statistics issued by each agency*	Currently each of the relevant ministries work alone without any effective methods to collaborate	0
		B	Although there is no formal interagency committee, the agencies involved have regular meetings to identify and resolve problems			
		C	There is no interagency committee, which delays efforts to resolve problems and can lead to serious data quality issues and bottlenecks (e.g. in data transfer)			

Component	Question	Option	Answer Options	Country situation	Comments	Score
		D	There is little interagency collaboration, with the various agencies functioning independently, resulting in problems such as duplication of work and inconsistencies in the estimates derived from vital statistics issued by each agency			
	Can the vital statistics system generate both national and subnational statistics on births and deaths each year?	A	Yes – annual statistics are generated on births, deaths, and causes of death by sex and age at both national and for all subnational levels	*C: The vital statistics system can generate births and deaths by sex and age for reporting regions, not for whole country; cause of death data are obtained only from hospitals*	Until now full coverage of population for CRVS is absent in the country. The Sample Vital Registration System (SVRS) based on sentinel sites routinely conducted by the Bangladesh Bureau of Statistics of the Ministry of Planning is the only source of population and demographic estimates in the inter-census periods. The BBS makes the estimates based on CRVS data collected from 1,500 static primary sampling units each comprising of 250 households spread across the country. It then makes age and sex disaggregated regional and national figures through data extrapolation.	1
		B	Annual statistics on births and deaths by sex and age are generated at national and subnational levels, but statistics on cause of death by sex and age are only available nationally			
		C	The vital statistics system can only generate births and deaths by sex and age for reporting regions and not for the whole country; cause of death data are obtained only from hospitals			
		D	No – the information collected by the civil registration system is not compiled for statistical purposes			

<table>
<tr><th>Component</th><th>Question</th><th>Option</th><th>Answer Options</th><th>Country situation</th><th>Comments</th><th>Score</th></tr>
<tr><td rowspan="4">Completeness of Registration of Births and Deaths</td><td rowspan="4">According to the most recent evaluation, how complete is birth registration in your country?</td><td>A</td><td>A recent evaluation (that is, in the last 10 years) showed that completeness of birth registration was 90% or higher (specify the date and method used to calculate completeness, and who calculated it)</td><td rowspan="4">D: There has not been a recent evaluation of the completeness of birth registration.</td><td rowspan="4">No formal evaluation has been conducted to determine the completeness of birth registration in Bangladesh. Based on the expertise of the Review Committee, members agreed that birth registration within the recommended period of 45 days after birth, or even a year after birth is not enough. Birth & Death Registration Project claims to have more than 150 million paper records, of which over 50 million were computerized. However, the project is unable to tell exact number of children who remain outside registration system. On the other hand, the immunization registration system of MOHFW is often reaching greater than 99% of the children and presents an opportunity to capitalize on this high immunization coverage. Given the completeness and robustness of the immunization registration systems in Bangladesh, the review committee members agreed that there is a need for improved coordination between immunization centers and local government registration offices.</td><td rowspan="4">0</td></tr>
<tr><td>B</td><td>A recent evaluation showed that completeness of birth registration was between 70% and 89% (specify the date and method used to calculate completeness, and who calculated it)</td></tr>
<tr><td>C</td><td>A recent evaluation showed that completeness of birth registration was between 50% and 69% (specify the date and method used to calculate completeness, and who calculated it)</td></tr>
<tr><td>D</td><td>Either – a recent evaluation showed that less than 50% of all births were registered (specify the date and method used to calculate completeness, and who calculated it) or – there has not been a recent evaluation of the completeness of birth registration</td></tr>
</table>

Component	Question	Option	Answer Options	Country situation	Comments	Score
	According to the most recent evaluation, how complete is death registration in your country?	A	A recent evaluation (that is, in the last 10 years) showed that completeness of death registration was 90% or higher (specify the date and method used to calculate completeness, and who calculated it)	*D: There has not been a recent evaluation of the completeness of death registration*	No formal evaluation has been conducted on the completeness of death registration in Bangladesh. Existing resources for data and information on deaths need extensive review. However, it is assumed that coverage of death registration is far from the actual number of deaths. Furthermore, there is currently no system to systematically review cause of deaths and issuing standard International Certification of Death using ICD-10 recommendation. However, MIS, DGHS, with assistance from WHO, recently introduced training program on proper certification of deaths to begin from hospital in-patients.	0
		B	A recent evaluation showed that completeness of death registration was between 70% and 89% (specify the date and method used to calculate completeness, and who calculated it)			
		C	A recent evaluation showed that completeness of death registration was between 50% and 69% (specify the date and method used to calculate completeness, and who calculated it)			
		D	Either – a recent evaluation showed that less than 50% of all deaths were registered (specify the date and method used to calculate completeness and who calculated it) or – there has not been a recent evaluation of the completeness of death registration			
Data Storage and Transmission	How are birth and death records transmitted from local and regional	A	All information is exchanged electronically from local to regional offices, then to a central office	*A: All information is exchanged electronically from local to regional*	Paper forms are used at the lowest registration points for collecting information from informants, including union parishads, municipalities, city corporations and cantonment boards. These points then enter the data directly to the central server through a	3

Component	Question	Option	Answer Options	Country situation	Comments	Score
	offices to a central storage in the capital city?	B	Paper copies are sent from local offices to the regional office and processed there for electronic transmission to the central office	*offices, then to a central office*	web-based system. The BBS also collects CRVS data on paper forms, which are send to the central facility for entry in stand-alone computers for analysis and interpretation. The hospitals under MOHFW sent compiled cause of death data for each death case through excel files to MIS, DGHS by email, which then compiled and analyzed. Efforts are undergoing to deploy case by case recording of patient data for registration and discharge through special software called DHIS 2.9 to be later migrated to a hospital management software (OpenMRS). This system will enable receipt of facility based quality data on births and deaths through the computerized online system.	
		C	The system is still mainly paper based, with copies sent from local offices to the regional office, where they are scanned, then sent to the central office for processing			
		D	Paper copies are used throughout the system to transfer birth and death records to a central storage facility			
	What procedures are in place to ensure that all local and regional offices report to the central office within agreed times?	A	There is an agreed schedule for reporting to the central office, with reporting deadlines taken seriously and closely monitored – it is rarely necessary to send out reminders	*A*- There is an agreed schedule for reporting to the central office, with reporting deadlines taken seriously and closely monitored – it is rarely necessary to send out reminders. However, there is backlog in transfer of data from paper to electronic records.	In case of Birth & Death Registration Project of MOLGRD, data are first collected in paper records. Then, they are fed into electronic system at local level to transmit to central server immediately. There is a backlog of transferring data to electronic system. For example, as yet >150 million paper records are in stock, but >5 million are in electronic database.	3
		B	An agreed schedule for reporting to the central office exists and this is largely adhered to – delays in local and regional offices are usually communicated to the central office			

Component	Question	Option	Answer Options	Country situation	Comments	Score
		C	Although there is a schedule of reporting from local and regional offices, this is not strictly adhered to and there is currently little that the central office can do to ensure the timely transfer of data			
		D	The local and regional offices report to the central office with erratic timelines, and there is little effort by the central office to encourage more timely and regular reporting			
ICD-Compliant Practices and Certification within and outside Hospitals	Does the country use the standard International form of medical certificate of cause of death for reporting?	A	Yes – the form is always used by doctors to certify cause of death	*D: No – the form is not used for certifying causes of death*	Bangladesh does not use the standard International form of medical certificate of cause of death reporting. However, the MOHFW has recently initiated efforts to introduce the ICD-10 system in all public hospitals. Most private hospitals do not use standard International Form. However, the system in a few state of the art private hospitals is unknown to the Review Committee, which needs to be further explored.	0
		B	The form is always used when deaths occur in health facilities, but is not generally used outside health facilities			
		C	The form is used to certify death only in major hospitals			
		D	No – the form is not used for certifying causes of death			
	When medical certification of cause of death is rare, is verbal autopsy1 routinely	A	Yes – verbal autopsy is routinely applied to certify death using the international standard tool or a similar questionnaire based on this	*D: Verbal autopsy is not routinely used to determine cause of death in cases where the death is not*	Verbal autopsy is not routinely used in Bangladesh.	0

Component	Question	Option	Answer Options	Country situation	Comments	Score
	used to determine the cause of death? (This question does not apply to countries where all deaths generally are medically certified as part of civil registration. Countries in this category should give themselves a score of 3)	B	Verbal autopsy using the international standard tool is progressively being introduced but is not currently in general use	*certified by a physician*		
		C	Verbal autopsy is used but is not based on the international standard tool			
		D	Verbal autopsy is not routinely used to determine cause of death in cases where the death is not certified by a physician			
Practices Affecting the Quality of Cause-of-Death Data	What training do doctors receive for certifying the cause of death?	A	All medical students are introduced to the ICD during their studies, and are taught how to certify the cause of death and correctly complete the medical death certificate	*D: No training or on-the-job instructions in the ICD and death certification is given to doctors*	No training or on-the-job instructions in the ICD-10 and death certification has previously been given to doctors. However, the MOHFW has started training for selected doctors to use ICD-10 in death reporting and writing death certificates. In medical colleges of Bangladesh, no formal training is given on use of ICD-10 or writing standard death certificates. The MIS, DGHS recently started efforts to include use of ICD-10 in morbidity and mortality reporting in standard protocols.	0
		B	No special training in the ICD or death certification is included in the medical curriculum, but all medical students learn about the ICD and death certification during their internships			
		C	No special training in the ICD or death certification is included in the medical curriculum, and only limited on-the-job training is available during internships			

Component	Question	Option	Answer Options	Country situation	Comments	Score
		D	No training or on-the-job instructions in the ICD and death certification is given to doctors			
	What percentage of causes of death in your country are classified as "Ill-defined and unknown causes of mortality" (as defined in Chapter XVIII of ICD-10)?	A	<10%	*D: 40% or more*	The ICD classification system is currently not being used in Bangladesh. Given that this system in not being used, the Review Committee agreed that it is safe to conclude that greater than 40% of deaths are being classified as "Ill-defined and unknown causes of mortality"	0
		B	10-19%			
		C	20-39%			
		D	40% or more			
ICD Coding Practices	In your country, is cause of death coded according to a national language version of the ICD?	A	Yes – ICD coding is done using a national language version of the ICD or a nationally agreed international language	*D: No – the ICD is not used*	ICD-10 is not being used. However, recent initiatives have been put into place to introduce the system for mortality reporting. Currently WHO's ICD-10 English version is being used. There is no plan to make a local language version.	0
		B	ICD coding is done, but no national language version of the ICD is available, which makes the coders' task more difficult			
		C	ICD coding is done according to a short list in the national language			
		D	No – the ICD is not used			
Coder Qualification and Training, and Quality of Coding	What qualifications do mortality coders have for coding mortality in accordance with ICD	A	Mortality coders must pass a formal test following a compulsory and intensive ICD-training course; additional courses are offered as needed	Doctors have only recently received ICD system training and there are no mortality coders in Bangladesh	There are no mortality coders in Bangladesh. MOHFW of Bangladesh has started to prepare doctors on the application of the ICD system. It is not financially feasible to recruit new ICD coders. Therefore, given these efforts of the MOHFW, and for the purpose of this rapid assessment, mortality coders in Bangladesh	0

Component	Question	Option	Answer Options	Country situation	Comments	Score
	principles and rules?	B	Mortality coders are given a short training course in the ICD and pass a basic test. Complex issues are learnt on the job from more experienced coders		were defined as doctors who have received or will be receiving training in the ICD system. Given that these training efforts have only recently been introduced, instructions are minimal and the coverage of ICD training is low. Therefore a score of 0 most closely reflects the current situation in Bangladesh. In four districts of Bangladesh, doctors are conducting maternal death audits to understand why maternal deaths are occurring.	
		C	New coders are instructed by more experienced coders; new coders are given the ICD volumes and expected to learn on the job			
		D	New coders are provided with minimal instructions from other coders and receive incomplete ICD materials			
	What quality assurance procedures are in place for checking the coding?	A	A national regulatory procedure is in place to periodically review the quality of coded certificates, and feedback is given to coders so they can improve if necessary	*D: No procedures exist and no evaluations of the quality of coding have been carried out*	The ICD coding system is currently being introduced by MOHFW. No quality assurance procedures are applied as yet. However, a computer-based system will be used to match ICD-10 coding with diagnosis. However, due to absence of diagnostic facilities, clinical diagnosis may often be less reliable.	0
		B	National evaluation of a random sample of coded certificates takes place occasionally to monitor the quality of the coding			
		C	Quality evaluation is left to local supervisors who check the work of individual coders on an ad hoc basis			
		D	No procedures exist and no evaluations of the quality of coding have been carried out			

Component	Question	Option	Answer Options	Country situation	Comments	Score
Data Quality and Plausibility Checks	What consistency and plausibility checks on fertility and mortality levels are carried out before the data are released?	A	Checks on overall levels of fertility and mortality derived from the vital statistics data are made routinely by calculating rates and comparing these over time; rates are also compared to data derived from other sources, such as censuses and surveys	*B: Checks on overall levels of fertility and mortality derived from vital statistics data are undertaken by calculating rates and comparing these to earlier time series*	Fertility and mortality statistics are done by national surveys (MOHFW) and SVRS (BBS). Strict survey quality checking mechanism is observed during data collection. Comparison with earlier and other surveys and time series data are used for quality checks.	2
		B	Checks on overall levels of fertility and mortality derived from vital statistics data are undertaken by calculating rates and comparing these to earlier time series			
		C	Checks are limited to computer programmes that simply look for compilation errors before the data are published			
		D	No specific checks are routinely carried out for data quality and plausibility of birth and death statistics			
	What consistency and plausibility checks are applied to data on cause of death?	A	In addition to checking the stability of patterns in cause of death over time, the proportion of ill-defined and unknown deaths is routinely monitored, and the age and sex patterns for major causes of death are checked for plausibility	*D: There are no consistency and plausibility checks routinely carried out on data for cause of death*	There is no consistency and plausibility checks routinely carried out on data for cause of death	0

Component	Question	Option	Answer Options	Country situation	Comments	Score
		B	Routine checks of the consistency of patterns in cause of death are made to ensure that mortality from any disease group does not vary significantly from year to year, and that any fluctuations can be explained			
		C	Checks are limited to automated checks for compilation and data entry errors			
		D	There are no consistency and plausibility checks routinely carried out on data for cause of death			
Data Access, Dissemination and Use	Does the country publish or make available annual numbers of births disaggregated by sex, age and geographical or administrative region?	A	Yes – annual data on births are published by all three disaggregation (sex, age and geographical or administrative region) Please indicate name of publication or web address where these data can be found	*A: Yes – annual data on births are published by all three disaggregation (sex, age and geographical or administrative region)*	Annual data on births are published by all three disaggregation (sex, age, and geographical or administrative region) (SVRS, BBS)	3
		B	Annual data on births are published according to any two disaggregation			
		C	Annual data on births are available but disaggregated by sex only			
		D	No annual statistics on birth are published			

Component	Question	Option	Answer Options	Country situation	Comments	Score
	Does the country publish or make available annual numbers of deaths disaggregated by sex, age and geographical or administrative region?	A	Yes - annual data on deaths are published by all three disaggregation (sex, age and geographical or administrative region). Please indicate name of publication or web address where these data can be found	*A: Yes - annual data on deaths are published by all three disaggregation (sex, age and geographical or administrative region).*	Annual data on deaths are published by all three disaggregation in the SVRS Report by the BBS	3
		B	Annual data on deaths are published according to any two of the above disaggregation			
		C	Annual data on deaths are available but disaggregated by sex only			
		D	No annual statistics on death are published			
	What is the delay between the reference year and the time when detailed national statistics on cause of death, classified by sex and age, are made available to the public?	A	Less than 2 years	*A: Less than 2 years*	MIS, DGHS collects cause of death data from public hospitals and a report is published and made available to the public, electronically and via print every year.	3
		B	More than 2 years but less than 3 years			
		C	More than 3 years but less than 5 years			
		D	5 years or more			
	How are data on vital events used for policy and programme purposes? (The group should discuss actual	A	Data on births, deaths, and causes of death are widely used for socioeconomic planning and for monitoring the health status of the population, including the use of data on cause of death for public health purposes	*B: Data on births and deaths are used for reporting on health-related indicators such as the* *Millennium Development Goals*	No comments	2

Component	Question	Option	Answer Options	Country situation	Comments	Score
	examples of where vital registration data are used)	B	Data on births and deaths are used for reporting on health-related indicators such as the Millennium Development Goals and other national health-related goals, but cause-specific data are rarely used for public health purposes	*and other national health-related goals, but cause-specific data are rarely used for public health purposes*		
		C	Only data on births are used for reporting on some indicators, such as fertility			
		D	Data from the civil registration and vital statistics systems are not routinely used for policy and programme purposes			

Area-wise situation analysis of the CRVS Rapid Assessment

1. **Legal Framework for civil registration and vital statistics: [Highest possible score: 9; Assessed score: 5]**

   Birth and death registration legislation currently exists in Bangladesh, but the legislation needs strengthening of enforcement. Moreover, there is no known evidence of any regulation that obliges all medical establishments to reports all vital events to the vital statistics system within a given time. There is also currently no regulation that requires deaths to be certified with a cause-of-death, and there are no guidelines on who can certify the cause of death. Based on the assessment the Review Committee recommended that: *The Birth and Death Registration Act (2004) should be revised to include shortfalls mentioned above.*

2. **Registration Infrastructure and resources: [Highest possible score: 9; Assessed score: 8]**

   The Bangladesh local government has registration points that are well distributed through the country. These include all union parishad, municipalities and city corporation offices as designated points for birth and death registration. These offices are adequately staffed with supplies and equipment. Local government staffs have also received technical support and continuous training from the concerned project of the MOLGRD in Bangladesh. In this area the Review Committee made following conclusion and recommendations:

The registration infrastructure and resources are considered to be adequate.

Given the success in registering children nearly 100% by the immunization programme of the DGHS, community clinics and domiciliary government health staffs should be included into CRVS efforts in order to achieve rapid and sustainable results.

Existing infrastructure must be assessed radically since digital registration provides an opportunity for less dependence on physical infrastructure and the opportunity to reach isolated populations.

Institutionalizing an information system that signals supply shortfalls in local offices.

To review frequency and inclusion criteria for trainings provided by the concerned project of the MOLGRD.

3. **Organization and functioning of the vital statistics system: [Highest possible score: 6; Assessed score: 1]**

   The organization and functioning of the vital statistics systems in Bangladesh requires substantial improvement in all areas. Currently, each of the relevant ministries works alone, without any effective way to collaborate between them.

   The set question regarding availability of disaggregated vital statistics data and its possible set answers are little bit inappropriate for the country. SVRS project of BBS providing disaggregated vital statistics information at regional and national levels, but not throughout the country at all levels. Moreover, cause of death data can be obtained only for hospital deaths. Review Committee made following recommendations:

Effective collaboration between all relevant agencies should be institutionalized

Measures should be in place for including professionally validated cause of death for all registered deaths in the country.

4. **Completeness of birth and death registration: [Highest possible score: 6; Assessed score: 0]**

There is poor coverage of births and deaths registration by the local government project, but no evaluation has been yet conducted to assess the percentage of completeness in both registrations. Furthermore, no regulation currently exists to certify cause of death using the ICD-10 coding system. CRVS Review Committee recommends:

An evaluation of the status of completeness of births and death registration might be conducted.

Measures to be taken to include professionally validated causes in all registered deaths as per ICD – 10 coding system.

5. **Data storage and transmission: [Highest possible score: 6; Assessed score: 6]**

The CRVS Review Committee of Bangladesh agreed that the question regarding transmission of data to the national level is not applicable to the CRVS system in Bangladesh, given that all information is electronically exchanged between the local offices to central office. Hence, one of the two questions in the area has not been included for assessment.

In case of Birth & Death Registration Project of MOLGRD, paper forms are used at the lowest registration points for collecting information from informants, including union parishads, municipalities and city corporations. Then, these points enter the data directly to the central server through a web-based system. There is a backlog of transferring data to electronic system. For example, as yet >150 million paper records are in stock, but >5 million are in electronic database.

The BBS also collects CRVS data through paper forms and then transfers this to an electronic format. Death records from all hospitals under the MOHFW are compiled and electronically sent to MIS, DGHS for analysis.

The Review Committee agreed that data storage and transmission infrastructure in Bangladesh is satisfactory.

6. **ICD-compliant practices and certification within and outside hospitals: [Highest possible score: 6; Assessed score: 0]**

The standard international form of medical certificate of cause of death reporting is not being used in Bangladesh. Most private hospitals also do not use standard International Form. Efforts to introduce the ICD-10 system in all public hospitals have begun through initiative of MIS-DGHS. Verbal autopsy is also not routinely used in Bangladesh.

The Review Committee recommended as follows:

The standard international form of medical certificate with cause of death reporting as per ICD – 10 recommendations should be introduced for all registered deaths.

7. **Practices affecting the quality of cause-of-death data: [Highest possible score: 6; Assessed score: 0]**

Determination and recording of cause of death as per ICD – 10 coding has not been introduced in the country. Hence, so long, doctors were not trained in using ICD – 10 mortality codes during recording of deaths in their private or public institutions.

Given the situation it was assumed during assessment that most of the stated causes of deaths were ill-defined and unknown causes.

8. ICD coding practices: [Highest possible score: 3; Assessed score: 0]

ICD-10 mortality coding is yet to be introduced in Bangladesh. Recent initiative of providing training to doctors on ICD-10 coding has utilized WHO's English version and there are no plans to make this available in the local language.

9. Coder qualification and training and quality of coding: [Highest possible score: 6; Assessed score: 0]

There is no mortality coder in Bangladesh. MOHFW of Bangladesh has started to prepare doctors on the application of the ICD system. It is not financially feasible to recruit new ICD coders. Therefore, given these efforts of the MOHFW, and for the purpose of this rapid assessment, mortality coders in Bangladesh were defined as doctors who have received or will be receiving training in the ICD system. Given that these training efforts have only recently been introduced, instructions are minimal and the coverage of ICD training is low. In four districts of Bangladesh, doctors are conducting maternal death audits to understand why maternal deaths are occurring. Regarding quality of coding, it was understood that the ICD coding system is at the stage of beginning of introduction. Hence, No quality assurance procedure is applied yet. However, after introduction, a computer-based system will be used to match ICD-10 coding with diagnosis. Given the context of current situation, country does not get any score greater than "0".

10. Data quality and plausibility checks: [Highest possible score: 6; Assessed score: 2]

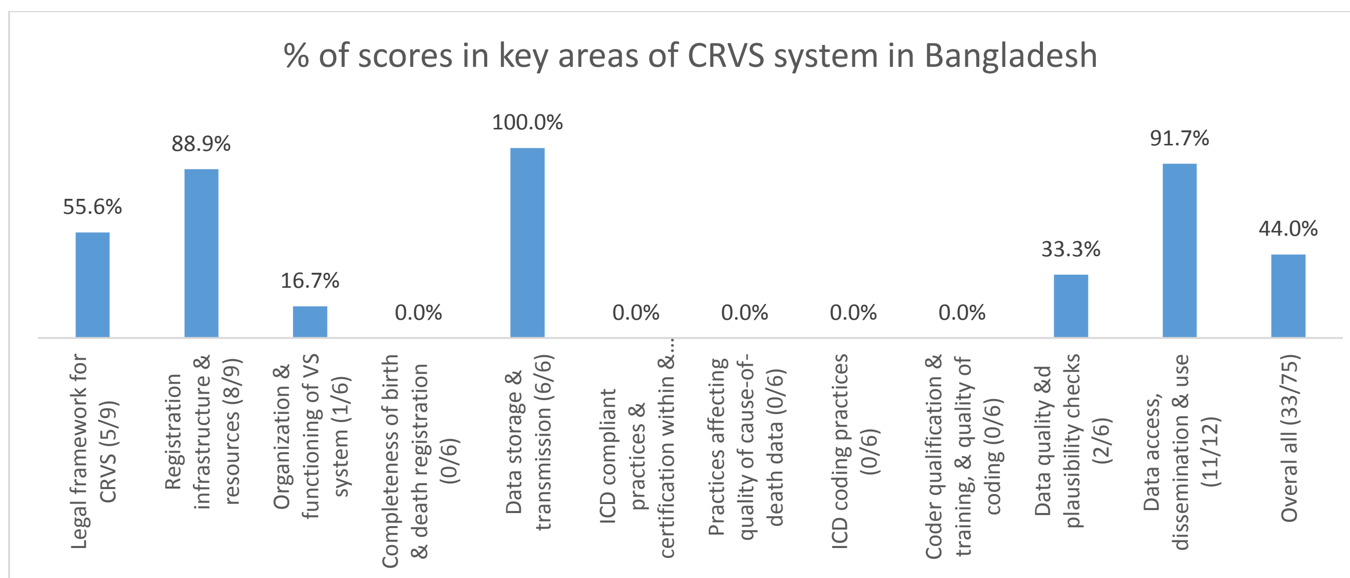
Strict survey quality checking mechanisms are observed during data collection of fertility and mortality statistics of national surveys. Additionally, comparisons with previous and other surveys, and time series data are used to assess consistency. However, no consistency and plausibility checks are carried out on data for cause of death.

11. Data access, dissemination and use: [Highest possible score: 12; Assessed score: 11]

The Review Committee observed that the result of the assessment in this area is satisfactory. The SVRS Report from the BBS publishes annual data on births and death by all three disaggregation: sex, age, and geographical or administrative region. MIS, DGHS collects cause of death data from all hospitals and publishes a report every year. Data on births and deaths from all sources are used for reporting health related indicators, but cause specific data is not routinely used for public health purposes.

Tabulation of scores after rapid assessment of CRVS system in Bangladesh

Sl. No.	Area of CRVS system	Number of Questions assessed	Total possible Score	Score after rapid assessment	Score (%)	Rating
1.	Legal framework for civil registration and vital statistics	3	9	5	55.6%	Weak
2.	Registration infrastructure and resources	3	9	8	88.9%	Satisfactory
3.	Organization and functioning of the vital statistics system	2	6	1	16.7%	Dysfunctional
4.	Completeness of birth and death registration	2	6	0	0.0%	Dysfunctional
5.	Data storage and transmission	2	6	6	100.0%	Satisfactory
6.	ICD compliant practices and certification within and outside hospitals	2	6	0	0.0%	Dysfunctional
7.	Practices affecting the quality of cause-of-death data	2	6	0	0.0%	Dysfunctional
8.	ICD coding practices	1	3	0	0.0%	Dysfunctional
9.	Coder qualification and training, and quality of coding	2	6	0	0.0%	Dysfunctional
10.	Data quality and plausibility checks	2	6	2	33.3%	Dysfunctional
11.	Data access, dissemination and use	4	12	11	91.7%	Satisfactory
Total=		25	75	33	44.0%	Weak
Interpretation of the score: <34% = Dysfunctional; 34 – 64% = Weak; 65 – 84% = Functional but inadequate; and 85 – 100% = Satisfactory						



Interpretation of the score: <34% = Dysfunctional; 34 – 64% = Weak; 65 – 84% = Functional but inadequate; and 85 – 100% = Satisfactory

Conclusion and recommendation

It is evident from the rapid assessment that the Civil Registration and Vital Statistics System (CRVS) in Bangladesh is not functioning well. Out of assessed eleven areas of the system, only three areas were found to be satisfactory. These three areas are births and deaths registration infrastructure; data storage and transmission; and data access, dissemination and use. One area, the "Legal framework for civil registration and vital statistics" was found weak. All the remaining seven areas were found dysfunctional. ICD 10 coding system is not operational and registration of all deaths with cause of their death is not available. Bangladesh has a legislation for births and deaths registration enacted in 2004. However, it would need further enforcement to get desired results. The legislation would also need amendment to incorporate detail provision for death registration in terms of need and responsibility for registering cause of death as well. As per rapid assessment, the overall rating of the CRVS system in Bangladesh has been found to be 'weak'.

After rapid assessment, the Review Committee for the assessment of the CRVS system in Bangladesh recommends as follows:

Detail assessment of the CRVS system in Bangladesh should be done as soon as possible;

A strategic plan should be developed for improvement of the CRVS system in Bangladesh;

Implementation of the strategic plan for satisfactory functioning of the CRVS system in Bangladesh.

Annex-3

Sub Groups for comprehensive assessment for CRVS System in Bangladesh

Sl. No.	Sub-Group	Capacity	Organization	Name and Designation	Contact Details
1	Legal Basis & Resources (A1, A2)	Coordinator	MoLGRD	Mr. A K M Saiful Islam Chowdhury, Additional Secretary and Project Director, Birth and Death Registration Project	01716-206557 saislach@yahoo.com
		Members	A 2 I, PMO	Mr. Fakhruzaman Senior Consultant	01819-253640 fzaman.2011@gmail.com
			BRAC	Dr. Ahmed Ali	01714-082148 ali.a@brac.net
			MoLGRD	Ms. Farah Gul Nijhum, UNO, Kotiadi, Kishoreganj	01726-559121 nijhum27@gmail.com
			MoPME	S M Ashraful Islam Additional Secretary, Ministry of Primary & Mass Education	ashrafbd@yahoo.com 01552423023
2	Forms used for birth & death registration (B2)	Coordinator	JICA	Ms. Yuki Yoshimura	01713-038406 yoshiboubd@gmail.com
		Members	BBS	Mr. S M Ahsan Kabir, Programmer, Computer Wing	01552-323492 smakabir@agni.com
			DGFP	Md. Naser Uddinn UFPO, Tejgaon Circle, Dhaka.	01960-400616 naser.hawlader@gmail.com
			DGHS	Dr. Tajul Islam A Bari, Program Manager, EPI and Diseases Surveillance, EPI HQ, DGHS	01711-976965 tajulepi@yahoo.com
			Field Admin Health	Dr. Suvash Kumar Saha Divisional Director, Dhaka Division	01715-145976 ddho@ld.dghs.gov.bd
			Field Admin Health	Dr. Mosharraf Hossain Dewan UH&FPO, Savar, Dhaka	01754-988933 savar@uhfpo.dghs.gov.bd
			MIS, DGHS	Dr. A S M Sayem, Manager, MIS, ICDDR'B	01711-789224 asm.sayem@mis.dghs.gov.bd
			MoLGRD	Md. Sofiqul Islam,	sofiq_uk@yahoo.com

Sl. No.	Sub-Group	Capacity	Organization	Name and Designation	Contact Details
				Deputy Secretary (System Analyst),	01818-641222
			MoLGRD	Dr. Mahmuda Ali, Assistant Health Officer (AHO), DCC	01715-456698 fantijohar@yahoo.com
3	Coverage and Completeness of Registration (B3)	Coordinator	UNICEF	Mr. Settasak Akanimart	01775-011914 sakanimart@unicef.org
		Member	BBS	Mr. Shahidul Islam, Statistical Officer, BBS	01197-215674 shahidul_bbs@yahoo.com
			DGHS	Dr. Abdul Jalil Mondal, Representative from CBHCIB	01558-777893 ajalil_mondal@yahoo.com
			Field Admin Health	Dr. Jasim uddin Khan, Civil Surgeon, Dhaka	01715-040937 dhaka@cs.dghs.gov.bd
			DGPE	Mr. Anuj Kumar Roy, System Analyst, DGPE	01717-081581 01555-555147
4	Organization and functioning of the VS system, data storage and transmission (B1,B4)	Coordinator	BBS	A K M Fazlul Hoque, Project Director, SVRS, BBS	01713-031557 akmfh_bbs@yahoo.com
		Member	A 2 I, PMO	Mr. Anir Chowdhury	01911-320311 anirchowdhury@gmail.com
			EC Secretariat	Md. Mohasin Ali, Director (Operation) Election Commission Secretariat	01711-483371 mohasin05@yahoo.com
			MIS, DGHS	Eng. Sukhendu Shekhor Roy, System Analyst, MIS, DGHS	01712-214539 sukhenbd@hotmail.com
5	Death certification & cause of death (C1,C2,C3,C4)	Coordinator	BRAC	Dr. Kaosar Afsana	01711-404572 afsana.k@brac.net
		Member	Academic Representative	Prof. A R M Lutful Kabir, Prof of Paediatrics, ICMH	01711-185409 edrafed@gmail.com
			MIS, DGHS	Dr. Shah Ali Akbar Ashrafi, DPM, e-Health, MIS, DGHS	01713-140842 dr.ashrafi@mis.dghs.gov.bd
			Plan Bangladesh	Dr. Selina Amin	01711-437898
6	ICD coding practices (D1,D2,D3)	Coordinator	WHO	Dr. Md. Badiuzzaman	01730-014065 badiuzzamanmd@searo.who.int

Sl. No.	Sub-Group	Capacity	Organization	Name and Designation	Contact Details
		Member	Academic Representative	Prof. Ayub Ali Chowdhury, Prof of Nephrology NIKDU	01199-802326 ayubali129@yahoo.com
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			MIS, DGHS	Dr. Ashish Kumar Saha AD, MIS, DGHS	01711-535154 aksaha@mis.dghs.gov.bd
			Academic Representative	Prof. M A K Azad, Dhaka Shishu Hospital	01819-223601 childcare1952@gmail.com
7	Data qualty & plausibility (E1)	Coordinator	BBS	Mr. Abdullah Harun Pasha Director, BBS	01715-722504 pasha051263@yahoo.com
		Member	MIS, DGHS	Dr. Md. Bashirul Islam, Consultant, MIS, DGHS	01746-240959 dr.bashirul@mis.dghs.gov.bd
			GiZ	Mr. Kelvin Hui,	01755-581323 kelvin.hui@giz.de
			ICDDR"B	Dr. Tanveer Huda	01713-093871 thuda@icddrb.org
			WHO	Dr. Arif Khan, NPO, WHO	01714-165222 khanar@searo.who.int
8	Data tabulation, access & dissemination (E2,E3)	Coordinator	JPGSPH, BU	Tim Evans, Dean, JPGSPH, BRAC University	01730-428047 evanst@bracu.ac.bd
		Member	A 2 I, PMO	Mr. Sabbir Mahbub, A2I, PMO	01713-249750 shabbirmahbub@gmail.com
			JPGSPH, BU	Prof Dr. Malabika Sarkar	01743-876921 malabika@bracu.ac.bd
			DGFP	Mr. Jahiruddin Babar, Director, MIS, DGFP	01711-840372 dirmisfp@gmail.com
			MIS, DGHS	Dr. Sultan Shamiul Bashar MIS, DGHS	01762-379767 dr.bashar.mis.dghs.gov.bd
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