



# Registering **millions:** celebrating the **success** and **potential** of Bangladesh's **Civil** **Registration** and **Vital** **Statistics System**

A case study of  
**Bangladesh**



Prepared by the Bangladesh CRVS Group with the support  
of the WHO South East Asia Regional Office

A project sponsored by the Canadian Department of Foreign Affairs,  
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## Registering millions: Celebrating the success and potential of Bangladesh's Civil Registration and Vital Statistics System: A case study



Bangladesh is located in the fertile Bengal Delta in South-East Asia and emerged as an independent nation in 1971, prior to which it was a province of Pakistan and was known as East Pakistan. With a population of over 150 million on a landmass of 147 570 square kilometres; Bangladesh is among the most densely populated countries in the world.

Bangladesh is going to celebrate 50 years of independence in 2021 and is making steady progress towards becoming an economically inclusive and politically accountable society, realizing the dream of “Digital Bangladesh 2021”. In the vision for Digital Bangladesh, Information and Communications Technology (ICT) is envisaged as a remedy for the nation’s struggle to achieve economic, cultural and social emancipation. Indeed, one of the key tenets of Digital Bangladesh is its unmistakable bias in favour of the poor who constitute a large proportion of the population. In many ways, Digital Bangladesh is a reincarnation of the vision of Sonar Bangla (Golden Bengal). All aspects of ICT and new technologies need to be leveraged in support of national progress towards a Digital Bangladesh<sup>1</sup>.

Bangladesh has aspirations to enter middle-income status in 2021. Political will, at the highest level, coupled with pragmatic action have geared the country for success.

United Nations (UN) Secretary General, Ban Ki Moon, in his address at Dhaka University on 15 November 2011, commended Bangladesh on development efforts saying “*You are already a leader on what must be the world’s number one priority for the 21st century: sustainable development.*”

In February 2014, Bangladesh achieved a milestone towards CRVS by completing 100 Million birth registrations on the online birth registration information system (BRIS) as part of the Birth and Death Registration Project of the Local Government Division (LGD). There is political will at the highest level to strengthen CRVS. Under the auspices of the Prime Minister’s Office with leadership by the Cabinet Secretary and four other secretaries of the line ministries, viz., Health (MOHFW), Local Government (LGD), Statistics (SID-BBS) and Election Commission (BEC), and technical support from the Access to Information (a2i) Programme of the Prime Minister’s Office, there is a coordinated effort underway to institutionalize collaboration to strengthen CRVS.

<sup>1</sup> A2i project <http://a2i.pmo.gov.bd/>

In 2010, 2011 and in 2013, Bangladesh received three consecutive United Nations Awards for MDG4, Digital Health and Poverty Reduction respectively. The second one titled “Digital Health for Digital Development” is notable due to good Internet connectivity of health systems across country - which may be considered as a step ahead towards realization of universal electronic CRVS systems.

**Regarding CRVS, Bangladesh recognizes the following important aspects:**

1. CRVS is not simply an effort for government to generate statistics for planning; rather CRVS sits at the heart of the government’s ability to track every citizen from birth to death through vital events in their life, and be able to provide services at the time they need it;
2. CRVS needs to be linked to uniquely identifying every citizen; and
3. For successful implementation of CRVS, a whole-of-government approach is a necessity. CRVS cannot be effectively and sustainably implemented through the efforts of one or two departments in charge of statistics, birth registration or health services.



UN Digital Health for Digital Development Award 2011

Bangladesh has already achieved the MDG 4 target of reducing the child mortality rate and is on track to reduce maternal mortality in accordance with MDG 5 (Improve Maternal Health).

*“Bangladesh has made service delivery available at the doorstep of people through the leadership of our Hon’ble Prime Minister Sheikh Hasina. The MIS of Health has taken steps to connect with Internet devices every community clinic and almost every health worker under DGHS. This is part of the infrastructure being developed from national up to the ward level in Bangladesh. Information on every mother and her child is going to be available in the near future. I am glad to acknowledge that the MIS of DGHS is the pioneer in fulfilling the targets of Digital Bangladesh through its leadership and remarkable success in recent years.”* Message from the Honourable Minister, Mohammed Nasim, Ministry of Health and Family Welfare, Government of the People’s Republic of Bangladesh<sup>2</sup>. It is pleasing to note that as of 2 April 2014, all the community clinics (currently 13 000) and almost all community health workers have been given Internet connectivity.

**1. Population and demographics**

The Bangladesh Bureau of Statistics (BBS) estimated the population of Bangladesh as of 1 July 2011 at 150.6 million. With an estimated annual population growth rate of 1.37%<sup>3</sup> the estimated population as of 1 July 2012 was 152.7 million and as of 1 July 2013, 154.8 million. Bangladesh is one of the most densely populated countries in the world, with 1 021 people living per square km, and approximately 39.8% of the popula-

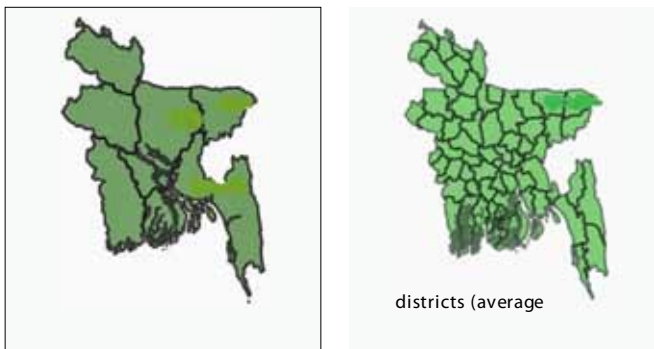
<sup>2</sup> Health Bulletin 2013, Management Information System, Directorate General of Health Services, Mohakhali, Dhaka 1212 www.dghs.gov.bd

<sup>3</sup> Bangladesh Bureau of Statistics (BBS) 2011 – Sample Vital Registration System

<sup>4</sup> Bangladesh Monthly statistical bulletin 2013 (BBS/SID, Aug 2013)

tion living in urban areas<sup>4</sup>.

The country has 7 divisions, 64 districts, 485 upazilas, 4,501 unions, 11 City Corporations, 318 municipalities (paurashavas), 40 509 wards and 85 000 villages. The percentage of the population belonging to the age group  $\leq 14$  years is 33.1%; 53.5% belong to the age group 14 to 49 years; 7.7% belong to the age group 50 to 59 years, and 6.9% belong to the age group 60+ years<sup>5</sup>.



The current Under-5 mortality rate is estimated at 53 per 1,000 live births infant mortality rate is 43 per 1,000 live births<sup>6</sup> and maternal mortality rate is 194 per 100,000 live births Percentage of childbirths attended by skilled personnel is 31.7%<sup>6</sup> The contraceptive prevalence rate is 61.2%<sup>6</sup> and rate of antenatal care (at least one visit) is 54.6%<sup>6</sup>.

## 2. Forging a trajectory for universal civil registration: Milestones

### I. The 2004 Birth and Death Registration Act: Legislation on compulsory registration of births and deaths within 45 days

Prior to 2004, birth and death registration in Bangladesh was stipulated by the archaic Birth and Death Registration Act dating back to 1873. The district administrators were responsible for birth and death registration and, in the 131 years between 1873 and 2004, only 8% of births were registered.

Recognizing that a well-functioning CRVS system is crucial for inclusive and sustainable development, Bangladesh undertook a revision of the legislation for birth and death registration. In 2004, a new law was enacted designating the local government bodies and Bangladesh Missions abroad as registrars. To better enforce the law, a set of rules (Birth and Death Registration Rules, 2006) were issued by the Ministry of Local Government under the 2004 Act.

The 2004 Birth and Death Registration Act mandates registration of all births and deaths within 45 days of occurrence. For registering the birth of a newborn, the parents need to present a medical birth certificate or immunization card; this lays the foundation for a stronger collaboration with the health sector going forward. For other age groups,

<sup>5</sup> Health Bulletin 2013, Management Information System, Directorate General of Health Services, Mohakhali, Dhaka 1212 [www.dghs.gov.bd](http://www.dghs.gov.bd). This total comes to 101.2%, due to rounding off.

<sup>6</sup> Bangladesh Demographic and Health Survey 2011, [http://www.dghs.gov.bd/licts\\_file/images/BDHS/BDHS\\_2011.pdf](http://www.dghs.gov.bd/licts_file/images/BDHS/BDHS_2011.pdf)

<sup>7</sup> Bangladesh Maternal Mortality and Health Care Survey 2010, <http://www.icddr.org/images/stories/WhatWeDo/Health-Programme/PopulationScience/bmms%202010%20final%20report.pdf>



a parent, children, nearest relatives or the person themselves can register the birth along with a medical birth certificate or any other proof of date of birth.

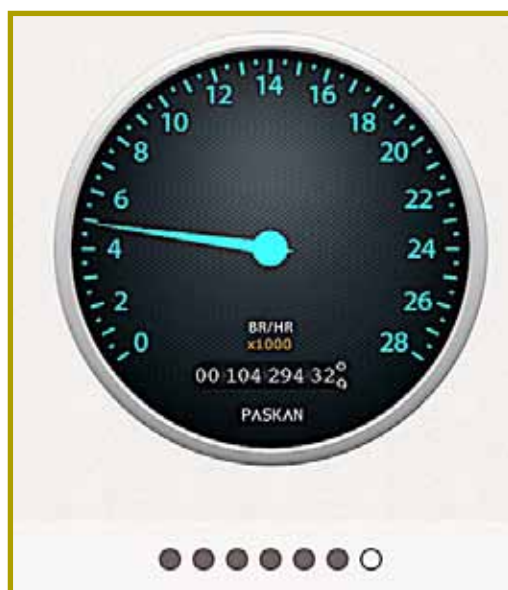
The Act also provides a legal basis for the use of a birth certificate as a proof of age to access services including, inter alia, issuance of a passport, voter registration, driving license, school enrollment and marriage registration. This legislation also defines the registration structure within the existing decentralized local government administration and obliges service providers, particularly in health and education sectors, to facilitate birth and death registration.

The 2004 Act was amended in 2013 to further facilitate the establishment of the Office of the Registrar General, as a permanent structure within the government to oversee the registration of births and deaths.

Anchoring civil registration in a law ensures the continuity, consistency, correctness and comprehensiveness of the CRVS system<sup>8</sup>. The enactment of the 2004 legislation and its amendment in 2013, are a milestone in Bangladesh's journey toward achieving universal civil registration and a clear indication of the government's commitment to prioritize strengthening Bangladesh's CRVS system.

## II. 100 million digital birth registrations and counting: Towards universal birth registration

On 15 February 2014, Bangladesh touched a milestone for CRVS by completing 100 Million birth registrations on the online birth registration information system (BRIS) as part of the Birth and Death Registration Project of the Local Government Division (LGD).



<sup>8</sup> Strengthening practice and systems in civil registration and vital statistics: A Resource Kit, Health Information Systems Knowledge Hub, Working Paper Series Number 19 | January 2012

The real-time data dial with the number of births registered can be accessed from the LGD website as this link: <http://www.paskan.com/br/bd/dial>

The government in 2007 officially declared July 3rd as the National Birth Registration Day. Through a combination of policy changes, promotional efforts and information campaigns, Bangladesh has greatly improved birth registration coverage. Bangladesh went from registering less than 10% of births for children under 5 years in 2004, to 40% in 2008, as also corroborated in the Bangladesh Demographic and Health Survey 2011 (BDHS), and is now quickly moving towards full registration of all births<sup>9</sup>.

With support from the United Nations Children’s Emergency Fund (UNICEF), the Government has replaced the manual registration of births with a computerized system (BRIS), and a 17-digit Birth Registration Number (BRN) is assigned to every registration. Now, online birth registration is being done at 5 000 registration offices in all union parishads<sup>10</sup>, city corporations and cantonment boards, and additionally at 28 Bangladesh Missions abroad. Birth registration has been made compulsory for obtaining machine readable passports, national identity cards and for many other activities. So far, over 160 million people (including expatriate Bangladeshis) have been covered under the birth and death registration project and it is expected that digital birth registration of all citizens of Bangladesh will be completed by December 2014.

All union parishad, municipality and city corporation offices designated for birth and death registration are adequately equipped and supplied with logistics. Local government staffs have also received technical support and continuous training from the concerned project of the LGD in Bangladesh.

The following services are linked with birth registration, and a birth certificate is required to access them, although not all are fully enforced<sup>11</sup>:

- passport issuance
- marriage registration
- admission to educational institutions
- government and non-government recruitment
- driving license
- voter enrollment
- land registration

**Reaching the unreached: Bangladesh’s efforts to strengthen civil registration in the Tea Gardens**  
(Source: UNICEF Bangladesh Newsletter – Plaudits for Birth Registration Success)



Shenjuti holding her birth registration certificate at Miringa Tea Estate in Maulavi Bazar, Sylhet.

<sup>9</sup> Muzzi M. Good practices in integrating birth registration into health systems (2000–2009); case studies: Bangladesh, Brazil, the Gambia and Delhi, India. New York: United Nations Children’s Fund; 2010 (Working Paper). Available from: [http://www.unicef.org/protection/Birth\\_Registration\\_Working.pdf](http://www.unicef.org/protection/Birth_Registration_Working.pdf)

<sup>10</sup> UNICEF Bangladesh Newsletter – Plaudits for Birth Registration Success

<sup>11</sup> <http://plan-international.org/birthregistration/resources/country-case-studies/bangladesh>

- opening a bank account
- getting import-export license
- getting utility services (water, electricity, telephone and gas)
- tax ID number
- trade license
- approval for building construction design
- vehicle registration
- contractor license
- national ID card

Given the success in registering nearly 100% of children through the immunization programme of the DGHS, community clinics and domiciliary government health staff should be included in CRVS efforts in order to achieve rapid and sustainable results. Digital registration provides an opportunity for less dependence on physical infrastructure and the opportunity to reach isolated populations<sup>12</sup>.

### III. 100 million shared lifetime health records

Since 1961, the DGHS, as part of the Geographical Reconnaissance system (GR) has been collecting population data annually. As part of an upgraded system, data have now been collected on 100 million rural citizens, using machine-readable paper forms. Citizens' basic soft data are now nearly ready for use; digitization will be completed in a searchable database format. These data, which comprise citizens' basic health records, will serve as the foundation for future lifetime shared health records.

With technical assistance from the UK Department For International Development (DFID), a software consortium comprising both local and non-local IT houses is now engaged in developing an integrated national eHealth Enterprise Architecture (eHEA). This will combine individual records for all citizens, lifetime health records, organization registries, information on public health programmes of the Department of Health Information Services (DHIS 2.14), hospital information systems (Open Medical Record System, MRS), and the health workforce registry (HRIS). It will also contain an inventory system for major equipment so as to virtually function as one system through a data exchange system, popularly known as the Electronic Health Information Exchange (eHIE).

All hospitals, whether public or private, will have the capacity to post records for each patient to the national data warehouse through eHEA. The first usable version will be ready by end 2014. The eHEA will work in unison with the electronic Civil Registration and Vital Statistics System and the National Population Register System to be jointly developed by the Ministry of Health and Family Welfare (MOHFW), Local Government Division (LGD), and National Statistics Office (SID-BBS)<sup>13</sup>. Meanwhile, the DGHS has

<sup>12</sup> UNICEF Bangladesh Newsletter – Plaudits for Birth Registration Success

<sup>13</sup> Health Bulletin 2013, Management Information System, Directorate General of Health Services, Mohakhali, Dhaka 1212 [www.dghs.gov.bd](http://www.dghs.gov.bd)

started to create a computerized network in all public hospitals with OpenMRS to automate hospital processes and introduce EHR/EMR systems linked with national eHealth systems. Beginning in 2009 and still being built on today, the DGHS has emerged as the world's largest Internet backbone connecting all public health facilities and almost all community health workers. It gathers real-time public health data and also registers pregnant mothers and children under 5 on a case-by-case basis.

#### **IV. Bangladesh Election Commission has registered over 90 million voters over the age of 18**

In 2010, Bangladesh enacted the National Identity Registration Act to ensure all citizens have a National Identity Card (NID), issued by the Bangladesh Election Commission (BEC), a non-statutory body. Since its enactment, the BEC has successfully issued over 90 million NIDs for citizens over the age of 18. Furthermore, the database used by the BEC is compliant with the Citizen's Core Data Structure (CCDS). This will ensure interoperability and data-validation and de-duplication with the National Population Register. As per the regulations, the Birth Registration Number and submission of a birth certificate are required to obtain an NID, however this is not fully enforced. In addition, in the last session of Parliament, the government has given the BEC the mandate to issue NID cards for all citizens.



#### **V. Sample Vital Registration System (SVRS) covering 1 500 Policy Support Units (PSU)**

A well-functioning nationally representative SVRS has been compiling vital statistics since 1980. The Ministry of Planning has a Bangladesh Bureau of Statistics (BBS) which is the national body responsible for carrying out different types of statistical data collection and reporting. This body is also responsible for the decennial census. BBS has 1 500 primary sampling units, each comprising 250 households, for routinely conducting vital registration. The system called Sample Vital Registration System (SVRS) was established in 1980. SVRS is a regular surveillance system to determine the annual population change at national and district levels.

Over the years, the vital registration system has improved to a great extent and its sample coverage has been increased to ensure the estimation of reliable demographic indicators at the sub-national levels. Data are collected by the local registrars and the quality of the data checked by supervisors. The special feature of SVRS is the collection of data under a dual record system to estimate demographic indicators using the

Chandrasekaran and Deming method. Under this system, vital events are collected as and when they occur by locally recruited female registrars known as Local Registers (LR) (System 1). Filled-in schedules are then sent to headquarters on a 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. On the other hand, under a second system another group of officials from the Upazila Statistical office of BBS also collect the data independently from the same area on a quarterly basis (System 2). Having filled out questionnaires from the two systems, data are matched in the headquarters by a pre-designed matching process and demographic rates. The surveys are conducted throughout the year and dissemination of the report is done every 2-3 years.



### 3. Key enablers for CRVS in Bangladesh

#### I. Highest level political commitment to strengthen CRVS

Under the leadership of the Cabinet Secretary and four other secretaries of the relevant line ministries, at a landmark meeting on 26 February 2014 the line ministries

undertook discussions on current and future collaboration.

1. Ministry of Health and Family Welfare: With a well-structured and uniform distribution of health facilities and community health workers (CHW) to reach every family, with full Internet connectivity to community health clinics and community health works and the Electronic Health Records from the GR being compiled for almost 100 million rural residents, the health sector will be an important contributor to improving the quality and completeness of birth and death registration and cause of death data.
2. Ministry of Local Government, Rural Development and Cooperatives - With the legal mandate for birth and death registration, and the success of the birth and death registration in 100 million plus online birth registrations on BRIS, LGD is at the epicenter of strengthening CRVS in the country.
3. Statistics and Informatics Division and Bureau of Statistics – The Sample Vital Registration System (SVRS) based on sentinel sites routinely conducted by the Bangladesh Bureau of Statistics of the Statistics and Informatics Division 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

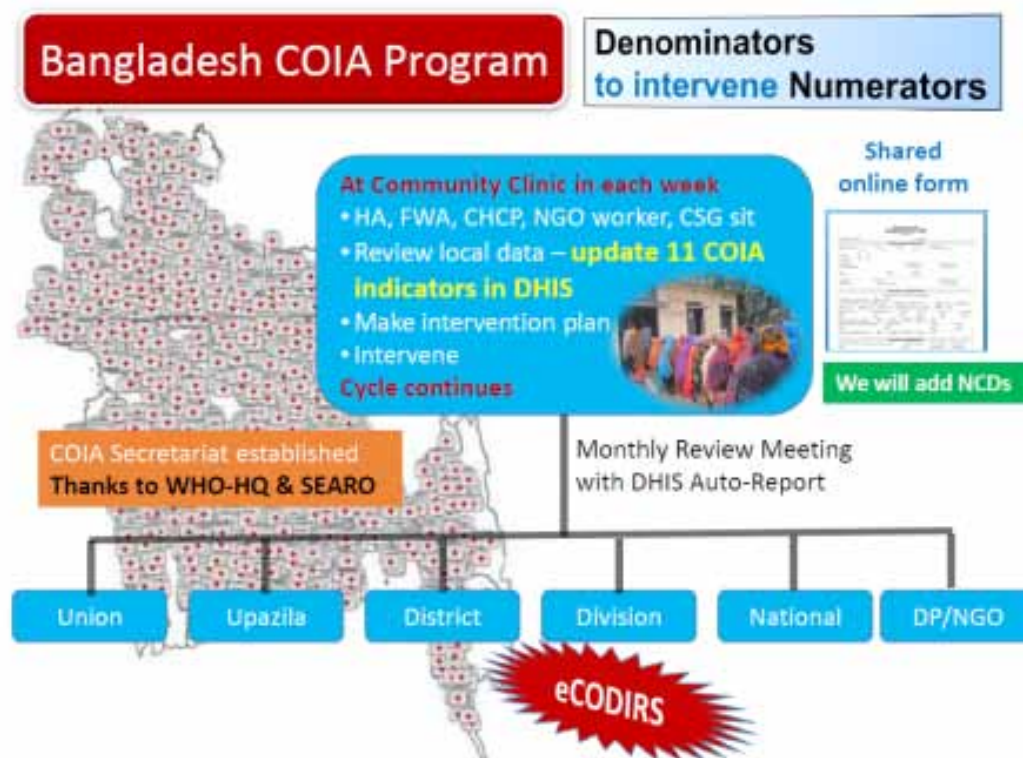
<sup>14</sup> Report of Comprehensive assessment and Strategic Action Plan on CRVS system in Bangladesh, MIS – DGHS, December 2013

and sex disaggregated regional and national figures through data extrapolation<sup>14</sup>. Further, the BBS is also developing a National Hardcore Poverty Register (NHPR), and it is expected that this will be completed by 2017 and will provide demographic data of citizen and PMT data of all households. The NHPR is CCDS compliant, and will likely be the primary database for the National Population Register.

4. The Bangladesh Election Commission: has registered over 90 million voters over the age of 18 giving them NID, and in the last session of Parliament was charged with registering all citizens. The BEC database is CCDS compliant and would serve as a data de-duplication source for the National Population Register (NPR).
5. The Cabinet Secretary will head the Steering Committee of Secretaries to build the CRVS and NPR database. The Access to Information (a2i) of Prime Minister's Office which is spearheading the efforts to realize Digital Bangladesh 2021 will provide the technical support to the Cabinet Secretary for this whole-of-government coordination.

## II. The Commission on Information and Accountability for Women's and Children's Health (COIA) effect

In September 2010, in an effort to accelerate progress towards MDG 4 and 5, the



Secretary-General of the United Nations launched the Global Strategy for Women's and Children's Health.

Given that accountability is critical to the objectives of the Global Strategy, the Secretary-General asked the Director-General of the World Health Organization to coordinate a process to determine the most effective international institutional arrangements for

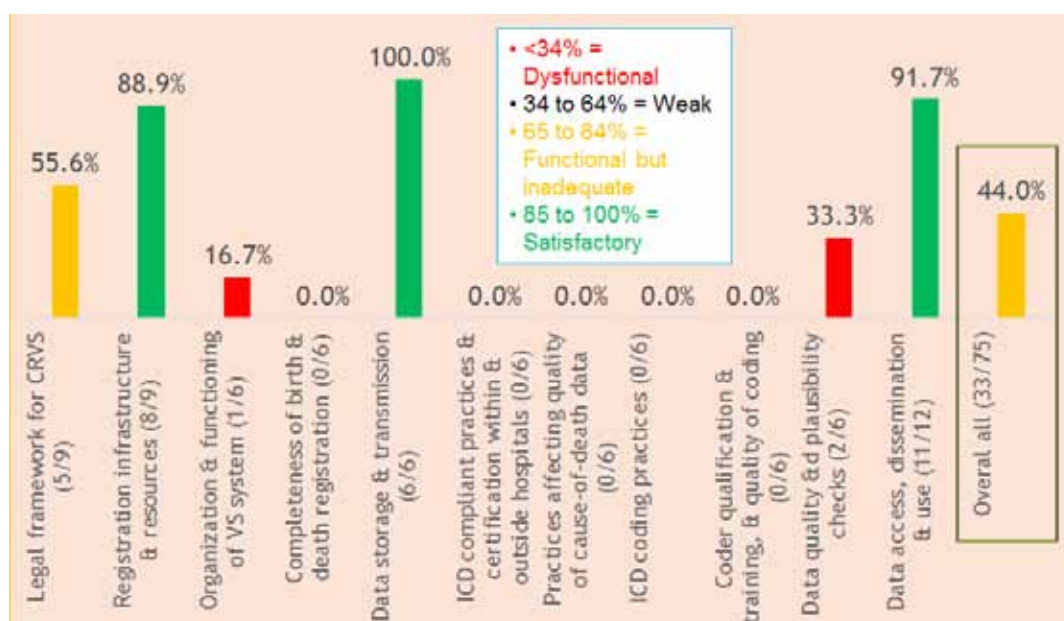
global reporting, oversight and accountability on women’s and children’s health. In response, a Commission on Information and Accountability for Women’s and Children’s Health (Accountability Commission) was created. The Commission was led by two co-chairs, President Kikwete of Tanzania and Prime Minister Harper of Canada, and two vice-chairs Dr Chan, WHO Director-General, and Dr Touré, Secretary-General of the ITU<sup>15</sup>. Bangladesh is one of the 74 countries that has committed to the recommendations of the COIA. The first of the ten recommendations of the COIA is that by 2015, countries have made significant steps for improving their CRVS systems to register births, deaths and causes of death.

To identify strengths and weaknesses in the country’s CRVS system and to provide evidence for an improvement strategy, Bangladesh undertook a comprehensive assessment of its CRVS system between 2012-2013 with participation of all key stakeholder ministries. Subsequently, a strategic plan for improving CRVS was also developed.

Bangladesh has participated in various regional and global forums on CRVS and showcased its successful achievements in strengthening CRVS to date:

1. Bangladesh Delegation participated in the High-Level Meeting on CRVS by UN-ESCAP in Bangkok, December 2012 and endorsed the Regional Strategic Plan for CRVS
2. Bangladesh delegation made a presentation at the Global Summit on CRVS in April 2013
3. Bangladesh delegation made a presentation at the Strengthening CRVS through Innovative Approaches in the Health Sector in Geneva, December 2013

### III. Comprehensive assessment of CRVS completed in 2013



<sup>15</sup> [http://www.who.int/woman\\_child\\_accountability/about/coia/en/](http://www.who.int/woman_child_accountability/about/coia/en/)

Below is a summary of the key findings of the comprehensive assessment.<sup>16</sup> Birth and death registration legislation currently exists in Bangladesh, but enforcement of the legislation needs strengthening. Moreover, there is no known evidence of any regulation that obliges all medical establishments to report all vital events to the vital statistics system within a given time. There is also currently no regulation that requires deaths to be certified by cause of death, as well as no guidelines on who can certify the cause of death.

The Bangladesh local government has registration points that are well distributed throughout the country. These include all union parishad, municipalities and city corporation offices as designated points for birth and death registration. Given the success in registering nearly 100% of children through the immunization programme of the DGHS, field level coordination with health workers is recommended to boost CRVS completeness.

Effective collaboration between all relevant agencies should be institutionalized and data security and confidentiality protocols established.

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 a standard international form. Efforts to introduce the International Classification of Disease (ICD-10) system in all public hospitals have begun through the initiative of the Management Information Services (MIS-DGHS). Verbal autopsy is also not routinely used in Bangladesh and it would be useful to introduce this, to capture cause of death in the community.

#### **IV. Bangladesh Vision 2021**

The year 2021 will mark the golden jubilee of Bangladesh's independence, while the year 2020 will be the hundredth anniversary of the birth of the father of the nation, Bangabandhu Sheikh Mujibur Rahman. The government of Bangladesh under the able leadership of Prime Minister Sheikh Hasina envisions Bangladesh as a democratic country where every citizen is assured of social justice, environmental protection, human rights and equal opportunities; and where the rule of law and good governance flourish. The Bangladesh government envisions a liberal, progressive and democratic welfare State. Simultaneously, a Bangladesh which by 2021, will be a middle income country where poverty will be drastically reduced where, citizens will be able to meet every basic need and where development will be on fast track, with ever-increasing rates of inclusive growth. These efforts to achieve Universal Civil Registration are aligned with the government's larger Vision 2021 of creating an inclusive country, strengthening CRVS will enable reaching the unreached, and ensure universal access to services and social protection for all.

<sup>16</sup> The below summary of the CRVS Comprehensive Assessment in Bangladesh has been extracted from EHealth Strategy, Policy and Action Plan – Bangladesh, Inception Report- WHO



## V. Digital Bangladesh 2021

Bangladesh, like most developing countries, recognizes the potential of ICTs as an unprecedented lever for economic emancipation as well as an enabler for poverty reduction and human development - both of which are of equal importance. (a2i website). Mobile phone coverage and internet accessibility pervasive even at the grassroots, and as of February 2014, the estimated mobile phone subscribers were 115.98 million (BTRC). The government of Bangladesh is committed to using technology as an enabler from transformation and has made significant strides in realizing the vision for Digital Bangladesh 2021, part of Prime Minister Sheikh Hasina's 'Charter for Change' announced in 2009.



The vision of Digital Bangladesh is beyond just automation of processes, and focuses on e-service delivery. Central to realizing this effort is the Access to Information (a2i) Programme is a comprehensive programme supported by the government, UNDP and USAID and implemented by the Prime Ministers' Office. The overall objective of the project is to provide support in building a digital nation through delivering services at the citizen's doorsteps through a whole-of-government approach. The programme aims to improve quality, widen access, and decentralize delivery of public services to ensure responsiveness and transparency. To use ICTs effectively for improving the government's service delivery mechanism as well as the related internal systems, it became essential to demonstrate to all stakeholders how useful ICTs could be in bringing public services near citizens' doorsteps. Building capacity of government officials and institutions to drive the required changes was also a priority. a2i established an information and service centre in each rural and urban local government institutions (unions in the rural areas and municipalities and City Corporations in the urban areas) in the country, totally over 5,000. Because of the whole-of-government approach, these centres are able to aggregate services from a number of departments of the government instead of only LGD, the parent ministry of the local government institutions. Each month, an average of 45 million citizens visit these centres to access vital information and services. Electronic birth and registration are among the services offered. These centres provide the foundation for service delivery decentralization in the country for all ministries and departments, and may serve as the focal point for capturing all vital events for CRVS.

## **VI. Well structured & uniform distribution of health facilities & CHWs to reach every family- Opportunity for collaboration between MOHFW and LGD to boost completeness of birth and death registration.**

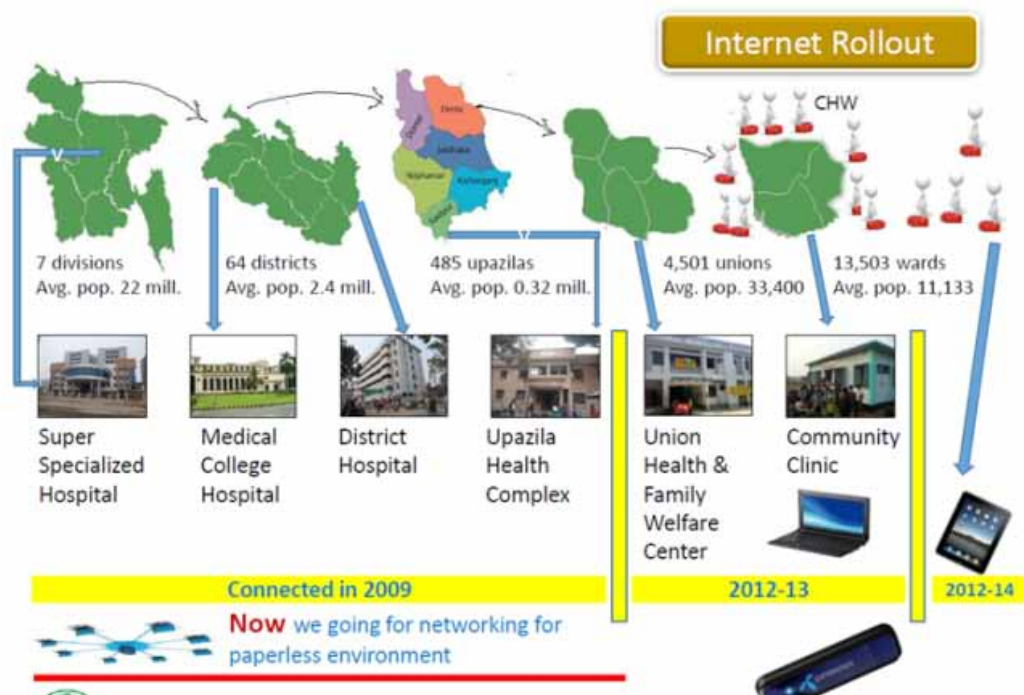
The opportunity for collaboration between the MOHFW and MOLGRD to boost the completion of birth and death registration formalities, has aided Bangladesh's network of health facilities and CHW in successfully bringing service delivery to the home of every citizen, an ongoing collaboration. Included is the field level coordination with the health sector, which will be instrumental in improving the quality and completeness of birth and death registration and cause-of-death data. The health care infrastructure under the DGHS comprises six tiers: national, divisional, district, upazila (subdistrict), union and ward. At the national level, there are institutions both for public health functions as well as for under- and postgraduate medical education/training and specialized treatment to patients. The MOHFW established and made operational 13 000 community clinics (CC) at the ward levels. One such community clinic serves roughly 6 000 people<sup>17</sup>. A total of 18 000 CCs are planned to be established in the country. The existing union and upazila facilities (~4 500) also provide community clinic services. The Revitalization of Community Health Care Initiatives in Bangladesh (RCHCIB) project is responsible for operationalizing the CCs. These facilities are mainly responsible for delivering primary health care services including Maternal, Neonatal, Child and Adolescent Health (MNCAH), the Expanded Programme on Immunization (EPI), treatment for common diseases (pneumonia, fever, cough, etc.), family planning services, health education, first aid and serve as the first contact points for patients. The clinics will also help in screening Noncommunicable Diseases (NCD) and mental health issues including autism. At the ward or village level, there are also domiciliary health workers, one for every 5 000 to 6 000 people. There are 26 412 sanctioned posts of domiciliary workers under the DGHS: 20 815 health assistants (HA), 4 198 assistant health inspectors (AHI) and 1 399 health inspectors (HI). The Directorate General of Family Planning (DGFP) also has domiciliary family planning staff working at the ward levels<sup>18</sup>.

The Ministry recruited 13 240 full-time Community Health Care Providers (CHCP) to run the community clinics. All of them have been trained to better meet the needs of those seeking health care. The CHCPs have also been provided with laptop computers and Internet connection to update local health data in the online central databases<sup>19</sup>. Utilizing health assistants and community health workers as notifiers for births and deaths is an essential linkage that needs to be established going forward, if significant strides in improving the comprehensiveness of birth and death registration are to be achieved.

<sup>17</sup> Health Bulletin 2013, Management Information System, Directorate General of Health Services, Mohakhali, Dhaka 1212 [www.dghs.gov.bd](http://www.dghs.gov.bd)

<sup>18</sup> *ibid*

<sup>19</sup> *ibid*



Much of this success in health-related indicators can be traced to the highest priority that government has accorded to health sectors, a well-structured health system reaching down to the grassroots level. In addition to seeking higher amounts of foreign aid, Bangladesh also channeled a greater amount of domestic resources to the health sector.

## 4. Current status: Important country data

### I. Highest level political commitment to strengthen CRVS

**Table 1: Status of Birth and Death Registration in Bangladesh: online BRIS 2014 (LGD)**

Country population	154.8 million (2013) Source: As per census report of BBS, the population of Bangladesh (July 2011)
Estimated births	<b>2 835 241</b> (2013) Source: BBS, birth rate was estimated at 17.88 per 1000 in 2011
Registered births	<b>39 646*</b> ( <b>1.4% within 45 days</b> ) (2013) Source: From inception of online BRIS
Estimated deaths	<b>761 139</b> (2013) Source: BBS, death rate was estimated 4.8 per 1000 in 2011
Registered deaths	<b>103 443**</b> (cumulative deaths, all age groups ever registered in BRIS since the time of its inception from October 2010 to February 2014) Source: From inception of online BRIS
Cause of Death	Not Available

\* Babies whose birth was registered within 45 days of birth. At present, BRIS has no provision to find the statistics of birth registered who born in a particular year, LGD is working to resolve this constraint.

\*\* At present in BRIS it is not possible to find the data of death registration for a particular year. LGD is working on resolving this constraint.

### II. Disaggregated birth registration of children under five years

Percentage of de jure children under five years of age whose births are registered with the civil authorities, according to background characteristics, Bangladesh 2011

Background characteristic	Children whose births are registered			Number of children
	Percentage who had a birth certificate	Percentage who did not have birth certificate	Percentage registered	
<b>Age</b>				
<2	9.4	3.0	13.3	3,187
2-4	30.3	10.6	40.9	5,300
<b>Sex</b>				
Male	22.2	8.3	30.5	4,304
Female	22.7	7.8	30.5	4,183
<b>Residence</b>				
Urban	25.5	8.6	35.0	1,880
Rural	21.3	8.0	29.2	6,606
<b>Division</b>				
Barisal	24.4	9.2	33.6	476
Chittagong	24.5	6.7	31.2	1,556
Dhaka	19.2	7.6	26.9	2,646
Khulna	25.7	6.2	31.9	761
Rajshahi	17.5	8.5	26.0	1,077
Rangpur	22.8	10.2	33.1	924
Sylhet	31.7	11.7	43.5	646
<b>Wealth quintile</b>				
Lowest	17.2	6.3	23.5	2,066
Second	19.4	8.5	27.9	1,719
Middle	23.0	8.1	31.1	1,594
Fourth	24.8	7.3	32.1	1,613
Highest	30.0	11.0	41.0	1,494
<b>Total</b>	<b>22.4</b>	<b>8.1</b>	<b>30.5</b>	<b>8,487</b>

**Table 2: Birth registration of children under age five (BDHS 2011)**

Table 2 from BDHS 2011 shows that births registered for children under the age of two, with a birth certificate, are still very low at only 9.4%. Birth registration is higher in urban (35%) than in rural (29%) areas. There is no difference regarding the extent of birth registration between male and female children. Among the administrative divisions, 44% of children from Sylhet, and around one third of children from Barisal, Chittagong, Khulna and Rangpur divisions are registered. Only

one quarter of the children from Dhaka and Rajshahi are registered. Children from the highest wealth quintile are more likely to have their births registered (41%) than children from the lowest wealth quintile (24%).<sup>20</sup>

<sup>20</sup> Bangladesh Demographic and Health Survey 2011, [http://www.dghs.gov.bd/licts\\_file/images/BDHS/BDHS\\_2011.pdf](http://www.dghs.gov.bd/licts_file/images/BDHS/BDHS_2011.pdf)

### III. Hospital deaths in Bangladesh

**Table 3: Deaths reported deaths by different types of hospital (BDHS 2011)**

Type of hospital	Existing	Data from hospitals		Total reported deaths	
	No.	No.	%	No.	%
Upazila Health Complex	421	345	81.9	38058	38.3
District and General Hospital	62	49	79.0	18359	18.5
Medical College Hospital	17	12	70.6	39044	39.3
National Institute of Cardiovascular Diseases (NICVD)	1	1	100.0	3085	3.1
National Institute of Kidney Diseases & Urology (NIKDU)	1	1	100.0	185	0.2
National Institute of Cancer Research & Hospital (NICRH)	1	1	100.0	65	0.1
Institute of Child & Mother Hospital (ICMH)	1	2	200.0	460	0.5
Total	504	411	81.5	99256	100.0

Reported data on deaths for 2012 from government health facilities were extracted from 504 Local Health Bulletins 2013. Each hospital published one Local Health Bulletin (Table 3). In these 504 hospitals, 95 256 deaths occurred in 2012. The largest proportion of those deaths was reported by medical college hospitals (39.3%), followed by upazila health complexes (38.3%) and district/general hospitals (18.5%).<sup>21</sup>

Data on deaths collected from four postgraduate institute hospitals showed that 3.6% died in those hospitals.

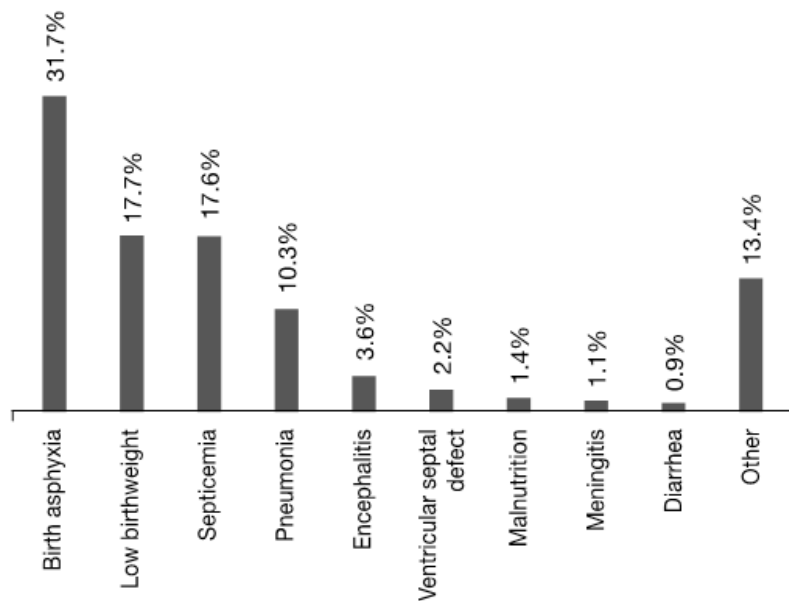
**Table 4: Cause of death among children under five (Health Bulletin 2013)**

ICD 10 major disease group	No. of deaths	%
Certain conditions originating in the perinatal period	7029	73.6
Diseases of the respiratory system	1310	13.7
Certain infectious and parasitic diseases	592	6.2
Congenital malformations, deformations, and chromosomal abnormalities	254	2.7
Endocrine, nutritional and metabolic diseases	113	1.2
Symptoms, signs, and abnormal clinical and laboratory findings, not elsewhere classified	95	1.0
Injury, poisoning, and certain other consequences of external causes	91	1.0
Diseases of the digestive system	62	0.6
<b>Total</b>	<b>9546</b>	<b>100.0</b>

<sup>21</sup> Bangladesh Demographic and Health Survey 2011, [http://www.dghs.gov.bd/licts\\_file/images/BDHS/BDHS\\_2011.pdf](http://www.dghs.gov.bd/licts_file/images/BDHS/BDHS_2011.pdf)

Causes of death among children under five: A total of 21 567 deaths among children under five were reported. 10 212 from upazila and district hospitals and 11 355 from tertiary-level hospitals. Causes of 9 546 deaths were analyzed. Perinatal conditions were the cause of most deaths (74%) (Table 4). These conditions included birth asphyxia, septicemia, prematurity of the baby, etc. The second cause was pneumonia (14%). Infectious diseases include mainly encephalitis and diarrhea.

The figure shows the distribution of causes of deaths among children under five. Birth asphyxia was the leading cause of death (31.7%), followed by low birth weight (17.7%) and septicemia (17.6%)



Distribution of causes of death among children under five:

Age distribution in all death cases as per the Health Bulletin 2012<sup>22</sup>– The percentage of under five mortality is 24% according to all the death cases analyzed. The percentage of child mortality is 15% for neonates and 21% for infants. Percentage of death cases among 15-24 years age group is 23%. Majority of the deaths occurred (43%) at more than 50 years of age.

- A = Under five, 25% (1-4 year/s) 3%; 2-11 months, 6%
- B = 50+ years, 43%
- C = 25-49 years, 23%
- D = 15-24 years, 6%
- E = 5-14 years, 4%



Percentage of deaths (n=43,200) according to age-groups

<sup>22</sup> Health Bulletin 2012 [www.dghs.gov.bd](http://www.dghs.gov.bd)

#### IV. MDG 4: Reduce child mortality

Bangladesh already attained the target of MDG 4 concerning the reduction of the child mortality rate. This is revealed in a recent publication entitled *Committing to Child Survival: A Promise Renewed Progress Report 2013* by UNICEF. The report shows that Bangladesh's under five mortality rate has dropped to a stunning 41 per 1 000 live births by 2012 from 144 per 1 000 live births in 1990 (Table 5). This is a 71% reduction against the target of a 66% reduction by 2015. According to the same report, the current infant mortality rate of Bangladesh is 33 per 1 000 live births, and the neonatal mortality rate is 24 per 1 000 live births. The share of the neonatal mortality rate is 59% in children under five and 80% of the infant mortality rate. Table 5 is ensuring universal coverage of the measles vaccination among the year old children by 2015. Bangladesh pledged to prevent an additional 108 000 deaths annually to reduce the national under five mortality rate to 20 per 1 000 live births by 2015. This is one of the important indicators of MDG 4.<sup>23</sup> In Bangladesh, these data are not generated from the civil registration system. However, as the country's CRVS system is strengthened, data from the civil registration system can be used to generate under five mortality, as well as infant and neonatal mortality by subnational disaggregation. CRVS is the only source from which to generate complete and continuous demographic statistics on population dynamics and causes of death. Other sources of data are infrequent or irregular and less effective and sustainable in the long run.

**Table 5: Goal 4 Reduce child mortality (Health Bulletin 2013)**

Target	Indicator	Benchmark (Year)	Current progress (Reference)	Target (Year)
Reduce by two-thirds the mortality rate among under-five children	Death rate among under-five children/1,000 livebirths	144.0 (1990)	41.0 (UNICEF 2013)** 44.0 (SVRS 2011) 53.0 (BDHS 2011)	48.0 (2015)
	Infant mortality rate/1,000 livebirths	94.0 (1990)	33.0 (UNICEF 2013)* 35.0 (SVRS 2011) 43.0 (BDHS 2011)	31.3 (2015)
	1-year old children immunized against measles (%)	52.0 (1991)	85.5% (BECES 2012)* 87.5 (BDHS 2011)	100.0 (2015)

#### V. MDG 5: Improve maternal health

The latest Bangladesh Maternal Mortality Survey 2010 by the National Institute of Population Research and Training (NIPORT) shows Bangladesh's current maternal mortality rate to be 194 per 100 000 live births, which was 574 per 100 000 live births in 1990 (Table 6). Maternal mortality has been dropped by 66% against the 2015 target of 75% (143 per 100 000 live births). In this indicator of MDG 5, Bangladesh is well on track.

<sup>23</sup> Health Bulletin 2013, Management Information System, Directorate General of Health Services, Mohakhali, Dhaka 1212 [www.dghs.gov.bd](http://www.dghs.gov.bd)

However, other indicators, namely births attended by skilled health personnel, birth rate among adolescent mothers, antenatal care coverage, and unmet needs for family planning (%) will require more attention (Table 6). The contraceptive prevalence rate (%) is moving on track as revealed by a 61% rate against a national 2015 target of 72%. Table 6 shows that the current coverage rate is 86%. So, Bangladesh is well on track for this indicator also.<sup>24</sup>

**Table 6: Goal 5 Improve maternal health (Health Bulletin 2013)**

Target	Indicator	Benchmark (Year)	Current progress (Reference)	Target (Year)
Reduce by three quarters the maternal mortality ratio	Maternal mortality ratio/100 000 live births	574.0 (1990)	194.0 (BMMS 2010)*	143.5 (2015)
	Births attended by skilled health personnel (%)	7.0 (1990)	26.5 (BMMS 2010) 31.7 (BDHS 2011)	50.0 (2015)
Ensure, by 2015, universal access to reproductive health care	Contraceptive prevalence rate (%)	39.9 (1991)	61.2 (BDHS 2011)* 58.4 (SVRS 2011)	72.0 (2016)
	Birth rate among adolescent mothers/1 000 women	77.0 (1990/91)	105.0 (BMMS 2010) 118.3 (BDHS 2011)	-
	Antenatal care coverage (at least one visit by skilled health professional) (%)	27.5 (1993)	54.6 (BDHS 2011)	100.0 (2015)
	Antenatal care coverage (at least four visits) (%)	05.5 (1993)	25.5 (BDHS 2011)	100.0 (2015)
	Unmet need for family planning (%)	19.4 (1993)	13.5 (BDHS 2011)	7.6 (2016)

<sup>24</sup> Health Bulletin 2013, Management Information System, Directorate General of Health Services, Mohakhali, Dhaka 1212 [www.dghs.gov.bd](http://www.dghs.gov.bd)



## 5. Challenges

**Enforcement of the legislation on mandatory birth and death registration within the stipulated time period of 45 days.** In spite of the incredible achievement of the birth and death registration project in registering over 100 million births online on BRIS, the compliance to timely registration within 45 days is still abysmally low, estimated at a mere 1.4%. While currently there is no provision to estimate completeness of death registration, in BRIS the total number of deaths registered is only 103 443, as BBS estimates the number of deaths per year at 761 139. Therefore death registration needs to be prioritized, and every effort needs to be made to increase awareness for death registration both within the institutional framework conducting registrations and among family members. The registration of current events in the system still remains critically low. More focus is required on active collection efforts, field level coordination, local and central integrated approaches with MOHFW and BBS. Further an M&E mechanism is required to ensure progress on achieving targets can be measured. A study to identify the barriers to registration would be useful to highlight targeted interventions needed to develop the strategy for boosting timely birth and death registration. At present, BRIS has no provision to find the statistics of birth registered who born in a particular year, LGD needs to resolve this constraint. Further, at present in BRIS not possible to find the data of death registration for a particular year and LGD is working on resolving this constraint. As without these provisions, accurately estimating completeness of birth and death registration is impeded.

### I. Need to institutionalize collaboration with the MOHFW, LGD, BEC and BBS

This will prevent duplication of work, and achieve greater comprehensiveness. Mechanisms for entering and updating data on adoption, marriage-divorce-separation and migration also need to be established, in collaboration with the Ministry of Law, Ministry of Agriculture, and the Economic Relations Department of the Ministry of Finance. In Bangladesh there are many parallel systems collecting similar demographic data, such as the Birth and Death registration project of the LGD, the GR of the MOHFW, the Voter registration by the BEC, the SVRS by the BBS, and most recently the NHRP by BBS. There is a need to coordinate efforts between ministries to achieve higher data completeness with data validation procedures in place and for optimum resource utilization. Health is a critical component in CRVS systems, providing birth and death notifications, and determining causes of death. Deaths from most of the Private and NGO facilities are not reported provision for mandatory reporting by MOHFW and private health facilities to LGD of births and deaths occurring in health facilities and notification by community health workers for births and deaths in the community, needs to be institutionalised. There is also a need to establish a mechanism to enter and update data on adoption, marriage-divorce-separation and migration. These are important elements of CRVS. Recently, Ministry of Law, Ministry of Agriculture; and Economic Relations Department of Ministry of Finance have been included in the collaborative effort between Key Stake-

holder ministries to institutionalize coordination. Overall the emphasis on collection strategies to boost registration, there is a critical need for a simple and effective collection process that clearly lays out the role of MOHFW, BBS and other relevant ministries.

## **II. Need for cause of death data for deaths occurring in the community and at health facilities**

Cause of Death Certification, is an aspect of CRVS systems that has been most neglected in many developing countries, this is partly due to the fact that while the mandate for death certification lies with the Registrar General's office (LGD), the expertise actually lies with the Ministry of Health (for death certification by doctors for hospital deaths, and by Health workers using Verbal autopsy for community deaths.) In the meantime, it is beneficial for the Health sector to take ownership of COD certification practices and to be prepared and strengthened to support CRVS development into the future. This plan identifies how health systems can be prepared in the SEAR region to achieve this. The focus is in two areas:

- Ensuring health systems are strengthened to support notification of births and deaths within their facilities; and
- Ensuring health systems can produce cause of death information through medical certification and interim measures such as verbal autopsy processes.

## **III: Compilation of vital statistics from CRVS data**

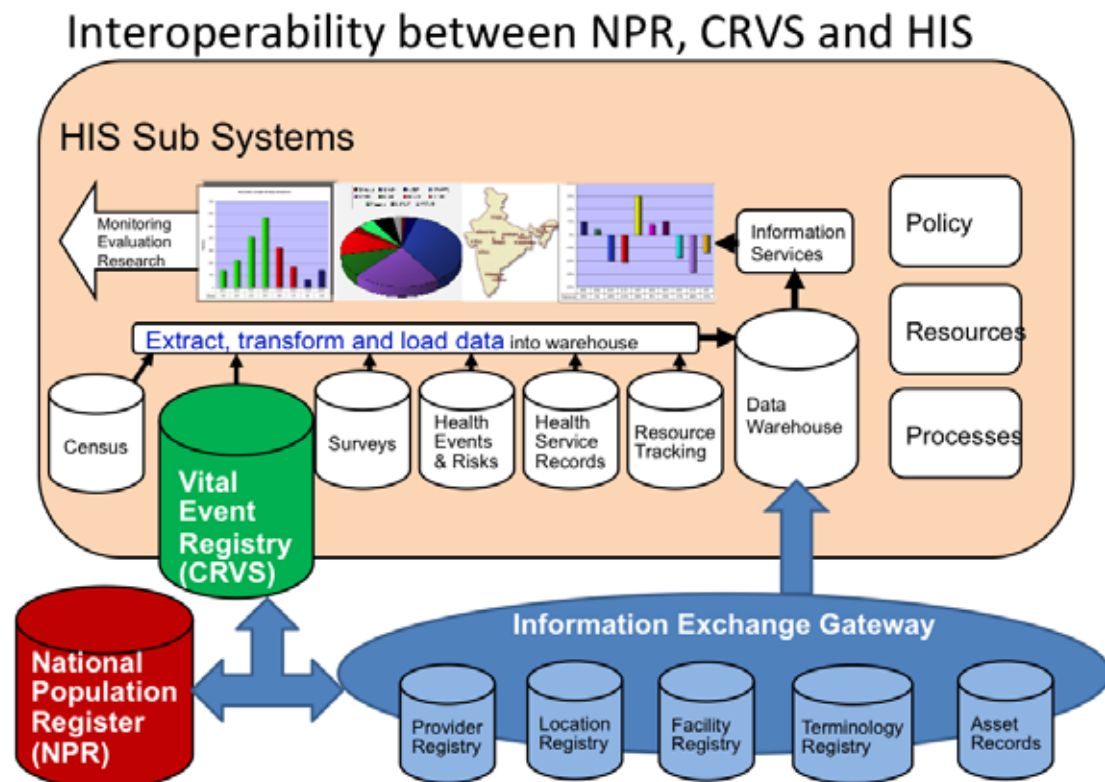
Currently no vital statistics are compiled from the birth and death registration data. There is a need to establish data release procedure between LGD and BBS. The Sample Vital Registration System (SVRS) based on sentinel sites routinely conducted by the Bangladesh Bureau of Statistics of the Ministry 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. There is a need to establish data quality assessment mechanisms. As the birth and death registration gets more complete, there is a need to produce vital statistics from the data.

### **Data security and confidentiality**

Data sharing protocols need to be developed keeping in mind the need for data security and confidentiality. Protecting the confidential information of individuals is an ethical requirement and needs to be reflected in the law, so it is a legal requirement as well. Where individual citizen data are not required, only anonymized and consolidated data need to be shared. A cyber law detailing these protocols is under development and needs to adequately capture the scope and requirement of CRVS data, the NPR and all the associated databases. A disaster data recovery mechanism also needs to be developed and implemented.

## 6. The CRVS roadmap

Bangladesh's journey towards achieving Universal Civil Registration focuses on strengthening four strategic areas. Ongoing success will depend on coordinated action among sectoral stakeholders and a systems approach that tackles the organizational, technical and behavioural determinants of CRVS performance and the synergies emerging from interactions among them. Health sector investments in particular need to be made as part of multisectoral, holistic approaches that are nationally owned, scalable, sustainable and cost effective and that build upon and contribute to Bangladesh's CRVS system.<sup>25</sup> As an overarching priority, critical to strengthening the four strategic areas would be establishing interoperability, linkages and field level coordination between the Health Information System, CRVS and the NPR, bearing in mind the need to manage confidentiality and data security, as the diagram below describes.



The specific activities to be undertaken for each of the four strategic areas below are described in detail in the accompanying investment plan:

**Strategy Area 1: Birth and Death Registration** Increase coverage of birth and death registration, with a focus on timely registration. The national plan to improve the civil registration and vital statistics system includes accelerating the registration of births and deaths within 45 days of occurrence of the event. The MOHFW has a 95% plus coverage of the EPI, therefore collaboration with the MOHFW will be instrumental in boosting

<sup>25</sup> Using innovative approaches in the health sector to strengthen and modernize civil and vital statistics (CRVS) systems: guiding principles and good practices, Report of a technical meeting sponsored by the World Health Organization in collaboration with Canada, UNICEF, USAID and the World Bank, Geneva, 17–18 December 2013

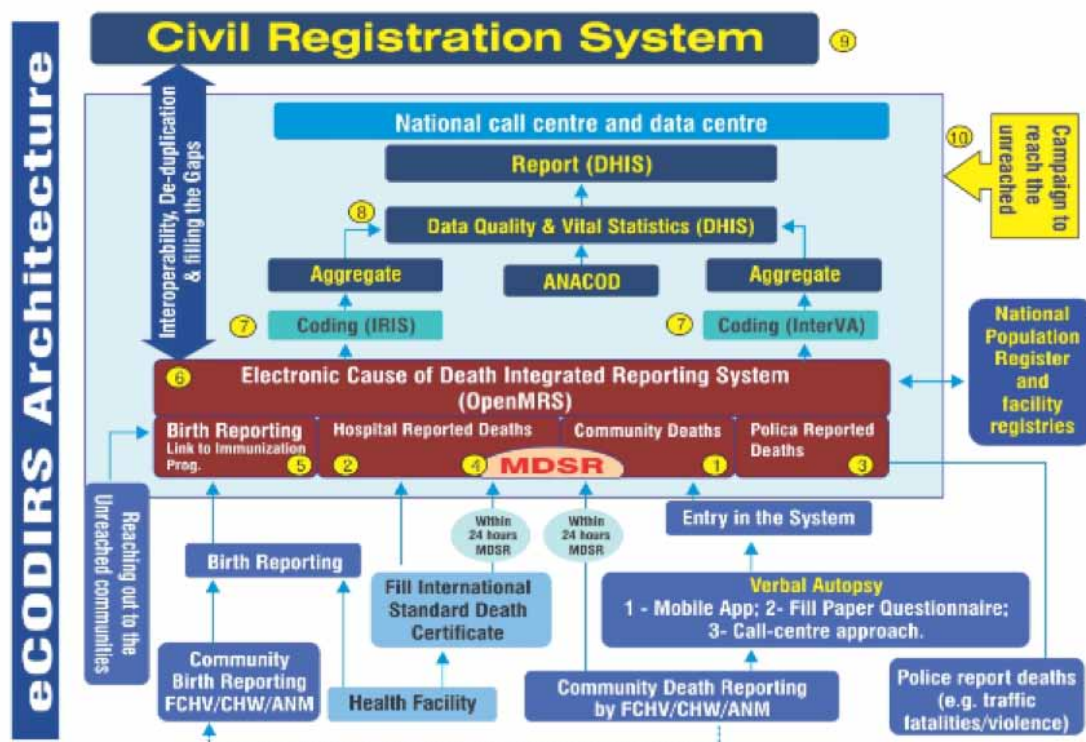
timely birth registration. This would include ensuring that all births and deaths occurring in health facilities are recorded and notified to the relevant authorities in ways that protect the confidentiality and security of information. The possibility of Conditional Case Transfers (CCTs) to the poorest populations needs to be explored as an effective solution to boost completeness of timely registration of births and deaths. CCTs are already widely used and the possibility to include birth registration alongside other indicators such as immunization coverage could play an instrumental role in encouraging early registration. Death registration is inevitably worse than birth registration. Furthermore, there is an extensive network of community health workers, now equipped with computer tablets, who could be useful as notifiers of deaths in the community. Innovative approaches that link service delivery to birth and death registration also need to be applied, so that an intrinsic value attached to registering birth and deaths is felt by the community. Death registration has been even more neglected than births, and establishing linkages with religious authorities such as the Imam, priests and temples, needs to be tapped into, as most families perform the last rites of the deceased at their place of worship, and the Imam or priest can be called upon to maintain a register of all deaths. The foundation of the CRVS system needs substantial strengthening; the registration of current events is very low, even after investment. Therefore more focus is required on active collection efforts, local and central integrated approaches with MOHFW and BBS are critically important to this end. The low rate of registration will not necessarily change unless there is clear imperative to do so, and the NPR is the means to keep the focus on the need to develop improved collection strategies. There is a need to establish field-level coordination between LGD and MOHFW. Further, in addition to the local data sharing linkages needed to strengthen the collection system, a robust monitoring and evaluation also needs to be instituted. Collaboration with faith organizations, funeral and burial institutions (often in the private sector) as notifiers of births and deaths, would also support in boosting the completeness of registration, and needs to be explored. The Figure above shows that registration of births and deaths occurring within the year, and registered within the year cannot be measured. Thus developing an M&E strategy is essential to make sure targets are being achieved.

**Strategy Area 2: Cause of Death Data** There is a need for establishing a clear business process describing who can certify death and causes of death, who can ensure reliable coding, and how the data are shared and analyzed while maintaining the confidentiality of personal information<sup>26</sup>. LGD would need to establish a linkage with MOHFW to report medically certified cause of death (MCCD) for deaths in health facilities and most probable cause of death by conducting verbal autopsy for community deaths. There is also a need for Introduction and scaling of standard international form of medical certificate of cause of death for all deaths occurring in the country The MOHFW would make use of already established and widely used open-source software for data aggregation and analysis that is DHIS2, and individual records Electronic Medical record system that is

<sup>26</sup> Using innovative approaches in the health sector to strengthen and modernize civil and vital statistics (CRVS) systems: guiding principles and good practices, Report of a technical meeting sponsored by the World Health Organization in collaboration with Canada, UNICEF, USAID and the World Bank, Geneva, 17–18 December 2013

OpenMRS. Automated tools like InterVA for COD from Verbal Autopsy and IRIS for ICD coding of COD would also be integrated, and it would be based on a systems approach using interoperability and data standards. WHO-SEARO has developed a concept paper, based on this approach described above, Electronic Cause of Death Integrated Reporting System( eCODIRS), and it is proposed to pilot eCODIRS in Bangladesh, to increase the completeness and quality of cause of death data. This would only entail building a thin application layer on top for cause of death data, birth and death reporting, analytics for vital statistics and data quality, M&E, and linkage to CRVS for de-duplication and gap filling, bearing in mind the need to manage confidentiality and data security. LGD to enhance campaigns and other measures to increase percentage of death registration out of total deaths. Use multi-stakeholders' collaboration especially with MOHFW and

**Verbal Autopsy & National Call Centre empowers community workers to report Births & Deaths**



BBS to improve coverage and will make mandatory provision for death registration with cause of death certification by physician according to ICD-10 code.

**Strategy Area 3: Vital Statistics and Integration with the National Population Register** At present, Bangladesh relies on its SVRS to compiled vital statistics from 1500 PSU's. It is suggested that as the civil registration system achieves higher completeness, vital statistics be compiled from the routine CRVS data. Bangladesh is undergoing a Data revolution, the enactment of the National Statistics act 2013, the government recognizes the need to make use of innovative techniques for statistical analyses in order to maximize the value of available data and take account of missing data and biases.

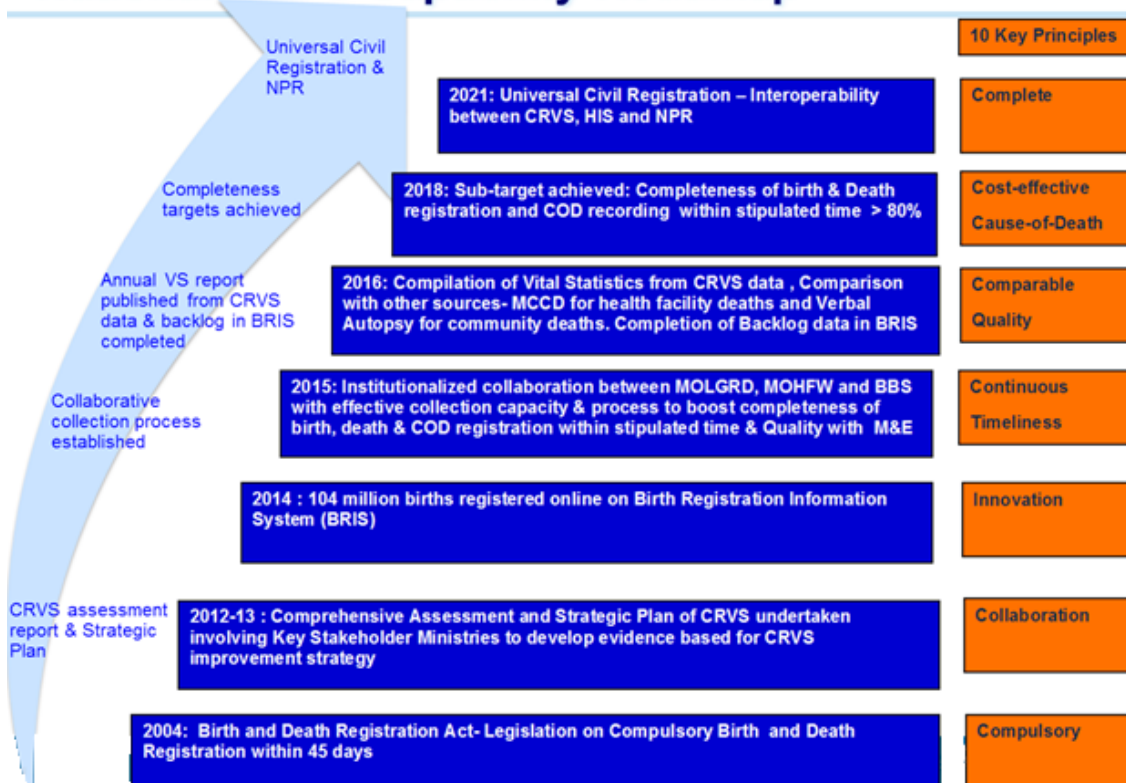
Bangladesh is also committed to promoting the use of multiple data sources in order to produce vital statistics in setting where available data are of limited quality. Introducing analytical methods to enhance data quality will be imperative to promote use of data for evidence-based decision making. Standing Committees on Statistics have been established on administrative levels of the country, to enable better data collection, compilation, analysis and use, part of the broader Data Revolution that Bangladesh is undergoing. Further, described in more detail in the next section, Bangladesh is moving towards developing a National Population Register (NPR) and it is envisaged that the CRVS would be primary means to update the birth and death data in the system, both text and biometric data, thus there is a need to establish interoperability between CRVS and NPR and begin early coordination between BBS, BEC, LGD and MOHFW, so processes and outputs can be aligned as far as possible. Interventions involving ICT need to be developed with sustainability and scalability in mind and support interoperability and capacity development in Bangladesh<sup>29</sup>. It is recognized that effective and sustainable CRVS implementation would need a coordinated whole-of-government approach and would need to either incorporate unique identification of citizens or link to a unique identification system.

**Strategy Area 4: Raising awareness, advocacy and strengthening the law** There is a need to develop a comprehensive awareness strategy, that is both innovative and catered to the specific target audience. Approaches such as a personalized voice message to parents, sent upon immunization of their baby requesting them to register their baby at the nearest union parishad office. There is also a need for an advocacy strategy that focuses efforts on those who are best placed to deliver the improvements. This “drivers of change” approach (PARIS21, 2010) specifically targets the institutions and individuals who can act as key levers to bring about desired changes in countries and who need to be convinced to act. To an amendment to the legislation for mandatory reporting of all vital events occurring in health facilities, private and public needs must be incorporated, as well as a requirement for cause of death data. Furthermore, as the coordination mechanisms and the process between the different stakeholder ministries become institutionalized, the legal framework would need to be modified to reflect this. Adequate provisions for data confidentiality and security would also need to be included in the legislation and stringently implemented, Data sharing protocols would need to be defined, instances where the detailed individual data are not required, anonymized and consolidated data would be shared. A cyber law is currently being developed in the country, which would define the protocols for data sharing and ensure that adequate levels of data security and confidentiality are maintained.

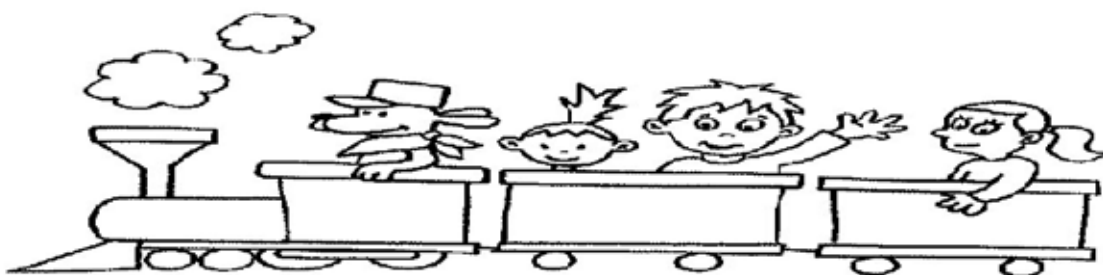
<sup>28</sup> Using innovative approaches in the health sector to strengthen and modernize civil and vital statistics (CRVS) systems: guiding principles and good practices, Report of a technical meeting sponsored by the World Health Organization in collaboration with Canada, UNICEF, USAID and the World Bank, Geneva, 17–18 December 2013

<sup>29</sup> Using innovative approaches in the health sector to strengthen and modernize civil and vital statistics (CRVS) systems: guiding principles and good practices, Report of a technical meeting sponsored by the World Health Organization in collaboration with Canada, UNICEF, USAID and the World Bank, Geneva, 17–18 December 2013

## "National CRVS Capability Roadmap"



### 7. The grand scheme of things: the routine use of CRVS data to update NPR in real time



#### Building a National Population Register: The whole is greater than the sum of its parts

Under the leadership of PMO the government of Bangladesh has begun working on its vision to establish a National Population Register, with updated demographic data of the citizen, covering the entire population in Bangladesh (permanent citizens as well as permanent residents). The NPR would include a unique ID, and Central authentication system and serve as a comprehensive database for use by all ministries. The NPR would also enable tracking of all delivered services to each citizen between 2015 and 2017, the BBS would be developing a National Hardcore Poor Register covering the entire population of Bangladesh, the database is CCDs compliant and would serve as

the starting point for the NPR data. Data from MOHFW and the BEC would be used to validate the data and for de-duplication. It is envisaged that the CRVS system would be responsible for updating the birth and death data in the NPR database and the collection of bio-metric data. The Statistics and Informatics Division (SID), Ministry of Planning would also plan a central role in maintaining the NPR, establish a statistical network and strengthen it and establish a digital archive for this purpose.

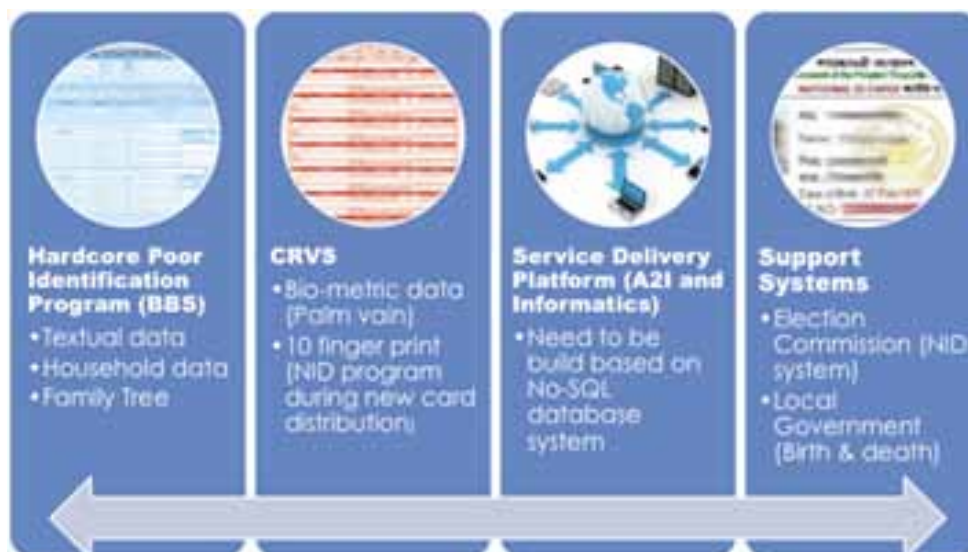
Data on adoption, marriage-divorce-separation and migration would also be entered and updated in the NPR, by the Ministry of Law. These are important elements of CRVS. Recently, Ministry of Law, Ministry of Agriculture; and Economic Relations Department of Ministry of Finance have been included in the collaborative effort between Key Stakeholder ministries to institutionalize coordination. In addition, with collaboration from the Ministry of Home Affairs, reliable and up-to-date data on migration in-country and outside the country would also be adequately captured in the NPR, and business process for updating the usual residents in every upazila would need to be developed. There is a need for applying a systems-wide approach for the introduction of NPR, taking into account the legal, socio-cultural, institutional context, business processes and system architecture in order to maximize sustainability and country ownership. Innovations need to be designed for institutionalization and scalability within various systems described in the diagram below and specifically take account of CRVS system architecture as they are developed and implemented<sup>28</sup>. The balancing of ICT emphasis with basic collection efforts is important. A well-functioning NPR will rely heavily on its basic components – Civil Registration and Health Information, and so the collection and business processes need to be emphasized as the foundation of NPR and the use of technology at various levels needs to be seen as optional and as an enabler to make the processes more effective.

### **Why NPR?**

- Convergence of all ID systems
- Central authentication system
- Foundation for citizen's service delivery
- Tracking of all delivered services to each citizen and their family
- Efficient service delivery and efficient utilization of national resources
- Effective statistics and data collection

<sup>28</sup> Using innovative approaches in the health sector to strengthen and modernize civil and vital statistics (CRVS) systems: guiding principles and good practices, Report of a technical meeting sponsored by the World Health Organization in collaboration with Canada, UNICEF, USAID and the World Bank, Geneva, 17–18 December 2013





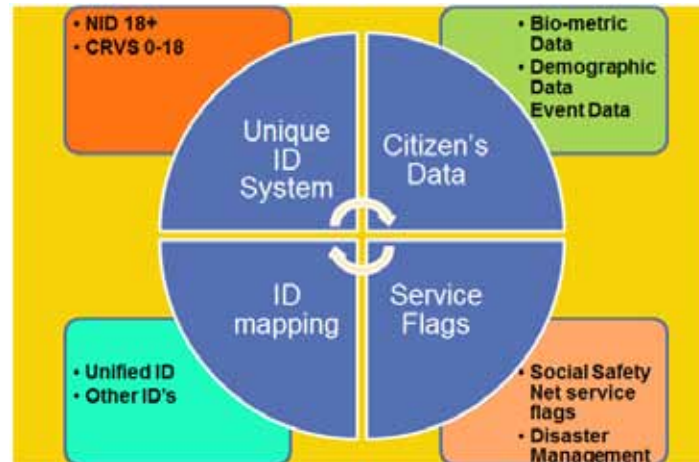
### Data sources proposed for NPR

NPR			
<p><b>Poor identification database:</b> Will provide demographic data of citizen and PMT data of all households</p>	<p><b>CRVS:</b> Will edit the demographic data and collect bi-metric data of citizens and assign an unified ID (Can be used as healthcare ID)</p>	<p><b>NID:</b> Will be used to identify 18+ citizens with NID</p>	<p><b>GR:</b> Will be used for household identification</p>

### Targeted immediate benefits

- Modernize and automate birth and death registration with higher accuracy and no duplication
- Log cause of death properly and log the information from the data source
- Stop child marriage
- Properly implement women's shares in assets through providing accurate information on inheritance
- Manage health care effectively for the homeless, the poverty stricken, even if they migrate frequently
- Target the poverty stricken with accuracy, giving them coverage under different social safety net programmes, monitoring their development closely (nutrition, health and its impact on economic conditions of the HH and vise-versa)
- Manage medical record of poor centrally to provide effective service
- Manage disaster (flood, cyclone etc.)

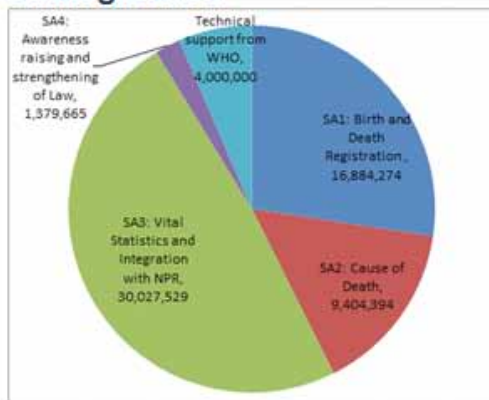
### Components of NPR



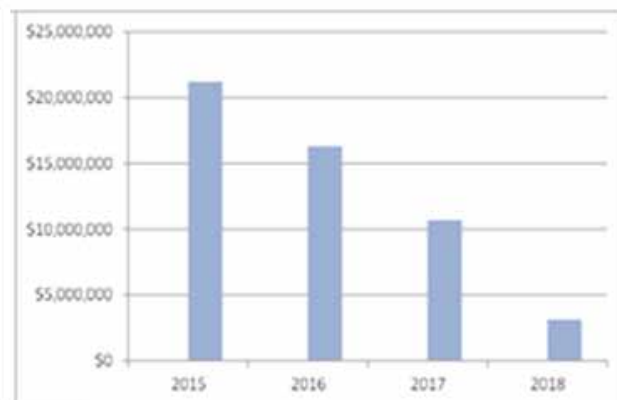
### 8. Way Forward: Bangladesh a Trailblazer redefining the scope of CRVS with its NPR

The case study has been developed to be read in conjunction with the detailed investment plan for 2015-2018, focusing on the four strategic areas detailed in section 6 of the CRVS Roadmap. The activities prioritized in the investment plan are based on the discussions and consensus among the key stakeholders of CRVS in Bangladesh. They are aligned with recommendations of the review committee that undertook the comprehensive assessment and strategic planning for CRVS in 2012-13, and were made while keeping in mind the big picture for the NPR. A robust M&E framework would be developed to track progress on indicators and meeting targets.

Investment plan costs by Strategic Area



Investment plan costs by year



Above is the proposed investment plan cost for each Strategy Area:  
 Strategy Area 1: Birth and death registration – US\$ 16 884 274 (to be finalized)  
 Strategy Area 2: Cause of death – US\$ 9 404 394 (to be finalized)  
 Strategy Area 3: Vital statistics and integration with NPR – US\$ 30 027 529 (to be finalized)  
 Strategy Area 4: Awareness raising and strengthening of law – US\$ 1 379 665 (to be finalized)  
 Technical support from WHO US\$ 4 000 000 (to be finalized)

As part of Bangladesh Vision 2021, the government of Bangladesh is committed to building a country whose citizens are able to live prosperous and happy lives. The year 2021 will mark the golden jubilee of Bangladesh's independence, while the year 2020 will be the 100th anniversary of the birth of the father of the nation, Bangabandhu Sheikh Mujibur Rahman.

The government of Bangladesh envisions by 2020/2021 a Bangladesh which will be a middle income country where poverty will be drastically reduced and where citizens will be able to meet every basic need, where development will be on a fast track, with ever-increasing rates of inclusive growth.

Establishing an NPR with universal coverage, unique identification, biometric data, ID mapping and service flags is the grand vision towards which Bangladesh is heading. With universal civil registration and a complete NPR, Bangladesh would have updated and reliable data on its population on an ongoing basis and, in due course, no longer require a census. This would lead to a direct saving of US\$ 2.5 million a year (a census every 10 years costs US\$ 25 million). NPR would enable more effective governance, the duplication of efforts between various ministries would be streamlined, and many other non-quantifiable savings would be realized. The service flagging component of the NPR would enable optimum utilization of resources and enable social safety net schemes to serve those most in need. In addition, Bangladesh would be able to closely track progress on various economic development indicators and make more targeted interventions that translate into the realization of Bangladesh Vision 2021: economic inclusiveness, poverty alleviation and better health for the money spent.

Continued coordination between ministries is required to agree upon the way forward for the implementation of NPR. It is also essential to align outputs of different related projects toward the building of the NPR. As the NPR design is in its nascent stages, as far as possible it would be useful to merge virtual process between different projects.

CRVS would be the primary source of updating the NPR on an on-going basis and all other ministries would be users of these data. In this sense, Bangladesh would redefine the scope and the usefulness of CRVS systems, and indeed be a trailblazer for the rest of the world.

