Investing in the potential of Bangladesh's Civil Registration and Vital Statistics System

A draft Investment Plan prepared for the Addis Ababa CRVS Meeting 28-29 April 2014

A project sponsored Canadian Department of Foreign Affairs, Trade and Development and the World Health Organization.

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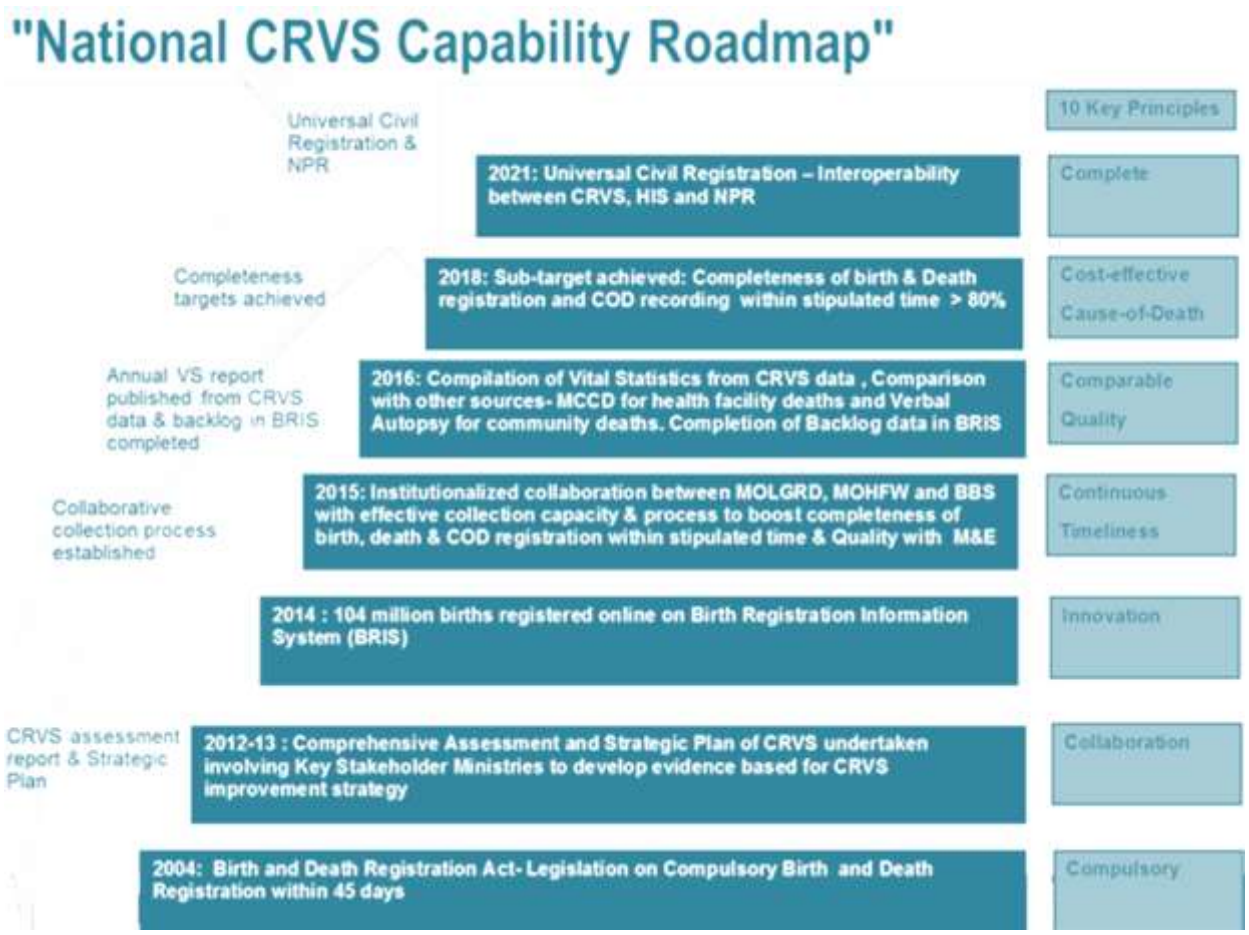
Acronym	Description
BBS	Bangladesh Bureau of Statistics
BDT	Bangladeshi Taka
BEC	Bangladesh Election Commission
CEPA	Cambridge Economic Policy Associates
COD	Cause of Death
CRVS	Civil Registration and Vital Statistics
eCODIRS	Electronic Cause of Death Integrated Reporting System
ICD	International Classification of Diseases
ICT	Information and Communication Technology
ID	Identification
MCCD	Medically certified cause of death
MIS	Monitoring and Information system
MoHFW	Ministry of Health and Family Welfare
MoLGRD	Ministry of Local Government and Rural Development
NPR	National Population Register
SEARO	South-East Asia Regional Office
SOP	Standard operating procedure
UNICEF	United Nations Children's Fund
USD	United States Dollars
WHO	World Health Organisation

CRVS Roadmap



Key Priority Areas

As defined in the Bangladesh Case Study:

Bangladesh's journey towards achieving Universal Civil Registration would focus on strengthening 4 Strategic areas. The specific activities to be undertaken for each of the 4 Strategy 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 civil registration and vital statistics system includes accelerating registration of births and deaths within 45 days of occurrence of the event. MOHFW has a 95% plus coverage of EPI, therefore collaboration with MOHFW will be instrumental to boosting 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 (CCT's) to the poorest populations needs to be explored as an effective solution to boost completeness of timely registration of births and deaths. CCT's 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. Further, there is an extensive community health workers, now equipped with tablet pcs, that could be useful as notifiers to deaths in the community. Innovative approaches that link service delivery to birth and death registration also needs to be applied, feel an intrinsic value attached to registering birth and deaths. Death registration has been even more neglected that births, and establishing linkages with religious authorities such as the Imam, priest and temples, needs to be tapped into, as almost families perform 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 MOLGRD 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.

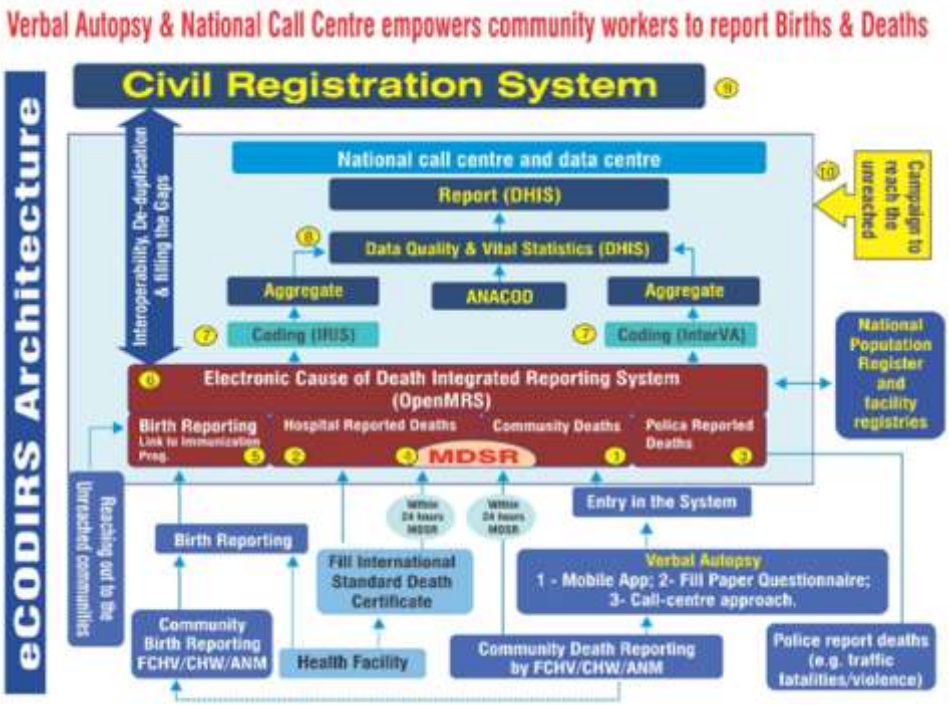
Strategy Area 2: Cause of Death Data

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. MOLGRD 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 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 completes 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.

MOLGRD to 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.



Strategy Area 3: Vital Statistics and Integration with 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, MOLGRD 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.

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 personalised voice message to parents being 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. Amendment to the legislation for mandatory reporting of all vital events occurring in health facilities, private and public needs to be incorporated, as also a requirement for cause of death data.

Further, as the coordination mechanisms and process between the different stakeholder ministries become institutionalised, the legal framework would need to be modified to reflect the same. 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 is 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.

Ongoing success will depend on coordinated action among sectoral stakeholders and a "systems" approach that tackles the organizational, technical and behavioral 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 .

As an overarching priority, critical to strengthening the 4 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.

Current Baseline

Status of Birth and Death Registration in Bangladesh- online BRIS 2014 (MOLGRD)

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

** Babies registered their birth within 45 days of birth. At present, BRIS has no provision to find the statistics of birth registered who born in a particular year, MOLGRD is working to resolve this constraint.** At present in BRIS not possible to find the data of death registration for a particular year. MOLGRD is working on resolving this constraint.*

Costing Methodology

This is an initial draft investment plan for CRVS in Bangladesh. The investment priorities and activities have been developed based on the Comprehensive Assessment and Strategic Action Plan (Dec 2013) and a one-week consultation during end March-early April 2014. Additional feedback was also received during two in-country stakeholder workshops held on 11th and 16th April 2014, organised by WHO.

These costing estimates are indicative only. They require review in further detail. In particular, more work is required to:

(i) rationalise and streamline some of the costs – e.g. by coordinating various planned trainings, considering requisite maintenance costs for capital equipment, considering refresher trainings needs, etc;

(ii) segregate fixed/ developmental costs (i.e. initial one-time costs and capital costs) as well as variable costs (i.e. ongoing operating costs); and

(iii) identify available government (and donor) funding for the investment plan, and thereby the current funding gap. Also, the investment plan does not take account of inflation.

Investment Summary

Priority areas	Costs per year (USD)					Total Costs (USD)
	2014	2015	2016	2017	2018	
CRVS investment plan	**2,107,343**	**17,715,939**	**20,146,067**	**12,298,716**	**11,507,973**	**63,776,038**
Strategy Area 1: Birth & death registration (MoLGRD)	**823,150**	**5,175,984**	**7,190,137**	**2,264,523**	**2,155,140**	**17,608,934**
Introduce strategies to improve coverage of birth and death registration and completeness of reporting	-	481,082	511,922	511,922	511,922	2,016,848
Prepare protocols and standard operating procedures (SOPs)	50,020	15,412	-	-	-	65,432
Provide capacity building trainings for staff	-	578,745	625,470	699,855	590,473	2,494,543
Improve centralised information and communications technology (ICT) systems	773,130	3,000,000	5,000,000	-	-	8,773,130
Improve local ICT systems	-	1,100,745	1,052,745	1,052,745	1,052,745	4,258,981
Strategy Area 2: Cause of death (MoHFW)	**122,738**	**4,266,224**	**4,300,357**	**866,621**	**697,260**	**10,253,200**
Hospital deaths						
Improve capacity of doctors and medical officers on medically certified cause of death (MCCD)	3,020	371,927	371,927	185,964	185,964	1,116,495
Develop strategy for ICD-10 implementation and capacity building trainings	7,432	403,046	403,046	193,798	193,798	1,201,119
Provide materials	6,000	-	-	-	-	6,000
Improve ICT systems	100,000	100,000	-	-	-	200,000
Verbal autopsy						
Pilot verbal autopsy procedures as part of eCODIRS	6,286	231	-	-	-	6,516
Provide capacity building trainings for staff	-	352,496	486,859	486,859	317,499	1,643,713
Improve ICT systems	-	3,038,525	3,038,525	-	-	6,077,050

Strategy Area 3: Vital statistics & integration with National Population Register (BBS)	**220,755**	**7,152,858**	**7,547,401**	**8,059,401**	**7,547,401**	**30,527,815**
Establish NPR governing and coordinating bodies	58	58	58	58	58	290
Develop procedures/ protocols for coordination of the NPR with CRVS and other main databases	119,077	6,947,343	6,947,343	6,947,343	6,947,343	27,908,448
Ensure adequate quality control mechanisms in place to maintain NPR with accurate and up to date information	1,620	105,458	-	-	-	107,077
Generate vital statistics	100,000	100,000	600,000	612,000	100,000	1,512,000
Train staff	-	-	-	500,000	500,000	1,000,000
Strategy Area 4: Advocacy and awareness raising; strengthening law (Cabinet Division)	**140,700**	**320,873**	**308,172**	**308,172**	**308,172**	**1,386,089**
Raising awareness & advocacy						
Raise awareness & advocacy amongst government	-	6,142	2,142	2,142	2,142	12,566
Raise awareness & advocacy amongst the public	-	310,031	306,031	306,031	306,031	1,228,123
Strengthening law						
Revise key legal aspects of civil registration	140,700	4,701	-	-	-	145,401
Develop regulations and legislation on data privacy and confidentiality	23,450	783	-	-	-	24,233
Technical support (WHO)	**800,000**	**800,000**	**800,000**	**800,000**	**800,000**	**4,000,000**
WHO Regional Office Technical Support	400,000	400,000	400,000	400,000	400,000	2,000,000
WHO Country Office Technical Support	400,000	400,000	400,000	400,000	400,000	2,000,000

Costing Analysis

Figure 1: Analysis of investment plan by Strategy Area

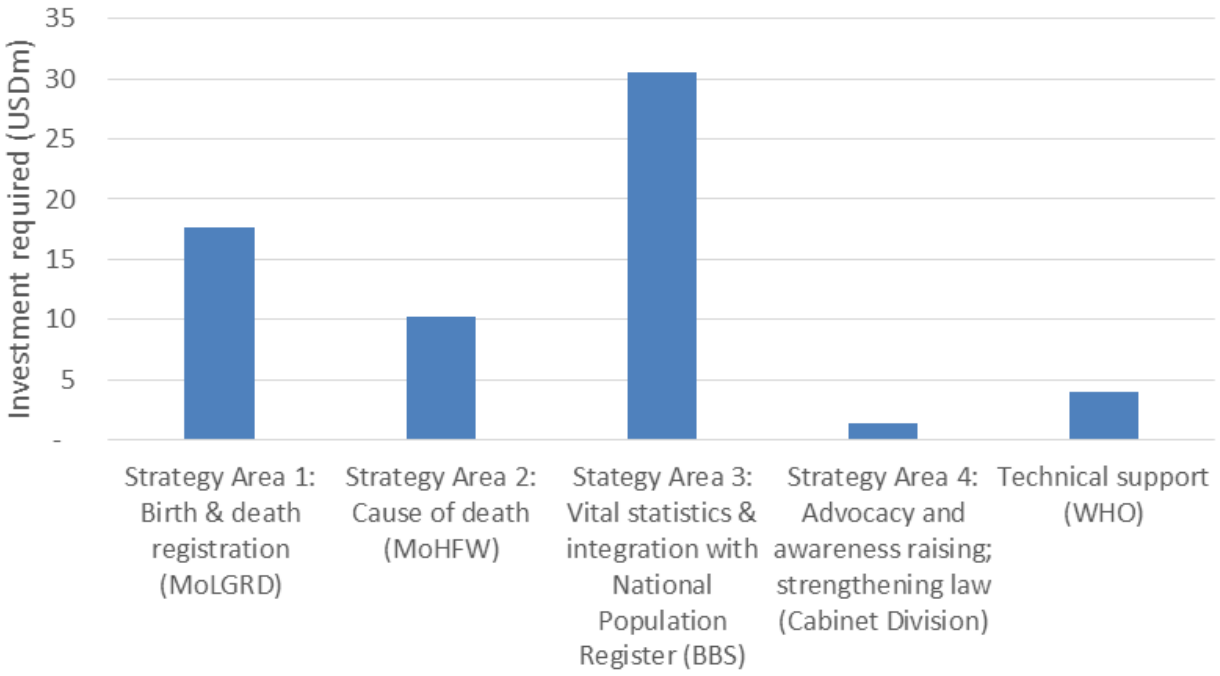


Figure 2: Cost profile of investment plan over time

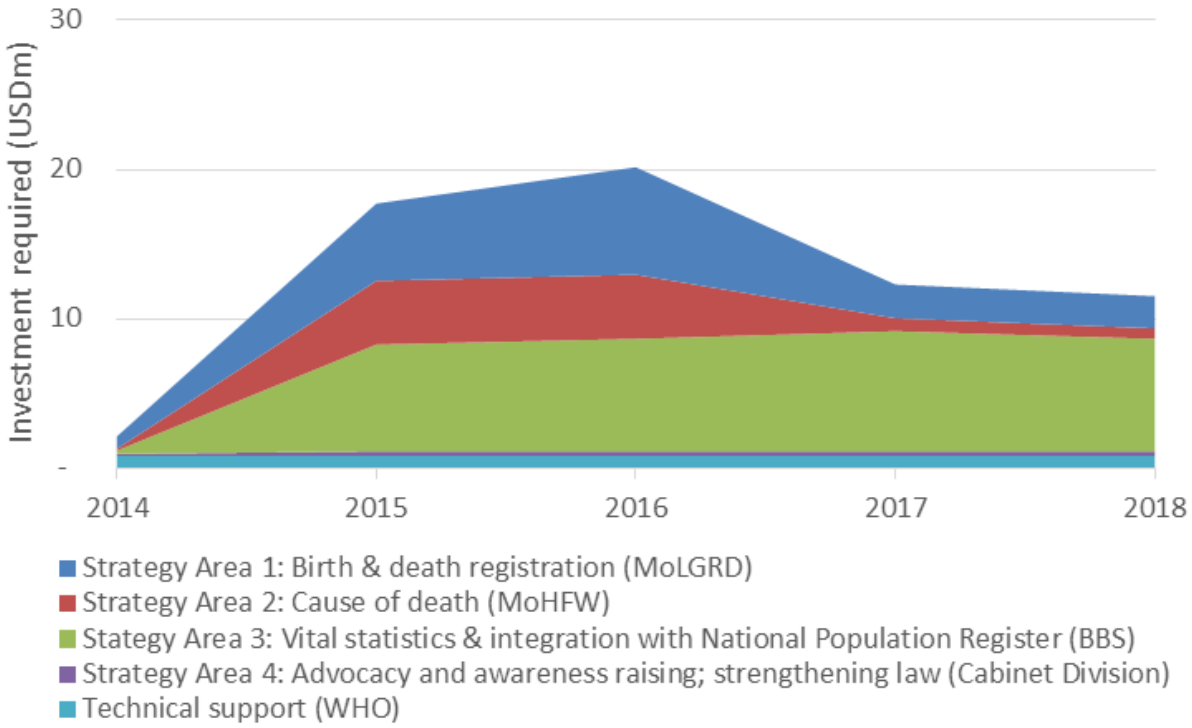


Figure 3: Cost profile of Strategy Area 1 over time

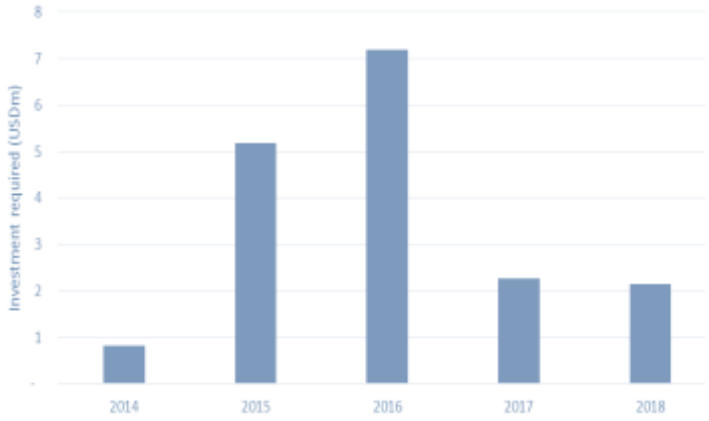


Figure 4: Cost profile of Strategy Area 2 over time

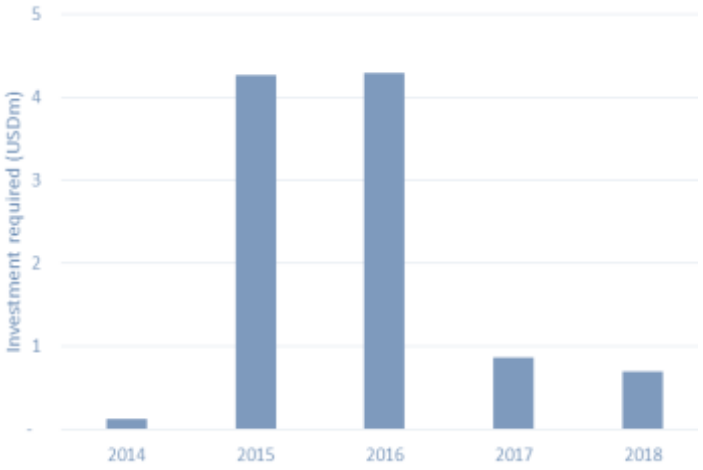


Figure 5: Cost profile of Strategy Area 3 over time

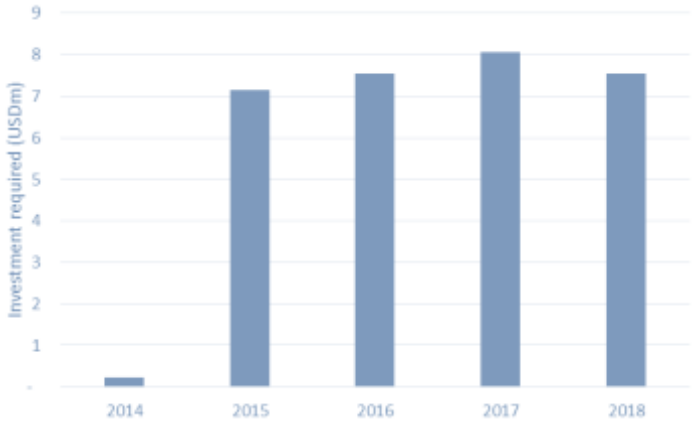
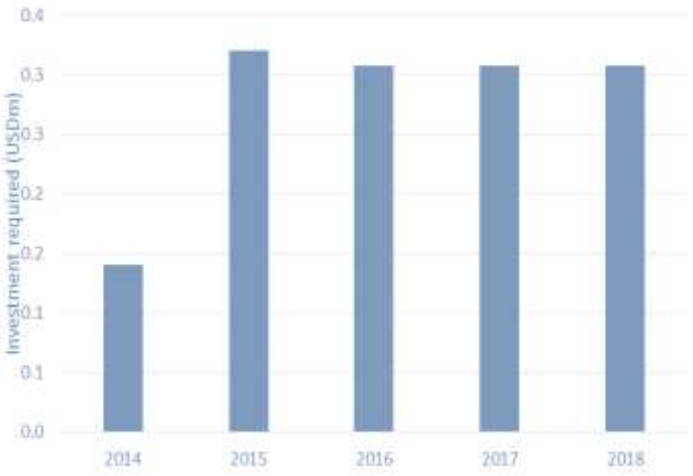


Figure 6: Cost profile of Strategy Area 4 over time



Annex - Investment by Priority Area and Activities

Priority area	Activities	Costing approach/ reference notes	Confidence in assumptions	Costs per year (USD)					Total Costs (USD)
				2014	2015	2016	2017	2018	
Strategy Area 1: Birth & death registration (MoLGRD)				**823,150**	**5,175,984**	**7,190,137**	**2,264,523**	**2,155,140**	**17,608,934**
Introduce strategies to improve coverage of birth and death registration and completeness of reporting	Establish Registrar General's Office to support improved civil registration, including improved monitoring and supervision	This will be a newly created office to be set up mid-2015, with initial set-up costs following by operating costs. It is likely that UNICEF will be able to provide budget support for initial set-up and the majority of ongoing costs for the first few years, afterwhich the government will be expected to take over. *Source: Proposal prepared by Birth & Death Registration office, submitted to MoLGRD for funding, and discussions with B&D Registration team*		-	307,915	511,922	511,922	511,922	1,843,681

	Develop strategies for improved registration: - Introduce approaches to record births and deaths from private and non-government hospitals - Introduce approaches for Field-Level Coordination, including community health workers (e.g. Community Health Care Providers, Health Assistants & Family Welfare Assistants) to inform registry offices of birth and deaths, using their newly provided communication equipment - Introduce approaches for linkages with faith organisations as notifiers for births and deaths - Creation of last mile inclusion strategy to improve access to coverage for birth and death registration in hard to reach areas (e.g slums, refugee camps, floating populations)	- Four international consultants for 1 month each to work on each of the four identified areas, with a dedicated team within the Registrar General's Office - Four local consultants for six months each to provide country-specific input and coordinate between key stakeholders for each of the four identified areas - Eight 1-day workshops (two per each identified area) with key stakeholders to draft policies (10 people) - Four 1-day consultative meetings to finalise each of these four areas (20 people)		-	173,167	-	-	-	173,167
Preparation of protocols and standard operating procedures (SOPs)	Develop protocols / SOPs: - Modify birth and death registration forms, to be compliant with UNSD recommendations - Establish guidelines on confidentiality and data protection - Design SOPs for use prior to corpse disposal - Establish validation system protocols to ensure data quality and avoid fraudulent registration of multiple births	- Local consultant for 6 months to work with a dedicated team within Registrar General's Office and liaise with other key stakeholders, eg MoHFW, BBS - Eight 1-day workshops (2 per each sub activity) with key stakeholders to agree draft procedures/ strategies (10 people) - Four 1-day consultative meetings to finalise procedures/ strategies (20 people)		-	15,412	-	-	-	15,412
	Publish birth and death registration manual to provide guidance to field staff	5,002 copies to be printed and distributed (1 for each registration office). A unit cost of $10 has been assumed.		50,020	-	-	-	-	50,020

Provide capacity building trainings	Introduce coordination mechanisms for MoHFW, MoLGRD and BBS	Costs are based on a 2-day workshop to be held each year in each of the 64 Districts for managerial staff		-	104,239	104,239	104,239	104,239	416,954
	Train relevant faith organisations on birth and death registration	Costs are based on a 1-day workshop to be held every other year in each of the 64 Districts for relevant faith organisation staff		-	74,385	-	74,385	-	148,771
	Train all relevent Birth & Death registration staff on newly created protocols and SOPs	Costs are based on a total of 5,002 staff (1 from each registration office) and a 5-day training. A 'Train the Trainers' approach will be used. Initially twelve trainings of 40 people per training will be held at District level so that one person per Upazila is trained. A training will then be held at each Upazilla level for approx. 10 people per training. Refresher trainings have not been accounted for.		-	47,625	44,788	44,788	44,788	181,988

	Train all relevant health staff on newly created protocols and SOPs (rural and urban areas)	MoHFW - Rural areas Costs are based on training a total of 37,581 staff (a Community Health Care Provider, a Community Health Assistant and Family Welfare Assistant from each of the 12,527 health facilities, Health Bulletin 2013). Each training would take 5 days. A Training of Trainers approach would be taken with the following number of trainings: - Five trainings at each 64 District level with 40 people per training to train all 12,527 Community Health Care Providers - Two trainings at each of the 485 Upazilas with 25 people per training to train all Community Health Assistants and Family Welfare Assistants MoLGRD - for Urban areas. Costs are based on taining a total of 1,347 staff (a total of 449 urban registration offices, each with 3 health officials. Urban registration offices include 310 municipalities (310), cantonments (15) and City Corporations (124)). Each training would take 5 days. - Three trainings held at each of the 11 city corporations with 40 people per training. Given the large numbers required to train, refresher trainings have not been accounted for.		-	352,496	476,444	476,444	441,446	1,746,829

Improve centralised information and communications technology (ICT) systems	Input all paper version birth and death certificates into MoLGRD online database	An estimated 60m records still need to be input into the online registration database. If data entry operators are paid 1BDT per entry, it is estimated that this work could be finalised within 4 months		773,130	-	-	-	-	773,130
	Create systems to process, store and protect data	Costs for Server and Security System, as well as SAN and backups. Need clarification on whether maintenance costs are included. *Source: Discussions at 11/4/14 workshop*		-	3,000,000	5,000,000	-	-	8,000,000
Improve local ICT systems	Equip all remaining registration offices with ICT equipment	3,000 out of the total 5,002 registration offices have not yet received ICT equipment (desktop and printer). Costs include installation of new equipment and maintenance. *Source: Unit costs from BEC*		-	1,052,745	1,052,745	1,052,745	1,052,745	4,210,981
	Develop communication systems with community level health workers	Costs for local ICT consultants taken from Poverty Database proposal to World Bank, 2013. Assume 2 local consultants to work for 12 months		-	48,000	-	-	-	48,000

Strategy Area 2: Cause of death (MoHFW)				**122,738**	**4,266,224**	**4,300,357**	**866,621**	**697,260**	**10,253,200**
Hospital deaths									
Improve capacity of doctors and medical officers on medically certified cause of death (MCCD)	Introduce procedures and provide training: - Modify death certificate for medically certified casue of death (MCCD) based on Internation Death Certificate formate to include cause of death (COD), as per ICD-10 - Develop handbook for doctors and medical officers on MCCD - Develop SOPs for cause of death ascertainment - Develop quality assurance processes for correct COD definition - Develop WHO recommended special death form for perinatal death - Train doctors and medical officers on MCCD	Costs to introduce procedures: Dedicated team within MoHFW to work on MCCD procedures. Costs would include two 1-day workshops for each activitiy with 10 MoHFW people at each, to develop procedures and finalise them. Training costs: Train all doctors and medical officers on medical certification of cause of death through a training of trainers approach - Five people (2 x doctors, 3 x medical officers) will then be trained from each of the 4,023 hospitals. Refresher training for half the cohort of doctors trained initially has been accounted for two years after the initial training. *(Source: Health Bulletin 2013, p16 - not including tertiary level hospitals)*		3,020	371,927	371,927	185,964	185,964	1,116,495

Develop strategy for ICD-10 implementation and capacity building trainings	- Train doctors on basic rules of ICD-10 coding - Develop a cadre of Coders to coduct ICD coding for cause of death data	Training costs will include: - Training of trainers by an international expert (from Sri Lanka WHO training centre) to train 40 people for a 5-day training at central level (Doctors and coders with public health background) - Two people (1 x doctors and 1 x coder) will then be trained from each of the 4,023 hospitals (*Source: Health Bulletin 2013, p16 - not including tertiary level hospitals).* Ten 5-day trainings will be carried out in each District for 30 people at a time - Two technical support vists of 1 month each by international expert to provide quality assurance Refresher training for half the cohort of doctors trained initially has been accounted for two years after the initial training.		7,432	403,046	403,046	193,798	193,798	1,201,119
Provision of ICD-10 handbook to hospitals	Provide copies of ICD-10 book to every hospital and clinic that currently does not have one	3,000 copies would need to be distributed, as 50% of government sector facilities have already received this manual. WHO would cover costs for providing this manual, so costs only include dustribution costs		6,000	-	-	-	-	6,000

Improve ICT systems	Introduce eCODIRS (electronic cause of death integrated reported system) and modify existing ICT systems to be compatible with new protocols	Includes cost for software development, customization, translation into Bangladeshi, rolling-out and maintenance of the software. It would also cover Integration of eCODIRS software with the existing Health Information System in Bangladesh. Managing this system should be the responsibility of MoHFW in collaboration with BBS & MOLGRD. *Source: WHO*		100,000	100,000	-	-	-	200,000
Verbal autopsy									
Pilot verbal autopsy procedures as part of eCODIRS	- Pilot verbal autopsy process, as part of eCODIRS - Modify verbal autopsy process and protocol according to lessons learned from pilot scheme	- Train 270 community health workers using current draft verbal autopsy manual. Three Trainings will take place in each of 3 Districts, with 30 people trained for 3-days - Conduct 1-day workshop for 10 people		6,286	231	-	-	-	6,516

Provide capacity building trainings	Train community level health workers on verbal autopsy (rural and urban)	<u>MoHFW - Rural areas</u> Costs are based on training a total of 37,581 staff (a Community Health Care Provider, a Community Health Assistant and Family Welfare Assistant from each of the 12,527 health facilities, Health Bulletin 2013). Each training would take 3 days. A Training of Trainers approach would be taken with the following number of trainings: - Five trainings at each 64 District level with 40 people per training to train all 12,527 Community Health Care Providers - Two trainings at each of the 485 Upazilas with 25 people per training to train all Community Health Assistants and Family Welfare Assistants <u>MoLGRD - for Urban areas</u> Costs are based on taining a total of 1,347 staff (a total of 449 urban registration offices, each with 3 health officials. Urban registration offices include 310 municipalities (310), cantonments (15) and City Corporations (124)). Each training would take 3 days. - Three trainings held at each of the 11 city corporations with 40 people per training. Given the large numbers required to train, refresher trainings have not been accounted for.		-	352,496	486,859	486,859	317,499	1,643,713

Improve ICT systems	Provide all community level health workers (MoHFW and MoLGRD) with ICT equipment to enable regular data updates, as part of eCODIRDS protocols	<u>MoHFW - Rural areas</u> Unit costs received from MoHFW for ICT distribtion carried out in April 2014, which covered 60% of community health clinics and community health workers. <u>MoLGRD - for Urban areas</u> Costs for providing urban registration offices with ICT equipment is covered under Strategy Area 1. Unit costs are to provide 1,347 health officials with tablet computers (3 health officials for each of the 449 urban registration offices. Urban registration offices include 310 municipalities (310), cantonments (15) and City Corporations (124)). Details on maintence costs are not available and have not been accounted for.		-	3,038,525	3,038,525	-	-	6,077,050
Strategy Area 3: Vital statistics & integration with National Population Register (BBS)				**220,755**	**7,152,858**	**7,547,401**	**8,059,401**	**7,547,401**	**30,527,815**
Establish NPR governing and coordinating bodies	Governing body to be created within BBS to provide oversight to NPR and coordinate NPR activities between different ministries	Need to identify whether a new department will need to be created within BBS to carry out this role		0	0	0	0	0	0
	Steering Committee to be created with representatives from each of the 17 stakeholder Ministries to facilitate coordination with NPR	Annual meeting costs of the Steering Committee (1 meeting per year, 30 participants)		58	58	58	58	58	290
Develop procedures/ protocols for coordination of the NPR with CRVS and other main databases	Modify core data elements to be included in NPR to ensure that needs of CRVS are fully covered by this central database	Current NPR design includes 13 mandatory data points and 10 optional ones. The process is already in place to include the CRVS fields within the system. 3 1-day Central Level workshops with 30 people would be required to finalise		1,620	-	-	-	-	1,620

		this							
	Develop data security and confidentiality protocols	- 1 international ICT consultant for 6 months and 1 local ICT consultant for 1 year to develop protocols and processes - Two 1-day consultation workshops with 20 people		117,458	-	-	-	-	117,458
	Include biometric information into National Poverty Database information collection	The proposed bio-metrics will include 10 finger print and two IRIS scans. Adding biometric data is estimated to cost $20m. A donor needs to be identified for this. *Data source: Cost calculations carried out at workshop 10/4/1. More information is needed on what these costs comprise.*		-	4,947,343	4,947,343	4,947,343	4,947,343	19,789,371
	Create unique ID number	Creating a unique ID is estimated to cost $8m. A donor needs to be identified for this *Data source: Cost calculations carried out at workshop 10/4/1. More information is needed on what these costs comprise.*		-	2,000,000	2,000,000	2,000,000	2,000,000	8,000,000
Ensure adequate quality control mechanisms in place to maintain NPR with accurate and up to date information	Establish protocols on responsibility for ensuring data are accurate and kept up to date	Three 1-day Central Level workshops with key stakeholders (30 people) led by BBS		1,620	-	-	-	-	1,620
	Enable ICT systems of community level health workers (from both urban and rural) to provide regular updates for NPR	One local ICT consultant for 6 months		-	12,000	-	-	-	12,000

	Establish quality control mechanisms for data analysis and data quality assessment	- Establish procedures for data analysis and data quality assessment. Costs to include international consultant for 6 months and two 1-day consultation workshops with 20 people		-	93,458	-	-	-	93,458
Generate vital statistics	Create systems to automatically generate regular vital statistics reports	An entire MIS system will cost $1m *Data source: Cost calculations carried out at workshop 10/4/1. More information is needed on what these costs comprise.*		-	-	500,000	500,000	-	1,000,000
	Annual publication of CRVS bulletin and development of data dashboard	Costs for publication and one local ICT consultant for 6 months to develop the data dashboard		100,000	100,000	100,000	112,000	100,000	512,000
Training of staff	Train all staff required to input into NPR / consolidate existing databses with information from NPR	$1m budgetted for this activitiy *Data source: Cost calculations carried out at workshop 10/4/14. More information is needed on what these costs comprise.*		-	-	-	500,000	500,000	1,000,000
Strategy Area 4: Advocacy and awareness raising; strengthening law (Cabinet Division)				**140,700**	**320,873**	**308,172**	**308,172**	**308,172**	**1,386,089**
Advocacy and awareness raising									
Advocacy and awareness raising amongst government departments	- Develop communication plan for the government - Hold awareness raising workshop for government	- Use of a national consultant for 2 months to develop the communication plan - Annual workshop for 40 government staff across ministries for 3 days		-	6,142	2,142	2,142	2,142	12,566

Advocacy and awareness raising amongst the public	Develop awareness building plan for the public Conduct awareness building campaigns for the public: - Advocacy on need and practices for borth and death registration and penalities for non registration - Advocacy on new civil registration related laws and regulations (see below) - Campaigns during national birth registration day to promote awareness	Use of a national consultant for 2 months to develop the awareness building plan Costs of national awareness raising campaigns for the poverty database (supported by the World Bank) used as a proxy. More detailed costing approach is required here.		-	310,031	306,031	306,031	306,031	1,228,123
Strengthening law									
Revise key legal aspects of civil registration	Key legal aspects relating to civil registration that require revision/ update include the following: - Revise regulations to accommodate provisions of mandatory reporting requirements on cause of death according to ICD-10 for health facility deaths, and provisions for assigning most probable COD using Verbal Autopsy for community deaths - Revise law so that definitions of fetal death and still birth align with international standards - Revise law for vital event registration which does not currently occur (eg marriage, adoption, migration in-country and out-country) - Introduce laws requiring death certificate in order to bury a body - Conduct study on reasons for low registration coverage and develop/ revise regulations based on learnings	Dedicated team within the Registrar General's Office will be responsible for all aspects relating to birth and death registration, costs for which have been factored under Strategy Area 1. Additional costs include international (1 month per area) and national consultants (4 months per area) to support the legal review and development process of activities falling under other ministries, as well as workshops for stakeholders discussion/ finalisation (2 workshops for 20 people each for each area).		140,700	4,701	-	-	-	145,401

Develop regulations and legislation on data privacy and confidentiality	- Develop regulations on data privacy and confidentiality - Introduce laws to ensure data privacy and confidentiality	One international consultant (1 month) and one national consultant (4 months) to suppor the development of regulations and support the legal review, as well as workshops for stakeholders to discuss/finalise (2 workshops for 20 people each)		23,450	783	-	-	-	24,233
Technical support				**800,000**	**800,000**	**800,000**	**800,000**	**800,000**	**4,000,000**
WHO technical support	WHO Regional Office Technical Support	This would cover providing support through international consultants, sharing the success of Bangladesh with other countries in the region		400,000	400,000	400,000	400,000	400,000	**2,000,000**
	WHO Country Office Technical Support	This would include on-going local technical support required during the course of implementation of the plan, monitoring progress and compliance.		400,000	400,000	400,000	400,000	400,000	**2,000,000**