INTER-COUNTRY CONFERENCE ON MEASUREMENT AND ACCOUNTABILITY FOR HEALTH (MA4HEALTH)

26-28 APRIL 2016

DHAKA, BANGLADESH

SUMMARY REPORT

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SUMMARY REPORT

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ABBREVIATIONS

AeHIN	Asia eHealth Information Network
COIA	Commission on Information and Accountability
CRVS	civil registration and vital statistics
CRVSS	civil registration and vital statistics system
DGHS	Directorate General of Health Services
DHIS 2	District Health Information System, Version 2
HDC	Health Data Collaborative
HIS	health information system(s)
HMIS	health management information system
ICD-10	International Classification of Diseases, 10th revision
icddr, b	International Centre for Diarrhoeal Disease Research, Bangladesh
ICT	information and communication technology
MA4HEALTH	Measurement and Accountability for Results in Health
MDG	Millennium Development Goal
M&E	monitoring and evaluation
MLA	monitoring, learning, and accountability
MOHFW	Ministry of Health and Family Welfare (Bangladesh)
NGO	nongovernmental organization
OpenMRS	Open Medical Record System
PHC	primary healthcare
PMMU	Program Management and Monitoring Unit
PPRC	Power and Participation Research Centre (Bangladesh)
RHIS	routine health information system(s)
SDG	Sustainable Development Goal
UNICEF	United Nations Children's Fund
USAID	U.S. Agency for International Development
WHO	World Health Organization
WHO-SEARO	World Health Organization, South-East Asia Regional Office

EXECUTIVE SUMMARY

The U.S. Agency for International Development (USAID), the World Bank, and the World Health Organization (WHO) convened a global summit, Measurement and Accountability for Results in Health (MA4Health), at the World Bank headquarters in Washington, DC, in June 2015. Bangladesh agreed to host a follow-on regional conference, held in Dhaka in April 2016. Objectives of the Bangladesh conference were to facilitate the regional and country responses to data needs, engage with the development partners to improve health data systems, and share and strengthen country-led monitoring and evaluation (M&E) plans in the region.

Key points highlighted and discussed at the conference were the following:
- **Demand for data will continue to increase:** The United Nations' Sustainable Development Goals (SDGs) pose a unique challenge for measurement, with many indicators that will increase demand for data. The SDGs also focus on equity, which will require data disaggregated at multiple levels.
- **Country measurement and accountability systems are inherently complicated:** The overall measurement and accountability systems in a country have many pieces, and bringing all of them together for sustainable improvement is a challenge. It is essential to have a visual blueprint to show how the pieces fit together to make a whole. A blueprint also provides a common plan so that all the actors can work collaboratively. Bangladesh provides a good example of government and development partners working in close collaboration for systems improvement.
- **The process is more important than the technology:** When developing measurement and accountability systems, it is essential to start from the public health problem to be addressed, then work from there to understand which data are needed and what kind of technology can support that data.
- **Human resources are essential to the development of measurement and accountability systems:** Leadership, ownership, political will, and collaboration are key factors behind Bangladesh's achievement. Both human elements and technology are essential to the development of large systems for health measurement and accountability. Introducing new technology where systems are already in place can be challenging; hence, leadership and political ownership are required to move forward with system changes.
- **Strengthening accountability requires horizontal monitoring:** Involving local leaders and the community is a sustainable way to improve accountability in the health sector. Apart from close supervision by the line ministries (vertical monitoring), community supervision and support play important roles in improving measurement and accountability.
- **Strengthening systems requires effective use of resources:** Most of the regional countries are working to improve measurement and accountability systems, but they require technical assistance and financial resources to carry out action plans.

BACKGROUND

The U.S. Agency for International Development (USAID), the World Bank, and the World Health Organization (WHO) convened a global summit, Measurement and Accountability for Results in Health (MA4Health), at the World Bank headquarters, in Washington, DC, in June 2015. More than 600 participants from 60 countries, representing development partners, country governments, and civil society organizations, endorsed the Health Measurement and Accountability Roadmap and Five-Point Call to Action. The Call to Action identified priority actions and targets to strengthen data and accountability systems. Two countries were invited to be co-sponsors of the summit: Bangladesh, because of its readiness to measure progress in health during the post-2015 period, and South Africa, for the high quality of its cause-of-death data, which illuminate the national and subnational health situation.
At the summit, Bangladesh agreed to host a follow-on regional conference, held in Dhaka in April 2016.

This conference had the following objectives:

- **Facilitate regional and country responses to data needs:** Strengthen country capacity to monitor and review progress, enhance existing approaches and establish new regional approaches, build consensus on monitoring health strategies and the SDGs, and enhance technical collaboration.
- **Engage with development partners to improve health data systems:** Improve efficiency and alignment of investments, establish new ways of working with development partners, and share knowledge and tools within the region.
- **Share and strengthen country-led M&E plans:** Learn from the experience of countries in the region, highlight innovative approaches to fill technical and financial gaps, strengthen accountability mechanisms, and measure the health-related SDGs.

More than 150 participants representing seven countries shared their successes and challenges in collecting and using data to guide public health programs. Eleven sessions employed presentations, question-and-answer panels, roundtable discussions, and group work. The final day featured three field trips in Dhaka and the region for international participants to see firsthand how Bangladesh is using routine health information system (RHIS) strategies at the community and health facility levels.

This conference report provides a brief summary of each of the sessions, followed by the detailed conference program and a list of the participants. More information, including access to all conference presentations, is available online at http://www.rhis.net.bd/ma4health.

SESSION 1. INTRODUCTION

In the opening session, **Abul Kalam Azad**, Directorate General of Health Services (DGHS), Bangladesh, welcomed the participants on behalf of the Health Data Collaborative (HDC) and the organizers. Prof. Dr. Azad discussed how the regional conference objectives follow the principles of the MA4Health Summit and the Health Data Collaborative. He stressed that the generation of reliable health data is a priority for the promotion of evidence-based decision making. He mentioned that Bangladesh demonstrated strong collaboration among key stakeholders in strengthening the health information system (HIS), and that this was instrumental in achieving success over the years. Prof. Dr. Azad thanked the HDC for facilitating technical collaboration and supporting country initiatives. He expressed hope

that the regional conference would help participating countries reach consensus on key elements to include in action plans to strengthen their health-sector measurement and accountability systems.

SESSION 2. THE COLLABORATIVE: FACILITATING GLOBAL MONITORING, LEARNING, AND ACCOUNTABILITY

The objectives of the session were to share the vision, mission, and objectives of the HDC; provide the global perspective of the HDC; and elaborate on the rationale of pursuing the HDC and the initiatives taken by the international organizations to promote it.

Kathleen Handley, USAID, expressed hope that the regional conference would be an effective platform for exchange of views and experiences within Asia and South Asia. She said that monitoring the SDGs will create increasing demand for data, and that country HIS goals will need to align with the post-2015 development agenda to meet this demand. Dr. Handley said that HDC aims to increase in-country engagement on measurement, accountability, and domestic investment for sustainable strengthening of country HIS. She gave examples from Malawi and Kenya, where HDC initiatives have been instrumental in carrying out country action plans to strengthen measurement and accountability.

Alastair Robb, WHO, called the HDC a revolution that has fostered collaboration and alignment in technical and financial support among key global and national stakeholders. The HDC has facilitated evidence-based planning and helped to improve "value for money" in health sector investment, he said. Dr. Robb stressed that countries need to do more to ensure successful implementation of the civil registration and vital statistics system (CRVSS) so that "everyone is counted."

Samuel Mills, World Bank, lauded Bangladesh's achievement in the Millennium Development Goals (MDGs) and noted that countries will need stronger collaboration and action plans to address the data demands of the SDGs. The World Bank has supported country HDC action plans in the health and nonhealth sectors, and has prioritized fulfillment of the goals of the CRVSS, the MA4Health Summit, and the Five-Point Call to Action. Dr. Mills gave examples of successful MA4Health action plans carried out in Cambodia, Democratic Republic of Congo, Kenya, and Malawi. Duplication of efforts remains a challenge in the health sector, he said, adding to the depletion of scarce resources for such activities (as in the Philippines).

Shams El Arifeen, International Centre for Diarrhoeal Disease Research, Bangladesh (icddr,b), mentioned that development partners have undertaken many activities in Bangladesh, and that existing collaboration among the partners has helped Bangladesh become the largest user in the world of District Health Information System, Version 2 (DHIS 2), an open-source information system. Nevertheless, he said, Bangladesh needs to take effective measures to strengthen coordination among partners in the coming years. Dr. El Arifeen highlighted major challenges for Bangladesh, such as the need to increase the level of investment for health M&E and to streamline the bifurcated data flow between the health and family planning directorates.

During the session, **Mark Landry, WHO, South-East Asia Regional Office (WHO-SEARO),** was appointed contact person for HDC country-level technical assistance and resource mobilization requests. A participant from Bhutan asked how to establish regional and country leadership within the HDC. Prof. Dr. Azad said that policymakers were required to be involved in the country measurement and

accountability processes and that existing human resources would be adequate to implement the MA4Health action plan.

SESSION 3. THE COLLABORATIVE: FACILITATING REGIONAL AND COUNTRY MONITORING, LEARNING, AND ACCOUNTABILITY

The objectives of the session were to elaborate on the role of regional networks to promote and support the HDC objectives and provide an in-depth case study of the experience of Bangladesh in strengthening its monitoring, learning, and accountability (MLA) systems. Session panelists examined regional and country initiatives and the ways in which the collaborative can support countries in strengthening their MLA systems.

Alvin Marcelo, Asia eHealth Information Network (AeHIN), used the analogy of how a blueprint for designing a building is essential so that workers (such as technicians, masons, plumbers, and electricians) know what to do to fulfill the plan. He gave an overview of AeHIN and discussed strategies linked with the MA4Health Five-Point Call to Action. Dr. Marcelo mentioned that the HDC at the global level and AeHIN at the regional level both focus on collaboration and sharing experiences. He noted that in the Philippines, DHIS implementation faced challenges because stakeholders had existing systems that worked well, and they were reluctant to switch to an alternative process. He said it's best to start from the business process and not the technology when developing measurement and accountability systems. Begin with the public health problem you are trying to address and work back from there to determine which data are needed and what kind of technology can support that data.

Mark Landry, WHO-SEARO, posed two questions to the audience: How can the partners work together to develop measurement, learning, and accountability platforms? How can countries do better? Countries should not work in isolation. He said the HDC would facilitate support from the global and regional partners while countries take the leadership role. We can learn from successes and failures of other countries, he said. He encouraged regional networks to track best practices.

Abul Kalam Azad, DGHS Bangladesh, said that Bangladesh's efforts to improve data quality and use, and the successes achieved so far, have been built on integrity, consistency, visibility, and policy (including Vision 2021 and Digital Bangladesh). He gave an overview of the endeavors of the Ministry of Health and Family Welfare (MOHFW) to establish digital solutions, such as iHuman Resource Information Systems, Commission on Information and Accountability (COIA)/COIA[+], DGHS Staff Attendance System, Call Center and Complaint Box, CRVSS, and the OpenData Initiative. Prof. Dr. Azad proposed the adoption of a "single sign-in" process to help users who are managing multiple digital platforms. He said the MOHFW has been striving to promote a "data use culture" within the health sector. The Directorate conducts periodic review meetings at different levels to ensure accountability and strengthen data governance.

SESSION 4. LEADERSHIP, GOVERNANCE, AND PARTNERSHIP

The objective of this panel discussion was to identify leadership mechanisms that have strengthened data-driven decision making and accountability, and opportunities and challenges provided by effective partnerships. Panelists responded to questions from the audience. Discussants were: **HR Dedi**

Kuswenda, Directorate General of Public Health in Indonesia; **Ishtiaq Mannan**, Save the Children Bangladesh; **Debra Jackson**, United Nations Children's Fund (UNICEF); and **Mosidi Nhlapo**, Statistics South Africa. The session was moderated by **Alastair Robb**, WHO. Select questions and panelists' answers are summarized below.

How can data be used for more equitable health benefits? Panelists said that while bureaucratic planning processes often deter data use, district-level data are needed to address equity issues. Demand for disaggregated data to measure universal health coverage will increase in the future and demographic and health surveys already provide data by socioeconomic status and geographic location.

What needs to be done to strengthen health? Mosidi Nhlapo noted that addressing a lack of statistical capacity begins with enhancing basic math education in the school system by engaging with the education sector. She stressed that political leadership to foster partnerships among different ministries was instrumental in strengthening health systems, particularly in successfully implementing CRVS.

How can we ensure that all decision makers are equipped with information to make good decisions? Debra Jackson cited examples of engaging communities through eHealth, encouraging civil societies, organizing dialogues on data quality and use, and ensuring transparency. She mentioned that social determinants remain a key factor in health and that community engagement would be an efficient way to address these factors. **Ishtiaq Mannan** stressed "demystifying" data and making data easier to interpret for decision making. He stated that countries often fared well in producing output-level data but not systems data (such as how many doctors are available at what level). He suggested using mobile phones to reach target populations for health services, noting 95 percent of households in Bangladesh have mobile phones.

What works in Bangladesh? The panel highlighted:
- Effective partnerships among stakeholders (government agencies, NGOs, and development partners) that ensure their involvement across multiple levels and efforts
- Consistent investments in good data, where Bangladesh has been investing in surveys and routine data sources for a long time
- Strong leadership to ensure alignment of partners to collect and manage data in a coordinated manner

SESSION 5. LEARNING FROM EXPERIENCE

The roundtable session focused on the following objectives:
- Countries share lessons learned in strengthening HIS for MLA
- Participants discuss gaps, challenges, and priorities
- Participants work with their country colleagues to begin applying information to their action plans for strengthening their MLA systems

Representatives from seven countries (Bhutan, Cambodia, Indonesia, Myanmar, Nepal, Philippines, and South Africa) prepared 15-minute presentations on their MLA systems that highlighted progress, successes, challenges, and lessons learned related to HDC objectives. **Mohammad Wahid Hossain,** from the Directorate General of Family Planning of Bangladesh, welcomed everyone and introduced the session facilitator: **Jim Thomas**, of the USAID-funded MEASURE Evaluation project.

Bhutan established its national HIS in 1984 to monitor the primary healthcare (PHC) program's implementation. Three types of data reporting systems are in place for monthly capture: activity report, morbidity/mortality report, and e-Patient Information System. Major challenges are poor network connectivity hindering rollout of DHIS 2, duplication of patient information in the system, and manual outpatient department registers in hospitals.

Bhutan also introduced a CRVSS, jointly managed by the Ministry of Home and Culture, the Ministry of Health, and the National Statistics Bureau. Major challenges are cause-of-death data according to International Classification of Diseases, 10th revision (ICD-10) classification, and a significant number of deaths occurring outside of health facilities.

Bhutan reported difficulty in motivating physician networks to use electronic tools. Bhutan has been developing strategy in accordance with the eGovernment Master Plan (2013): exploiting information and communication technology (ICT) for good governance, strengthening ICT skills of government staff, rolling out DHIS 2, strengthening CRVS, improving hospital information systems through use of the Open Medical Record System (OpenMRS), reviving telemedicine, improving cause-of-death data collection, and implementing SMS integration for notifiable diseases. These activities require significant country-level investments to meet the resource requirements.

Cambodia established a health sector program in 1997 and an HIS in 1992–1993. The national government developed an HIS strategic plan for 2008–2015. Components are a monthly routine report at the district and provincial levels, quarterly reports on communicable diseases and leprosy, an activity monitoring table (with disaggregated information), and collection of data from outpatient departments. Cambodia produces an annual health report based on service delivery field data, which are used at the central level only. In 2016, about 60 percent of 1,300 health facilities were using computer-based databases (the rest are using a paper-based system). The major challenges for the country's HIS are an absence of political commitment to expand HIS above the PHC level, a paper-based reporting system, a weak CRVSS, and capacity constraints of HIS staff to conduct basic and higher-level data analysis. Cambodia aims to establish open-source data platforms such as DHIS 2 to meet growing data needs there.

Indonesia aims to establish an integrated HIS to manage health developments in the country. Challenges are fragmented approaches, no standards for interoperability and data integration, inaccurate reporting, and limited access to public information. Indonesia is focusing on optimizing data flow and the data bank and managing data transactions. Some notable innovations are introducing a unique identifier for healthcare clients (MOHA, MOH, Health Insurance Board), a way to bridge health insurance and primary care information systems, a health data dictionary, a national CRVS registration system, a method to collect mortality data complete with cause of death, and initiation of DHIS 2 to create a decision-maker dashboard at the provincial and central levels.

Myanmar is updating the HIS Strategic Plan (2011–2015) to establish a simple, effective, and strategic system at all levels of healthcare delivery to strengthen health systems over the next five years. HIS capacity building activities in Myanmar are supported by development partners: WHO for training in reporting using ICD 10, advanced data analysis, and hospital supervision; Global Fund for DHIS 2 training and data integration with HIV, TB, and Malaria; and John Snow, Inc. and Pact Myanmar for

DHIS 2 training and hardware support. The major problems for HIS in Myanmar are inaccessible health information policy, insufficient staff quantity and capacity, and inadequate infrastructure to support advanced information technology. Possible programmatic options are updated regulations, laws, and policies for HIS; education and professional support to build the capacity of the human resources for health; and development of infrastructure for advanced ICT-based systems.

Nepal. The National Health Policy 2014 laid the foundation for a strong M&E system that would guarantee access to information for all. An e-health unit has been established and an e-health strategy is being developed. DHIS 2 customization for the health management information system (HMIS) is in the final stages, and a roll-out plan has been finalized. Nepal is also working to improve health data interoperability to move multiple HIS components to common or interoperable platforms, establish a unique health ID for client tracking, improve data quality (by disaggregation), and introduce electronic reporting from facility level based on OpenMRS and other open source platforms. To improve efficiency, Nepal is also using a transaction accounting and budget control system in the health sector.

Philippines. The central and regional offices have different M&E systems, and accountability mechanisms stop at the regional level. Multiple data systems are not harmonized across the health sector (for example, social health has its own database with a different system for diseases). The health sector monitoring framework has 300 indicators that are not routinely monitored. The indicator list needs to be trimmed down to 150. Data availability and incomplete data make monitoring difficult. Other barriers to implement a robust HIS at the national and regional levels are inadequate data compliance, sustainability, staff, funding, and political commitment. The government is planning several activities to rationalize the number and schedule of national surveys and produce performance monitoring data for administration below national and regional levels. They are studying the possibility for developing sustainable systems in collaboration with the private sector.

South Africa. The national government has been building a harmonized health system since 1994, which has strengthened primary healthcare (emphasizing health promotion and prevention). The RHIS is complemented by surveys, surveillance, evaluations, and research activities. Six government departments (Department of Performance, M&E; Department of National Treasury; Statistics South Africa; Department of Science and Technology; Council of Scientific Industrial Research; and Department of Telecommunication and Postal Services), and three ministerial-appointed bodies work together with development partners to strengthen the HIS. South Africa has been working on transitioning to a web-based DHIS to enhance data quality. The government's priorities for eHealth are to establish an eHealth Information architecture, develop a unique identifier (master patient index) and facility registry (national data dictionary), establish standards for data interoperability, expand a patient-based information system, rationalize indicators for routine monitoring, build capacity, and apply information at the facility level.

SESSION 6. REVIEW OF DAY 1 AND DAY 2 AGENDAS

Siân Curtis, of MEASURE Evaluation, briefly reviewed Day 1 to set the stage for Day 2. Here are the major points she highlighted from Day 1:
- Demand for data for monitoring of the SDGs will increase substantially, and focus on equity will necessitate more disaggregated data.

- Country monitoring and accountability systems have many pieces; the challenge is how to bring all of them together to form the whole. It is essential to have a blueprint to work from, especially for monitoring and accountability systems where many actors are involved.
- It makes sense to start from the public health problem that the country is trying to address and work back from there to determine which data the country needs and what technology can support that data.
- '"People aspects" are as important as technological advances. Leadership, ownership, political will, and collaboration are key factors to revolutionize data systems at the country level.
- Any system may be plagued by inertia and it is challenging to introduce new technology to improve measurement and accountability, where systems are already functioning. Technology is developing rapidly and systems quickly become out of date.
- Countries trying to improve measurement and accountability face similar challenges: lack of capacity to manage, analyze, and use data; lack of Internet connectivity; poor data quality; weak supervision and monitoring; interoperability issues; and parallel systems. Nevertheless, many opportunities exist to share experiences among countries as you learn big-picture solutions.

SESSION 7. STRENGTHENING ACCOUNTABILITY AND SETTING COMMITMENTS FOR HEALTH

This session aimed to discuss the rationale, parameters, and actions needed to strengthen accountability for health; describe innovations for data use in advocacy and communications; and define the role and commitment of governments, donors, private organizations (nonprofit and for-profit), civil society, and media in ensuring accountability. Presentations focused on the need to strengthening accountability in the health sector and accountability's contribution to achieving sustainable data goals and improving health.

Hossain Zillur Rahman, of Power and Participation Research Centre (PPRC), Bangladesh, discussed the economic burden of health. High out-of-pocket health expenditures are a key development challenge for Bangladesh. The major challenges to improving accountability in Bangladesh's health sector are poor quality of care, inadequate medical education, suboptimal utilization of rural health infrastructure where tertiary hospitals are burdened with primary healthcare, inaccessible valid health data, and overlapping public health and clinical care jurisdictions. To improve the quality of health services, he suggested first addressing the most feasible challenges ("low hanging fruit") and establishing horizontal accountability through community oversight in health service delivery. He also stressed the importance of effectively monitoring the implementation of the health program and establishing a multistakeholder advocacy platform for the SDGs.

Karar Zunaid Ahsan, of the Program Management and Monitoring Unit (PMMU), MOHFW/Bangladesh, described how health data are produced, used, and disseminated in Bangladesh. He gave examples of how data can be used effectively to support health policy decisions. He also mentioned that Bangladesh is data-rich considering the surveys and routine data sources, but the multiplicity of data was a challenge for health program administrators and policymakers. He shared examples of consistent and inconsistent data across local and global information systems, noting that the formation of a Country Indicator Reference Group for Bangladesh would address these issues.

Thet Thet Mu, Department of Public Health, Myanmar, discussed the need to strengthen accountability in the health sector. She discussed principles and strategies: reduce abuse, assure compliance with procedures and standards, and improve performance. Dr. Mu suggested ways to improve dissemination of data (use of social media) and to change behavior (encourage the use of data for decision making). She stated that clear roles and commitments from stakeholders (ministry of health, professional associations, data providers, patients, funding agencies, and NGOs) are essential to strengthen country accountability systems in the health sector.

Kirthi Ramesh, Asian Development Bank, presented a pilot program of Davao, Philippines, that has paved the way for enhanced accountability through a data dashboard. The dashboard's performance indicator levels mimic traffic-light colors: high (green), moderate (yellow), and low (red). She described the initial challenges the government faced: a decentralized health system that included a low level of health governance, lack of data integration, and unavailability of the DHIS 2 platform. She said that dashboards are useful in coordinating data for evidence-informed decision making.

Subhashini Chandrasekharan, USAID, described the nine principles of digital development for introducing a stronger HIS. She said that having access to open data fuels innovation, stimulates economic growth, and improves governance. Challenges associated with open data are coordination and duplication, she said, noting that special attention should be focused on data collection and utilization. She shared a list of practical, actionable recommendations to put digital principles into practice.

SESSION 8. INNOVATION: FINDING NEW WAYS TO FILL THE TECHNICAL GAPS

This session highlighted technical innovations, such as open-source platforms for collaboration in developing information and communications technology (ICT) solutions. Participants learned about tools, options and potential partners with technical skills in the region. Discussions focused on how to build regional and country capacity to ensure sustainable access to ICT solutions for health sector.

Anwer Aqil, USAID, presented a health systems benchmarking tool to compare country performance across more than 100 categorized indicators. While the tool is useful for global comparisons, he said, it requires a complete data set to run the report and is most effective for "short time period" comparisons used in decision making.

Pamela Rao, USAID, presented a tool for estimating the missing resources needed (nearly US$15 billion) to fulfill worldwide goals for reproductive maternal and neonatal child health. She briefly discussed increasing gross domestic product and private-sector investments. She noted that issues related to service quality, affordability, and misalignment of funding streams from multiple donors had negative effects in the health sector. She said the Bangladesh National Health Account supported 6 percent of the total health sector budget, providing less than half of the WHO standard (15 percent). Significant domestic resources would need to be mobilized to attain universal health coverage. She suggested that web-based platforms facilitating public financial management, risk pooling, private sector engagement, and blended finance and innovation exchange (such as mHero) could help Bangladesh track health financing at the country level.

Md. Humayun Kabir, MEASURE Evaluation, discussed how Bangladesh has been strengthening its RHIS and its modules, design framework, and technology innovations. Bangladesh has been piloting an RHIS strengthening initiative in two districts, which he said will lead to establishing an electronic HIS nationwide starting from the rural areas. They are replacing paper-based data collection tools with software applications on tablets, laptops, and desktops at government health centers. The RHIS will have online reporting to the DHIS 2 platform. Mr. Kabir also noted that a population registration system, based on a full census of the catchment area, has been developed for client tracking. He shared preliminary results from the initiative and said that capacity building of government health workers was crucial to rolling out such innovative systems.

Jaap Koot, GFA Consulting Group/EC Project, discussed ways to ensure the availability of reliable information through digital platforms for electronic financial management. He highlighted result-based financing, capacity building, dashboard development, and external evaluation of electronic systems (counter verification). He recommended using DHIS 2 as a tool for data management and reporting. He suggested conducting feasibility and cost-effectiveness studies while introducing electronic patient records. External verifications are effective in creating a reliable information culture and identifying its weak points, but the biggest limitation of this approach was high cost.

Jorn Braa, University of Oslo, provided a brief overview of the DHIS 2 platform and how it has been used in Indonesia. He said Indonesia combined national and district approaches to using the dashboard. He discussed integration, interoperability, and the prerequisites for rolling out DHIS 2 at the national level.

Shukhrat Rakhimdjanov, UNICEF, presented an overview of her agency's HIS interventions in Bangladesh, aimed at evidence-based planning for achieving universal health coverage. He shared field experiences and lessons learned through reporting, capacity building of local managers on data entry monitoring, defaulter tracking, quality analysis, and evidence-based planning.

SESSION 9. DEVELOPING FIVE-YEAR OPERATIONAL PLANS AND ROADMAPS FOR IMPLEMENTATION: COUNTRY GROUP WORK

Country teams worked together to develop an action plan for post-meeting activities at the country level. Objectives of this session were to review information shared on Day 2 as it applies to country efforts to strengthen MLA systems; develop action plans for each country to move forward in strengthening their MLA/M&E systems; and identify priorities, gaps, and next steps. Participants developed recommendations for meeting delegates to share with colleagues in their countries after the conference.

SESSION 10. COUNTRY ROUNDTABLE: KEY ACTIONS FROM COUNTRIES AND DONORS

Country representatives identified key points learned over the two-day conference and noted priority actions for their countries to take in developing or strengthening their M&E plans and MLA systems. The following table summarizes the country plans and resources required.

Country	Priorities	Resource Requirement
Cambodia	• Empower national statistical bureau and build capacity • Streamline HIS ownership • Enhance funding of government and infrastructure development	Not determined
Myanmar	• Develop common M&E framework • Establish unique identifier of patient information system • Support OpenMRS platform, including capacity building of staff and infrastructure development	• Financial and technical assistance from development partners • Investment for capacity building • Support for information technology (IT) infrastructure development
Indonesia	• Improve data collection, management, and analysis processes • Scale up DHIS 2 implementation • Promote culture of evidence-informed decision making using different tools and curriculum	• Technical assistance • Skill/capacity-building support
Philippines	• Strengthen country governance, advocacy, and M&E coordination • Increase investment of HIS, and work on interoperability and coordination • Institutionalize capacity building on data analysis, data use, and data dissemination	Technical assistance from HDC and AeHIN
Bangladesh	• Build on eHealth success • Scale up electronic medical records and effectively track universal health coverage and SDG indicators • Develop multiyear capacity building plan for data use, measurement, and accountability	US$250 million to implement M&E strategy/action plan and digitize the HIS
Nepal	• Finalize unique ID strategy • Invest in human resource development, maintenance, and data utilization • Develop sustainable infrastructure at all levels, and implement OpenMRS and DHIS 2	Not determined
Bhutan	• Improve the CRVSS • Implement the electronic patient information system and roll out DHIS 2 • Introduce an interoperable platform to integrate all existing systems	Not determined

SESSION 11. CLOSING SESSION

Abul Kalam Azad, DGHS Bangladesh, thanked the participants, organizers, sponsors, moderators, speakers and everyone involved in the conference. He said the meetings were "highly successful" in bringing together representatives from the regional countries, the HDC, and development partners. He summarized the common themes and highlighted the next steps for improving country measurement and accountability in the health sector.

APPENDIX A: REGIONAL CONFERENCE PROGRAM SCHEDULE

INTER-COUNTRY CONFERENCE ON MEASUREMENT AND ACCOUNTABILITY FOR HEALTH (MA4HEALTH)

26 – 28 APRIL 2016 || DHAKA || BANGLADESH

BANGLADESH CONFERENCE OBJECTIVES

-
- Facilitate the regional and country response to data needs, including strengthening country capacity to monitor and review progress, enhancing existing and establishing new regional approaches, building consensus on monitoring health strategies and the SDGs, and enhancing technical collaboration.
- Engage with development partners to improve health data systems, including improving efficiency and alignment of investments, establishing new ways of working with development partners and sharing knowledge and tools within the region.
- Share and strengthen country-led M&E plans, including learning from the experience of countries in the region, highlighting innovative approaches to fill technical and financial gaps, strengthening accountability mechanisms and measuring the health-related SDGs.

DAY 1: TUESDAY, 26 APRIL 2016

8.00 – 9.00	**Breakfast**
9.00 – 9.15	**Welcome, introductions, objectives of meeting**
Session 1	**Session Objectives:** • Welcome on behalf of the Health Data Collaborative (HDC) and Conference hosts • Discuss how the Conference follows the M&A4Health Summit and the HDC • Share the objectives of the Regional Conference **Speaker:** Abul Kalam Azad, DGHS, Bangladesh
9.15–10.15	**The Collaborative: facilitating global monitoring, learning, and accountability**
Session 2	**Session Objectives:** • Share the vision, mission, and objectives of the HDC • Provide the global perspective of the HDC • Elaborate on: the rationale of pursuing the Collaborative and the initiatives taken by the international organizations to promote the Collaborative **Speaker:** Kathleen Handley, USAID/DC

Moderator: Binod Mahanty, GIZ

Discussants:
Alastair Robb, WHO – HQ
Samuel Mills, World Bank Group
Shams El Arifeen, icddr,b

10:15 – 10:45	**Tea Break**
10.45 – 12.00	**The Collaborative: facilitating regional and country monitoring, learning, and accountability**
Session 3	**Session Objectives:**

- Elaborate on the role of regional networks and initiatives to promote and support the health data collaborative objectives
- Provide an in-depth case study of the experience of Bangladesh in strengthening its monitoring, learning, and accountability (MLA) systems

Speakers:
Alvin Marcelo, AeHIN
Mark Landry, WHO-SEARO
Abul Kalam Azad, DGHS, Bangladesh

Moderator: Ashadul Islam, HEU, Bangladesh

12.00 – 13.00	**Lunch**
13.00 – 14.00	**Leadership, governance, and partnership**
Session 4	**Session Objectives:**

- Identify national and sub-national leadership mechanism that have been effective in supporting strengthening of data driven decision making and accountability
- Identify opportunities and challenges provided by partnership mechanisms and means of improving the quality of partnerships to strengthen data driven decision making and accountability

Speakers:
HR Dedi Kuswenda, Directorate General of Public Health, Indonesia
Ishtiaq Mannan, Save the Children/Bangladesh
Debra Jackson, UNICEF – HQ
Mosidi Nhlapo, Statistics South Africa

Moderator: Alastair Robb, WHO – HQ

14.00 – 14.30	**Tea Break**

| 14.30 – 17.30 | **Learning from experience – roundtable session** |

Session 5   **Session Objectives:**
- Countries share lessons learned in strengthening health information systems for MLA
- Participants discuss gaps, challenges, and priorities
- Participants work with their country colleagues to begin to apply information to their action plans for strengthening their MLA systems

Speaker: Jim Thomas, MEASURE Evaluation

Facilitator: Mohammad Wahid Hossain, DGFP, Bangladesh

Presenters: HDC Representative from Bhutan, Cambodia, Indonesia, Myanmar, Nepal, Philippines, and South Africa

DAY 2: WEDNESDAY, 27 APRIL 2016

| 8.00 – 9.00 | **Breakfast** |

| 9.00 – 9.15 | **Review of Day 1 and Day 2 agenda** |

Session 6   **Session Objectives:**
- Welcome participants to second day of meeting
- Provide brief recap of Day 1 to set the stage for Day 2

Speaker: Siân Curtis, MEASURE Evaluation

| 9.15 – 10.30 | **Strengthening accountability and setting commitments for health** |

Session 7   **Session Objectives:**
- Discuss the rationale, parameters, and required actions for strengthening accountability for health
- Describe innovations for data use in advocacy and communications
- Define the role of and commitment from the government, donors, private (non-for-profit and for-profit) health sector, civil society, and media in ensuring accountability

Speakers:
Hossain Zillur Rahman, PPRC, Bangladesh
Karar Zunaid Ahsan, PMMU, MOHFW
Thet Thet Mu, Department of Public Health, Myanmar
Kirthi Ramesh, Asian Development Bank
Subhashini Chandrasekharan, USAID/DC

Moderator: Mark Landry, WHO-SEARO

10.30 – 11.00	**Tea Break**

11.00 – 12.15	**Innovation – finding new ways to fill the technical gaps**

Session 8

Session Objectives:
- To describe tools and options for countries in the region that will facilitate closing the technical gaps
- To identify potential partners with technical skills

Speakers:
Anwer Aqil, USAID/DC
Pamela Rao, USAID/DC
Md. Humayun Kabir, MEASURE Evaluation
Jaap Koot, EC Project
Jorn Braa, University of Oslo
Shukhrat Rakhimdjanov, UNICEF/BD

Moderator: Saad Khan, USAID/DC

12.15 – 13.15	**Lunch**

13.15 – 15.15	**Developing strong five-year operational plans and roadmaps for implementation: Country Group Work (tea served during session)**

Session 9

Session Objectives:
- Review information shared on Day 2 as it applies to country efforts to strengthen monitoring, learning, and accountability (MLA) systems
- Develop action plans for each country to move forward in strengthening their MLA/M&E systems
- Identify priorities, gaps, and next steps

Moderator: Bill Weiss, USAID/DC

15.15 – 16.15	**Country Roundtable: key actions from countries and donors**

Session 10

Session Objectives:
- Map technical support opportunities with key actions from the previous session
- Countries share insights from the conference and plans for the future

Moderator: Shams El Arifeen, icddr,b

Speakers:
Frances Rose E. Mamaril, Health Planning Division, Philippines
Thet Thet Mu , Department of Public Health, Myanmar
Cecep Slamet Budiono, Ministry of Health, Indonesia
Meas Vanthan, Ministry of Health, Cambodia

Mukti Nath Khanal, Ministry of Health, Nepal

Dorji Pelzom, Ministry of Health, Bhutan

Lokman Hakim, Ministry of Health and Family Welfare, Bangladesh

16.15 – 16.30	**Closing session**

Session 11   **Session Objectives:**
- Summarize common themes and next steps
- Thank participants and close meeting

Speaker: Abul Kalam Azad, DGHS, Bangladesh

18.00 – 21.00   **Cultural Program and Dinner**

DAY 3: THURSDAY, 28 APRIL 2016

06.30 – 16.00   **Field trip**

Trip Options and Objectives:

1. Azimpur and Mohakhali of Dhaka district to see implementation of OpenMRS in a large facility and to get a holistic view of the different eHealth solutions of the MOHFW
2. Kaliganj upazila of Gazipur district to see OpenMRS+ implementation in a sub-district health facility and community healthcare delivery system along with use of DHIS 2
3. Mirzapur and Basail upazilas of Tangail district to see implementation of Strengthening RHIS Project.

APPENDIX B. PARTICIPANTS

International Participants

1. Mr. Yenten Jamtsho, EPIS Focal Person, Department of Medical Services, Ministry of Health, Bhutan
2. Mr. Dorji Pelzom, Senior Statistician, Policy and Planning Division, Ministry of Health, Bhutan
3. Mr. Sonam Phuntsho, Planning Officer, Policy and Planning Division, Ministry of Health, Bhutan
4. Mr. Trashi Phuntsho, Assistant ICT Officer (ePIS Focal), Ministry of Health, Bhutan
5. Dr. Suraj M. Shrestha, Medical Officer (Health Systems Strengthening), World Health Organization (WHO) Country Office, Bhutan
6. Dr. Buth Saben, Ministry of Health, Kingdom of Cambodia, Cambodia
7. Dr. Meas Vanthan, Ministry of Health, Kingdom of Cambodia, Cambodia
8. Mr. Suon Serey Rathanak, M&E Advisor, U.S. Agency for International Development (USAID), Cambodia
9. Mr. Binod Mahanty, Advisor, Deutsche Gessellschaft fur Internationale Zusammenarbeit (GIZ) GmbH, Germany
10. Dr. Rakesh Mani Rastogi, Technical Officer, Health Situation and Trend Assessment, WHO-SEARO, India
11. Ms. Ruchita Rajbhandary, Junior Public Health Professional, Health Situation and Trend Assessment, WHO-SEARO, India
12. Mr. Mark Landry, Regional Advisor, Health Situation and Trend Assessment, Department of Health Systems Development, WHO-SEARO, India
13. Dr. HR Dedi Kuswenda, Director of Health Promotion and Community Empowerment, DG of Public Health, Ministry of Health, Indonesia
14. Dr. Andi Saguni, Head of Renstra and Programme Division, Ministry of Health, Indonesia
15. Mr. Cecep Slamet Budiono, Head of Data Analyst Sub Division, Ministry of Health, Indonesia
16. Ms. Farida Sibuea, Head of Information System Architecture Sub Division, Ministry of Health, Indonesia
17. Raden Noviane Chasny, National Professional Officer, WHO Country Office, Indonesia
18. Dr. Thet Thet Mu, Director, M&E, Department of Public Health, Myanmar
19. Dr. Wai Mar Mar Tun, Director, Planning, Department of Public Health, Myanmar
20. Dr. Maung Maung Than Htike, Director, Health Education, Department of Public Health, Myanmar
21. Ms. Franziska Fuerst, Senior Advisor, GIZ, Nepal
22. Mr. Saurav Bhattarai, Advisor, GIZ, Nepal
23. Dr. Indira Basnett, Director, Possible Health, Nepal
24. Mr. Mukti Nath Khanal, Director (Statistics),HMIS, Management Division, Department of Health Services, Ministry of Health, Nepal
25. Mr. Baburam Khanal, Under Secretary, Ministry of Health, Nepal
26. Mr. Sushil Nath Pyarkural, Director, Far Western Regional Health Directorate, Ministry of Health, Nepal
27. Mr. Garib Das Thakur, Chief, Public Health Administration, Monitoring & Evaluation, Ministry of Health, Nepal
28. Mr. Madhav Chaulagai, Strategic Information Advisor, Save the Children, Nepal
29. Dr. Jaap Koot, Team leader of GFA Consulting Team, GmbH, Netherlands
30. Dr. Jorn Braa, Professor, Department of Health Informatics, University of Oslo, Norway

31. Mr. Tomasito P. Javate Jr., Supervising Economic Development Specialist, Health, Nutrition and Population Division, National Economic and Development Authority (NEDA), Philippines

32. Ms. Frances Rose E. Mamaril, OIC-Division Chief, Health Planning Division, Health Policy Development and Planning Bureau, Philippines,

33. Ms. Wilma A. Guillen, Assistant National Statistician, Social Sector Statistics Service, Philippine Statistics Authority, Philippines

34. Dr. Alvin Marcelo, Team Leader, Philippine National eHealth Program Management Office, AeHIN, Philippines

35. Ms. Maria Paz de Sagun, Project Management Specialist, Office of Health, USAID/Philippines

36. Ms. Kirthi Ramesh, Social Development and Health Specialist, Asian Development Bank,

37. Ms. Thulile Zondi, Chief Director, Health Information Management and M&E, National Department of Health, South Africa

38. Ms. Nhlapo Mosidi, Acting Chief Director, Health and Vital Statistics, Statistics, South Africa

39. Mr. Mohlapametse Maditsi, Outcome Manager of Health, National Department of Planning, M&E, South Africa

40. Mr. Wesley Solomon, Programme Manager, ePHC, National Department of Health, South Africa

41. Mr. Derek Kunaka, Chief of Party, MEASURE Evaluation–Strategic Information for South Africa

42. Dr. Alastair Robb, Health Advisor, WHO, Switzerland

43. Dr. Sian Curtis, Senior Evaluation Advisor, MEASURE Evaluation, USA

44. Dr. Tariq Azim, Senior Technical Advisor, MEASURE Evaluation, USA

45. Ms. Gabriela Escudero, Research Associate, MEASURE Evaluation, USA

46. Dr. James Thomas, Director, MEASURE Evaluation, USA

47. Dr. Debra Jackson, Senior Health Specialist, Knowledge Management & Implementation Research Unit, Health Section, United Nations Children's Fund (UNICEF), USA

48. Dr. Kathleen Handley, Senior Advisor, Global Health Bureau, USAID, USA

49. Dr. William Weiss, Senior M&E Advisor, Ending Preventable Child and Maternal Deaths, Global Health Bureau, USAID, USA

50. Dr. Anwer Aqil, Senior M&E Advisor, USAID, USA

51. Mr. Mohammad (Saad) Khan, Senior Health Informatics Advisor, Global Health Bureau, Office of HIV/AIDS, USAID, USA

52. Ms. Aubra Anthony, Senior Data Advisor, USAID, USA

53. Ms. Brittany Eborn, Travel Analyst, Global Health Support Initiative II, USAID, USA

54. Dr. Pamela Rao, Senior Advisor, Global Health Bureau, Office of Country Support, USAID, USA

55. Dr. Samuel Mills, Senior Health Specialist, World Bank, USA

56. Dr. Subhashini Chandrasekharan, American Association for the Advancement of Science (AAAS) Science & Technology Policy Fellow, Global Development Lab, USAID, USA

57. Ms. Tiffany Lentz, Managing Director, ThoughtWorks, USA

58. Mr. David Walton, Director, Global Health, ThoughtWorks, USA

59. Mr. Angshuman Sarkar, Principal Consultant, Global Health Division, ThoughtWorks,

60. Mr. Karl Brown, Director of Technology, Office of Social Change Initiatives, ThoughtWorks, USA

61. Mr. Arun Velayutham Selvaraj, ThoughtWorks

Participants from Bangladesh

62. Dr. Hossain Zillur Rahman, Executive Chairman, Power and Participation Research Centre (PPRC), Bangladesh

63. Mr. Mohammad Wahid Hossain, Director General of Family Planning, Ministry of Health and Family Welfare, Bangladesh
64. Prof. Dr. Abul Kalam Azad, Director, MIS and Additional Director (Admin), Directorate General of Health Services, Ministry of Health and Family Welfare, Bangladesh
65. Mr. Ashadul Islam, Director General/Additional Secretary (Health Economics Unit), Ministry of Health and Family Welfare, Bangladesh
66. Dr. Abdul Ehsan Md. Mohiuddin Osmani, Joint Chief, Planning Wing, Ministry of Health and Family Welfare, Bangladesh
67. Dr. Mohammad Khairul Hasan, Deputy Chief, Health, Planning Wing, Ministry of Health and Family Welfare, Bangladesh
68. Mr. Mahbubur Rahman Joarder, Director, MIS, Directorate General of Family Planning, Ministry of Health and Family Welfare, Bangladesh
69. Mr. Md. Azam-E Sadat, Deputy Secretary (WHO), Ministry of Health and Family Welfare, Bangladesh
70. Ms. Nasrin Mukti, Deputy Secretary (WHO), Ministry of Health and Family Welfare, Bangladesh
71. Mr. Ahmed Latiful Hossain, System Analyst, Ministry of Health and Family Welfare, Bangladesh
72. Dr. Aminul Hasan, Deputy Director, Health Economics Unit, Ministry of Health and Family Welfare, Bangladesh
73. Dr. Samir Kanti Sarkar, Deputy Director, MIS, Directorate General of Health Services, Ministry of Health and Family Welfare, Bangladesh
74. Mr. S.M. Kamrul Islam, Deputy Director, Bangladesh Bureau of Statistics (BBS), Bangladesh
75. Mr. Md. Ashraful Amin Mukut, Senior Assistant Secretary, Cabinet Division, Bangladesh
76. Dr. Md. Nurul Islam, Urban PHC Specialist, UPHCSDP, Bangladesh
77. Mr. Mohammad Ashraful Amin, National Consultant, PMO, Bangladesh
78. Dr. Tapash Biswas, Deputy Director, Institute of Public Health Nutrition (IPHN), Directorate General of Health Services, Bangladesh
79. Dr. Shah Ali Akbar Ashrafi, Assistant Professor, Officer on Special Duty, Ministry of Health and Family Welfare, Bangladesh
80. Mr. MM Reza, Chief Technical Advisor, Program Management and Monitoring Unit (PMMU), Ministry of Health and Family Welfare, Bangladesh
81. Mr. A. Waheed Khan, Planning & Coordination Advisor, PMMU, Ministry of Health and Family Welfare, Bangladesh
82. Mr. Karar Zunaid Ahsan, M&E Advisor, PMMU, Ministry of Health and Family Welfare, Bangladesh
83. Dr. Md. Abul Bashar Sarker, HEU, Ministry of Health and Family Welfare, Bangladesh
84. Mr. Golam Faruk, DPH, MIS, Ministry of Health and Family Welfare, Bangladesh
85. Mr. Mohammad Nazrul Islam, Country Consultant, Cabinet Division, Bangladesh
86. Ms. Melissa Jones, Director, Office of Population, Health, Nutrition & Education, USAID Bangladesh
87. Dr. Kanta Jamil, Senior Monitoring, Evaluation & Research Advisor, Office of Population, Health, Nutrition & Education, USAID Bangladesh
88. Dr. Sukumar Sarker, Senior Project Management Specialist, Office of Population, Health, Nutrition & Education, USAID Bangladesh
89. Dr. Umme Salma Jahan Meena, Project Management Specialist, Office of Population, Health, Nutrition & Education, USAID Bangladesh
90. Ms. Farheen Khurrum, Senior M&E Specialist, USAID Bangladesh, Bangladesh

91. Ms. Valeria de Olivera Cruz, Team Leader and Advisor, Health System, WHO Bangladesh, Bangladesh
92. Dr. Arif Khan, WHO Bangladesh
93. Mr. Shukrat Rakhimdjanov, Health Manager, UNICEF Bangladesh
94. Dr. ASM Sayem, Health Manager (HSS), UNICEF Bangladesh
95. Mr. Nayeem al Mifthah, UNICEF Bangladesh, Bangladesh
96. Mr. Kelvin Hui, Principal Advisor, GiZ, Bangladesh
97. Mr. Md. Abdul Hannan Khan, Senior Technical Advisor, GiZ, Bangladesh
98. Ms. Chiara Weber-Rackow, German Embassy, Bangladesh
99. Ms. Fatema Uddin, GiZ, Bangladesh
100. Dr. Md. Ataur Rahman, Health and Nutrition Advisor, Department of Foreign Affairs, Trade, and Development (DFATD) (Canada), Bangladesh
101. Dr. Momena Khatun, Health Advisor, PSU, DFATD (Canada), Bangladesh
102. Mr. Dhiraj Kumar Nath, Project Implementation Specialist, Asian Development Bank, Bangladesh
103. Ms. Nadia Rashid, Senior Program Officer, Delegation of European Union to Bangladesh, Bangladesh
104. Dr. Selina Amin, Senior Advisor, MaMoni HSS, Save the Children, Bangladesh
105. Dr. Ishtiaq Mannan, Director, Health, Nutrition & HIV/AIDS, Save the Children, Bangladesh
106. Dr. Farzana Islam, Deputy Director, District Implementation, Save the Children, Bangladesh
107. Mr. Sabah Mugab, Manager, HMIS, Save the Children, Bangladesh
108. Dr. Muhibbul Abrar, Advisor, HMIS, Save the Children, Bangladesh
109. Mr. Jamil Anwar Zaman, Sr. Manager, HISD, Save the Children, Bangladesh
110. Mr. Arafat Hasan, Specialist-Software Developer, Save the Children, Bangladesh
111. Mr. Zahedul Islam, Country Director, Management Sciences for Health, Bangladesh
112. Mr. Mohammad Golam Kibria, Senior Technical Advisor, Health Information System, Management Sciences for Health, Bangladesh
113. Ms. Shamsun Nahar Rosy, Senior Sector Specialist (M&E), Health, Nutrition and Population Programme, BRAC, Bangladesh
114. Ms. Reshma Khanam, Manager, bHSP, Health, Nutrition and Population Programme, BRAC, Bangladesh
115. Mr. Humayun Kabir, Senior Strategic Technical Advisor, MEASURE Evaluation, Bangladesh
116. Dr. Mizanur Rahman, Senior Research Associate, MEASURE Evaluation, Bangladesh
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119. Ms. Rashida E Ijdi, Research Associate, MEASURE Evaluation, Bangladesh
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121. Dr. ATM Iqbal Anwar, Project Director, Universal Health Coverage, icddr,b, Bangladesh
122. Dr. Peter Kim Streatfield, Emeritus Scientist, Climate Change and Health, icddr,b, Bangladesh
123. Dr. Quamrun Nahar, Lead, Climate Change and Health, icddr,b, Bangladesh
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125. Mr. Monjur Ahmed, Communication Specialist, icddr,b, Bangladesh
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128. Mr. AKM Tanvir Hossain, Analyst Programmer, icddr,b, Bangladesh
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130. Mr. Mustafa Mohsin, M&E Officer, icddr,b, Bangladesh

131. Mr. Md. Shariful Islam, M&E Officer, icddr,b, Bangladesh
132. Mr. Angsuman Chakraborty, Senior Programmer, icddr,b, Bangladesh
133. Mr. Md. Fazlur Rahman, Programmer, icddr,b, Bangladesh
134. Mr. Md. Shamsul Haque, Database Administrator, icddr,b, Bangladesh
135. Mr. Md. Mostafa Kamal, Programmer, icddr,b, Bangladesh
136. Mr. Md. Atiqur Rahman, Senior Administrative Officer, icddr,b, Bangladesh
137. Mr. Mahfuzur Rahman Munshi, Clerk/Administration, icddr,b, Bangladesh
138. Mr. Moinuddin Haider, Research Investigator, icddr,b, Bangladesh
139. Ms. Afroja Yesmin, Research Officer, icddr,b, Bangladesh
140. Ms. Rafee Tamjid, Administrative and Communication Assistant, icddr,b, Bangladesh
141. Dr. Jannatul Ferdous, Consultant, icddr,b, Bangladesh
142. Dr. Shahed Hossain, Scientist, icddr,b, Bangladesh
143. Dr. Md. Shah Alam, Project Coordinator, icddr,b, Bangladesh
144. Mr. Masud Parvez, Assistant Programmer, icddr,b, Bangladesh
145. Mr. Mohammad Saiful Islam, Senior Programmer, icddr,b, Bangladesh
146. Mr. Sadika Akhter, Deputy Project Coordinator, icddr,b, Bangladesh
147. Mr. Md. Wahidul Hasan, Senior Programmer, icddr,b, Bangladesh
148. Ms. Rezwana Azad, Communication Officer, icddr,b, Bangladesh
149. Mr. Md. Nazmul Ahsan, Programming Officer, IPHN, Bangladesh
150. Ms. Inga Williams, M&E Officer, WHO, Bangladesh
151. Ms. Andrea Raickovic, Reports Officer, WHO, Bangladesh
152. Dr. Nur-A-Taomin, Partnership Coordinator, WHO, Bangladesh
153. Ms. Iffat Mahmud, Operations Officer, World Bank, Bangladesh
154. Mr. Md. Monzur Morshed, Senior Program Officer ICT, BCCP/BKMI, Bangladesh
155. Ms. Fatema Valehin, IT Expert, UHSSP-DFID, Bangladesh
156. Dr. Jahangir Hossain, Program Director, CARE, Bangladesh
157. Ms. Rebecca Arnold, BKMI Project, John Hopkins CCP, Bangladesh.

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