PATHFINDER

Health Facility Assessment

Disaster Preparedness and Service Readiness Assessment of the Health Facilities in the Climate Vulnerable North-Eastern Areas in Bangladesh

[This report was produced by Pathfinder International, with generous support from the Takeda Pharmaceutical Company Limited's Global Corporate Social Responsibility (CSR) Program funded **Dishari: Advancing the Leadership of Women and Girls Towards Better Health and Climate Change Resilience**, **Women-Led Climate Resilience** program in Bangladesh]

August 2024

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Suggested citation
Pathfinder International. *Health Facility Assessment: Disaster Preparedness and Service Readiness Assessment of the Health Facilities in the Climate Vulnerable North-Eastern Areas in Bangladesh*. Dhaka, Bangladesh: Pathfinder International, 2024.

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ACKNOWLEDGMENTS

Pathfinder would like to thank the participants of this study for sharing valuable insights related to disasters, climate shocks, health behaviors, coping strategies, livelihoods, and other socioeconomic and demographic information. Pathfinder would also like to thank the officials working at the different levels under DGHS and DGFP. Pathfinder is grateful to the Directorate General of Health Services (DGHS) and Directorate General of Family Planning (DGFP) agencies of the Government of Bangladesh (GOB), and would like to extend special thanks to the Takeda Pharmaceutical Company Limited's Global Corporate Social Responsibility (CSR) Program for their generous support and cooperation. Recognizing the efforts of the Resilience Officers, the project team and other engaged in-country and global Pathfinders for their critical role in conducting this study, Pathfinder believes that these findings will contribute immensely to the national discourse.

The contents of this report are the responsibility of Pathfinder and do not necessarily reflect the views of Takeda Pharmaceutical Company Limited's Global CSR Program.

ABBREVIATIONS AND ACRONYMS

ANC Antenatal care
API Application Programming Interface
AYSRH Adolescent and youth sexual and reproductive health
BCC Behavior Change Communications
BEmONC Basic Emergency Obstetric and Newborn Care
CAC Comprehensive abortion care
CC Community Clinic
CEmONC Comprehensive emergency obstetric and neonatal care
CMR Clinical Management of Rape
CS Caesarean section
DGFP Directorate General of Family Planning
DGHS Directorate General of Health Services
DNA Deoxyribonucleic acid
DPT Diphtheria, tetanus, & pertussis
EONC Essential obstetric and newborn care
FP Family planning
FWV Family Welfare Visitor
GBV Gender-based violence
HF Health facility
HFA Health facility assessment
Hep B Hepatitis B
HIV Human immunodeficiency virus
HMIS Health management information system
HPV Human papilloma virus
HTS HIV testing services
IEC Information, Education and Communication
IPC Infection prevention and control
IUD Intrauterine contraceptive device
IPV Inactivated poliovirus vaccine
LEEP Loop electrosurgical excision procedure
MCH Maternal and child health
MCRAH Maternal, Child, Reproductive and Adolescent Health
MCWC Mother and child welfare center
MNH Maternal and newborn health
MNCH Maternal, newborn, and child health
MEL Monitoring, evaluation, and learning
MISP Minimum Initial Service Package
MOH Ministry of Health
MOHFW Ministry of Health and Family Welfare
MVA Manual Vacuum Aspiration
NSV No Scalpel Vasectomy
PAC Post Abortion Care
PEP Post-Exposure Prophylaxis
PNC Postnatal care
PPFP Postpartum family planning
PPIUCD Postpartum intrauterine contraceptive device
RD Rural Dispensaries
SAM Short Acting Method
SRHR Sexual and reproductive health and rights
SRH Sexual and reproductive health
STI Sexually transmitted infection
UH&FWC Union Health and Family Welfare Centre
UHC Upazila Health Center
VIA Visual inspection with acetic acid wash
WHO World Health Organization

EXECUTIVE SUMMARY

This Health Facility Assessment Report provides a comprehensive overview of the disaster preparedness of the Ministry of Health and Family Welfare's (MOHFW) health facilities and health care landscape in the surveyed areas. Additionally, this report also offers insights on strengths, challenges, and opportunities for improvement. The assessment covered various dimensions, including disaster planning collaboration, routine data checking and reporting, service delivery preparedness, psychosocial support protocols, health services provision during disasters, infrastructure and resources, human resources, and capacity development. Assessing health facilities' disaster management is crucial for effective response, aiding in preparedness evaluation, resource allocation, and risk identification. These assessments inform response planning, coordination among stakeholders, and community empowerment through increased awareness. Regular monitoring and evaluation ensure ongoing improvement, while data-driven decision making prioritizes interventions based on identified gaps. Additionally, health facility assessments promote healthier lifestyles by evaluating health education and preventive services during disasters for specific target audiences.

Methodology

This assessment was conducted under the Women-Led Climate Resilience project in Bangladesh and aimed to evaluate health facilities' readiness and quality of care in climate-vulnerable areas. Utilizing a semi-structured questionnaire, the assessment focused on community clinics (CCs), rural dispensaries (RDs), union health and family welfare centers (UH&FWCs), upazila health centers (UHCs), and mother and child welfare centers (MCWCs) in four districts. Data collection methods included mobile-assisted personal interviews and observation, guided by a comprehensive questionnaire organized into ten modules covering facility identification and geographic coverage, health service availability, human resources, infrastructure and general environment, personal training, personal coverage and referral mechanism, emergency preparedness, vulnerability mitigation, governance and management, health communication and messaging. The adaptation, pre-test, and ethical clearance ensured the tool's applicability, while enumerators' orientation and data validation maintained rigor. Preliminary findings were shared with government personnel, and the final report underwent internal and external review. The sampling methodology targeted 297 health facilities across climate-vulnerable regions with due government approval. The analysis highlighted service availability, supporting informed decision-making for effective health care during disasters.

Key Findings

Population Burden. The study on health facilities in climate-vulnerable areas revealed a significant population burden, with over one-third of community clinics serving 10 or more villages. Notably, 50% of community clinics (108 of 216) catered to populations between 8,000 to 20,000, emphasizing the need for careful planning and resource allocation. Health facilities in disaster-affected regions faced challenges of excessive population burden and a lack of basic health services.

Service Availability. While antenatal care (ANC) and postnatal care (PNC) services were nearly universally offered, there were notable gaps in other crucial areas. Family planning services exhibited disparities, with deficiencies in short-acting methods at community clinics and injectables at both community clinics and UH&FWCs. Maternal, newborn, and child health services were generally available, but certain facilities reported limitations in services like newborn care and obstetric ultrasound. Gender-based violence services were concentrated at sub-district level UHCs, but not all offered a comprehensive range. Adolescent and youth services were prevalent, yet some facilities lacked specific offerings. Cervical-cancer-related services were accessible at MCWC and UHC facilities, but comprehensive services were not provided. The study underscores the need for targeted improvements to enhance the overall availability and accessibility of essential health services in climate-vulnerable regions.

Facilities out of Service in Disaster. Notably, the study highlighted the closure of 52% of surveyed health care facilities during recent floods (2022), impacting the continuity of care and emphasizing the need for disaster-resilient infrastructure and strategic planning.

Infrastructure and Resources. Of the 297 health facilities assessed, only 78% reported having functional toilets, with 21% having separate facilities for women. The assessment also revealed that only 13% of facilities were fully clean externally, and 26% were fully clean internally. Power source availability (from national grid, solar, and generators) was reported by 78% of facilities, yet 40 community clinics and 5 UH&FWCs lacked functional power sources. Water sources in 54% of health facilities were reported as clean, primarily relying on piped water (68%) or tube wells (36%).

Human Resources. Shortage of service providers, including doctors, nurses, and midwives, places added strain on healthcare service delivery. The assessment indicated that although 83% of sanctioned positions were filled, only 64% of staff were present during the assessment, mainly due to additional responsibilities in other facilities. Service providers often rotate between facilities, introducing unpredictability in health care availability. Furthermore, 50% of health care providers lacked essential training,

impacting service quality. Availability of services like Basic Emergency Obstetric and Newborn Care (BEmONC) and Comprehensive Emergency Obstetric and Newborn Care (CEmONC) was limited, particularly in community clinics and rural dispensaries facing acute population burden. The presence of trained providers for services such as Manual Vacuum Aspiration (MVA) and medical abortion was also inconsistent.

Disaster Preparedness. Amid the challenges posed by the COVID-19 pandemic, seasonal floods, and cyclones, only 2% of the surveyed health facilities demonstrated robust capacity for managing caseloads during such crises. Notably, 40% of UHCs (4 of 10) and 25% of MCWCs (1 of 4) reported elevated capabilities in this critical aspect. However, only 3% of health facilities had enough provisions on hand to sustain emergency backup generators for two weeks. Written guidelines for efficient energy usage were also rare, with just 1% of health facilities in possession of such protocols. Of note, 20% of UHCs (2 of 10) reported having some form of written instruction in this context.

The provisioning of SRH commodities for a two-month duration revealed a mixed landscape. While 30% of health facilities demonstrated readiness, 13% exhibited only partial preparedness. Alarmingly, 47% reported an unprepared status in this critical area. The availability of full personal protective equipment for a two-week period was observed in just 4% of health facilities. Robust backup communication plans were rare, evident in only 1% of health facilities. The existence of contingency plans for safe and efficient evacuation of personnel was reported at 1% of health facilities. Staff training on exit and evacuation during emergency situations emerged as a critical gap, with only 1% of health facilities reporting sufficient preparedness. Only 2% of health facilities reported having a written plan for the transfer of critical equipment and medical supplies to alternate facilities. Another concern was that only 3% of facilities adhered to a written protocol for monitoring the quality of drinking and washing water.

Collaborative Disaster Planning. Of the 297 health facilities assessed, 25% actively engaged in disaster planning with local management committees, highlighting collaborative efforts.

Data Integrity and Reporting. Although 79% of facilities exhibited strong practices in routine data checking for report preparation, only 50% received training in the last two years.

Financial Preparedness. Only 17 facilities reported a dedicated emergency preparedness budget, with 6% claiming an annual budget for disaster preparedness.

Psychosocial Support. Just 2% of health facilities had a written protocol for psychosocial support during crises, indicating a recognition of mental health needs.

Health Services Provision Post-Disaster. The assessment identified challenges in areas like menstrual regulation, family planning, HIV/STI services, maternal and child health, gender-based violence, and adolescent services.

Infrastructure and Resources. Challenges included cleanliness, power supply, water sources, and infrastructure, emphasizing the need for comprehensive improvements.

Human Resources and Training. Staff shortages and uneven distribution impacted service delivery; 50% of health care providers lacked essential training.

Recommendations

Enhanced Collaboration. Foster increased collaboration among health facilities, local management committees, and relevant stakeholders through knowledge-sharing platforms and joint training initiatives.

Data Management. Invest in further training to enhance data compilation and reporting practices, ensuring accurate and reliable information for decision-making.

Financial Resilience. Strengthen budget allocations and financial protocols to enhance overall preparedness and responsiveness during disasters.

Psychosocial Support. Develop and implement comprehensive psychosocial support programs, including training and resources for health care staff.

Critical Health Services Provision. Target interventions and resource allocations to address gaps in essential health services, ensuring continuity during and after disasters.

Infrastructure and Resources Enhancement. Invest in infrastructure upgrades, resource availability, and maintenance protocols to improve overall health facility functionality.

Human Resources Development. Address staff shortages and implement consistent training programs to build a resilient health care workforce capable of responding to dynamic challenges.

Conclusion

This report underscores the need for systematic improvements in disaster preparedness and health care delivery. By addressing the identified challenges and implementing the recommended interventions, the surveyed regions can build a more resilient health care system, capable of providing essential services even in the face of disasters. Collaborative efforts between health facilities, local management committees, and relevant authorities are pivotal for achieving sustained improvements in health care delivery and disaster resilience.

INTRODUCTION

Background

The health status of Bangladesh has improved substantially over the past two decades. Life expectancy at birth has increased by 7 years for men and 10 years for women between 2000 and 2017.[1] This improvement is due to a steady decline in childhood and maternal mortality. Between two DHS surveys from 1999–2003 and 2017–2018, the under-five mortality dropped from 88 to 45 deaths per 1,000 live births.[2] Maternal mortality also declined by 45%, from 322 to 176 deaths per 100,000 live births between 2001 and 2015.[3]

Evidence suggests that changing fertility behavior has contributed significantly to the steady decrease in mortality. Between 2000 and 2018, the total fertility rate in Bangladesh declined by one child—from 3.3 in 1999–2000 to 2.3 in 2017–2018.[2] Despite these successes, inequity in health care service delivery has proved to be a persistent challenge. Since 2010, floods have been the leading cause of disaster displacement in Asia and the Pacific, accounting for 113.6 million—50%—of people living in displacement.[4]

Climate vulnerability exacerbates this disparity, through increasingly frequent natural disasters that have caused 14 million displacements in Bangladesh over the last decade.[4] Bangladesh faces a myriad of challenges due to its geographical region and delta topography. Human, natural, and unintentional shocks—including floods, cyclones, and earthquakes—pose a constant threat to the country's pluralistic health care systems.[5] This increased vulnerability to climate change worsens the impact of these disasters, which disproportionately affects communities across Bangladesh, particularly those living in Haor areas.

Extreme weather events are becoming more common and intense because of climate change. The number of hot days and days with heavy rain is rising. Flash floods and monsoon floods occur almost every year, varying in severity. Large cyclones—such as Cyclone Mahasen in 2013, Cyclone Aila in 2014, Cyclone Mora in 2017, Cyclone Bulbul in

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2019; and Cyclone Amphan in 2020—are becoming increasingly common in coastal areas.

However, recent scientific investigations have revealed new information that allows us to more efficiently identify health vulnerabilities in qualitative and quantitative dimensions. Some examples include an increase in air-pollution-induced mortality cases,[6] a significant correlation between climatic factors and kala-azar incidence in three endemic districts of Bangladesh,[7] a significant increase in dengue cases before and after the monsoon, and the first outbreak of chikungunya in Bangladesh in 2017. According to the report's estimates, a 1°C increase in temperature in Bangladesh would result in a 4.5–5.5% increase in the initial risk of diarrheal disease by 2030. By 2050, climate change will account for 13% of all diarrheal deaths and other waterborne diseases.[8,9]

Furthermore, climate change has a significant indirect impact on the psychosocial well-being of individuals and communities.[10] The Haor regions in northeast Bangladesh, which are primarily dependent on single-cropped areas, face heightened vulnerability due to their geographic location. Most communities rely solely on the Boro rice crop, making them susceptible to climate-related challenges. The recent heavy rainfall (2022) and runoff from India have led to early flooding across more than half of the Haor area, resulting in the destruction of livelihood and resources. This crisis has impacted an estimated 4,667,000 people in 450 Unions (out of 530) within 60 Upazilas (out of 62) across the six districts of Sunamganj, Sylhet, Netrokona, Kishoreganj, Habiganj, and Moulvibazar. Sunamganj district is the worst affected, with 65% of its population impacted, followed by Netrokona (33%) and Sylhet (25%). The other districts also face significant challenges, with approximately 21% of their populations affected.[11] Despite the severity of the situation, there is a critical data gap in assessing the interruption of health service delivery, leaving the true impact on vulnerable populations unknown. To address this gap, it is imperative to conduct assessments measuring service delivery interruptions to gather necessary data for informed decision-making and targeted actions. Evidence-based information can ensure a more comprehensive understanding of the challenges faced by service providers, managers, and vulnerable communities.

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[6] Mutsuddy, Pulak, Sanya Tahmina Jhora, Abul Khair Mohammad Shamsuzzaman, S.M. Golam Kaisar and Md Nasir Ahmed Khan. "Dengue Situation in Bangladesh: An Epidemiological Shift in terms of Morbidity and Mortality." *The Canadian Journal of Infectious Diseases & Medical Microbiology = Journal Canadien des Maladies Infectieuses et de la Microbiologie Médicale* 2019 (2019). https://onlinelibrary.wiley.com/doi/10.1155/2019/3516284

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[8] Directorate General of Health Services. Bangladesh Health-National Adaptation Plan (HNAP). (Dhaka, Bangladesh: Directorate General of Health Services, Ministry of Health and Family Welfare, Government of the People's Republic of Bangladesh, March 2018). https://iedcr.portal.gov.bd/sites/default/files/files/iedcr.portal.gov.bd/page/b1dfa518_356c_4acc_8cb5_074929c46748/2024-04-17-08-17-bbc5c980516bc29ec86232155531e76e.pdf

[9] Prince, Ehsanur. (2017). An Analysis of the Impacts of Temperature on Diarrheal Disease in Bangladesh. International Journal of Social Science and Economic Research. 2. 5040-5049

[10] S Shahid, Shamsuddin. (2009). Probable Impacts of Climate Change on Public Health in Bangladesh. *Asia-Pacific Journal of Public Health.* Asia-Pacific Academic Consortium for Public Health. 22. 310-9. 10.1177/1010539509335499.

[11] Need Assessment Working Group (NAWG), *Key Immediate Needs and Preliminary Impact Assessment: North Eastern Flash Flood, May 2022 Bangladesh.* (Dhaka, Bangladesh: Need Assessment Working Group, Humanitarian Coordination Task Team, June 1, 2022). https://shelltercluster.s3.eu-central-1.amazonaws.com/public/docs/20220706_KIN_Preliminary_Impact%20Assessment_Haor%20Flash%20Flood%202022_%20Final.pdf

Risk Assessment and Health Care Systems Resilience. This study addresses the critical need to understand the capacity of local health authorities to conduct risk assessments for health facilities and the service delivery system. This assessment identifies potential risks, allowing authorities to anticipate and mitigate interruptions efficiently, fostering a proactive and effective emergency response. Health system resilience must become a priority, so that access equitable and high-quality health care service delivery can be sustained throughout various climate-induced shocks and stressors.

Health Care Infrastructure Challenges. Bangladesh boasts an extensive network of public health care facilities, including UH&FWCs, community clinics, district hospitals, and specialized hospitals. UH&FWCs and community clinics, especially in rural areas, play a crucial role in providing primary health care services. However, challenges related to infrastructure, equitable access, workforce distribution, funding, and addressing health disparities persist even when there are no disasters to address.

Health Facility Assessment and Disaster Preparedness. Health facility assessment is a critical tool for evaluating the readiness and resilience of health care establishments, particularly in disaster-prone regions. This comprehensive assessment encompasses infrastructure, staffing, emergency protocols, equipment, and community engagement strategies. This assessment aims to ensure that health care facilities are well-prepared for effective crisis response by anticipating potential challenges and identifying areas for improvement to enhance resilience.

In collaboration with the Government of Bangladesh and with funding from the Takeda Pharmaceutical Company Limited's Global CSR Program, Pathfinder's Women-Led Climate Resilience project assessed 297 health facilities across four vulnerable districts in the Haor area. This initiative aims to inform policy decisions, improve health care delivery, optimize resource allocation, and enhance the overall health care system's performance.

Rationale for Health Facilities Assessment

The landscape of emergency preparedness and response is evolving quickly in the health sector, particularly in Bangladesh. In 2011, the Directorate General of Health Services, in collaboration with the World Health Organization (WHO), formulated a hospital emergency preparedness and response plan to equip health managers and workers with technical guidelines for handling emergencies. However, assessments by the Department of Disaster Management and the Bangladesh Meteorological Department revealed underutilization of these plans by hospital health managers.

Consequently, in 2022, the Institute of Epidemiology, Disease Control, and Research updated the plan and developed training manuals for hospital staff in collaboration with the WHO and Directorate General of Health Services' Line Director of Hospital Services. These trainings and capacity-building efforts focus primarily on communicable diseases and related emergency preparedness. However, Pathfinder advocates for a broader approach, integrating maternal health, child health, reproductive health, and family planning as crucial components for building health system resilience. This holistic perspective ensures comprehensive, effective response to health emergencies.

This assessment examines the preparedness, capacity, and vulnerabilities of health facilities, allowing for appropriate planning and allocation of resources. The rationale of this health facility assessment in disaster management is summarized below.

- **Preparedness Assessment:** Assessing health facilities for availability of trained staff, medical supplies, infrastructure, communication systems, and evacuation plans helps evaluate readiness and preparedness for various disasters.
- **Resource Allocation:** Understanding the capacity and capabilities of health facilities enables effective resource allocation. Resources such as medical supplies, personnel, equipment, and funds can be directed to areas that are in need.
- **Identification of Vulnerabilities and Risks:** By revealing vulnerabilities and risks that health facilities may face during disasters, health facilities can devise strategies for mitigation in advance. These could be physical vulnerabilities, like location in a flood-prone area, or structural vulnerabilities, like outdated infrastructure.
- **Response Planning:** Findings from this assessment will enable the development of tailored strategies for enhancing the resilience and responsiveness of health facilities during disasters. This could involve developing alternative communication systems, training staff, or establishing contingency medical supply stockpiles.
- **Coordination and Collaboration:** By having a clear understanding of the health facilities' capacities, government agencies, non-governmental organizations, and international partners, and other stakeholders can work together to provide coordinated disaster response.
- **Community Engagement and Education:** Assessment findings can be shared with the community to increase awareness of the capabilities and limitations of

their local health facilities. This empowers communities to make informed decisions and take appropriate actions during disasters.

- **Monitoring and Evaluation:** Conducting regular assessments helps in monitoring the progress of disaster preparedness initiatives and evaluating the effectiveness of implemented strategies. It allows for adjustments and improvements to be made based on lessons learned from previous assessments.
- **Data-Driven Decision Making:** Utilizing data from health facility assessments enables evidence-based decision-making. Decision-makers can prioritize interventions and investments based on the identified needs within health facilities.
- **Promoting Health Care during Disaster:** Health Facility Assessment will help to promote healthier lifestyles by fostering alternative service delivery mechanism and health education session for wider client access and services.

Objectives of the Health Facility Assessment

This assessment was conducted as part of the Women-Led Climate Resilience project's baseline analysis, with a focus on documenting health facility service readiness during emergencies. This assessment aims to provide comprehensive understanding of the FP and SRH service requirements, the availability of general health services during emergencies, and the overall readiness of health facilities in the project intervention areas. This assessment focused on the objectives below.

FP and SRH Service Readiness

- Identify facility readiness for FP and SRH health equipment/supplies during pre-disaster and emergency periods.
- Evaluate the availability of supplies, equipment, and physical space.

General Health Services During Emergencies

- Maternal and Child Health (MCH)
    - Evaluate the availability of supplies, equipment, and physical space.
    - Understand the status of pregnancy, delivery, and post-delivery care.
    - Assess the effects of emergencies on pregnancy, delivery, and post-delivery care.
- Women's Empowerment and Gender-Based Violence (GBV)
    - Measure the women empowerment index.
    - Examine the occurrences of GBV during emergencies.

Community Resiliency Capacity

- Measure the community's capacity to tackle emergencies.

Service Providers and Community Health Workers

- Identify health facility and community health services' readiness capacity.
- Assess emergency preparedness and emergency response.

This Health Facility Readiness Assessment serves as a crucial component of the broader Women-Led Climate Resilience project, providing insights that will inform targeted interventions, enhance emergency response capabilities, and contribute to the overall resilience of health services in the intervention areas.

Limitations of the study

While the assessment of health facilities is essential for effective disaster response, recovery, and preparedness, it is crucial to acknowledge the following limitations:

- **Tool Universality Challenges:** The tool's design for multi-county use and multi-hazard perspectives can sometimes hinder obtaining context-specific accurate data.
- **Inadequate Data and Information:** The effectiveness of health facility assessments depends on data availability and accuracy. Obtaining comprehensive and reliable data can be challenging in regions with incomplete records, poor reporting systems, or limited information access.
- **Time and Resource Constraints:** Conducting thorough assessments requires sufficient time, resources, and staff. Limited resources may impede the ability to perform comprehensive assessments of all health facilities within a short timeframe.
- **Static Assessment in Dynamic Disasters:** Health facility assessments are often point-in-time evaluations. Assessments conducted at specific moments may not capture evolving situations or emerging needs as disasters progress.
- **Overemphasis on Physical Infrastructure:** Providers may focus predominantly on the physical infrastructure of health facilities, such as buildings and equipment, overlooking critical aspects like the functionality and effectiveness of health services, staff training, and community engagement in disaster management.
- **Assessment Bias and Subjectivity:** Potential bias exists in assessments due to the subjective nature of data collection, interpretation, and analysis. Assessor experience, perspectives, and preconceived notions may influence assessment results and recommendations.

METHODOLOGY

Overview

The Bangladesh health system has an extensive network of facilities for providing basic health services, from district-level to community-level. In the past 20 years, investments in health facilities have expanded services and improved access to quality care. However, service utilization in climate-vulnerable areas is not usually assessed and monitored through the lens of climate resilience, and infrequent or insufficient data has been a barrier to improvement. Under the Women-Led Climate Resilience project, Pathfinder is committed to assessing the quality of care of health systems in the climate-vulnerable areas. Women-Led Climate Resilience project led the survey, which was designed to evaluate the availability of basic and essential health care services and the readiness of health facilities to provide quality services to clients. The project developed standardized questionnaires to assess the provision of FP, MCRAH, and SRH services to inform health facilities' disaster preparedness.

This health facility assessment focused primarily on the service readiness indicators that were jointly developed and proposed by WHO and other stakeholders. The data from this assessment is not strictly comparable to the Bangladesh Health Facility Assessments survey results, because this assessment used a different set of questionnaires and a limited number of facilities. In general, the components that were assessed are those that are commonly considered important to Women-Led Climate Resilience project.

Map of Study Area

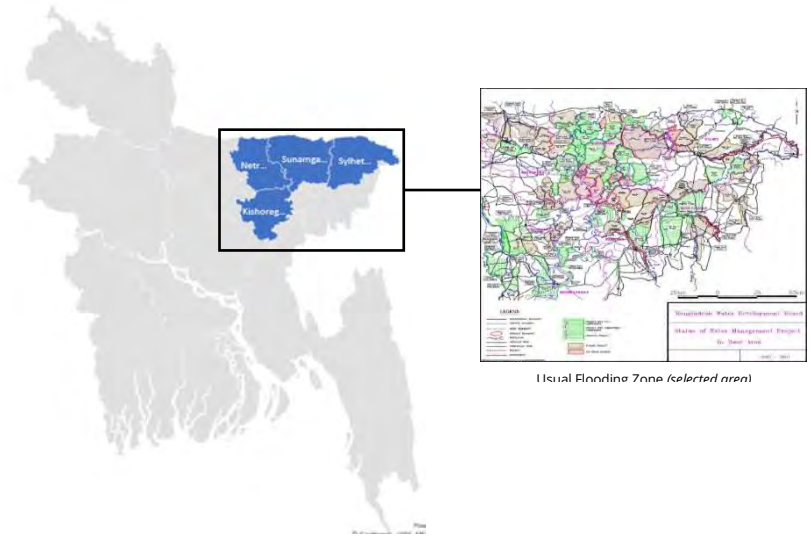

Figure 1: Study Districts and Usual Flooding Zone

Data Collection Methods

This health facility assessment utilized a semi structured assessment tool and a user guide which were loaded onto mobile phones and administered as mobile-assisted personal interviews, which were adopted from the WHO facility assessment tool.

The health facility assessment questionnaire obtained data on the availability of each priority service as well as the facilities' readiness to provide the service in an emergency. The questionnaire also gathered information on the availability of specific items (including their location and functional status), support system components (such as logistics, maintenance, and management), and facility infrastructure, including the service delivery environment. The person most knowledgeable about the facility and its services was interviewed by the data collectors. If another person or provider required specific information, the data collectors sought it from that person or provider. However, the data collectors only considered the services that were observed in the facility.

The selection of health facilities for this assessment was guided by a strategic rationale aimed at comprehensively capturing the service readiness and facility preparedness landscape within the four districts. The health facility assessment questionnaires were purposefully employed in five specific types of health facilities: community clinics (CCs), rural dispensaries (RDs), union health and family welfare centers (UH&FWCs), upazila health complexes (UHCs), and mother and child welfare centers (MCWCs). This selection was informed by an understanding of the vulnerabilities experienced by various health facilities during both pre- and post-disaster periods. Additionally, the scale of intervention by the Women-Led Climate Resilience project played a pivotal role in determining the inclusion of these facilities in the assessment. Notably, district hospitals were intentionally excluded from the HFA in these four districts, aligning with the project's strategic focus and ensuring a targeted evaluation of facilities most relevant to the Women-Led Climate Resilience project’s objectives.

Photo: (left) community clinic and (right) UH&FWC

Community Clinic: Community clinics usually cover a rural village-level population of 6,000 and aim to provide basic outpatient services under primary health care through non-clinical service providers.

Union Health and Family Welfare Centers: UH&FWCs usually provide a greater range of primary health care services, including vaginal delivery through qualified para-health professionals. They usually operate 24/7 and cover a population of approximately 25,000.

Upazila Health Complexes: UHCs are a sub-district-level primary health care referral center, providing in-patient and out-patient health services by qualified medical professionals with subsidiary other non-medical and support staff.

Photo: (left) Upazila Health Complex; (right) Mother and Child Welfare Centre

Mother and Child Welfare Centers: MCWCs are a specialized in-patient health facility for maternal and child health, usually a referral center located at the district headquarters. Medical doctors, FWV, and nurses provide a wider range of services there. This health facility assessment was designed in alignment with recommendations from WHO, with a focus on resilience.

The assessment evaluated availability of each priority service and the facility readiness to provide these services. Additionally, the questionnaire gathered data on the presence of specific items depending on health facility type, detailed their location and functional status, and recorded components of support systems such as logistics, maintenance, and management, and infrastructure—including the service delivery environment. During data collection, interviews were conducted with the relevant responsible individuals overseeing the facility and its services. In cases where additional information was required from another person or provider, the data collectors sought consultation to obtain the necessary details.

Table 1: HFA questionnaires were organized in 10 different modules

Module	Topic	Covered
Module 1	Facility Identification and	All geographical location information, data, time, informed consent, enumerator information, facility identification, geographic

Module	Topic	Covered
	Geographic Coverage	location, pre- and post- disaster service functionality, population coverage, and coverage information.
Module 2	Health Service Availability	Services offered by the facility.
Module 3	Human Resources/ Staffing	Clinical, non-clinical, support staff information.
Module 4	Infrastructure and General Environment	Facility infrastructure, water, energy and other supplies, emergency transportation, referral system, enumerators' observations, accessibility.
Module 5	Personal Training	Capacity building information.
Module 6	Personal Coverage and Referral Mechanism	Referral from community to health facility and from community level health facility to higher level referral center
Module 7	Emergency Preparedness	Observation and documentation, supply and resource management plan, skill, protocol, staffing, stock management, contingency plan
Module 8	Vulnerability Mitigation	Observation and document of mitigation plan, management, skill, process etc.
Module 9	Governance and Management	Community involvement, local leadership, management, and overall governance
Module 10	Health Communication and Messaging	Health education, messaging, communication etc.

Survey Implementation

Questionnaire Adaptation. The Women-Led Climate Resilience project team initially designed the health facility assessment tool, based on a WHO instrument. The tool then underwent revisions tailored to the contextual situation of Haor region of Bangladesh, which is affected by flash floods, ensuring its relevance and applicability within the country. The assessment adopted a quantitative data collection approach, aligning with WHO guidelines for facility assessment within the disaster context. The tool encompasses six thematic areas: service availability, human resources and training, infrastructure and general environment, emergency preparedness and planning, personal coverage and referral mechanisms, and governance and management. The questionnaire was formulated in English to facilitate the collection of essential data.

Pre-Test and Ethical Clearance. After adaptation, the questionnaires were pre-tested with the mobile application. The pre-test was conducted during June to July 2022 in four project districts: Netrokona, Kishoreganj, Sunamganj, and Sylhet. A total of 12 facilities

were tested, with three from each district. After the pre-test, the questionnaires and mobile programs were finalized for the main data assessment. Before initiating training and data collection, ethical clearance was received from Pathfinder that confirmed that this data collection activity was considered not human subject research. Health facility assessment tools were also disseminated to district- and upazila-level health managers and supervisors. Necessary modifications were adapted in the final questionnaire, such as facility-wise tool customization, photo-capturing options, and more.

Enumerators adhered to the highest ethical standards, respecting the dignity, rights, and wellbeing of all respondents involved. Participants were informed about the nature, purpose, and potential risks and benefits of their participation. Written consent, delivered digitally, was obtained from all participants. Participant information was treated with utmost confidentiality. Enumerators maintained strict measures to secure and protect all collected data to prevent unauthorized access, and only aggregate findings were reported to ensure individual privacy. Participation in the study was entirely voluntary, and participants had the right to withdraw at any stage of data collection.

Enumerator Orientation. The preparation for data collection comprised two phases of orientation, facilitated via Microsoft Teams. The first phase familiarized enumerators with the questionnaire, while the second phase provided an orientation to the mobile-based data collection system. In total, four personnel from district programs underwent repeat orientation process to proficiently execute the data collection process.

Data Collection. The pre-schedule meetings, in-person meetings, verbatim recording of all responses, photography and videography, and field notes were all handled by four enumerators. In addition, enumerators had to share their experiences during the meeting and submit electronic forms. While it took an average of two hours to collect data from ten modules per facility, certain health care facilities were visited multiple times. Data was collected from August 2022 to June 2023.

Data Management and Validation. Upon concluding the health facility assessment data collection, electronic data were securely stored in the mobile device. After, a thorough review was conducted to identify and rectify any inconsistencies. Enumerators conducted re-visits as necessary to ensure data accuracy. Following the submission of data into the server, a data administrator performed a secondary level of inspection and cleaning. Additionally, API-linked Microsoft Excel files were maintained to keep the database current and serve as a backup. Preliminary findings were communicated to pertinent government personnel, primarily supervisors and administrative officials. Their feedback, thoughts, and concerns were duly acknowledged and addressed.

Data Analysis and Report Preparation. The tabulation plan for this health facility assessment was created in alignment with the facility module section. The tables for the report were prepared between July and September 2023. Two aspects were observed during the analysis of the health facility assessment data:

- First, all available services were listed in a facility-by-facility basis tabular format to be displayed at a glance.
- Second, total service availability was calculated by categories of facilities considered in the study.

The final report was prepared with input from Pathfinder staff and later reviewed by the facility authority to ensure accuracy.

Sampling

Sampling Methodology. The geographic locations for the Women-Led Climate Resilience project's intervention were chosen according to the flash flood climate vulnerability index. The assessment focused on health facilities expected to offer primary health care services in the most climate-vulnerable unions and upazilas, as identified by relevant government stakeholders. A total of 297 facilities underwent evaluation for this health facility assessment. It's important to note that the facility authorized by the Directorate General of Health Services in Netrakona district was excluded from the study due to a delay in approval.

Table 2: Climate Vulnerability Context: Vulnerability Index for District

District	Climate Vulnerability Index
Sylhet	0.44
Sunamganj	0.51
Netrokona	0.52
Kishoreganj	0.49
[National (for district) highest 0.57 and lowest 0.41 for]	

Table 3: Climate Vulnerability Context: Vulnerability Index for Upazila

Upazila	Climate Vulnerability Index
Austagram	0.53
Itna	0.54
Mithamoin	0.53
Nikli	0.51
Khaliajuri	0.54
Madan	0.49

Upazila	Climate Vulnerability Index
Mohanganj	0.50
Netrokona Sadar	0.52
Bishwambarpur	0.52
Sunamganj Sadar	0.50
Tahirpur	0.53
Dharmapasha	0.53
Comapniganj	0.49
Gowainghat	0.51
Sylhet Sadar	0.43
Bishwanath	0.42
[National (for upazila) Highest 0.68 and lowest 0.38]	

Geographic Coverage of the Assessment: The assessment was conducted in 15 upazilas across four districts: Sylhet, Sunamganj, Kishoreganj, and Netrokona.

Table 4: Survey Health Facility Numbers by Geographic Location

		DGHS			DGFP		Grand
District	**Upazila**	CC	RD	UHC	UHFWC	MCWC	**Total**
Kishoreganj	Austagram	19	-	1	2	-	22
	Itna	18	-	1	5	-	24
	Mithamain	17	-	1	4	-	22
	Nikli	16	-	1	3	-	20
Kishoreganj Total		**70**		**4**	**14**		**88**
Netrakona	Khaliajuri	-	-	-	5	-	5
	Madan	-	-	-	6	-	6
	Mohanganj	-	-	-	5	1	6
	Netrakona Sadar	-	-	-	-	1	1
Netrakona Total		**-**	**-**	**-**	**16**	**2**	**18**
Sunamganj	Bishwambarpur	17	1	1	2	-	21
	Dharampasha	13	-	1	5	-	19
	Sunamganj Sadar	33	-	-	3	1	37
	Tahirpur	20	-	1	3	-	24
Sunamganj Total		**83**	**1**	**3**	**13**	**1**	**101**
Sylhet	Bishwanath	19	2	1	4	-	26
	Companiganj	8	-	1	2	-	11
	Gowainghat	20	1	1	7	-	29
	Sylhet Sadar	16	-	-	7	1	24
Sylhet Total		**63**	**3**	**3**	**20**	**1**	**90**
Grand Total		**216**	**4**	**10**	**63**	**4**	**297**

FINDINGS

Climate Vulnerability Context: Population Burden

The study revealed a significant population burden on surveyed health facilities, particularly in comparison to other regions of the country. Notably, over one-third of the community clinics assessed catered to 10 or more villages, with some extending services to as many as 23 villages.

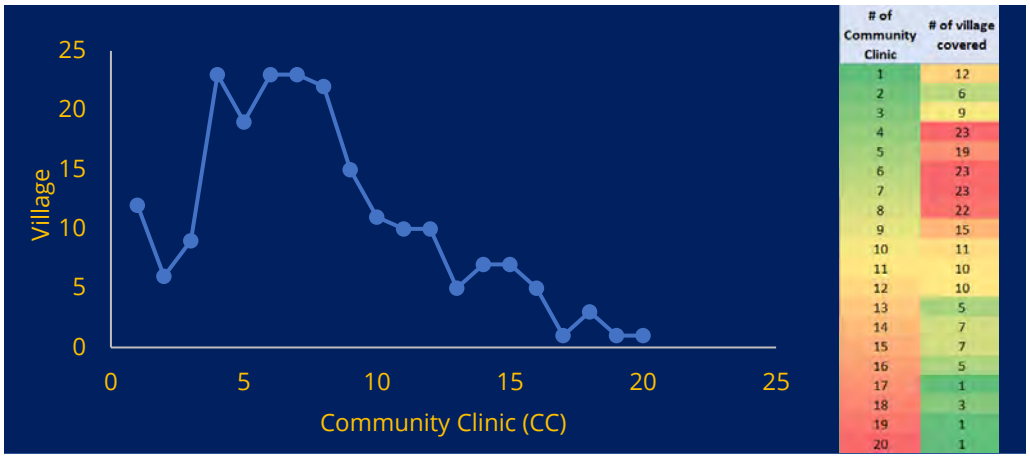

Figure 2: Village coverage by community clinic among the study sites

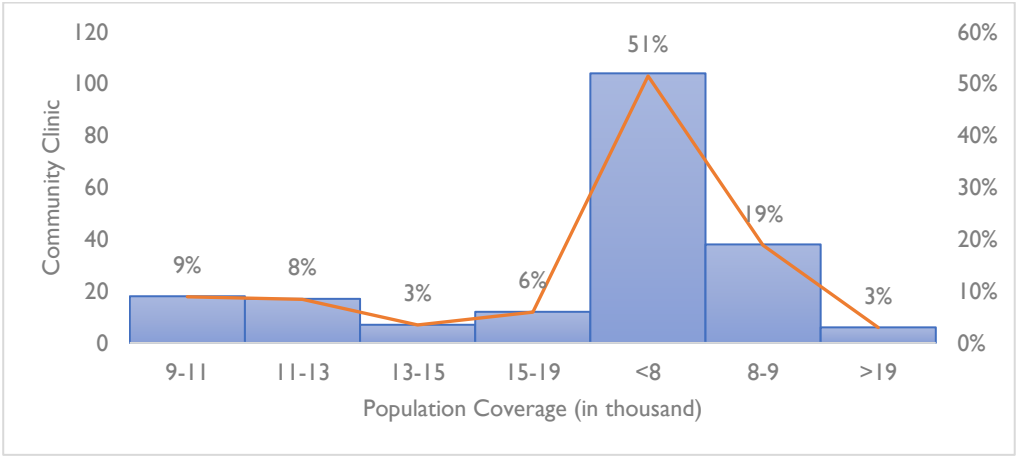

Figure 3: Population Burden by Community Clinics among the Study Sites

The assessment revealed population burden as an emerging trend, indicating that nearly 50% of community clinics were tasked with serving populations ranging from 8,000 to 20,000. This finding underscores the importance of careful consideration in health facility planning and resource allocation.

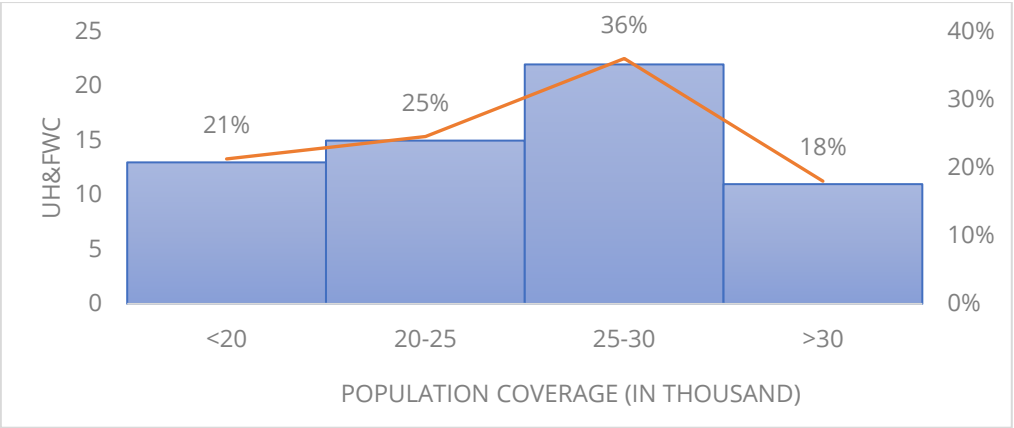

Figure 4: Population Burden by UH&FWC

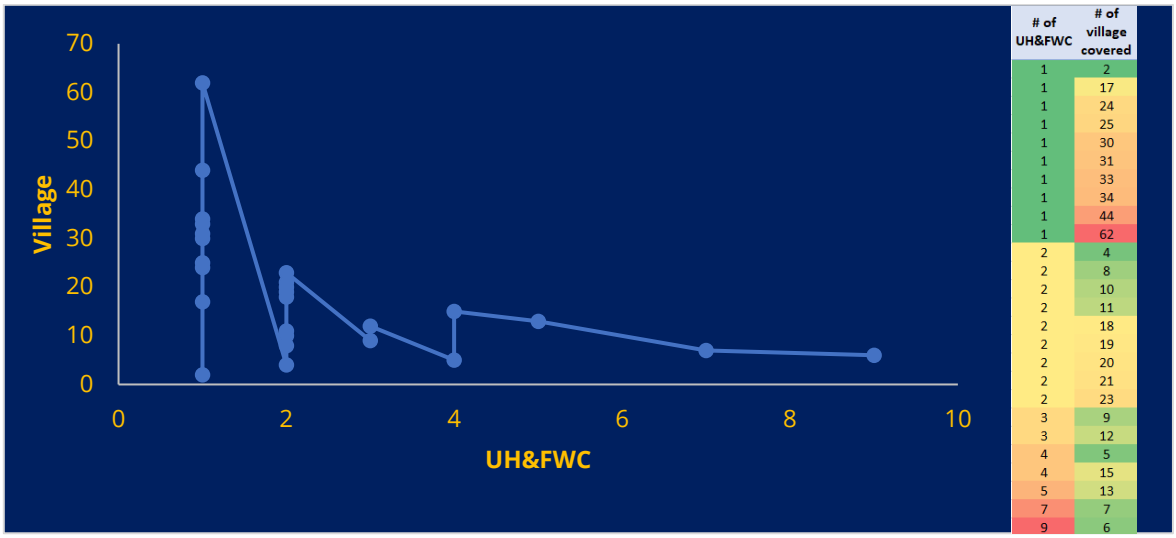

Figure 5: Village Coverage by UH&FWC

A similar pattern emerged in UH&FWCs, where both village and population coverage were exceptionally high (Figure 4 & 5). This extensive coverage places a significant strain on the health care infrastructure, as these facilities are tasked with serving a vast and densely populated region. This unprecedented scenario demands a closer examination of the population burden on community clinics and UH&FWCs, which are often the primary point of contact for health care services in rural areas.

Service Disparities in Health Facilities among Disaster-Affected Regions

Findings demonstrated that health facilities in disaster-affected regions are grappling with a dual challenge—population burden and the unavailability of basic health services.

Community clinics, UH&FWCs, and rural dispensaries play pivotal roles as community-level health facilities, entrusted with delivering primary health care services and outpatient care. However, analysis presented in Table 5 reveals significant gaps, particularly in the provision of FP, MNCH, HIV, GVB, abortion-related services, and other critical SRH services.

The data highlights that most community-level health facilities do not offer comprehensive FP and abortion services, with only short-acting methods available during survey data collection. The survey found notable deficiencies in FP services at surveyed community clinics, where 12% (26 of 216) lacked oral contraceptive pill services and 34% (73 of 216) lacked injectables services. UH&FWCs exhibited a slightly better scenario, with 2% (1 of 63) lacking oral contraceptive pill services and 5% (3 of 63) lacking injectable services.

Furthermore, the study pointed out a substantial gap in the availability of Postpartum Intrauterine Device (PPIUD) services. While UH&FWCs are expected to provide PPIUD services, around 30% of the surveyed health facilities reported no availability during the assessment. Although some facilities reported permanent FP methods, those were from special FP service delivery day. Almost 40% (86 of 216) community-level health facilities did not offer immediate postnatal family planning services like long-acting reversible contraceptives. IUD and implant services were generally not found at the community clinic level. In addition, such services are also limited to the rural dispensary level. IUD is a more available method than the implant in the UH&FWC level as 73% (46 of 63) reported that they have IUD facility whereas only 24% (15 of 63) reported that they have the implant services. Furthermore, one UHC reported that it did not have implant services available at the time of assessment, but the reason was not collected instantly. Not all referral centers provided permanent method services.

Table 5: Types of Services Offered and Available in Surveyed Health Facilities

Service Type	Community-Level Facility			Referral Center	
	Community Clinic	Rural Dispensary	UH&FWC	UHC	MCWC
FP-OCP	88%	100%	98%	100%	100%
FP-Injectable	56%	100%	95%	100%	100%
FP-IUD	N/A	N/A	73%	100%	100%
FP-IUD removal	N/A	N/A	70%	100%	100%
FP-Implant	N/A	N/A	24%	90%	100%
FP-Implant removal	N/A	N/A	25%	100%	100%
FP-Tubectomy	N/A	N/A	6%	90%	75%
FP-NSV	N/A	N/A	6%	90%	75%

Service Type	Community-Level Facility			Referral Center	
	Community Clinic	Rural Dispensary	UH&FWC	UHC	MCWC
FP-Immediate PPFP LARC	N/A	N/A	59%	90%	100%
FP-EPC	5%	75%	79%	100%	100%
CAC-MMR	N/A	N/A	19%	60%	50%
CAC-MVA	N/A	N/A	13%	70%	50%
CAC-D&C	N/A	N/A	N/A	70%	75%
SRH-STI	N/A	N/A	17%	70%	100%
SRH-HIV counseling	0%	0%	17%	50%	100%
MNCH-ANC	99%	100%	95%	100%	100%
MNCH-Intrapartum	N/A	0%	87%	100%	100%
MNCH-gynecological	N/A	0%	86%	100%	100%
MNCH-newborn care	86%	100%	94%	100%	100%
MNCH-CS	N/A	N/A	N/A	50%	50%
MNCH-NVD	38%	100%	60%	100%	100%
MNCH-Blood transfusion	N/A	N/A	N/A	80%	25%
MNCH-obs ultrasound	N/A	N/A	N/A	60%	25%
MNCH-Immunization	65%	100%	70%	100%	75%
MNCH-postnatal care	99%	100%	95%	100%	100%
GBV-Immediate psychological care	N/A	N/A	2%	90%	0%
GBV-Referral	1%	0%	11%	90%	100%
GBV-responsive FP/HIV	31%	75%	75%	80%	100%
GBV-Clinical management of rape	N/A	N/A	N/A	40%	N/A
GBV-Clinical management of rape for prepubescent children	N/A	N/A	N/A	70%	N/A
Treatment of trauma	N/A	N/A	N/A	90%	N/A
GBV-Medico legal documentation	N/A	N/A	2%	60%	N/A
Forensic laboratory support	N/A	N/A	N/A	10%	N/A
AYSRH-Counseling	97%	100%	97%	100%	100%
AYSRH-Integrated service	35%	100%	86%	50%	100%
SRH-via test	N/A	0%	0%	90%	50%
SRH-HPV vaccine	N/A	0%	0%	20%	0%

Service Type	Community-Level Facility			Referral Center	
	Community Clinic	Rural Dispensary	UH&FWC	UHC	MCWC
SRH-Cervical cancer referral	N/A	0%	0%	90%	50%

Menstrual regulation services were unavailable at the community clinic level. During the assessment, rural dispensaries also confirmed the absence of menstrual regulation services. Out of the 63 UH&FWCs contacted, only 12 indicated availability of menstrual regulation services. Conversely, one MCWC and four UHCs reported that they do not provide these services.

The manual vacuum aspiration method for menstruation regulation was identified at 8 out of 63 UH&FWCs. Furthermore, dilation and evacuation services were found to be unavailable at UH&FWCs. These services are found in some sub-district-level hospitals and UHCs. All types of health care facilities offer FP services following menstrual regulation. However, 158 community clinics, 1 rural dispensary, and 2 UHCs reported that they do not provide such services.

HIV and Sexually Transmitted Infection (STI). STI services are provided at UH&FWCs, MCWCs, and UHCs. Of health facilities surveyed, 17% (11 of 63) of UHFWCs, 100% (4 of 4) of MCWCs, and 70% (7 of 10) of UHCs reported that they provide such services. Additionally, these facilities also provide HIV counseling services to those who seek them.

Maternal, Newborn, and Child Health (MNCH). Antenatal care and postnatal care services were offered across almost all facilities. However, 30 community clinics and four UH&FWCs were found not offering newborn care services during the assessment. MCWCs and UHCs offer antenatal care, postnatal care, and newborn care services. Intrapartum and gynecological care are varied, and not accessible at community clinics or rural dispensaries. Additionally, the assessment revealed that operative vaginal delivery was not offered at 133 community clinics and 25 UH&FWCs. In contrast, all MCWCs and UHCs reported having facilities for operative vaginal delivery. Very limited coverage of obstetric ultrasound, blood transfusion, and cesarean section facilities are accessible at both district- or sub-district-level hospitals, MCWCs, and UHCs. Among the four MCWCs assessed, two have confirmed that they provide cesarean sections services. Furthermore, 5 out of the 10 UHCs assessed reported performing cesarean sections.

Gender-Based Violence. GBV-related comprehnsive services are offered at the sub-district-level UHCs. However, it has been observed that not all UHCs offer a

comprehensive range of these services. Among the 10 facilities assessed, 9 provide immediate psychosocial support and physical trauma services to survivors. When it comes to clinical management of rape cases, four UHCs provide such services, six facilities offer medico-legal documentation services, and only one UHC provides forensic laboratory services. GBV data reveals that 67 out of 216 community clinics offer services related to FP and HIV counseling, including the provision of emergency contraception after an incident of violence.

Adolescent and Youth Services. Adolescent and youth counseling services are available in 97% of surveyed health facilities. Three community clinics and two UH&FWCs were found to not offer the required services. Among surveyed community clinics, 48% of facilities (104 of 216) offered adolescent and youth SRHR services. Furthermore, of the 63 UH&FWCs, 9 do not currently provide these services.

Cervical Cancer. Cervical-cancer-related Visual Instruction with Acetic acid (VIA) test and human papillomavirus vaccines are offered at the MCWC and UHC facilities. However, it's important to note that comprehensive cervical-cancer-related services, including pathological tests, are not currently provided in the assessed health facilities. Specific tests like the Pap test, OncoE6, HPV/DNA test are not available at the UHCs. Additionally, some treatment processes for cervical cancer, such as cryotherapy, thermal ablation, and loop electrosurgical excision procedure, are also unavailable at UHCs. This indicates a critical need for a comprehensive understanding of the health care landscape in the aftermath of disasters, shedding light on the vulnerabilities that both the population and health facilities face.

Closure of Health Facilities

Adding another layer to the complexities faced by health facilities in disaster-affected areas, recent floods have forced the shutdown of 52% of surveyed health care facilities. The floods have inundated vast regions, leading to the closure of health facilities, except MCWCs, due to severe damage, compromised infrastructure, and the displacement of health care personnel. On average, community clinics remained closed for 8 days, with a wide-ranging closure period spanning from 1 day to an alarming 60 days. This variance in closure duration underscores the severity of the floods and the subsequent challenges faced by health facilities in resuming normal operations.

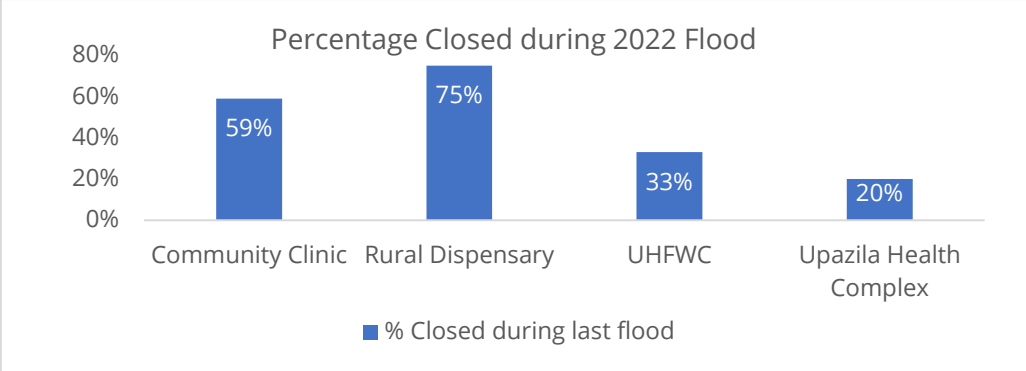

Figure 6: Percentage (%) of Health Facilities Closed in Recent (2022) Flood

Similarly, one out of three UH&FWCs experienced closure, with an average shutdown period of 18 days. However, the range of closure varied significantly, from 2 days to an alarming 150 days. This extended closure duration places immense strain on the health care system, disrupting the continuity of care and limiting the accessibility of health services to the affected population.

This unprecedented situation has exacerbated the challenges faced by communities, leaving them with limited access to essential health care services. The closure of health facilities during a critical period underscores the vulnerability of the health care system and highlights the urgent need for disaster-resilient infrastructure and strategic planning.

Infrastructure and Resources

This assessment captured information related to health facilities' infrastructure and resources to understand quality of care, including barriers to care. The overarching impact of poor infrastructure, insufficient resources such as lack of information, education, and communication (IEC) materials and Behavior Change Communication (BCC) materials, and insufficient cleanliness further exacerbates the challenges faced by health facilities. In times of disaster, where communication is paramount, the absence of adequate infrastructure hinders the effective dissemination of crucial information, compromising public health awareness and community engagement.

Functional Toilets and Women's Toilets. The assessment found that 78% of health facilities had functional toilets. A total of 74% of community clinics (160 of 216) and 86% of UH&FWCs (54 of 63) reported having functional toilets. However, only 21% facilities reported having separate toilets for women. In total, 27% of UH&FWCs (17 of 63) reported availability of a women's toilet. Even in large sub-district-level hospitals, 20% of UHCs (2 of 10) reported lack of a separate women's toilet. Though community clinics are

designed as single-toilet facilities, 15% (32 of 216) reported having separate women's toilets.

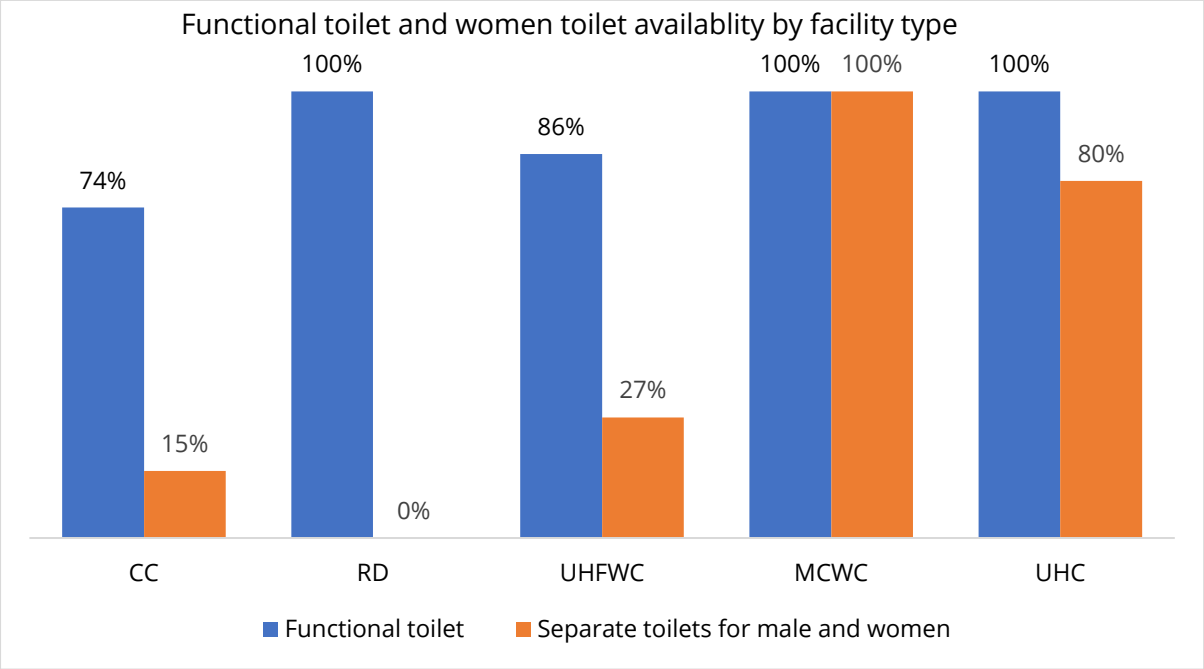

Figure 7: Percentage (%) of Functional Toilet Facilities

Citizen Charter and IEC Materials. Not all health facilities visibly displayed health services information. In total, 56% of facilities reported having information about reproductive health services displayed. The assessment revealed that 48% of community clinics (103 of 216) and 73% of UH&FWCs (46 of 63) reported display of reproductive health services information.

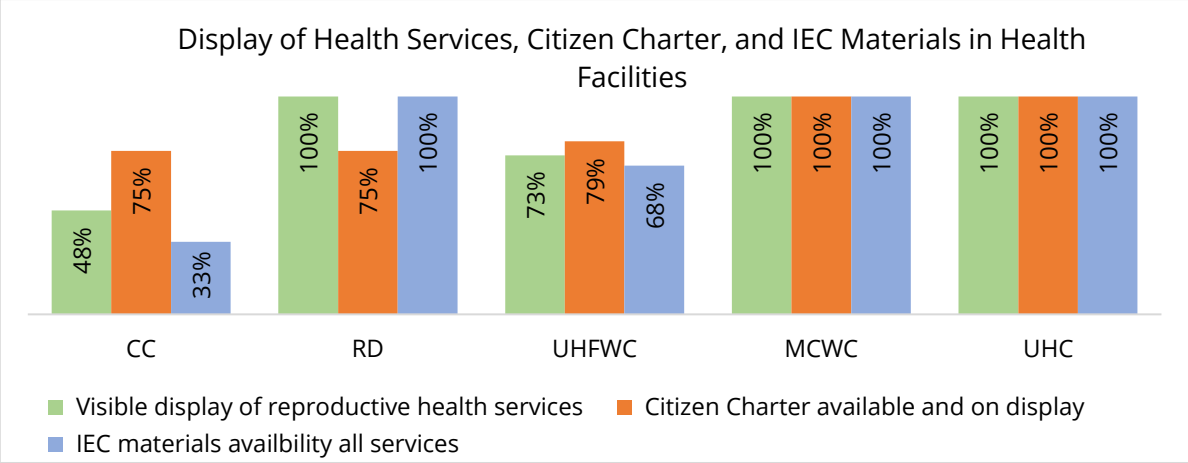

Figure 8: Citizen Charter and IEC Materials

Furthermore, the assessment found that 77% of surveyed health facilities had citizen charters displayed for clients. In total, 75% (162 of 216) of community clinics and 79% (50 of 63) UH&FWCs reported having citizen charters on display on the facility walls.

Results on IEC materials indicate that 44% of the surveyed health facilities displayed their performance data on the walls. In total, 33% (71 of 216) of community clinics and 68% (43 of 63) of UH&FWCs reported having visible IEC materials for the clients. However, all MCWCs and UHCs' service-related information displayed on the wall.

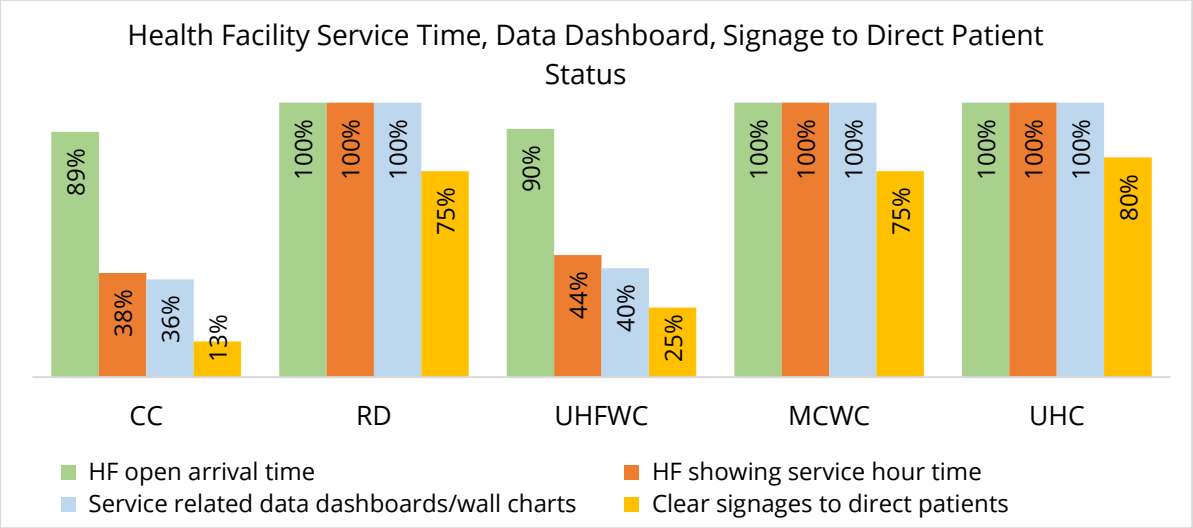

Figure 9: Service Time, Data Dashboard and Signage

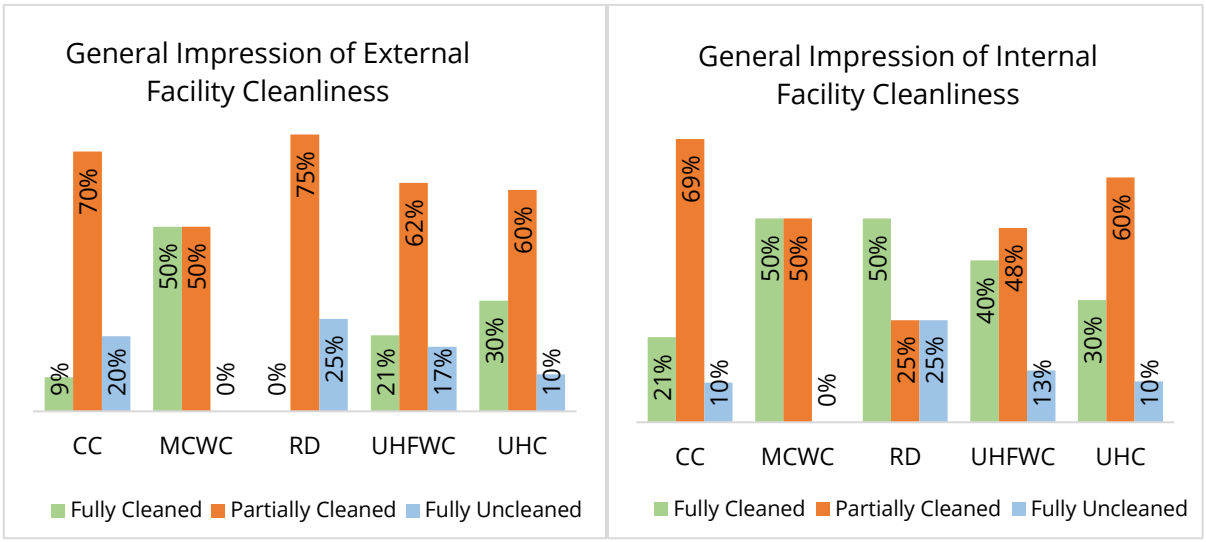

Figure 10: (left) External Facility Cleanliness; (right) Internal Facility Cleanliness

Regarding internal facility cleanliness, the assessment found that 26% of facilities were fully clean, 64% of facilities were partially clean, and 10% were fully unclean. In total, 10% of community clinics (22 of 216), 25% of rural dispensaries (1 of 4), and 13% of UH&FWCs (8 of 63) and 10% UHCs (1 of 10) reported having fully unclean internal facilities.

Power Source Availability at Health Facilities. Power source availability data shows that 78% of health facilities have functioning power sources and 54% of health facilities reported having a 24-hour power supply available. In total, 25% of MCWCs (1 of 4) and 80% of UHCs (8 of 10) reported having 24-hours power supplies. There were 60 community clinics and 5 UH&FWCs that reported lack of functional power sources at the time of assessment.

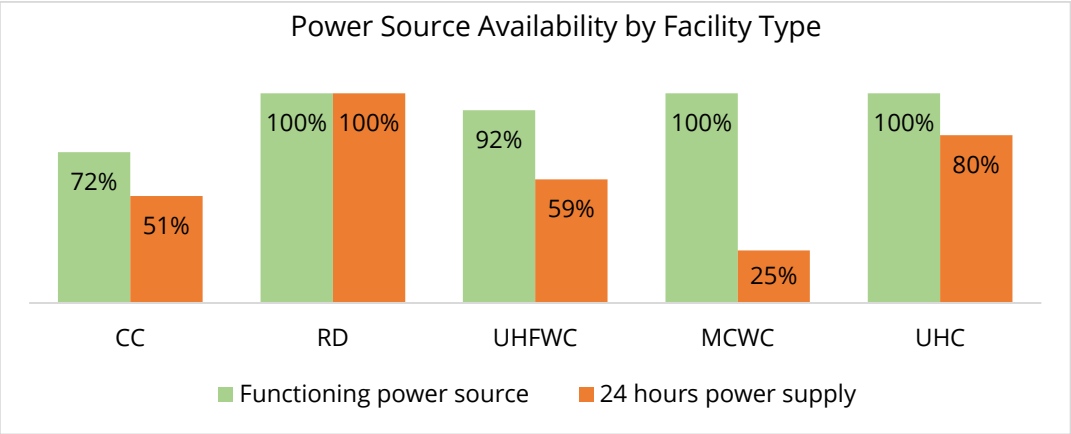

Figure 11: Power Source Availability by Facility Type

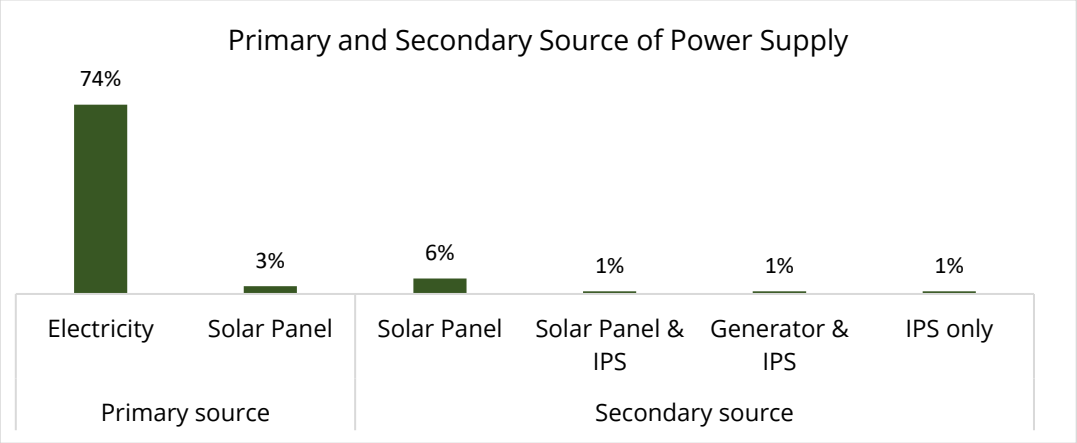

Figure 12: Power Supply Type

The primary source of power for most health facilities is electricity, although some (3%) facilities reported solar power as a primary source. Only 9% of facilities reported having secondary power sources. Solar is the most common secondary power source, as 6% of facilities reported having solar panels.

Water Source of Health Facilities. Availability of clean water was reported at 54% health facilities. In total, 44% of community clinics (95 of 216) reported having a source of clean water. Only 27% of UH&FWCs (17 of 63) reported having a clean water supply. Of the facilities surveyed, 68% reported dependence on piped water and 36% reported

dependence on tube well water. 11% facilities (32 facility) reported for having both pipe and tube well water sources.

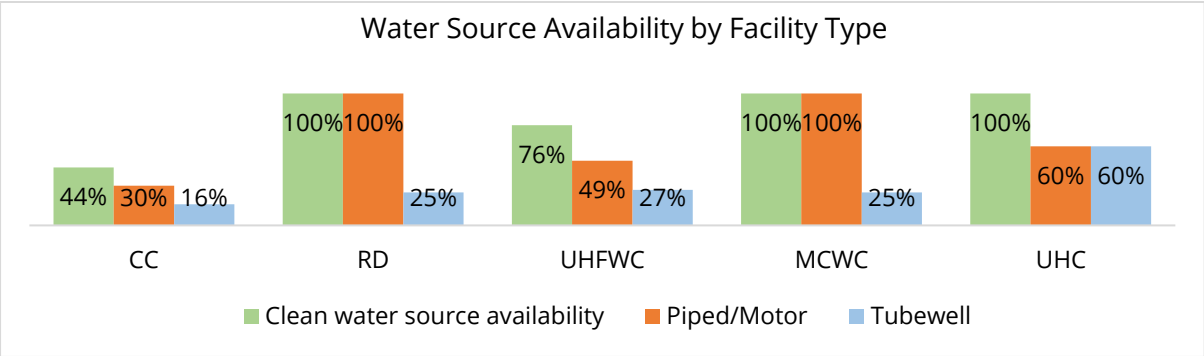

Figure 13: Functional Water Source and Type

Inadequate resources and poor infrastructure contribute to unsanitary conditions, posing additional health risks to both health care providers and patients. The importance of maintaining a clean and hygienic environment is paramount, especially in disaster-affected areas where the risk of waterborne diseases is heightened.

Facility Referral. Enumerators observed referral forms to be available at 81% of health facilities. Only 24% of UH&FWCs (15 of 63) reported having referral forms. All four rural dispensaries reported that they do not have referral forms, as referral processes are not audited there. A total of 67% of facilities reported having referral facility contact information with addresses.

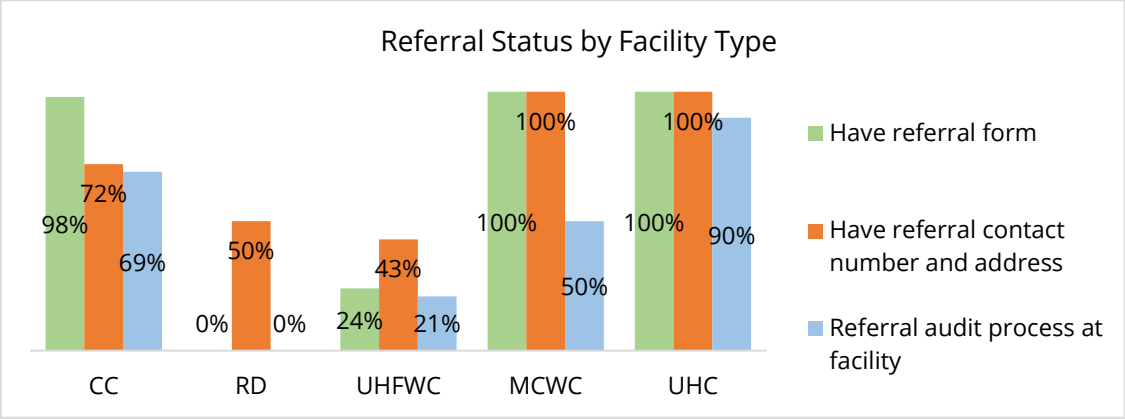

Figure 14: Functional Referral System

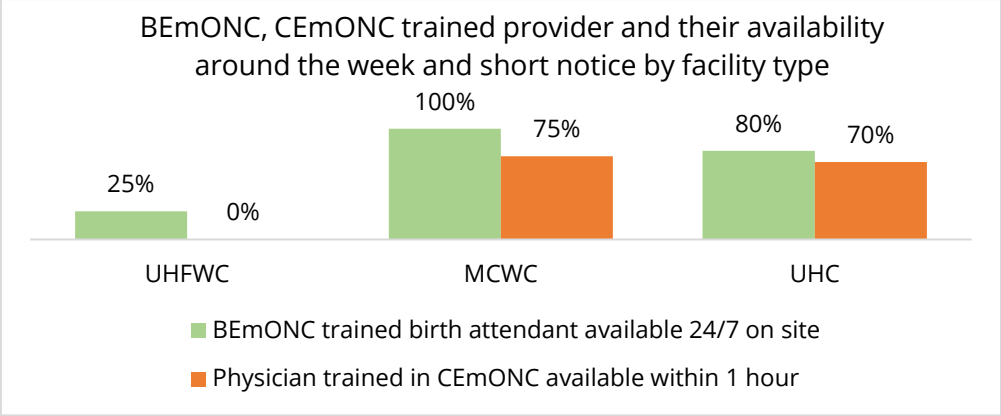

Figure 20: Functional Referral System

Human Resources

While this assessment does not directly capture staff vacancies within the surveyed facilities, insights from the USAID Assessment of Family Planning Service Delivery at Selected Public Health Facilities in Bangladesh Report[12] sheds light on the broader situation. According to the USAID assessment, 83% of sanctioned posts were reportedly filled by service providers, but only 64% were present during the visit.

The shortage of service providers has significant repercussions on the functionality, availability, and quality of health services, particularly in disaster-affected areas. The survey highlighted that around 6% of the service providers and community health workers often shoulder additional responsibilities for multiple health facilities like community clinics, UH&FWCs, and sometimes MCWCs, a circumstance exacerbated by staff shortages. This added burden not only strains the individual service providers, but also impacts the communities relying on these facilities for crucial health services.

Table 6: Number of Service Providers found in the Health Facilities

Service Providers	CC (n-216)	RD (n-4)	UHFWC (n-63)	MCWC (n-4)	UHC (n-10)
Non-specialist medical doctors				5	60
Specialist medical doctors					18
Registered counselors (HIV, FP, PAC, GBV, MNH)					
HMIS personnel/records assistants					4
Laboratory technicians					6
Pharmacists/dispensers				1	5
Nursing assistants/nursing aides				2	4

[12] USAID Assessment of Family Planning Service Delivery at Selected Public Health Facilities In Bangladesh. 2019. https://www.pathfinder.org/wp-content/uploads/2023/01/Assessment-of-FP-Service-Delivery-at-Selected-Public-Health-Facilities-in-Bangladesh-Jan2020-Report.pdf.

Service Providers	CC (n-216)	RD (n-4)	UHFWC (n-63)	MCWC (n-4)	UHC (n-10)
Clinical officers/assistant medical officers (Doctor)					26
Certified/registered nurses				6	133
Certified/registered midwives		1	1		25
Clinical officers/assistant medical officers (Non doctor)	1	5	51	10	26
Community health workers	1147	10	264		133
Social workers					
Aya	5	2	33	4	8
Guard			18	7	7

One coping mechanism adopted in the face of provider shortages is the practice of service providers offering their services on a rotating basis. This approach, while allowing for some coverage, introduces challenges in maintaining consistent and uninterrupted health care delivery. The inherent unpredictability of rotation-based service provision can lead to fluctuations in service availability, making it challenging for communities, especially in disaster-affected areas, to access timely and reliable health care.

Staff Trained in Last Two Years

This assessment revealed a pervasive issue that impedes the effective delivery of health services in disaster-affected areas: lack of capacity strengthening among skilled staff. These findings, as outlined in Table 8, underscore that nearly 50% of health care providers face shortages in essential training or refresher programs required for delivering optimal services.

Table 7: Staff Category and their Training Status

Training Name	Doctor trained (n-83)	Registered nurse (n-139)	Midwives (n-25)	Others (SACMO, FWV, FPI, FWA, HI, AHI, HA, CHCP, FPV, PPV) (n - 1697)
Short Acting Method (SAMs-Pills)	27	4	5	343
Short Acting Method (SAMs-Injectables)	34	3	3	282
Intrauterine Device (IUD) insertion and removal	15	1	1	34

Training Name	Doctor trained (n-83)	Registered nurse (n-139)	Midwives (n-25)	Others (SACMO, FWV, FPI, FWA, HI, AHI, HA, CHCP, FPV, PPV) (n - 1697)
Long-Acting Reversible Contraception (LARCs-Implant)	0	1	0	19
Tubal ligation	0	0	0	4
No scalpel vasectomy (NSV)	4	0	0	5
Postpartum Family Planning (PPFP)	41	9	0	167
Emergency contraception	14	0	0	21
Basic Emergency Obstetric and Newborn care (BEmONC)	12	0	8	77
Comprehensive Emergency Obstetric and Newborn Care (CEmONC)	11	0	0	22
Comprehensive Abortion Care (CAC) using medication abortion	0	0	0	0
Manual vacuum aspiration (MVA)	0	0	0	0
Postabortion Care (PAC)	8	0	0	0
Gender Based Violence (GBV)	23	6	0	46
Clinical management of rape (CMR)	0	0	0	0
Adolescent-responsive service provision	29	0	0	255
HIV testing services (HTS)	0	0	0	2
Cervical cancer screening	0	0	0	0
Cervical lesion treatment (e.g: LEEP-Loop Electrosurgical Excision Procedure)	0	0	0	0
Infection prevention and control (IPC)	32	0	0	123
Stocks management for medical supplies	0	0	0	179
MISP for SRH	10	2	0	28

Personal Coverage: BEmONC and CEmONC Service Availability. Community clinics do not have clinical service providers, and therefore do not provide BEmONC and CEmONC services. All the assessed rural dispensaries also reported lack of BEmONC-trained birth attendants available 24/7 on-site and lack of physician-trained CEmONC available within one hour. Even 25% of MCWCs (1 of 4) and 30% of UHCs (3 of 10) reported that they could not provide a CEmONC-trained physician within one hour. Furthermore, 20% of UHCs (2 of 10) reported that they do not have 24/7 BEmONC-trained birth attendant available.

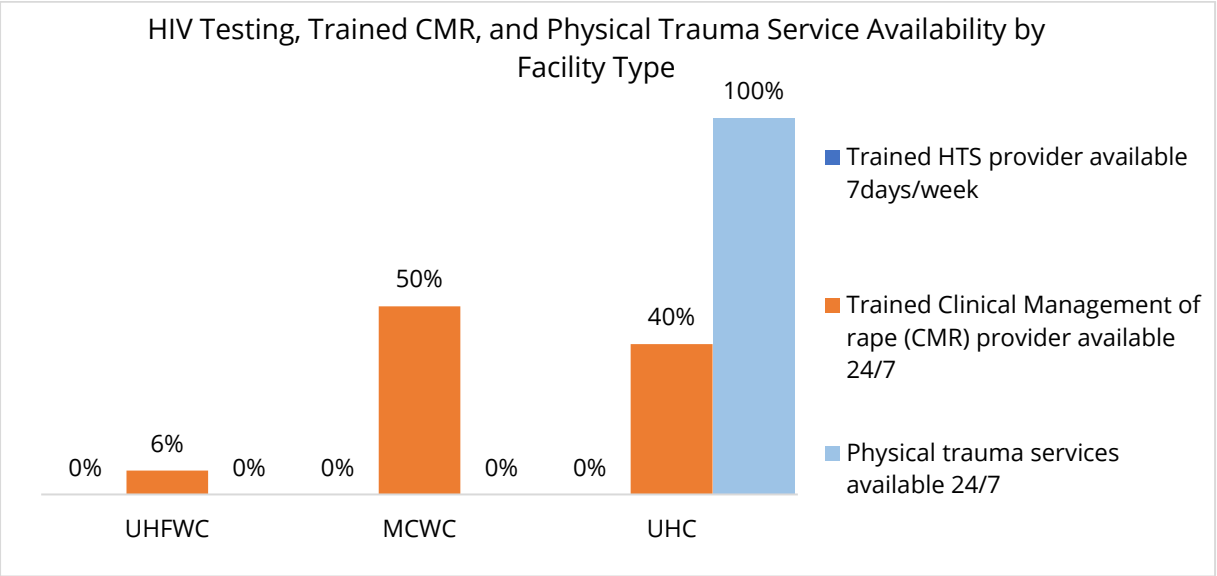

Figure 15: Trained providers for BEmONC and CEmONC

Abortion Care Service Availability around the Week. Manual Vacuum Aspiration **(**MVA) services are available in MCWCs and UHCs. At the time of assessment, it was found that 43% of MCWCs and UHCs (6 of 14) have a trained MVA service provider available throughout the week. Availability of a trained medical abortion provider throughout the week was reported at 50% of MCWCs and UHCs (7 of 14). The availability of a Short Acting Method (SAM)-trained provider throughout the week was reported at 64% of MCWCs and UHCs (9 of 14) reported that they have such services. Among the eligible 14 MCWCs and UHCs, 29% reported having a provider trained in long-acting reversible contraceptives.

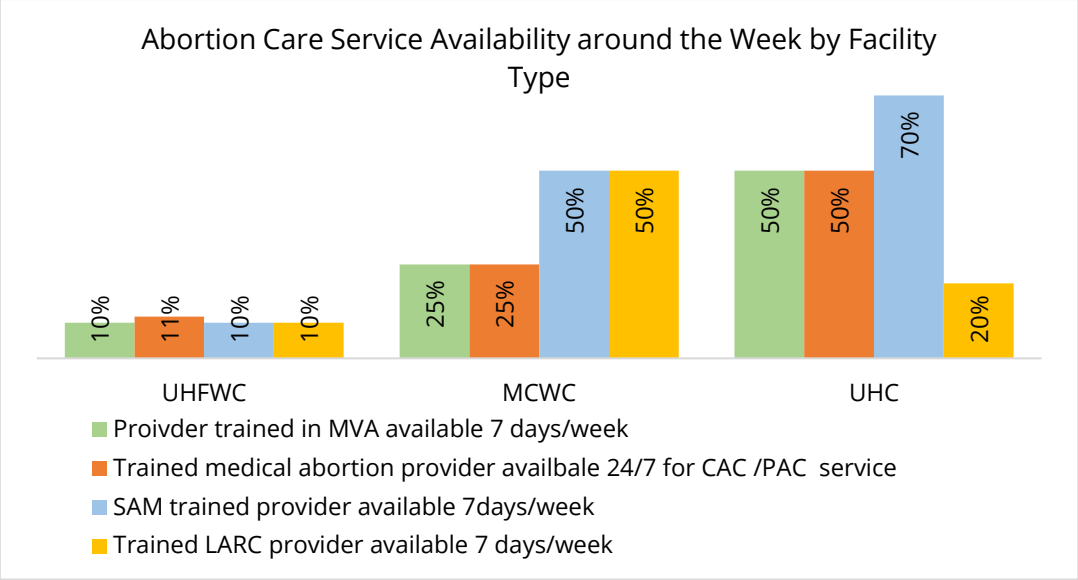

Figure 16: Abortion Care Services by Facility

HIV Testing, Trained CMR, and Physical Trauma Service Availability. The detection number for HIV patients was less than 10,000 in 2023. Therefore, HIV treatment was not available at assessed health facilities. Although district hospitals offer some HIV treatment, health facilities below the district-hospital-level provides counseling and refer patients to district hospitals or medical college service facilities.

Clinical management of rape services are provided in MCWCs and UHCs. Among the 14 MCWCs and UHCs, 29% (4 of 14) reported having clinical management of rape services. Physical trauma services are found in the sub-district large hospital UHCs. All 10 UHCs reported having physical trauma services.

Trained Adolescent Service Provider Availability. Community Clinics provide services 6 days a week. Rural dispensaries also do not provide the services throughout the week. Generally, MCWCs and UHCs provide services 7 days a week. This assessment found that 50% of MCWCs and UHCs (7 of 14) have such services. Among UH&FWCs, 16% (10 of 63) reported having 24/7 adolescent and youth services.

The significance of capacity building in the health care sector cannot be overstated, especially in regions prone to disasters. The ability of health care providers to respond effectively to the dynamic challenges presented by disasters relies heavily on their skills, knowledge, and preparedness. Capacity strengthening initiatives, encompassing training, refresher courses, and skill enhancement programs, are pivotal for ensuring a skilled workforce capable of delivering high-quality health services.

Emergency Preparedness

In evaluating the disaster preparedness of health facilities, various criteria were applied. Facilities were classified into three categories: high, medium, and low. High-category facilities demonstrated comprehensive preparedness for emergencies. Medium-category facilities exhibited partial or incomplete preparation—capable of responding, but with potential service disruptions. Low-category facilities demonstrated complete lack of preparedness, rendering them unable to respond or adapt effectively.

Caseload Management (1.5%). Among challenges posed by disasters, only 2% of surveyed health facilities showcased a robust capacity for managing caseloads during crisis. Notably, 40% of UHCs (4 of 10) and 25% (1 of 4) of MCWCs reported elevated capabilities in this critical aspect.

Emergency Backup Generator. Just 3% of health facilities demonstrated sufficient provisions for emergency backup generators to last two weeks. Disparities among facility types were apparent, with 5% (3 of 63) of UH&FWCs, 25% (1 of 4) of MCWCs, and 40% (4 of 10) of UHCs reporting preparedness in this regard.

Energy Use Protocol: Written guidelines for efficient energy usage were found to be a rarity, with only 1% of health facilities possessing such protocols. Of note, 20% of UHCs (2 of 10) reported having some form of written instruction in this context.

Stocking SRH Commodities. The provisioning of SRH commodities for a two-month duration revealed a mixed landscape. While 30% of health facilities demonstrated readiness, 13% exhibited only partial preparedness. Alarmingly, 47% reported an unprepared status in this critical area. SRH commodities targeted by the assessment included:

- Combined oral contraceptive pills
- Contraceptive implant (at least one type)
- Copper IUD
- MgSO4
- Syntocin/Pitocin – 10 IU injectable
- Misoprostol – 200 mcg tablets
- Amoxicillin 125g/250g
- Zinc ORS sachet
- Post-exposure prophylaxis (PEP) for HIV (e.g: tenofovir)
- DPT vaccine

- Tetanus vaccine

Personal Protective Equipment. The availability of full personal protective equipment for a two-week period was observed in just 4% of health facilities. Facility-type nuances emerged, with 2% (1 of 63) of UHFWCs, 50% (2 of 4) of MCWCs, and 60% (6 of 10) of UHCs reporting possession of such protective gear.

Backup Communication Plan. A robust backup communication plan was a rarity, evident in only 1% of health facilities.

Contingency Plan for Personnel Evacuation. The existence of a contingency plan for the safe and efficient evacuation of personnel was reported by only 1% of health facilities.

Training on Exit and Evacuation. Staff training on exit and evacuation during emergency situations emerged as a critical gap, with only 1% of health facilities reporting such preparedness.

Transfer of Critical Equipment and Medical Supplies. Just 2% of health facilities demonstrated foresight with a written plan for the transfer of critical equipment and medical supplies to alternate facilities.

Water Monitoring (Drinking and Washing). Concerningly, only 3% of facilities adhered to a written protocol for the quality monitoring of drinking and washing water. These findings underscore both the commendable efforts and significant gaps in the disaster preparedness landscape of health facilities. It is imperative to address these gaps systematically, acknowledging the nuances across facility types, to bolster overall resilience in the face of unforeseen disasters.

High - well-prepared; able to respond
Medium - partial or incomplete preparation; able to respond, but service availability and/or quality will be affected
Low - unprepared; unable to respond/adapt

Preparedness Indicator / Facility Type	CC			RD			UHFWC			MCWC			UHC		
	High	Medium	Low	High	Medium	Low	High	Medium	Low	High	Medium	Low	High	Medium	Low
Written emergency staffing plan that ensures 24/7 coverage of essential services at 1.5% normal case load	0%	4%	96%	0%	0%	100%	0%	3%	97%	25%	0%	75%	40%	30%	30%
Emergency backup generator that is able to cover at least all critical service areas and equipment, including two weeks worth of fuel	0%	1%	99%	0%	0%	100%	5%	6%	89%	25%	25%	50%	40%	40%	20%
Written emergency energy use protocols, including hours of use for each piece of equipment and electric lights by department	0%	1%	99%	0%	0%	100%	0%	3%	97%	0%	50%	50%	20%	50%	30%
Two month supply of all essential commodities for SRH (Sexual Reproductive Health), stored with appropriate temperature and moisture control	28%	13%	58%	75%	0%	25%	27%	27%	46%	25%	25%	50%	70%	30%	0%
Full personal protective equipment, (waterproof safety boots, aprons, goggles, gloves and masks) sufficient for all staff for	2%	31%	67%	0%	0%	100%	2%	25%	73%	50%	25%	25%	60%	30%	10%
Written emergency staff access and sleeping/rest quarter plans in case prohibiting commuting to homes	2%	31%	67%	0%	25%	75%	3%	29%	68%	25%	50%	25%	70%	20%	10%
Written emergency staff access and sleeping/rest quarter plans for: civil unrest, road disruption or destruction, extreme weather prohibiting commuting to homes	0%	3%	96%	75%	0%	25%	22%	8%	70%	25%	25%	50%	60%	40%	0%
Back up communication plan for contacting staff in the event of disruption of normal telecommunications	1%	1%	98%	0%	0%	100%	2%	3%	95%	0%	50%	50%	10%	50%	40%
Have a contingency plan in place for safe and efficient personnel evacuation (including transfer of in-patient clients)	0%	1%	99%	0%	0%	100%	2%	2%	97%	0%	25%	75%	0%	30%	70%
All staff trained on exit and evacuation routes that are clearly marked and free of obstacles to enable emergency evacuation	2%	4%	94%	0%	0%	100%	0%	3%	97%	0%	0%	100%	0%	50%	50%
Written plan and protocols to transfer critical equipment and medical supplies to another health care facility or to a secure storage	1%	1%	98%	0%	0%	100%	3%	5%	92%	0%	0%	100%	10%	40%	50%
Written quality monitoring plan for drinking water, and washing water	2%	4%	94%	0%	0%	100%	3%	8%	89%	25%	25%	50%	20%	40%	40%
Written plan for emergency maintenance and restoration of waste management systems	4%	10%	86%	0%	0%	100%	10%	13%	78%	25%	25%	50%	20%	50%	30%
Verify water safety conditions and riskassessments to map water resources and clean water supplies for the facility	0%	2%	98%	0%	0%	100%	2%	11%	87%	0%	25%	75%	0%	60%	40%
Written protocols for communicating shock-specific and/or shock-related health risks to catchment area	0%	2%	98%	0%	0%	100%	2%	3%	95%	0%	25%	75%	0%	40%	60%
Written protocols for secure storage for hazardous chemicals to prevent release or leakage during a flood event	1%	0%	99%	0%	0%	100%	5%	2%	94%	0%	0%	100%	10%	30%	60%
Anti-mosquito breeding measures in place, including safe insecticide use protocols	0%	0%	100%	0%	0%	100%	2%	2%	97%	0%	0%	100%	10%	40%	50%
Have a floodwater infiltration control system to reduce risk of facility flooding	0%	2%	97%	0%	0%	100%	2%	2%	97%	0%	0%	100%	0%	30%	70%
Power supplies and equipment are all stored/housed above ground level	3%	4%	93%	0%	0%	100%	3%	10%	87%	0%	50%	50%	0%	60%	40%

Figure 17: Health Facilities' Preparedness Score

Facility Vulnerability Measuring

Facility Type	Sharing resource and supplies across facilities	Regular inspection structural deterioration	Evaluates structural and non-structural condition latest disaster	Direct communication with meteorological services including early alert	Regularly conduct community disaster planning	Has post-crisis recovery plan	Emptying latrines before flood	Rainwater harvesting year round	Shading devices (trees or other architectural feature)	Back flow valves installed toilets, waste tanks, and other plumbing infrastructure
CC	24%	36%	23%	1%	18%	1%	1%	0%	27%	2%
RD	50%	50%	25%	0%	50%	0%	0%	0%	50%	0%
UHFWC	40%	32%	25%	2%	16%	0%	5%	0%	41%	6%
MCWC	75%	75%	25%	0%	25%	0%	0%	0%	50%	0%
UHC	80%	80%	70%	30%	50%	30%	20%	10%	70%	10%

Figure 18: Other Vulnerability Measurement Index 1

The assessment revealed that resource and supply sharing practices are prevalent across all categories of health facilities. Approximately 30% of surveyed health facilities

reported actively engaging in resource and supply sharing. Specifically, within community clinics, 24% (52 of 216) reported such collaborative practices, with sub-district level UHC demonstrating a commendable trend of sharing resources with their lower-tier health facilities.

Facility Type	Risk reduction , preparedness planning, and implementation with local mgt. committee	Routinely checking on data compilation for reports in place	Data compiling and reporting training received last 2 years	Submitted 3 most recent report on FP	Submitted 3 most recent report on MNCH	Submitted 3 most recent report on GVB	Submitted 3 most recent report on Reportable diseases	Dedicated annual budget for emergency preparedness	Written protocols staff psycho-social support during crises
CC	20%	76%	52%	93%	98%	29%	73%	6%	0%
RD	50%	100%	50%	100%	100%	75%	100%	0%	0%
UHFWC	25%	84%	33%	97%	98%	40%	86%	0%	3%
MCWC	75%	100%	75%	100%	100%	50%	100%	0%	0%
UHC	90%	100%	90%	90%	100%	70%	100%	30%	40%

Figure 19: Other Vulnerability Measurement Index 2

When assessing the regular inspection of structural deterioration, findings indicate that 37% of the surveyed facilities undertake this practice routinely. Notably, 36% of community clinics (78 of 216) and 32% of UH&FWCs (20 of 63) participated in regular inspections. However, the assessment reveals a comparatively lower commitment to assessing structural and non-structural damage after a disaster, with only 25% of the surveyed facilities conducting post-disaster structural evaluations.

In terms of meteorological services collaboration, 30% of UHCs (3 of 10) reported having connections with the meteorological department for early alerts. Some community clinics and UH&FWCs also indicated similar connections, contributing to an overall 2% of surveyed health facilities having meteorological department affiliations.

The study brought to light a significant gap in post-crisis recovery planning, particularly at the rural dispensaries, UH&FWCs, and MCWCs. Only 30% of UHCs (3 of 10) reported having active post-recovery disaster plans. Among the 216 community clinics, only 2 reported having post-recovery plans. This amounts to just 2% of surveyed health facilities with such preparedness.

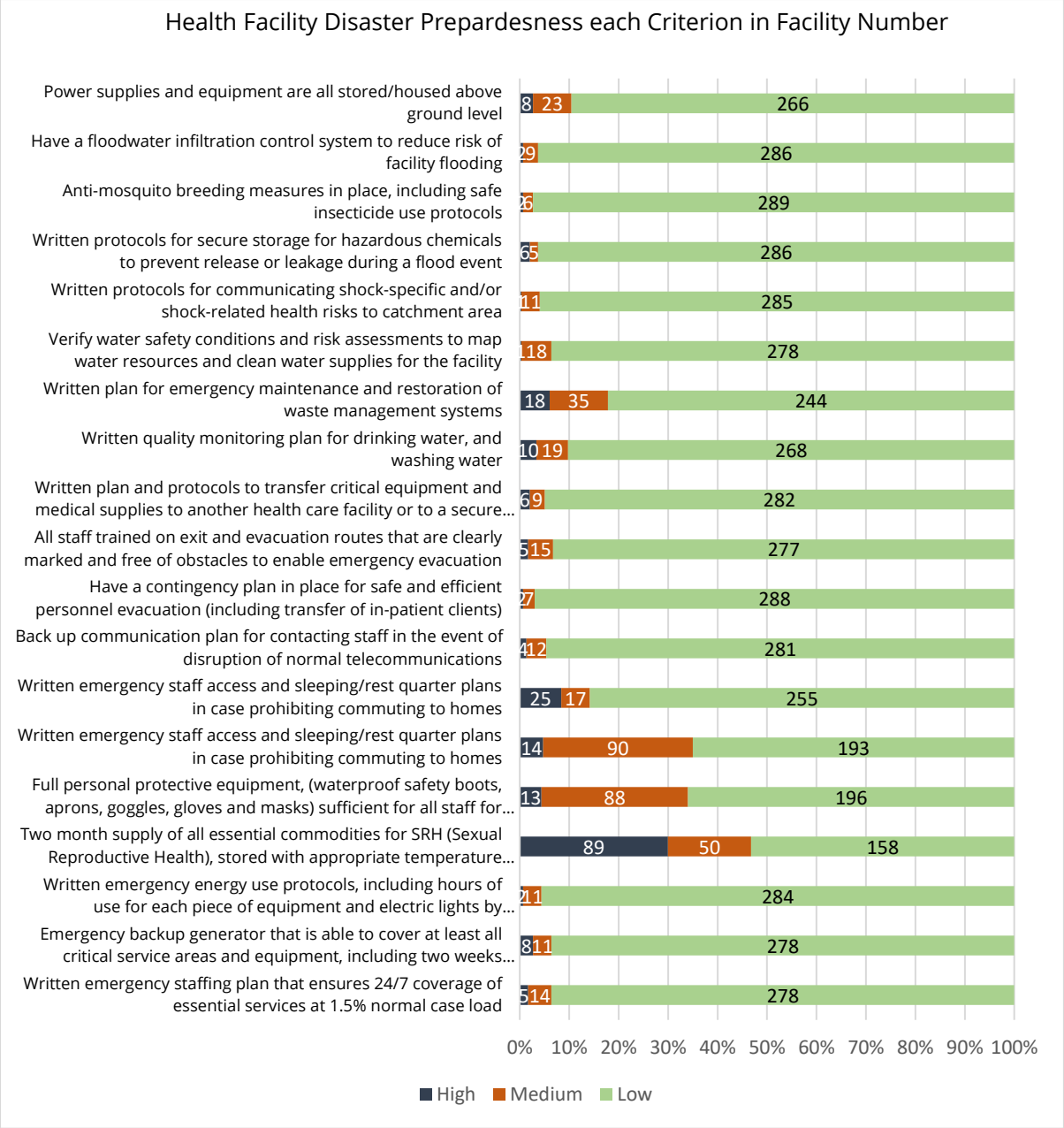

Figure 20: Overall Disaster Preparedness by Health Facility

Notably, the practice of emptying latrines before flood times is not widespread, as only 2% of health facilities among the 297 surveyed reported adhering to this practice. Similarly, rainwater storage is not a common practice at health facility levels, with only one UHC reporting such storage. Regarding shading devices, 32% of facilities reported having them on their premises. In contrast, only 3% of health facilities reported having structures in place to protect against external water pressure inflow. These findings shed light on areas of strength and opportunities for improvement in disaster preparedness across various health facility categories.

Governance and Management

The data indicates that 25% of health facilities (74 of 297) engage in disaster planning and execution in collaboration with the local management committee.

Regarding routine data checking for report preparation, a commendable 79% of facilities exhibit such practices. However, when it comes to training for data compilation and reporting, only 50% of health facilities have received training in the last two years, with at least one or multiple staff members benefitting from such training.

Concerning financial preparedness, 17 facilities have reported having a dedicated emergency preparedness budget. Specifically, 14 out of 216 community clinics reported having an annual budget earmarked for emergency preparedness. In total, 6% of health facilities claim to have a dedicated annual budget for facility disaster preparedness. Additionally, 2% of health facilities reported having some form of written protocol for providing psychosocial support to staff during a crisis. These findings highlight both areas of strength and opportunities for improvement in disaster preparedness and resource allocation across various health facilities.

Health Facility's Approach to Community on Disaster Health Messaging and Backup Communication. In total, 12% of health facilities out of (36 of 297) reported that they routinely provide education on climate-stressor-related health risks and necessary measures. Only 7% health facilities reported having communication systems that are functional during emergencies and able to reach the district authority.

Facility Type	Routinely provides community health education on risks and health protective behaviors re: common climate stressors (e.g. heat events, severe storms, rain/flood events)	Has information and communication systems safely secured with backup arrangements (e.g.: satellite phone) to ensure communication with district health authorities during acute crisis	Has written communication protocols for conveying critical information to the community during public health emergencies
CC	8%	6%	6%
RD	25%	0%	0%
UHFWC	13%	3%	6%
MCWC	50%	25%	25%
UHC	60%	50%	50%

Figure 21: Community Health Education by Facility Type

DISCUSSION AND CONCLUSION

This health facility assessment provides a comprehensive overview of the disaster preparedness and health care landscape in the surveyed areas. While certain aspects demonstrate commendable practices and resilience, significant gaps and challenges persist across various domains.

Population Burden. This study identifies the commendable effort of over one-third of community clinics catering to 10 or more villages, showcasing a commitment to serving diverse populations. This highlights the dedication of health care providers in reaching out to communities in need. The concentration of 50% of community clinics (108 of 216) catering to populations between 8,000 to 20,000 reveals an opportunity for strategic planning and resource allocation. This data provides valuable insights for optimizing health care delivery in alignment with population dynamics.

Service Availability. The widespread availability of antenatal care and postnatal care services indicate a strong foundation in maternal and child health. This reflects a positive aspect of health care accessibility, showcasing the commitment to essential services for vulnerable populations. The identified gaps in maternal health, child health and FP services, specifically in short-acting methods and injectables, present an opportunity for targeted improvements. Addressing these deficiencies can enhance the comprehensive availability of family planning services, contributing to better reproductive health care outcomes. The assessment revealed limitations in the provision of essential health services post-disaster, particularly in areas like menstrual regulation, family planning, HIV/STI services, maternal, newborn, and child health, gender-based violence support, and adolescent and youth services. Focused interventions and resource allocations are crucial to addressing these gaps and ensuring the continuity of critical health services during and after disasters.

Facility Out of Service in Disaster. The recognition of facility closures during recent floods is a crucial acknowledgment of the challenges posed by disasters. This awareness sets the stage for strategic planning and infrastructure improvements, emphasizing the need for disaster-resilient facilities. The closure data presents an opportunity for proactive disaster preparedness measures. Investing in infrastructure and planning for strategic locations can mitigate the impact of facility closures during disasters, ensuring continuous care.

Infrastructure and Resources. The reported functionality of 78% of health facility toilets is a positive aspect, indicating a baseline level of infrastructure reliability. This is a foundational element for maintaining hygienic conditions in health care settings.

Identified challenges in cleanliness, power source availability, and water sources underscore the need for comprehensive improvements. This presents an opportunity for targeted interventions, such as infrastructure upgrades and resource provision, to enhance overall facility resilience.

Human Resource and Training. The presence of 83% of sanctioned positions being filled demonstrates a commitment to maintaining a qualified workforce. This highlights the resilience of the health care system in coping with staff shortages to a certain extent. The reported lack of essential training for 50% of health care providers indicates an opportunity for capacity strengthening. Implementing targeted training programs can bridge gaps, ensuring a skilled and well-prepared health care workforce.

Disaster Preparedness. The study's identification of facilities showcasing robust caseload management during crises, particularly 40% of UHCs (4 of 10) and 25% of MCWCs (1 of 4), highlights existing strengths in certain facilities. Recognizing and building upon these strengths is crucial for enhancing overall disaster preparedness. The gaps in emergency backup generators, energy use protocols, and stocking of essential SRH commodities reveal opportunities for improvement. Implementing comprehensive disaster preparedness strategies, including infrastructure enhancements and resource provisioning, can address these vulnerabilities.

Disaster Planning Collaboration. The engagement of 25% of surveyed health facilities in disaster planning with local management committees is a positive indicator of collaborative efforts. There are rooms to enhance collaboration further, potentially through knowledge-sharing platforms or joint training initiatives.

Routine Data Checking and Reporting. The high prevalence (79%) of routine data checking for report preparation is encouraging for maintaining data integrity. Further investment in training, considering only 50% of facilities received training in the last two years, can enhance data compilation and reporting practices.

Financial Preparedness. Only 17 facilities reported having a dedicated emergency preparedness budget, and 6% claimed an annual budget for disaster preparedness. Enhancing budget allocations and ensuring streamlined financial protocols can contribute to better overall preparedness.

Psychosocial Support Protocol. While limited (2%), the presence of a written protocol for psychosocial support during crises signifies a recognition of the importance of mental health. Further investment in psychosocial support training and resources can better address the well-being of health care staff during emergencies.

Conclusion

In conclusion, this health facility assessment has sheds light on both promising practices and areas requiring urgent attention. While very few health facilities at district headquarters level demonstrate commendable disaster preparedness, the findings underscore the need for systematic improvements across multiple dimensions. Addressing these challenges will contribute to building a more resilient and responsive health care system, capable of providing essential services even in the face of disasters. The recommendations provided within each thematic area can guide future interventions and policy decisions to enhance disaster preparedness and response in the surveyed regions. The collaboration between health facilities, local management committees, and relevant authorities is pivotal for achieving sustained improvements in health care delivery and disaster resilience.

Pathfinder International is driven by the conviction that all people, regardless of where they live, have the right to decide whether and when to have children, to exist free from fear and stigma, and to lead the lives they choose. As a global health organization with locally led, community-driven programs, we support women to make their own reproductive health decisions. We work with local partners to advance contraceptive services, comprehensive abortion care, and young people's sexual and reproductive rights in communities around the world—including those affected by poverty, conflict, climate change, and natural disasters. Taken together, our programs enable millions of people to choose their own paths forward.

Suggested citation
Pathfinder International. *Health Facility Assessment: Disaster Preparedness and Service Readiness Assessment of the Health Facilities in the Climate Vulnerable North-Eastern Areas in Bangladesh*. Dhaka, Bangladesh: Pathfinder International, 2024.

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