

MOMENTUM

Country and Global Leadership



Technical Brief

ENSURING THE DELIVERY OF ESSENTIAL HEALTH SERVICES DURING THE COVID-19 PANDEMIC:

An Infection Prevention and Control Readiness Response in Bangladesh



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BACKGROUND & GOAL

The COVID-19 pandemic significantly disrupted health systems, creating a need to assess both assets and gaps to prioritize immediate infection prevention and control (IPC) risks and health care facilities' needs. In August of 2020, the United States Agency for International Development (USAID) funded [MOMENTUM Country and Global Leadership](#) project began implementing an infection prevention and control (IPC) COVID-19 activity in Bangladesh. The goal of the program was to provide rapid, needs-based support focused on water, sanitation, and hygiene (WASH) and IPC readiness in high volume facilities delivering reproductive, maternal, newborn, and child health services by leveraging existing MOMENTUM operational platforms and coordinating with district health offices. It aimed to ensure that delivery of essential health services was not adversely affected by the COVID-19 pandemic and to improve the quality of care among the 15 targeted health care facilities (HCFs) in Barishal division of Bangladesh.¹

MOMENTUM WASH/IPC Bangladesh Country Program Overview

Project Start Date: August 2020

Project End date: September 2021

Geographic focus: six sub-districts of Barishal, coastal division of Bangladesh

Project Scope: eight union health and family welfare centers (UHFWC), six upazila health complexes (UHCs), and one district hospital

KEY TAKEAWAYS:

- **Health Care Facility infection prevention scores increased by an average of 41% from baseline to endline.** Staff behavior compliance with critical hygiene and IPC behaviors also improved. Results show that implementing minimal package of support can lead to dramatic improvements in HCF infection prevention readiness within just 12 months.
- Collecting detailed infection prevention readiness data using a common, publicly available **digital data collection platform allowed MOMENTUM, government and HCF staff to collectively identify and prioritize HCF needs and evaluate progress efficiently and effectively.** While the platform used for (mWater/Solstice) was a helpful stop-gap system, integration of detailed WASH and IPC data within national HMIS would be more efficient for sustained reporting and use of this critical data.
- In the context of the COVID-19 pandemic, **it was beneficial to have QI training curriculum and coaching systems prepared for both in-person and remote sessions** to react to the fluctuating outbreak reality without interrupting support and coordination among HCF staff and district health offices.

¹ Although MOMENTUM originally partnered with 17 HCFs in Barishal district, two of the 17 HCFs (Chakhar UHFWC and Char Kalekha UHFWC) were removed from endline results because they were closed by the Ministry of Health for major renovations after the MOMENTUM assessment showed significant needs from damage sustained to the HCFs prior to the pandemic.

PROGRAM APPROACH AND ACTIVITIES

MOMENTUM implemented COVID-19 response activities in two phases that were designed to first address immediate HCF infrastructure needs and supply shortages that were inhibiting HCF IPC readiness and second to address behavior compliance and systems challenges that could best be addressed once infrastructure and supplies problems were addressed.

Phase 1 (rapid response): In collaboration with district health offices, MOMENTUM assessed and prioritized the immediate IPC risks and needs of HCFs; targeting COVID-19 specific priority actions and support activities to quickly improve access to basic WASH services and IPC practices, provide sufficient stocks of IPC supplies, and collect critical data needed to identify risks and allocate resources to make priority improvements.

Phase 2 (strengthen and maintain IPC standards through quality improvement support): Building off the initial IPC improvements, MOMENTUM transitioned to strengthen the capacity of sub-national governments and HCF staff to continue and sustain IPC quality improvements; establish an IPC culture, and to deploy advanced IPC measures as part of their COVID-19 preparedness and response plans.

PHASE 1 (RAPID RESPONSE):

The MOMENTUM Bangladesh COVID-19 response program conducted an initial health facility assessment in October 2020 in collaboration with district health offices. HCF managers and IPC focal points contributed to initial health facility assessments. While MOMENTUM hoped to use pre-developed national assessment tools and reporting systems to complete the assessment, no relevant tools and data were available. Therefore, using the digital data collection and dissemination platform mWater/Solstice, MOMENTUM created a comprehensive assessment tool based on the World Health Organization's (WHO) [WASH FIT](#) and [IPCAF](#) tools, the [Clean Clinic Approach](#) Assessment Tool, and emerging indicators used in the early days of the COVID-19 pandemic response.

The assessment identified existing IPC/WASH infrastructure, supply, and training needs, which were used to develop project interventions. A complete list of detailed results for HCFs and wards is available on a public-facing, interactive [dashboard](#). Based on the assessment findings, MOMENTUM worked with district health offices, HCF managers, and IPC focal points to prioritize immediate infrastructure and supply needs. MOMENTUM procured prioritized IPC and personal protective equipment (PPE) commodities for the 15 facilities and rehabilitated WASH infrastructure at targeted facilities, including extending/rehabilitating WASH infrastructure in designated COVID-19 triage areas at six UHCs and at the Barishal district hospital.

MOMENTUM also introduced all 15 HCFs and the district health office to the new global guidance document: [Essential Supply List For Infection Prevention and Control in Health Care Facilities](#), which provides global operational guidance on all the essential supplies for HCFs to maintain basic standard IPC precautions in all health care service levels and contexts. This list can also aid HCF staff, administrators, and government officials at local and national levels to better understand which IPC supplies should be prioritized to maintain minimal IPC readiness. This “essential list” provides guidance to inform budgeting, procurement, and planning decisions that impact IPC readiness of the health system and at health facility levels.

PHASE 2 (STRENGTHEN AND MAINTAIN IPC STANDARDS THROUGH QUALITY IMPROVEMENT SUPPORT)

After assessing and addressing the critical WASH infrastructure and IPC supply needs of each partner facility, MOMENTUM transitioned to focus on strengthening the capacity of doctors, nurses, cleaners, drivers, and other facility staff and providing supportive supervision and mentorship in quality improvement (QI). The program first created a trainer cohort comprised of 14 doctors and 14 nurses by organizing a training of trainers on IPC in healthcare settings through a one-day training program. The new trainers then supported 15 health facilities to receive on-the-job IPC training and support using the approach outlined in Figure 1.



At sub-district level hospital, Staff nurse washing her hands at the Integrated Management of Childhood Illness (IMCI) corner which was installed by the MOMENTUM WASH/IPC project

FIGURE 1: IPC/WASH READINESS IMPROVEMENT PROGRAM APPROACH

| Phase 1 | | Phase 2 | | |
|---|---|---|---|--|
| Support | Procurement and civil works | Moderate virtual platforms | Offer Physical and Virtual QI Training | Facilitate Data Reviews |
| <ul style="list-style-type: none"> Support review of assessment data, in partnership with facility hubs Support in strengths, weaknesses, opportunities, and threats (SWOT) analysis for QI Organized by facility networks | <ul style="list-style-type: none"> Procure needed IPC supplies Identified facilities to provide support in renovation of waste management and installation of triage and handwashing stations | <ul style="list-style-type: none"> Virtual trainings on zoom WhatsApp groups to support: <ul style="list-style-type: none"> Peer learning Sharing ideas As needed performance support | <ul style="list-style-type: none"> Offer QI coach training for up to 14 participants Build capacity on IPC in healthcare settings for all staff | <ul style="list-style-type: none"> Facilitate monthly reviews of quality indicators and QI efforts Facilitate in-person coaching and mentorship to lower performing facilities |

A total of 346 staff were trained through 45 on-the-job training sessions tailored to staff depending on their roles (199 male and 147 female participants). Staff from all service tiers attended the training. Training was also tailored for drivers and cleaners. Four QI aims (appropriate use of PPE, COVID-19 screening, hand hygiene compliance, and cleaning procedure compliance) were introduced during the trainings and were subsequently monitored by a designated QI focal person from existing QI committees, along with ongoing virtual QI coaching.

There were two QI coaches from each of the seven partner hospitals, comprised of 12 doctors, one nurse, and one technician. The designated QI focal person routinely observed key IPC practices linked to the four QI aims to identify quality gaps that needed to be addressed: HCF staff adherence with mask protocol, appropriate screening of arriving individuals (patients, visitors, or staff) for coronavirus, HCF staff adherence

with hand hygiene protocol, and cleaning routines where high-touch surfaces were cleaned. Data were reviewed by QI committees and shared with the rest of the facility staff to encourage continual improvement in IPC practices.

RESULTS AND FINDINGS

WASH/IPC READINESS

An endline evaluation was conducted in May 2021 to assess the extent to which the WASH/IPC readiness and key behaviors had changed within supported HCFs. The assessment showed increased IPC readiness among the 15 facilities. As displayed in Figure 2, the overall HCF IPC readiness assessment scores increased from an average of 32% at baseline assessment to 73% at endline.² HCF IPC readiness for COVID-19 specific standards also improved across HCFs. Outpatient wards saw the most significant improvements with an average score increasing from 49% to 90% at endline, followed by the outpatient ward with the average score increasing from 43% to 86% at endline. Labor and delivery wards had the highest average baseline score (61%), but improved to an average score of 88% after MOMENTUM assistance.

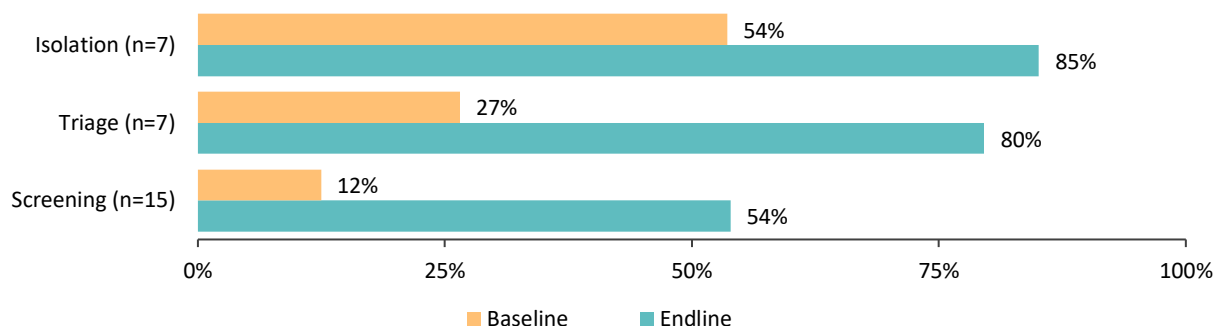
FIGURE 2: IPC/WASH FACILITY ASSESSMENT RESULTS BY WARD (N=15)



² General HCF WASH/IPC readiness scores are based on 83 weighted questions in the following categories: COVID-19 screening, COVID-19 triage, COVID-19 isolation, water, sanitation and hygiene, hygiene and IPC, health care waste, environmental cleaning, and administration. Wards were assessed using similar WASH and IPC criteria that were relevant to the specific ward context. All scores were assessed based on a 100point scoring scale.

The COVID-19 IPC readiness scores, a sub-set of the general HCF scores, are depicted in Figure 3. For the COVID-19 screening areas, the health facilities improved from an average score of 12% at baseline to an average score of 54% at endline. The seven facilities with isolation and triage wards saw similar IPC readiness improvements after MOMENTUM support.³

FIGURE 3: COVID-19 IPC READINESS SCORES BY AREA



All the facility levels and wards saw improvements but they were smallest in general facility readiness assessments. In the one district hospital, renovations in the triage room took place after endline and therefore received a zero score for COVID-19 triage, reducing the average. COVID-19 scores were also impacted by limited availability of resources and personnel to properly cover COVID areas. This had the greatest impact on the UHFWCs, whose average endline score for the COVID screening areas score was 23% compared to 89% for the health complexes and hospital.⁴

HEALTH CARE FACILITY ACCESS TO BASIC WASH SERVICES

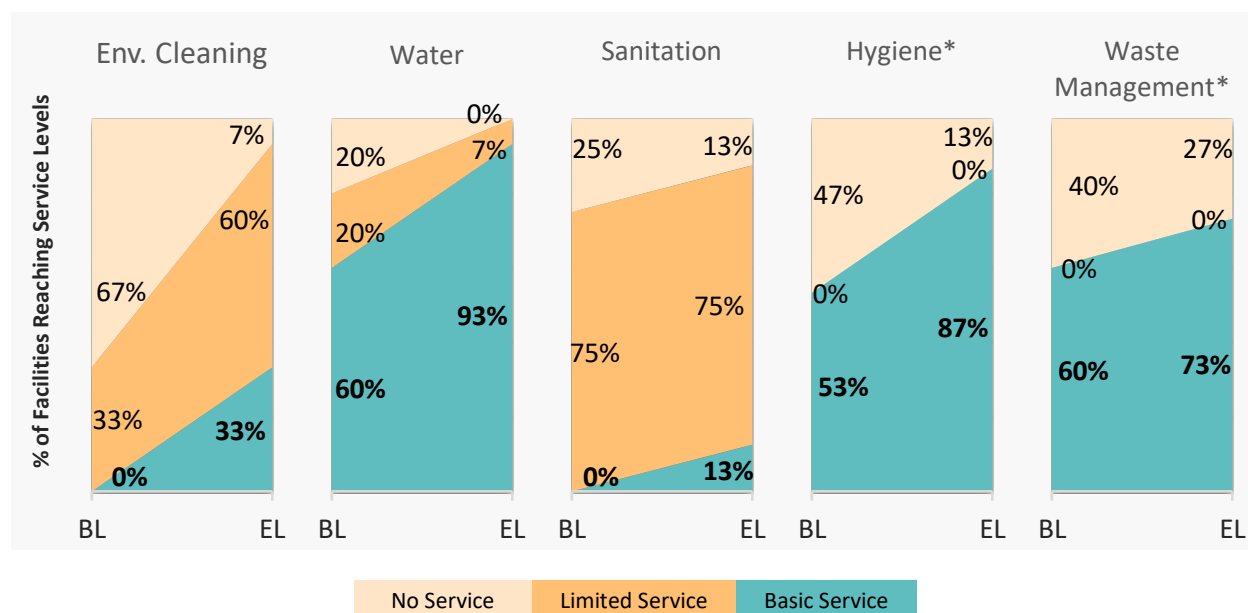
Figure 4 shows the IPC assessment results contextualized according to the [WHO/UNICEF Joint Monitoring Program \(JMP\)](#) service-level indicators for monitoring WASH, health care waste management, and environmental cleaning services in HCFs.⁵ Results demonstrate that significant improvements can be made with minimal support to improving HCF WASH infrastructure. The water service level shows the greatest improvement with five facilities moving from *no* or *limited service* to *basic service* levels. *No service* in waste management decreased from six facilities to four due to two facilities reaching *basic service* levels. Environmental cleaning made similar progress with the number of *no service* facilities decreasing from 10 to one with five facilities reaching *basic service* levels. These results highlight WASH service needs across health facilities and demonstrate how greater gains can be made in IPC readiness where facilities have access to basic IPC/WASH resources, such as continuous water access and sanitation infrastructure.

³ The 10 union level facilities (UHCs and UHFWC) had no basic infrastructure for providing supports for COVID-19 triage and isolation and therefore these sections were not included in their results. However, screenings were done as part of the referral system in all facilities and are reflected.

⁴ UHFWCs did not offer COVID-19 triage and isolation services.

⁵ Full descriptions of the JMP service level indicators are available at the following webpage: <https://washdata.org/monitoring/health-care-facilities>

FIGURE 4: WHO/UNICEF JOINT MONITORING PROGRAM (JMP) SERVICE-LEVEL INDICATORS (N=15)



BL, baseline; EL, endline.

*If any wards met *basic service* levels, then the health facility was assessed as having *basic service*. If any wards met at least *limited service* levels, but none meet *basic service* standards, then the ward was assessed as having *limited service*.

WASH/IPC BEHAVIORS

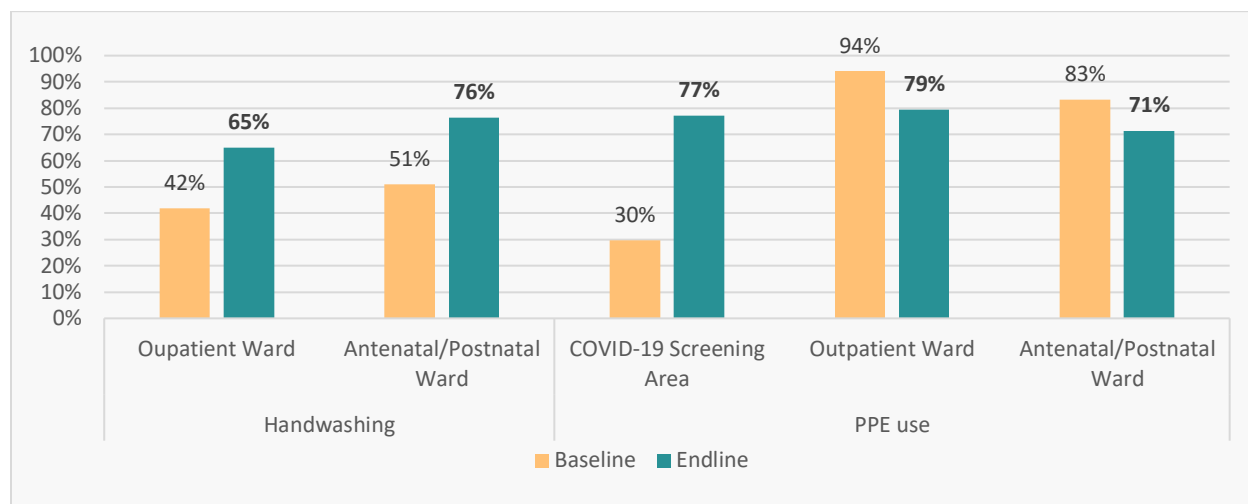
As part of its QI support to health facilities, MOMENTUM conducted monthly behavioral audits to evaluate handwashing practices in outpatient and antenatal/postnatal (ANC/PNC) wards, as well as observation of PPE use in outpatient, ANC/PNC, and COVID-19 screening areas, starting at baseline. As shown in Figure 5, all facilities had improved handwashing practices across assessed wards at the endline. COVID-19 screening areas saw the biggest improvement in use of PPE (30% to 77%). Interestingly, the ANC/PNC wards saw slightly decreased levels of PPE use after receiving MOMENTUM support. While these wards had very high PPE use at baseline, the endline results suggest that the available PPE for HCF staff was more equitably distributed across the HCF, resulting in a decrease in availability within some wards.



Photo: Elija Chambugang

Success story: Mohammed Masudul Hasan has served as a cleaner in the Bakergonj upazila health complex for many years. When the COVID-19 outbreak occurred, Masudul didn't know appropriate preventive and protective measures and had no protective equipment. Through the "Infection Prevention and Control at Healthcare Settings" training, organized by MOMENTUM-WASH/IPC COVID Activity, he learned about how to protect himself and others. The project also provided him with PPE suits, utility gloves, gumboots, masks, cleaning materials, etc.

FIGURE 5: AVERAGE HEALTH WORKER COMPLIANCE WITH IPC BEHAVIORS BY WARD (ALL HCFs)



A complete list of detailed results for HCFs and wards can be found on the following interactive [dashboard](#).

LESSONS LEARNED

Through implementation of this workplan, MOMENTUM documented the following lessons learned and best practices:

- The lack of available WASH and IPC data for health facilities delayed MOMENTUM’s response while assessments were completed and IPC challenges prioritized. If standardized, routine reports on the status of health facility WASH infrastructure, the availability of basic IPC supplies, and the training status of staff were available, response times would have improved and more resources would have been dedicated to implementing solutions.
- The project results demonstrate that it is possible to make dramatic improvements in HCF IPC readiness in a short period of time and with a package of minimal support in the areas of infrastructure, supply, training, coaching, and data collection and use.
- Coordination with other USAID programs and national response efforts saved time and resources and avoided duplication. Specifically, MOMENTUM’s ability to coordinate with ongoing national COVID-19 response efforts to train health workers on COVID-19 prevention and treatment protocols in partnership with USAID-MaMoni, allowed MOMENTUM to leverage existing curriculum and support the expansion of training to include health system stakeholders in Barishal district, where other partners were not supporting COVID-19 response activities.
- Using the digital data collection platform, mWater/Solstice, allowed MOMENTUM, district government staff, and health facility stakeholders to collectively assess health facility needs, prioritize those needs, and evaluate progress using a shared and free-to-use system. While mWater/Solstice was a helpful stop-gap system, integration of detailed WASH and IPC data within national HMIS would be more efficient for sustained reporting and use of this critical data.
- Implementing QI training and coaching sessions was challenging in the context of COVID-19. Though stakeholders preferred in-person and on-the-job training, it was beneficial to have QI training curriculum and coaching systems prepared for both in-person and remote sessions to react to the fluctuating outbreak reality without interrupting support and coordination among HCF staff and district health offices.

RECOMMENDATIONS

While MOMENTUM's support was limited to one district, the strategic approach it took to support HCFs in Barishal district to improve IPC readiness and service quality was successful in protecting the delivery of routine reproductive, maternal, newborn, and child health services during the pandemic, even as Bangladesh saw a spike in COVID-19 cases in the spring and summer of 2021. To replicate and sustain the success of this program, improve efficiency, and sustain IPC readiness, MOMENTUM recommends the following actions:

- WASH and health stakeholders should collaborate with the Ministry of Health to incorporate WASH and IPC indicators in DHIS2 system. Digital tools should be encouraged to capture data and share results directly with facilities and stakeholders. Having routine WASH and IPC data captured will allow for a quicker response to future outbreaks and support more targeted assistance to long-term IPC needs in health facilities across Bangladesh
- Continued infrastructure investment by local and national governments and/or local or international donors is necessary to improve further WASH and IPC readiness and facilitate behavioral improvements. Without it, further WASH and IPC improvements may be limited.
- MOMENTUM-supported health facilities reported appreciation for the QI approach and its ability to improve data-driven decision-making and prioritization. Future (and longer) WASH/IPC initiatives should include collecting and using detailed WASH and IPC data to facilitate adequate supply chain and reporting systems improvements. Formal, recurring processes to have health facility IPC committees review IPC data and develop action plans to improve readiness is an inexpensive and effective process to improve and maintain HCF IPC readiness and behavioral compliance.
- Donors and civil society advocate for the national adoption of a contextualized version of the [Essential Supply List For Infection Prevention and Control in Health Care Facilities](#), and to familiarize health care staff and procurement officials with the list and its practical application.
- While MOMENTUM prioritized water and hygiene infrastructure improvements due to the pandemic, sanitation infrastructure across supported health facilities was very low. This lack of basic sanitation services discourages patients from seeking care from higher level HCFs like upazila health complexes, rather they prefer to visit nearby community clinics. Future efforts should prioritize the improvement of health facility sanitation infrastructure, particularly considering the needs of pregnant women and people with limited mobility.

Attribution

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