

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 Ghana



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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 facility (HCF) needs. In August 2020, the United States Agency for International Development (USAID)-funded [MOMENTUM Country and Global Leadership](#) project began implementing an IPC COVID-19 program in Ghana through a partnership with the Christian Health Association of Ghana (CHAG).

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 maternal, newborn, and child health services by leveraging existing MOMENTUM operational platforms and coordinating with district health offices, partner platforms, and public organizations. It aimed to ensure that the COVID-19 pandemic did not adversely affect the delivery of essential health services and to improve the quality of care (QoC) among the 25 targeted faith-based HCFs in Ghana.

MOMENTUM WASH/IPC Ghana Country Program Overview:

Program dates: August 2020–September 2021

Geographic focus: Ahafo, Ashanti, Brong, Central, Eastern, Greater Accra, Northern, Upper East, Upper West, Volta, and Western regions of Ghana

Program scope: 25 Christian Health Association of Ghana-supported health facilities (six secondary, 19 primary)

KEY FINDINGS AND RECOMMENDATIONS

1. **Supported CHAG HCFs had high IPC readiness scores (average of 84 percent) at baseline and maintained high performance through endline (88 percent).** Specific wards started with lower average scores but made notable improvements at endline.
2. Results show that making **IPC readiness improvements within already high-performing HCFs yields smaller improvements** because remaining IPC readiness challenges are difficult to solve and often require changes within broader health or WASH systems. Closing remaining IPC gaps will require significant investment and resourcing.
3. **Using adaptive learning methods throughout implementation highlighted that cleaning staff across HCFs were underperforming due to a variety of resource, training, and support needs.** Health system stakeholders at various levels (cleaners, clinicians, HCF management, district health teams) stressed the need to support cleaners in future IPC and quality improvement (QI) efforts.
4. **While participants found virtual and in-person facility learning sessions helpful for sharing QI successes and challenges across HCFs and spreading best practices across the CHAG network, they preferred in-person or hybrid training and QI coaching models.** A blended approach for providing mentoring and coaching should be included in the Ghana Health Service supportive supervision manual.

PROGRAM APPROACH, STRATEGIES, AND INTERVENTIONS

MOMENTUM implemented a COVID-19 response program in Ghana in two phases. The first phase addressed immediate WASH service and supply shortages that were inhibiting HCF WASH/IPC readiness. The second phase was designed to address behavior compliance and systems challenges that could best be addressed once functional WASH services and supplies were available to HCF staff.

Phase 1 (Rapid response): In collaboration with CHAG, MOMENTUM assessed and prioritized the immediate IPC risks and needs of HCFs, targeting specific COVID-19 priority actions and supported activities to quickly improve access to basic WASH services and IPC practices and 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 QI support): Building on the initial IPC improvements, MOMENTUM transitioned to strengthen the capacity of HCF staff to continue to build and sustain IPC QI, establish a culture of IPC, and deploy advanced IPC measures as part of the HCFs' COVID-19 preparedness and response plans.

PHASE 1 (RAPID RESPONSE)

MOMENTUM conducted an initial health facility assessment in October 2020 in collaboration with CHAG. HCF managers and infection prevention focal points also 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, MOMENTUM created a comprehensive assessment tool based on the World Health Organization (WHO) Water and Sanitation for Health Facility Improvement Tool ([WASH FIT](#)) and IPC Assessment Framework ([IPCAF](#)), as well as 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 repair and supply and training needs and was used to develop program interventions. Detailed results for HCFs and wards are available on a public-facing, interactive [dashboard](#) at mWater/Solstice. Based on the assessment findings, MOMENTUM worked with CHAG, HCF managers, and IPC focal points to prioritize immediate, minor infrastructure repairs to WASH services. These minor improvements included replacing faulty water pumps, installing or repairing handwashing stations, unclogging piped systems and repairing water taps, and other similar repairs. MOMENTUM spent a maximum of US\$2,000 on minor WASH infrastructure repairs in each supported health facility. MOMENTUM also procured prioritized IPC and personal protective equipment (PPE) commodities and rehabilitated WASH infrastructure at 25 targeted facilities.

MOMENTUM introduced all 25 HCFs and district health offices to the new [Essential Supply List for Infection Prevention and Control in Health Care Facilities](#), which provides global operational guidance on the essential supplies HCFs need to maintain basic standard IPC precautions at all health care service levels and in all contexts. This list can also aid HCF staff, administrators, and government officials at local and national levels



CHAG held a training of trainers in Sunyani, Ghana.

to better understand which IPC supplies should be prioritized to maintain minimal WASH/IPC readiness. This essential list provides guidance to inform budgeting, procurement, and planning decisions that impact WASH/IPC readiness of the health system and individual HCFs.

PHASE 2 (STRENGTHEN AND MAINTAIN IPC STANDARDS THROUGH QI SUPPORT)

After assessing and addressing the critical WASH infrastructure repair and IPC supply needs of each partner facility, MOMENTUM transitioned to focus on strengthening the capacity of doctors, nurses, laboratory technicians, pharmacists, midwives, cleaners, and other HCF staff and providing supportive supervision and mentorship in QI. The program first created a trainer pool by organizing a training of trainers (ToT) on IPC in health care settings through a two-day, in-person training session. The trainer pool was comprised of three medical officers, 10 nurses, one pharmacist, four medical laboratory technologists, four midwives, and three physician assistants. Afterward, the ToT participants trained all HCF staff across the 25 facilities in their respective health care settings, using the approach outlined in Figure 1.

The 25 QI coaches, one from each of the 25 HCFs, trained a total of 125 staff (56 male and 69 female) through four rounds of on-the-job training sessions, tailored to their respective roles. Staff from all service tiers attended the training. The training was also adapted for drivers and cleaners as IPC is vital to their jobs. 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 point from existing QI committees, along with ongoing virtual QI coaching.

The designated QI focal point routinely observed key IPC practices linked to the four QI aims to identify quality gaps that needed to be addressed: HCF staff adherence to mask protocol, appropriate screening for COVID-19 of arriving individuals (patients, visitors, or staff), HCF staff adherence to hand hygiene protocol, and cleaning routines for high-touch surfaces. Data were reviewed by QI committees and shared with the rest of the facility staff to encourage continual improvement in IPC practices.

FIGURE 1: WASH/IPC 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 SWOT (strengths, weaknesses, opportunities, and threats) analysis for QI. Organized by facility networks. 	<ul style="list-style-type: none"> Procure needed IPC supplies. Identify facilities to provide support for minor repair of WASH infrastructure as needed. 	<ul style="list-style-type: none"> Virtual trainings on Zoom. Virtual mentoring via Zoom. WhatsApp groups to support: <ul style="list-style-type: none"> Peer learning Sharing of learning and ideas 	<ul style="list-style-type: none"> Offer QI coach training for up to 75 participants. Capacity-building on IPC in health care 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 short video describing MOMENTUM’S approach to improving the quality of health care services is available [here](#). Another, highlighting faith-based HCF staff experiences from participating in program, can be found [here](#).

RESULTS AND FINDINGS

WASH/IPC READINESS

An endline evaluation was conducted in June 2021 to assess the extent to which WASH/IPC readiness and key behaviors had changed in supported HCFs.

As Figure 2 shows, the general HCF WASH/IPC readiness assessment scores increased from an average of 84 percent at baseline assessment to 88 percent at endline.¹ HCF WASH/IPC readiness for COVID-19-specific standards also improved across the HCFs (85 to 88 percent). The postnatal wards saw the most significant improvements, with an average score increase from 72 to 86 percent; followed by the outpatient ward, with the score shifting from 74 percent at baseline to 86 percent at endline. The labor and delivery wards had an average baseline score of 72 percent and improved to an average score of 83 percent after MOMENTUM assistance.

FIGURE 2: AVERAGE WASH/IPC GENERAL FACILITY ASSESSMENT RESULTS BY WARD (N=25)

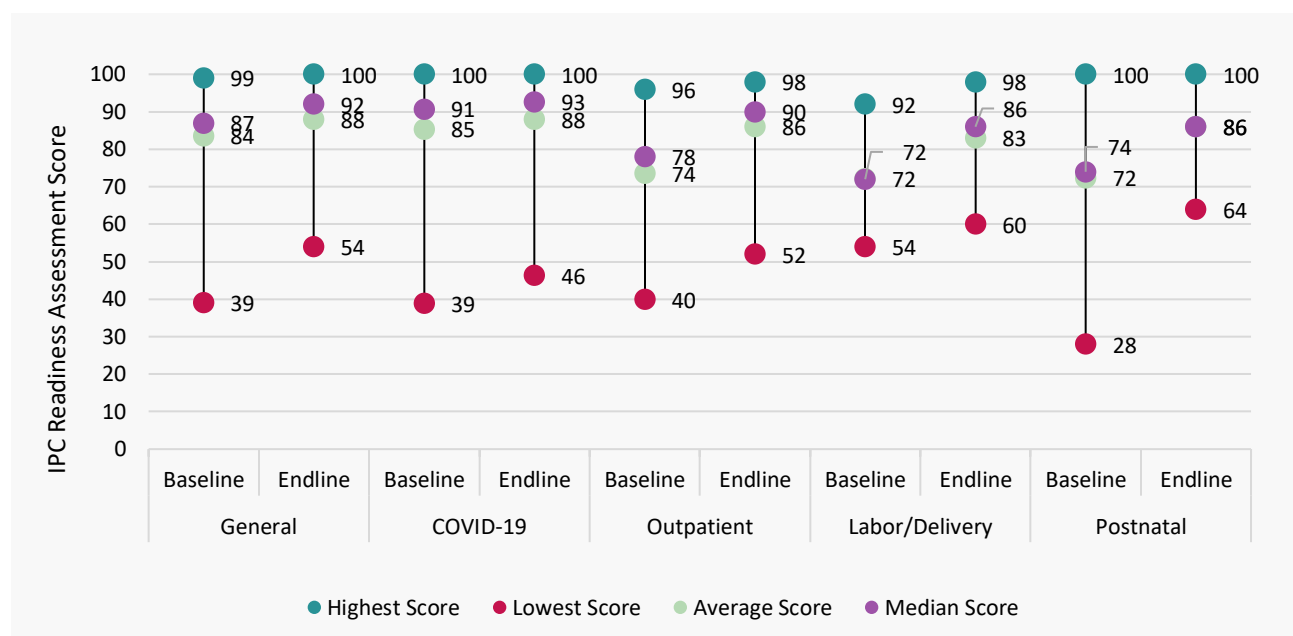
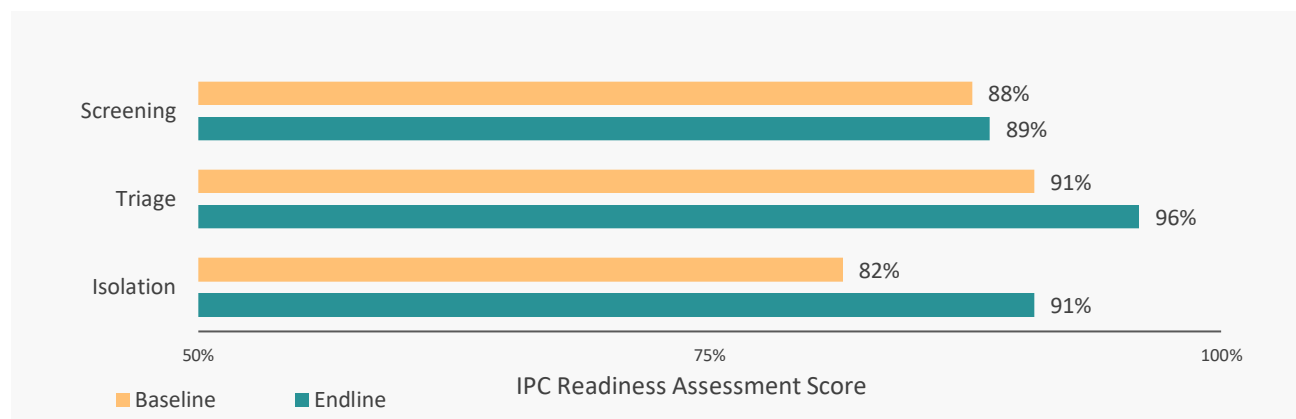


Figure 3 shows the COVID-19 WASH/IPC readiness scores, a subset of the general HCF scores. WASH/IPC readiness in COVID-19 screening areas improved marginally from an average score of 88 percent at baseline to 89 percent at endline. The isolation and triage wards saw slightly larger improvements. Prior to the program, the Ministry of Health administered several interventions and resources to strengthen IPC, particularly in the triage and screening areas, as they are the first point of contact when accessing an HCF. This is likely why the triage and screening areas had high baseline scores. Similar efforts were made at the isolation areas, however, their readiness scores remained low until MOMENTUM supported them with the WASH and IPC intervention. Most HCFs did not have an isolation area prior to the COVID-19 pandemic and needed WASH/IPC readiness support to improve.

¹ 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 infection prevention; 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 100-point scoring scale.

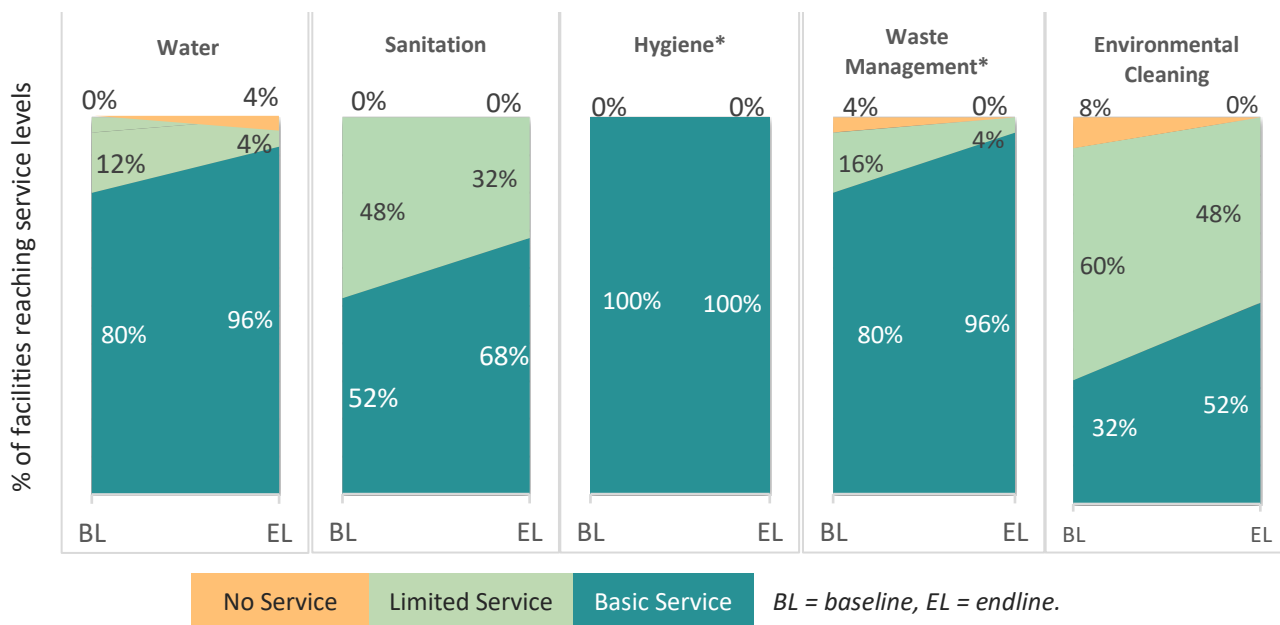
FIGURE 3: COVID-19 WASH/IPC READINESS SCORES BY AREA (N=25)



HEALTH CARE FACILITY ACCESS TO BASIC WASH SERVICES

Figure 4 shows the IPC assessment results according to WHO/UNICEF Joint Monitoring Program service-level indicators for monitoring WASH, health care waste management, and environmental cleaning services in HCFs. While all HCFs met the basic hygiene service level at baseline through endline, there was an improvement in HCF access to all four of the other services over the course of the MOMENTUM program.

FIGURE 4: IPC ASSESSMENT RESULTS BY WHO/UNICEF JOINT MONITORING PROGRAM SERVICE-LEVEL INDICATORS (N=25)



**If any wards met basic service levels, the health facility was assessed as having a 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 HCFs, MOMENTUM conducted behavioral audits to evaluate handwashing practices in outpatient and postnatal care (PNC) wards and observation of PPE use in outpatient, PNC, and COVID-19 screening areas (Figure 5).

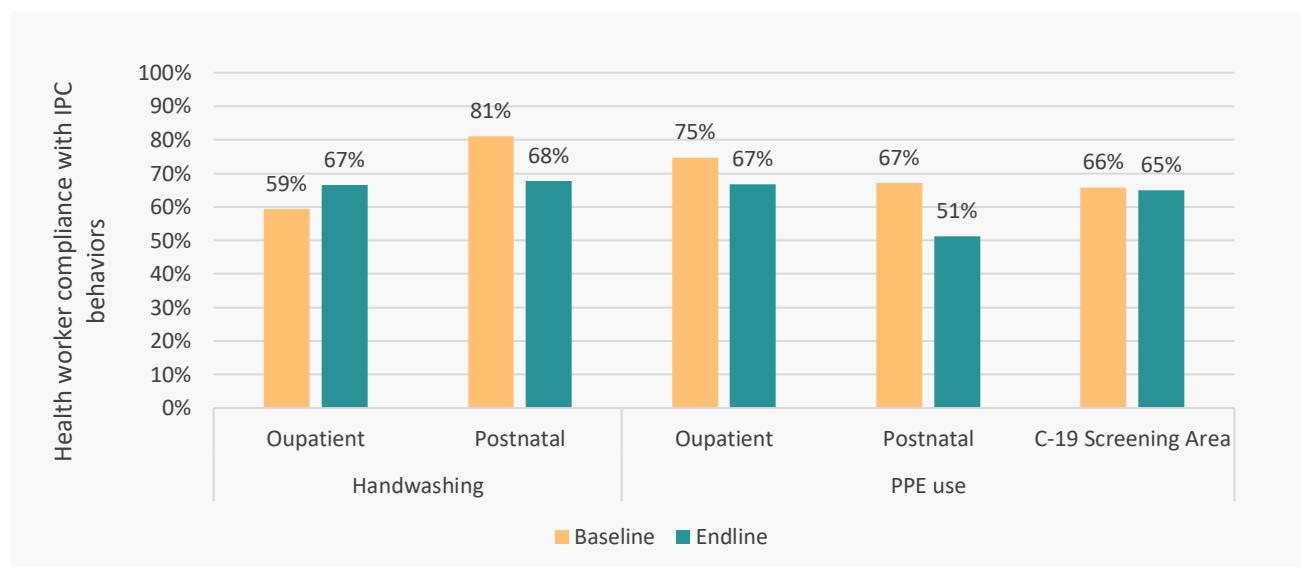
At final assessment, facilities had improved their handwashing practices in outpatient wards from 59 percent compliance at baseline to 67 percent at endline. However, the PNC wards saw compliance decrease from 81 percent at baseline to 68 percent at endline. Though more investigation is needed, this may be due to the low number of COVID-19 cases within the country at the time of baseline (October–November 2020) compared to the high caseloads seen at last assessment (January–February 2021), resulting in increased time and resource constraints at the facilities. This demonstrates the need for increased vigilance on handwashing compliance during outbreaks to prevent illness.



HCFs benefitted from WASH/IPC infrastructure improvements, such as installation of a water tank and renovations of toilets and washing facilities.

The COVID-19 screening areas saw little change in PPE compliance. However, the outpatient and PNC wards saw somewhat decreased levels of PPE use. 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.

FIGURE 5: AVERAGE HEALTH WORKER COMPLIANCE WITH IPC BEHAVIORS BY WARD (N=25 HCFs)



Detailed results for HCFs and wards can be found on this [interactive dashboard](#).

STAKEHOLDER FEEDBACK THROUGH ADAPTIVE LEARNING METHODS

During program implementation, MOMENTUM used a variety of adaptive learning techniques to better understand the acceptability, feasibility, and quality of the program’s implementation approach, with a focus on the QI trainings and coaching activities. A variety of methods, including pulse surveys, most significant change (MSC) exercises, and lessons learned meetings, were used to refine activities and inform follow-on programs. Pulse surveys and MSC exercises, in particular, yielded rich insights for program staff and health network leadership.

PULSE SURVEY RESULTS

Halfway through the implementation period, MOMENTUM conducted a pulse poll of 63 participants (24 coaches and 39 practicum participants) from the participating CHAG network HCFs to solicit feedback on the accessibility and feasibility of providing remote training and QI support. Both QI coaches and practicum participants understood the necessity and advantages of virtual training and QI support methods in the COVID-19 pandemic context and widely reported satisfaction with the virtual trainings and support. However, they strongly preferred purely in-person or hybrid implementation models. Table 1 lists some common reasons.

TABLE 1: COMMON REASONS QI COACH AND QI PRACTICUM PARTICIPANTS PREFERRED IN-PERSON TRAINING AND SUPPORT

Feasibility	Acceptability
<ul style="list-style-type: none"> • Persistent network and equipment challenges (even after MOMENTUM provided technology and airtime support to HCFs needing assistance). • Lack of knowledge on how to use technology platforms (WhatsApp and Zoom). • Conflicting priorities with routine duties (no protected time to leave the site and fully participate). 	<ul style="list-style-type: none"> • Hesitancy to ask questions and fully participate in an online environment. • No dedicated space and time to fully participate. • Lack of leadership support (buy-in).

These results led MOMENTUM to shift back to a hybrid model of support when and where pandemic restrictions and risk levels allowed.

MOST SIGNIFICANT CHANGE RESULTS

In August 2021, the MOMENTUM team worked with CHAG to use the MSC approach (a qualitative research method) to obtain stories from health facility staff on what they felt were the most important changes since the start of the program. Data collection was done virtually during two sessions, with participants joining over Zoom. The first session was an orientation on the MSC approach where participants practiced storytelling using a question that was different from the research question. The second session was held one week later, and participants shared stories in response to the research question: “In your opinion, what is the most significant change that you have seen at your work place for infection prevention and control since the introduction of training in IPC QI?” The question was intentionally broad with little guidance from project staff in order to capture the values and priorities of HCF staff.

In all, 10 participants from different health facilities took part: one pharmacist, two laboratory technicians, and seven nurses. During the second session, participants shared seven different stories in response to the research question, which they then categorized into five domains (knowledge change, behavior change of cleaning staff, behavior change of clinical staff, infrastructure change, and attitude change). After sharing and categorizing the stories into the various domains, participants opted to use voting to select three MSC stories: the infrastructure story received four votes and the other top stories received two votes each.

Three key themes emerged from applying the MSC methodology with health facility stakeholders.

- **Identifying an infection prevention focal point in the health facility and within each unit is critical.**

Several of the shared stories highlight the importance of forming QI teams responsible for overseeing IPC activities and tracking progress at the HCF level. As demonstrated by the following quote, these stories also emphasize the importance of assigning focal points at sub-HCF (unit/ward) level and engaging all facility staff in QI so they take personal responsibility for their behaviors and hold each other accountable.

“Initially, everybody had a thought the cleanliness and environmental work was for the cleaners so they did not care even if there were spillage they could have helped to [clean]. Now that each unit has a focal person responsible for sanitation, environmental cleanliness within their unit, they were empowered to make sure that sanitation activities were rightly done in the facility.”

- **Cleaning staff have been undervalued and under-supported. Providing them with support results in significant improvements.**

One of the most prevalent themes throughout participants’ stories was the new-found appreciation for cleaning staff and their critical role in maintaining a strong infection prevention program. Multiple stories noted that cleaning staff had been ignored or under-supported before the MOMENTUM project. The following quote demonstrates how participants viewed well-trained and supported cleaning staff with achieving results.

“Our last assessment we did around the hospital showed that we scored 93% compared to the initial 38%... So, generally that mysterious that we had was not something mysterious in itself, but it was because the cleaners did not know what they were doing and they did not have the necessary tools to do their work. They were ill motivated and we looked at all this. And when everyone came onboard, now this is a very clean environment and everyone is happy.”

- **Lack of adherence to proper (and basic) infection prevention protocols (e.g., handwashing and cleaning) is a multifaceted issue.**

Several of the stories demonstrated that low availability of basic materials, low awareness of proper protocols, lack of cues, and poor environmental structuring (placement) combined to result in low behavior compliance. This theme is clearly highlighted by the following quote.

“One staff was assigned to monitor both staff and clients entering the facility as well as while on duty, [and] we realized that only 8% of staff washed hands, though the facility had handwashing equipment available for use at the facility. With the knowledge learned from the QI training, we were able to diagnose the problem and found that most of the people indicated that the handwashing equipment was placed at places that people could not easily access, [there was] inadequate handwashing equipment, and [there was] low awareness on hand hygiene.”

LESSONS LEARNED AND INGREDIENTS FOR SUCCESS

MOMENTUM documented the following lessons learned and best practices from implementation of this program:

- **Results show that making WASH/IPC readiness improvements within already high-performing HCFs yields smaller improvements because remaining WASH/IPC readiness challenges are difficult to solve and often require changes within broader health or WASH systems.** However, it is possible to make improvements in HCF and point-of-care WASH/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.
- **As demonstrated in the MSC results, incorporating QI methods into WASH/IPC interventions** was essential to understand and address root causes of facility-specific challenges. In Ghana, the common theme of supporting cleaning staff emerged as a priority of health system stakeholders.
- **While participants found the virtual and in-person facility learning sessions helpful for sharing QI successes and challenges across HCFs and spreading best practices across the CHAG network, they preferred in-person or hybrid training and QI coaching models.** Using virtual technology platforms allowed MOMENTUM and district health offices to deliver mentoring and coaching that complied with COVID-19 protocols during the early months of the COVID-19 pandemic when in-person support was not possible, but pulse survey results guided a programmatic shift to a hybrid model in the late stages of implementation.
- **Health facility and government staff noted that using real-time digital data collection and management platforms** such as mWater/Solstice allowed MOMENTUM, CHAG, and HCF stakeholders to collectively assess facility needs, prioritize those needs, and evaluate progress using a shared and free-to-use system.
- **Partnering with an existing health network such as CHAG** allowed for rapid implementation with partner HCFs. Building on their existing systems and staffing provided catalytic technical assistance to make rapid improvements across their national network.

RECOMMENDATIONS

The strategic approach that MOMENTUM took to support HCFs in Ghana to improve WASH/IPC readiness and service quality was successful in protecting the delivery of routine reproductive, maternal, newborn, and child health services. However, MOMENTUM's support was limited to 25 facilities. To replicate and sustain the success of this program, improve efficiency, and sustain WASH/IPC readiness, MOMENTUM recommends the following actions:

1. While high-performing HCFs may have fewer infection prevention risks, their remaining challenges can still be significant and often require expensive structural changes or changes to broader health or WASH systems. Therefore, **donors and implementing partners should continue to include high-performing HCFs in assistance programs.**
2. **Strategies to provide broad and intensive support to cleaning cadres should be incorporated in future IPC and QoC efforts.** Health system stakeholders cited the importance of cleaning cadres in maintaining basic IPC standards and noted the widespread lack of support prior to this program.

3. **Hybrid approaches for providing QI mentoring and coaching should be included in the Ghana Health Service strategies** for improving service delivery. The integration of virtual mentorship through Zoom sharing sessions and moderated WhatsApp groups increased the reach and support to geographically diverse facilities at low cost. At the same time, pulse survey results with coaches and participants demonstrated that in-person or hybrid support was preferred to exclusively remote support methods.
4. **Increase the use of digital platforms to collect comprehensive readiness and behavioral data to target facility support.** Tracking a core set of outcome indicators linked to quality aims allowed CHAG to target support to lower-performing facilities within its network and give tailored support to each HCF. This approach can be used to increase cost efficiencies and maximize the value of supportive supervision and limited resources.

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