# MOMENTUM

Country and Global Leadership

Learning Brief

# SUPPORTING THE COVID-19 RESPONSE: AN INFECTION PREVENTION AND CONTROL READINESS RESPONSE IN GHANA

## Most Significant Change

## BACKGROUND

**Study Question:**

What were the most significant changes for infection prevention and control at facilities from the perspective of facility staff?

In August 2020, the MOMENTUM Country and Global Leadership project, funded by the U.S. Agency for International Development (USAID), began implementing an infection prevention and control (IPC) COVID-19 activity in Ghana through a partnership with the Christian Health Association of Ghana (CHAG). The goal of the activity was to provide rapid, needs-based support focused on water, sanitation, and hygiene (WASH) and IPC readiness in 25 high-volume facilities delivering maternal, newborn, and child health services. It aimed to ensure that the delivery of essential health services was not adversely affected by the COVID-19 pandemic and to improve the quality of care. The project did so by supporting the immediate needs of facilities for supplies and infrastructure improvements and by building capacity of approximately 125 facility staff on IPC quality improvement (QI) and establishing a culture of infection prevention.

## METHODS

In August 2021, the MOMENTUM team worked with CHAG to use the Most Significant Change (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 project. Data collection was done virtually during two sessions, with participants joining over Zoom. The first session was an orientation on the MSC approach, during which 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 workplace for infection prevention and control since the introduction of training in IPC quality improvement?” The question was intentionally broad and project staff gave little guidance in order to capture the values and priorities of health care facility staff.

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In all, 10 participants from MOMENTUM partner health facilities took part: one pharmacist, two laboratory technicians, and seven nurses. During the second session, seven participants shared stories, which the group then categorized into five domains: knowledge change, behavior change of cleaning staff, behavior change of clinical staff, infrastructure change, and attitude change. After stories were shared and categorized, participants voted for three MSC stories: the infrastructure story received four votes and the other top stories received two votes each.

MOMENTUM obtained a non-research determination from the Johns Hopkins University Institutional Review Board for this work. An informed consent form was designed on Google Forms and sent to participants prior to the session. All participants consented by completing the form before storytelling began.

# RESULTS

**Participants selected the following three MSC stories:**

## "PROVISION OF PORTABLE WATER"

- **Storyteller: Nurse**

  Domain of change: Infrastructure change

  *Based on our baseline data, when we did the analysis using the fish bone technique to identify the problem. We realized that the cleaning was not done well because of unavailability of water. So… the facility was supported to procure polytank [water storage tank], which helped the facility save water for cleaning…. Generally, the change is the procurement of the polytank, which has generally improved the water system in the facility. Now, we have 24 hours flow of water in the facility, which we did not previously have.*

## "ALL WE THOUGHT WAS 0.5"

- **Storyteller: Pharmacist**

  Domain of change: Knowledge change

  *As we started the project, we were trained. Sanitation has two aspects, seeing it as environmentally clean and the infectious aspect. A place can be clean, yet infectious. The cleaners can do the cleaning when [clinical] staff will not be there to understand how the chemical and solutions were mixed. We taught them to mix 0.5 chlorine solution for the cleaning…. While we were training the cleaners, we had the chance to ask them how they mix the solution for the cleaning. We were informed by the cleaners that after mixing and get the 0.5% chlorine solution, they add water, which does not make the chlorine solution 0.5%. Then they add the perfume, they mix everything together. In our minds, we thought they are mixing 0.5% chlorine solution. But after asking for the process to understand how the solution was mixed, we came to realize that the chlorine solution could be less than 0.1% because water and perfumes were all added to the 0.5% chlorine solution. Going forward, after the training, we have made supervision of cleaners as part of the clinical staff [responsibility] to be able to assess and train cleaners on the mixing of the solutions for cleaning. All clinical staff working at the ward have been trained on how to mix the chlorine solution so they can provide support and oversee the work of the cleaning staff while on duty. These have resulted in technical know-how, since cleaners are recently mixing the right solution for cleaning.*

## "IT'S TIME TO WASH WASH WASH"

- **Storyteller: Laboratory technician**

  Domain of change: Attitude change

  *Sometime last year, we did the baseline survey. We looked at the results, which indicated that our facility was ok, however, most of our staff were infected with COVID-19 during the pandemic. The Quality Improvement team took this to investigate further to be able to address this high infection among staff…. What we realized was that though we all knew hand hygiene was one of the best ways to reduce the spread of communicable disease, nonetheless, staff who knew better were always guilty of not washing their hands, which results in high infection among staff. The team did a handwashing utilization survey. 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 learnt 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. Awareness creation [materials were] created in the local language so clients could easily understand. Also, handwashing posters were posted all over the facility so both clients and staff can follow direction to where handwashing equipment are placed as well as how to wash hands appropriately. All staff were trained on WASH/IPC, cleaners were trained as well. The hand hygiene utilization survey was used continuously to monitor adherence, and there was a major improvement. Though not rapid, but gradually the facility has seen improvement over time.*

**Participants also shared the following four stories:**

## "THE MYSTERIOUS STENCH"

- **Storyteller: Nurse**

  Domain of change: Knowledge change

  *Two years ago, nurses were failing sick in turns. Prescribers, laboratory staff, and other clinical staff had their share of the . . . sickness. The cleaners, at every point in time, at least one of them were in admission or had been discharged from the hospital. There were certain service points and WASH [washroom] that was not pleasant to visit because of some unbearable scent at the place. The washrooms in particular were not a place to visit in the facility. In addition to all this, there was constant murmuring on the lips of cleaners as though that was their favorite song at the time. That was when we desperately needed help to get out of this menace of environmental uncleanliness and sickness. CHAG and [MOMENTUM] brought a WASH IPC project, and looking at the above outlined situation, there was no wonder we scored 38% during the baseline assessment on the adherence to cleaning protocol. So, when CHAG came in with training in collaboration with IHI [Institute for Healthcare Improvement], a practicum course on quality improvement was organized for staff. From there, the team met with the cleaners… and they told us their side of the story and why they keep murmuring and then complaining all the time and why some places are having that bad stench. From the practicum course too, we adapted the fishbone analysis and brought out the various components that summed up to give poor environmental cleanliness. From there we realized that one of the components was that the items they needed were inadequate. So a proposal was developed and CHAG brought us some funds to purchase some of the cleaning items. Key to the problems we had . . . was lack of training on the part of the cleaners as to how they do their cleaning and their activities, so we did trainings for the cleaners and brought out a cleaning protocol, which they follow and give good training practice in the facility. We also realized that, in order to achieve a good outcome, we needed to engage all stakeholders, and so the whole staff was also trained so that they will know what the cleaners are supposed to do so they can help with*

*supervision. After, we engaged the management again and then gave a feedback on what has been done so far. Fast forward to the present day, there is a general improvement in environmental cleanliness at [removed] hospital. In fact, the apparel of the cleaners alone is a pleasant site to behold. Every staff now knows what PPE [personal protective equipment] the cleaning staff should wear when cleaning and how to remove the PPE they used for the cleaning. There is this interesting story, the cleaners would come to us and say: "when we went to the female ward, the ward in charge and the nurses there say, we will not allow you to do the cleaning." And when we inquired why, they said the cleaner came in with inappropriate cleaning. The cleaners [now] do the cleaning as if they are cleaning their home and they now own the work. There are general senses of motivation among them because their salaries have been increased. 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. You do not have to worry when you need to visit the washroom, we do not have to afraid that the next person will have to fall sick because there is some mysterious disease among the staff of [removed] hospital.*

## "IMPROVEMENT IN ENVIRONMENTAL CLEANLINESS"

- **Storyteller: Nurse**

  Domain of change: Behavior change of cleaning staff

  *My facility over the years has been struggling with the provision of a safe and therapeutic environment for patients, visitors, as well as the staff. We had a lot of challenges when it came to environmental cleanliness. So, following the WASH IPC assessment by CHAG, we scored an average of 25% on environmental cleanliness so it necessitated the need to improve on environmental cleanliness. We already saw this problem before CHAG came in, but we didn't know how to approach this. We came up with an objective to improve on sanitation from 25% to hopefully 80% using the fishbone technique and we realized environmental cleanliness was the top challenges and coupled with other factors such as [lack of] human resources, methods, availability of cleaning materials, SOPs [standard operating procedures], and leadership support were the major the challenges the facility was facing. The hospital is surrounded by an untarred road at both sides, most drivers move on top of the speed, which generates a lot of dust. Even though cleaners clean the facility always, within 45 minutes the facility get dirty as if the facility has not been cleaned for days. So, after an assessment and coming up with an objective, there was intervention we also put in. We realized the cleaners lacked motivation, some materials were not available, most staff and clients did not keep the washroom clean, some clients kept the surroundings dirty by littering…. After meeting with the cleaners, the team met with management and gave them the feedback from the cleaners. Previously, cleaners had gaps in the remuneration, cleaners who have worked for example for eight years received same salary as those who have worked for a year. This was not motivating enough for the cleaning staff. After meeting with management, there was a decision to re-look at the salary of cleaners, which have now been adjusted to reflect their expectation. Most of the cleaning staff in the facility are paid with internally generated funds so the adjustment was made to ensure all the cleaners are on the same salary scale with those paid by the government. The issues on cleaning materials were also sorted by the facility leadership and there have been availability of these logistics. There have been training for the cleaners and leaders have been appointed from the various units. Now, cleanliness in the facility have been improved…. As compared to previously, in recent times when you go to the washroom, the place is clean for use.*

### "QUALITY IMPROVEMENT TEAM LEADING TO CHANGE IN SANITATION"

- **Storyteller: Nurse**

  Domain of change: Behavior change of cleaning staff

  *We had a score of 25% at the baseline, so when CHAG came in with the IHI program, a five-member team was selected to be part of the QI training. Out of those trainings, the team now had their capacity to act and make a change in the facility. The team trained others in the facility aside [from] the initial five trained by the IHI quality improvement program to support with the WASH quality improvement activities in the facility, particularly in the area of sanitation. There were focal persons selected from each unit within the facility to contribute to the change the team aimed at within the facility. Initially, everybody had 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. They were made to understand that the unit will be assessed periodically and they were the leading change agent responsible for ensuring that unit scored a good point on sanitation and environmental cleanliness. They were informed to ensure nothing untoward such as dust, spillage, breakages unsorted for repairs, are found at the unit when the team goes to the unit for random checks or unit inspection. The unit focal person had to act accordingly using the right structures to ensure that the general environmental factors in the facility was improved. [Forming] the quality improvement team and appointment of focal person[s] has contributed to improvement in environmental cleanliness resulting in improvement from 25% to 70%.*

### "THE POSITIVE IMPACT OF WASH/IPC ON THE ATTITUDE OF STAFF AND CLIENTS"

- **Storyteller: Nurse**

  Domain of change: Behavior change of cleaning staff

  *Before the WASH IPC program started, we had challenges in sanitation in the facility. The problems included few dustbins, cleaning of the facility, [and] disposing site. Initially we had only dustbin at one unit, so some of the nurses put everything (cotton, needles) in one dustbin, which caused one staff to be injured by a used needle. When the WASH/IPC intervention started, the facility was blessed to receive logistics and PPE supplies such as dustbins, cleaning materials, etc. So, now the significant change we have seen is that every unit has two dustbins disaggregated by the type of waste, one dustbin for infection waste and one for general waste, etc. Also, all our staff and cleaners have now been trained on WASH/IPC. Gowns have been provided for the orderlies so they do not use their personal clothes for cleaning.*

## CONCLUSIONS

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

1. **Participants stressed the importance of identifying an infection prevention focal point in the health facility and within each unit.**

   Several of the shared stories highlight the importance of forming QI teams responsible for overseeing IPC activities and tracking progress at the health care facility level. As demonstrated by the following quote, these stories also emphasize the importance of assigning focal points at sub-health care facility (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 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."*

2. **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."*

3. **Several stories emphasized the multifaceted nature of adhering to proper (and basic) infection prevention protocols (e.g., handwashing and cleaning)**

   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 handwashing equipment was 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."*

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