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IMPROVING INFECTION PREVENTION AND CONTROL IN ETHIOPIA THROUGH SUPPORTIVE SUPERVISION OF HEALTH FACILITIES



AIDSTAR-One
AIDS SUPPORT AND TECHNICAL ASSISTANCE RESOURCES

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Cover photo:

Staff sensitization by AIDSTAR-One Ethiopia regional technical officers, after supportive supervision visit at Hossana Health Center, Southern Nation Nationality Regional State.

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ACRONYMS

BCC	behavior change communication
FMOH	Federal Ministry of Health
HCWM	health care waste management
IEC	information, education, and communication
IPC	infection prevention and control
PATH	Program for Appropriate Technology in Health
PEP	postexposure prophylaxis
PPE	personal protective equipment
RHB	Regional Health Bureau
USAID	U.S. Agency for International Development

BACKGROUND

Healthcare–acquired infections lead to death, disability, and excess medical costs. Infection prevention and control measures maximize patient outcomes and are essential to providing effective, efficient, and quality health care services.

Since 2004, John Snow, Inc., has provided technical assistance to the Government of Ethiopia related to injection safety and health care waste management (HCWM) interventions and trainings. Between 2004 and 2009, this technical assistance was provided through the U.S. Agency for International Development (USAID)-funded Making Medical Injections Safer Project, which aimed to prevent the medical transmission of HIV and other blood-borne pathogens by reducing unsafe and unnecessary injections and ensuring the proper disposal of healthcare waste. When the Making Medical Injections Safer Project ended in September 2009, field support funding was provided by USAID/Ethiopia for a 12-month period to further sustain injection safety and HCWM efforts through AIDSTAR-One. Since October 2010, AIDSTAR-One has continued to provide technical assistance related to injection safety, HCWM, as well as infection prevention and control (IPC) to the Government of Ethiopia for an additional two-year period. The goal of the project is to facilitate the sustainability of these interventions through the integration of injection safety and HCWM into the wider IPC framework.

APPROACH

Infection prevention and control (IPC) work is being undertaken in Ethiopia to ensure that healthcare workers are adopting desired practices related to IPC and HCWM. Supportive supervision aims at ensuring and improving the quality, effectiveness, and efficiency of services provided at the facility level; it also enhances competencies and job satisfaction for staff engaged in activities at all levels of care delivery.

Many institutions address poor practices by current health care workers by providing on-the-job (i.e., “in-service”) training. Long-term capacity building, however, takes time and planning and should include a needs assessment and in-service training based on the results of assessments, supervision, and continuing education. Supervision is a way to provide on-site feedback to health care workers to ensure that after training they are adopting desired practices and that other systemic problems that may contribute to poor program performance are being addressed.

Supportive supervision has been defined as “expand[ing] the scope of supervision methods by incorporating self-assessment and peer assessment, as well as community input. Supportive supervision shifts the locus of supervisory activity from a single official to the broader workforce...[and] promotes quality outcomes by strengthening communication, focusing on problem-solving, facilitating teamwork, and providing leadership and support to empower health providers to monitor and improve their own performance”(Marquez and Kean 2002). Supportive supervision is a process that promotes quality at all levels of the health system by strengthening relationships within the system, focusing on the identification and resolution of problems, and helping to optimize the allocation of resources promoting high standards, teamwork, and better two-way communication (Program for Appropriate Technology in Health [PATH] 2003).

A cornerstone of supportive supervision is working with health staff to establish goals, monitor performance, identify and correct problems, and proactively improve the quality of service. Together, the supervisor and health workers identify and address weaknesses on the spot, thus preventing poor practices from becoming routine. Supervisory visits are also an opportunity to recognize good practices and help health workers maintain high levels of performance (PATH 2003).

Supportive supervision fosters a collaborative approach to strengthen health worker performance and quality of services. It has been an effective tool for improving performance for many organizations (Marquez and Kean 2002). Though there are many examples and case studies where supportive supervision has been used to improve health worker performance and service coverage, long-term and sustainable results have not been thoroughly documented (PATH 2003). Supportive supervision and self-assessment can reinforce communication and counseling, reflection, and learning, especially among inexperienced health workers by helping them improve their communication skills (Necochea and Bossemeyer 2005).

Supervision of health services and programs is not a new phenomenon in Ethiopia’s health care system. However, the existing supervisory practices are often ineffective at providing management support to improve the performance of staff. Research and application of supportive supervision in several countries has shown that the supportive supervision approach is superior to existing practices and significantly improves the performance of health systems (USAID 2008).

AIDSTAR-One's supportive supervision involves observation, discussion, support, and guidance of IPC program management, standard practices, equipment, supplies, and infrastructure. In order to ensure the long-term sustainability of the program, a set of criteria was developed for facility graduation from supportive supervision by AIDSTAR-One. The strategy provides follow-up steps to ensure that zones, *woredas*, and health facilities have the appropriate capacity to plan, implement, monitor, and manage IPC programs independently.

AIDSTAR-One conducted supportive supervision visits in 86 facilities around the country with the following specific goals:

- To enable healthcare workers to practice new skills in IPC following formal trainings
- To guide and coach health care facility staff to improve their performance in order to meet recommended IPC and HCWM standards
- To improve the supervisory skills of woreda and zonal supervisors for independent program monitoring
- To integrate IPC and HCWM into the routine health care supervision system
- To monitor the changes in program performance as a result of the previously mentioned activities.

PROCESS

Based on the national IPC guidelines in Ethiopia, a standard supportive supervision checklist that addresses a comprehensive IPC program was developed and used for data collection (See Annex I).

A selection of health facilities was chosen based on the proportional allocation of population size to determine where the bulk of health facilities were located. Of the health centers, 90 percent were in the four most populated regions, and the remaining 10 percent were in Addis Ababa, Dire Dawa, and Harari. A convenience sampling technique was used to select facilities from the Regional Health Bureaus' (RHBS') list of health centers in each region and city. The criteria used to select the health centers included a high patient load, the presence of HIV medical services (antiretroviral therapy, prevention of mother-to-child transmission, and provider-initiated testing and counseling), proximity to major roads for easy access, and selection by the Federal Ministry of Health (FMOH) for the implementation of the government's new Phase One Health Center Reform, which focused on quality control.

All of the supportive supervision visits were done based on the AIDSTAR-One supervision protocol to ensure uniformity in the data collection procedures. Accordingly, 86 facilities received three rounds of supportive supervision visits at 4- to 6-week intervals post-training over a 10-month period from January to October 2011. For each region, the supportive supervision team included an AIDSTAR-One regional training coordinator/other technical advisor, a trained woreda supervisor, and the head of the health center or a representative.

The AIDSTAR-One regional technical officer prepared IPC behavior change communication (BCC) materials, an IPC log book, and a supervision checklist in accordance with the established plan and arrived at the facility in the morning on the first day of mentoring. This was done after having communicated with the woreda expert and facility head one week before the beginning of the mentoring visits. The team first met with the head of the facility, introduced the team members,

explained the goals of the supervision visit, and started the facility visit guided by the supervision checklist.

The supportive supervision visits to each facility included both observations and interviews. Observations of the internal and external environments of each facility were made and interviews were conducted with health facility heads. There were also observations of injection and laboratory units and staff practices, observations and interviews with staff responsible for the sterilization of equipment, observations of storage and stock of supplies, interviews with pharmacy staff, as well as observations and interviews with waste handlers and laundry and housekeeping staff. Immediately after each observation and interview, the team members were provided on-site feedback to correct improper practices and knowledge gaps.

Before concluding each visit, the supervision teams held meetings with the IPC committee and discussed findings and major gaps. Interventions and action points were identified for monitoring changes. All completed checklists were approved by official seal of the facility and were made ready for data entry before leaving the health center.

Data were doublechecked, cleaned, entered into Microsoft Excel, and analyzed by category. Results were summarized and displayed using frequency tables and graphs to show changes by comparing the levels at baseline (first visit) with the levels at the third visit.

A summary of the results of the supportive supervision was also shared each quarter with donors, the FMOH, RHBs, zones, and woredas, as well as other relevant stakeholders to be used to monitor implementation of the program as well as for decision making at the local levels.

DEFINITIONS OF OUTCOMES

Using the standard supportive supervision checklist, which was developed based on the national IPC guidelines that address a comprehensive IPC program, data were collected on the following variables:

1. IPC Program Management:

- Availability of IPC/HCWM guidelines
- Availability and functionality of an IPC committee that meets regularly (at least every six weeks), takes meeting minutes, provides mentorship within the facility, takes action on identified gaps, and provides training for waste handlers and other staff to make the IPC program sustainable
- Budget allocation for IPC commodities and supplies and IPC infrastructure maintenance work
- Supportive supervision on IPC by internal or external supervisors in the previous year with written feedback
- BCC materials posted to reinforce IPC practices and job aids for quick reference in the health facility.

2. Standard Practices:

- Hand hygiene practiced by the health care providers, which is an essential measure for reducing infections in health care settings

- Use of personal protective equipment (PPE) by health care providers in order to avoid direct contact with blood/bodily fluids
- Safe work practices, including proper needle and syringe usage and disposal, and reporting/tracking mechanism for needle-stick injuries and HIV post exposure prophylaxis (PEP)
- Safe housekeeping practices, including the use of PPE by waste handlers when cleaning service delivery rooms, the practice of wet mopping, and the use of 0.5 percent chlorine solution for cleaning blood/bodily fluids
- Health care waste management, including segregation at the point of generation using the three-bin system (infectious, noninfectious, and sharps) using color-coded/labeled waste bins; collection, storage, and transportation of waste by waste handlers using PPE without mixing infectious and noninfectious waste; and using appropriate disposal facilities
- Appropriate decontamination, cleaning, and storage of instruments as well as appropriate collection and transportation of soiled linens to be sorted and cleaned outside of patient care areas by laundry staff using PPE.

3. Equipment, Supplies, and Infrastructure:

- Stock of supplies: PPE and cleaning supplies (gloves, soap, towels, linens, alcohol, etc.)
- Availability and functionality of hand washing facilities and toilets
- Availability and functionality of an incinerator and other waste disposal equipment
- Availability of drinking water for clients.

RESULTS

OVERALL SUMMARY

Overall, the supportive supervision results showed an improvement on IPC knowledge, attitudes, and practices of health care workers and supporting staff at the facility level. This improvement can be attributed to IPC training and on-site mentoring during supportive supervision visits. All 86 facilities were visited in three rounds during the 10-month period for a total of 258 observations and interviews that were conducted.

In the analysis of the results, every variable in the checklist (n=56) was assigned a value of 1. Health facilities were given a score between 0 and 56 based on performance. This performance score was then categorized as good, average, or poor (good: ≥ 35 ; average: 21 to 34; poor: < 21). The number of facilities that were scored as “good” (≥ 35 points) increased from 13 to 66 over the 10-month period. The number of facilities that were scored as “poor” (< 21) decreased from 5 to 1 at the final visit (see Table 1).

Table 1. Health Facilities Supportive Supervision Visit Scores

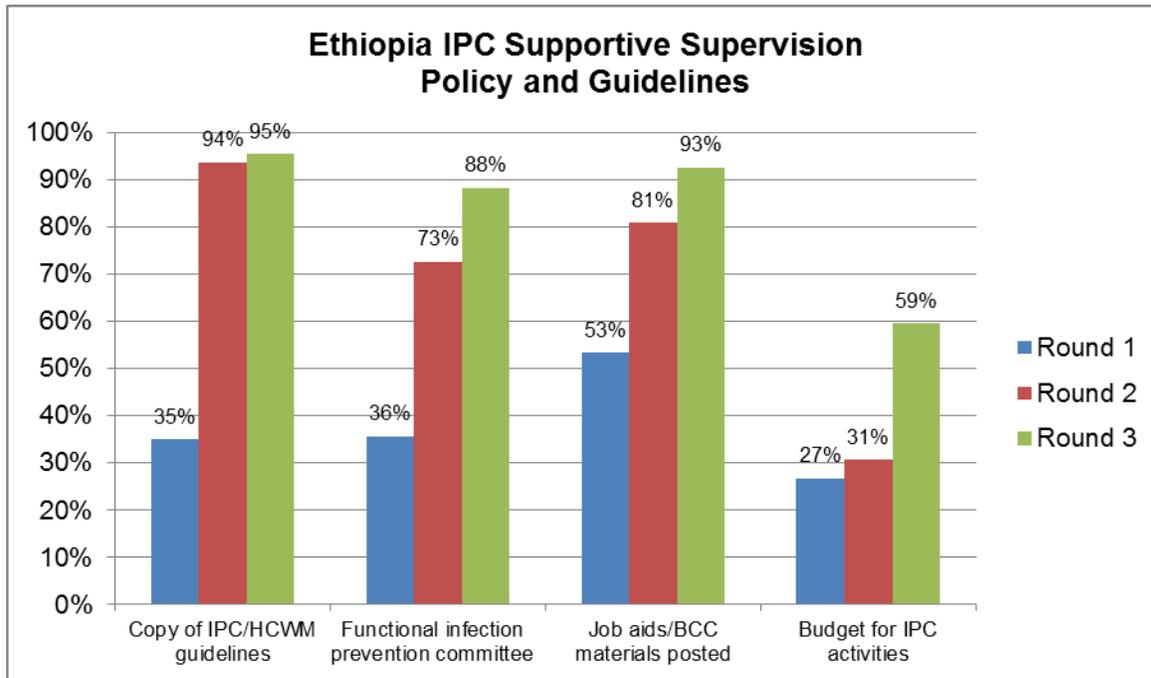
	# of Facilities with Score of Good (≥ 35)	# of Facilities with Score of Average (21–34)	# of Facilities with Score of Poor (< 21)
Round #1	13	68	5
Round #2	47	37	2
Round #3	66	19	1
Total	126	124	8

INFECTION PREVENTION AND CONTROL PROGRAM MANAGEMENT

The results show that the proportion of facilities with IPC guidelines, functional IPC committees, BCC materials and job aids, and a budget for an IPC program significantly improved since the first visit. This suggests a positive correlation between regular and sustained supportive supervision visits and an improvement in IPC program management by health facilities. The visits were good opportunities to establish IPC committees and to increase their involvement in the planning and follow-up of the IPC program, the distribution of policy documents, education and advocacy on the need for PEP services for staff safety, and the mobilization of a budget for the program.

The availability of a trained and committed IPC committee is vital to implementing and sustaining the recommended IPC practices at the facility level. Only 36 percent of the facilities’ IPC committees were functional during the first visit, and the proportion of functional committees increased to 88 percent by the third round visit (see Figure 1).

Figure I. Ethiopia IPC Supportive Supervision Policy and Guidelines



Avoiding occupational exposure to blood and bodily fluids is the primary way to prevent HIV, hepatitis B, and hepatitis C in health care settings. However, the hepatitis B virus vaccine and appropriate post exposure management are integral components of a complete program to prevent infection following exposure. Evidence supports the recommendation that PEP drugs should be started for exposed persons (based on the indication) as early as possible, but preferably within two hours of exposure. Giving PEP drugs after 72 hours of exposure is not generally recommended (FMOH Ethiopia 2011). Therefore, ensuring a 24-hour availability of PEP services (including weekends and holidays) in health care facilities and providing orientation to staff on the procedures and the reporting system to follow when an incident happens will help in taking timely action as well as tracking exposure incidents. The result of the supervision visits showed that the proportion of facilities that offered PEP services 24 hours a day increased from 60 percent to 92 percent.

Posted BCC materials and the availability of job aids can reinforce IPC practices and can serve as a quick reference for staff and clients. However, findings showed that at the first visit, just over half (53 percent) of the health facilities had BCC materials; information, education, and communication (IEC) materials; or job aids posted. Availability significantly increased by the third visit to 93 percent, with increased awareness about the importance of posting BCC materials and the provision of materials by AIDSTAR-One during each supportive supervision visit.

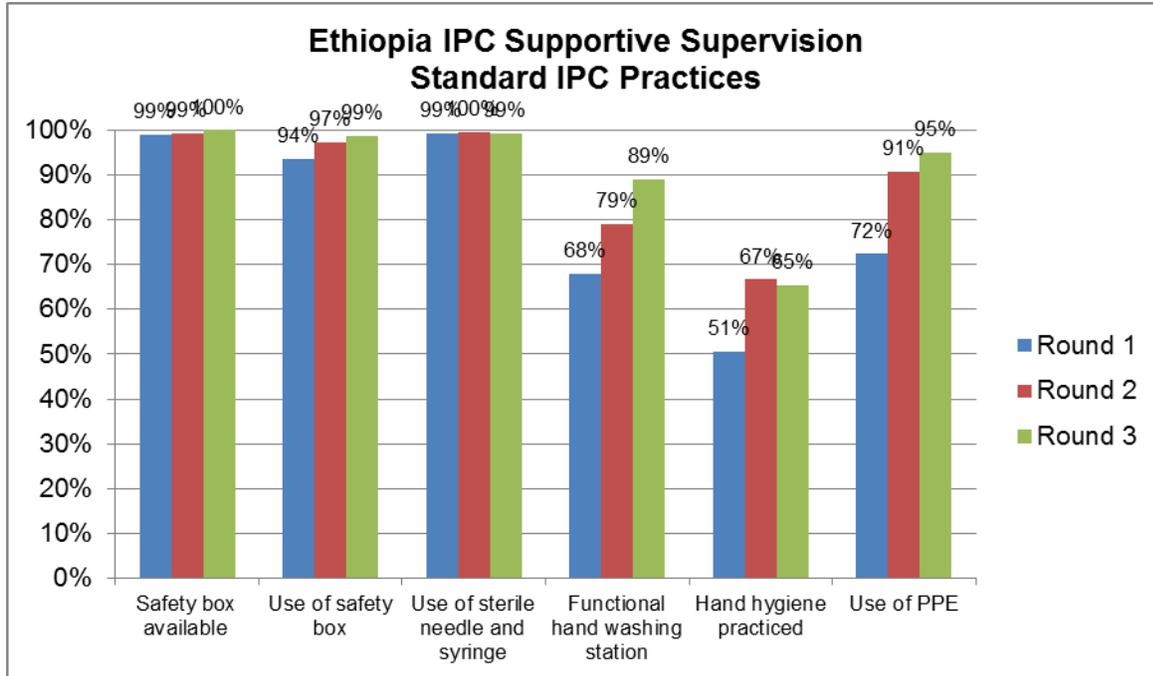
STANDARD PRACTICES

HAND WASHING

Improved handwashing practices significantly reduce the number of potentially infectious microorganisms on the hands, thus reduce infections spread in the health care facility and reduce associated risks. The assessment results show that the practice of a provider washing his or her hands with soap and running water or alcohol-based hand sanitizer between procedures was low,

but improvement was shown from the first to the third visit (from 51 percent to 65 percent; see Figure 2).

Figure 2. Ethiopian IPC Supportive Supervision Standard IPC Practices



HEALTH CARE WASTE MANAGEMENT

Most health care waste is noninfectious waste (like paper, cardboard, and food scraps), but when waste that carries harmful germs or dangerous chemicals is mixed with ordinary waste, the mixed waste can pose a health risk for the health workers, patients, and the surrounding community. In the majority of the facilities (99 percent), safety boxes were available in injection rooms, treatment rooms, operating theaters, labor and delivery rooms, and laboratories at the third round visits. The results also show that waste segregation practices improved significantly between the first and the third supportive supervision visits (from 29 percent to 73 percent) and that the waste containers were emptied in a timely manner (see Figure 2).

Ethiopia’s IPC guidelines recommend that waste should be transported in a way that does not pose a risk and that waste containers should be emptied frequently. The results demonstrate improvement from the first visit but were low even after the third visit (from 39 percent to 62 percent). The reasons cited include a shortage of proper waste transportation materials (e.g., wheelbarrow) and poor road access to the disposal site (e.g., incinerator).

PERSONAL PROTECTIVE EQUIPMENT

The appropriate use of PPE by health care providers is important for the prevention and control of healthcare-acquired infections in health care settings. Personal protective equipment provides a physical barrier and protects health workers from direct contact with infectious agents.

Staff awareness related to the use of the necessary PPE to protect against exposure to blood/bodily fluids reduces the risk of accidental injury. However, some medical staff and waste handlers/laundry

workers did not use PPE consistently or appropriately. Reasons mentioned include a shortage of PPE, discomfort (due to the quality, size, etc.), and a lack of awareness about the risks of non-use. Proper use of PPE by medical staff increased from the first to the third supervision visit. Current use varies by role; health workers reported greater use than waste handlers and laundry workers.

Most facilities have faced shortages of PPE for waste handlers and laundry workers due to unavailability in the local market. Supportive supervision led to an increased awareness on the proper use of PPE (utility gloves, aprons, face shield, boots, etc.) on the part of waste handlers when handling medical waste and when cleaning. The PPE rate of use by waste handlers showed slight improvement between the first and third round visits (from 53 percent to 59 percent). Due to the increased awareness through training, mentoring, and the proper use of available PPE, the reported incidence of needle-stick injuries during the previous six months decreased from 9 percent to 5 percent among waste handlers and 11 percent to 6 percent among health workers.

HOUSEKEEPING/STERILIZATION

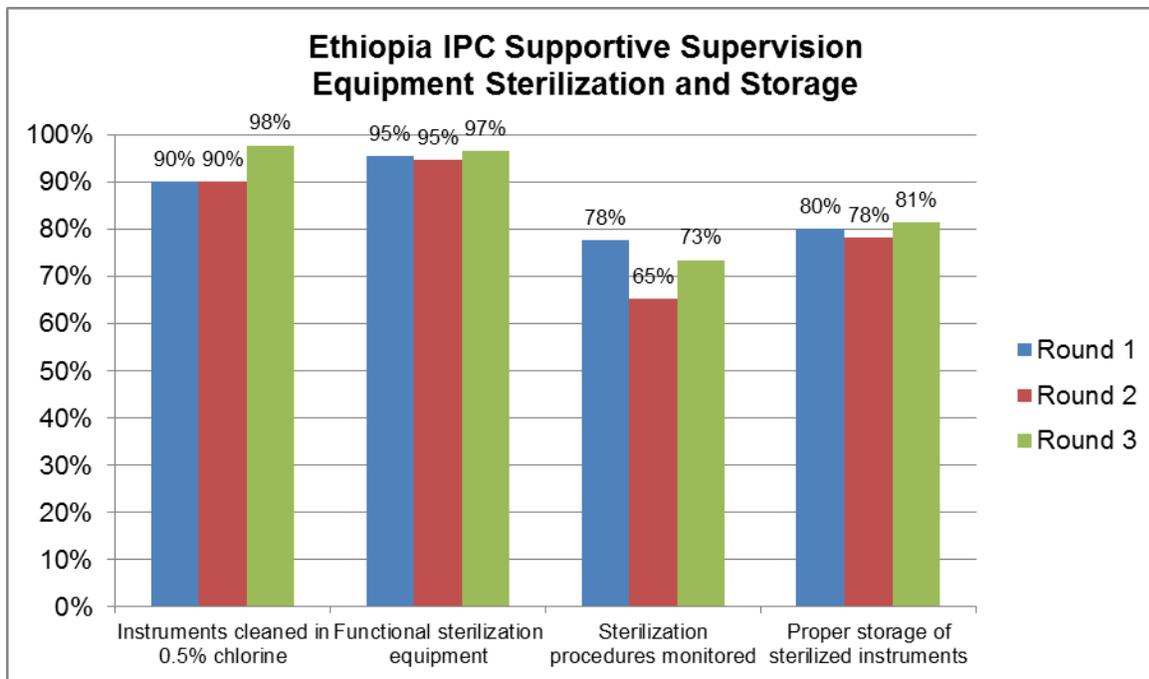
The practice of wet mopping by waste handlers improved between the first and third visits (from 57 percent to 78 percent). The use of 0.5 percent chlorine solution for cleaning blood and bodily fluid spills increased (from 86 percent to 98 percent) as well. Almost all health facilities in three rounds of visits (90 percent, 90 percent, and 98 percent, respectively) were practicing decontamination of used medical instruments and other items in 0.5 percent chlorine solution for 10 minutes immediately after a procedure was completed. The bucket used to hold the items being sterilized was observed in close proximity to the surgical/clinical area in 98 percent of the visited facilities during the third round visits.

Findings show that almost all facilities (97 percent) had functional sterilization equipment at the third visit. However, the percentage of facilities that monitor equipment sterilization procedures decreased from the first to the third visit (from 78 percent to 73 percent; see Figure 3). Specific time, temperature, and pressure requirements are necessary for effective steam sterilization. Autoclaves (steam sterilizers) and dry-heat ovens must be properly maintained to ensure that required sterilization has been achieved. The routine maintenance of sterilization equipment should be a standard procedure, and a responsible staff member should be assigned. However, in almost all facilities, sterilization equipment was not regularly or properly maintained, and there was no responsible staff member to accomplish the task. Approximately one-quarter of the visited facilities attempted to monitor sterilization procedure using time only because the pressure gauge was not functioning.

All sterile instruments and other items should be stored in an environment that is free of dust, dirt, and insects. Sterilized instrument storage practice improved from the first to the third supportive supervision visits (from 80 percent to 81 percent; see Figure 3).

Facilities were trained to store wrapped instruments and other items in a closed cabinet, and to store unwrapped instruments and other items covered in a sterile container. Some of the visited facilities prepared closed cabinets for the storage of sterile instruments.

Figure 3. Ethiopia IPC Supportive Supervision Equipment Sterilization and Storage



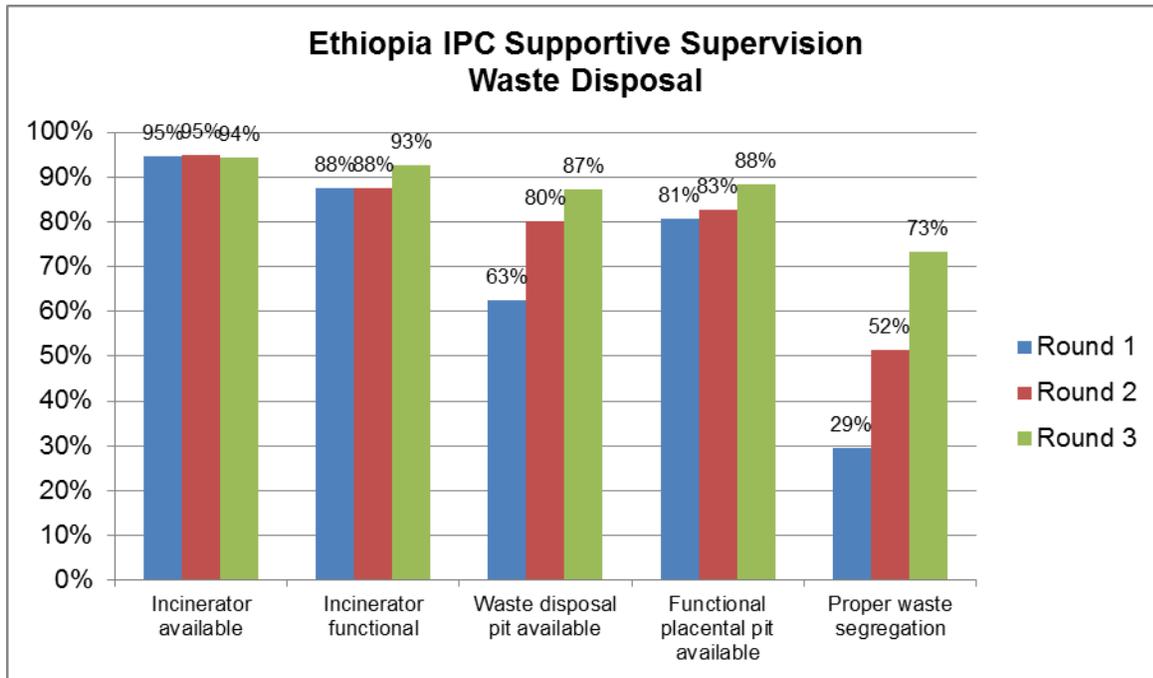
EQUIPMENT, SUPPLIES, AND INFRASTRUCTURE

In facilities where running water is not available or not functional, locally made “tippy taps” for handwashing may be prepared and used.¹ In areas where there is a shortage of water for handwashing, an alcohol-based hand sanitizer may be prepared and used. The results show that the number of functioning handwashing facilities for staff increased (from 68 percent to 89 percent; see Figure 2). Some of the health facilities repaired non-functional sinks and prepared locally made tippy taps. Most facilities with non-functional sinks provided an alcohol-based hand sanitizer as a substitute for handwashing with soap and water.

Field observation results show that the availability of functional incinerators increased (from 88 percent to 93 percent; see Figure 4). During supportive supervision, non-functional incinerators were identified and immediately repaired by AIDSTAR-One. Training for waste handlers and follow-up supervision by the health facility’s IPC committee contributed to proper incinerator use in the majority of the target facilities. Similarly, functional placental pit availability increased (from 81 percent to 88 percent; see Figure 4) during the mentoring period. Waste disposal pit availability showed improvement (from 63 percent to 87 percent; see Figure 4). Health facilities prepared waste disposal pits from their internal budgets. The installation of fencing around the incinerator, the placental pit, and the waste disposal pit was one of the activities accomplished by the project to prevent access to this area by children and animals in target facilities.

¹ A tippy tap is a hand washing facility made of locally available material such as clay, metal, or plastic and is a good alternative for hand washing in a resource-limited environment.

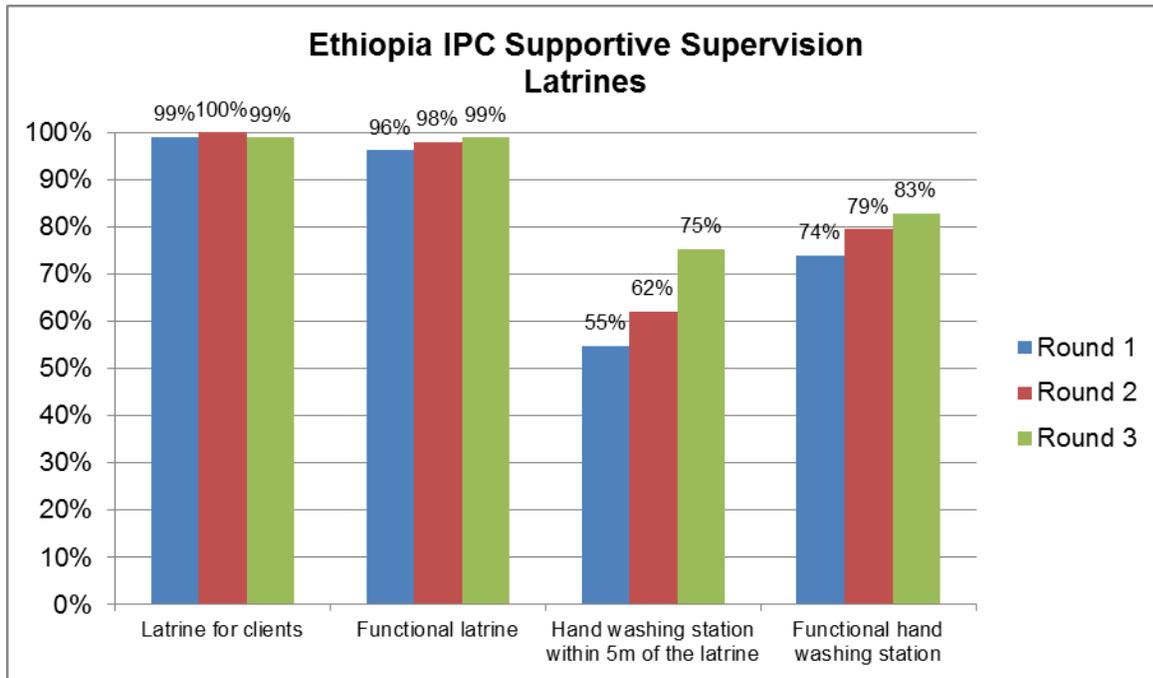
Figure 4. Ethiopia IPC Supportive Supervision Waste Disposal



Nosocomial diarrhea is a common problem in health care settings (Yannelli et al. 1988). Nosocomial transmission of fecal organisms by contaminated water can be reduced considerably by supplying drinking water and ensuring its quality in health care facilities. *Clostridium difficile* is the most frequent etiologic agent for healthcare-associated diarrhea. In one hospital, 30 percent of adults who developed healthcare-associated diarrhea were positive for *C. difficile* (Yannelli et al. 1988). Availability of drinking water for clients and facility/service delivery room staff improved between the first and third round visits (from 79 percent to 84 percent).

Almost all of the facilities (99 percent) had a functional latrine for staff and clients during the third visit. Supportive supervision focused on latrine sanitation and the availability of a handwashing facility near the latrine. The results show significant improvement (from 55 percent to 75 percent; see Figure 5). Of the available handwashing facilities near the client latrines, 83 percent were functional at the third supervision visit (see Figure 5).

Figure 5. Ethiopia IPC Supportive Supervision Latrines



The third round results show that there were no stock-outs of syringes, safety boxes, and sterile and clean gloves at the majority of the facilities (94 percent, 92 percent, and 81 percent, respectively). However, no stock-outs of disinfectants or decontamination chemicals were only reported in approximately three-fourths (74 percent) of the visited facilities.

DISCUSSION AND RECOMMENDATIONS

As mentioned previously, health care–associated infections can lead to disability, death, and excess medical costs. IPC interventions maximize patient outcomes and are an essential part of providing effective, efficient, and quality health care services. For successful implementation and to maintain appropriate IPC practices at health care facilities, basic IPC training can improve knowledge and skills and can also improve creativity and effective management skills through experience sharing among health care workers. Once IPC awareness has been created through training, the facility needs to be monitored and supervised regularly to help guide health care workers to improve their IPC practices. Establishing and strengthening the facility-level IPC committee members and building their independent supportive supervisory capacity are essential to sustain improved IPC practices.

Overall, the supportive supervision results show significant improvement in IPC knowledge and practices in health care workers and supporting staff at the facility level. This improvement can be attributed to the reinforcement of practices learned from the IPC training during on-site supportive supervision visits. Improvements have especially been made vis-à-vis facility-level budget increases for IPC programs, safety box use, PPE use by health workers, the availability of PEP, and proper medical instrument processing and storage practices.

Although encouraging progress was observed related to hand washing, waste segregation, and instrument sterilization-monitoring practices, there is still room for improvement, especially in the areas of on-site training and scheduling supportive supervision visits by IPC committees and woreda supervisors. Additional supportive supervision visits to those facilities that did not meet the graduation criteria can help fill the observed knowledge and skills gaps and create commitment and momentum among IPC committee members and other staff for implementing IPC activities.

Nearly half (40 percent) of the health facilities targeted for supportive supervision fulfilled the preset criteria for graduation, and the facilities' IPC committees will continue to provide internal supervision to sustain the observed IPC practices. The remaining target facilities that did not meet the criteria will be provided with one to two additional visits by the project in conjunction with the counterparts from the respective facilities.

The improvements demonstrate that supportive supervision can lead to behavior changes among health care workers by improving knowledge and practices related to IPC.

CHALLENGES

- IPC staff turnover (especially among the facility heads) in some of the visited health facilities has made sustainability a challenge.
- There is a shortage of PPE for waste handlers and laundry workers (not available in the local market).

- Written supervision feedback is not properly documented in some of the facilities. Introduction of a logbook helped address this situation.
- In some facilities, there is a lack of commitment by the IPC committee members and head of the facility.
- Some facilities were constructed without an incinerator or placenta pit, especially facilities that were upgraded from clinics.
- There is a shortage of water supply during the entire year as well as malfunctioning sewers, pipes, sinks, and other sanitary fittings in some of the visited facilities.
- Non-functional instrument sterilizers were found in some of the visited facilities. (This is due to the following challenges: the instrument sterilizers are frequently not bundled with spare parts or manuals, staff have little knowledge or skill to operate and repair them, no maintenance training has been given, and some facilities have no power supply to use their sterilizers.)
- Sterilized medical equipment was not stored appropriately by some staff in certain facilities.
- There are no clear-cut written policies or procedures for the treatment and disposal of expired drugs in facilities.
- Students doing their clinical practicum or internship are not properly practicing hand washing and waste segregation practices in some facilities.

NEXT STEPS

Next steps include sharing a copy of this supportive supervision report with the FMOH, target RHBs, zonal health departments, woreda health offices, health facilities, and other partners.

RECOMMENDATIONS

PARTNERS

Partners should continue to provide technical and financial support at each level (FMOH, regions, zones, woredas, and health facilities) on the proper implementation of IPC and HCWM activities, including a sustainable supply of IPC commodities, staff training, and capacity building of biomedical equipment maintenance personnel.

FEDERAL MINISTRY OF HEALTH

- The FMOH of Ethiopia should ensure the availability of IPC commodities and supplies in the local market by working with local manufacturers and technical and vocational training colleges to enable them to produce IPC supplies locally.
- The FMOH should provide all health facilities with IPC and HCWM guidelines through RHBs, who should further distribute them to health facilities.
- The FMOH should provide hard and soft copies of educational materials, job aids, and video clips to all targeted health facilities. The FMOH and the health education center should collect and distribute IPC-related IEC/BCC materials and job aids developed by partners to the RHBs on a regular basis.

- The FMOH should ensure the availability of regular funding to purchase IPC commodities and maintenance work on water, sanitation, and hygiene stations. It should also prioritize IPC commodities during regular budget allocation and planning and should raise funds centrally and purchase enough supplies of IPC commodities for the country.
- The FMOH should replicate these supportive supervision experiences in other public facilities to improve their IPC practices, and it should work with partners to document best IPC practices and scale up those best practices in other regions, such as training followed by supportive supervision.
- Finally, the FMOH should support regions, woredas, and health facilities on medical equipment maintenance activities. The FMOH should, in collaboration with partner organizations, arrange training and capacity building activities on medical equipment maintenance to the regional-, zonal-, woreda-, and facility-level biomedical equipment technicians, so that they can repair any non-functional medical equipment in their respective areas of the country.

REGIONAL HEALTH BUREAUS

- The RHBs should ensure the availability of IPC commodities and supplies in the local market by working with local manufacturers and technical and vocational training colleges to enable them to produce IPC supplies locally.
- The RHBs should provide all health facilities with IPC and HCWM guidelines. The FMOH should distribute IPC and HCWM guidelines to RHBs, who should further distribute them to health facilities.
- The RHBs should provide hard and soft copies of educational materials, job aids, and video clips to all targeted health facilities. The FMOH and the health education center should collect and distribute IPC-related IEC/BCC materials and job aids developed by partners to the RHBs on a regular basis.
- The RHBs should build the independent supervision capacity of the woreda supportive supervision experts and health facility-level IPC committees. The RHBs, with partner organizations, should provide training on supportive supervision skills and should arrange joint supportive supervision visits with zonal and woreda experts to build capacity.
- The RHBs should also ensure the availability of regular funding for IPC commodities and maintenance work on water, sanitation, and hygiene stations. The RHBs should prioritize the IPC program during budget allocation and should secure funds from donors and other sources for the program to locally purchase IPC commodities and distribute them to health facilities.
- The RHBs should support zones, woredas, and health facilities in medical equipment maintenance activities. The RHBs should deploy trained medical equipment maintenance technicians to maintain non-functioning medical equipment in their surrounding facilities.
- The RHBs should replicate these supportive supervision experiences for other public facilities to improve their IPC practices. RHBs should work with partners to document best IPC practices and scale up those best practices in other regions, such as training followed by supportive supervision.
- Finally, RHBs should organize refresher trainings to health care workers on IPC practices, especially on handwashing and waste segregation practices.

ZONAL HEALTH DEPARTMENT/WOREDA HEALTH OFFICE

- The zonal health department/woreda health office should establish or strengthen health facilities' IPC committees through joint supportive supervision so that the committee regularly supervises the implementation of IPC practices by staff and identifies gaps in order to explore possible solutions.
- The zonal health department/woreda health office should prioritize IPC programs during budget allocation and should increase budgets for IPC programs.
- The zonal health department/woreda health office should support woreda and health facilities in maintenance activities on medical equipment.

HEALTH FACILITIES

- The health facility IPC committee should continue having regular meetings and internal facility supervision. Each supportive supervision should be conducted in a more effective way (i.e., use structured checklists, involve relevant personnel, provide on-site and written feedback, provide proper documentation, and provide objective monitoring of progress).
- The health facility should secure funds for the IPC program locally through sensitization of local community and local nongovernmental organizations working on health activities.

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ANNEX I

AIDSTAR-ONE SUPPORTIVE SUPERVISION CHECKLIST FOR INJECTION SAFETY AND INFECTION PREVENTION

SECTION 1: IDENTIFICATION

Region: _____ Zone _____ Woreda _____

Name of Health Center _____

Circle the type of facility: Government / NGO / Private

Date of last Visit _____ Date of Current Visit _____

SECTION 2: FOLLOW UP ISSUES FROM PREVIOUS SUPERVISION

Key Issues from the last visit

1. _____
2. _____
3. _____
4. _____
5. _____

Circle **Yes** or **No** for each question below in each of the sites visited. If you are unable to observe an item, circle **NA/NO**. If respondent does not know the answer, circles **don't know**. All questions should be answered. If a question has two parts and the answer to part A is NO, mark NA for part B.

For each question below, if you observe an unsafe injection, practice, or situation, discuss what the health worker should do differently and why it is important. Please record your additional relevant observations in the column entitled "Comments."

If you mark "**not observed**" explain the reason for no observation in the comments column

Explain the purpose of the visit to the head of the facility/representative. Inform this person that you would like to ask a few questions about infection prevention. Ask to look around the facility to make some observations of infection prevention (IP) and waste management practices.

3: Questions

No	Question or Observation	Response	Intervention	Comments
INTERVIEW WITH THE HEALTH FACILITY DIRECTOR or person in charge of the unit, as appropriate.				
1	In this facility, do you have a copy of IPC/HCWM guideline?	1/Yes 2/No 3/Don't know	If no, provide a copy.	
2A	Is there infection prevention committee in this facility?	1/Yes 2/No 3/Don't know	If no, discuss importance with health facility head and next steps for committee organization	
2B	If yes, is it functional? (meet at least once a month, check plan and minutes)	1/Yes 2/No 3/Don't know 4/NA		
3	Did this facility allocate budget for IPC activities? (such as IP commodities, and facility maintenance)	1/Yes 2/No 3/Don't know		
4	Is a needle stick injury recording and reporting system available in this facility?	1/Yes 2/No 3/Don't know	If yes, ask to see the registration and check for proper utilization. Ensure that staff is how to report injury and how to access VCT services. If no, discuss importance of creating a reporting system with facility head & IP committee. .	
5	Is Post Exposure Prophylaxis (PEP) service available at all times (24 hours) in this facility?	1/Yes 2/No 3/Don't Know	If no, discuss the importance of 24 hr PEP with management and IP committee to ensure availability	
6	Have you ever conducted internal IS/IP supportive supervision in this facility?	1/Yes 2/No, 3/ Don't know	If yes, ask to review identified gaps noted follow up, if any.	
7A	Did your facility received supervision on IS/IP practices by external supervisors during the previous year (12 months)?	1/Yes 2/No 3/Don't know	If yes, record who supervised the facility	
7B	If yes, did the facility receive supervision feedback from external supervisors? If no supervision in previous year, mark NA.	1/ Yes 2/ No 3/ Don't know 4/NA	If yes, ask for major feedbacks	

OBSERVATIONS OF SERVICE DELIVERY UNITS (Injection and Laboratory units)					
Instruction: Observe two different providers (observation 2 should be in the Lab. If the facility has one). If no provider is available for the second observation select “not observed” for Observation 2.					
		Observation 1	Observation 2	Interventions	Comments
8	For each injection observed, were the needle and syringe taken from <u>unopened</u> package? <i>If not observed, explain why in comments.</i> <i>(This question applies to standard disposable syringes and syringes with reuse and/or needle stick prevention features. Code sterilizable syringes, as “no”.)</i> <i>NOTE: Intervene tactfully to interrupt any unsafe injection or reconstitution as needed.</i>	1/Yes 2/No 3/Not observed	1/Yes 2/No 3/Not observed		
9	After observed injection, did the provider <u>immediately</u> dispose of the used needles and syringes in an appropriate sharps container/safety box? <i>If not observed, explain why in comments.</i> <i>(Include the needles and syringes used for reconstitution and for injection in answering this)</i>	1/Yes 2/No 3/Not observed	1/Yes 2/No 3/Not observed	If no, ask the reason why they are not using a sharps container or not using it immediately. Discuss the importance of proper disposal of used sharps and the dangers improper disposal may cause to other health workers and the community. Seek solutions.	
10	Did the provider use a pair of gloves? If not observed, explain why in comment column	1/yes 2/No 3/Not observed	1/yes 2/No 3/Not observed		
Interview with the injection provider					
11A	<u>Ask injection provider:</u> Have you had any needle-stick injuries in the last 6 months?	1/Yes 2/No 3/Don't know	1/Yes 2/No 3/Don't know	If yes, find out how the injury occurred and discuss ways of preventing such injuries in the future. Discuss any constraints the person faced in reporting / being tested and the MOH policy. Answer any questions on PEP.	
11B	If yes, did you report the incidence?	1/Yes 2/No 3/NA	1/Yes 2/No 3/NA		

OBSERVATION OF THE FACILITY					
12	Is there a safety box in all observed injection areas?	1/Yes 2/No	1/Yes 2/No	If no, discuss why safety boxes are not available and discuss with the head of the facility to obtain safety boxes and make them available at all injection areas.	
13A	Is there a hand washing facility in observed injection area?	1/Yes 2/No	1/Yes 2/No	If no, discuss the importance of hand washing facility and discuss next steps with the IP committee	
13B	If yes, is it functioning? If no hand washing station mark NA	1/Yes 2/No 3/NA	1/Yes 2/No 3/NA	If no, ask the reason for not functioning and discuss possible solution and next steps with the IP committee	
14	Did the service provider wash his/her hands between procedures? If yes, mention the technique used(soap & water, alcohol based sanitizer) on the comment column	1/Yes 2/No 3/Not observed	1/Yes 2/No 3/Not observed	If no, discuss the importance of hand washing. Where possible, demonstrate the right technique	
15	Is waste being properly segregated (using 3 bin systems)?	1/Yes 2/No	1/Yes 2/No	At minimum, a safety box for sharps and at least two different waste bins for infectious & noninfectious wastes should be available in each injection area(3 bin system)	
16	Are job aids/ BCC materials posted that promote safe IS/IP practices?	1/Yes 2/No	1/Yes 2/No	If not posted encourage posting in order to promote safe IS/IP practice	
INTERVIEW WITH THE HEALTH FACILITY medical equipment processing personnel or person in charge					
17	Are used medical instruments first decontaminated with 0.5% chemical then cleaned and sterilized before reuse?	1/Yes 2/No 3/Don't know		If no, ask the reason provide technical support on how to prepare the solution For equipment processing unit and/or all service delivery unit	
18A	Is sterilization equipment available in the facility?	1/Yes 2/No 3/Don't know		For equipment processing unit and/or all service delivery units	
18B	If yes, is it functioning?	1/Yes 2/No 3/Don't know 4/NA		If no, ask the reasons and discuss maintenance issues with management and IP committee.	
19	Do you monitor sterilization procedures? If yes describe how in comment section	1/Yes 2/No 3/Don't know			

20	Are sterilized instruments stored in closed cabinet that limits the risk of contamination?	1/Yes 2/No 3/Don't know	If no, provide technical assistance on proper storage of sterile instrument.	
INTERVIEW WITH THE HEALTH FACILITY store man or person in charge				
21	Has there been a stock out of 5 ML syringes in the last 6 months?	1/Yes 2/No 3/Don't know 4/NA	If yes, discuss why with facility management	
22	Has there been a stock out of safety boxes in the last 6 months?	1/Yes 2/No 3/Don't know 4/NA	If yes, discuss why with facility management	
23	Has there been a stock out of disposable gloves in the last 6 months?	1/Yes 2/No 3/Don't know 4/NA	If yes, discuss why with facility management	
24	Has there been a stock out of chemicals (e.g chlorine) in the last 6 months?	1/Yes 2/No 3/Don't know	If yes, discuss why with facility management	
25	Is personal protective equipment available for waste handlers? If heavy duty gloves and boots are available, mark yes	1/Yes 2/No 3/Don't know 4/NA	Discuss with the store man what equipment is available, what additional needs they may have, and possible strategies to meet those needs.	Circle all, that are available 1.Face mask 2. Goggles 3. Heavy duty gloves 4.Plastic apron 5.Clothes that cover the body 6.Heavy duty boots Other protective equipment-----
OBSERVATION OF THE FACILITY				
26A	Is there a stock/ bin card for 5ML syringes?	1/Yes 2/No 3/NA	If yes, record the balance. If no, count and record the balance, suggest use of stock/bin card. Check for different types of gloves	
26B	If yes, is it updated? If no stock/bin card, mark NA	1/Yes 2/No 3/NA	At least updated for the last one month	
27A	Is there a stock/ bin card for disposable gloves?	1/Yes 2/No 3/NA	If yes, record the balance. If no, count and record the balance, suggest use of stock/bin card.	
27B	If yes, is it updated? If no stock/bin card, mark NA	1/Yes 2/No 3/NA	At least updated for the last one month	
Interview with waste handler and/or laundry staff				
28	Does staff practice wet mopping for cleaning	1/Yes 2/No 3/Don't know	If staff practices dry mopping, discuss the risk of disease transmission and suggest wet mopping	
29	When cleaning blood/body fluid spills from surface/floors, is a 0.5%	1/Yes 2/No 3/Don't know	If no, discuss the risk of disease transmission and prepare method for 0.5% solution	

	chemical solution used?			
30A	<u>Ask waste handler</u> : Have you had any needle-stick injuries in the last 6 months ?	1/Yes 2/No 3/Don't know	If yes, discuss how the injury occurred and ways of preventing injury in the future. Discuss any constraints person faced in reporting / being tested and the MOH policy. Answer any questions on PEP.	
30B	If yes, did you report the incidence? If no needle stick in the last 6 months, mark NA	1/Yes 2/No 3/NA		
31	Is transportation of infectious medical waste being practiced in a way that does not pose risk of infection?	1/Yes 2/No 3/Don't know	Not pose risk during transportation means: Using carts for infectious and noninfectious wastes transportation or waste bin with cover and handle & for sharps with the necessary precaution, to avoid risk of needle-stick injury.	
Interview with laundry worker				
32	Is used linen sorted in a non-patient care area?	1/Yes 2/No 3/Don't know 4/NA	If sorting takes place in patient care area, discuss the risk of disease transmission and suggest sorting used linen in the laundry area	
33	Are clean and used linens transported using different carts?	1/Yes 2/No 3/Don't know 4/NA	If using the same carts without cleaning, discuss the risk of cross contamination and suggest use of separate carts or provide technical assistance on how to clean before use.	
34	Is there a storage place/area for used/soiled separate from clean linen?	1/ Yes 2/ No 3/Don't know 4/NA	If no, discuss the risk of cross contamination and suggest separate storage	
35A	<u>Ask laundry staff</u> : Have you had any needle-stick injuries in the last 6 months?	1/Yes 2/No 3/Don't know	If yes, find out how the injury occurred and discuss ways of preventing such injuries in the future. Discuss any constraints the person faced in reporting / being tested and the MOH policy. Answer any questions on PEP.	
35B	If yes, did you report the incidence? If no needle stick, mark NA	1/Yes 2/No 3/NA		

OBSERVATION of waste handler and Laundry workers				
36	During each observation did all waste handlers wear PPE according to the standard? (while engaged in activities) If not observed , explain why in comments	1/Yes 2/No 3/Not observed 4/NA	PPE according to the standard: Utility gloves mask & boots. If no, ask the reason for not wearing. Discuss the importance of PPE with waste handlers & IP committee. How to get it if not available.	
37	During each observation did all laundry worker wear PPE according to the standard? (while engaged in activities)	1/Yes 2/No 3/Not observed 4/NA	PPE according to the standard: Utility gloves, apron, boots If no, ask the reason for not wearing. discuss the importance of PPE with the workers & IP committee, to get it if not available	
OBSERVATION of the facility waste treatment & disposal and WASH infrastructure				
38A	Is an incinerator available?	1/Yes 2/No		
38B	If yes, is incinerator functional? If no incinerator is available, mark NA	1/Yes 2/No 3/ NA	If maintenance is needed for the incinerator to function & discuss with facility head and IP committee needs and next steps.	
39	Is a waste disposal pit available? <u>If waste disposal pit is full mark NO and explain in comments section</u>	1/Yes 2/No	If no, discuss the importance with management and IP committee and discuss next steps.	
40	Is a placental pit available? <u>If placenta pit is full mark NO and explain in comments section</u>	1/Yes 2/No	If no, discuss importance and next steps (maintenance or construction)	
41	Is clean drinking water available for clients?	1/Yes 2/No		
42A	Is a latrine/toilet available for clients?	1/Yes 2/No		
42B	If latrine/ toilet is available, is it functional? If No latrine available, mark NA	1/Yes 2/No 3/ NA	If not functional, discuss why and next steps with the management and IP committee.	
42C	If latrine/toilet is functional (yes to 42B) is it clean?(no visible feces or urine) If No functional latrine, mark NA	1/Yes 2/No 3/ NA	If no, discuss importance of keeping latrine clean with IP committee.	
43A	If latrine/toilet is functional (yes to 42B), is there a hand washing facility available within 5meter of the latrine? If No functional latrine, mark NA	1/Yes 2/No 3/ NA	If no, discuss the necessity of hand washing facility near latrine/toilet with the management and the IP committee and next steps for construction	
43B	If hand washing facility is available within 5 meters of	1/Yes 2/No	If no, discuss why with the management and the IP	

	latrine (yes in 43 A, is it functional? If NO functional latrine mark NA If NO hand washing mark NA	3/ NA	committee and next steps for maintenance.	
43C	If functional hand washing facility is available (yes in 43 B) is soap/ash available at each <u>functional hand washing</u> facility? If NO functional latrine available mark NA If NO functional hand washing facility mark NA	1/Yes 2/No 3/ NA	If no, discuss importance of availability of soap/ash with the management and IP committee and next steps for provision of soap/ash.	

N.B: Make sure that, any IPC commodity & supplies which are available in the facility store are being utilized, if there is a need.

3.3 Major Strengths and Weaknesses

Strengths

1. _____

2. _____

3. _____

4. _____

5. _____

Observed gaps

1. _____

2. _____

3. _____

4. _____

5. _____

3.4 Additional comments and concerns for future revision

1. _____

2. _____

3. _____

4. _____

5. _____

Supervision Team

1. Name _____ Position ----- Signature _____
Date _____

2. Name _____ Position ----- Signature _____
Date _____

3. Name _____ Position ----- Signature _____
Date _____

For more information, please visit aidstar-one.com.

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