ETHIOPIAN HOSPITAL ALLIANCE FOR QUALITY

CHANGE PACKAGE ON CATCH-IT 2019-2020

July, 2019

Addis Ababa, Ethiopia

FORWARD

The FMOH has identified quality as Transformational agenda of the Health Sector Transformational Plan (HSTP) and envisions all of its citizens to enjoy quality and equitable access to all types of health services. To this end, the Medical Service General Directorate developed different Quality improvement initiatives in line with HSTP and the Ethiopian Hospital Service Transformation Guidelines (EHSTG), Ethiopian National Quality Strategy (ENQS),Saving Life through Safe Surgery (SaLTs) ,Health Service Transformation in Quality (HSTQ) and Hospital Performance Monitoring Improvement (HPMI) are different major initiative to achieve quality and thus, the Ethiopian Hospital Alliance for Quality (EHAQ) was formed to address this need.

Since its inception, the EHAQ has already improved the documentation and sharing of best practices between hospitals, and has helped to motivate quality improvement projects in both the LEAD, CO-LEAD and member hospitals that are participating in the alliance. FMOH decided 3rd EHAQ cycle to be focused on CATCH-IT: Clean and Timely Care in Hospitals for Institutional Transformation.

This CATCH-IT Change Package is prepared for hospitals pertaining that all healthcare providers shall be participating in the initiative to realize the envisioned quality improvement collaborative. The Change Package describes some nationally and internationally recognized best practices relating to Clean and Timely Care in hospitals.

I believe the change package provide valuable information for taking hospital transformation actions that will be helpful in improving and scaling up to respond to the practical needs of our health service customers

Finally, I would like to take this opportunity to call upon all health sector actors, development partners, and the wider health community to contribute maximally on the success of this national initiative.

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ACRONYMS

AMR Anti-Microbial Resistance

CATCH-IT Clean and Timely Care for Institutional Transformation

CASH Clean and Safe Health Facilities

DHIS2 District Health Information System

EHAQ Ethiopian Hospital Alliance for Quality

ENQS Ethiopian National Quality Strategy

EHSTG Ethiopian Hospital Service Transformation Guidelines

FMOH Federal Ministry of Health

HSTP Health Sector Transformational Plan

HH Hand hygiene practice

HCAI Health Care Acquired Infections

HSTQ Health Service Transformation in Quality

HPMI Hospital Performance Monitoring Improvement

IOM Institute of medicine

IPC Infection Prevention and Control

KPI Key Performance Indicator

LEAD Leadership, Excellence, Action, and Dissemination

MSDG Medical Service General Directorate

RHBs Regional Health Bureaus

SaLTS Saving life through Safe Surgery

BACKGROUND

The Ethiopian Hospital Alliance for Quality (EHAQ) is a system for promoting learning and collaboration, based on a model that involves hospitals exchanging knowledge with each other and empowering the hospital industry to self-improve. EHAQ was designed to act as a catalyst to allow this new model of learning to take root and flourish, connecting hospitals across the country in an effort to accelerate quality improvement.

EHAQ consists of 47 LEAD (Leadership, Excellence, Action, and Dissemination) hospitals that are connected with a cluster of general member hospitals to which they are responsible for providing direct assistance in implementing service-based quality improvement projects. In addition, each LEAD hospital will share innovative and best practices from their own hospital with all members of the cluster as well as members of the EHAQ. As a reward for their high performance and mentoring efforts (in the last cycle), the LEAD hospitals have received financial and technical support from the Ministry of Health and Regional Health Bureaus (RHBs).

During the third cycle the focus area is Clean and Timely Care. However during selection of LEAD Hospitals, it is not only the Clean and Timely Care services that will be evaluated, but also other elements that can indicate the overall performance of the hospitals, such as Ethiopian Hospital Service Transformation Guidelines (EHSTG) implementation performance, Clean and Safe Hospital (CASH) initiative implementation, Saving Life through Safe Surgery (SaLTs) initiative ,Health Service Transformation in Quality (HSTQ) implementation, Key Performance Indicator (KPI) and DHIS2 data handling and reporting, and cluster activity.

INTRODUCTION

Cleanliness of care

Health care facility cleanliness is an important determinant of quality of care and patient satisfaction. Health care provided in health facilities should be safe, effective, patient-centered, timely, efficient and equitable. Health facilities should ensure that patients are the corner-stone in the whole health care delivery process. This would entail for health facilities to be responsive to the values, beliefs and culture of patients in all aspects as well as creating a healing health care environment.

Cleanliness in health care facilities is about more than just keeping the place clean. It makes a statement to patients and visitors about the attitudes of staff, managers and the board in terms of attention to detail on the level of care and the way the facility is organized and run. It is not possible to have a good health facility without being clean and tidy. Excellence in patient care is dependent on getting the basics right, making sure that the food is good, making sure that the patients are cared for appropriately and that the surroundings are clean, tidy, comfortable and safe.

It is also said that cleanliness is everybody's responsibility. The advantages of a clean health facility include clean, comfortable and safe environment for patients, attendants, visitors, staff and members of the general public; increased patient confidence in local health care settings in relation to environmental hygiene and the organizations commitment to reduce the incidence of hospital acquired infections.

Cleaning is the physical removal of foreign material i.e. bloody and body substances, rust, dust, debris, spillages, etc. Cleaning physically removes rather than kills microorganisms. This basic function could be achieved with water, detergent and mechanical action. It is said that cleaning by normal housekeeping methods is sufficient for general hospital cleaning and is a prerequisite for decontamination. If an item is not cleaned, dirt can prevent an item from being decontaminated i.e. the dirt prevents the action of the disinfectant making it ineffective. Disinfectants are only necessary to decontaminate when potential infection is suspected and after spillage of organic matter, blood, pus etc.

The Ministry has been implementing a big national initiative in complement of the infection prevention and control program called clean and safe health facilities (CASH) and significant

improvements have been recorded. The cleanliness of health care facilities still requires sustainable progress and improvement so as to address the problems mainly related health facility acquired infections (HCAI's) and the burden of antimicrobial resistance (AMR).

A recent assessment of selected public hospitals indicated that many hospitals have poor performance particularly environmental cleaning and health care waste management practices is in bad shape.

Timeliness of care

The IOM defines timely care as "reducing waits and sometimes harmful delays for both those who receive and those who give care." These quality measures show how often or how quickly hospitals give clinical services for the client according to recommended time known to get the best results.

Timely care in hospital is essential for good patient outcomes. Delays before getting care in hospital can reduce the quality of care and increase risks and discomfort for patients with serious illnesses or injuries. In addition, it is negatively affecting health outcomes due to delays in diagnosis and treatment, it also decreases patient satisfaction.

Waiting times at different hospital departments can vary widely, depending on the number of patients seen, staffing levels, efficiency, admitting procedures, or the availability of inpatient beds.

Improving timeliness of healthcare is important because:

- Long-term disability or risks of death from acute conditions (e.g. stroke and heart attack) are influenced by timeliness of treatment.
- Prolonged waits time for care reduce patients' quality of life, their productivity at work, and the likelihood of achieving good health outcomes.
- If healthcare services and diagnostic test results are not available or not delivered in a timely way, patients can experience emotional distress, physical harm and higher treatment costs.
- Waiting times can influence the way patients seek care, such as visiting a hospital emergency department (ED) for cases which could be managed in regular OPD.

Ensuring people receive timely services when they need it, is a central element of quality healthcare service.

What is the change package?

The change package includes a set of evidence-based tools and resources to promote quality improvement. The package is designed to help physicians, midwives, nurses, hospital managers, all health care providers, non-clinical staff and quality improvement teams as they are seeking to improve hospital cleanliness and timely care. The package includes nationally-adapted international tools, ready to be tailored to your hospital's needs. The change package provides practical ways to better implement existing standards and guidelines and to address gaps in practice found in a baseline assessment of Ethiopian hospitals.

Purpose of the change package

The general purpose of this change package is to help hospitals identify gaps in service in order to improve cleanliness and timely care.

CATCH-IT CHANGE MANAGEMENT

Change management is a structured and intentional approach to support people through change. It prepares, equips, and supports individuals through the changes to their jobs. With a dedicated focus on mobilizing adoption and usage, change management supports holistic and successful change. It is solid foundation covering the what, why and how of managing the people side of change to deliver results.

Change is often a complex and difficult process. Leading successful change in other people and across whole organizations requires new thinking and new tools. The success of this CACH-IT initiative depends on how individuals in the organization embrace and adopt these changes. Change happens at the individual level. Even with an effectively architected project plan, however, the most commonly cited reason for project failure is problems with the people side of change. In order for a group or organization to change, all the individuals within that group or organization must change. This means that in order to affect change in our organizations and communities, we must first understand how to affect change one person at a time.

Change naturally aligns to typical activities associated with change management and articulates clear goals for these activities:

For example:

1. Awareness of the need for change. Awareness is a goal/outcome of early communications related to an organizational change.
2. Desire to participate and support the change. Desire is a goal/outcome of sponsorship and resistance management.
3. Knowledge about how to change. Knowledge is a goal/outcome of training and coaching.
4. Ability to implement the change on a day-to-day basis and to realize or implement the change at the required performance level. Ability is a goal/outcome of additional coaching, practice and time.
5. Reinforcement to keep the change in place and to ensure change sticks. Reinforcement is a goal/outcome of adoption measurement, corrective actions and recognition of successful change

Awareness

If the new change package is implemented and Hospital staffs are not aware that any changes are needed, their reaction might be:

"This is a waste of time."

"It was working just fine before."

"They never tell us what's going on!"

A natural human reaction to change, even in the best circumstances, is to resist. Awareness of the hospitals need to change is a critical component to overcoming resistance. If, on the other hand, Hospital staffs clearly understand that the old practice and their version of change will no longer be supported by the managing, or that new change packages will help them meet patients' needs more effectively, the reaction (based on increased awareness) could look very different:

"How soon will this happen?"

"How will this impact me?"

Will, I receive new training?"

Desire

Armed with awareness that a change is required, a Hospital staff still may have low desire to log in and use the new change packages:

"I'm not interested in changing."

"What's in it for me?"

"I doubt they are really serious about this."

The Hospital staff's personal motivators or barriers contribute to their level of desire to use the new change packages. Each person could have his/her own unique reasons for engaging or resisting; sometimes reasons that are not even related to the change.

If a Hospital staff has no desire to change, they may be labeled as difficult, inflexible, pessimistic or unsupportive. The best person to help a resistant Hospital staff is their department/case team head or supervisor, who is usually closest to the Hospital staff and able to translate the change into the Hospital staff's personal context. Managers need to engage in coaching conversations to help connect the change to personal motivators and to identify how barriers can be removed or minimized.

Knowledge

Only after awareness and desire are built should we begin providing detailed knowledge of how to use the new change packages. Unfortunately, it is often the case that an organization sees a change coming and the very first step that they take is to send Hospital staffs to training. The result of this approach is that the investment in the training is not highly effective. Hospital staffs are not engaged in the detailed functionality of the change packages because they are not prepared to learn. They may not even know why they are there in the first place. To make the most of a training investment, it must come after initial awareness and desire building.

Ability

After helping Hospital staffs gain intellectual understanding of how to navigate in the change package interface, there may still be a gap between knowledge and ability. Knowledge knows what to do; ability is being able to actually put that knowledge into practice. Demonstrated ability to operate with the change package in a live, real-world situation is where the change actually takes place. If a Hospital staff has knowledge but not ability, you might hear:

"I'm not getting these new steps right."

"I eventually get there but it takes me twice as long."

"I understand the manual, but when I have to do it, I freeze."

To bridge the "knowledge to ability gap," Hospital staffs will benefit from hands-on coaching and practice using the change package before go-live. This practice could happen in a formal training setting or by working through a simulated live environment. The important factor is that the Hospital staffs using the change package can try it out, make mistakes and identify questions in a safe environment. Often, Hospital staffs simply need time to realize changes and the best thing we can do is to give them time to practice.

Reinforcement

The human brain is wired for habit. We are physiologically programmed to revert to our old habits. When reinforcement is not in place, we see Hospital staffs using work-around or relying on their old practices instead of the new change package. We may hear things like:

"The new way just takes too long; I'm going to keep doing it my way."

"I keep forgetting to include the new unit established."

To reinforce change, we need to monitor whether the change is being sustained or not. Who is compiling or not, following workflows and using the new change package successfully? Where are individuals recognizing new efficiencies in their work? With this information, the first step is to celebrate and recognize where the change has taken hold. Positive recognition is a great way to reward Hospital staffs for working hard to make changes and demonstrate to the organization that participating in the change is important. If some Hospital staffs are reverting to work-around or old processes, follow-up is needed to understand where their barriers are. Do they need more training or coaching? Reinforcement confirms that they are expected to continue working in the new way. The data are abundantly clear. The better we apply change management, the more likely we are successful.

Strategies for improvement

This change package includes five core strategies to reduce delay and waiting time for clinical and to optimize surgical care and improving cleanliness.

- Reducing delays in the acute care continuum (emergency and critical care services) and reducing delays in the care for non- emergency/ cold cases.
- Optimize operating list scheduling to reduce waiting time for surgery by increasing Operating Room efficiency and Minimizing cancelation of surgery.
- Reduce health care facility acquired infection and decrease anti-microbial resistance through clean hospital environment and service by creating clear accountability structure,

better human resource management, professional competency and availing consistent supplies.

- Ensure patient safety and to provide high quality health care service through optimal instrument processing technique, improved instrument management and enforcing standard instrument processing practice.
- Reduce Health care acquired infection through adherence to 5 moments of hand hygiene practice by availing guidelines, providing training and education, promotion and consistent availability of supplies.

Timeliness

Delays of services are mostly systemic, and not the fault of any one provider or practice, therefore redesigning the system processes to make better use of time is necessary to enhance timely patient centered care. There are a lot of ways to improve timeliness of care in the health setting. The following major change concepts introduced to be implemented in this change package.

- Better Appointment system
- Early initiation of hospital service
- Proactive discharge plan
- Better queue management systems
- Optimum capacity for liaison service
- Increase OR efficiency in facilities with backlog
- Avoid/Minimize cancellation

Strategy to improve timeliness of care

This change package includes two core strategies to reduce delay and waiting time for clinical and to optimize surgical care

1. Reducing delays in the acute care continuum (emergency and critical care services) and reducing delays in the care for non- emergency/ cold cases.
2. Optimize operating list scheduling to reduce waiting time for surgery by increasing Operating Room efficiency and Minimizing cancelation for surgery.

1. Central appointment system

The appointment system is common practice in Health Care. Its value in general practice is obvious particularly in the planning of the daily work schedule. An efficient appointment system encourages more organized attendance and better care for chronic and other cases where follow-up is important. Having central appointment system contributes positively to the appointment in improving accessibility of patient and consequently their satisfaction. In addition, retrieving patient cards a day before appointment day improving quality of patient care will decrease waiting time.

2. Early opening and late working hours of service

Reducing waiting time is usually regarded as important determinant of patient satisfaction and service quality. Reducing the waiting time is not only valuable for patient but also helpful to decrease hospital workload. Assigning dedicated staff to function for an early start up of service adhering to working time and conducting morning session on low patient load time is important.

3. Proactive Discharge planning

Discharge is not an isolated event but a process that starts at the time of admission and continues throughout the hospital stay. We should have a system to estimate date when it is expected that the patient will be ready to be safely discharged from acute care to their normal or new place of residence or transferred to a non-acute setting for on-going care. Changes to the patient's predicted discharge date should be communicated to members of the MDT at the soonest possible time following the change, and no later than the next ward Round.

4. Queue management systems to reduce patient wait time

Long queues are an unwanted and unnecessary burden to the public as well as the hospital staffs. Long queues are then associated with a negative image of the hospital experience, but most people can't avoid being under this present system. Implementing a queue management system helps to manage patient flow and reduce patient wait time. Improved outpatient flow at hospitals and clinics with re-designed Patient Flow Management System enables management to efficiently organize staff, resources and patient queues so that patients receive the right care at the right time. This could be achieved through assigning sufficient and trained triage officers and introducing queue management system at central triage and medical record rooms.

Queuing management methods mostly used in the hospital are queue card and smart queue as described by figure 1. When using queue card system, the people in the queue are assigned by numbers according to the arrival order. This method allows the patients to be able to manage their time based on an estimation of the time available until their number is called. Most of the hospitals should provide a smart queue system as well as helpdesks and counter services for their customers. The smart queue system provides automatic queue numbers along with automatic voice calling and LED display panels on a progressive basis. However there needs to be a system to quickly scan and triage those that need to get priority, e.g. neonates and infants, elderly and frail patients…

5. Optimum capacity for liaison service

The provision of inpatient beds is central to the hospital service. It is therefore essential that beds are managed well and used efficiently. And it is important that there are enough beds to ensure that patients do not have to wait when they need a bed in an emergency, planned admissions for surgery are not cancelled because of a lack of beds and patients are admitted to wards that are appropriate to their clinical needs. Promoting central bed management digitalization system and cross department utilizing beds is the suggested change idea this change package to improve timeliness of care.

Aim	Key change concept	Specific change idea	Change champion
To reduce clinical care waiting time	Better Appointment system Manage wait time	Divide the day into blocks of time	OPD and ED director • Establish central appointment system • Link with medical record room • Make sure that medical record folders are retrieved

		Use of phone calls to provide specific appointment day and time	a day before appointment date
		Early triage and initiation of care	
		Use of checklists and structured forms to adhere to timeliness standards in care	
		Application of hospital wide patient flow	
		Initiation of fast track protocols for emergency services	
	Early opening and late working hours of service	Assign dedicated staff to function for an early start up of service adhering to working time Early initiation of hospital including Early disposition of patients to respective destinations	Inpatient, Outpatient and ER director • Daily checkup of service start up time • Make sure that appropriate number and staff mix assigned to the service areas • Ensure early

			initiation of triage and medical record (at list one hour a head of service time) • Conduct morning session on low patient load time
	Proactive Discharge plan	Estimate the expected discharge date	Liaison officer, Inpatient director • Develop case based ALOS estimated day standard • Develop SOP for expected discharge date • Ensure engagement of patients on discharge plan • Ensure frequent senior physician round • Ensure 24/7 discharge process
	Better queue management systems	• Assign sufficient and trained triage officer • Introduce queue management system	ER director and liaison office • Dedicated triage area in the ED

		at central triage and medical record rooms	• Assign sufficient and trained triage officers • Deliver Point of care testing system (phlebotomy, portable diagnostics…) • Ensure continuous rapid assessment of patients • Introduce smart queue management system
	Optimum capacity for liaison service	• Central management of beds	Liaison office, inpatient, ER • Ensure sufficient and appropriately trained staff assigned at liaison office • Digitalize bed management with ensured access for each department • Ensure cross departments bed utilization • Ensure proper utilization of

			ambulance for emergency patients

6. Increase OR efficiency to reduce surgical waiting time

Operating room is one of the key departments of the hospital. Its carries high cost. All the measures must be taken to make it highly efficient. Increasing efficiency of operation performance will reduce long waiting time through Starting operation for elective surgeries at the beginning of the working hour, Arranging campaign surgeries over weekends, Offload patients for operation and post op care, Multidisciplinary approaches and reduction of cancellation.

Aim	Key change concept	Specific change idea	Change champion
To reduce surgical waiting time	Increase OR efficiency in facilities with backlog	• Starting operation for elective surgeries at the beginning of the working hour • Arranging campaign surgeries over weekends • Offload patients for operation and post op care	OR director, Surgical department head • Assign sufficient staff according to the case • Ensure schedules include estimated time for planed surgery and cover the whole working hours • Ensue surgical backlogs are clear using weekends for campaign • Ensure offload post op patients to the nearest health center • Ensure use of safe surgery checklist for all surgical patients • Ensure adequate number of recovery bed and staffs are assigned

			• Optimize Day surgery practice
	Avoid/Minimize cancellation	• Evaluation of patients for fitness before admission • Mini-blood bank establishment within the hospital	OR director, Surgical department head, Anesthetist or Anesthesiologists • Ensure pre-operative evaluation and investigation completed before admission of patient • Ensure blood is available and cross much is done at list a day before admission • Ensure the patient is well prepared if needed (enema, NPO, any procedure needed, etc.) • Ensure the necessary supplies and equipment availed • Ensure continuous psychosocial support provided patients and care takers

Checklist for Timely Care

Standard	Verification criteria	Score (0,1,2)	Remark
Better Appointment system			
Central appointment system is established	➢ Check if there is central appointment unit established with dedicated staffs under OPD ➢ Verify if there is appointment Log book for different departments ➢ Check if there is Digitalized Central		

	appointment system established and verify that all departments have access		
Medical record folders are retrieved a day before appointment date at central appointment unit	• Check if there is SOP developed for Central appointment system • Verify if the central appointment unit provides list of appointed patients a day before appointment to medical record room with continues documentation at least for the last one month • Check if there is a system established for appointed patients card to be retrieved a day before the appointment • Check if there is a system established for retrieved patient cards to be sent to units before starting time and verify if there is signed handover mechanism in place		
Increase OR efficiency in facilities with backlog			
Adequate trained staff is assigned daily in OR according to the case	• Check if there is full OR team assigned for surgery depending on OR schedules, which at least comprises cleaner, porter, Scrub nurse, circulating nurses, Anesthetists, assistance and Surgeon • Verify if daily OR schedule documented and kept for at least for a quarter in the folder		
OR schedules cover the whole working hours	• Verify if SOP is developed for common surgical procedures with estimated operating time • Check if the daily OR schedules cover whole working hours by categorizing in hours for		

	other departments to use the OR table		
surgical backlogs are cleared using weekends for campaign	• Check if there is a report/record that describes about the mobilization of necessary staffs, equipment and supplies for the campaign and Documentation of the campaign includes number of patients, date of the campaign, assigned staff, surgery per cases		
Offload post op patients to the nearest health center	• Verify if MOU was signed between the hospital, and receiving health center • Check if there is a record for patient transferred and monthly report that describes the number of patients.		
Safe surgery checklist used for all surgical patients	• Verify if the hospital uses safe surgery checklist for all operated patients by randomly checking 5 patient charts that included safe surgery checklist		
Adequate number of recovery bed and staffs are assigned	• Check if there is dedicated recovery room adjacent to OR with adequate number of beds, staffs and equipment by observing the room		
Optimize Day surgery practice	• Check if there is SOP developed day care surgery and the hospital documented patents used the service		
Discharge plan			
Hospital implements a discharge plan at the time of admission	• Check if the hospital has developed case based estimated date of stay by SOP • Verify by assessing randomly 10 admitted patient chart and observe discharge plan is included in the chart at the admission • Check if the hospital introduced a system to		

	engage patients and family on discharge plan and by interviewing 10 random patients admitted in the ward.		
Hospital implements frequent senior physician round	• Check if there is daily base senior physician round implemented in the hospitably observing the practice and progress note.		
Hospital should have 24/7 discharge process conducted	• Check if there is established administration process available 24/7		
Reduce rate of OR Cancelation			
Hospital should have a system for pre-operative evaluation of patient for fitness	• Check if there is SOP for pre-operative preparation • Check if the hospital established a system for preoperative anesthetic evaluation at OPD level • Verify by Reviewing 10 random patient charts if cross much is done at list a day before elective surgery admission		
Early initiation of hospital service			
Hospital should have a system for an early start up and late working hour service adhering to working time	• Check if there is daily registration for start and end time of services in all department • Check if there is a system for morning session to be conducted on low patient load time		
Optimum capacity for liaison service			
Optimum capacity for liaison service	• Check if there is admission and discharge protocol • Check if there is organized liaison office with trained staff • Check if there is digitalized bed management		

	system established and continues records of bed censes with list of bed numbers for all service area • Check if the hospital implemented cross departments bed utilization and verify by interviewing five staffs from different departments • Check if there is proper utilization of the hospital ambulance for emergency patients and verify from the ambulance registration book • Check if there is 24/7 availability of ambulance with adequate supply and equipment under the liaison office with assigned ambulance nurse and driver		
Queue management systems			
The hospital has emergency triage system	• Check if there is dedicated triage area in the ED and adequate trained triage officers assigned • Check if there is continuous rapid assessment of patients • Check if the emergency department deliver Point of care testing system		
Introduce smart queue management system	• Check if there is functional queue management machine is installed at the central triage or the hospital implement card based queue management • Verify if the hospital regularly monitors patients waiting time to triage, from triage to medical record room and from medical record to treatment (physician) separately and check if		

	action taken		

Cleanliness

Cleaning is a common activity performed to maintain a healthy, safe, and aesthetically pleasing environment. Cleaning of healthcare facilities is performed for medical and astatic reasons. Maintaining an environment with a low pathogenic burden is essential for avoiding complications during the care and recuperation of patients. While cleaning is important in all economic sectors, it serves the healthcare industry the dual functions of: (i) surface cleanliness, and (ii) infection prevention and control. Health care settings are complex environments that contain a large diversity of microbial flora, many of which may constitute a risk to the clients/patients/residents, staff and visitors in the environment. High-touch environmental surfaces of the health care setting hold a greater risk than do public areas of non-health care organizations, due to the nature of activity performed in the health care setting and the transient behavior of employees, patients and visitors within the health care setting, which increases the likelihood of direct and indirect contact with contaminated surfaces. As such, healthcare settings require intensive and frequent cleaning with a wide range of measures. This document summarizes the main cleaning change packages related to conventional surface cleaning, describes a systems approach for designing and implementing healthier and environmentally friendlier hospitals for the healthcare.

One of the most basic measures for the maintenance of hygiene, and one that is particularly important in the hospital environment, is cleaning. The principal aim of cleaning is to remove visible dirt. It is essentially a mechanical process: the dirt is dissolved by water, diluted until it is no longer visible, and rinsed off. Thorough cleaning will remove more than 90% of microorganisms. However, careless and superficial cleaning is much less effective; it is even possible that it has a negative effect, by dispersing the microorganisms over a greater surface and increasing the chance that they may contaminate other objects. Cleaning has therefore to be carried out in a standardized manner. The following major change concepts introduced to be implemented in this change package.

- Improve cleanliness norms and practice
- Optimum instrument processing

- Hand hygiene practice (HH)
- Improve health care waste management practice

Strategies for improvement

This change package includes tools support three strategies for improvement of hospital and its surround cleanliness

1. Reduce health care facility acquired infection and decrease the transmission of anti microbial resistance through clean hospital environment and service by creating clear accountability structure, better human resource management, professional competency and availing consistent supplies.
2. Ensure patient safety and to provide high quality health care service through optimum instrument processing technique, improved instrument management and enforcing standard instrument processing practice.
3. Reduce Health care acquired infection through adherence to 5 moments of hand hygiene practice by availing guidelines, providing training and education, promotion and consistent availability of supplies.

1. Improve cleanliness norms and practice

A health care facility has peculiar nature from other industries due the nature and level of risk they pose for both clients they serve, service providers and the environment in general. Because of this, cleaning practice requires:

a) A robust management structure with clear accountability at all level
b) Strict adherence of standards and guidelines (IPC)
c) Improvement in infrastructural setup
d) Appropriately trained and professionally competent housekeeping staff.
e) Consistent supply of cleaning supplies and commodities

f) Regular audit and feedback mechanism

Aims	Key change concepts	Specific change ideas	Change champion
To improve cleanliness of hospital environment	• Regular standardized audit	• Conduct standardized regular internal cleaning audit	• House Keeping Staff • Supervisors • IPC Committee • Senior Management committee
	• Capacity Building for Housekeeping staff	• Compulsory training for onboarding and in-service awareness for housekeeping staff. • Hospital should make sure outsourcing contract clearly stipulate the required housekeeping training.	• CPD and facility management unit • Provide 3 days standardized IPC for supportive staff training
	• Introduction of KIZEN principle	• Implement 5S	• *Facility management*

			• Quality unit
	• Sense of competition	• Regular recognition scheme for clean wards •	• Senior management and IPC committee • Assign service area/ward master to oversee cleanness of their respective service area/ward
	• Cleaning day	• Monthly cleaning Day	• Hospital CEO • Cleaning procedure will be conducted as per functional area risk level. • Involve patients

2. Optimum instrument processing

Significant discrepancies have been noticed in instrument processing thorough out the country between the practice and international standards. the current WHO recommendation suggests the elimination of Decontamination (which is socking instruments in 0.5% chlorine solution) and it clearly states the disadvantage of decontamination. This tool will help to align all instruments processing though out all hospitals with the standard framework.

Aims	Key change concepts	Specific change ideas	Change champion
To improve	• Guideline and	• Develop SOP for	• Senior

cleanness of medical instrument	SOPs	instrument processing from the latest IPC guideline • Implement central sterilization/supply department/unit	management • IPC committee and IPC focal • All cleaning staff should be well trained in instrument handling and cleaning

3. Hand hygiene practice (HH)

Hospital associated infection in Ethiopia is between x% in hospitalized patient acquire HCAIs. These HCAIs often lead to increased hospital stay and cost of care; they promote resistance to antibiotics and contribute to increased patient's mortality and morbidity. Hand hygiene (HH) is the simplest and most important intervention that has consistently proved to decrease hospital-acquired infections. Hospital can achieve the implementation of the 5 moments hand hygiene practice through enforcing strict adherence of standards and guideline, consistent availability of cleaning supplies and encouraging staff through training, promotion and recognition scheme.

Aims	Key change concepts	Specific change ideas	Change champion
Improve hand hygiene practice compliance	• Hand hygiene promotion	• Five moments of hand hygiene • Quarterly hand hygiene day	

4. Improve health care waste management practice

5. Aims	6. Key change	7. Specific	8. Change

	concepts	change ideas	champion
Improving health care waste management practice	• Introduction of KIZEN principles	• Implement 5S	

Checklist for clean care

RN	Standard	VERIFICATION CRITERIA	ASSEMEMTN METHOD	SCORE	REMARK
1	Hospital has standardized regular internal and external cleaning audit process	• Check and review if there is audit committee with TOR, plan, minutes of committee meeting • Check the recent quarter audit report	RR,		
2	Hospital has a compulsory training for onboarding and in-service awareness program for housekeeping staff.	• Check if the hospital has IPC supportive staff training for 3 days and proportion of trained house keeping staff certified is greater than 90%		0 if training document is available <50%, 1 = training document is available and proportion	

				of trained staff is between 50 – 90%, 2 if proportion of trained staff is >90	
3	Housekeeping outsourcing contract clearly indicate the required house keeping training.	• Check and review outsourcing housekeeping contract agreement and all cleaners hired are trained and certified	RR	Give 2 only if the contract include training requirement and all cleaners hired are trained	
4	Hospital has implemented KIZEN 5S	• Check if KIZEN 5s procedure document is available • Check training document or trainee list if KIZEN 5s principles training has been give	RR	0 if both are not available, 1 if one of the activity has been done, 2 if both have been met	
5	Hospital has a regular recognitions mechanism for service areas achieved better cleanness	• Check if there is current standing recognized service area based cleanness audit to	OB, RR	Give 2 only if the criteria is met, 0 if otherwise	

6	Hospital has a monthly cleaning day activity	• Check if there is written monthly schedule • Check the last 6 month cleaning activity report or record	Review or record and document, Staff Interview		
7	Hospital has SOP for instrument processing from the latest IPC guideline	• Check if there is written and visibly available SOP	Review or record and document	Give 2 only if the criteria is met, 0 if otherwise	
8	Hospital has a central sterilization/supply department/unit	• Check if there exist a central sterilization unit • Check if the CSD is divided in to 4 functional area as per the IPC guideline	Direct observation, Review or record and document		
9	Hospital has implemented Five moments of hand hygiene	• Check if there are posters and educational proportional material available and posted throughout the hospital environment • Check if the WHO hand hygiene self assessment checklist is being used and champions are recognized quarterly	Direct observation, Review or record and document	0 if none of them are available, 1 if one of them is available, 2 if both are available	

10	Hospital has quarterly hand hygiene day	• Check if there is written quarterly program schedule • Check and review HH day activity report	Review or record and document	Give 2 only if both activities have been implemented	

List of EHAQ Project Team

1. Yakob Seman

2. Abas Hasen

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4. Markos Paulos

5. Zelalem Gizachew

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12. Walitaji Terfa

13. Dr.Abiyou Kiflu

14. Sr.Ayinalem Legesse

Annex I CASH Audit tool standards-------Refer HPMI guideline.

Annex II Excel summary sheet Sample.

Cleaning audit score sheet (score 1:- if fulfill the standard, Score 0:- if not fulfilled the standards, Score:- x if not applicable
Audit Date: Auditors: Audit date:

Functional Areas

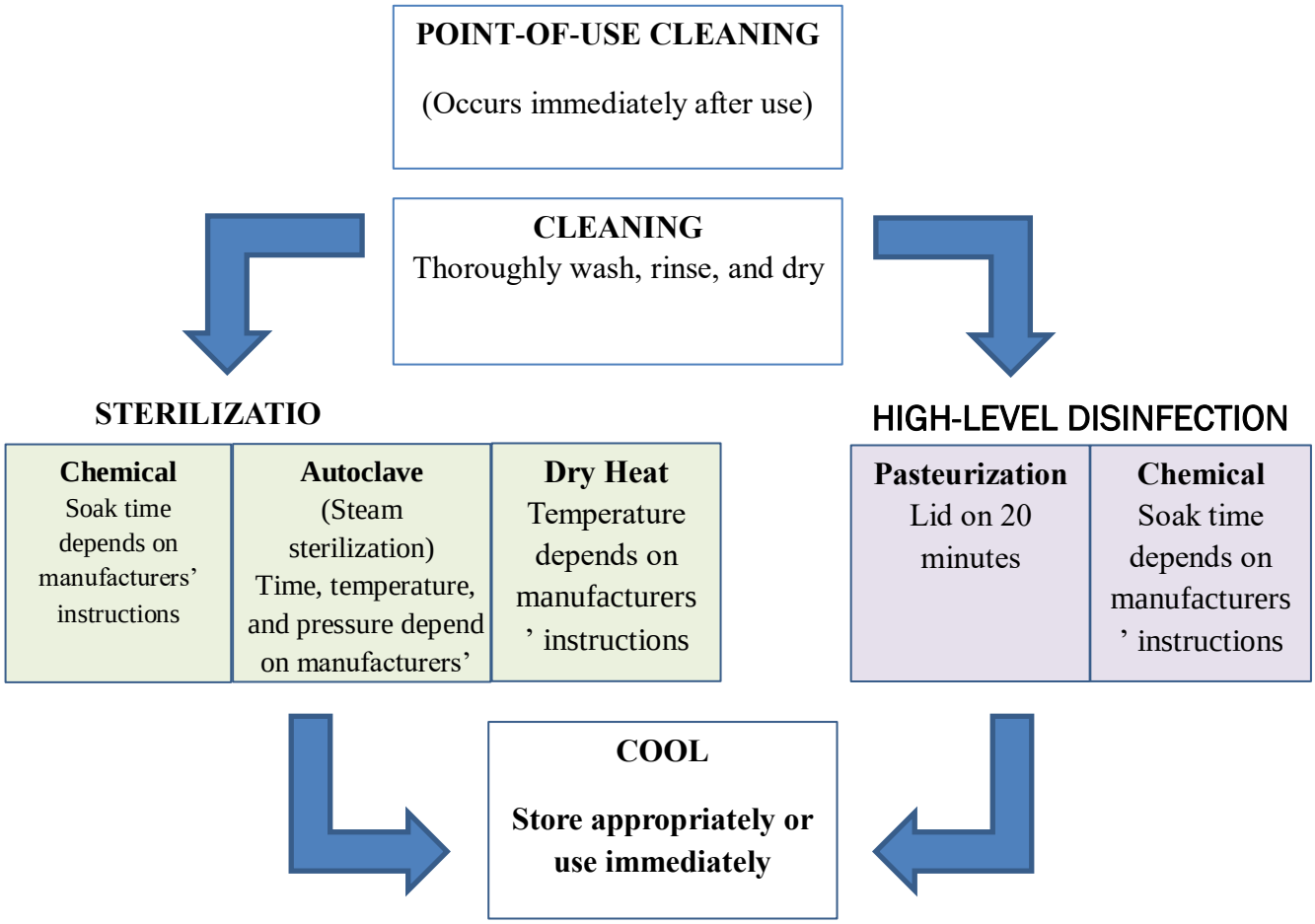
Room name	Commode	Weighing scales	Drip stands	Medical Equipment	bed sheet and linen	Bed	Patient washbowls	floors	Switches, sockets and data points	Walls	Ceilings	doors	All windows and frames	Mirrors	notice board	TV for entertainment system	Radiators or baby incubators	Ventilation grilles/extractors/inlets/fans	odor	Electrical items	lighting	ventilation	Cleaning equipment	Chairs	Lockers	Tables	Hand wash containers	Hand hygiene alcohol rub dispensers	waste segregation practise/Waste receptacle (bin)	Curtains, blinds (including screens)	water availability	Repleshiments	Hand washing sink	baths	toilet	Privacy,	**Actual score**	**Percentage attained**

ANNEX III

Instrument processing procedures

Major Steps in Reprocessing Instruments and Medical Devices

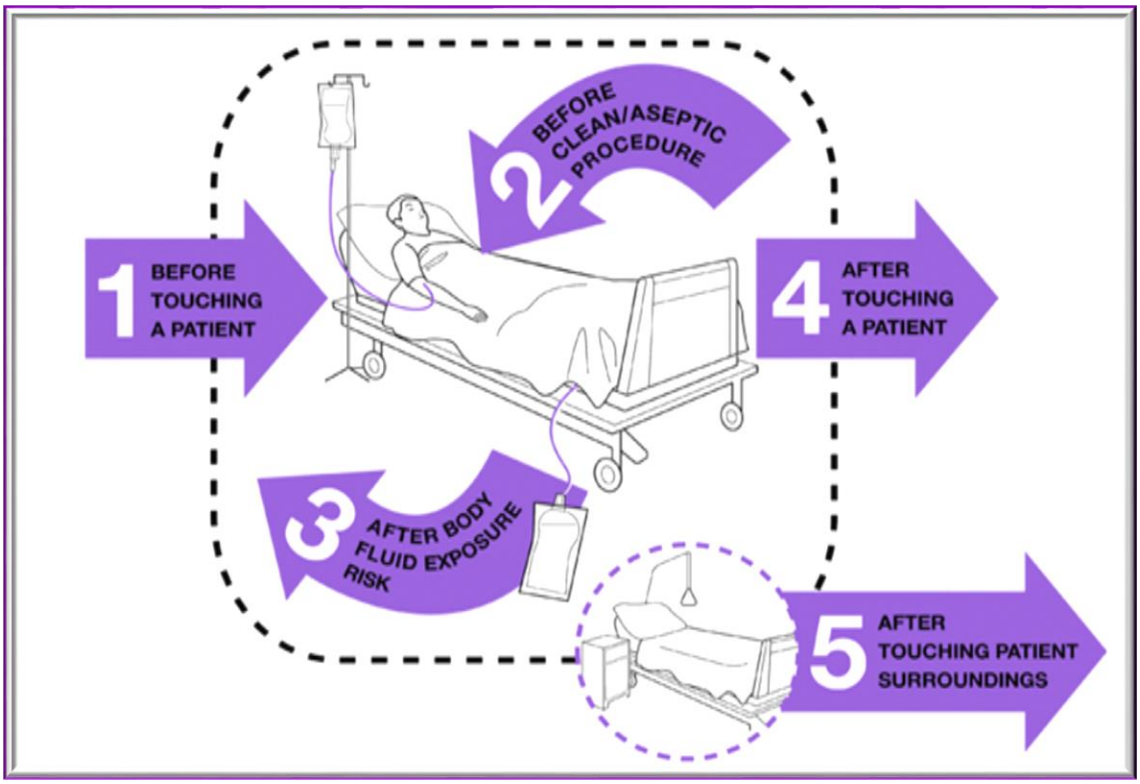
Figure 1. Workflow for Processing Instruments and Medical Devices



Adopted from Jiepyego IPC Guidelines for resource Limited countries.

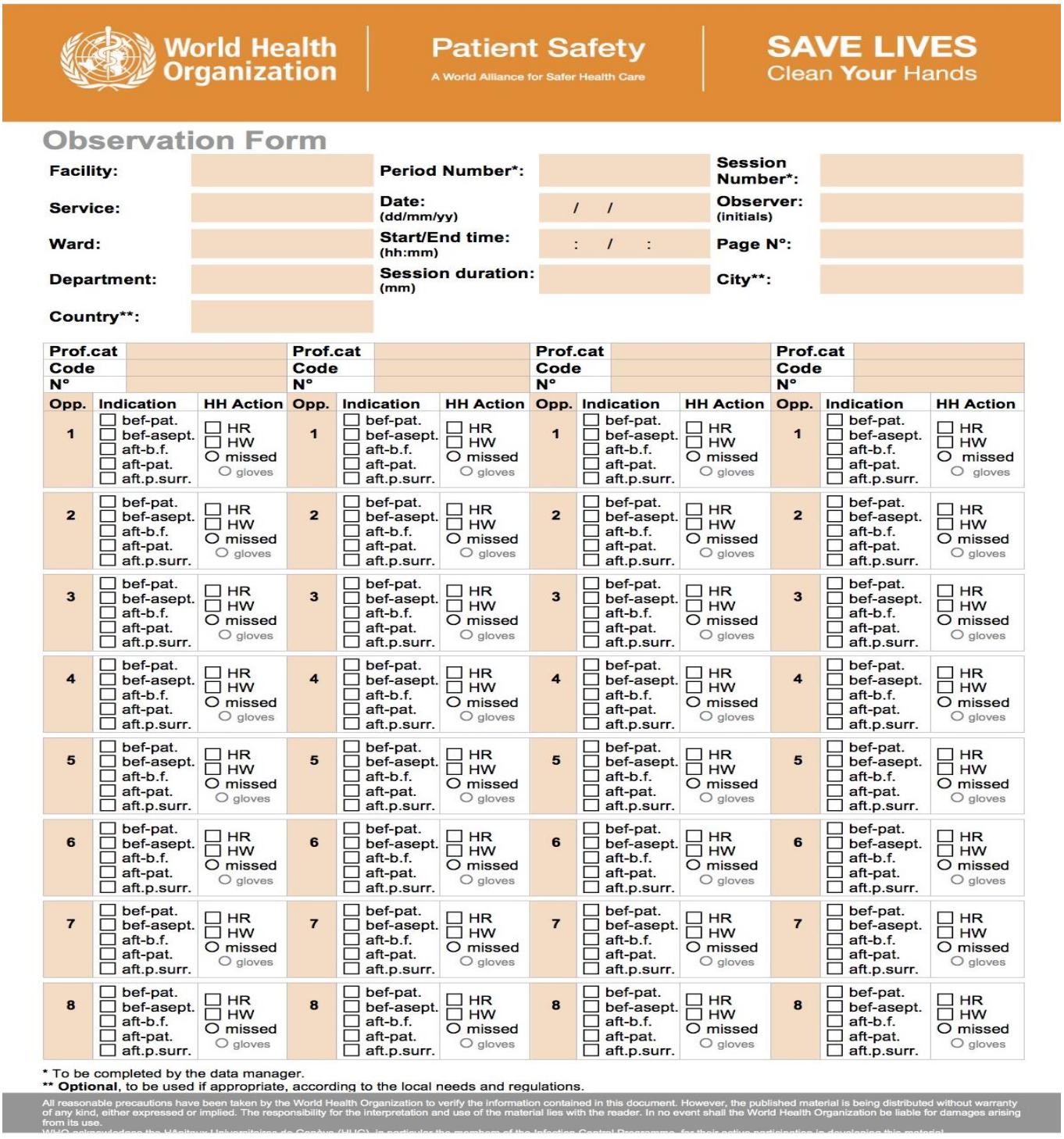
ANNEX IV

Five moments of hand hygiene



ANNEX V

WHO hand hygiene assessment tool



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Observation Form

Facility:		**Period Number*:**		**Session Number*:**	
Service:		**Date:** (dd/mm/yy)	/ /	**Observer:** (initials)	
Ward:		**Start/End time:** (hh:mm)	: / :	**Page N°:**	
Department:		**Session duration:** (mm)		**City**:**	
Country:**					

Prof.cat			Prof.cat			Prof.cat			Prof.cat		
Code			Code			Code			Code		
N°			N°			N°			N°		
Opp.	**Indication**	**HH Action**	**Opp.**	**Indication**	**HH Action**	**Opp.**	**Indication**	**HH Action**	**Opp.**	**Indication**	**HH Action**
1	☐ bef-pat. ☐ bef-asept. ☐ aft-b.f. ☐ aft-pat. ☐ aft.p.surr.	☐ HR ☐ HW ○ missed ○ gloves	1	☐ bef-pat. ☐ bef-asept. ☐ aft-b.f. ☐ aft-pat. ☐ aft.p.surr.	☐ HR ☐ HW ○ missed ○ gloves	1	☐ bef-pat. ☐ bef-asept. ☐ aft-b.f. ☐ aft-pat. ☐ aft.p.surr.	☐ HR ☐ HW ○ missed ○ gloves	1	☐ bef-pat. ☐ bef-asept. ☐ aft-b.f. ☐ aft-pat. ☐ aft.p.surr.	☐ HR ☐ HW ○ missed ○ gloves
2	☐ bef-pat. ☐ bef-asept. ☐ aft-b.f. ☐ aft-pat. ☐ aft.p.surr.	☐ HR ☐ HW ○ missed ○ gloves	2	☐ bef-pat. ☐ bef-asept. ☐ aft-b.f. ☐ aft-pat. ☐ aft.p.surr.	☐ HR ☐ HW ○ missed ○ gloves	2	☐ bef-pat. ☐ bef-asept. ☐ aft-b.f. ☐ aft-pat. ☐ aft.p.surr.	☐ HR ☐ HW ○ missed ○ gloves	2	☐ bef-pat. ☐ bef-asept. ☐ aft-b.f. ☐ aft-pat. ☐ aft.p.surr.	☐ HR ☐ HW ○ missed ○ gloves
3	☐ bef-pat. ☐ bef-asept. ☐ aft-b.f. ☐ aft-pat. ☐ aft.p.surr.	☐ HR ☐ HW ○ missed ○ gloves	3	☐ bef-pat. ☐ bef-asept. ☐ aft-b.f. ☐ aft-pat. ☐ aft.p.surr.	☐ HR ☐ HW ○ missed ○ gloves	3	☐ bef-pat. ☐ bef-asept. ☐ aft-b.f. ☐ aft-pat. ☐ aft.p.surr.	☐ HR ☐ HW ○ missed ○ gloves	3	☐ bef-pat. ☐ bef-asept. ☐ aft-b.f. ☐ aft-pat. ☐ aft.p.surr.	☐ HR ☐ HW ○ missed ○ gloves
4	☐ bef-pat. ☐ bef-asept. ☐ aft-b.f. ☐ aft-pat. ☐ aft.p.surr.	☐ HR ☐ HW ○ missed ○ gloves	4	☐ bef-pat. ☐ bef-asept. ☐ aft-b.f. ☐ aft-pat. ☐ aft.p.surr.	☐ HR ☐ HW ○ missed ○ gloves	4	☐ bef-pat. ☐ bef-asept. ☐ aft-b.f. ☐ aft-pat. ☐ aft.p.surr.	☐ HR ☐ HW ○ missed ○ gloves	4	☐ bef-pat. ☐ bef-asept. ☐ aft-b.f. ☐ aft-pat. ☐ aft.p.surr.	☐ HR ☐ HW ○ missed ○ gloves
5	☐ bef-pat. ☐ bef-asept. ☐ aft-b.f. ☐ aft-pat. ☐ aft.p.surr.	☐ HR ☐ HW ○ missed ○ gloves	5	☐ bef-pat. ☐ bef-asept. ☐ aft-b.f. ☐ aft-pat. ☐ aft.p.surr.	☐ HR ☐ HW ○ missed ○ gloves	5	☐ bef-pat. ☐ bef-asept. ☐ aft-b.f. ☐ aft-pat. ☐ aft.p.surr.	☐ HR ☐ HW ○ missed ○ gloves	5	☐ bef-pat. ☐ bef-asept. ☐ aft-b.f. ☐ aft-pat. ☐ aft.p.surr.	☐ HR ☐ HW ○ missed ○ gloves
6	☐ bef-pat. ☐ bef-asept. ☐ aft-b.f. ☐ aft-pat. ☐ aft.p.surr.	☐ HR ☐ HW ○ missed ○ gloves	6	☐ bef-pat. ☐ bef-asept. ☐ aft-b.f. ☐ aft-pat. ☐ aft.p.surr.	☐ HR ☐ HW ○ missed ○ gloves	6	☐ bef-pat. ☐ bef-asept. ☐ aft-b.f. ☐ aft-pat. ☐ aft.p.surr.	☐ HR ☐ HW ○ missed ○ gloves	6	☐ bef-pat. ☐ bef-asept. ☐ aft-b.f. ☐ aft-pat. ☐ aft.p.surr.	☐ HR ☐ HW ○ missed ○ gloves
7	☐ bef-pat. ☐ bef-asept. ☐ aft-b.f. ☐ aft-pat. ☐ aft.p.surr.	☐ HR ☐ HW ○ missed ○ gloves	7	☐ bef-pat. ☐ bef-asept. ☐ aft-b.f. ☐ aft-pat. ☐ aft.p.surr.	☐ HR ☐ HW ○ missed ○ gloves	7	☐ bef-pat. ☐ bef-asept. ☐ aft-b.f. ☐ aft-pat. ☐ aft.p.surr.	☐ HR ☐ HW ○ missed ○ gloves	7	☐ bef-pat. ☐ bef-asept. ☐ aft-b.f. ☐ aft-pat. ☐ aft.p.surr.	☐ HR ☐ HW ○ missed ○ gloves
8	☐ bef-pat. ☐ bef-asept. ☐ aft-b.f. ☐ aft-pat. ☐ aft.p.surr.	☐ HR ☐ HW ○ missed ○ gloves	8	☐ bef-pat. ☐ bef-asept. ☐ aft-b.f. ☐ aft-pat. ☐ aft.p.surr.	☐ HR ☐ HW ○ missed ○ gloves	8	☐ bef-pat. ☐ bef-asept. ☐ aft-b.f. ☐ aft-pat. ☐ aft.p.surr.	☐ HR ☐ HW ○ missed ○ gloves	8	☐ bef-pat. ☐ bef-asept. ☐ aft-b.f. ☐ aft-pat. ☐ aft.p.surr.	☐ HR ☐ HW ○ missed ○ gloves

* To be completed by the data manager.
** **Optional**, to be used if appropriate, according to the local needs and regulations.

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General Recommendations

(refer to the Hand Hygiene Technical Reference Manual)

1. In the context of open and direct observations, the observer introduces him/herself to the health-care worker and to the patient when appropriate, explains his/her task and proposes immediate informal feed back.
2. The health-care worker, belonging to one of the main four following professional categories (see below), is observed during the delivery of health-care activities to patients.
3. Detected and observed data should be recorded with a pencil in order to be immediately corrected if needed.
4. The top of the form (header) is completed before starting data collection (excepted end time and session duration).
5. The session should last no more than 20 minutes (± 10 minutes according to the observed activity); the end time and the session duration are to be completed at the end of the observation session.
6. The observer may observe up to three health-care workers simultaneously, if the density of hand hygiene opportunities permits.
7. Each column of the grid to record hand hygiene practices is intended to be dedicated to a specific professional category. Therefore numerous health-care workers may be sequentially included during one session in the column dedicated to their category. Alternatively each column may be dedicated to a single health-care worker only of whom the professional category should be indicated.
8. As soon as you detect an indication for hand hygiene, count an opportunity in the appropriate column and cross the square corresponding to the indication(s) you detected. Then complete all the indications that apply and the related hand hygiene actions observed or missed.
9. Each opportunity refers to one line in each column; each line is independent from one column to another.
10. Cross items in squares (several may apply for one opportunity) or circles (only a single item may apply at one moment).
11. When several indications fall in one opportunity, each one must be recorded by crossing the squares.
12. Performed or missed actions must always be registered within the context of an opportunity.
13. Glove use may be recorded only when the hand hygiene action is missed while the health-care worker is wearing gloves.

Short description of items

Facility:	to complete according to the local nomenclature	
Service:	to complete according to the local nomenclature	
Ward:	to complete according to the local nomenclature	
Department:	to complete according to the following standardized nomenclature:	
	medical, including dermatology, neurology, haematology, oncology, etc.	surgery, including neurosurgery, urology, EENT, ophthalmology, etc.
	mixed (medical & surgical), including gynaecology	obstetrics, including related surgery
	paediatrics, including related surgery	intensive care & resuscitation
	emergency unit	long term care & rehabilitation
	ambulatory care, including related surgery	other (to specify)
Period N°:	1) pre- / 2) post-intervention; and then according to the institutional counter.	
Date:	day (dd) / month (mm) / year (yy)	
Start/end time:	hour (hh) / minute (mm).	
Session duration:	difference between start and end time, resulting in minutes of observation.	
Session N°:	attributed at the moment of data entry for analysis.	
Observer:	observer's initials (the observer is responsible for the data collection and for checking their accuracy before submitting the form for analysis.	
Page N°:	to write only when more than one form is used for one session.	
Prof.cat:	according to the following classification:	
	1. nurse / midwife	1.1 nurse, 1.2 midwife, 1.3 student.
	2. auxiliary	
	3. medical doctor	3.1 in internal medicine, 3.2 surgeon, 3.3 anaesthetist / resuscitator / emergency physician, 3.4 paediatrician, 3.5 gynaecologist, 3.6 consultant, 3.7 medical student.
	4. other health-care worker	4.1 therapist (physiotherapist, occupational therapist, audiologist, speech therapist), 4.2 technician (radiologist, cardiology technician, operating room technician, laboratory technician, etc), 4.3 other (dietician, dentist, social worker and any other health-related professional involved in patient care), 4.4 student.
Number:	number of observed health-care workers belonging to the same professional category (same code) as they enter the field of observation and you detect opportunities.	
Opp(ortunity):	defined by one indication at least	
Indication:	reason(s) that motivate(s) hand hygiene action; all indications that apply at one moment must be recorded	
	bef.pat: before touching a patient	aft.b.f: after body fluid exposure risk
	bef.asept: before clean/aseptic procedure	aft.pat: after touching a patient
		aft.p.surr: after touching patient surroundings
HH action:	response to the hand hygiene indication(s); it can be either a positive action by performing handrub or handwash, or a negative action by missing handrub or handwash	
	HR: hand hygiene action by handrubbing with an alcohol-based formula HW: hand hygiene action by handwashing with soap and water	Missed: no hand hygiene action performed

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Observation Form – Basic Compliance Calculation

	Facility:						Period:			Setting:					
	Prof.cat.			Prof.cat.			Prof.cat.			Prof.cat.			Total per session		
Session N°	Opp (n)	HW (n)	HR (n)	Opp (n)	HW (n)	HR (n)	Opp (n)	HW (n)	HR (n)	Opp (n)	HW (n)	HR (n)	Opp (n)	HW (n)	HR (n)
1															
2															
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															
16															
17															
18															
19															
20															
Total															
Calculation	Act (n) = / Opp (n) =			Act (n) = / Opp (n) =			Act (n) = / Opp (n) =			Act (n) = / Opp (n) =			Act (n) = / Opp (n) =		
Compliance															

Compliance (%) = $\frac{\text{Actions}}{\text{Opportunities}}$ x 100

Instructions for use

1. Define the setting outlining the scope for analysis and report related data according to the chosen setting.
2. Check data in the observation form. Hand hygiene actions not related to an indication should not be taken into account and vice versa.
3. Report the session number and the related observation data in the same line. This attribution of session number validates the fact that data has been taken into count for compliance calculation.
4. Results per professional category and per session (vertical):
   - 4.1 Sum up recorded opportunities (opp) in the case report form per professional category: report the sum in the corresponding cell in the calculation form.
   - 4.2 Sum up the positive hand hygiene actions related to the total of opportunities above, making difference between handwash (HW) and handrub (HR): report the sum in the corresponding cell in the calculation form.
   - 4.3 Proceed in the same way for each session (data record form).
   - 4.4 Add up all sums per each professional category and put the calculation to calculate the compliance rate (given in percent)
5. The addition of results of each line permits to get the global compliance at the end of the last right column.

ANNEX VI

Health care KAIZEN /5S

1. **Sort**: (Removal/ organization), Remove unused items for current work process from your workplace; and reduce clutter
2. **Set:** (orderliness), Organize everything needed in proper order for easy work
3. **Shine:** (Cleanliness), Maintain high standard of cleanness of workplace, tools and equipment
4. **Standardize:** (Standardize), set up "Sort", "Set" and "Shine" as norms in every section of work place
5. **Sustain:** (Discipline), Train and maintain disciple of health staff engaged.