



## Infection Prevention and Control (IPC) for Healthcare Workers

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## Background

In the first two decades of the 21<sup>st</sup> century, the world has witnessed disease outbreaks, reminding us of the danger of the chronic vulnerability to infectious diseases, known and unknown. These epidemics and pandemics have resulted in high morbidity and mortality on a still-evolving scale [1]. Among these are SARS CoV, MERS, Ebola, Marburg, cholera, influenza, and current SARS CoV-2 [1].

Uganda is particularly prone to infectious disease outbreaks [2]. Between 2000 and 2016, Uganda reported eight outbreaks caused

by filoviruses (EVD and Marburg), more than any other country in the world. Other outbreaks experienced from 2017-2019 include yellow fever, anthrax, Rift Valley Fever, meningitis, avian influenza, and Crimean-Congo Hemorrhagic Fever (CCHF), and Ebola Virus Disease, among others [3]. In December 2019, a novel coronavirus (SARS CoV-2, the causative agent for COVID-19 emerged in China and became a pandemic with the first case in Uganda reported in March 2020 [4, 5].

Healthcare workers (HCWs), support staff, patients, and visitors to health facilities are at risk of acquiring such infections in healthcare settings (out-patient and in-patient departments, HIV care clinics, and operating theatres) as well as from the community [2]. With the current COVID-19 pandemic, 1,943 health workers so far in Uganda have contracted the disease, and 18 have died, reported as of March 2021 [6].

To minimize the risk of transmitting these infectious agents from one person to another, health workers

to patients and vice versa, infection prevention and control (IPC) practices should be paramount [2]. Infection prevention and control is a practical, evidence-based approach that focuses on preventing patients, visitors, and HCWs from being harmed by avoidable and preventable infections in a healthcare setting [2].

IPC practice in Uganda's health facilities is still shallow, demonstrated by noncompliance to hand hygiene measures, poor waste management, lack of isolation protocols, and lack of functional IPC committees [7-9]. Hand hygiene compliance is still much lower than the international standard of 80% at 20-50%, as demonstrated in IPC assessments in different health facility levels in the country [8-11]. Figure 1 shows some

of the poor IPC practices in these facilities.

**Figure 1**



*Poor hand hygiene facilities*

This low level of IPC practice coupled with the recent epidemic disease outbreaks necessitates rapid scale-up of IPC preparedness

activities at health facilities where the risk of encountering patients with these diseases is high. This gap calls for a focus on building



*Poor waste management*

effective, sustainable peacetime IPC structures at frontline general health care facilities so as to offset rapid epidemic preparedness activities.

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## Editor's Note

Welcome to this quarter's ATIC newsletter!

Are you still masking-up? Washing your hands? Social distancing? We hope that you continue doing so as that could be your reasonable service to those around you in the fight against COVID-19, especially as we're now dealing with variants of the disease.

We celebrate the milestones though: various treatments and vaccines have been developed and administered in some parts of the world to a section of the population. Hopefully, we'll get to

a point where the vaccines are available to all across the globe including to those in developing countries.

This pandemic has informed this quarter's newsletter topic given the immense difference that implementing IPC protocols could make in slowing or even halting the spread of infection. We've focused on IPC for healthcare workers for obvious reasons – you are on the frontlines of most infections.

You will read about the practices of IPC precautions, and how to apply this in your facility; how to set-up an IPC programme in your facility and, of course, how to assess that framework. We've also shared how our Centre of Excellence HIV clinic in Mulago managed to continue delivering services to our clients especially at the start of the pandemic when challenges such as the nationwide lockdown were in place. And, yes, as always, we've answered some of your questions on the pandemic and other ailments in our Ask ATIC column. We hope that you can learn a thing or two to implement in your facility.

We're happy to hear from, and support you. Reach us through our toll free number: **0800200055** or **WhatsApp: +256787311883** or **email: [training@idi.co.ug](mailto:training@idi.co.ug)**

*Stay safe and healthy!*

**Carolyne Amuge**

*Research and Communications Officer*

## Practices of Infection Prevention and Control (IPC) Precautions

The IPC strategies implementation is through IPC precautions. These precautions are subdivided into three groups: standard precautions, transmission-based precautions, and non-pharmaceutical precautions [2, 12].

### A. Standard Precautions

These are IPC practices recommended in the care of all patients at all times to prevent infection and include:

- 1. Hand Hygiene (HH)** is the cornerstone of all IPC programmes [13]. One of the main challenges with HH is maintaining the required contact time and maintaining the correct procedure. Busy schedules contribute to this. However, with continued practice, improvements are observed. The World Health Organization (WHO) recommends five moments for performing hand hygiene in healthcare settings [13]. (See Figure 2 below)

Figure 2.



2. **Appropriate PPE** should be selected and worn depending on the risk of exposure/infection that the procedure carries. For example, a health worker who is carrying out screening at the entrance of a health facility needs a face shield and mask. In contrast, someone taking a nasopharyngeal sample needs a respirator, face shield/ goggles, and body protection with a gown/coverall (as shown in fig. 3 below) to protect them from COVID-19 disease [14].

Figure 3. Personal protective equipment (PPE) for COVID-19 [14]



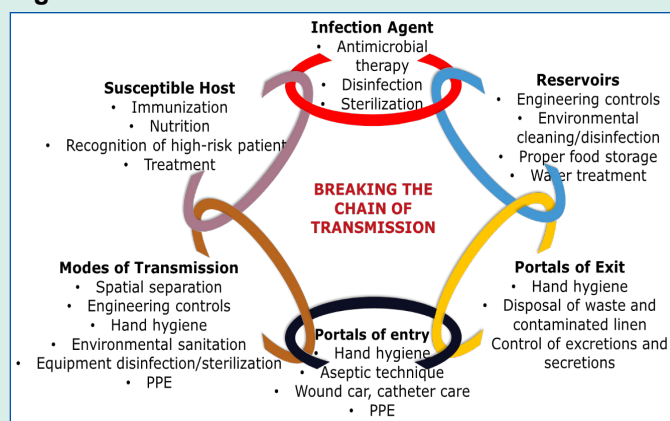
3. **Respiratory hygiene**, which includes proper cough etiquette is vital in minimizing the spread of respiratory diseases like TB, COVID-19, and others.
4. **Safe handling of sharps** including syringes, needles, scalpels, glass ampoules, scissors, and lancets during procedures and disposal remains important in preventing transmission of blood-borne infectious pathogens like viral hepatitis B and C, HIV, and viral haemorrhagic fevers.
5. **Healthcare-generated waste** carries the significant potential of spread of infection. Therefore, proper collection in designated colour-coded containers and bags, storage, transfer, treatment, and final disposal of infectious waste from healthcare facilities is essential in preventing infection spread.
6. **Decontamination and disinfection** of patient care equipment, surfaces, linen, patient environment.

## Application of standard IPC precautions in clinical practice

For a microbe or infectious disease agent to be spread from person to person, certain conditions must be met. This process is called the chain of infection. The six links include the infectious agent, reservoir, portal of exit, mode of transmission, portal of entry, and susceptible host [15]. For infection to spread, all links in the chain must be connected.

IPC practices are the primary interventions in breaking the chain's link to prevent the pathogen's transfer. Figure 4 below highlights where the different IPC precautions apply to break this chain of transmission.

Figure 4. Chain of infection



## B. Transmission-based Precautions

These are additional precautions to standard practices taken by healthcare workers to protect themselves from harmful germs that are not stopped by standard precautions alone, like highly infectious diseases such as COVID-19, Ebola, cholera, etc. They are based on the transmission mode of harmful germs. These are:

- **Contact precautions:** These include use of gloves and apron/gown for diarrheal diseases like cholera, and full-body coverage of face, hair and body protection using water resistant body coverage for highly contagious diseases like VHF.
- **Droplet precautions:** These include the use of facial protection (to cover eyes, nose, and mouth) employed for diseases that spread by droplets like COVID-19, influenza, meningococcal meningitis, and Diphtheria.
- **Airborne precautions:** These include respirators for diseases spread by aerosols < 5 micrometers that remain airborne for long durations and can travel longer distances like pulmonary TB, measles, chickenpox.

### C. Non-Pharmaceutical Precautions

These are employed additional to standards where the disease carries a sufficiently high transmission risk like COVID-19. They call for the practical application of isolation precautions. Here, one avoids the following; non-essential travel, crowded places, handshakes and hugs.

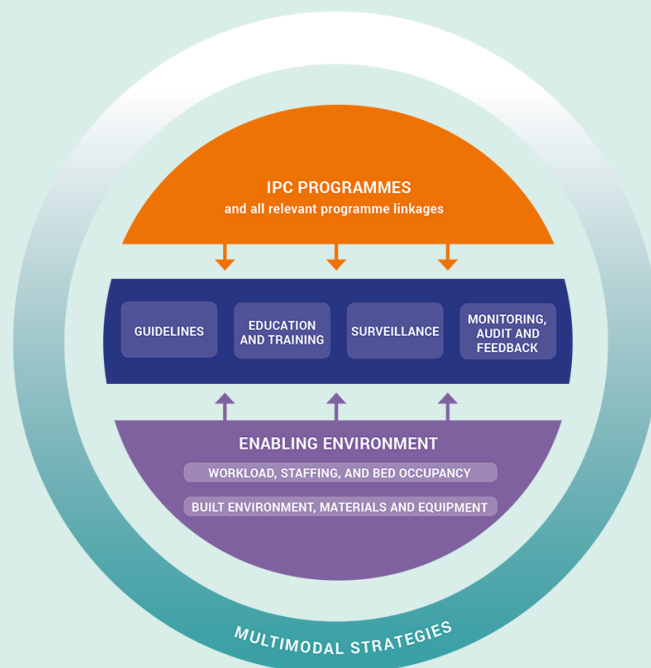
Designate screening points at the entry of health facilities and ensure all patients, visitors, and staff undergo screening before proceeding into the health facility. This approach helps facilities identify patients suspected of having highly infectious, epidemic-prone diseases like VHFs and COVID-19 so that they can be immediately isolated to minimize the spread of the infection.

### Setting up an IPC Programme at the Health Facility Level

Although planning for functional treatment units, for example, COVID-19 treatment units (CTUs), is a critical aspect of epidemic disease preparedness, IPC readiness at frontline general healthcare facilities is vital to preventing the spread of disease and propagation of outbreaks [16]. Oftentimes, patients first present to the general clinic before being transferred or referred to the designated treatment facility [17, 18]. Therefore, every health facility in Uganda needs to have an IPC programme to reduce morbidity and mortality associated with disease epidemics.

The WHO recommends eight core components necessary to be established in countries to ensure effective IPC programmes, as illustrated in figure 5 below [19, 20].

Figure 5



### Infection prevention and control programmes

at national, subnational, and health facility levels: Each health facility should have an IPC committee comprised of representatives from the different units/departments led by the IPC focal person with the following roles:

- Ensure the facility develops IPC protocols or standard operating procedures (SOPs) aligned to national plans.
- Lead continuous training on implementing the IPC standards and guidelines using different training strategies including practical and simulation training.
- Monitor and evaluate adherence to IPC standards/guidelines.
- Surveillance for healthcare-associated infection (HAIs) for both outbreak diseases like COVID-19, Ebola, and measles, and non-outbreak diseases like surgical site infections, catheter-associated urinary tract infections, and hospital-acquired pneumonia.
- Develop work-plans for stipulated activities.
- Conduct monthly IPC meetings and submit a report to the district IPC committee.

**Note:** IPC committees should include waste handlers, cleaners, and community health members on the committee. Health facility leadership and management involvement is critical for advocacy and availability of IPC supplies.

An enabling environment, materials, and equipment are required to build and sustain IPC structures at the health facility level, including;

**i. Consistent availability of IPC materials and equipment**

Washing stations with water, soap, clean towels, and alcohol-based hand rub should be available in critical areas such as toilets and at the point of care as hand hygiene is the cornerstone of IPC programmes at the health facility. Other materials, such as personal protective equipment, should be available at the point of care and other sites where potentially contaminated material is handled. For example, medical masks, goggles, face shields, and gloves should be available at the entry of the health facilities to support proper screening and isolation of patients suspected of highly infectious diseases.

**ii. Adequate staffing based on workload**

This is important as it has been observed that work overload contributes significantly to laxity in IPC measures.

**iii. Proper hospital and ward structures**

Standard facility design recommends one patient per bed with at least one meter between beds to avoid increased disease transmission between patients and even between patients and visitors.

All the core components should be implemented using multimodal strategies for implementing infection prevention and control activities, i.e., using an integrated approach with several features. When used in combination, multiple methods can influence behavior change in health care workers to improve practice and reduce healthcare-acquired infections. Targeting only ONE area (i.e., unimodal) is highly likely to fail. All five areas should be considered, and the necessary action taken based on the local context and situation informed by periodic assessments.

**Figure 6: The WHO IPC multimodal strategy**



- ❖ System change is needed to enable IPC practices, including infrastructure, equipment, supplies, and other resources.
- ❖ Training and education to improve health worker knowledge.
- ❖ Monitoring and feedback to assess the problem, drive appropriate change, and document practice improvement.

- ❖ Reminders and communications to promote the desired actions, at the right time, including campaigns e.g. hand hygiene procedure posters at points of performing hand hygiene.
- ❖ A culture of safety to facilitate an organisational climate that values the intervention, with a focus on the involvement of senior managers, champions, or role models.

## IPC Assessment Framework at the Facility Level

Monitoring, evaluation, and feedback: Healthcare IPC practices should be regularly monitored and evaluated at the facility level. Input from the assessments should be given to relevant staff and stakeholders to take action based on the evaluations. It is essential that the monitoring and feedback be conducted in a blame-free, non-punitive manner.

Conduct a baseline assessment of the IPC programme and activities within a health care facility and ongoing evaluations through repeated administration of the assessment to document progress over time and facilitate improvement. The Infection Prevention and Control Assessment Framework (IPCAF) tool that is based on the WHO core components for building structured IPC systems guides a structured objective self-administered IPC assessment [20].

The framework’s goal is to assess the current IPC situation in your facility, that is, existing IPC activities and resources, and identify strengths and gaps that can inform plans.

**Take home**

- *As health workers, we all should be champions of IPC modeling and advocates for behavior change as part of the non-maleficence (not harm) principle of health care ethics because even without our knowledge, our families, patients and their caregivers, colleagues, and communities are looking up to us and doing what we are doing and not necessarily what we are telling them to do. And rightly so because they expect us to know better.*

# Service Delivery in the Face of a Global Pandemic: An HIV Clinic's Effort to Provide Services to its Clients in spite of the Odds

By Dr. Noela Clara Owarwo

The Prevention, Care, and Treatment (PCT) programme at the Infectious Diseases Institute (IDI) is home to the adult infectious diseases clinic that offers specialist HIV care to over 8,000 patients annually. Located at the Mulago National Referral Hospital complex, it is a tertiary referral clinic receiving complicated HIV patients managed by a multidisciplinary team.

In 2016, PCT adopted several WHO guidelines around infection prevention and control, and established a working committee and guidelines for IPC in the clinic. Training of staff and regular performance reviews in IPC was part of the committee's core roles, which created confidence among the team on the clinic's best IPC practices. The aim of this effort was to improve patient outcomes and reduce hospital-acquired infections.

In early February 2020, it became clear that it was just a matter of time before the novel coronavirus outbreak would reach Uganda. The new virus that was then identified as the SARS\_CoV2 caused a respiratory illness but had no vaccine or specific therapeutics to manage it. The WHO made several recommendations for management based on IPC principles of universal precautions, including, hand hygiene, respiratory etiquette, and use of Personal Protective Equipment (PPE). Some countries had instituted a lockdown, and we assumed that when the infection got to us, we would have to deal with similar challenges. It was now more apparent that the WHO infection prevention and control guidelines we had adopted in 2016 would be needed more than ever before.

With support from our Global Health Security team, the IPC committee created a contingency plan that considered the different stages of disease transmission scenarios and how services for our HIV clients would carry on while maximizing patient and staff safety. At the heart of our planning was to ensure that as much as lay with us, our clients adhered to their regimens, and that we avoided lost-to-follow up cases especially with the confusion and uncertainty that marked the start of this pandemic.

## Preparing for the Unknown

With the data on the pandemic that was available to us at that time, our multidisciplinary team met to assess the task ahead of us. Areas for consideration for the committee included:

- Identifying physical space for ongoing patient review and isolation facilities.
- Assessing our PPE needs and projections.
- Staffing and task-shifting.
- Practice drills, including simulations for different clinic scenarios.

These were all shared with both our senior management team (SMT), and the business continuity committee set-up by the institute for concurrence.

## The Total Nation-wide Lockdown

Following the country's lockdown, many patients and staff were unable to make it to the clinic for their appointment due to the halt in public transport. A team was set-up to support the Community Drug Distribution Point model of differentiated care to support patients' access to drugs. The points were premised on the residential information that patients provided.

Using the staff's knowledge of the Kampala-Wakiso (KW) geography, the provided client addresses, and Google Maps, different distribution points were identified. A total of 22 points were created to support drug distribution. The team reached more than 600 patients in this period. Patients received a review phone call to establish care needs and drugs were pre-packed for distribution. We sought clearance from the local LC1 chairpersons so that neither our staff nor patients were arrested for breaking the lockdown rules.

Our preferred distribution points included health centres, worship places, police station areas, or other semi-public structures. We were mindful of unintended disclosure and allowed patients the choice of having the drugs brought to them at these points or not. In the latter, they were allowed to send someone to pick-up the drugs on their behalf if they could identify themselves and carried the patient's card.

We had drugs delivered by boda-boda riders who signed a confidentiality agreement before undertaking the task for some patients. In addition, staff in certain areas were able to carry drugs to patients along their route home and this supported the drug distribution for areas outside the KW catchment area.



Staff continued to have remote training and mentorship and regular communication to bust myths and other infodemic issues. This ensured that all our staff were acting on accurate and the latest information while also helping curb the misinformation and confusion around the pandemic among patients and their communities.

Once patients were able to access the facility following the lifting of the ban on public transport, we got more patients accessing viral load and other laboratory services as well as PMTCT/EID follow-up and review of sick patients.

## Getting the Work Done

Based on the WHO and the Uganda Ministry of Health case definition, two levels of screening were developed: the primary stage that was supported by any cadre of staff (task-shifting), review of the known symptoms suggestive of COVID-19 before further review for ART and other-drug support or laboratory work; a medical officer or physician screened anyone with suggestive symptoms at the secondary screening point in the period before the lockdown was instituted in the country.

Due to air circulation inadequacies in the building, triage was external to the building with other services. Space outside the clinic building was identified to provide for a pharmacy area, and the TB clinic area was the isolation space for all suspected COVID-19 cases. These were supported with handwashing facilities and a tent for waiting.

The Friends' Council (expert clients who represent the patients and help with cross communication at our clinic) was charged with ensuring that patients were adequately spaced as per the recommendations, and identified patients with cough, runny nose, or sneezing, offered a mask and moved them away from the rest of the patients to the isolation area for further review by a medical officer.

With anticipated staffing challenges, there was creation of a staff rota that took into account exposure risk and rest period to allow for symptoms for anyone that could have acquired the infection while moving the staff who have known conditions like diabetes, hypertension, COPD, haematological and other immune system illnesses away from the frontline to other supportive roles that kept them out of contact with patients and exposed staff. This also allowed for task-shifting among the different cadres for roles that did not have particular skill set requirements or for staff who had multiple skills in non-primary roles. The intention here was to identify staff at risk and keep them away from possible infection; having others take on their roles where possible; creating a work rota that kept everyone safe and also allowed rest time to reduce fatigue and potential for mistakes as well as allow for symptoms to develop while off-duty so that the staff then got supported without exposing others.

The Electronic Medical Records system (EMR) was adjusted to capture visits in the outbreak period that for most was a phone call consultation by a clinician who then established what care was required and medication packed for delivery to the client.

## The Challenges

Our interventions were not without challenges. Among them:

- Poor access to food led many to interrupt their medication. To address this, we wrote to the prime minister's office seeking permission and supplies to distribute some food to our patients along with the drugs.
- Patients that take unusual drug combinations had challenges accessing their treatment from other sites.

- Some patients changed addresses and did not update this information. Unfortunately, these were missed on the distribution lists.
- Patients who had not disclosed to their partners expressed challenges taking the medication and often missed their doses. They also refused multiple prescription drugs to avoid being caught. In a few instances, those whose spouses found out suffered violence and separation.
- Some patients refused to come to the distribution points due to stigma and fear of unintended disclosure.
- Some mothers and babies did not make it to the facility for their care, and many lost timeline interventions like PCRs.
- Dedicated clinics for groups like discordant, young adults, elderly patients were disrupted but restored using the existing data in the clinic.
- Like many other healthcare providers, consistent access to PPE for all the recommended levels (1-4) was difficult to sustain due to supply issues. Some staff were unable to come into work due to the lockdown finding them upcountry and so some of the roles that could not be shifted were suspended. This allowed for virtual care to happen for some of these technical services.

## Overcoming the Challenges

- \* One of the brighter sides of this pandemic is the opportunity to innovate around the unique challenges that it has posed to our service delivery, for instance, on food challenges, patients were re-educated on any food recommendation for their medication and asked to see their area LC 1 chairperson for support.
- \* We also used truck drivers (clinic clients) and centres nearest to our clients to deliver drugs for those who were on unusual drug combinations.
- \* In cases where clients changed their addresses, we used phone calls to establish their new addresses and include them on our drug distribution list. Using our database, we have been able to trace mothers and babies who missed PCRs and catch up within the window allowed.
- \* Using existing data, we have also been able to restore dedicated clinics for discordant, young adults and the elderly. For many, this was a welcome intervention to help them have access to medication during the lockdown. In the period following the lifting of the lockdown, this has not been successful as we had anticipated, because patients have returned to work and cannot access the residential community. However, this has allowed us to build community client led ART delivery (CCLAD) groups based on the workplace, and we have learned of the need for the fluidity of these differentiated care models for service delivery.

In closing, disease outbreaks and other similar disasters teach us about preparedness and resilience to maintain the strides made in health provision and the need to innovate and optimize best practices available.

# ASK ATIC



**Dear Doctor, I am a nurse working at the outpatient department in a HC IV. How do I protect myself from acquiring COVID-19 while attending to patients since I may not know their COVID-19 status?**

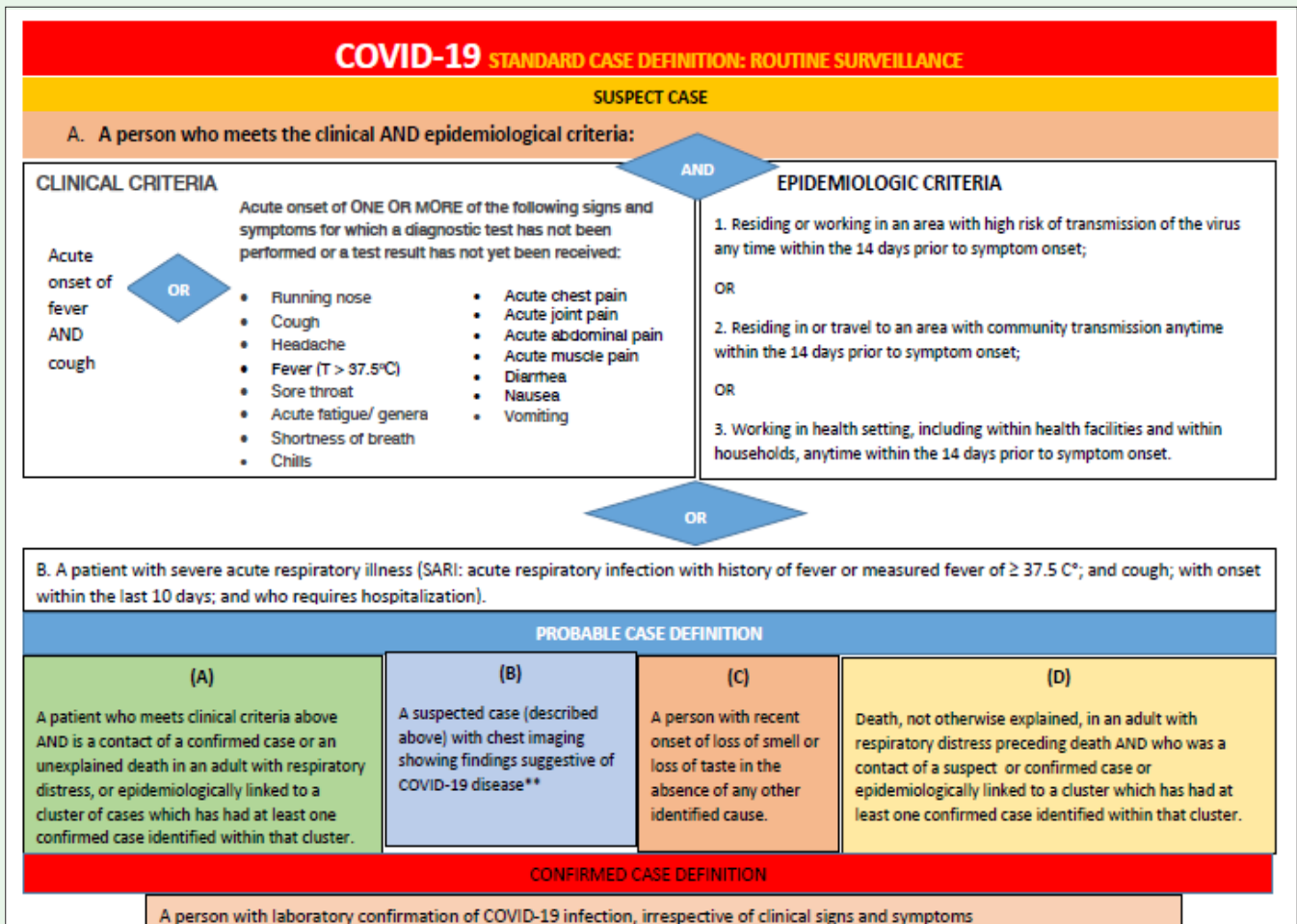
Healthcare workers, support staff, patients, and visitors to health facilities are at risk of acquiring such infections in healthcare settings both in out-patient and in-patient departments, as well as from the community. A high index of suspicion is required at all times while providing patient care and appropriate protective measures should be applied at all times. Ensure that all patients, staff and visitors are screened for COVID-19 before entering the

health facility using the current case definition. Hand hygiene should be performed at the screening area and at other times following the five moments of hand hygiene. Ensure to appropriately utilise face masks and social distancing even when interacting with colleagues at the work place.

**Dear Doctor, how can I make a diagnosis of COVID-19?**

Diagnosis of COVID-19 is based on the disease case definition of a suspect, probable and confirmed case as shown in figure 7 below. These may change from time to time, hence the need to keep abreast of the most recent case definitions.

**Figure 7: COVID-19 Case Definitions**



**Doctor, we have a patient who has been on HAART for four years, with a suppressed viral load from the most recent test, he has now tested HIV negative from two different facilities. The patient wants to stop taking the HAART. What should we do for this patient?**

Re-testing people who are already on ART is not advised. This is because HAART, when appropriately taken, inhibits HIV viral replication and reduces the amount of HIV in the body (viral load), and slows disease progression. As a result, there is a reduction in viral antigens present, which reduces the production of HIV antibodies. Evidence indicates that the earlier the ART is initiated, the more likely the antibody response



will be impaired. This means that if your client/patient is taking HAART and his/her test result is non-reactive on a serology assay – such as an HIV-1/2 rapid diagnostic test – there is a chance that the test result might not be accurate. The risk of false-negative results is moderate to high, so this patient should be kept on ART.

**Dear Doctor, I have a pregnant woman at 24 weeks of amenorrhoea who has tested positive for syphilis using a DUO kit. She has not been treated for syphilis in the past one year. What is the management?**

If early syphilis (i.e., primary, secondary, and early latent syphilis of not more than two years' duration) treat with Benzathine penicillin G 2.4 million units intramuscularly one dose; in late syphilis or unknown stage of syphilis administer Benzathine penicillin G million units intramuscularly once weekly for three consecutive weeks.

**Dear Doctor, unlike in the previous HIV treatment guidelines, the 2020 guidelines discourage concomitant initiation of a DTG based regimen and TPT. What is the science behind this recommendation?**

Studies have shown that co-administration of DTG and INH is well-tolerated though liver injury is a recognized adverse effect of both drugs. Co-administration could potentially lead to hepatotoxicity. Therefore, the 2020 HIV treatment guidelines recommend differing TPT for three months to allow for monitoring and attribution of adverse events to the right medicine and proper management if hepatotoxicity arises.

**Dear Doctor, what is the right time to carry out an HIV test after probable exposure to HIV?**

Following the 2020 Uganda HIV treatment and prevention guidelines, the first test is done immediately after exposure to ascertain the HIV status of the exposed individual. If there is a need for Post Exposure Prophylaxis (PEP), it is repeated at one month after completing the PEP course and, if negative, repeated at three months.

**Dear Doctor, what is the way forward after the second inconclusive HIV RDT Result?**

Take off a Dry Blood Spot sample from the patient and fill in the inconclusive request form. Send these through the hub transport system to UNHLS. A hard copy of the result will be received through the hub system as well.

**Doctor, why are we giving Darunavir, a protease inhibitor, as a second-line drug to children failing on a Lopinavir-based regimen?**

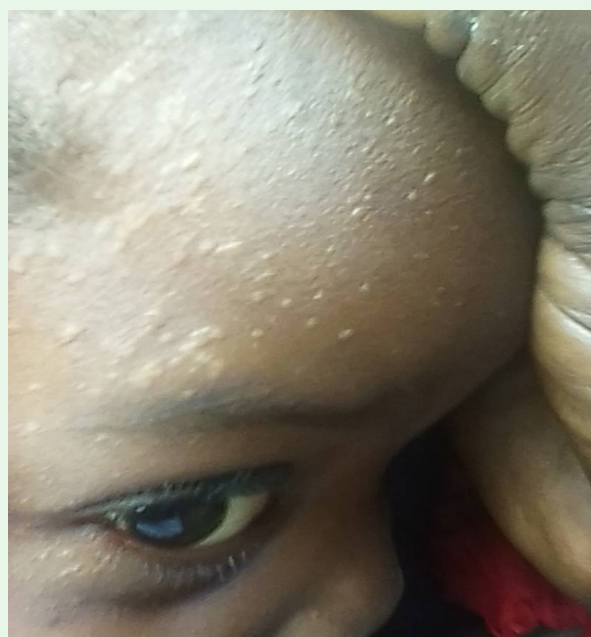
Darunavir is one of the anchor ARVs for children less than 20kg who were on Lopinavir-based first-line regimen switching to second-line ART because it provides a sustainable viral load suppression due to the high genetic barrier and its genetic resistance profile making it is efficacious in patients who have failed on other protease inhibitors.

**Dear Doctor, a six-year-old child had sex with another 13-year-old child who is HIV positive, now four days since the incident. Can we give PEP?**

PEP should be started as early as possible, ideally within the first two hours of the exposure but not beyond 72 hours after exposure. After 72 hours, PEP is not practical, and there are gradations in efficacy from 24 hours post-exposure to 36, 48, and 72 hours.

**Doctor, I have a three-year-old HIV positive child with whitish skin patches (not sure if it is a rash or not) on the face for one year. I have used local soaps, petroleum jelly, and seproderm, but no improvement. What's the appropriate diagnosis and treatment?**

This is Verruca plana, common in HIV infected children caused by Human Papilloma Virus. It has no specific treatment but encourage patient to adhere to treatment. Provide this information to the parents and counsel them to continue with ART.



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# Point of Care **Ultrasound** Course

For Practicing Health Workers



Dates:  
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—→  
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<https://idi.mak.ac.ug/point-of-care-ultrasound-training-for-practicing-health-workers/>

## Course Overview

This **THREE WEEK** training is designed to provide clinical care proficiency in Point-of-Care Ultrasound (POCUS). It is recommended for healthcare practitioners whose scope of practice allows the use of POCUS to make a diagnosis or enhance clinical and therapeutic decision-making. The course has both didactic and practical sessions.

### Selection Criteria

- High level of interest in ultrasound
- Should be a practicing health care worker/professional (medical doctor, registered nurse/midwife or clinical officer)
- Preferably remain at the current health facility five months post training to enable follow up.
- Recommendation from supervisor/manager.

The training is **NOT** intended to replace the traditional/comprehensive ultrasound examinations rather to answer specific clinical questions that aid clinical decision-making to expedite action

Training venue:  
IDI Makerere/Mulago

For course costs and other details, contact:  
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