Objective of this document

The World Health Organisation has recommended the following actions for the different disease severities in Corona Virus Disease (COVID-19):

Case severity, risk factors	**Recommendations**
Mild Moderate, with no risk factors	Patient should be instructed to self-isolate and contact COVID information line for advice on testing and referral. Test suspect COVID-19 cases according to diagnostic strategy. Isolation/cohorting in: • Health facilities, if resources allow; • Community facilities (i.e. stadiums, gymnasiums, hotels) with access to rapid health advice (i.e. adjacent COVID-19 designated health post, telemedicine); • Self-isolation at home according to WHO guidance.
Moderate, with risk factors Severe Critical	Patient should be instructed to self-isolate and call COVID hotline for emergency referral as soon as possible. Hospitalization for isolation (or cohorting) and inpatient treatment. Test suspect COVID-19 cases according to diagnostic strategy.

The aim of this document is to highlight how EMTs can be involved to ensure the delivery of essential healthcare services that come under pressure by the outbreak. While it is very clear that there is no out-of-the box solution for using EMTs in the treatment of coronavirus patients, we do believe this is an option that can be considered:

Delivery of essential healthcare services by EMTs

When healthcare facilities are overwhelmed by patients infected with CoVid-19, the access to regular healthcare will come under severe pressure. Hospitals will be full, and risk of cross-infections cannot be denied. Therefore, it might be useful to deploy EMTs to replace these essential services, for those patients that are not fulfilling the case definition of COVID. We know for example that access to maternal and neonatal child health and essential surgical services are a huge contribution that could be sustained by EMTs if the regular facilities can't cope anymore. It is essential to ensure an efficient system to identify those patients that might be infected. A screening at the entrance of the EMT is therefore essential.

Screening:

Informing

Healthcare facilities are advised to inform everyone entering the facility about the signs and symptoms of CoVid-19 and measures to be put in place (hand washing, respiratory hygiene, limiting visitors, distancing measures…). Those with symptoms should not enter the facility in order not to disturb essential health services. Inside the facility, posters can make staff, patients and visitors aware of the signs and symptoms and encourage everyone to inform the staff when needed.

Entrance screening points

All health facilities introduce screening points at the entrance filtering out those with acute respiratory illness (fever and/or respiratory disease (e.g. shortness of breath, cough)) and channelling those to a COVID treatment centre triage point with a high level of suspicion[1]. Checkpoints should be properly equipped with correct PPE for patients and staff.

- Guidance posters for staff (e.g. to guide the process) (Figure 1) and non-staff (e.g. to self-report)
- Masks for staff (if there is no patient contact, PPE does not have to be changed by HCW)
- Gloves for staff (if there is no patient contact, PPE does not have to be changed by HCW)
- Masks for patients: patients that are referred to the triage point are given a mask and explained they should wear it until instructed otherwise at or after the triage
- Thermometers (infrared)
- Hand hygiene facilities (handwashing and alcohol-based hand rub) in staff and non-staff area
- Waste bins for safe PPE disposal

[1] Infection prevention and control during health care when novel coronavirus (nCoV) infection is suspected. https://apps.who.int/iris/rest/bitstreams/1266296/retrieve

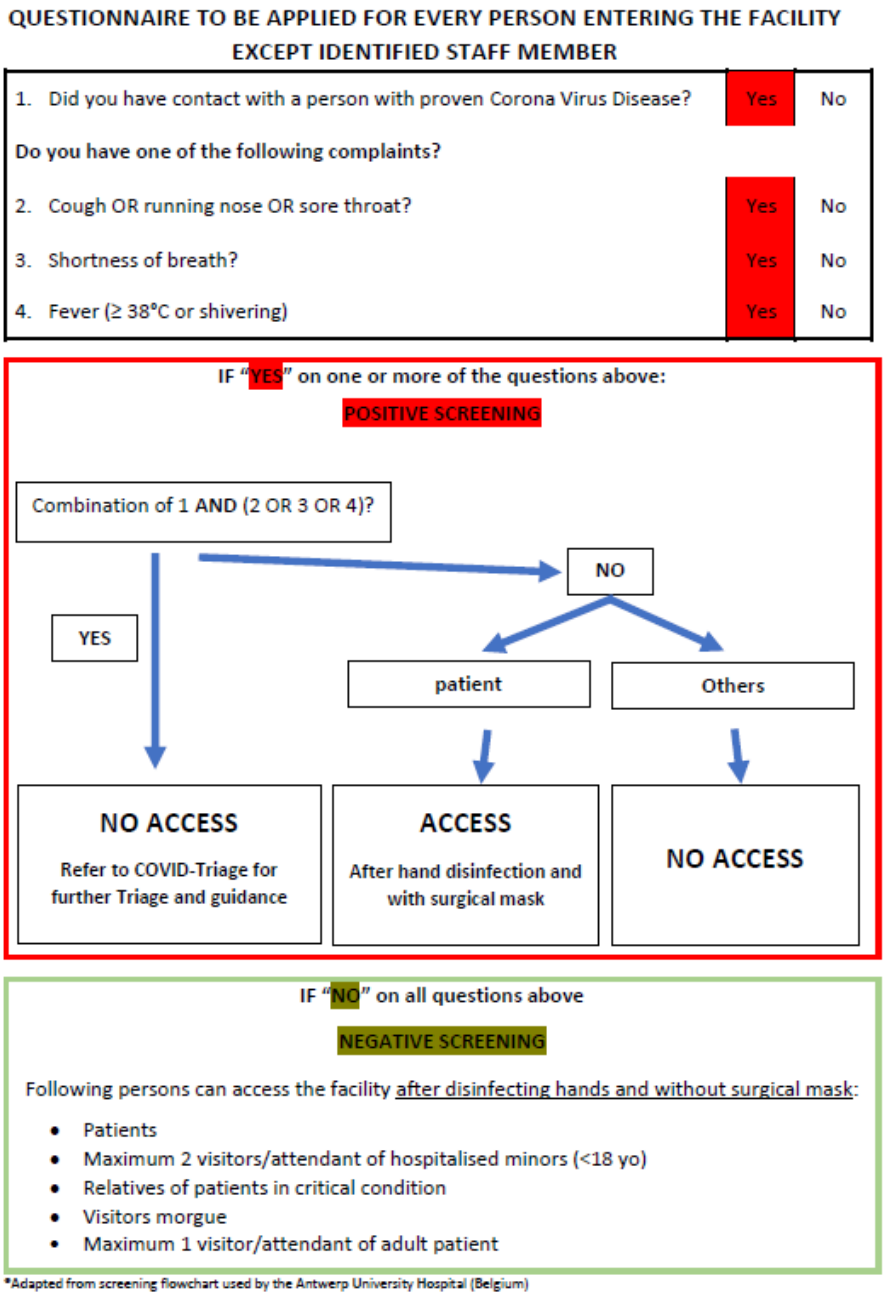

Figure 1: example of screening questionnaire for access at non-Covid health facilities

Design considerations for screening points

- The entry and exit points of the screening areas must be clear and have to be signposted, they must always be in one direction only
- All patients should be able to perform hand hygiene (handwashing with soap and running water or alcohol- based hand rub AHRB/ sanitizer) at entry and exit points.
- Fence between staff / patient's area, should be setup in e.g. tent in front of the entrance. The distance must be minimum 1 meter possible 2 meters
- Use physical barriers to reduce exposure to the COVID-19 virus, such as glass or plastic windows. This approach can be implemented in areas of the healthcare setting where patients

will first present, such as triage areas, the registration desk at the emergency department or at the pharmacy window where medication is collected[2].

- The more ventilation possible, the better (if only shadow is sufficient this should be preferred e.g. tent with open sides oriented same as dominant wind direction)
- The routes and the walkways must be wide enough to prevent overcrowding, as sometimes these can be points of contact of several people with different degrees of contamination or protection.
- It must have good visibility so that the guard can control the whole area from his position. It is a place to take temperatures and record data.
- Regarding dimensions sufficient space is recommended as the number of people waiting can be very variable. Waiting areas should be spacious enough to allow distancing between those waiting to be seen.
- The patients waiting to be prescreened must be able to see and to speak with relatives while they wait to be taken care of but separated by a safe distance.

Referral and transport

For those facilities that are not connected directly to a COVID treatment centre, measures need to be arranged to refer symptomatic patients to a triage point. Where several triage points are available, it is advised to take contact with those to ensure there is capacity available to accept the patient and to avoid additional transport needs. A staging area should be put in place where patients can wait until the appropriate facility is identified and transport is arranged.

The modes of transport should be chosen in a way that does not expose others to the patient. Public transport needs to be avoided. The best possible way is the patients' own transport mode but if this is not available it might be useful to use an ambulance. In any case there should be maximised distance between the patient and other persons in the car and the patient should always wear a mask. Ambulances with a division between the driver and the patient compartment are preferred, and when there is no clinical need there should be no healthcare worker accompanying the patient in the back. It is not good practice to put several patients in 1 car together if they are not all confirmed COVID-infected cases.

Ambulance staff should have access to appropriate PPE, though never use it in the drivers' compartment of the car. Before stepping into the drivers' compartment, used PPE should be safely removed and discarded off in a bin for infectious medical waste and hands should be cleaned by using water and soap or alcohol-based hand rub.

The ambulance needs to be disinfected after each use. Therefore, it is useful to reduce the equipment in the patient compartment to the essentials. Currently, WHO recommends using 70% ethyl alcohol to disinfect small areas between uses, such as reusable dedicated equipment (for example, thermometers) and sodium hypochlorite at 0.5% (equivalent to 5000 ppm) for disinfecting surfaces. Disinfection can be done preferably at the triage facility, so the ambulance is immediately available again. Waste should be handled as infectious medical waste and can be handed over at the triage facility after handing over the patient.

[2] "Rational use of personal protective equipment for coronavirus disease 2019 (COVID-19)". https://apps.who.int/iris/bitstream/handle/10665/331215/WHO-2019-nCov-IPCPPE_use-2020.1-eng.pdf

After screening

Patients not presenting with acute respiratory disease can be taken care of in the health facility as regular.

Specific IPC measures inside the non-COVID-19 health facility

Access to the facility should be controlled strictly and limited to staff and patients. Visitors should be avoided. Temperature checks on entry of staff, combined with supervised hand washing can be considered.

Of course, it remains of utmost importance to keep standard precautions in place with extra attention for hand- and respiratory hygiene. Hand washing stations and alcohol-based hand rub should be widely available, and ventilation should be maximised. Large openings for natural ventilation without any protection increase the risk of security breaches and the spread of vector-borne diseases. Purpose-designed barred windows and semi-transparent mosquito meshes can be used in these situations. Where possible services can be delivered in open air or under shading to allow maximal ventilation. Safe cough and sneeze etiquette should be thought to patients and visitors.

Whenever there is doubt about a specific patient, this patient should wear a mask and be isolated in a designated area. Staff should wear proper PPE[3] when in contact with this patient and referral to a triage point annex treatment centre should be arranged. All waste coming from caring of this patient should be handled as infectious medical waste. The treatment locations and equipment where the patient was cared for should be disinfected by surface disinfection procedures with 62–71% ethanol, 0.5% hydrogen peroxide or 0.5% sodium hypochlorite within 1 minute[4]. Current WHO recommendations indicate to clean utility gloves or heavy duty, reusable plastic aprons with soap and water and decontaminate with 0.5% of sodium hypochlorite after each use. Single-use gloves (nitrile or latex or nitrile) or gowns should be discarded after each use and not reused, and hand hygiene should be performed after removal of PPE.

[3] "Rational use of personal protective equipment for coronavirus disease (COVID-19)" . https://apps.who.int/iris/bitstream/handle/10665/331215/WHO-2019-nCov-IPCPPE_use-2020.1-eng.pdf

[4] " Persistence of coronaviruses on inanimate surfaces and their inactivation with biocidal agents": https://www.sciencedirect.com/science/article/pii/S0195670120300463