MANAGEMENT GUIDELINES FOR DISTRICT HOSPITALS DURING COVID-19

Nigeria

This operational guideline is based on guidelines of WHO, China, the UK and other countries with experience of COVID-19.

Use this together with national and WHO COVID-19 guidelines.

The aim is to manage people ill with possible COVID-19 while continuing other essential care and prevention.

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Introduction to the guideline

It is for managers and health workers in healthcare facilities, and freely available for adaptation and use in any country. There is also a clinical outpatient deskguide being developed. This is based on COVID-19 guidelines from WHO, Sierra Leone, China, the UK and other countries. It was developed by a team in China, Toronto Canada and Leeds UK. Please send your comments and proposed edits (in track changes) so we can improve this guideline to j.walley@leeds.ac.uk emmanueleffa@yahoo.com and akanotu@yahoo.com . Details will change as the epidemic progresses in the country and more scientific and public health evidence emerges. The aim is to manage and investigate ill people with possible COVID-19 while continuing other essential care and prevention.

Key points

The COVID-19 epidemic evolved rapidly with spread from the first few cases and their contacts to communities. Everyone is susceptible to the infection and needs education about the virus. Symptoms in approximately 80% of the cases are mild with some asymptomatic, especially in children and young adults. Most people will not know they have the disease, and can spread it. Therefore social distancing or infection prevention measures they is important. Confirmed or suspected cases should isolate for 14 days. Only 15-20 % of cases may require treatment in hospital. Some, especially elderly or those with chronic diseases may get very ill and require oxygen or ventilator support. Within a few weeks of the epidemic there can be a steep climb in cases and deaths. After a few months the numbers stop rising and then start to decline. But after this first peak of cases other epidemics with peaks of cases can follow.

Key manager/ health worker actions:

- **Know the risk of disease severity:**
  - Most will recover
  - 100% are susceptible to getting infected. Prevention includes: 2 meters social distance, work from home if possible, avoid touching face, mouth and eyes, and handwash with soap for at least 20 seconds or use an alcohol based hand santiser.

  Based on China and other country data:
  - Of 100 people infected, 98 will recover, half or more have mild symptoms. 15 or 20 get very difficult breathing needing hospitalisation and oxygen, while some will need intensive care on ventilators, and of the ill people 2 out of a 100 die - generally older people and/or with an existing chronic illness.

- **Continu**e services for non-COVID diseases to avoid preventable death and illness eg Maternal and Child health programs, Family Planning, Immunisations, Malaria, HIV and TB testing. Severe disease related to COVID-19 is higher in those with chronic health conditions such as diabetes and heart disease, therefore it is even more important to detect, monitor and treat these conditions.

- **Communicate** to patients clearly what the patient pathway to reduce their confusion

and stress as they will often be very anxious coming to the hospital.

- o **Separate** patients with symptoms of COVID-19 from others. This is done through screening and directing to separate parts of the hospital. In 'suspected COVID-19' areas, strictly enforce 2 meter distancing and IPC measures, to prevent infecting those that are not yet confirmed COVID-19 positive. Treat all as possible COVID-19 until otherwise proved, and that testing may take about 4 days. Also look for other, non COVID-19 infective causes of their symptoms eg bacterial pneumonia or TB. Continue to detect and treat chronic health conditions in these patients.

- o In the non COVID-19 areas everyone must still be 2 meters apart as there may be patients who have COVID-19 that are asymptomatic or have mild symptoms. Diagnose and treat as usual, using standard treatment guidelines.

- **Educate** staff patients and relatives to keep 2 meters (m) apart at all times in all places in the hospital. Use visual aids eg posters and 2m marks on the floor. Restrict visitors and relatives access to hospital to reduce their infection risk.

- **Enforce** strict hygiene: Consider the WHO my five moments of hand hygiene. All staff should wear face masks at all times if there is resource. In the COVID areas all staff should wear gloves AND wash with soap and water. If there's no handwashing area, then provide hand sanitiser with at least 60% alcohol content.

- **Allocate** staff at high risk of complications from COVID-19 (older age, immunosuppressed, chronic diseases) to do roles not involving contact with others/patients, preferably in a well ventilated space, and strictly social distancing 2m at all times.

  Any staff who develop symptoms are to be tested and isolated as per current guidance or self-isolate at home if conducive, in own room, 2m from family/carers, vigilantly hand washing, for 14 days from the start of symptoms. Structures for routine surveillance of COVID-19 related symptoms should be put in place.

- **Have clear guidelines on** isola**ti**on, management of COVID-19 and other regular diseases and IPC.

Chapter 1 Screening and Isolation Area Management

Screening Process

Health facilities can adapt the processes to the local organization and structure of the health facility.

All health facilities should identify screeners at the facility entrance to:

1. Ask patients and visitors entering if they have any of: fever, cough, difficulty breathing, sore throat, loss of smell or taste.

2. If temperature of more than 37.8 degrees Celsius or any of these symptoms (or close contact with someone with COVID-19) then provide a face mask and direct the patient to desk B (discussed below) for further assessment.

1. The Reception and Emergency Room

Screeners separate patients with possible COVID-19 symptoms from those with non-COVID-19 symptoms throughout the entrance, reception, emergency room, waiting and consultation rooms.

- Have a designated registration Desk A (non-COVID-19) and registration Desk B (suspected COVID-19 from screening).

- Direct non-COVID-19 patients to Waiting Area A and direct suspected COVID-19 patients to Waiting Area B to be moved to the COVID-19 Isolation Area.
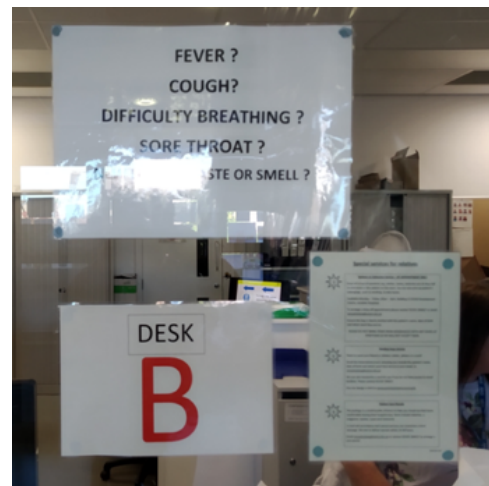
The non-COVID-19 patients are triaged and consulted as usual, however staff still observing social distancing and standard and transmission-based precautions. Ensure non- COVID-19 patients seen in outpatients are educated on signs of possible COVID-19 and who to call if they develop symptoms. Inpatients are admitted to non-COVID-19 wards,

which should be located in a different part of the hospital, separated from COVID-19 ward and areas. However, some patients may not report COVID-19 symptoms but later mention symptoms of possible COVID-19 or are found to have signs (eg fever, rapid pulse, low oxygen saturation or chest signs) – if so manage as possible COVID-19, transfer to a COVID-19 ward and still separate from confirmed COVID-19 cases, until a positive test result confirms COVID-19.

2. Designated COVID-19 Isolation Area

2.1 Scope

The designated COVID-19 isolation area is a dedicated and isolated room aiming to provide interim care and monitoring of possible or confirmed COVID-19 patients with moderate symptoms or prior to inpatient admission to an isolation ward if symptoms are severe.

2.4 Patient Selection & Management

(1) This is for suspected or confirmed COVID-19 patients with moderate symptoms

(2) Organise inpatient if more severe symptoms eg:

- Increased difficultly breathing
- Can't easily speak in sentences without taking extra breaths
- Can't manage basic things like eating and taking a shower
- Found to have severely abnormal vital signs (and so higher NEWS scores)

(3) Admit to ICU as per the hospital admission criteria

(4) Exclude patients with an unclear diagnosis, not suspicious of COVID-19.

(5) Enforce a strict no visitor policy and confine patient's activity to the isolation ward

(6) Educate patients on use of masks, washing hands etc.

2.2 Layout

(1) Set up an independent tent or room with an exclusive one-way passage at the hospital/emergency department entrance with a visible sign, separating them from the no-

fever-cough (clean zone) patients;

(2) Patient movement should follow the principle of three COVID-19 zones:

•   A Contaminated Zone

•   A Potentially Contaminated Zone

•   A Clean Zone

The 3 zones should be clearly signed and demarcated with two buffer zones between the contaminated zone and the potentially contaminated zone;
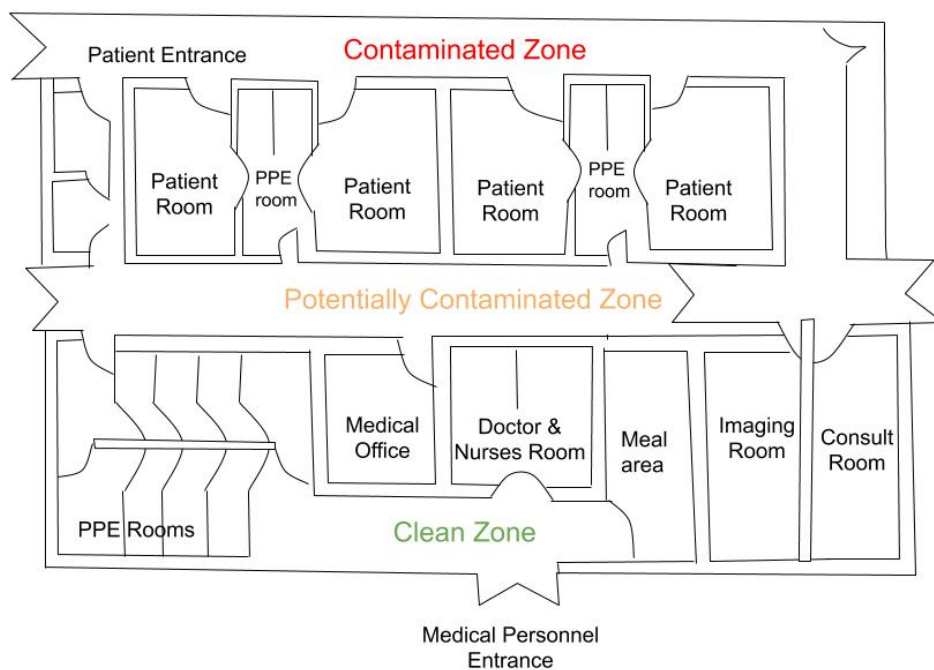
An example layout of zonings of observation or in-patient rooms. Each hospital needs to lay out zones adapting its existing rooms and corridors.

(3) Contaminated items should be stored in an independent passage and a region for one-way delivery of items from an office area to the isolation wards (office to ward all potentially and contaminated, separated from the same for clean);

(4) Flowcharts of different zones and full-length mirrors should be provided to ensure appropriate PPE procedures with strict observation of movement routes;

(5) Infection prevention and control (IPC) officers should supervise medical personnel's PPE on and off procedures so as to prevent contamination;

(6)   All non-disinfected items in the contaminated zone should not be removed.

<u>2.3 Designated COVID-19 Isolation Area Requirements</u>

(1) Keep possible and confirmed patients separated in different isolation areas within the unit, each equipped with separate facilities (e.g. bathroom), ie separate as far as possible;

(2) Confirmed patients can be arranged in the same observation room with bed spacing of no less than 1.2 meters (appx 4 feet);

(3) Monitor all patients in the designated COVID-19 isolation area for vital signs and record respiratory rate, oxygen saturation, pulse, blood pressure and temperature;

(4) Signs of clinical deterioration and decompensation should be addressed immediately, transfering to inpatient ward as appropriate;

(5) A doctor/community health officer and nurses (ideally 1 nurse for every 5 patients) per shift, and with patient rounds at the beginning of each shift (depending on resource availability).

3. Ward Isolation

3.1 Scope of Application

The isolation areas include an observation unit, wards, and an intensive care unit (ICU) area (i.e. separate from non COVID-19, non-isolation areas). The building layout, staff and workflow should meet the hospital isolation technical regulation/requirements (national or WHO). Isolation areas should be well ventilated (preferably in negative pressure rooms) and with strictly limited access.

3.2 Layout

Please refer to Section 1.

3.3 Ward Requirements

(1) Possible and confirmed COVID-19 patients should be separated in different ward areas;

(2) Possible patients preferably are isolated in single rooms (or at least beds are 2 metres apart) with private facilities e.g. a bathroom

(3) Confirmed patients can be arranged in the same room with bed spacing of no less than 1.2 meters (appx 4 feet) and with dedicated facilities such as a bathroom.

3.4 Patient Management

(1) Enforce a strict no visitor policy but allow patients to use their phones to facilitate interactions

(2) Confine patients' activity to the isolation ward

(3) Educate patients and provide instructions on how to wear surgical masks, proper handwashing, cough hygiene (into mask or arm), medical observation and home isolation (quarantine).

Chapter 2 Clinical Treatment

COVID-19 Treatment Guidelines

For patients who walk into the emergency/ outpatient department, see the 'Deskguide Nigeria for primary care'.

Non-COVID-19 Treatment Guidelines

As many of the patients will have underlying conditions, it is just as important to treat these problems. See below the link to the WHO IMAI district clinician manual parts 1 and 2.

For non communicable diseases, there is also a FMoH/NCD deskguide, also available on InStrat VTR.

Chapter 3 Healthcare Staff Management

1. Workflow Management

(1) Staff must undergo training or on-the-job briefings at the minimum. PPE on and off techniques should be assessed- see figures below, and follow the national IPC guidelines.

(2) The staff should be divided into different teams. Each team should be limited, if

possible, to 4 hours work on an isolation ward, and include an IPC officer if available.

(3) Treatment, examination and disinfection for each team should be arranged as a group to reduce the frequency of staff moving in and out of the isolation wards

(4) Before going off duty, staff must wash themselves and conduct necessary personal hygiene regimens to prevent possible infection

2. Staff Health

(1) Frontline staff – healthcare personnel, medical technicians and property & logistics personnel – ideally should live self-isolated away from family members (in isolated accommodation) and avoid social interaction except with similarly exposed colleagues, but should always observe social distancing and the necessary prescribed precautions. This is likely not feasible for most contexts/frontline staff. However, staff can reduce the risk of transmitting the virus to their family members e.g changing their clothes at work, washing on arrival at home and keeping 2m from others especially older people or those with chronic diseases, and at higher risk of complications if they contract COVID.

(2) A nutritious food should be provided. Medical personnel should only eat in designated areas, avoid sharing food and practice social distancing while taking breaks.

(3) Monitor and record all staff's health status. Conduct health monitoring for front-line staff, including monitoring body temperature and new respiratory symptoms and address any arising psychological problems with relevant expert/ counsellors.

(4) If the staff have any relevant symptoms such as fever or cough or loss of taste or smell etc., they should be isolated immediately for 14 days.   If possible test and if found negative on a RT- PCR test it is less likely their illness is due to COVID-19 unless there was recent exposure.

(5) After completion of work in the isolation area, ideally front-line staff should first be RT PCR tested, but likely isn't feasible. Even though well, they should continue to minimise risks for 14 days to family members as above (1).

Chapter 4 Hospital Work Plan Requirements

1. Preparation early in the epidemic

1.1 Infection Control Procedures

- Strengthen infection, prevention and control (IPC) of infectious respiratory tract diseases, including wash basin soap/dispensers, hand washing procedure posters, gowns, masks, etc.

- Strengthen the surveillance of respiratory infection cases and initiate a tailored emergency backup plan for outbreak prevention and control

1.2 Testing

- Regulate collection of throat swab samples
- Submit possible COVID-19-related sputum samples

1.3 Training on Guidance

- Organize training for medical staff on COVID-19 related pneumonia etc. illness
- Post advice for COVID-19 IPC in all wards and outpatient/ emergency departments
- Provide guidance in line with the national referral policy for COVID-19 positive patients including use of emergency ambulance service
- Provide guidelines on admission for emergency surgery during the epidemic
- Display rules who can/ not visit inpatients

2. During the Epidemic

COVID-19 patient numbers are increasing so:

- Provide guidance on admission procedures and enforce screening for fever, cough and difficulty breathing, and direct patients non/ possible or confirmed COVID-19 outpatient, observation or inpatient admission
- Provide guidance on disease prevention for radiological examinations in fever-cough

outpatient (emergency room) clinics and in observation areas

- Adapt non COVID-19 'clean' outpatient care fully to an appointment-based system

- Standardize the diagnosis and treatment of fever, cough and difficult breathing in hospitalized patients

- Provide guidance for the consultation of staff with fever and respiratory symptoms

Chapter 5 Infection Prevention and Control (IPC) for COVID-19

See the national or WHO IPC standard operating procedures for COVID-19.

1. COVID Patient IPC Management

Follow your national or WHO IPC procedures (see below).

1.1 Patient Instructions

(1) Give a 'supected COVID' patient a medical mask and direct patient to an isolation area

(2) Keep at least 2 m distance between all other patients

(3) Instruct all patients to cover nose and mouth during coughing or sneezing with tissue, or at least a flexed elbow, and wash hands with soap straight away

(4) All visitors should perform hand hygiene whenever indicated

(5) Limit patient movement and ensure patients wear masks when outside their rooms

1.2 Healthworker instructions

(1) Health Care Workers should apply the WHO's My **5 Moments for Hand Hygiene** approach: before touching a patient, before any clean or aseptic procedure is performed, after exposure to body fluid, after touching a patient, and after touching a patient's surroundings. Hand hygiene includes either cleansing hands with an alcohol based hand rub or with soap and water. Alcohol based hand rubs are preferred if hands are not visibly soiled

(2) Use a medical mask if working within 2 m of the patient and at all times when working with COVID-19 patients. Use eye protection (face mask or goggles) if in close contact with a patient with respiratory symptoms (e.g. coughing or sneezing)

(3) Use PPE (medical mask, eye protection, gloves and gown) when entering room, remove PPE when leaving and practice hand hygiene following PPE off procedure

(4) If possible, use equipment (e.g. stethoscopes, blood pressure cuffs, pulse oximeters and thermometers) dedicated to that area. Clean and disinfect shared equipment between each patient use

The Levels of Protection – add protective equipment according to the level of risk:

- Level 1: Work uniform, disposable surgical cap and medical surgical masks
- Level 2: Add disposable medical protective uniform, latex gloves, goggles
- Level 3: Add full-face respiratory protective devices or powdered air-purifying respirator.

Scope of Protective Equipment Application:

- Level 1: wear 'surgical' masks in the reception/ triage area
- Level 2: apply in all clinical areas (but if not sufficient available use level 1)
- Level 3: when doing cough/droplet inducing tests, procedures, autopsies surgery on suspected/ confirmed cases who may spray respiratory fluids or blood

Never touch your mask or eyes, handwash with soap for 20 seconds, etc.


SEQUENCE FOR PUTTING ON
PERSONAL PROTECTIVE EQUIPMENT (PPE)

The type of PPE used will vary based on the level of precautions required, such as standard and contact, droplet or airborne infection isolation precautions. The procedure for putting on and removing PPE should be tailored to the specific type of PPE.

1. GOWN

- Fully cover torso from neck to knees, arms to end of wrists, and wrap around the back
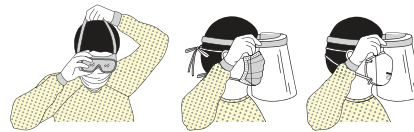- Fasten in back of neck and waist
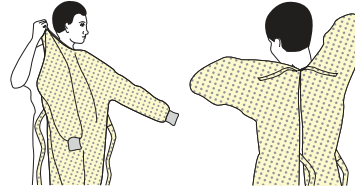
2. MASK OR RESPIRATOR

- Secure ties or elastic bands at middle of head and neck
- Fit flexible band to nose bridge
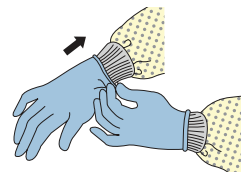- Fit snug to face and below chin
- Fit-check respirator

3. GOGGLES OR FACE SHIELD

- Place over face and eyes and adjust to fit

4. GLOVES

- Extend to cover wrist of isolation gown

USE SAFE WORK PRACTICES TO PROTECT YOURSELF
AND LIMIT THE SPREAD OF CONTAMINATION

- Keep hands away from face
- Limit surfaces touched
- Change gloves when torn or heavily contaminated
- Perform hand hygiene

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2.1 Removing PPE:

HOW TO SAFELY REMOVE PERSONAL PROTECTIVE EQUIPMENT (PPE)
EXAMPLE 2

Here is another way to safely remove PPE without contaminating your clothing, skin, or mucous membranes with potentially infectious materials. **Remove all PPE before exiting the patient room** except a respirator, if worn. Remove the respirator **after** leaving the patient room and closing the door. Remove PPE in the following sequence:

1. GOWN AND GLOVES

- Gown front and sleeves and the outside of gloves are contaminated!
- If your hands get contaminated during gown or glove removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Grasp the gown in the front and pull away from your body so that the ties break, touching outside of gown only with gloved hands
- While removing the gown, fold or roll the gown inside-out into a bundle
- As you are removing the gown, peel off your gloves at the same time, only touching the inside of the gloves and gown with your bare hands. Place the gown and gloves into an infectious* waste container

2. GOGGLES OR FACE SHIELD

- Outside of goggles or face shield are contaminated!
- If your hands get contaminated during goggle or face shield removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Remove goggles or face shield from the back by lifting head band and without touching the front of the goggles or face shield
- If the item is reusable, place in designated receptacle for reprocessing. Otherwise, discard in an infectious* waste container

3. MASK OR RESPIRATOR

- Front of mask/respirator is contaminated — DO NOT TOUCH!
- If your hands get contaminated during mask/respirator removal, immediately wash your hands or use an alcohol-based hand sanitizer
- Grasp bottom ties or elastics of the mask/respirator, then the ones at the top, and remove without touching the front
- Discard in an infectious* waste container
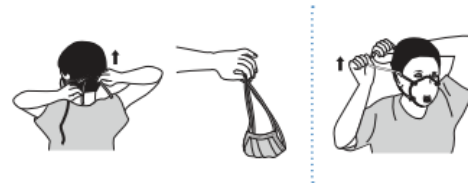
4. WASH HANDS OR USE AN ALCOHOL-BASED HAND SANITIZER IMMEDIATELY AFTER REMOVING ALL PPE
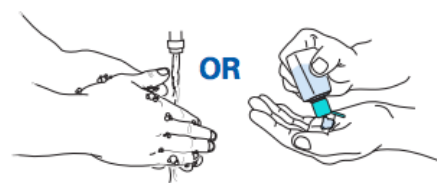
* An infectious waste container is used to dispose of PPE that is potentially contaminated with Ebola virus.

PERFORM HAND HYGIENE BETWEEN STEPS IF HANDS BECOME CONTAMINATED AND IMMEDIATELY AFTER REMOVING ALL PPE

CDC

3. Disinfection Procedures for COVID-19 Isolation Wards/Areas

3.1 Disinfection for Floor and Walls

(1) Visible pollutants e.g. blood and bodily fluid spills should be completely removed before disinfection and handled in accordance with disposal procedures.

(2) Disinfect the floor and walls with 1000 mg/L chlorine-containing disinfectant through floor mopping, spraying or wiping.

(3) Make sure that disinfection is conducted for at least 30 minutes.

(4) Disinfect three times a day and repeat the procedure whenever there is contamination.

3.2 Disinfection of Object Surfaces

(1) Visible pollutants should be completely removed before disinfection and handled in accordance with disposal procedures of blood and bodily fluid spills.

(2) Wipe the surfaces of objects with 1000 mg/L chlorine-containing disinfectant or wipes wait for 30 minutes and then rinse with clean water. Perform disinfection procedure three times a day. Repeat at any time when contamination is suspected.

(3) Wipe cleaner regions first, then more contaminated regions: first wipe not frequently touched object surfaces, and then wipe frequently touched object surfaces. (Once an object surface is wiped clean, replace the used wipe with a new one).

As above, follow your national IPC guidelines or see the more detailed WHO IPC guide.

Chapter 6: Management of Hospital Supplies

Supply, procurement and management is critically important during the COVID-19 pandemic and other healthcare emergencies. The COVID-19 epidemic evolves rapidly with a steep climb in cases and deaths, to peaking in the number of cases to eventual decline. Getting supplies takes time, and needs advance planning and procurement.

1. WHO COVID-19 Critical Items List (30 March 2020)

1.1 Personal Protective Equipment (PPE)

- Gloves (examination, surgical)
- Goggles, protective
- Gown, protective
- Face shield
- Mask, surgical, N95, particulate respirator.

1.2 Diagnostic Equipment

- Lab screening test kit
- Lab confirmation test kit
- RT-PCR kit
- Extraction kit
- Cartridges for RT-PCR automatic systems
- Swab and Viral transport medium.

1.3 Clinical Care Equipment:

- Pulse oximeter
- Concentrator O2, 10L, 230V, 50 Hz + acc.
- Nasal oxygen cannula, with prongs,
- Ventilator patient, for adult, paediatric w/acc.
- CPAP, with tubing and patient interfaces for adult and paediatric, w/acc.
- Suction pump, mechanical
- High-flow nasal cannula (HFNC) w/acc.

2. WHO Disease Commodity Package
Particular priorities are increasing availability and maintaining supplies of:
- Soap and gels for handwashing, at entry, toilets, and at any point of patient contact
- Oxygen, by continuous pressure (CPAP) and when required by ventilators
- Personal protective equipment (PPE).
  Click on link to access the **Disease Commodity Package**

3. WHO COVID-19 Essential Supplies Forecasting Tool

The WHO COVID-19 Essential Supplies Forecasting Tool (ESFT) is to estimate potential requirements for essential supplies during this pandemic of COVID-19. Although it provides users with a case number estimation, this calculator is not an epidemiological calculator.

To forecast essential supplies: it includes estimation of personal protective equipment, diagnostic equipment, biomedical equipment for case management, essential drugs for supportive care, and consumable medical supplies.

The COVID-19 ESFT tool is intended to be complimentary to the Health Workforce tools (Adapt and the Workforce Estimator). Both tools use the same base clinical attack rate ranges and classify health workforce using ILO ISCO codes, but their outputs are intentionally different due to their primary focus.

Click on the link to access the WHO COVID-19 Essential Supplies Forecasting Tool

4. Maintaining other essential services during COVID

A key point from the introduction includes to continue regular essential services that will be prioritized in their efforts to maintain continuity of service delivery. High-priority categories includes:
- Essential prevention for communicable diseases, particularly vaccination;
- Services related to reproductive health, including family planning and care during pregnancy and childbirth;
- Care of vulnerable populations, such as young infants and older adults;
- Provision of medications and supplies for the ongoing management of chronic diseases, including TB, diabetes/hypertension, epilepsy and mental health conditions;
- Continuity of critical inpatient therapies and surgery eg for appendicitis;
- Accident and emergency care, and common acute presentations that require time-sensitive intervention;
- Other as relevant in your setting.

Access WHO Operational Guide on Maintaining Essential Services by clicking on the link:

https://www.who.int/publications-detail/covid-19-operational-guidance-for-maintaining-essential-health-services-during-an-outbreak

Conclusion

Use this guide together with clinical guidelines and your judgement. Please send your comments (and proposed edits in track changes to this document) so we can improve this guideline to j.walley@leeds.ac.uk.   These are difficult times, but together we need to tackle the COVID epidemic, while maintaining the essential other services.

Clinical guides

There is a clinical outpatient deskguide to accompany this hospital management and IPC guideline. Below are the (adapted from UK NICE sepsis) NEWS tools, referred to above.

NEWS national early warning score (Child use the danger signs in WHO IMNCI)

If you **have an oximeter**, use the simplified from NICE, Sepsis 'at a glance' aid to judgement on who requires urgent assessment by a hospital/doctor. Rates given for adults (non-pregnant).

NEWS sign and score	**0**	**1**	**2**	**3**
> more, or < less than	normal	raised	high	severe
Respiratory rate	12 - 20	- (9 – 11)	>20	> 25 < 8
Heart rate	51 - 90	> 90 (40 – 50)	> 110	> 130 < 40
Temperature	36 - 38	> 38 (35 – 36)	> 39	<35
BP Systolic	110 - 220	< 110	< 100	< 90 > 220
Sats (not on oxygen) by oximeter (or cyanosed = 3)	96 -100	< 95	< 93 Or on oxygen	< 91
Level of consciousness	Alert			V, P or U
Urgent assessment hospital? any single 3 or total of 5+ send in				Any

Urgent transfer to hospital/doctor if CRP65 3-4 (or NEWS any single 3 or total of 5) as likely sepsis eg pneumonia/ acute respiratory distress syndrome (ARDS).

Ill, but not severe, then ask about past illness.

Ask and look for chronic illness: if a co-morbid disease, so more at risk? if:

 i) Any chronic disease of the heart/ blood vessels (CVD), lungs, kidneys etc.

 ii) Frail: elderly, thin, weak, tired, difficult walking or thinking (memory/orientation)

If ill with a chronic disease or frailty => admit

References

1. Liang TB. Handbook of Covid-19 prevention and treatment. Zhejiang: Zhejiang University School of Medicine; 2020. 68 p.

2. National COVID-19 guidelines on eg the Control of Communicable Diseases (CDC) or other public health office, COVID website.

3. World Health Organisation (WHO). https://www.who.int/emergencies/diseases/novel-coronavirus-2019

4. WHO Country and Technical guidance documents, including: https://www.who.int/emergencies/diseases/novel-coronavirus-2019/technical-guidance.

Hospital clinical (not including COVID):

WHO IMAI district clinician manual: Hospital care for adolescents and adults. Guidelines for management of common conditions with limited resources (2011) (Volumes 1 &2) http://www.who.int/hiv/pub/imai/imai2011/en/