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MINISTRY OF HEALTH - ETHIOPIA

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HEALTHIER CITIZENS FOR PROSPEROUS NATION



National Public Health Emergency Operating Center COVID-19 Emergency Preparedness and Response

Minimum standards for quarantine, isolation and treatment centers in Ethiopia



Purpose of this document

This minimum standard designed based on assessment and perceived needs to set up isolation, quarantine and treatment center in relevance to the Ethiopia context and resource all action for COVID 19 national readiness and response plan. The minimum standard will assist the continuum of emergency health service for COVID 19 outbreak in Ethiopia; it will encompass essential drugs, supplies and equipment to be used for these dedicated centers and outlines clear requirements and inputs for existing and repurposed centers. The minimum standard will be revised periodically as the needs arises based on Ethiopian emergency care follow up tool and basic critical care and WHO emergency kit tools.

Categories of Health facilities for Management COVID-19 in Ethiopian Service Provision Points

Within, the contexts of the COVID-19 outbreak, FMOH/EPHI have designated facilities into categories based on:

1. Laboratory status of the patient that will access care
2. Clinical status of the patient to be managed: existence or otherwise of medical or surgical co-morbidities that require emergency care.
3. Existence of relevant resources for the safe and appropriate management of the patient.

Categories of centers

- A. Quarantine centers/Sites:** centers which are assigned or dedicated in response to suspected or confirmed coronavirus exposure sites or places to stop peoples or groups who don't have symptoms before getting in to the community to stop the spread of contagious diseases, but who are exposed to the sickness
- B. Isolation Centers:** facilities which receive patients who have met the case definition criteria and are suspected cases for COVID-19. All isolation centers should be already established health facilities including health centers and hospitals. These centers have two categories:
- **Category I-** These isolation centers include patients who are non-complicated/stable COVID 19 suspects. Health centers can be used for this category based on the need
 - **Category II-** These isolation centers include patients who are complicated/unstable COVID 19 suspects. Isolation centers for this category are hospitals
- C. Treatment/Management Centers:** Are facilities that will receive, manage, and treat patients that have Lab confirmed (positive) for COVID-19.



NB- The statement below is the detailed description for patients who will be in Isolation centers

Clients who are admitted to isolation centers are those individuals who:-

- Had direct / physical contact with known confirmed COVID 19 patients and presented with clear sign and symptoms of COVID-19.

These symptomatic patients will be admitted for follow up and care.

The clients in the isolation center will stay till they are tested for COVID-19 and get their result. As soon as the result is received, decision will be made to transfer cases to case management centers if they are positive or send them to their home if their test result is negative for COVID19.

Minimum standards based on the type of facility

Note: - Below are the medical and non-medical equipment, materials and HR required at every facility. The PPE requirement should be referred from the **National PPE guideline**.

Quarantine sites/centers

Quarantines are used:

- Outbreaks: when there is a sudden rise in the number of cases of a disease
- Epidemics: Similar to outbreaks, but generally considered larger and more widespread,
- Pandemics: Larger than epidemics, generally global in nature and affect more people

It shall be equipped with Temporary clinic and aligned with the state of emergency or legislation.

- There should be One GP and one nurse assigned for 100 people in quarantine centers

In addition, the following materials should be available

- Glucometer
- Pulse oxymetry
- Face mask
- Personal hygiene materials
- Temporary clinic



Isolation centers

All health facilities are expected to prepare isolation room and assign health professionals to manage clients admitted. As a country, selected facilities will have isolation centers according to these set standards. The number of patients to be admitted and managed at isolation centers will depend on the health facilities capacity.

Human resource minimum standard

Category I- The following professionals will be needed for 25-30 patients in one shift for 8 hour rotation shift

- One GP/HO
- Two nurse
- Two Lab technician
- Two Pharmacist
- One IP focal
- Supportive staffs (Guard, cleaner, Porter, Laundry, catering)

NB: Dead body management should be according to the COVID 19 death body management protocol following all the necessary IP standards

Category II- The following professionals will be needed

- One senior physician form each of the following professions are needed Internist, Er physician, surgeon, anesthetist, pediatrician
- General practitioner
- Nurse
- Lab technician
- Pharmacist
- IP focal
- Supportive staffs (Guard, cleaner, Porter, Laundry, catering)

Note:

1. Supporting staffs and the total number of health professionals required in the health facility will be calculated based on the number of cases to be admitted in the isolation center.



2. This facility may manage patients with invasive MV if not with non-invasive MV
3. Dead body management should be according to the COVID 19 death body management protocol following all the necessary IP standards

Medical supplies and equipment minimum standards

- Drugs, medical equipment, laboratory and diagnostic supplies for the isolation centers will be covered by the regular budget of the health facility during the period of COVID outbreak. The list of supplies is according to the countries supply standard and budget for health centers and hospitals.
- EPHI will provide PPE and IP equipment from COVID dedicated budget for the isolation centers

In addition, the following basic need materials are needed for both categories of isolation centers



Table 1: General medicine list for COVID 19 isolation centers

S.N	Item description
1	ORS (oral rehydration salts) powder for dilution
2	Paracetamol, dispersible tablets
3	Zinc sulfate, dispersible tablets
4	40 % glucose
5	Albendazole, chewable tablets 400 mg
6	Aminophylline injection
7	Amoxicillin, dispersible tablets 250 mg
8	Asprine po
9	Atropine injection
10	Benzyl benzoate, lotion 25%
11	Calcium gluconate injection
12	Chlorhexidine digluconate, solution 5%
13	Cimetidine injection
14	Ciprofloxacin tablet
15	Dexamethasone iv
16	Diazepam infusion
17	Diclofenac injection
18	Doxycycline tablet
19	Ferrous sulfate + folic acid,
20	Furosemide iv
21	Hydralizine
22	Hyoscine injection
23	Ibuprofen
24	Insulin iv (Regular insulin and human insulin)
25	IV FLUIDS(N/S , R/L, D/N/S, D/W)
26	Mebendazole tablet
27	Metformine po
28	Metoclorpramide
29	Miconazole, cream 2%
30	Nifedipine tablet
31	Omeprazole, solid oral dosage
32	Paracetamol po
33	Paracetamol, tablets
34	Phenobarbital po
35	Phenytoin tablet
36	Potassium chloride iv
37	Povidone iodine, solution
38	Salbutamol puff
39	Tetracycline eye ointment 1%
40	Tramadol tablet
41	IV metronidazole 500 mg

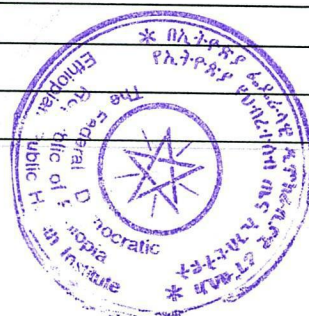


Table 2: Personal hygiene materials for patients in isolation centers

S.N	Personal hygiene materials for patients	S.N	Stationary items
1	Sanitary Napkin (cotex)	1	Towel
2	Diapers adults	2	pen, fine point, (50 pieces box)
3	children's diapers (6-10kg)	3	Marker, indelible, large, chisel point, black
4	Adult blanket	4	Marker, indelible, large, chisel point, Red
5	Baby blanket	5	Marker, indelible, large, chisel point, green
6	Bed sheet	6	Duracell AAA 2 battery (pair)
7	Body soap (100g)	7	Duracell AA 2 battery (pair)
8	Toilet paper (piece)	8	CR 2032 battery
9	Toilet slipper- Flipflop-tong	9	Clock/pendulum
10	Toothpaste with tooth brush	10	Rolls of scotch tape (5cm)
11	Men's sandals	11	Note book, A4, squared, spiral, 180 pages
12	Girls children's sandals	12	Envelop, plastic, transparent, perforated, A4 open at the top
13	Boy's children sandals	13	10/12 folder -pack separaion
14	Lady sandals	14	Hardcover note book, A4, rid, 80g, 200 pages
15	children clothing (0-5yrs)	15	Paper, A4, 210X297mm, white, for photocopy, 80 g
16	children clothing (5-12yrs)	16	Notepad, A5, 210X140mm, grid 5mm
17	adult t-shirts	17	Punch, paper, with guide
18	Kids T-shirt	18	Marker, erasable, black, round point
19	Pentalon adult	19	Marker, erasable, green, round point
20	Pentalon Child	20	Marker, erasable, blue, round point
21	Jacket adult	21	Marker, erasable, red, round point
22	Child jacket		
23	Men's underwear		
24	Women's underwear		
25	Child under wear		



Treatment center

Clients who are admitted to case management centers are:

- Individuals who are tested positive and verified COVID-19 patients including those who need intensive case management and extra advanced medical care for COVID-19 related or any other health problems

Human resource minimum standards

This facility shall assign specialists for every specialty service provided and supporting staffs to manage clients admitted to advanced case management centers. The number of patients to be admitted and managed in these centers will depend on the respected health facilities capacity.

Table 2: Health professional requirement for treatment centers

S.N	Specialty	600 BED CAPACITY HR	200 BED CAPACITY HR
1	Emergency Physician	6	4
2	Internist	22	6
3	ICU Physician (EMC,PCM,ANS,INT)	21	4
3	Anesthesiologist	3	1
4	Anesthetist	9	4
5	Radiologist	1	1
6	GP	84	28
7	Nurse	340	115

Medical supplies and equipment minimum standards

- These includes general medication list, COVID-19 management related drugs and ICU drugs and equipment



Table 3: General medicine list for COVID 19 treatment centers

S.N	Item description
1	ORS (oral rehydration salts) powder for dilution
2	Paracetamol, dispersible tablets
3	Zinc sulfate, dispersible tablets
4	40 % glucose
5	Albendazole, chewable tablets 400 mg
6	Aminophylline injection
7	Amoxicillin, dispersible tablets 250 mg
8	Asprine po
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26	Mebendazole tablet
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29	Miconazole, cream 2%
30	Nifedipine tablet
31	Omeprazole, solid oral dosage
32	Paracetamol po
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37	Povidone iodine, solution
38	Salbutamol puff
39	Tetracycline eye ointment 1%
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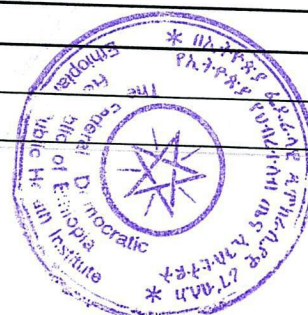


Table 4: Medicines related to treatment of COVID-19

S.N	Item description
1	Chloroquine phosphate /hydroxychloroquine
2	Azithromycin
3	*Remdesivir
4	*Interferon
5	Favipiravir
6	Amoxicillin-clavulanate(Augmentin
7	Amoxicillin 500mg po BID
8	IV ceftriaxone 2 g
9	Ceftazidime/Cefepime 2g
10	Vancomycin 1 gm IV
11	IV metronidazole 500 mg

NB: Those drugs use will be based on the solidarity trial

Table 5: Medical equipment needed for treatment center

S.N	Items
1.	Ventilators
2.	Circuit for ventilators
3.	Test lungs
4.	Humidifier (Adult) HME
5.	NIV fisher packet
6.	NIV Ordinary (Adult) Mask
7.	Hand splints
8.	Leg splints
9.	Heater room
10.	Pulse ox meter
11.	ECG machine
12.	Ultra sound
13.	Ophthalmoscope
14.	Torch
15.	Glucometer
16.	Protoscope
17.	Shaving set
18.	Tongue depressor
19.	Minor set
20.	Chest tube bottle
21.	Stethoscope
22.	T.piece
23.	Benes circuit
24.	Knee hammer
25.	Tuning fork



S.N	Items
26.	Bronchoscope different size set
27.	Glidoscope
28.	Bugie (new)
29.	Laryngeal mask
30.	Cricothyroid set/ tracheostomy set
31.	Styllets
32.	Fibreoptic laryngoscope
33.	Laryngoscope(ordinary)
34.	Laryngoscope No:4
35.	Laryngoscope no: 3
36.	Laryngoscope No:2/ No:1
37.	Ambu bag's (adult)
38.	Nail cutter
39.	Scales
40.	Cordless phone
41.	Bath basins
42.	IV stands
43.	Trolley
44.	O2 trolley's
45.	Wheel chair
46.	Fumigation pump
47.	Ladder
48.	Monitor
49.	ETCO2 Module
50.	Thermometer
51.	Othoscope
52.	Defibrillator
53.	Feeding cup
54.	Calling bell
55.	Enema can
56.	Bed pan
57.	Urinal
58.	Portable X ray
59.	X – ray view machine / Computer
60.	Suction unit
61.	Fridges
62.	Fire extinguisher
63.	Pillows
64.	ABG GEM machine
65.	Knife
66.	Wall clock
67.	EEG machine with laptop



S.N	Items
68.	Infusion Pump
69.	Syringe Pump
70.	Pressure bags
71.	Face mask
72.	Reservoir bags
73.	Ambu bag (ped)

Table 6: ICU drug and equipment list requirement for COVID 19 treatment centers

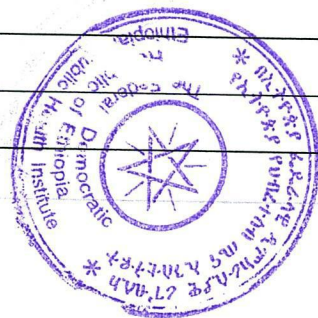
S.N	Items
1.	Atropine
2.	Adrenaline
3.	Sodium Bicarbonate
4.	Dobutamine
5.	Lebetolol IV
6.	Lidocaine
7.	Bupivacaine
8.	Menadione Sodium
9.	Pheniramine maleate
10.	Calcium Gluconate
11.	Dextrose 25% 100ML
12.	Dextrose 50% 100ML
13.	Phenytoin
14.	Hydrocortisone
15.	Dexamethasone
16.	Quinine
17.	Heparin 5000 IU
18.	Heparin 25000IU
19.	Lasix
20.	Potassium Chloride
21.	Paracetamol
22.	Multi vitamin injection
23.	Mannital 100ML



S.N	Items
24.	Midazolam Ampoules
25.	Magnesium Sulphate 50%
26.	Normal Saline 25ml
27.	Promethazine
28.	Methyl prednisolone 500 MG
29.	Vasopressin
30.	T.T 0.5 ML
31.	Anti snake venom
32.	Metoclopramide
33.	Ranitidine
34.	Haloperidol
35.	Tramadol
36.	Water for INJ 10ML
37.	Atracurium
38.	Lorazepam
39.	Pancuronium
40.	Dextrose 5%
41.	3 % Saline
42.	DNS
43.	Normal Saline 500 ML
44.	Ringer Lactate
45.	Sodium Chloride 0.45 %
46.	Dextrose 10 %
47.	Dextrose monohydrate
48.	NORMAL SALINE 100 ML
49.	Haemacoel
50.	Hydroxyethyl 6%
51.	Nor Adrenaline
52.	Xylocaine 2% 30 ML



S.N	Items
53.	½ GNS
54.	Amphotericin B 50 MG
55.	Nitroglycerine
56.	Veccuronium
57.	Rocuronium
58.	Pethedine
59.	Morphine
60.	Fentanyl
61.	Thiopentone
Antibiotics	
62.	Cefaperazone Sulbactum 2 MG
63.	Cefaperazone 2 MG
64.	Piperacellin Tazobactum 4.5 MG
65.	Ceftriaxone 1MG
66.	Cefazolin 1 MG
67.	Imipenem 500 MG
68.	Artesunate 60 MG
69.	Vancomycin 500 MG
70.	Tigycycline 50 MG
71.	Propofol 20 ml
Solutions	
72.	Ipratropium Bromide
73.	Asthalin Solution
74.	Wokadine Mouthwash
75.	Xylocaine Viscous
76.	Diclofenac
77.	Buscopan
78.	Ketamine 100 Mg
79.	Scoline 100 Mg



S.N	Items
80.	Propofol 50 Ml
81.	Amiodarone
82.	Adenoside
Sutures	
83.	Sutering material
Materials	
84.	Dynaplast 10 cm
85.	Elastic bandage
86.	IV Set Prime Line
87.	Blood Set
88.	3 WAY
89.	IV Extension Line
90.	Oxygen Mask - A
91.	Nebu Mask - A
92.	Venturi Mask
93.	Nasal Oxygen Cannula
94.	Vasofix 20 G
95.	Vasofix 18 G
96.	Jelco 20 G
97.	Ryles Tube 14
98.	Cvc Urocom
99.	Disposable Syringe 5 CC
100.	Disposable Syringe 10 CC
101.	Disposable Syringe 20 CC
102.	Disposable Syringe 50 CC
103.	Disposable Syringe 1CC
104.	Disposable Syringe 2CC
105.	Needle 23
106.	Needle 18 G



S.N	Items
107.	Needle 26 G
108.	Vacurette Plain 4 Ml
109.	Vacurette Edta
110.	Vacurette Coagulation
111.	Vacurette ESR
112.	Surgical Gloves 6.5"
113.	Surgical Gloves 7
114.	Surgical Gloves 7.5
115.	Certofix Trio
116.	Certofix Mono
117.	Arterial Line Kit
118.	Tegaderm 10 X 12
119.	Swab Stick
120.	Airway 3.0
121.	Airway 2.0
122.	ET Tube 9
123.	ET Tube 8.5mm
124.	ET Tube 8
125.	ET Tube 7.5
126.	ET Tube 7
127.	ET Tube 6.5
128.	ET Tube 6
129.	ECG Electrodes
130.	Tracheostomy Tube 8
131.	Tracheostomy Tube 8.5
132.	Foleys Catheter 14 Ch
133.	Foleys Catheter 16
134.	Tri Flow
135.	Dual Line Monitoring Kit



S.N	Items
136.	Urocondom Medium
137.	Spinocaine Needle No 22
138.	Spinocaine Needle No 20
139.	Cotton 200gm
140.	Gauze Bandage 6"
141.	Introducer Guidewire
142.	Suction Catheter 14
143.	Thoracic Catheter 28
144.	Thoracic Catheter 32
145.	Haemodialyser
146.	Ventilator Connections
147.	Oxygen Recovery Kit
148.	Catheter Mount
149.	Bacterial +Hme Filter
150.	Steri Catheter
151.	Sub Clavian Kit
Externals	
152.	Healex Spray
153.	Xylocaine Jelly
154.	Betadine 500 Ml
155.	Irrigation Saline 500 Ml
156.	Distilled Water
157.	Hydrogen Peroxide
158.	Eusol
159.	Glycerin 400 Gm
160.	Surgical Spirit 1l
161.	Betadine Ointment 250 Gm
162.	Oil Turpentine
163.	Polysan 0.5% 5 Ltr



S.N	Items
164.	Mercurochrome
165.	Glycerin Magsulf
166.	Vaseline
167.	Sterilium 500 Ml
168.	Micro Shield Hand Scrub 500 Ml
Ointments	
169.	Thrombophob
170.	Lacrigel Eye Ointment
Drops	
171.	Moisol Eye Drops
172.	Tropicamide Eye Drops
173.	NARCOTICS
174.	Inj. Fentanyl 2ml
175.	Inj. Fentanyl 10ml
176.	Inj. Pethidine
177.	Inj. Morphine
178.	Inj. Tramadol (1ml)
179.	Inj. Thiopentone 500mg



Table 7: Personal hygiene materials for COVID 19 treatment centers

S.N	Personal hygiene materials for patients	S.N	Stationary items
1	Sanitary Napkin	1	Towel
2	Diapers adults	2	pen, fine point, (50 pieces box)
3	Children's diapers (6-10kg)	3	Marker, indelible, large, chisel point, black
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6	Bed sheet	6	Duracell AAA 2 battery (pair)
7	Body soap (100g)	7	Duracell AA 2 battery (pair)
8	Toilet paper (piece)	8	CR 2032 battery
9	Toilet slipper- Flipflop-tong	9	Clock/penulum
10	Toothpaste with tooth brush	10	Rolls of scotch tape (5cm)
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22	Child jacket		
23	Men's underwear		
24	Women's underwear		
25	Child under wear		

These centers will provide sub specialty services in different disciplines like:

- Major OR surgery
- Labor delivery service for pregnant confirmed cases
- Dialysis for renal failures
- Neonatal ICU
- Oncology Services
- Rehabilitative services for cases of end stage chronic illnesses and as such
- Mental Health and Psychosocial support care



Every Disciplinary service shall avail the minimum requirement set previously by ministry of health.