Laboratory confirmation of a COVID-19 case will trigger an immediate investigation. Because there currently is no PCR test available, testing may take several days or longer. WHO's recommended strategy is to begin an investigation immediately, thus requiring immediate operational support and supplies.

### Sample Collection

<table>
<thead>
<tr>
<th>Sample Collection</th>
<th>Diagnosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upper and lower respiratory samples (nasopharyngeal and sputum samples)</td>
<td>Polymerase Chain Reaction (PCR)</td>
</tr>
<tr>
<td></td>
<td>Immunoassay</td>
</tr>
<tr>
<td></td>
<td>Culture</td>
</tr>
<tr>
<td>Viral transport medium</td>
<td>Commercial rT-PCR kits are available; See interim nCoV laboratory guidance below</td>
</tr>
</tbody>
</table>

### Personal Protective Equipment (PPE)

- Medical mask, good breathability, internal and external faces should be clearly identified, 98% droplet filtration, preferably fluid resistant
- Fluid resistant masks:
  - EN 14683 Type II
  - YY 0469, with at least 98% bacterial droplet filtration, or alternative equivalent standard
- Non-fluid resistant mask:
  - EN 14683 Type I
  - YY 0469 or YY 0969, if bacterial droplet filtration is below 98% or alternative equivalent standard

### Supportive treatment

- Oxygen Therapy with use of pulse oximeter highly recommended
- Mechanical ventilation of severe cases (40%)
- Invasive ventilation and intensive care of critical cases

### Antigen detection

- Several candidates are under consideration for evaluation. On outbreak-specific basis, the Monitoring of Unregulated Interventions (MEUR) may be considered. Please refer to most recent WHO guidance

### Treatment

- Several vaccine candidates are in development

### Vaccine

- Several vaccine candidates are in development

- Standard precautions with an emphasis on hand and respiratory hygiene, plus additional precautions - specifically droplet and contact precautions. Airborne-related precautions are only required for aerosol-generating procedures. Personal protective equipment (PPE) for screening and at-risk healthcare workers at healthcare facilities.

### Key outbreak control activities considered for material supply

1. Supportive treatment (oxygen, hydration, antibiotics & fever/pain relief) to reduce mortality
2. PPE and other materials for the establishment of IPC measures at healthcare level to reduce transmission

### Surveillance

- Technical guidance for COVID-19 is available online

### Intervention

<table>
<thead>
<tr>
<th>COMMODITY</th>
<th>TECHNICAL DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Triple packaging boxes</td>
<td>Comply with the CLSI standard M40-A (for the Quality Control of Microbiology Specimen Transport Devices).</td>
</tr>
<tr>
<td>Viral transport medium</td>
<td>Compatible with molecular and cell culture techniques.</td>
</tr>
<tr>
<td>Puncture resistant container for collection and disposal of used, disposable and auto-disable syringes and needles</td>
<td>WHO performance specification E10/IC.1 WHO/UNICEF standard E10/IC.2 or equivalent</td>
</tr>
</tbody>
</table>

### Disease Commodity Packages

- Laboratory testing for COVID-19 is in development

- There is no specific treatment or vaccine for COVID-19; however, R&D efforts for MERS-CoV are ongoing. See current WHO guidance on case management for MERS-CoV. WHO guidance on COVID-19 case management is in development.

- On outbreak-specific basis, the Monitoring of Unregulated Interventions (MEUR) may be considered. Please refer to most recent WHO guidance.

- Invasive ventilation and intensive care of critical cases.
### Oxygen Concentrator
- Device concentrates oxygen from ambient air. Mobile on four antistatic swivel castors, two with brakes.
- Tidal volume: 20 - 1500 mL.
- SIMV Respiratory Rate (preferable).
- CPAP/PEEP (preferable).
- Pressure support up to 40 cm H2O.
- SpO2 between 21 to 100%.
- Compiles with ISO 80601-2-61:2011, or equivalent.
- Compliance to the following international standards or to regional or national equivalent (including the technical tests for safety and performance from accredited laboratory or third party) for (latest version recommended but compliance to previous standards versions could be accepted):
  - IEC 60601-1:2005 Medical electrical equipment – Part 1: General requirements for basic safety and essential performance
  - ISO 80601-2-75:2018 Medical electrical equipment – Part 2-75: Particular requirements for basic safety and essential performance of ventilatory support equipment for ventilatory impairment
  - ISO 80601-2-79:2017 Medical electrical equipment – Part 2-79: Particular requirements for basic safety and essential performance of ventilatory support equipment for ventilatory impairment
  - ISO 18562-1:2017 Biocompatibility evaluation of breathing gas pathways in healthcare applications – Part 1: Evaluation and testing within a risk management process (if applicable)
  - ISO 20789:2018 Anaesthetic and respiratory equipment – Passive humidifiers (if applicable)

### Pulse Oximeter
- Compact portable device to monitor the haemoglobin saturation and to calculate the pulse rate for a patient. Finger-tip, hand-held or tab-top; battery powered or line powered.
- SpO2 detection to include the range: 70–100%.
- SpO2 resolution: 1% or less.
- Pulse rate detection to include the range: 30–240 bpm.
- Pulse rate resolution: 1 bpm or less.
- Compiles with ISO 10601-2-61:2011, or equivalent.

### Flow-splitter, for oxygen supply
- Flow-splitter for diversification of the oxygen delivery. Each outlet with an independent flowmeter for independently controlled oxygen flow rates. Full scale is graduated in litres per minute. The device is connected to a single, or double, oxygen supply (e.g., concentrator).

### Flowmeter, Thorpe tube
- The Thorpe tube flowmeter is composed of inlet and outlet ports, a regulator, a valve and a clear tapered measuring tube. It is suitable for connection with various medical gas sources, such as centralised system, cylinders, concentrators or compressors. Pressure-compensated flowmeter versions, suitable for specific flow ranges.

### Humidifier, non-heated
- The humidifier is inserted in the inspiratory line of a breathing circuit to add moisture to the breathing gases for administration to a patient. The bubbling bottle humidifier is a sealed container filled with water and connected inline into the breathing circuit. The medical gas mixture flows through the water inside the bottle and is enriched in humidity. This type of humidifier does not heat the gas. To be compatible with oxygen concentrator, including necessary hose connectors.

### Nasal prongs
- Oxygen cannulae are plastic tubes shaped as two prongs delivering air/oxygen mixture into the nasal cavities and connected with an oxygen administration circuit. Cannulae can be designed for low-flow applications (0–15 L/min range in general).
- Oxygen and air/oxygen mixture compatibility, as per ISO 15001. Different sizes: Adult, paediatric, neonatal.

### Catheter
- Flexible nasal catheter with multiple holes (6 to 12 lateral eyes) at distal end. Oxygen and air/oxygen mixture ratio fully controllable. Medical air compressor integral to unit. If alarm silencing feature is incorporated, it must be temporary and clearly displayed when activated.
- System alarms required: power failure, gas disconnection, low battery, vent inoperative, self diagnostics.
- Alarms are required: FiO2, pressure, PEEP, apnoea, occlusion, high respiration rate, disconnection System alarms required: power failure, gas disconnection, low battery, vent inoperative, self diagnostics.
- Alarms are required: power failure, gas disconnection, low battery, vent inoperative, self diagnostics.
- Accessories and spare parts should be available to ensure at least one year of operation.

### Oxygen Mask
- Connection tube, reservoir bag and valve, high-concentration, non-sterile, single use. Different sizes: Adult, paediatric.

### Venturi Mask
- Venturi mask, with percent O2 Lock+1.5 - 2.0 m tubing, non-sterile, single use. Different sizes: Adult, paediatric.
### Ventilator for Transport (adult and paediatric)

- **Medical air compressor integral to unit, with inlet filter or high performance air filters.**
- **External low-flow oxygen (preferable).** If oxygen high-pressure input port (≥ 35 psi).
- **Each high-pressure input port with a filter having a pore size ≤ 10 μm. Oxygen-air mixture accuracy of 4%. Oxygen consumption with 660 L (E) tank:**
  - 104 minutes with 18 L/min, FIO2 50%.
  - 280 minutes with 6 L/min, FIO2 50%.
- **Internal function testing/leak testing:** Event log for errors traceability (preferable).
- **All parts withstand high disinfection procedures.**
- **Ventilation modes:**
  - Pressure control ventilation (PCV).
  - Volume control ventilation (VCV).
  - Synchronized intermittent mandatory ventilation (SIMV) (preferable).
  - Pressure regulated volume control (PRVC) (or similar preferable).
  - Non-invasive ventilation (CPAP/BiPAP).
- **Monitored and controlled parameters (by user):**
  - Air and externally supplied oxygen mixture ratios fully controllable. FIO2: 21–100%.
  - Tidal volume: 50–1000 mL (preferable).
  - Inspiratory pressure: 0–40 cmH2O.
  - E: ratio. RR: 10–60 breath/min, minimum.

### Ventilator for Sub-acute Care (adult and paediatric)

- **Medical air compressor or turbine in-built, with inlet filter.** Possibility for using external low-pressure oxygen (approx. 20 psig) as source (preferable). If oxygen high pressure input port (> 35 psig): Oxygen-air mixture accuracy of 4%. Oxygen consumption with 660 L (E) tank:
  - 104 minutes with 18 L/min, FIO2 50%.
  - 280 minutes with 6 L/min, FIO2 50%.
- **Oxygen conserve feature (preferable).** Internal function testing/leak testing. Event log for errors traceability (preferable).
- **Capability to work with dual-limb breathing circuits.** Capability to connect to an active humidifying system.
- **Ventilation modes:**
  - Non-invasive ventilation.
  - It must include at least one mandatory and invasive ventilation mode.
- **Pressure control ventilation (PCV).** Volume control ventilation (VCV). Pressure support ventilation (PSV).
- **Synchronized intermittent mandatory ventilation (SIMV) (preferable).** Pressure regulated volume control (PRVC) (or similar preferable).
- **Monitored and controlled parameters (by user):** Air and externally supplied oxygen mixture ratios fully controllable. FIO2: 21–100%.
  - Tidal volume: 50–1000 mL (preferable).
  - Inspiratory pressure: 0–40 cmH2O.
  - E: ratio. RR: 10–60 breath/min, minimum. PEEP: at least 0–20 cmH2O.

### High-flow nasal cannula (HFNC) (adult and paediatric)

- **Capability to generate a high flow of mixed room air and oxygen.**
- **Capability to use oxygen from an oxygen concentrator or cylinder.**
- **In-built air compressor/turbine/piston.** Easy to operate user interface, with displayed parameters clearly visible.
  - The mixed room air and oxygen should be warmed up to 37°C and 100% RH. Controls to be easy to operate, numbers and displays to be clearly visible.
  - It should have a humidity compensation system.
  - Noise level < 35 dB at mid pressure range.
  - Trigger sensitivity range: 1–10 cmH2O, increments of 1 or automatic.
- **Monitored and controlled parameters (by clinical user):**
  - FIO2: 21–100% (preferable).
  - Flow up to 50 L/min (minimum).
- **Alarms, related to gas delivered (visual and audible):**
  - Inaccurate temperature/humidity.
  - System leakage or blockage.
  - High/low FIO2 (preferable).
  - Alarms, related to equipment operation (visual and audible): Lack of water.
- **System failure.** Air filter to be replaced. Power failure. Low battery (if applicable).

Compliance to the following international standards or to regional or national equivalent, (including the technical tests for safety and performance from accredited laboratory or third party), for (latest version recommended but compliance to previous standards versions could be accepted):

- **IEC 60601-1:2005 Medical electrical equipment – Part 1: General requirements for basic safety and essential performance.**
- **ISO 20789:2018 Anaesthetic and respiratory equipment – Passive humidifiers (if applicable).**
### CASE MANAGEMENT

#### Supportive Treatment

- **Resuscitator, child**
  - Laryngoscope, neonate: Instrument used to expose and view the larynx and surrounding areas during orotracheal and nasotracheal intubation. It consists in a large cylindrical, hollow, slightly ribbed handle with a threaded head consistent of different types and sizes of blades. Each blade has fibre optics or a single bulb. The bulb is of at least 3.75 V Halogen light and is removable for cleaning. The connector is straight and double-ended, with the proximal end being an outer, standard 15 mm internal diameter, conical tip that allows the tube to be connected to the ventilation system (breathing circuit or manual resuscitator). The distal end of the tube is open and bevelled (obliquely cut),atraumatic, with Murphy's eye. The endotracheal tubes are standard in all aspects: dimension (at least following sizes: 4, 5, 6, 7, 8, and 9), markings and connectors.
  - Endotracheal tube: Without cuff, sterile, single-use. It consists in a thin, flexible, transparent and single hollow cylinder, with an anatomical curvature Magill-type of 37.5°, black and legibly depth markings and graduation in centimetres, with radio-opaque continuous line mark, with cuff and pilot balloon, with a standard connector in the proximal end. The pilot balloon indicates the cuff distension. One end is connected to the cuff through a thin inflation tube located close to the proximal end. The other end has a spring-loaded, one-way valve that maintains a pre-set pressure in the circuit, and has Luer tip connector for syringes. The endotracheal tubes are standard in all aspects: dimension (at least the following sizes: 4, 5, 6, 7, 8, and 9), markings and connectors.

- **Resuscitator, adult**
  - Laryngoscope, adult/child: Instrument used to expose and view the larynx and surrounding areas during orotracheal and nasotracheal intubation. It consists in a large cylindrical, hollow, slightly ribbed handle with a threaded head consistent of different types and sizes of blades. Each blade has fibre optics or a single bulb. The bulb is of at least 2.7 V Halogen light and is removable for cleaning. The connector is straight and double-ended, with the proximal end being an outer, standard 15 mm internal diameter, conical tip that allows the tube to be connected to the ventilation system (breathing circuit or manual resuscitator). The distal end of the tube is open and bevelled (obliquely cut), atraumatic, with Murphy's eye. The endotracheal tubes are standard in all aspects: dimension (at least following sizes: 2, 2.5, 3, 3.5, 4, and 5), markings and connectors.
  - Endotracheal tube: With cuff, sterile, single-use. It consists in a thin, flexible, transparent and single hollow cylinder, with an anatomical curvature Magill-type of 37.5°, black and legibly depth markings and graduation in centimetres, with radio-opaque continuous line mark, with cuff and pilot balloon, with a standard connector in the proximal end. The pilot balloon indicates the cuff distension. One end is connected to the cuff through a thin inflation tube located close to the proximal end. The other end has a spring-loaded, one-way valve that maintains a pre-set pressure in the circuit, and has Luer tip connector for syringes. The endotracheal tubes are standard in all aspects: dimension (at least the following sizes: 4, 5, 6, 7, 8, and 9), markings and connectors.

- **Resuscitator, child**
  - Endotracheal tube introducer, Bougie: Blue or yellow tube with graduated marking. Curved tip with distal rounded smooth tip. Sterile, single use. Diameter: 10 Fr. and 15 Fr., Length: 60 cm to 70 cm.

- **Resuscitator, adult**
  - Endotracheal tube (with cuff): Curved tip with distal rounded smooth tip. Sterile, single use. Diameter: 10 Fr. and 15 Fr., Length: 60 cm to 70 cm.
  - Endotracheal tube (with cuff): Flexible and malleable guide (stylet). Soft and round end tip. Shaped as needed. Graduated marking. Manufacturer name and tube size are indicated on the tube. Sterile, single use. Diameter: 10 Fr. and 14 Fr., Length: 30 cm to 45 cm.

#### Oxygen System

- **Oxygen reservoir bag complete.**
  - Non-rebreathing patient valve with pressure limiting valve, patient connector outside/inside diameter: 22/15 mm.
  - Inlet valve with nipple for O2 tubing.
  - Oxygen reservoir bag complete. Non-rebreathing patient valve with pressure limiting valve, patient connector outside/inside diameter: 22/15 mm.
  - Inlet valve with nipple for O2 tubing.

#### Other Devices

- **Flexible and malleable guide (stylet):** Soft and round end-tip. Shaped as needed. Graduated marking. Diameter: 10 Fr. and 15 Fr., Length: 60 cm to 70 cm.
  - **Blades, Miller type (straight):** No. 1, length 70 mm, for infant.
  - **Blades, Miller type (straight):** No. 2, length 70 mm, for small adult.
  - **Blades, Miller type (straight):** No. 3, length 100 - 135 mm, for small adult.
  - **Blades, Miller type (straight):** No. 4, length 135 - 155 mm, for adult.
  - **Blades, Miller type (straight):** No. 5, length 150 mm.
  - **Blades, Macintosh type (curved):**
    - No. 0, length 55 mm, for newborn.
    - No. 1, length 70 mm, for infant.
    - No. 2, length 90 mm, for child.
  - **Blades, Macintosh type (curved):**
    - No. 0, length 90 - 110 mm, for child.
    - No. 2, length 110 - 135 mm, for small adult.
    - No. 4, length 135 - 155 mm, for adult.

- **Plastic or metal case:**
  - Heavy-walled plastic or metal case.
  - Instruction of use, troubleshooting and maintenance (English, French, Spanish).
  - Supplied with six compatible batteries in total.
  - Four extra halogen bulbs.

- **Laryngoscope, adult/child:**
  - Handle is 19 mm diameter and battery powered with two standard alkaline dry cell batteries (1.5 V, type A LR6).
  - Blades, Macintosh type (curved): No. 0, length 55 mm, for newborn.
  - No. 1, length 70 mm, for infant.
  - No. 2, length 90 mm, for child.
  - Heavy-walled plastic or metal case.
  - Instruction of use, troubleshooting and maintenance (English, French, Spanish).
  - Supplied with six compatible batteries in total.
  - Four extra halogen bulbs.

- **Laryngoscope, neonate:**
  - Handle is 19 mm diameter and battery powered with two standard alkaline dry cell batteries (1.5 V, type AA LR6).
  - Blades, Macintosh type (curved): No. 0, length 55 mm, for newborn.
  - No. 1, length 70 mm, for infant.
  - No. 2, length 90 mm, for child.
  - Heavy-walled plastic or metal case.
  - Instruction of use, troubleshooting and maintenance (English, French, Spanish).
  - Supplied with six compatible batteries in total.
  - Four extra halogen bulbs.

- **Endotracheal tube:**
  - Without cuff, sterile, single-use. It consists in a thin, flexible, transparent and single hollow cylinder, with an anatomical curvature Magill-type of 37.5°, black and legibly depth markings and graduation in centimetres, with radio-opaque continuous line mark, with cuff and pilot balloon, with a standard connector in the proximal end. The pilot balloon indicates the cuff distension. One end is connected to the cuff through a thin inflation tube located close to the proximal end. The other end has a spring-loaded, one-way valve that maintains a pre-set pressure in the circuit, and has Luer tip connector for syringes. The endotracheal tubes are standard in all aspects: dimension (at least following sizes: 2, 2.5, 3, 3.5, 4, and 5), markings and connectors.

- **Endotracheal tube (with cuff):**
  - With cuff, sterile, single-use. It consists in a thin, flexible, transparent and single hollow cylinder, with an anatomical curvature Magill-type of 37.5°, black and legibly depth markings and graduation in centimetres, with radio-opaque continuous line mark, with cuff and pilot balloon, with a standard connector in the proximal end. The pilot balloon indicates the cuff distension. One end is connected to the cuff through a thin inflation tube located close to the proximal end. The other end has a spring-loaded, one-way valve that maintains a pre-set pressure in the circuit, and has Luer tip connector for syringes. The endotracheal tubes are standard in all aspects: dimension (at least the following sizes: 4, 5, 6, 7, 8, and 9), markings and connectors.

- **Endotracheal tube introducer, Bougie:**
  - Flexible and malleable guide (stylet). Soft and round end-tip. Shaped as needed. Graduated marking. Manufacturer name and tube size are indicated on the tube. Sterile, single use. Diameter: 10 Fr. and 14 Fr., Length: 30 cm to 45 cm.

- **Endotracheal tube introducer, Stylet:**
  - Flexible and malleable guide (stylet). Soft and round end-tip. Shaped as needed. Graduated marking. Manufacturer name and tube size are indicated on the tube. Sterile, single use. Diameter: 10 Fr. and 14 Fr., Length: 30 cm to 45 cm.

- **CO2 detector:**
  - Sizes compatible with child and adult endotracheal tube. Single use.

- **Resuscitator, adult:**
  - Four extra halogen bulbs.
  - Supplied with six compatible batteries in total.
  - Instruction of use, troubleshooting and maintenance (English, French, Spanish).
  - Heavy-walled plastic or metal case.

- **Resuscitator, child:**
  - Four extra halogen bulbs.
  - Supplied with six compatible batteries in total.
  - Instruction of use, troubleshooting and maintenance (English, French, Spanish).
  - Heavy-walled plastic or metal case.

**ISO 7376:2009 or equivalent**

**ISO 3561:2016; ISO 10993-1:2018; ISO 11135:2014 or equivalent**


**ISO 7376:2009 or equivalent**
**COVID-19 v5**

**Operational Support & Logistics**

**Disease Commodity Packages**

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### Oropharyngeal Airway
- **Guedel, sterile, single-use**
- One-piece, semi-rigid, curved plastic tube. To be inserted through the oropharynx to facilitate airway management. Guedel type.
- Flange surface is permanently marked with tube size/length in mm, and the manufacturer or supplier's name. Biodegradable.
- Proximal (or buccal) end straight and reinforced.
- Distal end semi-rigid, curved, with autumatic soft rounded edges.

- Adult sizes: 2, 3, 4 and 5

### Nasopharyngeal Airway
- **Sterile, single-use. A Nasopharyngeal Airway is recommended for use as an airway adjunct in the semi-conscious or unconscious patient with an intact gag reflex.**
- Individually packaged sterile with a conveniently attached surgical lubricant for quick access to facilitate ease of insertion.
- Flexible and soft material for maximum patient comfort.
- Rounded tip allows for gentle insertion.
- Trumpet design for secure placement.
- Diameter and size labelled according to standards.
- Range of sizes from 20 Fr to 36 Fr.

### Suction Devices
- Portable suction devices / aspiration pumps used to evacuate secretions and liquids from the nasal cavity or from high airways.
- Devices capable to resist high level disinfection procedures.
- Aspiration pumps are varied in vacuum level and flow capacity.
- Anti-bacterial filter and containers should be available, if applicable.

### Compound Sodium Lactate Solution
- **Compound solution of sodium lactate (Ringer’s lactate), injection solution, w/o IV set and needle, 1000ml**

### Infusion Giving Set
- Infusion giving sets for adult and pediatric use to be considered. IV catheters and scalp veins covering all range of sizes to be considered. Stopper/closing cones, 3-way stopcock and other devices needed to complete the infusion line to be considered.

### Paracetamol
- **Paracetamol, 500mg, tablets**

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### PPE Healthcare Facilities

#### Supportive Treatment
- **Apron, heavy duty**
- Straight apron with tab.
- Fabric: 100% polyester with PVC coating, or 100% PVC, or 100% rubber, or 100% reusable and biodegradable material, or other fluid resistant coated material.
- Waterproof, seven strap for neck and back fastening or single-material cut film.
- Minimum basis weight: 300 g/m2.
- Thickness: 200 - 300 microns, optional.
- Coveting size: 70 - 90 cm (width) x 120 - 150 cm (height).
- Reusable (provided appropriate arrangements for decontamination are in place) or biodegradable.

- **En 12161**
- **ISO 5846**
- **ISO 10993-1** or equivalent

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#### APRON, HEALTHCARE WORKERS
- **Face Shield**
- Made of clear plastic and providing good visibility to both the wearer and the patient. Adjustable band to affix firmly around the head and fit snugly against the forehead, fog resistant (preferable).
- Completely covers the sides and length of the face. May be re-usable (made of robust material which can be cleaned and disinfected) or disposable.

- **EN 166** (if reusable), or alternative equivalent set of standards

#### FIT TEST KIT
- To evaluate effectiveness of seal for tight fitting respiratory protection devices.
- **OSHA 29 CFR 1910.133 Appendix A**

#### PARTICULATE RESPIRATOR
- **Medical mask, good breathability, internal and external faces should be clearly identified, 98% droplet filtration, preferably fluid resistance**

- Fluid resistant respirator:
  - NIOSH 42 CFR 84, FDA minimum “surgical N95”
  - EN 149, minimum “FFP2” and EN 14683 Type IIR GB 19083, minimum “Grade/Level 1”, or alternative equivalent standard

- Non-fluid resistant respirator:
  - NIOSH 42 CFR 84, minimum “N95”
  - EN 149, minimum “FFP2”
  - GB 2626, minimum “KN95” or alternative equivalent set of standards

#### MASK, MEDICAL - HEALTHCARE WORKER
- **Medical mask, good breathability, internal and external faces should be clearly identified, 98% droplet filtration, preferably fluid resistance**

- Fluid resistant masks:
  - EN 14683 Type IIR
  - ASTM F2100 Level 2 or 3
  - YY 0469, with at least 98% bacterial droplet filtration, or alternative equivalent standard

- Non-fluid resistant mask:
  - EN 14683 Type II
  - YY 0469 or YYT 0803, if bacterial droplet filtration is below 98% or alternative equivalent standard

#### Mask, Medical - Patient
- **Medical mask, good breathability, internal and external faces should be clearly identified**

- **EN 14683 Type I**
- **ASTM F2100 Level 2**
- **YY 0469 or YYT 0803**

#### Scrubs, Top
- **Tunic/tops, woven, scrub, reusable or single use, short sleeved (tunic/tops), worn underneath the coveralls or gown.**

#### Scrubs, Pants
- **Trousers/pants, woven, scrub, disposable or single use, worn underneath the coveralls or gown.**

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**OSL | Disease Commodity Packages**

5

**MERS-CoV**
<table>
<thead>
<tr>
<th>Product</th>
<th>Description</th>
<th>Standards</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Apron, disposable</strong></td>
<td>Single-use straight sleeveless protective apron, for use in healthcare settings</td>
<td>- Comfortable to wear, apron has back- and neck-band strips attached (4 in total) &lt;br&gt; - Both back- and neck-band can be adjusted/fastened</td>
</tr>
<tr>
<td><strong>Gown, isolation</strong></td>
<td>Single use, disposable, made of nonwoven material, length mid-calf. Sizes S, M, L</td>
<td>- May also be reusable, woven, length mid-calf, sizes S, M, L. Critical zones may be more fluid resistant than non-critical zones.</td>
</tr>
<tr>
<td><strong>Gown, surgical</strong></td>
<td>Single use, disposable, nonwoven material, length mid-calf, sterile or non-sterile. Critical zones may be more fluid resistant than non-critical zones. Or</td>
<td>- Single use, woven material, length mid-calf, sterilizable. Critical zones may be more fluid resistant than non-critical zones.</td>
</tr>
<tr>
<td><strong>Alcohol-based rub</strong></td>
<td>Bottle of 100ml &amp; 500ml, at least 80% ethanol or 75% isopropyl alcohol (v/v)</td>
<td>- Optional: ASTM E2755, or EN 1500, or alternative equivalent set of standards.</td>
</tr>
<tr>
<td><strong>Handwash</strong></td>
<td>Bottle of 100ml &amp; 500ml</td>
<td>- EN 1499, ASTM E1174</td>
</tr>
<tr>
<td><strong>Bio-hazard bag - 20L</strong></td>
<td>Disposable autoclavable bag for biohazard waste. Material: High density polyethylene (HDPE) or Polypropylene (PP).</td>
<td>- Capacity: Approximately 20L &lt;br&gt; - Size: 45 cm (width), 50 cm (length) (+/- 10%) &lt;br&gt; - Thickness: minimum 0.035 mm (1.5 mil) &lt;br&gt; - Color: red or yellow &lt;br&gt; - Autoclave ability: Temperature resistant up to 121°C</td>
</tr>
<tr>
<td><strong>Bio-hazard bag - 50L</strong></td>
<td>Disposable autoclavable bag for biohazard waste. Material: High density polyethylene (HDPE) or Polypropylene (PP).</td>
<td>- Capacity: Approximately 50L &lt;br&gt; - Size: 60 cm (width), 62 cm (length) (+/- 10%) &lt;br&gt; - Thickness: minimum 0.038 mm (1.5 mil) &lt;br&gt; - Color: red or yellow &lt;br&gt; - Autoclave ability: Temperature resistant up to 121°C</td>
</tr>
<tr>
<td><strong>Safety box</strong></td>
<td>SAFETY BOX; needles/syringes, 5 L capacity, cardboard for incineration, box-25</td>
<td></td>
</tr>
<tr>
<td><strong>Soap</strong></td>
<td>Liquid (preferred), powder and bar</td>
<td></td>
</tr>
<tr>
<td><strong>Gloves, cleaning</strong></td>
<td>Glove should have long cuffs, reaching well above the wrist, ideally to mid-upperarm. Minimum 280 mm total length. Sizes S, M, L. Reusable. Heavy duty gloves, high cracking, puncture and abrasion resistant Powder free, seamless, and entirely waterproof. Made of nitrile, synthetic rubber (no latex), K. Cleanable with water and disinfectant (resisting both ethanol solutions 70% and chlorine solutions 0.5%) Material thickness, at level of the fingers, not less than: 0.38 mm Length not less than: 30cm Supply co-packed as one left/right pair</td>
<td>- EN 388, ANSI 105, EN 374-1, EN 374-2 (at least Level 2), EN 420 + A1, or alternative equivalent set of standards.</td>
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<tr>
<td><strong>Hand drying tissue</strong></td>
<td>50 to 100 m roll</td>
<td></td>
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