Khalifa Isolation Unit (KIU) Alturbah, Taiz

Dr Samer, M&E- WHO
Khalifa Isolation Unit (KIU)

• Khalifa Isolation Unit (KIU) is situated among Khalifa Public Hospital's building complexes and constructions.
• **KIU** is mainly formed by two properties:
  1) The **SARI treatment Unit (STU)**: composed of the 1st floor from the illustrated building of the hospital (picture 1 and 2).
  2) An **outbuildings** composed of
     - **Triage zone and Waiting area**: 2 large tents in the back yard, a part of the Turkish field-hospital (not prepared).
     - **Ambulance park**
Suggested Patient Flow:

- Gate for KIU
- Triage zone
- Ambulance park
- SARI Treatment Unit
- Patients refereed from other hospital wards
- Patient transferred by ambulance
Basic infrastructures

• Electricity
• Running waters
• Staff residences
• Meals
• No gas station
• No oxygen producing plants
• Waste burning oven
• Mortuary
Layout & services
Screening & Triage zone

- Patient entry:
- Waiting room:
- Triage zone:
- Ambulance Service:
<table>
<thead>
<tr>
<th>Entry points</th>
<th>Available</th>
<th>Needed</th>
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<tbody>
<tr>
<td></td>
<td>HH facilities</td>
<td>No IR thermometers</td>
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<td></td>
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<td>Staff (2) for screening with IR thermometer</td>
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<td></td>
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<td>should be recruited</td>
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<td></td>
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<td>Training</td>
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<tr>
<td>Screenin g &amp; triage tent</td>
<td>Available</td>
<td>Needed</td>
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<td></td>
<td>An empty non-well ventilated tent. HH facilities PPEs, stethoscope sphengomssnometer &amp; waste bins from the stores (not disposed)</td>
<td>Air conditioning system with air extractors to ensure unidirectional air flow Separate room for females Area for sampling <strong>Furniture:</strong> transparent barriers, examination table, desk, chairs <strong>Equipment:</strong> IR thermometers, pulse oximeters, resuscitation kits, laryngoscope, defibrillator with crash cart, Electrocardiograph portable machine with accessories, 2 oxygen cylinders with accessories, flowmeters, Suction pump, portable ventilator, trollies glucometer</td>
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<tr>
<td>Screeni<strong>ng &amp; triage tent</strong></td>
<td><strong>Available</strong></td>
<td><strong>Needed</strong></td>
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<tr>
<td>An empty non-well ventilated tent. HH facilities PPEs, stethoscope sphengomsnomet er &amp; waste bins from the stores (not disposed)</td>
<td><strong>Posters</strong> for case definition, screening and triage algorithm, and IPC. <strong>Supplies:</strong> PPEs, swabs for sampling, oxygen canula ,masks simple and with reservoir bag, airways, endotracheal and suction tubes, syringes and canulas <strong>Medicine:</strong> drugs for resuscitation <strong>Informatics:</strong> records for cases documentation, standardized form for reporting identified COVID19 case, telephone for communication <strong>Staff:</strong> 2 doctors, 2 nurses and 1 cleaner, 1 security guard, TRAINING <strong>Protocol:</strong> for screening, triage and referral</td>
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<tr>
<td>Temporary isolation &amp; waiting area at the tent</td>
<td>Air conditioning system</td>
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<td>Air extractors</td>
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<td></td>
<td>Separate room for females</td>
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<tr>
<td><strong>Furniture:</strong> mobile curtains, well-spaced beds and chairs, trolley and</td>
<td><strong>Air conditioning system</strong></td>
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<td>wail chair for patients, desk, chairs</td>
<td><strong>Air extractors</strong></td>
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<td></td>
<td><strong>Separate room for females</strong></td>
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<tr>
<td><strong>Equipment:</strong> IR thermometers, pulse oximeters, oxygen cylinders (6 larges</td>
<td><strong>Furniture:</strong> mobile curtains, well-spaced beds and chairs, trolley and wail chair for patients, desk, chairs</td>
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<tr>
<td>&amp; 4 smalls) with accessories as flowmeters, oxygen trollies (4),</td>
<td><strong>Equipment:</strong> IR thermometers, pulse oximeters, oxygen cylinders (6 larges &amp; 4 smalls) with accessories as flowmeters, oxygen trollies</td>
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<tr>
<td>infusion stands, two multiparametric monitors, Posters: for health</td>
<td>(4), infusion stands, two multiparametric monitors, Posters: for health education.</td>
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<td>education.</td>
<td><strong>Supplies:</strong> masks for patients, syringes, canula, Staff: 3 nurses, Protocol: for screening, triage and referral</td>
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<tr>
<td>The three ambulances of hospital used to transport COVID19 &amp; non-COVID19 patients</td>
<td>Two separate ambulances for SARI patients</td>
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<td>Patients pay the cost of fuel and transport</td>
<td>Fuel and transport cost</td>
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<td></td>
<td>Maintenance cost</td>
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<tr>
<td></td>
<td><strong>Equipments &amp; supplies:</strong> Facilities for sample storing and transport, PPEs, oxygen treatment fascilities, pulse oximetr, suction pump, resuscitation kit</td>
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<td></td>
<td><strong>Protocol</strong> for patients referral &amp; communication, facilities for sample storing and transport, disinfection between usages.</td>
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<td><strong>Staff:</strong> 2 drivers &amp; 2 nurses</td>
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Screening & Triage Process

Cannot be done with no staff and prepared area
SARI or COVID-19 Treatment Unit (STU or CTU):

• STU is composed of:
  – Two rooms for non-critical hospitalized cases, with a total capacity of 10 beds.
  – One room as an SARI-ICU
  – Sampling area (not yet prepared’)
  – One room as store
  – Nursing room
  – Physician room
  – Patients toilets
  – Staff toilets and doning/doffing room
  – PPEs store
  – Dead bodies washing area
  – STU has specialized toilets for patients (4 toilets), and for the staff (2 toilets),
<table>
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<th>Available</th>
<th>Needed</th>
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<tbody>
<tr>
<td><strong>SARI wards</strong></td>
<td><strong>Equipments &amp; supplies:</strong> pulse oximeter (table top), 1 oxygen cylinder, oxygen flow meter with bubble humidifier, Facilities for sample storing and transport, PPEs, oxygen treatment facilities, pulse oximeter, suction pump, resuscitation kit <strong>Protocol</strong> for patients treatment and discharge <strong>Staff:</strong></td>
</tr>
<tr>
<td>HH facilities 8 beds, 1 IR thermometers, stethoscope sphengomssnometer, 1 pulse oxi 1 oxygen cylinder, oxygen flow meter with bubble humidifier, mobile curtains, infusion stands, PPEs, 2 waste bins, 2 sharp waste sink with running water and soap, and ABHR</td>
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<td><strong>SA RI-ICU</strong></td>
<td><strong>Critical cases room</strong>: composed of 4 beds, 1 mechanical ventilators, 1 heat and moisture exchanger, 3 oxygen cylinder, with 1 gas flowmeter and regulator, 2 suction pumps, 2 multiparametric monitors (EKG, NIBP, SpO2, RR, HR, temperature), stethoscope and sphingomanometer, Laryngoscope with different sized blades, 2 High flow nasal canula (HFNC), 1 neubelizer, infusion stands, mobile curtains, 2 waste bins, 2 sharp waste containers, sink with running water and soap, and ABHR conductive and lubricating gel, urine bags, N95 masks, gloves (disposable and sterile), oxygen masks and prongs, ventilator circuits, endotracheal tubes,</td>
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IPC Hygiene & Environmental Cleaning

- Hygiene
- Hand hygiene facilities
- Cleaning
- IPC
Lab services

• No separate lab for CTU is available. However the hospital general Lab. can provide and test for the following:
  • Hematology tests
  • Biochemistry tests
  • Malaria blood film
  • Urine and stool analysis
  • Electrolytes analysis (the machine is available but not set up yet)
  • Sputum examination for AFB (currently no ZNS available)
  • Others: ESR, CRP, ASO, RF, Rapid malaria test, Dengue virus IgG and IgM kits
  • No pcr swabs available
Other services in hospital:

- Electricity provided for 20 hours a day
- No meals available for staff or patients at hospital
- Running water is available almost in all hospital wards and buildings except the CTU and triage zone
- No gas station
- No oxygen producing plants
- Residence for hospital staff is available
- Waste burning oven
- Laundry
- **Mortuary:**
Training:

• Training sessions for 3 days for the staff
• More training needed
Staffing

- **Staff Capacity**: total staff at MIU is 16
- Administration officers
- Specialists
- General practitioners (GPs)
- Nurses
- Physician assistant
- Anesthesia doctor
- Anesthesia technician
- Lab. technician
- Radiology technician
- Security guard
- Cleaner
- Pharmacologist
- Surveillance officer
- Others 0
Challenges

• Staffing (incentives???)
• Training
• Equipping
• Supplies
• Sustainability
• Screening, and triage
• Sampling
• ICU case management protocol
• Transporting
• Data documentation