**Competency framework for the COVID-19 and critical care management under USAID RISE**

| **Area** | **Type of assessment** | **Topics/skills** | **Cadre** | **Training mode** | **Training method** | **Material required** | **Duration** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| SP | MO | NS | LT | BME | V |
| Critical care | Knowledge | Triage in ARDS and SARI and management in emergency | √ | √ | √ |  |  |  | Virtual/Onsite | Interactive discussion  | PPT  | 30 mins |
| Point of care testing- pulse oximetry and blood gas analysis | √ | √ | √ |  |  |  | Virtual/Onsite | Interactive discussion | PPT  | 30 mins |
| Point of care testing- Lung ultrasonography | √ | √ | √ |  |  |  | Virtual/Onsite | Interactive discussion | PPT Video | 30 mins |
| Oxygen Therapy- oxygen sources, conventional oxygen delivery devices, rational use of oxygen | √ | √ | √ |  |  |  | Virtual/Onsite | Interactive discussion | PPT  | 30 mins |  |
| HFNC vs NIV in ARDS and SARI | √ | √ | √ |  |  |  | Virtual/Onsite | Interactive discussion | PPT  | 30 mins |
| ABG interpretation-case scenarios | √ | √ |  |  |  |  | Virtual/Onsite | Interactive discussion | PPT  | 30 mins |
| Investigations in COVID-19 | √ | √ | √ |  |  |  | Virtual/Onsite | Interactive discussion | PPT  | 30 mins |
| Clinical Management Protocols in COVID-19- Medical Management) | √ | √ | √ |  |  |  | Virtual/Onsite | Interactive discussion | PPT  | 30 mins |
| Monitoring in COVID-19- Early warning scores | √ | √ | √ |  |  |  | Virtual/Onsite | Interactive discussion | PPT  | 30 mins |
| Management of shock, fluid and electrolyte imbalance in COVID-19 | √ | √ | √ |  |  |  | Virtual/Onsite | Interactive discussion | PPT  | 30 mins |
| Management of comorbidities – Diabetes and hypertension) | √ | √ | √ |  |  |  | Virtual/Onsite | Interactive discussion | PPT  | 30 mins |
| Common Complications and management in COVID- Mucormycosis | √ | √ | √ |  |  |  | Virtual/Onsite | Interactive discussion | PPT  | 30 mins |
| Common complications and management in COVID-19 - Thrombosis, bleeding, Pneumothorax | √ | √ | √ |  |  |  | Virtual/Onsite | Interactive discussion | PPT  | 30 mins |
| Mechanical ventilation- Initiation, Basic modes and settings | √ | √ | √ |  |  |  | Virtual/Onsite | Interactive discussion | PPT  | 30 mins |
| Graphs in Mechanical Ventilation | √ | √ |  |  |  |  | Virtual/Onsite | Interactive discussion | PPT  | 30 mins |
| Lung protective ventilation, sedation and paralysis in Mechanically Ventilated | √ | √ | √ |  |  |  | Virtual/Onsite | Interactive discussion | PPT  | 30 mins |
| Troubleshooting and alarms in MV | √ | √ | √ |  |  |  | Virtual/Onsite | Interactive discussion | * PPT
 | 30 mins |
| ICU care of Ventilated Patients | √ | √ | √ |  |  |  | Virtual/Onsite | Interactive discussion | * PPT
 | 30 mins |
| Infection Control Bundles in ICU | √ | √ | √ |  |  |  | Virtual/Onsite | Interactive discussion | * PPT
 | 30 mins |
| Dead body management in COVID-19 | √ | √ | √ |  |  |  | Virtual/Onsite | Interactive discussion | * PPT
* Video
 | 30 mins |
| Skill | Lung ultrasonography | √ |  |  |  |  |  | Onsite | Demonstration/ Hands on | * USG machine
* Volunteer
 | 40 mins |
| Oxygen Therapy- oxygen sources, conventional oxygen delivery devices, rational use of oxy | √ | √ | √ |  |  |  | Onsite | Demonstration/Hands on | * Nasal prong
* Face mask
* Nasal cannula
* NRBM
* Venturi mask with valves
* Oxygen concentrator
* Oxygen cylinder with key and humidifier
 | 40 mins |
| Infection prevention practices: **Hand washing** | √ | √ | √ | √ | √ | √ | Onsite | Demonstration/Hands on | * Soap with dry dish
* Pic. Of tap with running water
* Alcohol based hand rub
* Checklist
* Job aid
 | 40 mins |
| Infection prevention practices: **Wearing and removing gloves** | √ | √ | √ | √ | √ | √ | Onsite | Demonstration/Hands on | * Gloves
* Checklist
 |
| Infection prevention practices: **Donning/doffing** | √ | √ | √ | √ | √ | √ | Onsite | Demonstration | * Cap
* N 95 Mask
* Face shield/Eye cover
* Gown
* Gloves
* Shoe cover
* Hand sanitizer
* Checklist
 |
| Basic Life Support | √ | √ | √ |  |  |  | Onsite | Demonstration/Hands on | * BLS mannequin
* Face mask
* Ambu bag (adult)and mask
* Automated defibrillator
* Checklist
 | 40 mins |
| Advanced Cardiac support | √ | √ | √ |  |  |  | Onsite | Demonstration/Hands on | * Simple adult mannequin
* ECG strips (normal sinus rhythm, Supraventricular tachycardia, Ventricular tachycardia, atrial fibrillation)
* Adenosine vial
* Amiodarone vial
* Lidocane vial
* Defibrillator cum cardioverter cum pacer
* Pacer pads
* ECG gel
* ECG chest lids
* Checklist
* Job aid
 | 40 mins |
| Central Line Insertion | √ | √ | √ |  |  |  | Onsite | Demonstration/Hands on | * Central line mannequin
* Central line with insertion needle, guide wire and syringe and dilator
* Gloves
* Towel holder
* Beta dine solution
* Gauze
* 10 ml syringe
* 18 G needle (for puncture)
* 16 G needle (for insertion)
* Needle holder
* Suture Ethicon 2 x 0 silk
* Dynaplast
* Lignocaine 2%
* Checklist
 | 40 mins |
| Arterial Line Insertion and setup | √ |  |  |  |  |  | Onsite | Demonstration/Hands on | * Arterial line with insertion needle and guide wire
* Gloves
* Towel holder
* Beta dine solution
* Gauze
* 10 ml syringe
* 18 G needle
* Needle holder
* Suture Ethicon 2 x 0 silk
* Dynaplast
* Lignocaine 2%
* Checklist
 |  |
| Mechanical Ventilation- Initiation, basics and lung protective ventilation | √ | √ | √ |  |  |  | Onsite | Demonstration/Hands on | * Test lung
* Mechanical ventilator
* HEPA filter
* Oxygen source (if required)
* Ventilatory circuit
* Catheter mount
* Checklist
 |  |
| Mechanical Ventilation- Trouble shooting and alarms | √ | √ | √ |  |  |  | Onsite | Demonstration/Hands on | * Test lung
* Mechanical ventilator
* HEPA filter
* Oxygen source (if required)
* Ventilatory circuit
* Catheter mount
* Checklist
 | 40 mins |
| Proning | √ | √ | √ |  |  |  | Onsite | Demonstration/Hands on | * Bed
* Pillow
* Bed sheets
* Full body Mannequin
 | 40 mins |
| Airway management and intubation | √ | √ | √ |  |  |  | Onsite | Demonstration/Hands on | * Airway mannequin
* AMBU bag with valve mask
* Guedel airway
* Nasopharyngeal airway
* Laryngoscope (adult) with blade size 3 and 4
* Batty for the laryngoscope
* Intubating bougie
* Intubating stylet
* Endotracheal tube (size 7 or 7.5)
* 10 ml syringe
* Lignocaine jelly
* ET tie
* Stethoscope
 | 40 mins |