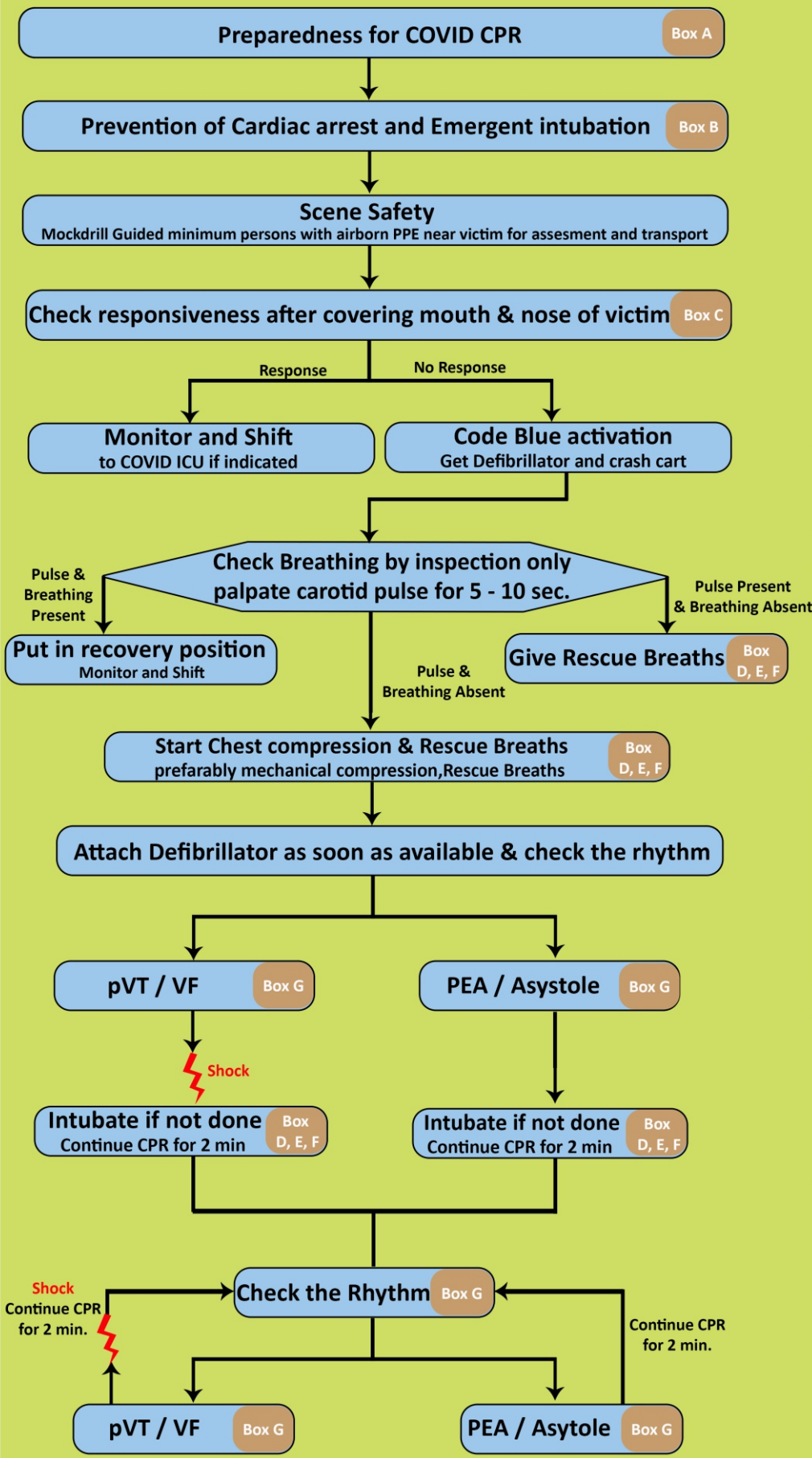


CPR IN COVID ERA
 A CALL FOR BLANACE BETWEEN
 PROTECTION [OF HCWS] AND COMPROMISE [OUTCOME OF VICTIM]

Figure 1 : Basic Cardiac Life support[BCLS] in COVID era

AED :- Automated External Defibrillator, COLS :- Compression Only Life Support,
 EMS :- Emergency Medical Service, CPR :- Cardio Pulmonary Resuscitation



BOX A : Resuscitation Bay in ED or ICU

- Close door or negative pressure room equipped for resuscitation, intubation and ventilation
- Restricted entry of HCW donned with airborne PPE
- Minimize to and fro movement of medical devices (USG, Torch, Ventilator, XRay machine, etc)
- Follow stringent disinfection protocol
- Minimize number of HCWs in code team
- Frequent mockdrills and training

BOX B : Prevention of Exposure to HCW

- Revisit Direction of care or End Of Life care policy to optimize early labling of DNR (Consider living will)
- Clear communication with relative
- CPR should be performed in resuscitation bay
- Preemptive intubation and resuscitation for COVID Patient
- Deploy more senior staff or modify MET call criteria for COVID

BOX C : Check Response

- Give Hudson mask with oxygen flow of upto 10 L / min with additional cover of clear plastic sheet, towel, surgical mask, clothes

BOX D : Airway & Breathing in COVID CPR

- Early intubation → if NP/NA then SGA devices → if NP/NA then BMV
- BMV - 2 person 2 hand technique with VE manueur to minimize leak
- Use HME filter between ambu and mask, SGA - ET and ventilator circuit
- Give rescue breath 10 - 12 / min.

BOX E : Intubataion in COVID CPR

- Optimal preparation for first attempt success
- use Video Laryngoscope if available
- Pause chest compression to intubate
- use HME viral filter
- Use ETCo2 - to confirm ETT placement and quality of CPR
- Restart chest compression only after ETT cuff inflated
- Must use closed suction for ETT
- Attach ventilator once ETT in situ

BOX F : Ventilator settings in COVID CPR

- Mode : Pressure Control Ventilation
- FIO2 : 1.0.
- Pressure limit : adequate chest rise (Vt - 6 ml/kg IBW)
- Trigger : Off (allow asynchronous ventilation)
- RR : 10/min for adults and pediatrics
- PEEP titrate as per Lung volumes and venous return
- Alarms to set appropriately

BOX G : Rhythm Appropriate Medications

- Secure IV / IO Access
- Administer 1 mg Adrenaline iv, reapeat every 3-5 minutes
- For refractory VF/pVT : Amiodarone 300 mg iv bolus, second dose of 150 mg
- identify, Investigate and Treat Reversible causes (mnemonic for reversible causes "HIT THE TARGET")
- Ensure high quality CPR : Maintain ETCo2 ≥ 10 mmHg, Diastolic ABP ≥ 20 mmHg
- Early defnitive airway with chest compression @ 100 - 120 / min & breath every 6 seconds

Box H: Reversible causes of cardiac arrest

- | | |
|--------------------------|------------------------|
| H - Hypoxia | T- Temponade cardiac |
| I - Increased H+ion | A- ACS |
| T - Tension Pneumothorax | R- Raised ICP[SAH] |
| T - Toxins/ Poisons | G- Glucose |
| H - Hypovolemia | E- Embolism[pulmonary] |
| E- electrolyte imbalance | T- Temp. [hypothermia] |

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Figure 2 : Comprehensive Cardiac Life support [CCLS] in COVID era

NP/NA-Not possible / Not Available , PEA- pulseless electrical activity, HCW - Health Care Worker