HEmodynamic Resuscitation and Monitoring in Early Sepsis (HERMES Study)

An ISCCM research project

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A. SCREENING LOG

1. Inclusion criteria
   
a. New admission (a patient who has not been in ICU in the last 7 days, can also be considered as a new admission)
   - YES
   - NO

   b. Is patient's age ≥ 18 years?
   - YES
   - NO

   c. Does the patient have suspected sepsis with hypotension? (Systolic BP <90/ MAP less than 65 mmHg OR Systolic BP ≥ 90 / MAP ≥ 65 on vasopressors)
   - YES
   - NO

2. Exclusion criteria

   a. Is the patient likely to be hypotensive due to a reason other than sepsis? (e.g. cardiogenic shock, hemorrhagic shock)
   - YES
   - NO

   b. Decision taken for not intubating / ventilating / performing aggressive resuscitation prior to ICU admission
   - YES
   - NO

   c. Patient transferred from another ICU/another Hospital (admission >7 days)
   - YES
   - NO

If the answer to all the inclusion criteria are YES and exclusion criteria are NO, the patient is eligible for enrolment

If eligible and not enrolled, give the reason for this ________________________________
B. ADMISSION DETAILS

1. Patient number: ________________

2. Date of hospital admission: ______(DD)/_______(MM)/_______(YY)

3. Date of ICU admission: ______(DD)/______(MM)/______(YY)

4. Time of ICU admission (HH:MM): _____: _____

5. The patient was received from:
   - ☐ Emergency department /Casualty
   - ☐ Hospital ward
   - ☐ Operation theatre
   - ☐ Another Hospital
   - ☐ Other, please specify ____________________________________________

Patient transferred from another ICU/another hospital (admission >7 days) is not to be enrolled in the study
C. PATIENT DEMOGRAPHIC CHARACTERISTICS

1. Sex: M ☐ F ☐
2. Age: ______________
3. Height: ______________ cm
4. Weight: ______________ Kg

5. Comorbidities (select all that apply):
   ☐ Asthma
   ☐ COPD
   ☐ Diabetes Mellitus
   ☐ Solid neoplasm
   ☐ Metastatic ☐ Non-metastatic ☐ Unknown
   ☐ Hematologic malignancy
   ☐ Heart failure (NYHA III-IV)
   ☐ Ischemic heart disease
   ☐ Arterial hypertension
   ☐ Chronic kidney disease
   ☐ Chronic liver disease
   ☐ Neuromuscular disease
   ☐ Obstructive Sleep Apnoea Syndrome (use of nocturnal CPAP ☐/ no use of nocturnal CPAP)
   ☐ Interstitial lung disease
   ☐ Surgery in last 4 weeks ☐ Neuro ☐ GI ☐ Cardiac ☐ Orthopedic ☐ Gynac ☐ Plastic
   ☐ Other, please specify _____________________________
   ☐ None

6. Likely source of sepsis
   ☐ CNS ☐ Lung ☐ Cardiac ☐ Gastrointestinal ☐ Urogenital ☐ Soft tissue ☐ Skeletal ☐ Blood
   ☐ Gastrointestinal ☐ Malaria ☐ Dengue ☐ Scrub typhus ☐ Leptospirosis
   ☐ Unknown ☐ Other _____________________________
D. PATIENT CLINICAL CONDITION ON ADMISSION

1. SOFA score at admission
   Total

2. APACHE II SCORE
   Total

3. Patients Vitals at presentation
   a) Systolic blood pressure: ______________________mmHg
   b) Diastolic blood pressure): ______________________mmHg
   c) Heart rate: _______________________/min
   d) Respiratory rate: _______________________/min
   e) SpO2 %: ________________________%
   f) Body temperature: _________________ °F

4. Glasgow Coma Scale

   Eye opening response: (1-4)
   Best verbal response: (1-5)
   Best motor response: (1-6)
   Total
E. MONITORING AND THERAPY PRESENT ON ICU ADMISSION

1. Artificial airway
   ☐ None  ☐ Endotracheal tube  ☐ Tracheostomy

2. Respiratory support at time of admission to ICU (Select one)
   ☐ On air  ☐ O₂ with Hudson mask  ☐ O₂ with T-piece
   ☐ O₂ mask with rebreathing bag  ☐ HFNC  ☐ NIV  ☐ Pressure support ventilation
   ☐ CMV  ☐ AC (Volume)  ☐ AC (Pressure)  ☐ SIMV (Volume)  ☐ SIMV (pressure)
   ☐ Other ________________________________

   Settings (Fill all applicable)
   FiO₂ __________ RR __________ PS __________ TV ml __________ PEEP __________ Flow L __________

3. Intravenous fluid received in last 4 hour before ICU admission
   ☐ YES  ☐ NO  ☐ Not known

   If yes, total Volume (ml) ________________

4. Vasopressor/inotropic support* on admission to ICU
   If yes, specify: __________________________ mcg/Kg/min __________ mcg/Kg/min

5. Pulseoxymeter/Cardioscope monitoring  ☐ YES  ☐ NO
6. Noninvasive blood pressure monitoring  ☐ YES  ☐ NO
7. Central line  ☐ YES  ☐ NO
8. Arterial line present  ☐ YES  ☐ NO
9. Cardiac output monitor present  ☐ YES  ☐ NO
10. Lactate measured prior to ICU admission  ☐ YES  ☐ NO
11. ABG done prior to ICU admission  ☐ YES  ☐ NO
12. VBG done prior to ICU admission  ☐ YES  ☐ NO
13. CVP measured prior to ICU admission  ☐ YES  ☐ NO
14. SVV recorded prior to ICU admission  ☐ YES  ☐ NO
15. PPV recorded prior to ICU admission  ☐ YES  ☐ NO
16. PAOP measured prior to ICU admission  ☐ YES  ☐ NO
17. Echocardiography (TTE/TEE) performed prior to admission  ☐ YES  ☐ NO
F. DEMOGRAPHICS OF THE RESUSCITATOR

1. Specify the primary speciality of primary resuscitator (The one who has initialed and was most actively involved in the resuscitation of the patient on arrival)

(Select only one)
☐ Anesthesia
☐ Internal Medicine
☐ Emergency Medicine
☐ Pulmonary Medicine
☐ Surgery
☐ MBBS
☐ BAMS
☐ BHMS
☐ Other, please specify [______________________]

2. Consultant involved in primary resuscitation
   ☐ Yes   ☐ No

3. Number of doctors involved in resuscitation
   ☐ 1   ☐ 2   ☐ 3   ☐ 4

4. No of nurses involved in resuscitation
   ☐ 1   ☐ 2   ☐ 3   ☐ 4

5. Doctor resuscitator 1: Highest qualification [_____] Years of experience in Critical care [____]
   
   Doctor resuscitator 2: Highest qualification [_____] Years of experience in Critical care [____]
   
   Doctor resuscitator 3: Highest qualification [_____] Years of experience in Critical care [____]
G. FLUID BOLUS (large volume of fluid given over a short duration)

1. What was the main indication for giving the FIRST fluid bolus? (select all that apply)

☐ Tachycardia ☐ Hypotension ☐ To wean off vasopressors ☐ Low Cardiac output
☐ Oliguria ☐ Skin mottling ☐ Hyperlactatemia ☐ ScVO₂ ☐ SVV ☐ PPV
☐ CVP ☐ PAOP ☐ Other, please specify: ______________________________________

2. No of Fluid boluses given in first 6 hours after admission

3. Details of fluid boluses given in first 6 hour

<table>
<thead>
<tr>
<th>S.No</th>
<th>Time of Initiation</th>
<th>Time of Stopping</th>
<th>Volume (ml)</th>
<th>Type of fluid</th>
</tr>
</thead>
<tbody>
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Type of fluids include NaCl 0.9%, RL, 5% Dextrose, Starch, Albumin, Gelatin, Dextran, Balanced salt solution, etc.

4. Mention the change in the following parameter for your FIRST fluid bolus (fill all available)

1. MAP (mmHg)  
   Baseline ___________________ End of fluid bolus ___________________
2. HR (beats/min)  
   Baseline ___________________ End of fluid bolus ___________________
3. CVP (mmHg)  
   Baseline ___________________ End of fluid bolus ___________________
4. Lactate (mmol/L)  
   Baseline ___________________ End of fluid bolus ___________________
5. ScVO₂ %  
   Baseline ___________________ End of fluid bolus ___________________
6. PPV %  
   Baseline ___________________ End of fluid bolus ___________________
7. SVV%  
   Baseline ___________________ End of fluid bolus ___________________
<table>
<thead>
<tr>
<th>No.</th>
<th>Measurement</th>
<th>Baseline</th>
<th>End of fluid bolus</th>
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<td>8.</td>
<td>PVI</td>
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<td>9.</td>
<td>Urine output (ml)</td>
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<td>10.</td>
<td>Cardiac output (L/min)</td>
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<td>11.</td>
<td>PAOP (mmHg)</td>
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<td>12.</td>
<td>IVC Diameter variability (%)</td>
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<td>13.</td>
<td>SVC Diameter variability (%)</td>
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<td>14.</td>
<td>Aortic Flow velocity</td>
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<td>15.</td>
<td>FTc</td>
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<td>16.</td>
<td>GEDV (ml)</td>
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<td>17.</td>
<td>EVLWI</td>
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<tr>
<td>18.</td>
<td>PVPI</td>
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</tbody>
</table>

5. What do you think was the response to the **FIRST** fluid bolus?

- [ ] No response
- [ ] Positive Response
- [ ] Do not know/uncertain

6. Positive response to **FIRST** fluid bolus based on

- [ ] Changes in arterial pressure
- [ ] Changes in cardiac output
- [ ] Changes in heart rate
- [ ] Changes in urine output
- [ ] Change in lactate level
- [ ] Change in skin perfusion
- [ ] Change in mental status
- [ ] Change in CVP
- [ ] Change in PAOP
- [ ] Change in SVV
- [ ] Change in PPV
- [ ] Change in PVI
- [ ] Change in GEDV
- [ ] Resp. variability in IVC/SVC
- [ ] Change in FTc
- [ ] Change in Aortic Flow Velocity
- [ ] Other
H. HEMODYNAMIC MONITORING PARAMETERS AT THE END OF EACH HOUR OF RESUSCITATION (Enter all available values)

<table>
<thead>
<tr>
<th>Time (HH:MM)</th>
<th>Duration</th>
<th>Admission</th>
<th>1hr</th>
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<th>6hr</th>
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<td>HR (beats/min)</td>
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<td>Urine output (ml)</td>
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<td>CVP mmHg</td>
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<td>PPV %</td>
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<td>PVI</td>
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<td>SVV %</td>
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<td>CO (L/min)</td>
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<td>IVC/SVC variability %</td>
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<td>Total fluid volume (ml) (bolus + maintenance)</td>
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<td>Vasoactive drug 1</td>
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<td>Vasoactive drug 1 dose mcg/kg/min</td>
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<tr>
<td>Vasoactive drug 2 dose mcg/kg/min</td>
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<td>Vasoactive drug 3</td>
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<tr>
<td>Vasoactive drug 3 dose mcg/kg/min</td>
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<td>Respiratory support</td>
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<td>FiO₂ %</td>
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Intubation in first 6 hours ❏ YES ❏ NO  Time ______________________

Respiratory support includes: On air, O2 with Hudson mask, HFNC, NIV, O2 with T-piece, O2 mask with rebreathing bag, PSV, CMV, AC (Volume), AC (Pressure), SIMV (Volume), SIMV (pressure)

Vasoactive drugs include: Noradrenaline, Vasopressin, Adrenaline, Dopamine, Dobutamine, Levosimendan, Milrinone etc.
I. HAEMODYNAMIC MONITORING DEVICES INSERTED/USED IN ICU (First 6 hours)

1. Arterial line  YES ☐ NO ☐ Time of insertion  

2. Central line  YES ☐ NO ☐ Time of insertion  

3. Echocardiography

   2D ECHO used by the attending ICU doctor

   Yes ☐ No ☐ If yes, time of first use 

   No times ECHO done in first 6 hours

<table>
<thead>
<tr>
<th>ECHO</th>
<th>LV FUNCTION</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>☐Poor ☐Moderate ☐Good</td>
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<tr>
<td>2</td>
<td>☐Poor ☐Moderate ☐Good</td>
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<tr>
<td>3</td>
<td>☐Poor ☐Moderate ☐Good</td>
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<tr>
<td>4</td>
<td>☐Poor ☐Moderate ☐Good</td>
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<tr>
<td>5</td>
<td>☐Poor ☐Moderate ☐Good</td>
</tr>
</tbody>
</table>

4. FlowTrac  YES ☐ NO ☐ Time of first use  

5. PA Catheter  YES ☐ NO ☐ Time of first use  

6. Volume view  YES ☐ NO ☐ Time of first use  

7. PiCCO  YES ☐ NO ☐ Time of first use  

8. Bioreactance monitor  YES ☐ NO ☐ Time of first use  

9. Other _______________  YES ☐ NO ☐ Time of first use  


J. VARIABLES USED TO PREDICT FLUID RESPONSIVENESS

(Day 0-3)

Did you use any of the following variables or tests to predict fluid responsiveness at any time during the Day 0-3? Select All that apply and give the date (DD/MM/YY) and time (HH:MM) when first used.

<table>
<thead>
<tr>
<th>No</th>
<th>Variable</th>
<th>Date (when first used)</th>
<th>Time (when first used)</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>CVP</td>
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<td>2</td>
<td>PAOP</td>
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<td>3</td>
<td>GEDV</td>
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<td>4</td>
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<td>SVV</td>
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<td>6</td>
<td>Pleth variability index (PVI)</td>
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<td>7</td>
<td>Corrected Flow Time (FTc)</td>
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<td>8</td>
<td>Tidal Volume Challenge (TVC)</td>
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<td>9</td>
<td>End Expiratory Occlusion Test (EEOT)</td>
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<td>10</td>
<td>Passive Leg Raising Test (PLRT)</td>
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<td>11</td>
<td>Respiratory variation in IVC</td>
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<td>12</td>
<td>Respiratory variation in SVC</td>
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<td>13</td>
<td>Aortic Flow velocity</td>
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K. INVESTIGATIONS (First 6 hours to Day 3)

1. Arterial blood gas analysis (First 6 hours)

<table>
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<tr>
<th>No</th>
<th>Time</th>
<th>pH</th>
<th>pO₂</th>
<th>pCO₂</th>
<th>cHCO₃</th>
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2. Serum Lactate (First 6 hours)

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<th>Time</th>
<th>Lactate</th>
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3. ScVO₂ (First 6 hours)

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<th>Time</th>
<th>ScVO₂</th>
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4. VCO₂ Gap (First 6 hours)

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<th>S No</th>
<th>Time</th>
<th>VCO₂ Gap</th>
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<td>4</td>
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<td>5</td>
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<td>6</td>
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<td></td>
</tr>
<tr>
<td>7</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5. Laboratory data of Day 0-3 (put the worst values if many)

<table>
<thead>
<tr>
<th>Day</th>
<th>WBC</th>
<th>Platelet</th>
<th>Creatinine</th>
<th>Urea</th>
<th>SGOT</th>
<th>SGPT</th>
<th>Na</th>
<th>K</th>
<th>Bilirubin</th>
</tr>
</thead>
<tbody>
<tr>
<td>Day0</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Day1</td>
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<tr>
<td>Day2</td>
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<tr>
<td>Day3</td>
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</tbody>
</table>

Day 0 is the first calendar day of presentation and Day 1 is the next calendar day, irrespective of the time of admission
L. ANTIBIOTICS AND MICROBIOLOGY (Day 0-3)

1. Antibiotics

Already present on admission  ☐Yes  ☐No
Antibiotic 1_________________
Antibiotic 2_________________
Antibiotic 3_________________
Antibiotic started in ICU
1. Antibiotic 1___________ Time of Initiation _____________
2. Antibiotic 2___________ Time of Initiation _____________
3. Antibiotic 3___________ Time of Initiation _____________
4. Antibiotic 4___________ Time of Initiation _____________

2. Source Control

Surgery/Drainage needed for source control  YES ☐NO ☐
If, yes  Surgery  Date _____________ Time _______________ Type________________
Drainage Date _____________ Time _______________ Type________________

3. Microbiology

1. Time of taking first culture in ICU _____________

2. Culture sent prior to ICU admission (last 12 hour) YES ☐NO ☐
Sample cultured (Select all that apply)
☐Blood  ☐BAL  ☐Urine  ☐CSF  ☐Other specify________________

3. Sample sent for culture in ICU YES ☐NO ☐
(Select all that apply)  ☐Blood  ☐BAL  ☐Urine  ☐CSF  ☐Other specify________________

4. Antibiotics given before culture being taken YES ☐NO ☐

5. Procalcitonin sent YES ☐NO ☐

6. Galactomannan sent YES ☐NO ☐NA ☐
# M. ADJUANT THERAPIES INITIATED FOR SEPSIS (Day 0-3)

## Adjuvant therapies used for septic shock

<table>
<thead>
<tr>
<th></th>
<th>Therapy</th>
<th>YES ☐</th>
<th>NO ☐</th>
<th>Time</th>
<th>Dose</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Hydrocortisone</td>
<td>YES ☐</td>
<td>NO ☐</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Vitamin C</td>
<td>YES ☐</td>
<td>NO ☐</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Thiamine</td>
<td>YES ☐</td>
<td>NO ☐</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Cytosorb</td>
<td>YES ☐</td>
<td>NO ☐</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>PMX-HP</td>
<td>YES ☐</td>
<td>NO ☐</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>Other Specify</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
N. SUBSEQUENT HEMODYNAMIC AND OTHER MONITORING AND THERAPY (Day 0-3)

1. Is the patient still in shock?

Day 1   YES ☐ NO ☐  Vasoactive drug YES ☐ NO ☐  (Dose in mcg/kg/min)
Drug 1 ________ dose ________ Drug 2 ________ dose ________

Day 2   YES ☐ NO ☐  Vasoactive drug YES ☐ NO ☐  (Dose in mcg/kg/min)
Drug 1 ________ dose ________ Drug 2 ________ dose ________

Day 3   YES ☐ NO ☐  Vasoactive drug YES ☐ NO ☐  (Dose in mcg/kg/min)
Drug 1 ________ dose ________ Drug 2 ________ dose ________

2. Was any advanced hemodynamic monitor used (Select all that apply)

Day 0   YES ☐ NO ☐  if yes,
☐ FlowTrac  ☐ PA Catheter  ☐ Volume view/PiCCO  ☐ Echocardiography ☐ TEE  ☐ Other

Day 1   YES ☐ NO ☐  if yes,
☐ FlowTrac  ☐ PA Catheter  ☐ Volume view/PiCCO  ☐ Echocardiography ☐ TEE  ☐ Other

Day 2   YES ☐ NO ☐  if yes,
☐ FlowTrac  ☐ PA Catheter  ☐ Volume view/PiCCO  ☐ Echocardiography ☐ TEE  ☐ Other

Day 3   YES ☐ NO ☐  if yes,
☐ FlowTrac  ☐ PA Catheter  ☐ Volume view/PiCCO  ☐ Echocardiography ☐ TEE  ☐ Other

3. Fluid balance

(Day0) Input ml  Output ml  Net ml
(Day1) Input ml  Output ml  Net ml
(Day2) Input ml  Output ml  Net ml
(Day3) Input ml  Output ml  Net ml
O. OTHER SYSTEM MONITORING AND THERAPY (Day 0-3)

1. Need for Intubation
   Yes ☐ No ☐ If yes, Time: ___________________

Main indication for intubation (Select one)
☐ Respiratory failure
☐ Airway obstruction
☐ Cardiovascular instability
☐ Neurological impairment
☐ Other, specify _______________________________________

P/F ratio at time of intubation: _______________________

2. Initial mode used for mechanical ventilation
   ☐ PSV ☐ CMV ☐ AC (Volume) ☐ AC (Pressure) ☐ SIMV (Volume) ☐ SIMV (pressure)

Initial mechanical ventilation settings (Select all that apply)
FiO₂ % __________ RR __________ PS __________ TV ml __________ PEEP __________ Flow L __________

Mechanical Ventilation Day 0 ☐ Yes ☐ No
Mechanical Ventilation Day 1 ☐ Yes ☐ No
Mechanical Ventilation Day 2 ☐ Yes ☐ No
Mechanical Ventilation Day 3 ☐ Yes ☐ No

3. Chest X-ray or CT scan (First one performed since admission)

YES ☐ NO ☐

If YES, Chest X-ray or CT scan findings (Select all that apply):
☐ Normal lung fields
☐ Pleural effusion
☐ Unilateral lung opacity
☐ Bilateral lung opacities
☐ Pulmonary contusion
☐ Rib fracture(s)
☐ Pneumothorax
☐ Hemothorax
4. 24-hour Urine output

<table>
<thead>
<tr>
<th></th>
<th>Day 0</th>
<th>Day1</th>
<th>Day2</th>
<th>Day3</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Day 0)</td>
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<td>(Day1)</td>
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<td>(Day2)</td>
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<tr>
<td>(Day3)</td>
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</tr>
</tbody>
</table>

5. Renal support Day 0-3

Day 0 YES ☐ NO ☐
Day 1 YES ☐ NO ☐
Day 2 YES ☐ NO ☐
Day 3 YES ☐ NO ☐

If YES Time of initiation

Initial therapy ☐ IHD ☐ SLED ☐ CVVH ☐ other ________________________

Initial reason for renal support:
☐ Metabolic acidosis ☐ Hyperkalemia ☐ Low urine output ☐ Other ________________________

6. SOFA Score Day 1-3

<table>
<thead>
<tr>
<th></th>
<th>Day 1</th>
<th>Day 2</th>
<th>Day 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Day 1)</td>
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<td>(Day 2)</td>
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<tr>
<td>(Day 3)</td>
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</tbody>
</table>
P. CHOICE OF HAEMODYNAMIC VARIABLES, TESTS AND MONITORING USED (Day 0-3)

Why did you NOT use the following haemodynamic variables, tests, monitors in your patient

1. **IBP** (Invasive blood pressure monitoring)
   - [ ] Used
   - [ ] Not available
   - [ ] Not applicable
   - [ ] Other variable more relevant
   - [ ] No trust in this variable

2. **CVP** (Central venous pressure)
   - [ ] Used
   - [ ] Not available
   - [ ] Not applicable
   - [ ] Other variable more relevant
   - [ ] No trust in this variable

3. **PAOP** (Pulmonary artery occlusion pressure)
   - [ ] Used
   - [ ] Not available
   - [ ] Not applicable
   - [ ] Other variable more relevant
   - [ ] No trust in this variable

4. **SVV** (Stroke volume variation)
   - [ ] Used
   - [ ] Not available
   - [ ] Not applicable
   - [ ] Other variable more relevant
   - [ ] No trust in this variable

5. **PPV** (Pulse pressure variation)
   - [ ] Used
   - [ ] Not available
   - [ ] Not applicable
   - [ ] Other variable more relevant
   - [ ] No trust in this variable

6. **PVI** (Pleth variability index)
   - [ ] Used
   - [ ] Not available
   - [ ] Not applicable
   - [ ] Other variable more relevant
   - [ ] No trust in this variable

7. **TTE** (Transthoracic echocardiography)
   - [ ] Used
   - [ ] Not available
   - [ ] Not applicable
   - [ ] Other variable more relevant
   - [ ] No trust in this variable

8. **TEE** (Trans-esophageal echocardiography)
   - [ ] Used
   - [ ] Not available
   - [ ] Not applicable
   - [ ] Other variable more relevant
   - [ ] No trust in this variable

9. **TED** (Trans-oesophageal doppler)
   - [ ] Used
   - [ ] Not available
   - [ ] Not applicable
   - [ ] Other variable more relevant
   - [ ] No trust in this variable

10. **PLRT** (Passive leg raising test)
    - [ ] Used
    - [ ] Not available
    - [ ] Not applicable
    - [ ] Other variable more relevant
    - [ ] No trust in this variable

11. **EEOT** (End expiratory occlusion test)
    - [ ] Used
    - [ ] Not available
    - [ ] Not applicable
    - [ ] Other variable more relevant
    - [ ] No trust in this variable
12. **TVC** (Tidal Volume Challenge)  
☐ Used ☐ Not available ☐ Not applicable ☐ Other variable more relevant ☐ No trust in this variable  

13. **CO/SV** (Cardiac output/Stoke volume)  
☐ Used ☐ Not available ☐ Not applicable ☐ Other variable more relevant ☐ No trust in this variable  

14. **EVLWI** (Extra vascular lung water index)  
☐ Used ☐ Not available ☐ Not applicable ☐ Other variable more relevant ☐ No trust in this variable  

15. **GEDV** (Global end diastolic volume)  
☐ Used ☐ Not available ☐ Not applicable ☐ Other variable more relevant ☐ No trust in this variable  

16. **PVPI** (Pulmonary vascular permeability index)  
☐ Used ☐ Not available ☐ Not applicable ☐ Other variable more relevant ☐ No trust in this variable
Q. LIMITATION /WITHDRAWAL OF THERAPY IN ICU

Was there a decision implemented for limitation/withdrawal of therapy or no resuscitation for this patient at any time during the ICU Stay?

☐ YES ☐ NO

R. PATIENT DISCHARGED AGAINST MEDICAL ADVICE (DAMA)

☐ YES ☐ NO

S. STATUS AT ICU DISCHARGE

1. Date of ICU discharge _________ (DD:MM; YY)

2. Time of ICU discharge ______: ______(HH:MM)

3. Date of hospital discharge _________ (DD:MM: YY)

4. Time of hospital discharge ______: ______(HH:MM)

5. Status at ICU discharge  ☐Dead ☐Alive

6. Status at Hospital Discharge  ☐Dead ☐Alive

7. Status at Day 28 day of ICU admission  ☐Dead ☐Alive