Study ID: \_\_\_\_\_

Date (dd/mm/yyyy) and time (hhmm) of diagnosis/enrollment\*:

| Date of birth (dd/mm/yyyy)   |  |
|--|--|
| Date of admission to hospital (dd/mm/yyyy)   |  |
| Date of admission to ICU (dd/mm/yyyy)  |  |
| Date of discharge from ICU (dd/mm/yyyy)  |  |
| Date of discharge from hospital (dd/mm/yyyy)   |  |
| Gender (Male: 1, Female: 2)  |  |
| Measured weight (kg) on admission  |  |
| Measured height (cm) on admission  |  |
| Indication for ICU admission:<br>1 Cardiac surgical<br>2 Cardiac non-surgical<br>3 Trauma<br>4 Respiratory<br>5 Neurological non-surgical<br>6 Surgical non-cardiac<br>7 Other medical diagnoses. Speficy: |  |
| Date of diagnosis of PARDS (dd/mm/yyyy)  | This will be referred to as Day 1.   |
| Primary underlying co-morbidity: System involved (1:<br>cardiovascular, 2: respiratory, 3: neurological, 4: renal, 5:<br>gastrointestinal, 6: hematological/oncology, 7: others)                           | According to Edwards et al. Chronic<br>conditions among children admitted<br>to U.S. pediatric intensive care<br>units: their prevalence and impact<br>on risk for mortality and prolonged<br>length of stay*. Critical care<br>medicine. 2012 Jul;40(7):2196-203. |
| Specify primary underlying comorbidity (free text)   |  |
| Associated underlying co-morbidity 1 (free text)   |  |
| Associated underlying co-morbidity 2 (free text)   |  |
| Associated underlying co-morbidity 3 (free text)   |  |
| Associated underlying co-morbidity 4 (free text)   |  |
| Associated underlying co-morbidity 5 (free text)   |  |
| Immunosuppression (1: yes, 0: no)  |  |

| If yes, please specify reason for immunosuppression:               | Immunosuppressive medication     |
|--|----------------------------------|
| (choose all that apply)  | includes chemotherapy, biologics |
| 1. HIV/AIDS  | and long-term steroids           |
| 2. Hematological malignancy  | <b>.</b>                         |
| 3. Primary immunodeficiency  |                                  |
| 4. Solid organ malignancy + immunosuppressive                      |                                  |
| medication   |                                  |
| 5. Organ transplant + immunosuppressive medication                 |                                  |
| 6. Rheumatologic/ inflammatory + immunosuppressive                 |                                  |
| medication   |                                  |
| 7. Others. Specify:  |                                  |
| Limitation of care i.e. do-not-resuscitate orders. (No: 0, Yes: 1) |                                  |
|  |                                  |
| Reason for limitation of care (free text)                          |                                  |
|  |                                  |
| Brainstem death or not expected to survive the next 48hours on     |                                  |
| PICU admission. (No: 0, Yes: 1)                                    |                                  |
|  |                                  |
| Does the patient have any of the following co-morbidities (No:     |                                  |
| 0, Yes: 1)   |                                  |
| 1) Cyanotic congenital heart disease                               |                                  |
| 2) Chronic lung disease of prematurity                             |                                  |
| 3) Left ventricular dysfunction                                    |                                  |
| PIM 3 score at admission   |                                  |
| https://www.anzics.com.au/severity-score-and-risk-of-death-        |                                  |
| <u>calculators/</u>  |                                  |
| PELOD 2 score at admission   |                                  |
| https://espnic-online.org/Education/Professional-                  |                                  |
| Resources/Paediatric-Logistic-Organ-Dysfunction-2-Score-           |                                  |
| Calculator   |                                  |

| ARDS Characteristics                                     | Value | Additional comments        |
|--|-------|----------------------------|
| Risk factors for ARDS (pneumonia/pneumonitis:1,          |       | If 1, please specify S-PIC |
| aspiration: 2, drowning: 3, sepsis: 4, trauma:5,         |       | study ID.                  |
| transfusion: 6, cardiopulmonary bypass: 7                |       |                            |
| pancreatitis:8, others:9-specify)                        |       |                            |
| Positive blood cultures (No: 0, Yes: 1); if yes, please  |       |                            |
| specify organisms.                                       |       |                            |
| Respiratory pathogen identified (No: 0, Yes: 1). If yes, |       |                            |
| please specify.  |       |                            |
| Does the patient have any contraindications to           |       |                            |
| permissive hypercapnia (No: 0, Yes: 1)                   |       |                            |
|  |       |                            |
| If yes,  |       |                            |
| - specify [intracranial hypertension: 1, severe          |       |                            |
| pulmonary hypertension (>2/3 systemic): 2,               |       |                            |
| hemodynamic instability (>/=3) inotropes: 3,             |       |                            |
| others: 4 specify]                                       |       |                            |
| 2DE performed within 28 days of PARDS (No: 0,            |       | You may be contacted for   |
| Yes: 1).   |       | details of the 2DE         |
|  |       |                            |

| Day of ARDS                            | Day of ARDS   |  | D2 | D3 | D4 | D5 | D6 | D7 |
|--|---------------|--|----|----|----|----|----|----|
| DD/MM/YYYY                             |               |  |    |    |    |    |    |    |
| Mechanical ventila                     | tor Mode      |  |    |    |    |    |    |    |
| settings                               | $F_iO_2$ (%)  |  |    |    |    |    |    |    |
| -                                      | PIP/ Phigh    |  |    |    |    |    |    |    |
|  | PEEP/Plow     |  |    |    |    |    |    |    |
|  | MAP           |  |    |    |    |    |    |    |
|  | TV            |  |    |    |    |    |    |    |
|  | (ml)          |  |    |    |    |    |    |    |
|  | Rate/Freq     |  |    |    |    |    |    |    |
|  | Amp           |  |    |    |    |    |    |    |
| ABG                                    | pH            |  |    |    |    |    |    |    |
|  | $P_aO_2$      |  |    |    |    |    |    |    |
| (Take the morning                      | (mmHg)        |  |    |    |    |    |    |    |
| routine ABG with                       | $P_aCO_2$     |  |    |    |    |    |    |    |
| corresponding MV                       | (mmHg)        |  |    |    |    |    |    |    |
| settings, EtCO2,                       | Lactate       |  |    |    |    |    |    |    |
| SpO2)                                  | (mmol/L)      |  |    |    |    |    |    |    |
|  |               |  |    |    |    |    |    |    |
| End-tidal CO2 (mr                      | nHg)          |  |    |    |    |    |    |    |
| S <sub>p</sub> O <sub>2</sub> (88-97%) |               |  |    |    |    |    |    |    |
| Cumulative balance                     |               |  |    |    |    |    |    |    |
| Inotropes                              | Dopamine      |  |    |    |    |    |    |    |
|  | (ug/kg/min)   |  |    |    |    |    |    |    |
| (Take the dose at                      | Dobutamine    |  |    |    |    |    |    |    |
| 6-8am)                                 | (ug/kg/min)   |  |    |    |    |    |    |    |
|  | Adrenaline    |  |    |    |    |    |    |    |
|  | (ug/kg/min)   |  |    |    |    |    |    |    |
|  | Noradrenaline |  |    |    |    |    |    |    |
|  | (ug/kg/min)   |  |    |    |    |    |    |    |
|  | Milrinone     |  |    |    |    |    |    |    |
|  | (ug/kg/min)   |  |    |    |    |    |    |    |
|  | Vasopressin   |  |    |    |    |    |    |    |
|  | (unit/kg/min) |  |    |    |    |    |    |    |

| Date of intubation in ICU (dd/mm/yyyy)   | (if the patient is on tracheostomy, this<br>date should be the date when he/she is<br>put on an invasive mechanical<br>ventilator) |
|--|--|
| Date of 1 <sup>st</sup> extubation in ICU (dd/mm/yyyy)   | (if the patient is on tracheostomy, this<br>date should be the date when he/she is<br>put on a portable ventilator/NIV)            |
| Type of first endotracheal tube? (cuffed: 1, uncuffed: 2)  |  |
| Need for reintubation in ICU (No: 0, Yes: 1); if yes:  |  |
| <ul> <li>Date of second intubation (dd/mm/yyyy)</li> <li>Date of second extubation (dd/mm/yyyy)</li> </ul>           |  |
| Type of second endotracheal tube? (cuffed: 1, uncuffed: 2)   |  |
| Need for HFV in first 28 days (No: 0, Yes: 1). If yes,   |  |
| <ul> <li>Date of start HFOV (dd/mm/yyyy)</li> <li>Date of stop HFOV (dd/mm/yyyy)</li> </ul>                          |  |
| Need for pulmonary vasodilators in first <b>7 days</b> (No: 0, Yes: 1); if yes,                                      |  |
| <ul> <li>please specify type (inhaled nitric oxide: 1, sildenafil: 2, iloprost: 3, bosentan: 4, others:5)</li> </ul> |  |
| Need for prone positioning in first <b>7 days</b> (No: 0, Yes: 1); if yes,   |  |
| <ul> <li>please specify if prone &gt;/=8hours/day:1,</li> <li>&lt;8hours/day:2</li> </ul>                            |  |
| Need for steroids within 28 days (No: 0, Yes: 1); if yes, please specify   |  |
| - Indication (PARDS: 1, adrenal insufficiency: 2,  |  |
| laryngeal edema: 3, others: 4 specify)   |  |
| - Start (dd/mm/yyyy)   |  |
| - Stop (dd/mm/yyyy)  |  |
| - Total cumulative dose in hydrocortisone  |  |
| equivalent (mg)*   |  |
| Need for surfactant therapy in first 7 days (No: 0, Yes: 1)  |  |
| Need for paralysis in first 7 days (No: 0, Yes: 1); if yes,  |  |
| - Start (dd/mm/yyyy)   |  |
| - Stop (dd/mm/yyyy)  |  |
| Need for continuous renal replacement therapy (CRRT) in first 7 days (No: 0, Yes: 1)                                 |  |

| Need for diuretics in first <b>7 days</b> (No: 0, Yes: 1); of yes, |  |
|--|--|
| - Frusemide used (No: 0, Yes: 1)                                   |  |
| - Total cumulative dose in first 7 days                            |  |
| - Spironolactone used (No: 0, Yes: 1)                              |  |
| - Total cumulative dose in first 7 days                            |  |
| - Bumetanide used (No: 0, Yes: 1)                                  |  |
| - Total cumulative dose in first 7 days                            |  |
| Need for packed cell transfusion in first 7 days (No: 0, Yes:      |  |
| 1); if yes<br>- Total cumulative dose (ml)                         |  |
| - Indication (improve oxygen delivery:1, bleeding:2,               |  |
| hemodynamic instability:3, others: 4 specify)                      |  |
| - Hb target (>7g/dL:1, >9: 2, >10: 3, >12:4)                       |  |
| Total dose of platelets (ml)                                       |  |
| Total dose of fresh frozen plasma (ml)                             |  |
| Total dose of cryoprecipitate (ml)                                 |  |
| Total dose of intravenous immunoglobulin (g)                       |  |
| Total dose of "others"   |  |
| Need for ECMO in first 7 days (No: 0, Yes: 1), if yes              |  |
| - Start (dd/mm/yyyy)   |  |
| - Stop (dd/mm/yyyy)  |  |
| - Type (veno-venous:1, veno-arterial:2)                            |  |
| *Steroid conversion:   |  |

| Hydrocortisone     | 1  |
|--------------------|----|
| Prednisolone       | 4  |
| Methylprednisolone | 5  |
| Dexamethasone      | 25 |

## **Outcomes**

| PICU Mortality: (No: 0, Yes: 1)                                 |  |
|---|--|
| If yes, please state cause of death                             |  |
|   |  |
| PICU Transfer: (No: 0, Yes: 1)                                  |  |
| Multiorgan Dysfunction; >/=2 non-pulmonary organ                |  |
| dysfunction (No: 0, Yes: 1)                                     |  |
| If yes, please state the organs involved (1: cardiovascular, 2: |  |
| neurology, 3: hepatic, 4: renal, 5: hematology)*                |  |
| Pediatric Overall Performance Category                          |  |
| - Admission   |  |
| - Discharge   |  |
| Pediatric Cerebral Performance Category:                        |  |
| - Admission   |  |
| - Discharge   |  |
| Air leak in first 7 days (eg: pneumothorax,                     |  |
| pneumomediastinum) (No: 0, Yes: 1)                              |  |

\* Goldstein et al. International pediatric sepsis consensus conference: definitions for sepsis and organ dysfunction in pediatrics. Pediatric critical care medicine 2005 Jan;6(1):2-8.

# **Enteral Nutrition**

| Enteral      | Day 1 | Day 2 | Day 3 | Day 4 | Day 5 | Day 6 | Day 7 |
|--------------|-------|-------|-------|-------|-------|-------|-------|
| nutrition    |       |       |       |       |       |       |       |
| Formula      |       |       |       |       |       |       |       |
| name         |       |       |       |       |       |       |       |
| Carbohydrate |       |       |       |       |       |       |       |
| (g/100ml)    |       |       |       |       |       |       |       |
| Protein      |       |       |       |       |       |       |       |
| (g/100ml)    |       |       |       |       |       |       |       |
| Fat          |       |       |       |       |       |       |       |
| (g/100ml)    |       |       |       |       |       |       |       |
| Volume       |       |       |       |       |       |       |       |
| received     |       |       |       |       |       |       |       |

#### **Parenteral Nutrition**

|              | Day 1 | Day 2 | Day 3 | Day 4 | Day 5 | Day 6 | Day 7 |
|--------------|-------|-------|-------|-------|-------|-------|-------|
| PN           |       |       |       |       |       |       |       |
| prescribed   |       |       |       |       |       |       |       |
| Dextrose (g) |       |       |       |       |       |       |       |
| Amino acid   |       |       |       |       |       |       |       |
| (g)          |       |       |       |       |       |       |       |
| Lipid (g)    |       |       |       |       |       |       |       |
| Volume       |       |       |       |       |       |       |       |
| DAE          |       |       |       |       |       |       |       |
| prescribed   |       |       |       |       |       |       |       |
| Volume lipid |       |       |       |       |       |       |       |
| prescribed   |       |       |       |       |       |       |       |
| PN received  |       |       |       |       |       |       |       |
| Volume       |       |       |       |       |       |       |       |
| DAE          |       |       |       |       |       |       |       |
| received     |       |       |       |       |       |       |       |
| Volume lipid |       |       |       |       |       |       |       |
| received     |       |       |       |       |       |       |       |

### A. Pediatric Cerebral Performance Category Scale (PCPC) Scoring Criteria

Worst level of performance for any single criterion is used for categorizing, and deficits are scored if they result from a neurological disorder.

| Score Category<br>1 - Normal | <u>Description</u><br>Normal; at age-appropriate level of functioning.<br>Preschool child: developmentally appropriate.<br>School-age child: attending regular school classroom   |
|------------------------------|---|
| 2 - Mild Disability          | Conscious, alert, and able to interact at age-appropriate level;<br>Preschool child: may have minor developmental delays.<br>School-age child: attending regular school classroom, but grade is not appropriate<br>for age, or child is failing appropriate grade because of cognitive difficulties.<br>Possibility of mild neurologic deficit, or mild neurologic disease that is controlled<br>and does not interfere with daily functioning (e.g. seizure disorder). |
| 3 - Moderate Disability      | Conscious; below age appropriate functioning.<br>Neurologic disease that is not controlled and severely limits activities.<br>Preschool child: delayed for most of their activities of daily living.<br>School age child: sufficient cerebral function for age-appropriate independent<br>activities of daily life; attending special education classroom because of cognitive<br>difficulties and/or learning deficits.  |
| 4 - Severe Disability        | Conscious<br>Preschool child: delayed for most of their activities of daily living, <b>and</b> excessively<br>dependent on other for the provision of activities of daily living.<br>School age child: may be so impaired as to be unable to attend school; dependent<br>on others for daily support because of impaired brain function.  |
| 5 - Coma/Vegetative<br>State | Any degree of coma.<br>Unaware, even if awake in appearance, without clear or consistent interaction with<br>environment.<br>Unresponsive with no evidence of cortical function (not aroused by verbal stimuli).<br>Possibility of some reflexive response, spontaneous eye-opening, and sleep-wake<br>cycles.  |

# **B.** Pediatric Overall Performance Category Scale (POPC) Scoring Criteria

PCPC scores are included as criteria for POPC scores; POPC scores cannot exceed PCPC scores.

| Score Category     | Description   |
|--------------------|---|
| 1- Good            | PCPC =1   |
|                    | Healthy, alert, and capable of normal age appropriate activities of daily life.<br>Medical and physical problems do not interfere with normal activity.                             |
| 2 -Mild Disability | PCPC = 2  |
|                    | Minor chronic physical or medical problems present minor limitations but are<br>compatible with normal life (e.g. asthma, heart disease requiring medication or<br>medical device). |
|                    | Preschool child: has physical disabilities consistent with future independent   |
|                    | functioning (e.g. single amputation, and is able to perform the majority of age appropriate activities of daily living.)  |
|                    | School age child: able to perform age appropriate activities of daily living.   |

|                             | Can physically participate in physical activities with limitations (i.e. may need breaks) or has the ability to do physical activities but is medically restricted from doing so.<br>Mild medical problems that do not present limitations (i.e. reflux that does not interfere with feeding) should <u>NOT</u> be considered a mild disability.   |
|-----------------------------|--|
| 3 - Moderate Disability     | PCPC=3<br>Possibility of moderate disability from noncerebral systems dysfunction alone or<br>with cerebral system dysfunction.<br>Preschool child: delayed for most of their activities of daily living.<br>School age child: conscious and performs independent activities of daily life but<br>is physically disabled (e.g. cannot participate in competitive physical activities.)<br>Cannot participate in physical activities because physically disabled. |
| 4- Severe Disability        | PCPC=4<br>Possibility of severe disability from non-cerebral systems dysfunction alone or<br>with cerebral system dysfunction.<br>Preschool child: delayed for most of their activities of daily living, <b>and</b><br>excessively dependent on other for the provision of activities of daily living.<br>School age child: dependent on others for most activities of daily living.   |
| 5- Coma/Vegetative<br>State | PCPC=5   |