

How to complete the PICA Net ECMO Referral data collection form

NHS number (England and Wales), **CHI number** (Scotland), **H&C number** (Northern Ireland)—patient **not eligible** if overseas national who does not have an allocated number

Record **family name, first name** and **postcode**. If not known, record **UNKNOWN** and state reason why in comments section

Date and time of initial referral call - The actual date and time when the initial referral call for ECMO consideration was made to the ECMO centre

Referral number - Unique identifier assigned to each consecutive referral event. As recorded within your organisation to identify each referral episode.

Initial referring unit - Identifies the referring hospital, DGH or PICU where the child is located at the time of the referral call.

ECMO support requested - Defines the Support type of ECMO that is likely to be required

- Respiratory – The use of extracorporeal membrane oxygenation with a primary indication for support of respiratory failure by providing gas exchange support. Does not imply ECLS mode or cannula configuration
- Cardiac – The use of extracorporeal membrane oxygenation with a primary indication for support of left and/or right ventricle failure by providing cardiac and gas exchange support. Does not imply any specific ECLS mode or cannulation configuration
- Both – Mixture of both respiratory and cardiac definitions above.

Second opinion sought - Specifies whether the referring centre sought a second opinion .
If second opinion sought specify **ECMO centre providing second opinion**

PICA Net Paediatric Intensive Care Audit Network - Data collection form **ECMO referral**

Please complete for all referrals for ECMO support, whether or not clinicians decide the patient is a candidate for ECMO.

Patient details (or hospital label)

Family name: _____ NHS/CHI/H&C number: _____ Tick if patient is not eligible for number

First name: _____ Date of birth (dd/mm/yyyy): _____ Not estimated Estimated Anonymised

Postcode: _____ Sex: Male Female Ambiguous

ECMO referral details

Date and time of initial referral call: ____/____/20____ : ____:____ Referring area: X-ray/endoscopy/CT scanner Ward Recovery only Theatre and recovery PICU Emergency department (A&E) NICU Other transport service ICU (adult) Other intermediate care area Level 2 unit (HDU)

Referral number: _____ Referring speciality: _____

Initial referring unit (where patient was at time of referral call): _____

ECMO referral outcome

ECMO support requested
 Respiratory
 Cardiac
 Both

Accepting ECMO centre

 If referred to other ECMO centre
 Number of additional ECMO centres referred to prior to accepting centre (excluding initial and accepting centre)

 Record the names of the additional centres in chronological order of referral

Transport outcome
 Patient transported
 Not transported – condition improved
 Not transported – condition deteriorated
 Not transported – other reason
 Patient died before transport team arrived
 Patient died while transport team present
 Patient died during transit

Admission outcome
 Admitted to PICU only
 Admitted for ECMO assessment
 Admitted on ECMO

Reason not ECMO candidate (select all that apply)
 Pre-existing comorbidity
 Poor prognosis due to condition at time of referral
 Other (specify) _____

Transport decision
 Accepted for conventional retrieval
 Accepted for mobile ECMO
 Transport not requested

Mode of transport
 Conventional by road
 Conventional by air
 Mobile ECMO by road
 Mobile ECMO by air

Follow-up post referral
 Status at 30 days post referral? Alive Dead Unknown
 Status at 180 days post referral? Alive Dead Unknown
 Date and time of death (dd/mm/yyyy): ____/____/20____ : ____:____

ECMO centre providing second opinion

Transport team

Comments

Form completed by: _____

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Date of Birth

- **Not estimated** – The child’s date of birth as recorded on the child’s birth certificate or other appropriate document
- **Estimated** - if DOB unknown, estimate year by looking at child (so age can be calculated) and enter 01/01 for dd/mm
- **Anonymised** - tick if anonymising. Enter 01 for dd along with correct month and year

Sex - Identifies the genotypical sex of the child at referral or admission to this paediatric intensive care service.

Referring area - Identifies the care area where the child is located at the time of the referral call.

Referring speciality - Specialty from which this request for ECMO admission is made. Record the parent speciality of the doctor who made the ECMO referral.
Examples:

- A patient is admitted to A & E with respiratory failure, an PICU consultant attends and decides to refer for ECMO – referring speciality PICU
- A patient has deteriorated in neonatal intensive care, the consultant calls the ECMO centre for consideration of ECMO and the decision is taken to admit the patient – referring speciality NICU
- The transport team call the ECMO centre to request a bed and arrange admission – referring speciality Paediatric Intensive Care Transport Service

Accepting ECMO centre - The accepting ECMO centre identifies the exact destination where the child was accepted for admission/transfer.

Date and time of referral decision - The actual date and time when clinicians agreed that the child is an appropriate candidate to receive ECMO if required. This is based on the patient’s eligibility for ECMO (not the availability of a team or a bed). This may not be the date of the first telephone call to the PICU or transport service as this may have been for advice or discussion only.

Referral decision - specifies patients’ status as an ECMO candidate and outcome of referral decision.
If ‘Not ECMO candidate’ then select all reasons that apply

Please complete for all referrals for ECMO support, whether or not clinicians decide the patient is a candidate for ECMO.

Patient details (or hospital label)

Family name:

First name:

Postcode:

NHS/CHI/H&C number: Tick if patient is not eligible for number

Date of birth (dd/mm/yyyy): / / → Not estimated
 Estimated
 Anonymised

Sex: Male Female Ambiguous

ECMO referral details

Date and time of initial referral call: / / 20 : :

Referral number:

Initial referring unit (where patient was at time of referral call):

Referring area: X-ray/endoscopy/CT scanner Ward
 Recovery only Theatre and recovery
 PICU Emergency department (A&E)
 NICU Other transport service
 ICU (adult) Level 2 unit (HDU)
 Level 2 unit (HDU)

Referring speciality:

ECMO referral outcome

ECMO support requested: Respiratory Cardiac Both

Date and time of referral decision: / / 20 : :

Referral decision: Accepted at initial ECMO centre
 Referred to other ECMO centre - no staffed bed
 Referred to other ECMO centre - other specialist service required
 Did not require ECMO assessment at the time of referral, but patient considered a candidate for ECMO
 Not ECMO candidate (specify reason):

Reason not ECMO candidate (select all that apply): Pre-existing comorbidity Poor prognosis due to condition at time of referral Other (specify):

Second opinion sought? Yes No

ECMO centre providing second opinion:

Accepting ECMO centre:

If referred to other ECMO centre:

Number of additional ECMO centres referred to prior to accepting centre (excluding initial and accepting centre):

Record the names of the additional centres in chronological order of referral:

Transport decision: Accepted for conventional retrieval Accepted for mobile ECMO Transport not requested

Mode of transport: Conventional by road Conventional by air Mobile ECMO by road Mobile ECMO by air

Transport team:

Transport outcome: Patient transported Not transported - condition improved Not transported - condition deteriorated Not transported - other reason Patient died before transport team arrived Patient died while transport team present Patient died during transit

Admission outcome: Admitted to PICU only Admitted for ECMO assessment Admitted on ECMO

Follow-up post referral: Status at 30 days post referral? Alive Dead Unknown Status at 180 days post referral? Alive Dead Unknown

Date and time of death (dd/mm/yyyy): / / 20 : :

Comments:

Form completed by:

Number of additional ECMO units referred to prior to accepting centre - If 'Referred to other ECMO centre (no staffed bed)' or 'Referred to other ECMO centre (specialist service required)' Specify the number of additional ECMO units that the patient was referred to prior to acceptance.

You do not need to include the owner centre or the accepting centre as additional units. This is intended to collect the number of refusals.

Record the names of up to 5 other centres in the order of referral.

Transport decision - This intends to identify the decision that was made during the referral process, the outcome of the referral may be different.

- Accepted for conventional retrieval – the referral for ECMO was accepted, and the decision made for the child to be transported by conventional retrieval.
- Accepted for mobile ECMO – The referral for ECMO was accepted, and the decision made to transport the patient using mobile ECMO.
- Transport not requested – Patient was already at the referring centre so no transport required.

Mode of transport - Identifies the main mode of transport used by the transport team at any time during the journey with the child. This may differ from the original decision made as part of the referral call.

Transport team - The name of the mobile ECMO transport team, PICU or Centralised Transport Service (CTS), undertaking this episode of transport.

Transport outcome- The result of the transport episode once the decision to mobilise the transport team has been made and/or the transport journey has been completed.

Admission outcome - Identifies the admission outcome once the transport journey has been completed.

- Admitted to PICU only – admitted for PICU care only
- Admitted for ECMO assessment – admitted for assessment for ECMO on PICU
- Admitted on ECMO – Admitted already on ECMO

Status at 30 days post referral- Identifies the status (alive or dead) of the child on 30 days post referral

Status at 180 days post referral- Identifies the status (alive or dead) of the child on 180 days post referral

Date and time of death- Identifies the date of death if this occurs following the ECMO referral and is identified at 30 or 180 day follow-up

The time of death is important for this purpose if it is during or immediately following the referral episode. If the death occurs after this period and the time of death is not known then the time of death may be left blank

How to complete the PICANet ECMO Admission data collection form



PICANet Paediatric Intensive Care Audit Network - Data collection form **ECMO Admission**

Please complete if patient is admitted as an ECMO assessment, admitted on ECMO, or is placed on ECMO during their standard PICU admission to an ECMO centre.

Patient details (or hospital label)

Family name	Postcode	Case note number
First name	NHS/CHI/H&C number	Date of birth (dd/mm/yyyy)

Admission details

<p>ECMO status</p> <input type="checkbox"/> Admitted for assessment – not a candidate <input type="checkbox"/> Admitted for assessment – did not require ECMO <input type="checkbox"/> Admitted for assessment – placed on ECMO <input type="checkbox"/> Admitted on ECMO <input type="checkbox"/> Admitted for PICU care, placed on ECMO later	<p>Neurological status on admission</p> <input type="checkbox"/> Normal <input type="checkbox"/> Mild disability <input type="checkbox"/> Moderate disability <input type="checkbox"/> Severe disability <input type="checkbox"/> Vegetative state <input type="checkbox"/> Dead
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Date of referral decision: / / 20

If patient was admitted for assessment but ultimately did not receive ECMO, follow up information is still required to be completed

<p>ECMO details</p> <p>Reason for starting ECMO</p> <input type="checkbox"/> Circulatory failure <input type="checkbox"/> Respiratory failure <input type="checkbox"/> ECPR <p>Cannulation and ECMO started in</p> <input type="checkbox"/> PICU/Cardiac PICU <input type="checkbox"/> NICU <input type="checkbox"/> Emergency department <input type="checkbox"/> Adult ICU <input type="checkbox"/> Cardiac theatre <input type="checkbox"/> Cardiac catheter lab <input type="checkbox"/> Other theatre <input type="checkbox"/> Other (specify) <p>Cardiac surgical patient?</p> <input type="checkbox"/> Yes <input type="checkbox"/> No <p><i>If cardiac-surgical patient</i></p> <input type="checkbox"/> Preoperative <input type="checkbox"/> Theatre <input type="checkbox"/> Post-surgery ECPR <input type="checkbox"/> Post-surgery (not ECPR) <input type="checkbox"/> Not related to surgery	<p>Additional information</p> <p>Cannula change?</p> <input type="checkbox"/> Yes <input type="checkbox"/> No <p>Left sided decompression?</p> <input type="checkbox"/> Yes → <input type="checkbox"/> LA vent <input type="checkbox"/> No <input type="checkbox"/> Septostomy <input type="checkbox"/> Impella/Balloon device <p>Re-operation or catheter intervention?</p> <input type="checkbox"/> Yes <input type="checkbox"/> No <p>Renal replacement therapy during ECMO run?</p> <input type="checkbox"/> Yes <input type="checkbox"/> No <p><i>If yes</i></p> <p>Reason for RRT (select all that apply)</p> <input type="checkbox"/> Acute kidney injury → <input type="checkbox"/> Stage 1 <input type="checkbox"/> Fluid removal → <input type="checkbox"/> Stage 2 <input type="checkbox"/> Anuria → <input type="checkbox"/> Stage 3 <input type="checkbox"/> Hyperkalaemia <input type="checkbox"/> Acidosis <input type="checkbox"/> Other (specify)	<p>ECMO run complications (select all that apply)</p> <input type="checkbox"/> No complication <input type="checkbox"/> Mechanical <input type="checkbox"/> Haemorrhage <input type="checkbox"/> Neurology <input type="checkbox"/> Renal <input type="checkbox"/> Cardiovascular <input type="checkbox"/> Pulmonary <input type="checkbox"/> Metabolic <input type="checkbox"/> Limb <input type="checkbox"/> Other <p>Plasma exchange?</p> <input type="checkbox"/> Yes <input type="checkbox"/> No <p>Bloodstream infections (select all that apply)</p> <input type="checkbox"/> Not tested <input type="checkbox"/> No infection <input type="checkbox"/> Gram + Bacteria <input type="checkbox"/> Gram - Bacteria <input type="checkbox"/> Mycobacterium <input type="checkbox"/> Fungus (yeast & mould) <input type="checkbox"/> Virus & Prions <input type="checkbox"/> Protozoa <input type="checkbox"/> Other
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NHS number (England and Wales), CHI number (Scotland), H&C number (Northern Ireland)—patient **not eligible** if overseas national who does not have an allocated number

Local hospital case note number

Date of Birth —The child's date of birth as recorded on the child's birth certificate or other appropriate document

Neurological status on admission - Identifies the neurological status on admission using the Paediatric Cerebral Performance Category scale

Date of referral decision - The actual date when clinicians agreed on the outcome of the ECMO referral call resulting in this ECMO admission

Cannula change - Identifies whether at any point whilst the patient was on ECMO they required a change/replacement of cannula(s)

Left sided decompression - Identifies whether left side of heart needed decompression whilst on ECMO
If yes specify – 'LA Vent', 'Septostomy' or 'Impella/Balloon device'

Re-operation or catheter intervention - Identifies whether the patient required a surgical or catheter intervention whilst on ECMO.

Record **family name, first name** and **postcode**. If not known, record **UNKNOWN** and state reason why in comments section

Identifies the child's **ECMO status** on admission to the ECMO centre with one of the following:

- Admitted for assessment - not a candidate (the child was admitted for consideration of ECMO but after assessment the decision was taken that they were not a candidate for ECMO)
- Admitted for assessment – did not require ECMO (the child was admitted for consideration of ECMO but did not require ECMO during this PICU admission)
- Admitted for assessment - placed on ECMO
- Admitted on ECMO – the child was admitted already on ECMO

• Admitted for PICU care, placed on ECMO later - the child was a standard admission to PICU. They subsequently require ECMO during this PICU admission

Reason for starting ECMO – Circulatory failure, respiratory failure, or ECPR

Cannulation and ECMO started in - Identifies the location where the ECMO cannulas were placed and ECMO initiated

Cardiac surgical patient? - Identifies if patient is a cardiac surgical patient (includes planned or unplanned).

If cardiac surgical patient

Preoperative - patients are placed on ECMO prior to cardiac surgery, including those who were initially placed on ECMO where it was not known that they would require cardiac surgery (e.g undiagnosed TAPVD)

Theatre - placed on ECMO immediately after cardiac surgery/ bypass

Post-surgery ECPR - Placed on ECMO after surgery, outside of cardiac theatre and was ECPR

Post-surgery (Not ECPR) - Placed on ECMO after surgery, outside of cardiac theatre and was not ECPR

Not related to surgery- Patient underwent cardiac surgery on this PICU admission but it was unrelated to receiving ECMO (e.g. patient underwent cardiac surgery successfully and while admitted to PICU developed influenza and received ECMO for respiratory failure).



Please complete if patient is admitted as an ECMO assessment, admitted on ECMO, or is placed on ECMO during their standard PICU admission to an ECMO centre.

Patient details (or hospital label)	
Family name <input type="text"/>	Postcode <input type="text"/>
First name <input type="text"/>	NHS/CHI/H&C number <input type="text"/>
	Case note number <input type="text"/>
	Date of birth (dd/mm/yyyy) <input type="text"/>

Admission details	
ECMO status <input type="checkbox"/> Admitted for assessment – not a candidate <input type="checkbox"/> Admitted for assessment – did not require ECMO <input type="checkbox"/> Admitted for assessment – placed on ECMO <input type="checkbox"/> Admitted on ECMO <input type="checkbox"/> Admitted for PICU care, placed on ECMO later	Neurological status on admission <input type="checkbox"/> Normal <input type="checkbox"/> Mild disability <input type="checkbox"/> Moderate disability <input type="checkbox"/> Severe disability <input type="checkbox"/> Vegetative state <input type="checkbox"/> Dead Date of referral decision <input type="text"/> / <input type="text"/> / <input type="text"/> 20 <input type="text"/>
<i>If patient was admitted for assessment but ultimately did not receive ECMO, follow up information is still required to be completed</i>	

ECMO details		Additional information
Reason for starting ECMO <input type="checkbox"/> Circulatory failure <input type="checkbox"/> Respiratory failure <input type="checkbox"/> ECPR Cannulation and ECMO started in <input type="checkbox"/> PICU/Cardiac PICU <input type="checkbox"/> NICU <input type="checkbox"/> Emergency department <input type="checkbox"/> Adult ICU <input type="checkbox"/> Cardiac theatre <input type="checkbox"/> Cardiac catheter lab <input type="checkbox"/> Other theatre <input type="checkbox"/> Other (specify) <input type="text"/> Cardiac surgical patient? <input type="checkbox"/> Yes <input type="checkbox"/> No <i>If cardiac-surgical patient</i> <input type="checkbox"/> Preoperative <input type="checkbox"/> Theatre <input type="checkbox"/> Post-surgery ECPR <input type="checkbox"/> Post-surgery (not ECPR) <input type="checkbox"/> Not related to surgery	Cannula change? <input type="checkbox"/> Yes <input type="checkbox"/> No Left sided decompression? <input type="checkbox"/> Yes → <input type="checkbox"/> LA vent <input type="checkbox"/> No <input type="checkbox"/> Septostomy <input type="checkbox"/> Impella/Balloon device Re-operation or catheter intervention? <input type="checkbox"/> Yes <input type="checkbox"/> No Renal replacement therapy during ECMO run? <input type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes</i> Reason for RRT (select all that apply) <input type="checkbox"/> Acute kidney injury → <input type="checkbox"/> Stage 1 <input type="checkbox"/> Fluid removal <input type="checkbox"/> Stage 2 <input type="checkbox"/> Anuria <input type="checkbox"/> Stage 3 <input type="checkbox"/> Hyperkalaemia <input type="checkbox"/> Acidosis <input type="checkbox"/> Other (specify) <input type="text"/>	ECMO run complications (select all that apply) <input type="checkbox"/> No complication <input type="checkbox"/> Mechanical <input type="checkbox"/> Haemorrhage <input type="checkbox"/> Neurology <input type="checkbox"/> Renal <input type="checkbox"/> Cardiovascular <input type="checkbox"/> Pulmonary <input type="checkbox"/> Metabolic <input type="checkbox"/> Limb <input type="checkbox"/> Other Plasma exchange? <input type="checkbox"/> Yes <input type="checkbox"/> No Bloodstream infections (select all that apply) <input type="checkbox"/> Not tested <input type="checkbox"/> No infection <input type="checkbox"/> Gram + Bacteria <input type="checkbox"/> Gram – Bacteria <input type="checkbox"/> Mycobacterium <input type="checkbox"/> Fungus (yeast & mould) <input type="checkbox"/> Virus & Prions <input type="checkbox"/> Protozoa <input type="checkbox"/> Other

Identifies complications that arise during the ECMO run

No complication – occurred during the ECMO run
Mechanical – such as membrane lung failure, blood pump failure, raceway rupture, other tubing rupture, circuit change, cannula problems, temperature regulation device malfunction, clots and air emboli, clots in the haemofilter affecting flow, and air in circuit

Haemorrhage- such as GI haemorrhage, Peripheral cannula site bleeding, mediastinal cannulation site bleeding, surgical site bleeding.

Neurology – such as brain death, seizures clinically determined, seizures confirmed by EEG, CNS diffuse ischaemia (confirmed by CT/MRI), CNS infarction (confirmed by CT/MRI), Intra/extra parenchymal CNS haemorrhage (confirmed by US, CT/MRI), neurological intervention performed (ICP monitor, external ventricular drain, craniotomy).

Renal – Creatinine 1.5 – 3.0, creatinine > 3.0 and renal replacement therapy required

Cardiovascular – such as CPR required, Cardiac arrhythmia requiring antiarrhythmic medication infusion, overdrive pacing, cardioversion or defibrillation, tamponade (not blood) requiring pericardial drain or mediastinal washout, and tamponade (blood) requiring pericardial drain or mediastinal washout

Pulmonary – such as pneumothorax or pulmonary haemorrhage (requiring pRBC transfusion - > 20ml/kg/24 hours of pRBCs or >3U PRBCs/24hours in neonates and paediatrics.

Metabolic – such as hyperbilirubinemia, moderate haemolysis, severe haemolysis

Limb – such as limb compartment syndrome, fasciotomy, limb amputation, limb ischaemia requiring limb reperfusion canulae.

Other – any other complications not shown here

Identifies the infections associated with the child on ECMO

Include infections that occur during the ECMO Run
Not tested – the patient was not tested for evidence of infection whilst on ECMO

No Infection – the patient was tested for infection whilst on ECMO but no infection was detected

Gram positive bacteria – such as staphylococcus, streptococcus, and clostridium

Gram negative bacteria – such as Escherichia coli, pseudomonas, klebsiella and Acinetobacter
Mycobacterium – such as tuberculosis and leprosy
Fungus (yeast and mould) - such as aspergillus, candida, histoplasmosis and pneumocystis pneumonia (PCP)

Virus and Prions – Viruses such as influenza (A, B & C), measles, mumps, chickenpox, prions such as neurodegenerative disorders

Protozoa – such as malaria, giarda and toxoplasmosis

Other – use free text to specify

Plasma exchange - Identifies whether plasma exchange was undertaken during the child's ECMO run(s)

Plasma exchange is a procedure involving the separation and removal of the plasma from the blood in order to remove abnormal substances circulating in the plasma

Renal replacement therapy during ECMO run - Identifies whether renal replacement support was required whilst the child was on ECMO

Reason for RRT - Identifies the reason for 'Renal replacement therapy (RRT) during ECMO run, RRT includes continuous renal replacement therapy (Continuous Veno-Veno Haemofiltration (CVVH), Continuous Veno-Veno Haemodialysis (CVVHD), and Continuous Veno-Veno Haemodiafiltration (CVVHDF)), and peritoneal dialysis.

Total number of ECMO runs/cannulation mode changes

Identifies the number of ECMO runs for this admission

The first time a patient is placed on ECMO prior to or during this admission is classed as Run 1

Temporary transition of ECLS support to cardiopulmonary bypass (CPB) for cardiac surgery would not be categorised as an additional run

Changes to ECMO mode such as from VA to VV do not constitute a new run in isolation but are recorded in 'ECMO cannulation/mode changes' section.

Provide details of 2nd ECMO run (if applicable) in 'ECMO run 2' section. Further ECMO runs are not required to be entered

Date and Time ECMO run/change started

Identifies the date and time that the first and second ECMO run started

This refers to the time that the extracorporeal blood flow was established through cannulas attached to an ECMO circuit.

This date and time will be prior to the admission date and time in a child who was commenced on ECMO in another organisation prior to being admitted to your ECMO centre.

ECMO mode

Identifies the mode of drainage and return of blood in the extracorporeal system

Select the primary cannulation configuration even if multiple cannulas are placed

VV - Venovenous

VA - Venoarterial

VVA: Venovenarterial

Other: indicates a support not listed – indicate the primary cannulation configuration in free text

Cannula type - Specifies whether a single or dual lumen was used

Dual lumen (if applicable)

Select one from each pair;

Percutaneous - records if the ECMO drainage cannula was inserted peripherally (without incision and dissection of the vessel)

Surgical - records if the ECMO drainage cannula was inserted surgically (with incision and dissection of the vessel)

Left - Select if a Dual Lumen cannula was inserted into the Left Internal Jugular

Right - Select if a Dual Lumen cannula was inserted in the Right Internal Jugular

ECMO runs		ECMO cannulation/mode changes	
Total number of ECMO runs <input type="text"/>		Total number of ECMO cannulation/mode changes <input type="text"/>	
RUN 1	RUN 2	CHANGE 1	CHANGE 2
Date and time run started [][]/[][]/20[][] [][]:[][]	Date and time run started [][]/[][]/20[][] [][]:[][]	Date and time change started [][]/[][]/20[][] [][]:[][]	Date and time change started [][]/[][]/20[][] [][]:[][]
ECMO mode <input type="checkbox"/> VV <input type="checkbox"/> VA <input type="checkbox"/> VVA <input type="checkbox"/> Other (specify) _____	ECMO mode <input type="checkbox"/> VV <input type="checkbox"/> VA <input type="checkbox"/> VVA <input type="checkbox"/> Other (specify) _____	ECMO mode <input type="checkbox"/> VV <input type="checkbox"/> VA <input type="checkbox"/> VVA <input type="checkbox"/> Other (specify) _____	ECMO mode <input type="checkbox"/> VV <input type="checkbox"/> VA <input type="checkbox"/> VVA <input type="checkbox"/> Other (specify) _____
Cannula type <input type="checkbox"/> Dual lumen <input type="checkbox"/> Single lumen	Cannula type <input type="checkbox"/> Dual lumen <input type="checkbox"/> Single lumen	Cannula type <input type="checkbox"/> Dual lumen <input type="checkbox"/> Single lumen	Cannula type <input type="checkbox"/> Dual lumen <input type="checkbox"/> Single lumen
Dual lumen (if applicable) <input type="checkbox"/> Percutaneous <input type="checkbox"/> Surgical <input type="checkbox"/> Left <input type="checkbox"/> Right	Dual lumen (if applicable) <input type="checkbox"/> Percutaneous <input type="checkbox"/> Surgical <input type="checkbox"/> Left <input type="checkbox"/> Right	Dual lumen (if applicable) <input type="checkbox"/> Percutaneous <input type="checkbox"/> Surgical <input type="checkbox"/> Left <input type="checkbox"/> Right	Dual lumen (if applicable) <input type="checkbox"/> Percutaneous <input type="checkbox"/> Surgical <input type="checkbox"/> Left <input type="checkbox"/> Right
Drainage cannula (if single lumen) <input type="checkbox"/> Percutaneous <input type="checkbox"/> Surgical <input type="checkbox"/> Central <input type="checkbox"/> Peripheral <input type="checkbox"/> Jugular <input type="checkbox"/> Femoral <input type="checkbox"/> Left <input type="checkbox"/> Right	Drainage cannula (if single lumen) <input type="checkbox"/> Percutaneous <input type="checkbox"/> Surgical <input type="checkbox"/> Central <input type="checkbox"/> Peripheral <input type="checkbox"/> Jugular <input type="checkbox"/> Femoral <input type="checkbox"/> Left <input type="checkbox"/> Right	Drainage cannula (if single lumen) <input type="checkbox"/> Percutaneous <input type="checkbox"/> Surgical <input type="checkbox"/> Central <input type="checkbox"/> Peripheral <input type="checkbox"/> Jugular <input type="checkbox"/> Femoral <input type="checkbox"/> Left <input type="checkbox"/> Right	Drainage cannula (if single lumen) <input type="checkbox"/> Percutaneous <input type="checkbox"/> Surgical <input type="checkbox"/> Central <input type="checkbox"/> Peripheral <input type="checkbox"/> Jugular <input type="checkbox"/> Femoral <input type="checkbox"/> Left <input type="checkbox"/> Right
Return cannula (if single lumen) <input type="checkbox"/> Percutaneous <input type="checkbox"/> Surgical <input type="checkbox"/> Central <input type="checkbox"/> Peripheral <input type="checkbox"/> Neck <input type="checkbox"/> Femoral <input type="checkbox"/> Left <input type="checkbox"/> Right	Return cannula (if single lumen) <input type="checkbox"/> Percutaneous <input type="checkbox"/> Surgical <input type="checkbox"/> Central <input type="checkbox"/> Peripheral <input type="checkbox"/> Neck <input type="checkbox"/> Femoral <input type="checkbox"/> Left <input type="checkbox"/> Right	Return cannula (if single lumen) <input type="checkbox"/> Percutaneous <input type="checkbox"/> Surgical <input type="checkbox"/> Central <input type="checkbox"/> Peripheral <input type="checkbox"/> Neck <input type="checkbox"/> Femoral <input type="checkbox"/> Left <input type="checkbox"/> Right	Return cannula (if single lumen) <input type="checkbox"/> Percutaneous <input type="checkbox"/> Surgical <input type="checkbox"/> Central <input type="checkbox"/> Peripheral <input type="checkbox"/> Neck <input type="checkbox"/> Femoral <input type="checkbox"/> Left <input type="checkbox"/> Right
Additional drainage cannula <input type="checkbox"/> Tick if not applicable	Additional drainage cannula <input type="checkbox"/> Tick if not applicable	Additional drainage cannula <input type="checkbox"/> Tick if not applicable	Additional drainage cannula <input type="checkbox"/> Tick if not applicable

Decannulation	ECMO follow up
Indication for decannulation <input type="checkbox"/> Recovery <input type="checkbox"/> Died on ECMO or ECMO withdrawn <input type="checkbox"/> Conversion to VAD <input type="checkbox"/> Heart transplant <input type="checkbox"/> Other reason for decannulation <input type="checkbox"/> Not decannulated prior to discharge	Neurological status at discharge <input type="checkbox"/> Normal <input type="checkbox"/> Mild disability <input type="checkbox"/> Moderate disability <input type="checkbox"/> Severe disability <input type="checkbox"/> Vegetative state <input type="checkbox"/> Dead
If decannulated prior to discharge	Status at 30 days post-ECMO / assessment? <input type="checkbox"/> Alive <input type="checkbox"/> Dead <input type="checkbox"/> Unknown
Date and time of decannulation for ECMO run 1 (if applicable) [][]/[][]/20[][] [][]:[][]	Status at 180 days post-ECMO / assessment? <input type="checkbox"/> Alive <input type="checkbox"/> Dead <input type="checkbox"/> Unknown
Date and time of decannulation for ECMO run 2 (if applicable) [][]/[][]/20[][] [][]:[][]	Date and time of death (time if available) [][]/[][]/20[][] [][]:[][]
Comments Form completed by	

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Drainage cannula (if applicable)

Select one from each pair;

Percutaneous – records if the ECMO drainage cannula was inserted peripherally (without incision and dissection of the vessel)

Surgical -records if the ECMO drainage cannula was inserted surgically (with incision and dissection of the vessel)

Central – records if the ECMO drainage cannula was inserted directly centrally into the heart e.g. via sternotomy

Peripheral -records if the ECMO drainage cannula was not directly inserted into the heart

Jugular- records if the ECMO drainage cannula was inserted into the right or left internal jugular vein

Femoral – records if the ECMO drainage cannula was inserted into the right or left femoral vein

Left - indicates the ECMO drainage cannula was placed on the left side

Right - indicates the ECMO drainage cannula was placed on the right side

Additional drainage cannula - 'Tick if not applicable' - if no drainage cannula was inserted

Return cannula (if applicable)

Select one from each pair;

Percutaneous – records if the ECMO return cannula was inserted peripherally (without incision and dissection of the vessel)

Surgical -records if the ECMO return cannula was inserted surgically (with incision and dissection of the vessel)

Central – records if the ECMO return cannula was inserted directly centrally into the heart e.g. via sternotomy

Peripheral -records if the ECMO return cannula was not directly inserted into the heart

Neck - records if the ECMO return cannula was inserted into the right/left internal jugular vein or carotid artery

Femoral – records if the ECMO return cannula was inserted into the right or left femoral vein

Left - indicates the ECMO return cannula was placed on the left side

Right - indicates the ECMO return cannula was placed on the right side

ECMO runs		ECMO cannulation/mode changes	
Total number of ECMO runs <input type="text"/>		Total number of ECMO cannulation/mode changes <input type="text"/>	
RUN 1	RUN 2	CHANGE 1	CHANGE 2
Date and time run started [][]/[][]/20[][] [][]:[][]	Date and time run started [][]/[][]/20[][] [][]:[][]	Date and time change started [][]/[][]/20[][] [][]:[][]	Date and time change started [][]/[][]/20[][] [][]:[][]
ECMO mode <input type="checkbox"/> VV <input type="checkbox"/> VA <input type="checkbox"/> VVA <input type="checkbox"/> Other (specify) [] [] [] []	ECMO mode <input type="checkbox"/> VV <input type="checkbox"/> VA <input type="checkbox"/> VVA <input type="checkbox"/> Other (specify) [] [] [] []	ECMO mode <input type="checkbox"/> VV <input type="checkbox"/> VA <input type="checkbox"/> VVA <input type="checkbox"/> Other (specify) [] [] [] []	ECMO mode <input type="checkbox"/> VV <input type="checkbox"/> VA <input type="checkbox"/> VVA <input type="checkbox"/> Other (specify) [] [] [] []
Cannula type <input type="checkbox"/> Dual lumen <input type="checkbox"/> Single lumen	Cannula type <input type="checkbox"/> Dual lumen <input type="checkbox"/> Single lumen	Cannula type <input type="checkbox"/> Dual lumen <input type="checkbox"/> Single lumen	Cannula type <input type="checkbox"/> Dual lumen <input type="checkbox"/> Single lumen
Dual lumen (if applicable) <input type="checkbox"/> Percutaneous <input type="checkbox"/> Surgical <input type="checkbox"/> Left <input type="checkbox"/> Right	Dual lumen (if applicable) <input type="checkbox"/> Percutaneous <input type="checkbox"/> Surgical <input type="checkbox"/> Left <input type="checkbox"/> Right	Dual lumen (if applicable) <input type="checkbox"/> Percutaneous <input type="checkbox"/> Surgical <input type="checkbox"/> Left <input type="checkbox"/> Right	Dual lumen (if applicable) <input type="checkbox"/> Percutaneous <input type="checkbox"/> Surgical <input type="checkbox"/> Left <input type="checkbox"/> Right
Drainage cannula (if single lumen) <input type="checkbox"/> Percutaneous <input type="checkbox"/> Surgical <input type="checkbox"/> Central <input type="checkbox"/> Peripheral <input type="checkbox"/> Jugular <input type="checkbox"/> Femoral <input type="checkbox"/> Left <input type="checkbox"/> Right	Drainage cannula (if single lumen) <input type="checkbox"/> Percutaneous <input type="checkbox"/> Surgical <input type="checkbox"/> Central <input type="checkbox"/> Peripheral <input type="checkbox"/> Jugular <input type="checkbox"/> Femoral <input type="checkbox"/> Left <input type="checkbox"/> Right	Drainage cannula (if single lumen) <input type="checkbox"/> Percutaneous <input type="checkbox"/> Surgical <input type="checkbox"/> Central <input type="checkbox"/> Peripheral <input type="checkbox"/> Jugular <input type="checkbox"/> Femoral <input type="checkbox"/> Left <input type="checkbox"/> Right	Drainage cannula (if single lumen) <input type="checkbox"/> Percutaneous <input type="checkbox"/> Surgical <input type="checkbox"/> Central <input type="checkbox"/> Peripheral <input type="checkbox"/> Jugular <input type="checkbox"/> Femoral <input type="checkbox"/> Left <input type="checkbox"/> Right
Return cannula (if single lumen) <input type="checkbox"/> Percutaneous <input type="checkbox"/> Surgical <input type="checkbox"/> Central <input type="checkbox"/> Peripheral <input type="checkbox"/> Neck <input type="checkbox"/> Femoral <input type="checkbox"/> Left <input type="checkbox"/> Right	Return cannula (if single lumen) <input type="checkbox"/> Percutaneous <input type="checkbox"/> Surgical <input type="checkbox"/> Central <input type="checkbox"/> Peripheral <input type="checkbox"/> Neck <input type="checkbox"/> Femoral <input type="checkbox"/> Left <input type="checkbox"/> Right	Return cannula (if single lumen) <input type="checkbox"/> Percutaneous <input type="checkbox"/> Surgical <input type="checkbox"/> Central <input type="checkbox"/> Peripheral <input type="checkbox"/> Neck <input type="checkbox"/> Femoral <input type="checkbox"/> Left <input type="checkbox"/> Right	Return cannula (if single lumen) <input type="checkbox"/> Percutaneous <input type="checkbox"/> Surgical <input type="checkbox"/> Central <input type="checkbox"/> Peripheral <input type="checkbox"/> Neck <input type="checkbox"/> Femoral <input type="checkbox"/> Left <input type="checkbox"/> Right
Additional drainage cannula <input type="checkbox"/> Tick if not applicable <input type="checkbox"/> Percutaneous <input type="checkbox"/> Surgical <input type="checkbox"/> Central <input type="checkbox"/> Peripheral <input type="checkbox"/> Jugular <input type="checkbox"/> Femoral <input type="checkbox"/> Left <input type="checkbox"/> Right	Additional drainage cannula <input type="checkbox"/> Tick if not applicable <input type="checkbox"/> Percutaneous <input type="checkbox"/> Surgical <input type="checkbox"/> Central <input type="checkbox"/> Peripheral <input type="checkbox"/> Jugular <input type="checkbox"/> Femoral <input type="checkbox"/> Left <input type="checkbox"/> Right	Additional drainage cannula <input type="checkbox"/> Tick if not applicable <input type="checkbox"/> Percutaneous <input type="checkbox"/> Surgical <input type="checkbox"/> Central <input type="checkbox"/> Peripheral <input type="checkbox"/> Jugular <input type="checkbox"/> Femoral <input type="checkbox"/> Left <input type="checkbox"/> Right	Additional drainage cannula <input type="checkbox"/> Tick if not applicable <input type="checkbox"/> Percutaneous <input type="checkbox"/> Surgical <input type="checkbox"/> Central <input type="checkbox"/> Peripheral <input type="checkbox"/> Jugular <input type="checkbox"/> Femoral <input type="checkbox"/> Left <input type="checkbox"/> Right
Decannulation	ECMO follow up		
Indication for decannulation <input type="checkbox"/> Recovery <input type="checkbox"/> Died on ECMO or ECMO withdrawn <input type="checkbox"/> Conversion to VAD <input type="checkbox"/> Heart transplant <input type="checkbox"/> Other reason for decannulation <input type="checkbox"/> Not decannulated prior to discharge	Neurological status at discharge <input type="checkbox"/> Normal <input type="checkbox"/> Mild disability <input type="checkbox"/> Moderate disability <input type="checkbox"/> Severe disability <input type="checkbox"/> Vegetative state <input type="checkbox"/> Dead		
Date and time of decannulation if decannulated prior to discharge Date and time of decannulation for ECMO run 1 (if applicable) [][]/[][]/20[][] [][]:[][]	Follow up neurological assessment by 180 days post-ECMO / assessment? <input type="checkbox"/> Yes <input type="checkbox"/> No if yes Neurological status at 180 days post-ECMO / assessment <input type="checkbox"/> Normal <input type="checkbox"/> Mild disability <input type="checkbox"/> Moderate disability <input type="checkbox"/> Severe disability <input type="checkbox"/> Vegetative state <input type="checkbox"/> Dead <input type="checkbox"/> Unknown		
Date and time of decannulation for ECMO run 2 (if applicable) [][]/[][]/20[][] [][]:[][]	Status at 30 days post-ECMO / assessment? <input type="checkbox"/> Alive <input type="checkbox"/> Dead <input type="checkbox"/> Unknown		
Comments	Status at 180 days post-ECMO / assessment? <input type="checkbox"/> Alive <input type="checkbox"/> Dead <input type="checkbox"/> Unknown		
	Date and time of death (time if available) [][]/[][]/20[][] [][]:[][]		
	Form completed by		

Neurological status at discharge - Identifies the neurological status on admission using the Paediatric Cerebral Performance Category scale

Indication for decannulation - Identifies the reason the child was decannulated from ECMO
Choose one reason for discontinuing ECMO support

Date and time of decannulation - The actual date and time when the child was decannulated from ECMO Run.
This specifically refers to the date and time that the cannulas are removed

Follow up neurological assessment by 180 days post ECMO - Identifies whether the child had a follow up neurological assessment by 180 days post decannulation
Neurological status at 180 days post ECMO - To identify the child's neurological status at 180 days post decannulation using the Paediatric Cerebral Performance categories

Status at 30 days post ECMO/assessment - Identifies the status (alive or dead) of the child on 30 days post decannulation

Status at 180 days post ECMO/assessment - Identifies the status (alive or dead) of the child on 180 days post decannulation

Date and time of death (if applicable) - The actual date and time of death if this occurs post-discharge from your unit and is identified at follow-up
The time of death is important if it is during or immediately following ECMO. If the death occurs after this period and the time of death is not known then the time of death may be left blank