

Paediatric Critical Care Clinical Network Specification



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Executive Summary

A networked approach to care of critically ill children and young people is required to deliver equitable access to high quality critical care that meets the needs of each child or young person. This must include knowledge, skills training and advice to ensure that immediate stabilisation can be offered to all children at the point of presentation. This should be done in conjunction with transport services where required to provide advice and assistance in the event of a child or young person needing to be transferred between hospitals.

Paediatric critical care networks have been established to support these requirements and to lead implementation of the agreed recommendations of the national reviews by NHS England and GIRFT.

The requirements for these networks are described in this specification.

1. Clinical Networks

Specialised services Clinical Networks¹ are a vehicle for specialty level collaboration between patients, providers and commissioners. They should have clear lines of governance and accountability with Integrated Care Boards (ICBs) including providers and provider collaboratives, and to NHS England (NHSE) Regional Teams, to ensure local ownership, alignment and a local mandate. This will include participation in the relevant Strategic Children's Forum(s) (or equivalent) to ensure strategic alignment across children and young people's networks and services.

All networks have an important role in delivering the triple aim, supporting:

- better health and wellbeing of everyone,
- better quality of care for all patients, and
- sustainable and efficient use of NHS resources

This specification sets out the appropriate scope for the work of PCC clinical networks. This will inform the development of the annual workplans developed in conjunction with the network's commissioners. No network will, or could, focus on all aspects of the scope described, at one time.

In describing the appropriate scope for networks, these specifications refer to the work of the network board and the network's members, supported by the network team. Networks are not expected to assume the legitimate accountabilities and responsibilities of providers who

¹ While some specialised services Clinical Networks have previously been described as Operational Delivery Networks (ODNs), the range of activity undertaken is now significantly beyond that envisaged for ODNs, reaching into non-specialised services, and in some cases primary and community care and prevention. Some are jointly funded as part of national transformation programmes and have accountabilities outside as well as within specialised services. As a result, as a group they are now referred to as specialised services 'Clinical Networks'.

are accountable for meeting the needs of the Service Specification. However, network responsibilities inevitably overlap with those of providers, because networks aim to improve the ways in which services are delivered operationally and shape how they develop and because providers are members of networks.

In describing the appropriate scope for networks, these specifications refer to the work of the network board and the network's members, supported by the network team.

2. Paediatric Critical Care: Strategic Context

An NHS England review of critical care and surgery in children was published in 2019. The review recommended a new 'model of care', with the establishment of 10 paediatric critical care networks across England as part of the Long Term Plan and a clear vision for increased resilience at times of surge demand.

In 2022 GIRFT published its National Specialty Report on Paediatric Critical Care making 22 recommendations, many of which involve PCC networks.

The recommendations of these reports are reflected in this specification.

Each network is responsible, working with commissioners and providers, for implementing the agreed recommendations of these reviews, as well as systems of governance, education and training, and data capture, as well as rationalisation of clinical pathways to deliver safe, effective critical care as close to the child or young person's family home as possible.

3. Network Scope

3.1 Scope

The scope of Paediatric Critical Care (PCC) clinical networks includes all children and young people between the ages of 0-18 years in England, requiring paediatric critical care, whether specialised (level 2 and 3) or non-specialised (level 1), whether the commissioner is NHS England or one or more Integrated Care Boards (ICBs). Care for patients between 0 and 16 years will normally be within paediatric critical facilities, but arrangements vary for young people over 16 years. Each network should work with the relevant adult critical care network(s) to agree a policy on developmentally appropriate care arrangements for young people 16-18 (and beyond 18 years in special circumstances, for example those with learning disabilities) alongside an agreed transition protocol which includes these issues, in line with NICE guidance 'Transition from children's to adults' services for young people using health or social care services'.

These arrangements should cover normal operating conditions and also appropriate flex at times of great pressure within either paediatric or adult critical care. This should be signed off by all members of both networks in a joint network MOU.

This includes:

- Level 1 (L1) critical care (Basic Critical Care)
- Level 2 (L2) critical care (Intermediate Critical Care)
- Level 3 (L3) critical care: (Advanced Critical Care, which is also known as Intensive Care)

- Paediatric critical care transport services
- Specialised long-term ventilation (LTV) services

The care pathway for each child or young person will be specific to their needs, making management of patient flow across the network (which may extend across several ICBs) an essential component of the model of care. Clinical networks help to manage this flow and capacity, ensuring services meet the needs of patients and staff are competent to manage patients at the appropriate level of care for their needs.

Level 3 critical care is delivered by 23 hospitals and managed as a national resource. Not all have the all the key co-located services (such as general paediatrics, trauma, cardiac and neurosurgical teams) that would enable them to look after the most complex paediatric cases. Other elements of paediatric critical care are provided in 153 hospitals in England outside of designated paediatric intensive care units, with most providing level 1 care and some providing level 2.

The specialised service is described in detail in Service Specifications:

- paediatric critical care services level 2 (E07/S/b), and 3 (E07/S/a);
- paediatric critical care transport services (E07/S/d) and
- specialised long-term ventilation services (E07/S/c)

Not in Scope

Adult Critical Care services
Neonatal Intensive Care services

3.2 Population Covered

All providers of PCC services in England will be required to be part of one of 10 PCC clinical networks which cover the country. The networks are:

NORTH EAST AND YORKSHIRE

North East & North Cumbria
Yorkshire & Humber

NORTH WEST

North West

MIDLANDS

West Midlands
East Midlands

EAST OF ENGLAND

East of England

LONDON, AND SOUTH EAST

North Thames
South Thames (South London, Kent, Surrey and Sussex)

SOUTH EAST

Thames Valley and Wessex

SOUTH WEST

South West

Wales and Scotland: While some residents of Wales and Scotland receive their care in England, hospitals in these countries are not part of these networks.

Networks in England work with colleagues in Scotland and Wales to offer mutual aid as appropriate at times of service pressure.

Crown Dependencies: Residents of the Channel Islands and the Isle of Man receive their care in England and for this reason hospitals in these territories are also part of these networks.

Northern Ireland: While some residents of Northern Ireland receive their care in England, hospitals in Northern Ireland are not part of these networks.

4. Network Aims and Objectives

4.1 Network Vision and Aims

The aim of PCC clinical networks is to provide leadership to the development of sustainable, affordable and high-quality services by bringing together commissioners, providers and other key stakeholders.

PCC clinical networks have a central role in delivering the recommendations of the NHS England national review of critical care in children and the agreed recommendations of the GIRFT National Specialty Report on Paediatric Critical Care.

PCC clinical networks have an important 'real time' role in monitoring capacity and demand at times of service pressure, responding to surge, supporting regional and national capacity planning and escalation of network pressures.

4.2 Network Objectives

The overarching objectives of PCC clinical networks are to:

- Work with commissioners, providers and other local stakeholders, including ICBs, to agree the population footprint as the basis for planning and transforming services collaboratively.
- Act as virtual team with the same stakeholders to bring together the providers of levels 1, 2 and 3 critical care and transport services across a hub.
- Provide network and service oversight, understand the risks to provision of services to patients and their families and developing potential solutions.
- Identify, prioritise and provide leadership to improve patient care.
- Reduce variation in clinical practice and treatment outcomes.
- Provide clinical links to best practice, national programmes, service and clinical strategies.
- Reduce fragmentation of clinical provision.
- Provide advice to commissioners to improve patient flow and experience throughout the system.
- Identify shortfalls in workforce supply and retention and support action to ensure sustainability of services.
- Act as the clinical collaborative transformation group for children and young people

using PCC.

4.3 Network Functions

Service delivery: plan and manage capacity and demand

- Develop a collaborative approach to managing capacity and demand that:
 - Agrees pathways of care that will support efficient and effective flows of patients, address variation within the network and assure equity of access for patients based on need. Networks play an important role in proactively managing capacity and patient flow particularly at times of demand surge and including supporting mutual aid.
 - Ensures that arrangements are in place so that every child or young person requiring PCC can receive care as close to the family home as possible and that the patient and their family travel only when essential, avoiding unnecessary transfers, whilst ensuring timely access for urgent and emergency procedures and the best possible outcome for the patient.
- Develop an approach to managing capacity and demand when services are under pressure (e.g. when services are experiencing a surge in demand for PCC) that:
 - Establishes and tests mutual aid arrangements within network, within region and supra-regionally, including diversion of new admissions, supported by clear agreements for cross site working
 - Ensures IT/digital provision in place for specialist advice (including patient helplines), triage, consultation and MDT provision meetings Uses websites, social media etc. to provide information or signpost patients and network members to up to date appropriate information
 - Escalates issues not resolvable at network level to UK network group call
 - Aligns specialist paediatric pathways so that so that each child or young person with multiple co-morbidities receives co-ordinated care in one (principal) tertiary hub whenever possible.
- Ensure a system is in place to monitor and report on bed occupancy, and alert commissioners to situations in which referrals into L3 cannot be accepted within the network, as a result of a lack of L3 capacity at that time.
- Ensures there is sufficient L2 capacity and capability within the network to avoid admissions to L3 beds for L2 care.
- Prepare an annual surge plan including contingency measures to be enacted when PCC capacity is exceeded. These plans will be prepared in conjunction as a minimum with Adult critical care, Neonatal critical care, Surgery in children and Congenital heart disease clinical networks, neighbouring PCC clinical networks and emergency care and anaesthetic services.
- Support collaboration between providers to ensure patients progress through the appropriate levels of care independent of funding mechanism.
- Work with commissioners to ensure there are adequate paediatric transport services both now and following any changes to service provision across the network.

Resources: stewardship of resources across whole pathway and minimising unwarranted variation

- Improve utilisation of resources

- Minimise unnecessary use of L3 Paediatric Critical Care by:
 - Supporting the implementation of standardised pathways of care across the network.
 - Facilitating stepdown of care when this is no longer required.
 - Building confidence in local services to support early discharge.
- Improve the effectiveness and appropriateness of use of high-cost treatments and consumables.
- Encourage standardisation of PCC practice including drugs, devices etc used across the network to achieve best value, to facilitate collaborative purchasing arrangements to achieve the best price.
- Work with other related networks, flexing use of resources to find efficiencies, target resources for best effect and share insight and experience.

Workforce: *flexible, skilled, resilient staffing*

- Work with the Children and Young People Transformation programme, and regional workforce leads to assess future workforce needs across the network taking into account projected demand.
- Advise providers and professional organisations of expected workforce needs and where training places will need to be funded
- Supports providers to develop and implement extended roles for non-medical staff groups, through training and development and network wide policies and procedures.
- Undertake network training needs assessment (including baseline skills audit and network maturity assessment).
- Develop and agree a network training plan that meets the needs of the network both in the delivery of care and in the functioning of the network. This should include non-invasive ventilation training and training on care of technology dependent children including those on long term ventilation. The training plan should also include:
 - Adult and neonatal critical care staff to ensure mutual aid arrangements are in place in the event of a paediatric surge.
 - non-hospital based care providers including Housing and Social Care.
- Agree with commissioners and providers how the planned training will be delivered.
- Monitor delivery and assess the effectiveness of the agreed training.
- Enable the potential movement of staff through the implementation of a staff passport.

Quality: *improving quality, safety, experience & outcomes*

- Create a culture of ongoing service improvement, ensuring best practice models are embedded and contribute to improved quality performance.
- Reduce variations in care
- Improve equity of access for planned and unplanned care and swift escalation pathways.
- Support the collection, analysis and reporting of key indicators of outcomes, quality of care and patient and family experience including the use of PICANET and SUS.

- Ensure national level capacity data is submitted and data represented on the national dashboard is accurate and up to date for the units within the network.
- Monitor key indicators of quality across the network and regularly review clinical outcomes across the network.
- Manage risks to the delivery of the network's annual work programme.
 - Identify service issues and risks and ensure they are managed through regional and system quality structures following agreed escalation processes. Providers or commissioners may ask networks to facilitate the response to risks, but providers and commissioners remain accountable for their services' risks.
- Run a regular clinical forum to review outcomes across the network.
- Work with surgical specialties to reduce cancelled operations by addressing critical care capacity and demand locally.
- Assure and improve quality and safety, patient experience and outcomes
 - Ensure that the whole patient pathway is focused on the holistic needs of the child or young person and involve families in the care of their children.
- Develop an active patient engagement strategy, and establish mechanisms for hearing patient and family voice Provide standardised information, about paediatric critical care, for families whose children are admitted or may be admitted to facilities across the network.

Collaboration: working together within individuals and organisations at local, system and national level

- Develop partnership arrangements with all relevant partners including national and local commissioners, providers, patients and families to plan services as a system rather than individual organisations:
- Link network clinical leadership with system, regional and national clinical leadership cadres to support a collaborative approach and shared aims.
- Share best practice with networks covering the same service across the country.
- Work closely with other clinical networks supporting the care of children and young people through the Children's Strategic Forum (CSF) or equivalent, identifying opportunities for shared solutions and resources.
- Work closely with neonatal critical care clinical networks to ensure the safe and effective transition of patients where necessary.
- Work closely with adult critical care clinical networks to assure the quality of care provided to young people treated in ACC settings as part of a transition pathway.
- Work closely with regional palliative care networks/system to co-ordinate care for children with palliative care as well as critical care needs.
- Network actively participates in and supports the national network meetings, sharing experience and learning.

Transformation: plan sustainable services that meet the needs of all patients

- Work with NHSE and relevant ICBs provide recommendations on:
 - Appropriate network configuration – to ensure that spoke hospitals sit within the most appropriate network
 - L3 bed distribution – to ensure capacity in each hub is appropriate to demand, including unmet demand,
 - L2 and L1 bed distribution across the network, within both hub and spoke hospitals

- Ensure that providers of L1, L2 and L3 services meet appropriate agreed standards.
- Improve equity of access for planned and unplanned care and swift escalation pathways.

Population health: assessing need, improving inequalities in health, access, experience and outcomes

- Develop and implement network pathways and protocols to reduce variation in service delivery, identifying those aspects of care that should be delivered at home or in spoke hospitals (L1, 2), and criteria for referral to L3, in line with national service specifications
- Utilise data to identify geographical trends within region and work with ICB's to support better health and wellbeing for ill children.

4.4 Annual workplan

The network board will agree an annual workplan with its commissioners (system and regional). This will reflect national, regional and local priorities taking account of the resources available to support delivery. The workplan will describe its expected deliverables and benefits.

The network board will publish an annual report detailing its activities, accounts and delivery against the agreed annual plan.

5. Governance

5.1 Accountability

Hosting

Networks and their boards are independent of the host, with their own governance and accountability directly to the commissioner. The host is not accountable for the delivery of the network's functions and where the host is a network member, they will have the same roles and responsibilities as other members and will exert no undue influence as host of the network.

The network host will be selected by the Commissioners following an open and defensible process that maximises value for money, which would include consideration of opportunities for sharing infrastructure. The responsibilities of each party will be set out in a formal hosting agreement.

Network funding provided to the host is ring-fenced for the network and cannot be used by the host for other purposes, and is not subject to host cost improvement targets.

Accountability and responsibility

Network footprints reflect patient flows, provider scale and catchments so will often cut across commissioner boundaries (ICB and regional). Governance arrangements must provide clear accountability to commissioners at system level (with links to all relevant ICBs) and region as appropriate for both network delivery and commissioning responsibilities. Local arrangements to achieve this should be clearly documented within the network's terms of reference.

Networks will be responsible to ICBs for the management of local pathways and delivery of locally agreed targets. This should be set out in memoranda of understanding between ICBs, providers and the network.

The network will be accountable to the regional team of NHSE via the appropriate board within the Region including any multi-ICB decision bodies established.

A single network plan and deliverables should be agreed with all ICBs within the network's geography and signed off by the region. Networks will be expected to provide regular reports and have regular reviews with NHSE regional teams.

The network's authority to act on behalf of its commissioners and members will be set out clearly within the network memorandum of understanding and where necessary clarified within the agreed annual plan.

5.2 Network governance and architecture

Members and stakeholders

Networks are required to have a formally constituted governing body or board, which is accountable to the network's commissioner for delivery of the network's agreed programme, with a line of sight to all ICBs whose patients use the services of providers within the network.

Network boards should include balanced representation from member organisations and other relevant stakeholders, including specialist transport and LTV, representatives of referring hospitals, commissioner representatives, families, carers and third sector organisations.

Clinical representation should cover the whole multi-disciplinary team and pathway of care.

Patients, their families and carers are key partners and should be represented on the network board and parental involvement should be embedded into all aspects of network work.

The Board

The board should meet on a regular basis and operate under the oversight of a suitable chair with agreed terms of reference.

The chair will be an appropriately experienced, impartial leader who is credible across the whole network and will be appointed through a fair and open process.

- The chair ideally should not be the network clinical lead, and ideally should not have the same main employer as the Network Clinical Lead in order to mitigate the risk of (real or perceived) conflicts of interest.
- They could be a board member or senior clinician from one of the provider organisations in the network (ideally not the host, to underpin the collective nature of these arrangements) or a patient representative where a suitable candidate is available.

5.3 Risk Management and risk sharing

Networks do not manage risk independently but within a system of national, regional and system level arrangements. Networks support risk identification, assessment, mitigation and may facilitate any agreed response.

Specific local risk management arrangements and governance processes should be managed locally through MOUs/ SOPs etc which are clear and signed off. Escalation processes for risks within a system should be clear and explicit, with any quality concerns escalated through agreed systems and regional processes.

5.4 Interdependent Relationships

- Neonatal critical care clinical networks
- Surgery in children clinical networks
- Congenital Heart Disease clinical networks
- Paediatric palliative care networks
- Paediatric LTV services
- Cancer alliances
- Adult Critical Care (ACC) clinical networks: PCC clinical networks will work closely with ACC clinical networks to assure the quality of care provided to young people treated in ACC settings as part of a transition pathway.

Interdependencies for the specialised services elements of PCC are described in Service Specifications E07/S/b, and E07/S/a.

6. Resources

Network funding provided to the host is ring-fenced for the network programme of work.

Each network should have a team to support its work that provides clinical leadership, management and administrative support. Networks should also have arrangements for analytical and business intelligence support. Commissioners must ensure as part of the annual planning process that the scale of resource made available to networks is sufficient to support the agreed programme of work. The capacity of the network to deliver its programme of work does not reside solely in the network team but also in the support of all network members including its commissioners.

As part of the annual planning process, commissioners must ensure that:

- the scale of resource made available to networks is sufficient to support the agreed programme of work
- networks have access to the data they need and the analytical capacity and capability to turn this into actionable improvement programmes

Roles such as administration, network management and analytical support may be appropriately combined across CYP networks, with further opportunities to increase the value from these investments, share learning across networks and improve the sustainability of networks through the provision of a pool of staff to support specialised services Clinical Networks across a region.

7. Deliverables, Service Indicators & Outcomes

Indicators and metrics of network performance come from three principal sources:

1. Generic indicators of a well set up, well-functioning network
 - There is an appropriate network management team in post with the skills to deliver the specification
 - The network board meets at least three times per year, is quorate, and minutes, actions and risks are recorded
 - As appropriate to the network spec, there are regular network specialist Multi-Disciplinary Team (MDT) meetings (or equivalent)
 - There are IT facilities in place that enable communication across the network, supporting image transfer and remote participation in the MDT.
 - There is an annual workplan agreed with the network's commissioners
 - There is an agreed plan for PPV engagement
 - There is an analysis of the service needs of the population served by the network, a gap analysis and a plan, agreed with the network's commissioners to meet those needs
 - There are network agreed patient pathways, procedures and protocols
 - There is an analysis of workforce requirements and a plan, agreed with network members to meet these requirements
 - There are arrangements (for example passporting) that enable workforce flexibility between providers within the network.
 - There is an analysis of training needs, and an annual network training plan agreed with network members
 - There is an analysis of the network's data and information needs and a plan, agreed with network members to meet these requirements
 - There is a network agreed research strategy including access and participation in clinical trials
 - The annual workplan includes at least one quality improvement initiative
 - An annual report is produced, summarising the work of the network and its outcomes. The report includes a financial statement
 - The network participates in the national network of networks.
2. Nationally agreed indicators and outcomes for all networks of this specialty, for example as defined by a national transformation programme, or included in the service specification and delegated to network leadership.

TBC

3. The network's individual locally agreed annual workplan, which should build in metrics and indicators for each element.

The network board will agree an annual workplan with its commissioners which will include the expected in year deliverables along with the indicators that will demonstrate effective network operation.

PCC networks will be required to participate in annual quality assurance and collect and submit data to support the assessment of compliance with the service specification as set out in Schedule 4A-C. These will be developed and implemented alongside the quality management of commissioned PCC services.

8. Further support and information

Paediatric critical care and surgery in children review, NHSE, 2019 [summary report available at:

<https://www.england.nhs.uk/wp-content/uploads/2019/11/paediatric-critical-care-and-surgery-in-children-review-summary-report-nov-2019.pdf>]

National Specialty Report on Paediatric Critical Care, GIRFT, 2022 [available at: <https://future.nhs.uk/GIRFTNational/view?objectId=130559333>]

Guidance for Paediatric to Adult Critical Care Transition, PCCS/ICS, 2022 available at: <https://pccsociety.uk/paediatric-to-adult-transition-guidance/>

The full suite of materials covering what clinical networks do, commissioning of specialised services clinical networks and the clinical networks operating model together with model materials for use by networks and their commissioners can be found on the Future NHS website here:

<https://future.nhs.uk/NationalSpecialisedCommissioning/view?objectID=34094320>

Access requires membership of the site and permission to access the workspace. This is straightforward for all NHS employees.