

NWTS



The North West and North Wales Paediatric Transport Service (NWTS) Annual Report 2022 - 2023

NWTS provide a single point of contact for advice, bed location, and paediatric critical care transport teams for critically ill infants and children.

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About the North West and North Wales Paediatric Transport Service (NWTS)

NWTS was commissioned and launched in 2010 to provide a service dedicated to the stabilisation and transfer of critically ill infants and children. NWTS is hosted by the Manchester University Hospitals Foundation Trust and is based at Birchwood Business Park, Warrington. This service has been commissioned and in operation since 2010.

The NWTS team has two leads as recognised by the Paediatric Critical Care Society (PCCS) Standards (2021).

Dr. Suzy Emsden is the medical lead consultant and Christopher Walker is the acting lead nurse.

Nationally paediatric critical care is provided in tertiary centres across the country. The two regional tertiary hospitals that provide this level of care are Alder Hey Children's Hospital and The Royal Manchester Children's Hospital.

Mission Statement

The NWTS Specialist Paediatric Critical Care Transport Service (SPTS) aims to provide the highest quality paediatric critical care stabilisation and transfer for critically ill infant and children from the first point of contact to their Paediatric Critical Care (PCC) destination. In doing this, NWTS aim to remain family-focussed, providing good quality advice and support for families, allowing a family member or guardian to travel with their child whenever this is possible.

NWTS aims to provide the highest possible quality advice and remote support to teams in District General Hospitals (DGHs, also referred to as referring centres) caring for children who are reaching the threshold for transfer to a PCC facility. This support and advice may result in a transfer to PCC not being required, and the NWTS team will provide their partner DGHs with critical care advice and remote support for the duration it is required.

NWTS will provide:

- A single point of contact for referring units requiring advice and/or transfer of a critically unwell child.
- 24-hour specialist stabilisation, treatment, and retrieval advice. Also a triaging facility for all referrals
- Facilitation of the delivery of the most appropriate care in the most appropriate place for any infant or child requiring critical care in the North

West or North Wales (with some exceptions which will be outlined in this document), as well as appropriately triaged patients requiring an uplift to regional tertiary centres for L1-2 Critical Care.

- Transfer of patients already requiring critical care within the regional tertiary centres to national centres to receive specialist treatment not available in region.
- A team, equipment, ambulance, and driver to allow patients receiving critical care support within region to be transported by their local consultant (be that at tertiary or secondary centre) to a Hospice setting for end-of-life care.
- An Outreach Education Programme for regional referring centres
- Robust and transparent internal governance with a strong commitment to the continual improvement of service delivery and patient safety
- Active participation in research and contribution to local, national, and international academic activities

These services will be consultant-led, and where appropriate, consultant-delivered

NWTS will endeavour to work collaboratively with all referring centres and receiving PCC Units across the catchment area, as well as with networks including the North West Paediatric Critical Care (NWPPCC), North West Children's Major Trauma, North West Congenital Cardiac, North West Neonatal, and other relevant Operational Delivery Networks (ODNs). NWTS will also work with neighbouring and national SPTSs and PICUs to ensure that the service is appropriately delivered, reviewed, developed, and bench-marked. (PCCS QS T-801)

NWTS will work with the NWPPCC ODN to ensure that appropriate clinical input is provided by NWTS for the development and maintenance of regional guidelines.

NWTS will ensure that they maintain good communication links with the region's emergency ambulance provider (Northwest Ambulance Service – NWAS) to ensure that on the rare occasions that NWTS and NWAS may request mutual aid from one another, there is a good understanding of the processes which need to be followed.

NWTS aim to meet PCCS quality standards and to meet the RCPCH recommendations for the structure of future paediatric services - 'the goal to provide (the child and their family) with the best care as close to their home as possible', and to honour the host trust (Manchester Foundation Trust) Vision, Values, and Behaviours – 'together care matters' (everyone matters, working together, dignity and care, open and honest).

NWTS aim to ensure that every member of the NWTS team is valued, and that the working environment is supportive, inclusive, and structured to allow the best in every team member to be achieved. As a team, NWTS aim to provide world-class care to the sickest infants and children in the North West and North Wales region.

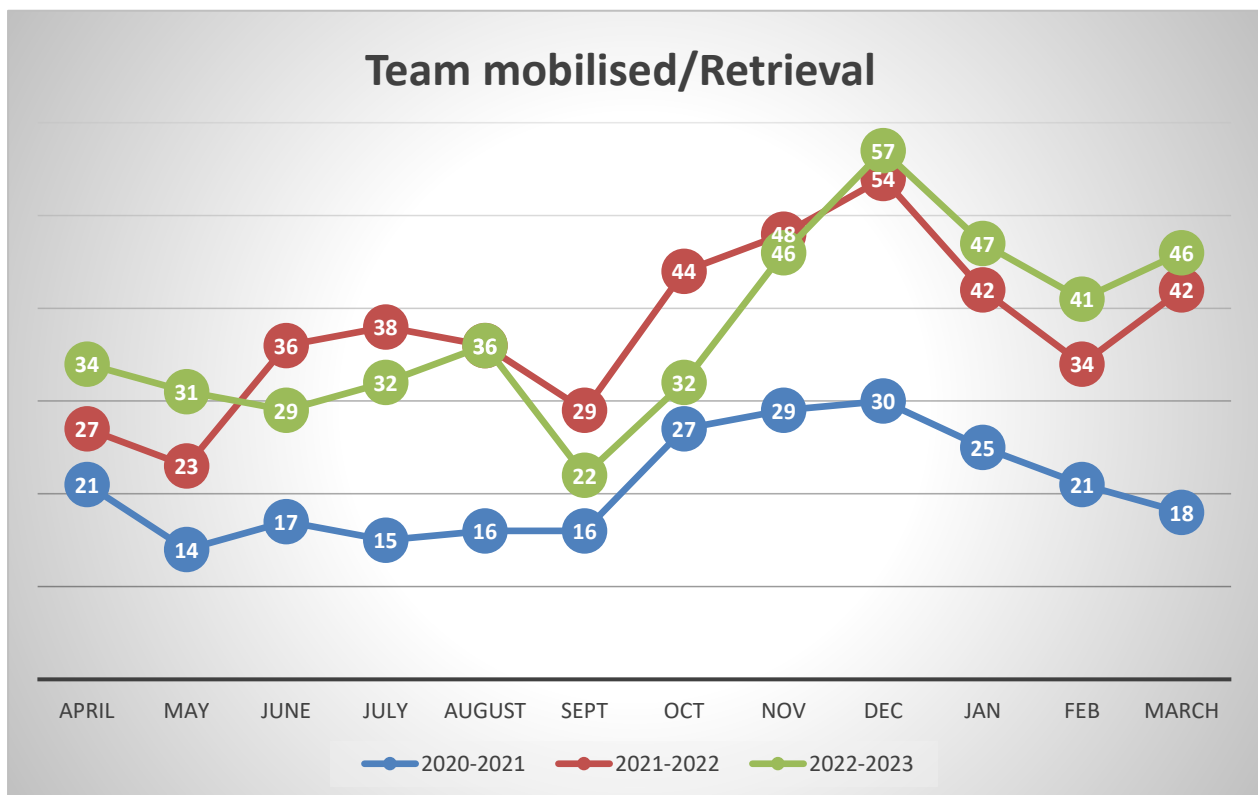
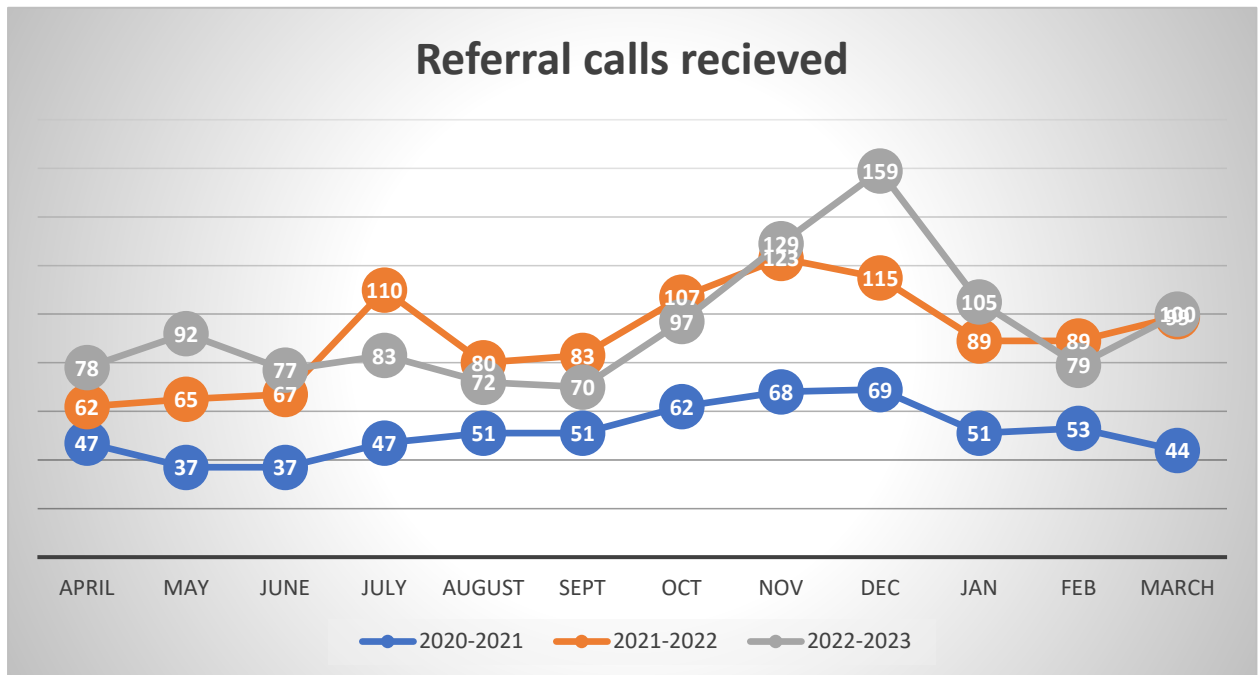
Executive Summary

Following the outbreak of the coronavirus pandemic in 2020 variations in the traditional peak periods of demand have been seen. NWTS has been responding to these evolving demands in addition to being integrally involved in the regional planning required to meet the demands faced. 2022 – 2023 has seen a return to a more expected pattern of work, but availability of critical care beds in the regional tertiary centres continues to be challenging.

Since its launch NWTS and the rest of the paediatric critical care community nationally have seen a change in the type of infants and children requiring critical care. Whilst the need still exists for the stabilisation and transfer of children with a requirement for the highest level of critical care, NWTS has long recognised a previously unmet need has existed -an increased requirement for infants and children with a high dependency critical care level of support has not been matched by a commissioned level of support provided by NWTS.

In 2022 NWTS had a business case successfully accepted and funded in full by NHS England to meet this previously unmet need. As a result, additional staffing, ambulances, equipment, and infrastructure have been funded. NWTS is now able to provide year-round a fully funded 3 team model over a 24hr period to meet the needs of all appropriately referred critical care patients.

Activity Summary 2022-23



Referral Outcomes

	April 2022- March 2023 n= 1142
NWTS Team Mobilised	453 (39.7%)
Advice/Consultation only	508 (44.5%)
Refused (within scope of care)	3 (0.3%)
Refused - out of scope of care	73 (6.4%)
Cancelled by referrer	0 (0%)
Time critical transfer (local team)	49 (4.2%)
PIC bed request support	56 (4.9%)

Transport Outcomes

	April 2022- March 2023 n= 453
Transferred by NWTS Team	434 (95.8%)
Patient improved (team present)	8 (1.7%)
Patient died (team present)	5 (1.0%)
Patient too unstable to transfer	3 (0.6%)
Cancelled by referrer	3 (0.6%)

NWTS team transfers - Destination Hospital

	April 2022- March 2023 n= 434
Royal Manchester Children's Hospital	154 (35.5%)
Alder Hey Children's Hospital	226 (52%)
Out of region for PIC bed	36(8.3%)
Out of region for Quaternary Care	5 (1.2%)
Palliative Care Location	3 (0.7%)
Neonatal Unit	1(0.2%)
Repatriation/Other	9(2%)

Clinical Outcome Measures

Clinical outcomes are broadly agreed measurable changes in health, function, or quality of life that result from our care. Constant review of our clinical outcomes establishes standards against which to continuously improve all aspects of our practice.

a. Mobilisation time

NWTS is measured against national key performance indicators to ensure it provides the highest quality of care to patients and their families. One of these service standards is the time it takes to get a team ready to go once the decision to accept a patient for transport has been made. This is known as the mobilisation time.

Timely mobilisation ensures that the NWTS team can arrive at the hospital site to deliver critical care for the patient and are able to safely transport a child to where is required as quickly as possible.

Reported below are the proportion of patient transports (retrievals) where the team departs the transport base within 30 minutes of accepting a referral.

For April 2022 to March 2023 the NWTS team mobilised within 30 minutes for 66.4 % of patient transports.

NWTS team was commissioned on a single team model with one team available during the day and night. With NHSE winter pressures funding expanding to an additional team (twilight) during the winter months.

During busy periods (e.g. winter months) the NWTS team may be retrieving another patient when a new referral has been accepted. Activity linked to team availability impacts on figures such as mobilisation times. It is anticipated an improvement in mobilisation figures will be seen linked to the recent service expansion.

Numerator: Number of retrievals (of a patient) where the team departs the transport base within 30 minutes from the time the referral is accepted.

Denominator: Total number of emergency retrievals (of a patient) undertaken.

Table 1.1 Proportion of patient retrievals within 30 minutes of referral being accepted, 2020 to 2022 (Nb – numbers include planned transfers)

Year	Number of patient retrievals where the team departs the transport base within 30 minutes from the time the referral is accepted (including planned transfers)	Total number of emergency patient retrievals undertaken	Percentage of patient retrievals where the team departs the transport base within 30 minutes from the time the referral is accepted (including planned transfers)
April 2022 – March 2023	301	453	66.4%

b. Time to bedside time

The standard time to patient bedside is recorded from to decision to transfer. The key performance indicator is 180 minutes from acceptance for transfer.

From April 2022 to March 2023 the NWTS team arrived at the patient bedside within 180 minutes 91.2% of the transports agreed.

Year	Number of patient retrievals where the team arrives at the patient bedside within 180 minutes from the time the referral is accepted (Including planned transfers)	Total number of emergency patient retrievals undertaken	Percentage of patient retrievals where the team arrives at the patient bedside within 180 minutes from the time the referral is accepted (Including planned transfers)
April 2022 – April 2023	413	453	91.2%

c. Refused Requests for Retrieval

At times of peak demand for paediatric critical care services (mainly in winter months), the NWTS team may on occasion be unable to transport a patient. In this event the patient's condition is assessed and a plan is discussed. The patient may then be referred to a neighbouring transport service or continue to be cared for at the local hospital whilst waiting for the NWTS team (or other transport service) to become available. All patients are monitored to ensure they receive the highest quality care.

We report the proportion of refused requests for transport (retrieval) of a patient, within our defined catchment area. Overall, between April 2022 and March 2023, 0.65% of requests were refused (within scope of care).

This measure is a national measure that is reported to commissioners by paediatric critical care transport services.

Numerator: Number of requests (within defined catchment of retrieval service) for retrieval of a patient requiring paediatric intensive care admission that are refused.

Denominator: Total number of requests (within defined catchment of retrieval service) for retrieval of a patient requiring paediatric intensive care admission

Table 2.1 Proportion of refused requests for retrieval of a patient (within defined catchment area), 2022 to 2023

Year	Number of refused requests for retrieval of a patient requiring paediatric intensive care admission (within scope of care)	Total number of requests for retrieval of a patient requiring paediatric intensive care admission (within scope of care)	Proportion of refused requests for retrieval of a patient requiring paediatric intensive care admission (within scope of care)
April 2022 – April 2023	3	456	0.65%

d. Advice and Support

Reported here are the number of calls received when a transport to a tertiary centre is not required. The ongoing advice and support provided by the NWTs Consultant team supports the local team to care for the child who at the time of the advice does not require tertiary paediatric intensive care.

	April 2022- March 2023 n= 1141
Advice/Consultation only	508 (46.7%)

e. Critical Incidents

During transportation of critically ill children, incidents that impact on patient care can occur. Our aim is to prevent these events by monitoring their occurrence and analysing the reasons they happened, to make service improvements and reduce the likelihood of the same incident occurring again.

All incidents reported are reviewed daily by a member of the senior NWTs team and are discussed at the weekly paediatric critical care governance meeting at Royal Manchester Children’s Hospital (host trust).

Reported here are critical incidents impacting on patient care that occurred during journeys undertaken by NWTs for critical care patients. Overall, between April 2022 and March 2023, there were no critical incidents in 93.4% of emergency transports.

Table 3.1 Number and percentage of critical incidents for emergency transports, April 2022 to March 2023

	April 2022 – March 2023 Total transports n= 453	Percentage of Incidents
Critical incidents reported	60	
Accidental extubation	1	(1.7%)
IV access loss	0	(0%)
Cardiac arrest	2	(3.3%)
Medical device failure	3	(5%)
Medical equipment issue	4	(6.7%)
Medical gas supply loss	0	(0%)
Ambulance issue	20	(33.3%)
Non- NWTS Incidents	30	(50%)

Research and Audit

NWTS has continued to participate in research and audit activity.



<https://www.icnarc.org/Our-Research/Studies/Current-Studies/Oxy-Picu/About>



<https://www.bess-trial.org.uk/#>



<https://www.icnarc.org/Our-Research/Studies/Current-Studies/Pressure/About>

NWTS Education and Training

NWTS takes an active roll in the development and delivery of education for all allied health care professions working at NWTS (inhouse education) and within the region (outreach education).

Inhouse education-

Induction day for all new staff 100% compliance, mandatory study day for all permanent and permanent rotational staff 100% of nurses attended and 80% of consultants attended, 5 simulation sessions, daily teaching sessions and shadow shifts.

Outreach-

A 3-hour session either face to face or virtual was offered to each of our District General Hospitals (DGH) twelve sessions were delivered, four sessions were cancelled by the DGH one session cancelled by NWTS and No contact from six DGH regarding outreach. We ran five PCC update sessions throughout the year, four regional teaching days and the NWTS conference ran virtually with over one hundred attendees from around the region. The NWTS Website has numerous education resources and links to guidelines.

The Nurses subgroup-

Held three study days focusing on looking after the child in PCC L1 & L2 for the region's nurses, along with quarterly meeting with an education element to the meeting. <https://www.nwts.nhs.uk/education-website>

Partnerships

The Children's Air Ambulance - TCAA – who provide rotary wing transport when required for transporting of patients over distances that would normally take in excess of 90 minutes.

NWTS is a clinical partnership team member, attending monthly governance meetings and annual training events.



<https://theairambulanceservice.org.uk/childrens-air-ambulance/>

Networks

NWTS continue to maintain strong links with all paediatric critical care networks, attending regular meetings and events.



Paediatric Critical Care Operational Delivery Network

Paediatric Trauma Network

<https://nwchildrenstrauma.nhs.uk/the-network>



<https://www.northwestchdnetwork.nhs.uk/about-us/>

<https://www.neonatalnetwork.co.uk/nwnodn/>





Feedback

As the PCCT service is often the first point of contact for parents/carers of critically ill children, it is important to establish a good relationship to provide support during this very challenging time for the parents/carers.

During a 3-year period from June 2016 to June 2019, only 6 feedback forms were received. After increasing feedback accessibility in 2019, a total of 110 forms were received over a 4-year period from July 2019 to March 2023 (an increase of 15-fold). This year April 2022 – March 2023 we received 46 feedback forms this is a mixture of a paper copy and online electronic versions.

- On the whole, feedback for the NWTS service has been positive. Any suggestions for improvement were evaluated and acted upon to improve the Transport Service, with a couple of examples shown in the results section below.
- Patients (and in our case parents/carers of patients) offer a complementary perspective to that of clinicians, providing unique information and insights into both the humanity of care (such as dignity and respect, privacy, compassion, and quality of care received) and the effectiveness of health care.

You Said	We Did	Actioned
<p>I wished I could have said thank you and goodbye to the NWTS staff before they left following transferring and handing over my baby to Alder hey ICU staff. I was sent away to get some food and a breath of fresh air whilst they changed him over to the ICU drivers and ventilators. I didn't get to thank the staff that helped save my boy. Maybe a card in each parent snack packs with people's names in so we can thank them afterwards, once the dust has settled would be nice.</p>	<p>All our parents have a parent information leaflet handed directly to them by a member of the NWTS team. We have Re-designed the front of the parent leaflet to include 'Your NWTS team today is' section identifying all members of the team for that specific transfer.</p>	
<p>Directions once arrived at AHCH were confusing</p>	<p>NWTS parent information leaflet updated with instructions of how to get to PICU at both RMCH and AHCH</p> <p>QR code added to the back page of the parent information leaflet to maximise feedback.</p>	

Forward plans

- To work in partnership with the host trust to advance data management and move towards a paperless system
- To establish a wider remit of commissioned work to move all appropriate critical care infants and children.
- To review and redesign the NWTS transport trolley and equipment.
- To develop a simulation training area for the development of NWTS staff.

More information

More information about the NWTS Service can be found at www.nwts.nhs.uk