

NWTS



The North West and North Wales Paediatric Transport Service (NWTS) Annual Report 2023 - 2024

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

Christopher Walker (Lead Nurse)
Dr. Suzy Emsden (Lead Clinician)



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. A service expansion occurred in 2023 providing additional capacity to deliver the service to more critically ill infants and children when required.

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 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 infants 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 advice and support to 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 local regional hospitals (also referred to as referring centres) caring for children who are reaching the threshold for transfer to a Paediatric Critical Care (PCC) facility. This support and advice may result in a transfer to PCC not being required, and the NWTS team will provide their partner referring centres 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- (NWPCC), 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 Paediatric Intensive Care Units (PICUs) to ensure that the service is appropriately delivered, reviewed, developed, and bench-marked. (PCCS Quality Standard (QS) T-801)

NWTS will work collaboratively with the NWPCC ODN to support the delivery of educational support, development of clinical guidelines, and data collection/ analysis to shape care delivery across the region to match the regional and demographic needs of the patient population.

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

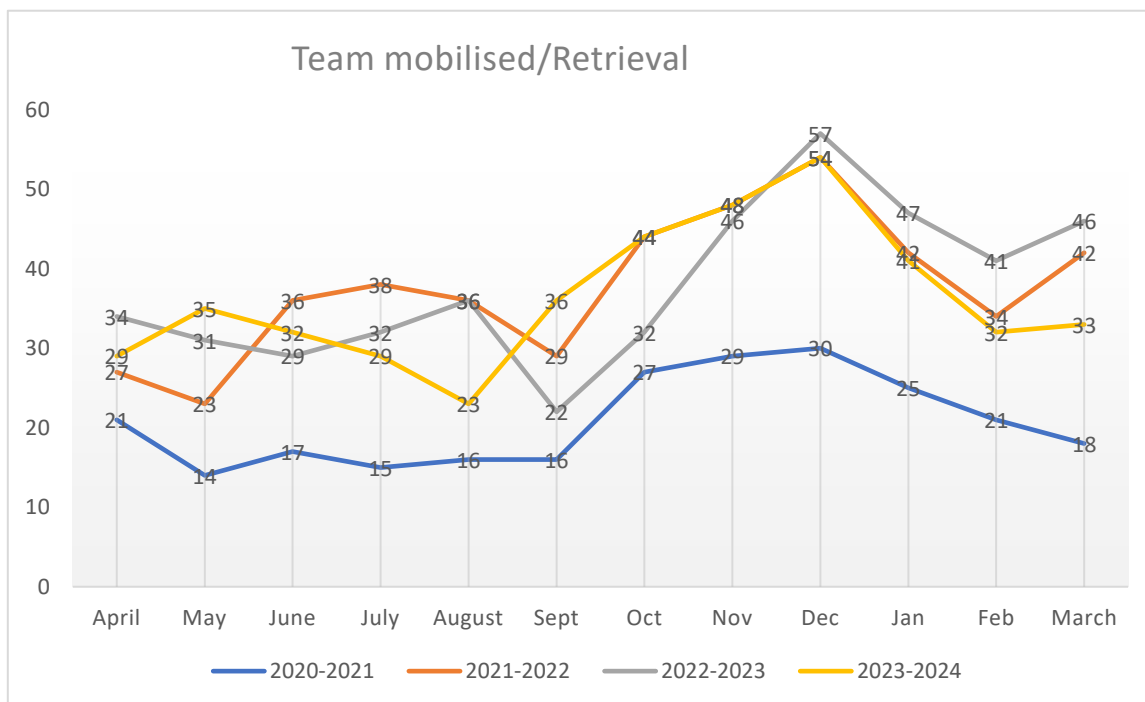
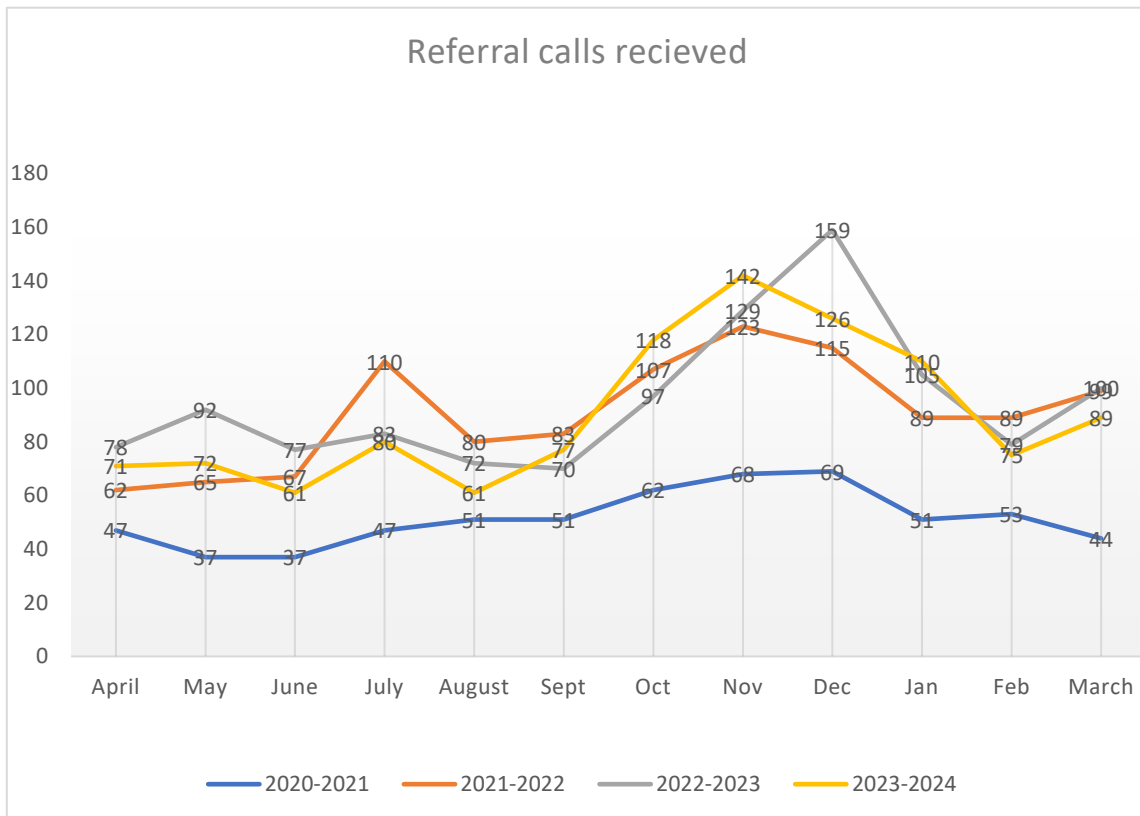
NWTS has evolved since its launch in 2010 to continue to meet needs of its patient population. Nationally it is expected that a closer focus on the care delivery required by high dependency paediatric critical care patients will evolve over the coming years.

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 had existed -an increased requirement for infants and children with a high dependency critical care level of support had not been matched by a commissioned level of support provided by NWTS.

In 2022 NWTS' business case was accepted and funded in full by NHS England to meet this previously unmet need. As a result, additional staffing, ambulances, equipment, and infrastructure were funded. NWTS have been 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. This is inclusive of all patients requiring critical care uplift into a tertiary centre, and is no longer restricted to those patients with the highest critical care requirements.

NWTS has a commitment to support the development of all levels of critical care delivered to all infants and children. This is aligned to the vision, principles and recommendations outlined in the Getting It Right First Time (GIRFT) report (2022). https://pccsociety.uk/wp-content/uploads/2022/04/Paed-Critical-Care-GIRFT-report_final_April2022.pdf

Activity Summary 2022-23



Referral Outcomes

	April 2023- March 2024 n= 1087
NWTS Team Mobilised	449 (41.3%)
Advice/Consultation only	496 (45.6%)
Refused (within scope of care)	2 (0.2%)
Refused - out of scope of care	60 (5.5%)
Cancelled by referrer	0 (0%)
Time critical transfer (local team)	33 (3.0%)
PIC bed request support	47 (4.3%)

Transport Outcomes

	April 2023- March 2024 n= 449
Transferred by NWTS Team	431 (96.2%)
Patient improved (team present)	7 (1.5%)
Patient died (team present)	6 (1.3%)
Patient too unstable to transfer	1 (0.2%)
Other reasons	4(0.9%)

NWTS team transfers

	April 2023- March 2024 n= 431
Royal Manchester Children's Hospital	147(34.1%)
Alder Hey Children's Hospital	235 (54.5%)
Out of region for PIC bed	5 (1.2%)
Out of region for Quaternary Care	15 (3.5%)
Palliative Care Location	2 (0.5%)
Neonatal Unit	1 (0.2%)
Repatriation	26 (6.0%)

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 (KPIs) 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 the required destination 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 2023 to March 2024 the NWTS team mobilised within 30 minutes for 89.9 % of patient transports.

NWTS team was commissioned originally 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. In these figures, an improvement in mobilisation times can be seen. This is likely to be linked recent service expansion and year round availability of 3 teams across 24hrs.

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 2023 – March 2024	404	449	89.9%

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 2023 to March 2024 the NWTS team arrived at the patient bedside within 180 minutes 97.5% 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 2023 – March 2024	438	449	97.5%

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 within scope of care were refused).

This is a national measure that is reported to commissioners by all 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 2023 – April 2024	2	449	0.44%

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 2023-
March 2024
n= 1087**

Advice/Consultation only	496 (45.6%)
--------------------------	-------------

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, as well as that of 'near misses', 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 meetings at the 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 2023 and March 2024, there were no critical incidents in 88.5% of emergency transports. This is a drop from the previous annual figures reported. It is seen and recognised that a notable drop in the number of critical incidents reported can be seen in this year's annual figures compared to the previous year. This does not directly correlate on all occasions with a safer culture and could also reflect a culture of underreporting events and incidents that have occurred. NWTS encourages a culture of actively reporting near miss events and critical incidents, allowing the service to continually learn, recognising trends in reporting and changing

practice as appropriate in response. To address potential underreporting of near miss events and critical incidents, teaching to raise the importance of reporting will be embedded in the mandatory training program at NWTS.

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

	April 2023 – March 2024 Total transports n= 453	Percentage of Incidents
Critical incidents reported	26	
Accidental extubation	1	(3.8%)
Intubation in transit (non intubated patient)	1	(3.8%)
IV access loss	0	(0%)
Documentation and information governance	1	(3.8%)
Cardiac arrest	2	(7.7%)
Medical device failure	3	(11.5%)
Medical equipment issue	1	(3.8%)
Medication	1	(3.8%)
Communication and consent	2	(7.7%)
Ambulance issue	7	(33.3%)
Telecoms/computer failure	2	(7.7%)
Needle stick injury (staff)	1	(3.8%)
Non- NWTS Incidents	3	(11.5%)

Research and Audit

NWTS has continued to participate in research and audit activity. NWTS present audit work regionally, nationally, and internationally. NWTS has been involved in a national audit of the care and management of infants and children following seizures. In the published results, it can be seen that the service and the North West and North Wales regions lead the way nationally in the care delivered

NWTS are active participants in the Pressure trial, this is examining the use of inotropes linked to the targeting of defined blood pressure parameters.



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

NWTS Education and Training

Outreach

A 3-hour outreach session was offered to each of our District General Hospitals (DGH) via the Paediatric Critical Care (PCC) Operating Delivery Network (ODN) - Outreach was delivered to nineteen of our twenty-three hospitals; two sessions were cancelled due to the doctors' strikes and teams were unable to reschedule. We had no booking from two of our hospitals. Virtual Grand rounds were held monthly, and the NWTS annual conference was held face to face. We held two nurse PCC training days, four regional teaching days and one Paediatric, Anaesthetic & Emergency medicine day which was virtual. We continue to support numerous education resources and links to clinical guidelines on the NWTS website.

In house education

Induction day for all new staff 100% compliance, mandatory study day for all permanent and permanent rotational staff 93% of nurses attended due to sickness, 100% of consultants attended, and 75% of NWTS clinical fellow/ANP's attended. We run team simulation sessions though out the year. We held daily teaching sessions for staff on shift and a weekly Case of the Week which is shared education between other transport teams.

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. The TCAA is a service fully funded by charitable donations and provides a vital method of transporting critically ill infants and children across the region and country.

NWTS is an active clinical partnership team member, attending monthly governance meetings and annual training events. NWTS has been involved with the TCAA since its first launch as a service.



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

Networks

NWTS maintain strong links with the paediatric critical care regional network, attending regular meetings and co running events. The NWTS service take an active role in partnership with the regions Paediatric Critical Care Operational Delivery Network to deliver training and support to the regions hospital to support all levels of paediatric critical care delivery.

The service celebrates the ongoing work by the NWTS team to develop and maintain a very effective and vital subgroup to the PCC ODN.

The Paediatric Critical Care ODN and NWTS Link Nurse and Allied Health Professional Sub Group continues to grow in membership and develop year on year. In the last year, the group has facilitated three study days for the region's nurses, nurse associates and ODPs with great attendance and feedback that has allowed us to develop the content we offer. We meet quarterly with a mixture of in-person and Teams meetings to facilitate easier access to the meetings logistically whilst providing opportunities to network. We actively share learning and resources to ensure best practice and encourage equity across the region, whilst providing support and clinical supervision to the staff. Education on topical themes or case reviews happens during each meeting to keep staff up to date.



Paediatric Critical Care Operational Delivery Network

NWTS maintain links with other relevant networks to support care delivery across the regions as a partnership.

Paediatric Trauma Network

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



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



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



Feedback

Local Hospital Feedback

Local Hospitals can give feedback from any transfer following a link on the NWTS website, a paper copy of the feedback form is left with the Local Hospital team after each transfer. There is an 82% compliance with the feedback being left with the Local Hospital, with a feedback response of 53%. All feedback is shared with staff and relevant learning and changes to practice has taken place.

Feedback from parents and carers

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. Feedback forms are distributed with every parent snack pack which gives an option to parent/carer to complete either a paper versions or electronic version via a QR Code/Link. The QR code has also been printed on the back of the parent information leaflet to maximise feedback.

After increasing feedback accessibility in 2019, a total of 151 forms have been received over a 5- year period from July 2019 to May 2024. This year April 2023 – March 2024 we have received 47 feedback forms. This feedback is reported as soon as we receive it and shared amongst the NWTS team.

Examples of Feedback received:

"The parent bag with information, drinks and snacks was a lovely touch and really helped. It's hard to think of anything in that situation and we really appreciated it. The three knitted hearts were an amazing touch and are now a lovely keepsake".

"I'm so thankful to the NWTS team that arrived to transport our baby. I've never heard of this service before, but now that I've had the experience of needing this service how lucky we were to have it. Amazing people that do amazing things. Thank you :)"

"The care given to my daughter was exceptional. I felt so confident that she was in the best and safest hands. I cannot thank the team that cared for her enough. We were both treated with kindness, compassion, dignity, and respect".

What matters to me - You said, we did?

Feedback for the NWTS service has been positive. Any suggestions for improvement were evaluated and acted upon to improve the transport service.

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.

- A. *"Wished I could have said thank you. Maybe in each parent pack having the team members names".*
- B. *"Confusion about direction when arrived at AHCH."*
- C. *"Make your knitted hearts pattern available on your website so we can knit".*

We did

- A. 'Your NWTS team today' now placed on all parent information leaflets
- B. NWTS parent information leaflet updated on how to get to PICU at both RMCH and AHCH.
- C. Knitted heart pattern now available on the NWTS website under parent and family

Forward plans

- To work in partnership with the host trust to advance data management and move towards a paperless system to improve efficiency in care delivery.
- To review and redesign the NWTS transport trolley and equipment.
- To develop simulation training and embed within the service to continually develop NWTS staff to impact positively on care delivery.
- To work with the PCC ODN to support care delivered across the region to all levels of paediatric critical care delivery. This will be aligned to the recommendations from the paediatric Getting it Right First Time report (GIRFT)

More information

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