



The North West and North Wales Paediatric Intensive Care Transport Service (NWTS) Annual Report

This report covers the 2-year period from April 2020 to March 2022

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

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

NWTS is a specialised service designed to transport critically ill children safely from within the North West of England and the North Wales regions. The NWTS team is hosted by the Manchester University Hospitals Foundation Trust and is located in Birchwood Park, Warrington. This service has been in operation since November 2010.

Nationally paediatric intensive care is only provided in a tertiary centre and the two hospitals that provide this level of care for this region is The Royal Manchester Children's Hospital and Alder Hey Children's Hospital. However, children can become critically ill in hospitals where there is no paediatric intensive care unit. Where this is the case, the NWTS team travel to the hospital required, start intensive care support for the child and then provide safe and speedy transfer of the child to a hospital with a paediatric intensive care unit.

Mission Statement

NWTS aims to provide the highest quality paediatric intensive care for children and their families from the first point of contact to the final unit of destination.

- ✓ Provides easy access and service co-ordination for referring children's units via a dedicated telephone line 24 hours a day and 365 days a year.
- ✓ Facilitates improvements in transport provision for critically ill children.
- ✓ Co-ordinates all available regional resources to aim to meet fluctuating demands of the region.
- ✓ Provides telephone advice and triaging facilities for all referrals.
- ✓ Facilitates the delivery of the most appropriate care, in the most appropriate place, for any infant or child requiring Intensive Care in the North West/North Wales Region
- ✓ To provide annual education and outreach for the District General Hospitals.
- ✓ Audit and research form an important part of the service provision

Executive Summary

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

Dr. Suzy Emsden is the medical lead consultant and Kathryn Claydon-Smith is the clinical nurse manager.

During the spring of 2020, the world saw huge challenges in healthcare and changes in home work/life with the outbreak of the coronavirus pandemic.

New ways of working and the need to keep all safe and well was all our priority.

Both of our PICU's provided huge support to the regional adult intensive care units as it soon became clear that the effect of the virus, had not affected children as much as first thought.

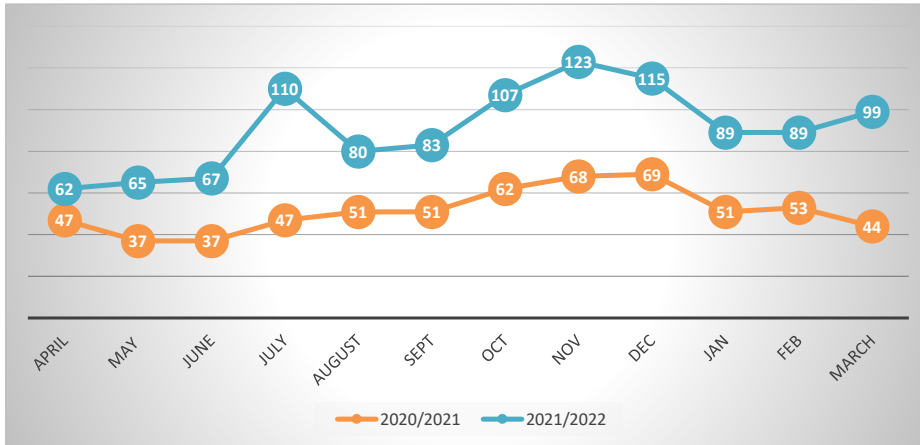
NWTS continued to support the regional paediatric services and transfer to the appropriate paediatric intensive care unit as need.

Nationally the number of children being admitted to hospitals fell and therefore the number referred to intensive care transport services also decreased. This year's figures were the lowest reported with an overall 30% decrease in paediatric critical care transports. Information taken from the published PICANet data report "Paediatric Intensive Care Audit Network Annual Report 2021 (published Nov 2021): Universities of Leeds and Leicester."

During spring 2021, the reports from Australia had begun to depict an associated rise and early onset of the respiratory virus season for children.

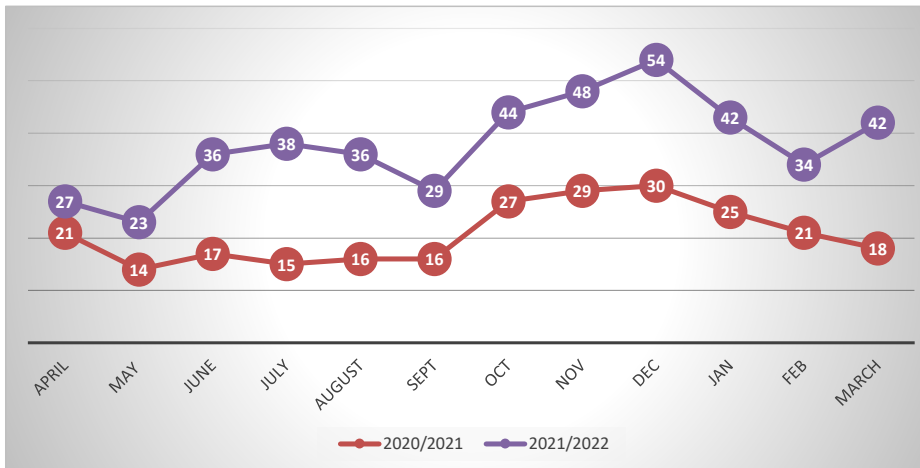
By July 2021 it was predicted that there was likely to be a significant rise in the numbers of children requiring hospitalisation and potentially intensive care. After review by NHSE early resourcing of an additional team during the autumn and winter months in addition to starting the winter twilight team (12-12) early here at NWTS.

Activity Summary 2020-22



Referral calls received

Activity Summary 2021-22



Team Mobilised / Retrieval

Referral Outcomes

	April 2020- March 2021 n= 623	April 2021- March 2022 n= 1089
NWTS Team Mobilised	255 (41%)	451 (41%)
Advice/Consultation only	242 (39%)	516 (48%)
Refused (within scope of care)	4 (0.6%)	2 (0.2%)
Refused - out of scope of care	71 (11%)	55 (5%)
Cancelled by referrer	5 (0.8%)	0 (0%)
Time critical transfer (local team)	44 (7%)	40 (3.7%)
PIC bed request support	2 (0.3%)	25 (2.3%)

Transport Outcomes

	April 2020- March 2021 n= 255	April 2021- March 2022 n= 451
Transferred by NWTS Team	240 (94%)	428 (95%)
Patient improved (team present)	6 (2.4%)	8 (1.8%)
Patient died (team present)	8 (3.1%)	11 (2.3%)
Patient too unstable to transfer	1 (0.4%)	0
Cancelled by referrer	0	4 (0.9%)

NWTS team transfers - Destination Hospital

	April 2020- March 2021 n= 240	April 2021- March 2022 n= 428
Royal Manchester Children's Hospital	115 (48%)	169 (39.5%)
Alder Hey Children's Hospital	105 (44%)	215 (50%)
Out of region for PIC bed	2 (0.8%)	10 (2.3%)
Out of region for Quaternary Care	10 (4.2%)	14 (3.3%)
Palliative Care Location	0 (0%)	6 (1.4%)
Neonatal Unit	4 (1.6%)	3 (0.7%)
Repatriation/Other	4 (1.6%)	11 (2.5%)

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.

1. Mobilisation time

The NWTS team is required to meet 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 start intensive care for the patient and are in a position to safely transport a child to where is required as quickly as possible.

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

For April 2020 to March 2022 the NWTS team mobilised within 30 minutes for 71 % of patient transports.

The NWTS team is commissioned on a single team model with one team available during the day and night. With NHSE funding the team can expand to an additional team (twilight) during the winter months.

We monitor mobilisation times, however during busy periods (e.g. winter months) the NWTS team may be retrieving another patient when a new referral has been accepted. All patients continue to receive the highest quality of care whilst waiting for the NWTS team to become available. This measure is a national measure that is reported to commissioners by paediatric intensive care transport services.

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 2020-March 2021	193	255	75.6%
April 2021-March 2022	307	451	67.6%

2. 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.

For April 2020 to March 2022 the NWTS team arrived at the patient bedside within 180 minutes 92.4% 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 2020-March 2021	241	255	94.5%
April 2021-March 2022	410	451	90.3%

3. Refused Requests for Retrieval

At times of peak demand for paediatric intensive 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 another nearby transport service or continue to be cared for at the local hospital while 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 2020 and March 2022, 0.5% of requests were refused (within scope of care).

This measure is a national measure that is reported to commissioners by paediatric intensive 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), 2020 to 2022

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 2020-March 2021	4	255	0.6%
April 2021-March 2022	2	451	0.4%

4. Advice and Support

We report here the amount 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 2020-March 2021 n= 623	April 2021-March 2022 n= 1089
Advice/Consultation only	242 (39%)	516 (48%)

5. Critical Incidents

In the 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 with the senior team and also discussed at the weekly paediatric critical care governance meeting at Royal Manchester Children’s Hospital (host trust).

We report here critical incidents impacting on patient care that occurred during journeys undertaken by NWTS for emergency patients. Overall, between April 2020 and March 2022, there were no critical incidents in 87% of emergency transports. This is in line with the national equivalent figure of 89.9%. Information taken from the published PICANet data report “Paediatric Intensive Care Audit Network Annual Report 2021 (published Nov 2021): Universities of Leeds and Leicester.”

Table 3.1 Number and percentage of critical incidents for emergency transports, April 2020 to March 2022 (PICANet reportable)

	April 2020 – March 2022 Total transports n= 706	Percentage of transports completed
No critical incidents reported during transport	616	(87%)
Accidental extubation	3	(0.4%)
IV access loss	2	(0.3%)
Cardiac arrest	3	(0.4%)
Ventilator failure	2	(0.2%)
Medical gas supply loss	0	(0%)
Vehicle accident or breakdown	1	(0.1%)
Non- NWTS Incidents	79	(11%)

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6. 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>

7. NWTS Education and Training

The NWTS education programme had to be conducted via online platforms during 2020-2021. There were numerous recorded and moderated sessions provided by NWTS and nationally and sharing knowledge of how to manage the evolving Paediatric multisystem inflammatory syndrome temporally associated with COVID-19 (PIMS-TS).

<https://www.rcpch.ac.uk/resources/paediatric-multisystem-inflammatory-syndrome-temporally-associated-covid-19-pims-guidance>



The PCCN nurses subgroup were very active during 2020-2022 providing virtual meetings and drop in sessions.

On the 29th September 2021 the NWTS Education team delivered a virtual annual conference which was well supported and attended by both regional national colleagues.

<https://www.nwts.nhs.uk/education-website>

8. Partnerships

The Children's Air Ambulance - TCAA –

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



<https://theairambulance.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>



The North West Children's
Major Trauma Network



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



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

9. Feedback

NWTS welcome feedback from both parents and guardian and the referring clinical teams.

This is received via a paper-based questionnaire and an electronic link.

<https://www.nwts.nhs.uk/feedback>

More information

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