



This month's top papers: August 2026

Welcome to the latest blog in the literature podcast from the NTSP. We try to bring you a quick roundup of what is hot in the world of tracheostomy and laryngectomy publications by scouring internationally recognised journals and media and bringing you the highlights.

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The papers we will discuss this month are detailed below, along with an automated transcript of the podcast. Please note that the transcript is generated by AI and so may not be totally accurate.

You can find the links to the podcast on www.tracheostomy.org.uk and by searching for NTSP on your favourite podcast platform. Some of the podcasts are also uploaded to YouTube if you prefer to get your news that way. Check out the NTSP YouTube channel at <https://www.youtube.com/c/NationalTracheostomySafetyProject>. Please follow us and/or subscribe to keep up to date! https://x.com/NTSP_UK



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This month's top papers cover

- Cuff deflation in patients with prolonged ventilation
- Pharyngo-cutaneous fistula after laryngectomy
- Paediatric consensus on trachy care
- Paediatric incidents

Featured Papers – August 2026

1. Investigating the effects of tracheostomy cuff deflation timing in patients requiring prolonged mechanical ventilation

PLoS One, 2026 — UK retrospective study, n=157

Earlier cuff deflation was associated with earlier weaning and decannulation, fewer ventilator-associated pneumonias, shorter ICU stays and less psychological distress. However, this cannot establish that delayed cuff deflation caused poor outcomes: sicker patients inevitably deflate later, and patients dying before deflation were included in the latest-deflation group.

Why it matters: Highly relevant to UK multidisciplinary practice, communication, rehabilitation and the move towards earlier restoration of upper-airway airflow.

[PubMed](#) link

This study looked at how the timing of deflating the cuff on a tracheostomy affects patients who need long-term help with breathing machines.

What they wanted to find out:

- When do doctors usually deflate the cuff on a tracheostomy tube?
- Does the timing of this cuff deflation affect how well patients recover, how long they stay in the hospital, or their overall well-being (physical, mental, and emotional)?

How they did it:

- Researchers looked back at the records of 157 patients in a UK intensive care unit (ICU) who had tracheostomies because they needed help breathing for a long time.
- They split these patients into three groups based on how quickly their tracheostomy cuff was deflated: within 0-5 days, 6-10 days, or after 10 days (this last group also included patients who sadly died before deflation).

What they found:

- Patients who had their tracheostomy cuff deflated later (after 10 days or those who died before deflation) tended to have worse outcomes.
- Specifically, delayed cuff deflation was linked to:
- Spending more time on the breathing machine.
- Taking longer to achieve important milestones like speaking or having the breathing tube completely removed.
- Higher rates of lung infections (ventilator-acquired pneumonia or VAP).
- Longer stays in the ICU and in the hospital overall.
- A higher chance of dying in the ICU or hospital.
- Greater levels of anxiety and psychological distress when they left the ICU.
- Interestingly, the study suggested that it might be possible to deflate the cuff earlier, even when patients still need some breathing support.

What this means:

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- The study suggests that deflating the tracheostomy cuff sooner rather than later might be connected to better recovery for patients, including shorter hospital stays and fewer complications like pneumonia.
- However, because this was an observational study (looking back at existing records), it can't definitively prove that earlier deflation *causes* these better outcomes. It simply shows a strong association.
- The researchers believe these findings are important and call for more, higher-quality studies to confirm if early cuff deflation truly helps patients recover better.

2. Pharyngocutaneous fistula after total laryngectomy: IFOS consensus on prevention, diagnosis and management

Head & Neck, 2026 — international modified Delphi consensus

Thirty-six experts from 18 countries considered 59 statements. Consensus supported nutritional optimisation, enteral feeding, structured surveillance, revision of persistent fistulae and selective vascularised-tissue reinforcement. Importantly, nearly half the statements did not achieve consensus, including oral-feeding timing, salivary bypass tubes and negative-pressure therapy.

Why it matters: It combines clear practice recommendations with an honest account of continuing uncertainty. There are UK contributors and strong relevance for surgeons, nurses, SLTs, dietitians and people undergoing laryngectomy.

[PubMed](#) link

Pharyngocutaneous Fistula (PCF) is a common and challenging saliva leak that can occur after total laryngectomy (voice box removal). An international panel of experts aimed to establish consensus on its prevention, diagnosis, and management.

Key Agreements:

- Prevention: Crucial steps include reinforcing throat closure with vascularized tissue (like a pectoralis major muscle flap) in high-risk patients (e.g., after radiation), ensuring meticulous surgical technique, and optimizing patient nutrition before surgery.
- Management: It involves multidisciplinary care, proper wound maintenance, nutritional support, and considering surgical repair if conservative treatments are unsuccessful.

Key Disagreements:

- Experts did not reach consensus on PCF classification systems, the routine use of prophylactic salivary bypass tubes, the optimal time to resume oral feeding, or the effectiveness of negative pressure wound therapy (NPWT).
- Variability also persists regarding the ideal timing for surgical repair and the specific choice of reconstructive flaps for certain defects.

In essence, while fundamental principles were agreed upon, significant differences remain in specific techniques and adjunctive treatments for PCF.

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3. Clinical consensus statement on the care of the child with a tracheostomy: 2026 update

Archivos Argentinos de Pediatría, 2026

This updates a 2016 multidisciplinary consensus covering the broad care of children with tracheostomies. It addresses newer evidence and areas where practice has changed over the past decade.

Why it matters: Provides an opportunity to compare an international consensus with UK paediatric pathways and identify common safety principles, particularly for discharge, family education and long-term care.

[PubMed](#) link

Here's a simple summary of what it's all about:

- **Why an update?** It's been 10 years since the last guide (published in 2016), and a lot of new scientific information and experiences have emerged. This update makes sure everyone has the most current and best practices.
- **Who is it for?** This guide is crucial for anyone involved in the care of these children—parents, family members, doctors, nurses, therapists, and even school staff.
- **Main Goal:** The primary aim is to make sure children with tracheostomies receive the safest and best possible care, whether they are at home, school, or in a hospital. This helps reduce anxiety, prevent complications, and improve their quality of life, allowing them to participate in social activities and go to school like other children.
- **Key Areas Covered:** The guide provides updated information and recommendations on many aspects, including:
 - **Choosing the right tube:** How to select the correct type and size of tracheostomy tube for each child.
 - **Daily care:** Instructions on how to keep the tube clean, manage secretions (mucus), and ensure the air the child breathes is moist (humidification).
 - **Emergency preparedness:** What to do in case of a sudden breathing problem.
 - **Going home:** Preparing families and caregivers to manage the tracheostomy safely at home.
 - **Speaking and eating:** Addressing challenges related to speech and swallowing with a tracheostomy.
 - **Removing the tube:** The process of taking out the tracheostomy tube when it's no longer needed (called decannulation).
 - **What's *not* included:** This update does not cover how the tracheostomy surgery is performed, the immediate care right after surgery, or care for children who need long-term breathing machines.

In essence, this updated consensus is a comprehensive manual to equip caregivers and professionals with the knowledge and skills needed to provide excellent and safe care for children with tracheostomies, helping them live full and healthy lives.

4. Antibiotic use and infection patterns in paediatric tracheostomy patients during index hospitalisation

OTO Open, 2026 — retrospective cohort, n=429

Across 38,030 cultures, only 19.6% identified a true bacterial infection. Antibiotic exposure varied considerably and did not closely track infection rates; cardiac patients had the greatest exposure despite comparatively low infection rates.

Why it matters: Tracheostomy colonisation frequently leads to cultures and potentially avoidable antibiotics. This creates a useful discussion about distinguishing colonisation from infection, interpreting cultures and developing local antimicrobial-stewardship pathways.

[PubMed](#) link

This study aimed to evaluate antibiotic utilization patterns in paediatric tracheostomy patients during their initial hospitalization to identify areas for quality improvement and antimicrobial stewardship.

Methods: Researchers retrospectively analyzed data from 429 paediatric tracheostomy patients at a tertiary children's hospital between 2015 and 2024. They quantified antibiotic use across eight diagnostic categories (e.g., respiratory, cardiac, trauma) and distinguished true bacterial infections from viral detections or colonization by reviewing 38,030 cultures. Mixed-effects logistic regression was used to model infection risk, accounting for patient-level clustering.

Key Findings:

- Patient Demographics: The median age at tracheostomy was 6.8 months. Respiratory conditions were the most common diagnosis (43.8%), followed by cardiac (19.3%).
- Antibiotic Exposure: Cardiac patients received the highest mean antibiotic exposure (52.1 days) despite having low bacterial infection rates (17.8%). Conversely, trauma patients had the highest bacterial infection rates (31.5%).
- True Infections vs. Cultures: Only 19.6% of all cultures reviewed demonstrated true bacterial infections. The median time to the first bacterial infection was 14.1 days post-tracheostomy.
- Viral Detection Cascade: 11.4% of bacterial cultures were ordered within 48 hours of a positive viral result, indicating that viral detections often prompted bacterial diagnostic workups.
- Predictors of Infection: Individual patient factors were more predictive of bacterial infection risk than diagnostic categories or patient age. The length of hospital stay was strongly associated with antibiotic exposure.
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Implications: The study concluded that antibiotic prescribing patterns often reflect institutional preferences rather than true infection risk. The significant variability in antibiotic utilization across diagnostic categories presents a measurable target for stewardship interventions. Focusing stewardship efforts on high-utilization groups like cardiac and respiratory patients (which account for about 70% of total exposure) and establishing standardized protocols for bacterial cultures

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following viral detections could reduce unnecessary antibiotic exposure, healthcare costs, and antibiotic-associated complications.

5. Incidence and long-term outcomes of paediatric tracheostomy in Japan

Pediatrics International, 2026 — national claims cohort

Among more than six million children and young people, 1,032 underwent tracheostomy. Decannulation reached 22.9% at one year and 40.6% at five years; mortality was 12.9% and 22.2%, respectively. Diagnosis and age were associated with markedly different trajectories.

Why it matters: These figures help clinicians explain that paediatric tracheostomy is often a long-term pathway rather than a temporary procedure. They also highlight the need for continuing multidisciplinary and family support.

[PubMed](#) link

This study looked at how often children and teenagers in Japan need a tracheostomy and what happens to them in the long term.

Here's a summary of what they found:

- How common is it? About 4 out of every 100,000 children in Japan get a tracheostomy each year. It's most common in babies under one year old, and then there's a small increase in older teenagers (15-19 years).
- What happens afterward?
- Tracheostomy Removal (Decannulation): About 23% of children had their tracheostomy removed within one year, and this increased to about 41% after five years.
- Death: Sadly, about 13% of children with a tracheostomy passed away within one year, and this figure rose to about 22% after five years.
- Factors influencing outcomes:
- Earlier Removal: Children who were older (6-19 years) or had a tracheostomy due to trauma were more likely to have it removed sooner.
- Earlier Death: Children with serious conditions like cancer, heart disease, congenital/genetic disorders, or those who had a tracheostomy after a cardiac arrest, were at a higher risk of earlier death.

The study concluded that paediatric tracheostomy rates are highest in infants and slightly increase in late adolescence. Over the long term, a significant number of patients either had their tracheostomy removed or died, with different factors predicting each outcome. This information is important for doctors and families to understand what to expect and make informed decisions.

Overall August 2026 themes

The five papers reinforce several recurring NTSP principles: restore normal physiology and communication where safely possible; do not confuse expert consensus with high-level evidence; treat families and caregivers as central members of the tracheostomy team; distinguish airway colonisation from infection; and think beyond the index admission towards long-term rehabilitation and quality of life.

The evidence this month contains several important signals, but relatively few definitive answers. That is probably the most useful conclusion of all: good tracheostomy care continues to depend on careful interpretation of evidence, multidisciplinary judgement and continued research into the parts of the pathway that matter most to patients and families.