

Pediatric Tracheostomy: An Overview. Megan Quinn, MSN, CPNP-PC. Atos Medical.

#### Reference List

1. Barros, C. E., Almeida, J. A., Silva, M. H. E., Ayres, G. H. D. S., Oliveira, C. G., Braga, C. A. D. S. B., & Avelino, M. A. G. (2019). Pediatric tracheostomy: epidemiology and characterization of tracheal secretion - a literature review. *Revista da Associacao Medica Brasileira*, 65(12), 1502–1507. <https://doi.org/10.1590/1806-9282.65.12.1502>
2. Brenner MJ, Pandian V, Milliren CE, et al. Global Tracheostomy Collaborative: data-driven improvements in patient safety through multidisciplinary teamwork, standardisation, education, and patient partnership. *Br J Anaesth*. 2020;125(1):e104-e118. doi:10.1016/j.bja.2020.04.054
3. Bonvento, B., Wallace, S., Lynch, J., Coe, B., & McGrath, B. A. (2017). Role of the multidisciplinary team in the care of the tracheostomy patient. *Journal of Multidisciplinary Healthcare*, 10, 391–398. <https://doi.org/10.2147/JMDH.S118419>
4. Chakkarapani AA, Adappa R, Mohammad Ali SK, et al. "Current concepts of mechanical ventilation in neonates" - Part 1: Basics. *Int J Pediatr Adolesc Med*. 2020;7(1):13-18. doi:10.1016/j.ijpam.2020.03.003
5. Chorney, S. R., Brown, A. F., Brooks, R. L., Bailey, C., Whitney, C., Sewell, A., & Johnson, R. F. (2021). Pediatric Tracheostomy Outcomes After Development of a Multidisciplinary Airway Team: A Quality Improvement Initiative. *OTO open*, 5(3), 2473974X211045615. <https://doi.org/10.1177/2473974X211045615>
6. Dennis, B. M., Eckert, M. J., Gunter, O. L., Morris, J. A., Jr, & May, A. K. (2013). Safety of bedside percutaneous tracheostomy in the critically ill: evaluation of more than 3,000 procedures. *Journal of the American College of Surgeons*, 216(4), 858–867. <https://doi.org/10.1016/j.jamcollsurg.2012.12.017>
7. Doherty C, Neal R, English C, et al. Multidisciplinary guidelines for the management of paediatric tracheostomy emergencies. *Anaesthesia*. 2018;73(11):1400-1417. doi:10.1111/anae.14307
8. Eichar BW, Kaffenberger TM, McCoy JL, Padia RK, Muzumdar H, Tobey ABJ. Effect of Speaking Valves on Tracheostomy Decannulation. *Int Arch Otorhinolaryngol*. 2023;28(1):e157-e164. Published 2023 Oct 6. doi:10.1055/s-0043-1767797
9. Fuller, C., Wineland, A. M., & Richter, G. T. (2021). Update on Pediatric Tracheostomy: Indications, Technique, Education, and Decannulation. *Current Otorhinolaryngology Reports*, 9(2), 188–199. <https://doi.org/10.1007/s40136-021-00340-y>
10. Gergin O, Adil EA, Kawai K, Watters K, Moritz E, Rahbar R. Indications of pediatric tracheostomy over the last 30 years: Has anything changed?. *Int J Pediatr Otorhinolaryngol*. 2016;87:144-147. doi:10.1016/j.ijporl.2016.06.018
11. Gipsman A, Prero M, Toltzis P, Craven D. Tracheobronchitis in children with tracheostomy tubes: Overview of a challenging problem. *Pediatr Pulmonol*. 2022;57(4):814-821. doi:10.1002/ppul.25814

12. Gursoy TR, Eyuboglu TS, Aslan AT, et al. The associations between the clinical course of children with tracheostomy and their mothers' depression, burnout, burden, and self-esteem. *J Clin Nurs*. 2023;32(13-14):3412-3420. doi:10.1111/jocn.16450
13. Haring, C. T., Farlow, J. L., Leginza, M., Vance, K., Blakely, A., Lyden, T., Hoesli, R. C., Neal, M. E. H., Brenner, M. J., Hogikyan, N. D., Morrison, R. J., & Casper, K. A. (2022). Effect of Augmentative Technology on Communication and Quality of Life After Tracheostomy or Total Laryngectomy. *Otolaryngology--Head And Neck Surgery : Official Journal of American Academy of Otolaryngology-Head And Neck Surgery*, 167(6), 985–990. <https://doi.org/10.1177/01945998211013778>
14. Harless J, Ramaiah R, Bhananker SM. Pediatric airway management. *Int J Crit Illn Inj Sci*. 2014;4(1):65-70. doi:10.4103/2229-5151.128015
15. Hashimoto, D. A., Axtell, A. L., & Auchincloss, H. G. (2020). Percutaneous Tracheostomy. *The New England Journal of Medicine*, 383(20), e112. <https://doi.org/10.1056/NEJMvcm2014884>
16. Hebbar KB, Kasi AS, Vielkind M, et al. Mortality and Outcomes of Pediatric Tracheostomy Dependent Patients. *Front Pediatr*. 2021;9:661512. Published 2021 May 4. doi:10.3389/fped.2021.661512
17. Heffner, J. E., & Hess, D. (2001). Tracheostomy management in the chronically ventilated patient. *Clinics in chest medicine*, 22(1), 55–69. [https://doi.org/10.1016/s0272-5231\(05\)70025-3](https://doi.org/10.1016/s0272-5231(05)70025-3)
18. Herritt, B., Chaudhuri, D., Thavorn, K., Kubelik, D., & Kyeremanteng, K. (2018). Early vs. late tracheostomy in intensive care settings: Impact on ICU and hospital costs. *Journal of critical care*, 44, 285–288. <https://doi.org/10.1016/j.jcrc.2017.11.037>
19. Hosokawa, K., Nishimura, M., Egi, M., & Vincent, J. L. (2015). Timing of tracheotomy in ICU patients: a systematic review of randomized controlled trials. *Critical care (London, England)*, 19, 424. <https://doi.org/10.1186/s13054-015-1138-8>
20. Johnson-Obaseki, S., Veljkovic, A., & Javidnia, H. (2016). Complication rates of open surgical versus percutaneous tracheostomy in critically ill patients. *The Laryngoscope*, 126(11), 2459–2467. <https://doi.org/10.1002/lary.26019>
21. Jung, S., Kim, D., Kim, Y., Koh, Y., Joo, S., & Kim, E. (2012). Effect of decannulation on pharyngeal and laryngeal movement in post-stroke tracheostomized patients. *Annals of Rehabilitation Medicine*, 36: 356-364.
22. Kearney, A., Norris, K., Bertelsen, C., Samad, I., Cambridge, M., Croft, G., Peavler, S., Groen, C., Doyle, P. C., & Damrose, E. J. (2023). Adoption and Utilization of Heat and Moisture Exchangers (HMEs) in the Tracheostomy Patient. *Otolaryngology--head and neck surgery : official journal of American Academy of Otolaryngology-Head and Neck Surgery*, 169(5), 1374–1381. <https://doi.org/10.1002/ohn.368>
23. Kou YF, Chorney SR, Johnson RF. Multidisciplinary Pediatric Tracheostomy Teams. *Otolaryngol Clin North Am*. 2022;55(6):1195-1203. doi:10.1016/j.otc.2022.07.005

24. Madsen, K. R., Guldager, H., Rewers, M., Weber, S. O., Købke-Jacobsen, K., White, J., Danish Society of Anesthesiology and Intensive Care, & Danish Society of Intensive Care Medicine (2015). Danish Guidelines 2015 for percutaneous dilatational tracheostomy in the intensive care unit. *Danish medical journal*, 62(3), C5042.
25. McGrath, B. A., Wallace, S., Wilson, M., Nicholson, L., Felton, T., Bowyer, C., & Bentley, A. M. (2019). Safety and feasibility of above cuff vocalization for ventilator-dependent patients with tracheostomies. *Journal of the Intensive Care Society*, 20(1), 59–65. <https://doi.org/10.1177/1751143718767055>
26. Mitchell, R.B., Hussey, H.M., Setzen, G., Jacobs, I.N., Nussenbaum, B., Dawson, C., Brown, C.A., III, Brandt, C., Deakins, K., Hartnick, C. and Merati, A. (2013), Clinical Consensus Statement. *Otolaryngology–Head and Neck Surgery*, 148: 6-20. <https://doi.org/10.1177/0194599812460376>
27. Muller RG, Mamidala MP, Smith SH, Smith A, Sheyn A. Incidence, Epidemiology, and Outcomes of Pediatric Tracheostomy in the United States from 2000 to 2012. *Otolaryngol Head Neck Surg*. 2019;160(2):332-338. doi:10.1177/0194599818803598
28. Muscedere, J., Rewa, O., McKechnie, K., Jiang, X., Laporta, D., & Heyland, D. K. (2011). Subglottic secretion drainage for the prevention of ventilator-associated pneumonia: a systematic review and meta-analysis. *Critical care medicine*, 39(8), 1985–1991. <https://doi.org/10.1097/CCM.0b013e318218a4d9>
29. Mussa, C. C., Gomaa, D., Rowley, D. D., Schmidt, U., Ginier, E., & Strickland, S. L. (2021). AARC Clinical Practice Guideline: Management of Adult Patients with Tracheostomy in the Acute Care Setting. *Respiratory Care*, 66(1), 156–169. <https://doi.org/10.4187/respcare.08206>
30. Nieszkowska, A., Combes, A., Luyt, C. E., Ksibi, H., Trouillet, J. L., Gibert, C., & Chastre, J. (2005). Impact of tracheotomy on sedative administration, sedation level, and comfort of mechanically ventilated intensive care unit patients. *Critical care medicine*, 33(11), 2527–2533. <https://doi.org/10.1097/01.ccm.0000186898.58709.aa>
31. Okonkwo I, Cochrane L, Fernandez E. Perioperative management of a child with a tracheostomy. *BJA Educ*. 2020;20(1):18-25. doi:10.1016/j.bjae.2019.09.007
32. Pandian, V., Cole, T., Kilonsky, D., Holden, K., Feller-Kopman, D. J., Brower, R., & Mirski, M. (2020). Voice-related quality of life increases with a talking tracheostomy tube: A randomized controlled trial. *The Laryngoscope*, 130(5), 1249–1255. <https://doi.org/10.1002/lary.28211081>
33. Papazian, L., Klompas, M., & Luyt, C. E. (2020). Ventilator-associated pneumonia in adults: a narrative review. *Intensive care medicine*, 46(5), 888–906. <https://doi.org/10.1007/s00134-020-05980-0>
34. Park, M. K., & Lee, S. J. (2018). Changes in Swallowing and Cough Functions Among Stroke Patients Before and After Tracheostomy Decannulation. *Dysphagia*, 33(6), 857–865. <https://doi.org/10.1007/s00455-018-9920-9>

35. Powell J, Buckley HL, Agbeko R, Brodlie M, Powell S. Tracheostomy trends in paediatric intensive care. *Arch Dis Child*. 2021;106(7):712-714. doi:10.1136/archdischild-2020-319396
36. Pozuelo-Carrascosa, D. P., Herráiz-Adillo, Á., Alvarez-Bueno, C., Añón, J. M., Martínez-Vizcaíno, V., & Caveró-Redondo, I. (2020). Subglottic secretion drainage for preventing ventilator-associated pneumonia: an overview of systematic reviews and an updated meta-analysis. *European respiratory review : an official journal of the European Respiratory Society*, 29(155), 190107. <https://doi.org/10.1183/16000617.0107-2019>
37. Raimonde AJ, Westhoven N, Winters R. Tracheostomy. [Updated 2023 Jul 24]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2025 Jan-. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK559124/>
38. Sakai M, Kou YF, Shah GB, Johnson RF. Tracheostomy demographics and outcomes among pediatric patients ages 18 years or younger-United States 2012. *Laryngoscope*. 2019;129(7):1706-1711. doi:10.1002/lary.27463
39. Santos, A., Harper, D., Gandy, S., & Buchanan, B. (2018). The positive impact of multidisciplinary tracheostomy team in the care of post-tracheostomy patients. *Critical Care Medicine*, 46(1), 591-591.
40. Streppel, M., Veder, L. L., Pullens, B., & Joosten, K. F. M. (2019). Swallowing problems in children with a tracheostomy tube. *International Journal of Pediatric Otorhinolaryngology*, 124, 30–33. <https://doi.org/10.1016/j.ijporl.2019.05.003>
41. Tracheostomy Education ‘Cough Techniques for Individuals with Tracheostomy’ June 5, 2019 [tracheostomyeducation.com/cough-techniques/](http://tracheostomyeducation.com/cough-techniques/)
42. Volsko TA, Parker SW, Deakins K, et al. AARC Clinical Practice Guideline: Management of Pediatric Patients With Tracheostomy in the Acute Care Setting. *Respir Care*. 2021;66(1):144-155. doi:10.4187/respcare.08137
43. Watters KF. Tracheostomy in Infants and Children. *Respir Care*. 2017;62(6):799-825. doi:10.4187/respcare.05366
44. Wong, C. Y., Shakir, A. A., Farboud, A., & Whittet, H. B. (2016). Active versus passive humidification for self-ventilating tracheostomy and laryngectomy patients: a systematic review of the literature. *Clinical otolaryngology : Official Journal Of ENT-UK ; Official Journal of Netherlands Society for Oto-Rhino-Laryngology & Cervico-Facial Surgery*, 41(6), 646–651. <https://doi.org/10.1111/coa.12577>
45. Xiansong, W. & Wen, Y (2021). Exploring the effects of continuous airway humidification on nursing care and complications in patients with tracheotomy. *International Journal of Clinical and Experimental Medicine*, 14(1), 192-200