



TITLE: Transitional Care for Pediatric Patients Requiring Chronic Ventilation: Clinical Effectiveness and Guidelines

DATE: 11 September 2008

RESEARCH QUESTIONS:

1. What is the clinical effectiveness of transitional care for pediatric patients requiring chronic ventilation?
2. What are the guidelines for transitional care for pediatric patients requiring chronic ventilation?

METHODS:

A limited literature search was conducted on key health technology assessment resources, including PubMed, the Cochrane Library (Issue 3, 2008), University of York Centre for Reviews and Dissemination (CRD) databases, ECRI, EuroScan, international HTA agencies, and a focused Internet search. Results include articles published between 2003 and September 2008, and are limited to English language publications only. Filters were applied to limit the retrieval to health technology assessments, systematic reviews, meta-analyses, clinical guidelines, randomized controlled trials, other clinical trials, and observational studies. Internet links are provided, where available.

RESULTS:

HTIS reports are organized so that the higher quality evidence is presented first. Therefore, health technology assessment reports, systematic reviews, and meta-analyses are presented first. These are followed by randomized controlled trials, observational studies, and evidence-based guidelines.

The literature search identified one randomized controlled trial and five observational studies on transitional care for pediatric patients requiring chronic ventilation. No health technology assessments, systematic reviews, meta-analyses, or evidence-based guidelines were identified.

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Additional articles of potential interest, including two non-evidence-based guidelines, are included in the Appendix.

Health technology assessments

No literature identified

Systematic reviews and meta-analyses

No literature identified

Randomized controlled trials

1. O'Shea TM, Nageswaran S, Hiatt DC, Legault C, Moore ML, Naughton M, et al. Follow-up care for infants with chronic lung disease: a randomized comparison of community- and center-based models. *Pediatrics* 2007;119(4):e947-e957. [PubMed: PM17387168](#)

Observational studies

2. O'Brien JE, Haley SM, Dumas HM, Ladenheim B, Mast J, Burke SA, et al. Outcomes of post-acute hospital episodes for young children requiring airway support. *Dev Neurorehabil* 2007;10(3):241-7. [PubMed: PM17564864](#)
3. O'Brien JE, Dumas HM, Haley SM, Ladenheim B, Mast J, Burke SA, et al. Ventilator weaning outcomes in chronic respiratory failure in children. *Int J Rehabil Res* 2007;30(2):171-4. [PubMed: PM17473631](#)
4. Tearl DK, Hertzog JH. Home discharge of technology-dependent children: evaluation of a respiratory-therapist driven family education program. *Respir Care* 2007;52(2):171-6. [PubMed: PM17261205](#)
5. Leurer MK, Be'eri E, Zilbershtein D. Discharge of respiratory-compromised children after respiratory rehabilitation. *Isr Med Assoc J* 2006;8(7):473-6. [PubMed: PM16889162](#)
Full text available: <http://www.ima.org.il/imaj/ar06jul-6.pdf> (Accessed 10 Sep 2008)
6. Tearl DK, Cox TJ, Hertzog JH. Hospital discharge of respiratory-technology-dependent children: role of a dedicated respiratory care discharge coordinator. *Respir Care* 2006;51(7):744-9. [PubMed: PM16800908](#)

Guidelines and recommendations

No literature identified

PREPARED BY:

Karen Cimon, Research Assistant
Emmanuel Nkansah, MLS, Information Specialist

Health Technology Inquiry Service

Email: htis@cadth.ca

Tel: 1-866-898-8439

APPENDIX – FURTHER INFORMATION:

Guidelines and recommendations (non-evidence-based)

7. Ventilator assisted children at home: Guidelines for discharge of children dependent on respiratory life support equipment and for their home care management. In: *Schneider Children's Hospital [website]*. Manhasset (NY): Schneider Children's Hospital at North Shore; 200?. Available: http://www.schneiderchildrenshospital.org/sch_crit_care_vent.html (accessed 2008 Sep 8).
8. Paediatric home ventilation working group. *Model for management of children who require long-term ventilation in the Western Board area*. Londonderry (UK): Western Health and Social Services Board; 2002. Available: http://www.whssb.nhs.uk/publication/children_ventilation.pdf (accessed 20058 Sep 8).

Review articles

9. Primhak RA. Discharge and aftercare in chronic lung disease of the newborn. *Semin Neonatol* 2003;8(2):117-26. [PubMed: PM15001148](#)
10. Simonds AK. Home ventilation. *Eur Respir J Suppl* 2003;47:38s-46s. [PubMed: PM14621116](#)

Additional references

11. Murphy J. Medically stable children in PICU: better at home. *Paediatr Nurs* 2008;20(1):14-6. [PubMed: PM18335898](#)
12. Edwards EA, O'Toole M, Wallis C. Sending children home on tracheostomy dependent ventilation: pitfalls and outcomes. *Arch Dis Child* 2004;89(3):251-5. [PubMed: PM14977704](#)
13. Barnardos JN, Lewis M. *Care pathway for the discharge and support of children requiring long term ventilation in the community* [National Service Framework for Children, Young People and Maternity Services]. London (UK): Department of Health, National Health Service (NHS); 2005. Available: http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/@dh/@en/documents/digitalasset/dh_4115102.pdf (accessed 2008 Sep 8).
14. Ludvigsen A, Morrison A. *Breathing space: Community support of children on long term ventilation - summary*. Ilford (UK): Barnardo's; 2003. Available: http://www.barnardos.org.uk/cym/breathing_space_-_community_support_of_children_on_long_term_ventilation_-_summary.pdf (accessed 2008 Sep 8).