Eliminating Harm: Chronic Pediatric Ventilated Care

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Learning Objectives and Disclosure

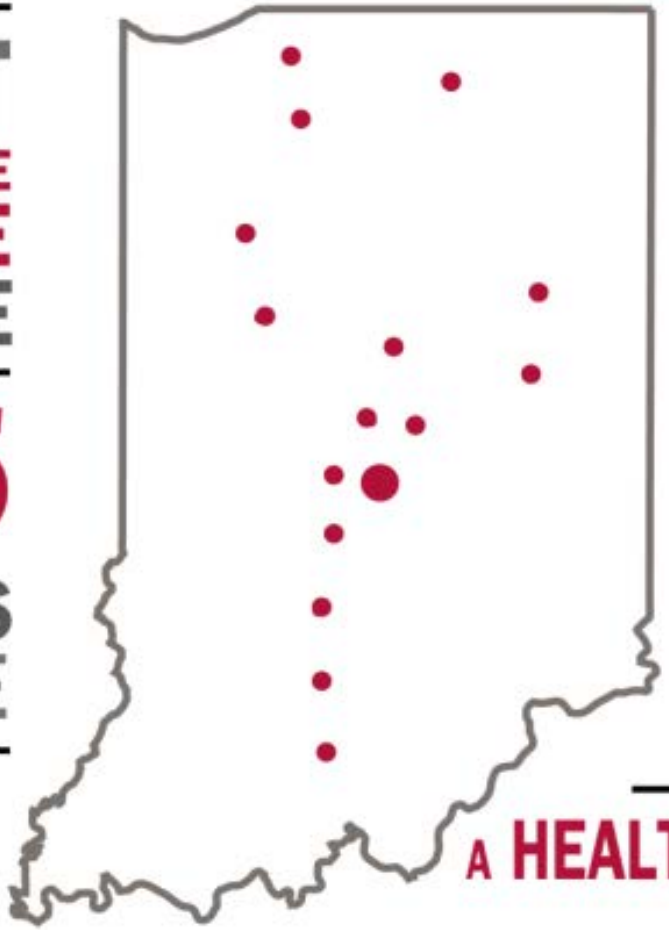
- Learning Objectives
  - The learner will be able to understand complexity of care for pediatric chronic ventilated patients.
  - The learner will be able to verbalize best practices for complex discharge planning of chronic ventilated patients.
- No Disclosure and No Conflict of Interest
- Our Employer
  - Indiana University Health (Indianapolis, IN)
  - Riley Hospital for Children

18 MEDICAL CENTERS & HOSPITALS

LARGEST PRIMARY CARE PRACTICE IN THE STATE

29,395 EMPLOYEES STATEWIDE

AFFILIATED WITH THE IU SCHOOL OF MEDICINE



NATIONALLY RANKED 18 YEARS IN A ROW

U.S.NEWS & WORLD REPORT

A HEALTH PLAN EMBEDDED IN A HEALTH SYSTEM

Purpose

- Improve quality outcomes for Home Vent patient population
  - Family education process
  - Decrease catastrophic outcomes
- Create a physical environment that increases the overall quality of care
  - Specific for the PICU home vent patient
- Increase satisfaction of families and ICU team members

Literature Review

- Standardized hospital transition to home criteria with at least 2 family caregivers trained for the child's care (Sterni et al., 2016)
- 4 Elements of Complex Transition Planning (Moore et al., 2016)
  - Child's medical stability for transition to home
  - Family's preparedness for providing care in the home environment
  - Acquiring necessary medical equipment
  - Safety of the home environment
- Integrate activities of daily living for smooth transition to home
  - Play time and feeding during daytime hours (Dumas, 2012)

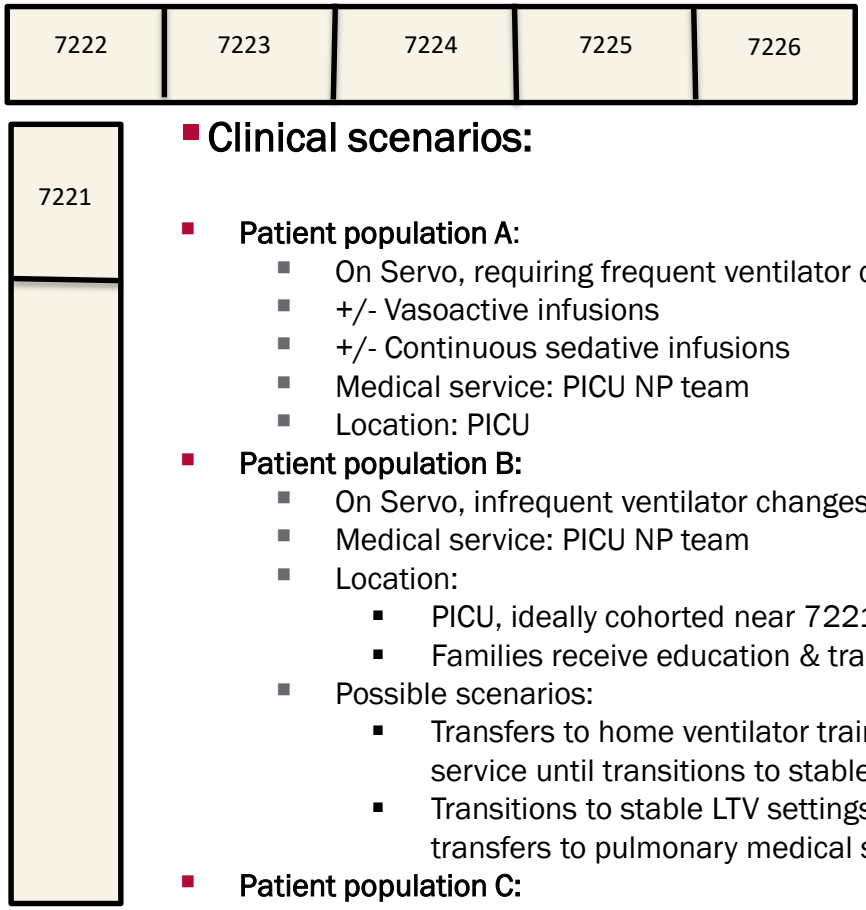
Initial State

- Home Vent patients assigned to rooms within the general patient population in the PICU
- PICU RNs commonly cared for the chronically ill home vent child along with an acutely ill PICU patient
- Education delivered by assigned nurse for each shift. Variability home vent skills sets for nurses assigned to patient population.

Action Planning

- 4 beds initially designated within PICU as Chronic Home Vent Program location
- Created system to identify patients most appropriate to locate in this designated area
- Recruitment of nurses who aspire to provide expert level care for these patients
- Relocation of supplies for safe patient care delivery continuum
- Home Vent nurse education

Home Ventilator Training Area



- **Clinical scenarios:**

- **Patient population A:**
  - On Servo, requiring frequent ventilator changes
  - +/- Vasoactive infusions
  - +/- Continuous sedative infusions
  - Medical service: PICU NP team
  - Location: PICU
- **Patient population B:**
  - On Servo, infrequent ventilator changes
  - Medical service: PICU NP team
  - Location:
    - PICU, ideally cohorted near 7221 when staffing allows
    - Families receive education & training when staffing allows
  - Possible scenarios:
    - Transfers to home ventilator training room if bed becomes available (remains on PICU service until transitions to stable LTV settings)
    - Transitions to stable LTV settings but no home ventilator training room is available transfers to pulmonary medical service
- **Patient population C:**
  - Stable LTV settings
  - Medical service: pulmonary
  - Location: home ventilator training rooms

Outcomes

- Median length of stay
  - 2014: 55.2 days
  - 2015: 38.2 days
  - 2016: 37.8 days
- Catastrophic events
  - 2015: 3
  - 2016: 0
- Empowered team members

Additional Support and Future Growth

- Home Vent Registered Nurse Champion
  - Quarterly newsletter for team
- Expanded area to 6 beds
- 2018 Goal
  - Expand to 8 bed program
- Onboarding of new home vent registered nurses

References

- Dumas, H. (2012). Rehabilitation considerations for children dependent on long-term mechanical ventilation. International Scholarly Research Notices, http://dx.doi.org/10.5402/2012/756103
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- Sterni, L., Collaco, J. M., Baker, C. D., Carroll, J. L., Sharma, G. D., Brozek, J. L., . . . Halbower, A. C. (2016). An official american thoracic society clinical practice guideline: Pediatric chronic home invasive ventilation. American Journal of Respiratory and Critical Care Medicine, 193(8), http://dx.doi.org/10.1164/rccm.201602-0276ST

Questions?
Thank you!

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