

Evidence-based Practice Excellence Award

Pediatric Ventilator-Associated Pneumonia (VAP) Prevention: An Evidence-based Practice Project

Julie Capas MSN, RN, CPN
Tallahassee Memorial HealthCare

In 2016, a rise in pediatric ventilator-associated pneumonia (VAP) occurrences in a 10-bed PICU prompted a look into pediatric VAP prevention measures. A multidisciplinary team was established to research and implement evidence-based practice strategies to reduce the incidence of VAP. The team consisted of the Clinical Education Coordinator, Assistant Nurse Manager, PICU nurses, Respiratory Therapy Educator, and a Pediatric Intensivist. PICO question: In ventilated pediatric patients, does having a standardized VAP prevention protocol versus current practice affect the incidence of VAP. A literature review was performed to identify evidence-based best-practices and gaps in current practice. The current VAP bundle, implemented in 2013, included head of bed elevation, oral care, minimizing circuit disruption, and hand hygiene. After reviewing the research, the team identified areas for improvement in the current VAP bundle. These included standardizing oral care methods and daily readiness to extubate assessments.

First, we standardized oral care supplies and practices to ensure consistency across our patient population. Second, we implemented a pediatric readiness to extubate assessment form for the respiratory therapist (RT) to complete on a daily basis. Third, we implemented documentation in the electronic medical record. The PICU ventilator orderset was updated to include the standardized oral care practices and the daily readiness to extubate assessment order. A pediatric VAP prevention bundle checklist was incorporated into the nursing documentation to remind staff of the bundle.

Lastly, education was provided to PICU nurses and RT colleagues via multiple modalities: web-based learning, skills fair, equipment in-services, and staff meetings.

Since implementation of the pediatric VAP bundle, there have been zero incidences of pediatric VAP over the past 18 months. Barriers to success included disruption in availability oral care supplies and lack of consistency with compliance after implementation. We continue to monitor compliance and provide feedback to staff on a regular basis.

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Leadership and Management Excellence Award

Parking Lot Friends: Pediatric/Pediatric Intensive Care Unit Mentorship Program

Lisa Walker-Vischer RN, DNP, CNS, CCRN
Santa Clara Valley Medical Center

Background: Both units have experienced an increased turnover of new graduate nurses. The Pediatric/Pediatric ICU Shared Leadership committee identified the lack of professional support as an issue. A mentoring program was developed in response. Nurses were matched with a “parking lot friend,” a veteran nurse that they could confide in and use as a resource. As nurses, we know how important it is to have someone to debrief with after long, stressful days, as well as someone to share our successes with.

Purpose: The purpose of this program is to assist in retaining nurses, as well as foster improved relationships between new hire nurses and experienced nurses. There was an expectation to decrease financial losses from reduced turnover. Literature supports that the implementation of a RN mentor program positively affects turnover rate and employee satisfaction (Frost, 2013).

Implementing: With the support of management, a mentorship program was created to provide guidance and support beyond the traditional orientation. The role of the mentor was to bridge the transitional gap between novice nurse in training, until he/she gained adequate experience and confidence. The program was customized based on two existing programs (Robert Wood Johnson Foundation, Stanford).

Requirements were clearly outlined for both mentors and mentees: monthly communication, goal setting, and absolute confidentiality. Monthly check ins would be submitted to a coordinator to hold all participants accountable. Veteran nurses were recruited, while newly hired nurses were automatically placed in the program unless they declined. Mentors and mentees were paired by the coordinator based on their application.

Evaluate: A full year of data will be completed by January 2019. Program developers anticipated resistance from veteran nurses, but received surprisingly positive support. General feedback has been positive from both parties.

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Quality Improvement Excellence Award

Improving Asthma in Pediatric Practice

Tiffany Leigh Kidd DNP, PPCNP-BC, CCRN, CPEN
Centra Health

Pediatric asthma is a significant public health problem. It is the third cause of pediatric hospitalizations, costing \$20 billion in 2016. In the US, approximately 6 million children have asthma. Despite available guidelines, implementation is lagging with only 35 % of providers using guidelines. The question was does provider compliance of the NAEPP 2007 asthma guidelines improve through an electronic health record (EHR) template in a pediatric primary care practice?"

A quality improvement project implemented an EHR template for pediatric asthma visits and provider education to support the compliance of following the NAEPP 2007 asthma guidelines. A retrospective EHR chart review of charts within the same seasonal time frame, ages 5-12yrs was done to determine documentation pre-and post-project implementation. The chi-square was used for statistical significance. Data reviewed were documentation of action plan, severity, adherence to follow-up appointment, prescribing of prevention medication, ED visits and hospitalizations, C-ACT score, spirometry use, education, and missed school days.

Documentation of asthma action plan increased from 10 % to 74 % $p = 0.001$, spirometry rose from 4% to 32 % $p = .011$, asthma education increased from 60 % to 98% $p = .000$, follow up adherence rose from 60% to 98% $p = .000$ and asthma severity categorized improved from 32% to 100 % $p = .011$. Statistical significance was shown in 7 out of the 8 quality measurements. The area of prescribing controller medication for persistent asthma showed clinical significance with 58% to 100% improvement, but was not statistically significant ($p = .258$) because clinical knowledge was present with the providers prior to the intervention on managing persistent asthma.

Results support the hypothesis that an EHR template with evidence-based guidelines improved provider documentation of an asthma action plan, severity, follow-up, and prescribing control medication, ED visits, hospitalizations, missed school days, C-ACT score, spirometry and asthma education.

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