An Evidence Based Practice Project to Improve Care of Pediatric Patients Receiving Non-Invasive Ventilation (NIV)
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**Problem:** Medical advancements have changed the treatment and prognosis of respiratory compromise in the pediatric population. As a result, non-invasive ventilation (NIV) has gained prevalence as an effective way to manage respiratory compromise while avoiding the potential adverse effects of invasive airway intubation. Skin injury is a documented adverse effect of NIV.

**Evidence:** A comprehensive literature review revealed that pediatric NIV is associated with skin breakdown and nasal damage. Despite a paucity of research evidence to guide practice, evidence from numerous published clinical practice guidelines identifies that appropriate physical assessment and care can reduce skin breakdown and nasal damage.

**Strategy:** A data collection tool was created to measure compliance with the hospital NIV standard of care. Over a 4 week period (December, 2010), hospital-wide audits (N=146) assessed care of children (M=6.63 yrs., sd=7.31, 0.01-24 years old) receiving NIV. Skin injury occurred in 15/93 (16%) of cases.

**Practice Change:** Evaluation of audit data revealed practice compliance issues, such as frequency of skin assessment documentation. An implementation plan is in progress which includes modifying the NIV standards and communicating those changes to staff. Education will include computer assisted learning and high fidelity simulation of care for the child receiving NIV. We hypothesize that practice consistent with published guidelines can decrease the occurrence of preventable skin injury, secondary to NIV.

**Evaluation:** We will complete a post implementation audit targeting practice components such as frequency of skin assessment documentation and prevalence of skin injury to determine project impact.

**Results:** Data will be presented comparing audits pre and post implementation specific to variables of interest such as number of days on NIV, patient age, NIV mode and interface.

**Recommendations:** Pending project completion.

**Lessons Learned:** Reliance on records to audit practice is limited by the reality that documentation is often incomplete. Finding time to participate and plan in an EBP project can be difficult as a staff nurse, especially when it is a hospital wide interdisciplinary project.

**Bibliography:**

