

### **NK3a**

Provide one example, with supporting evidence, of how clinical nurse(s) disseminated the organization's completed nursing research study to internal audiences.

#### **Example a: "Incidence, Healthcare Utilization and Cost of Bronchiolitis for Children Under 2 Years of Age at a Large Community Hospital" – Dissemination to Internal Audiences**

##### **Clinical Nurse**

Karen Tsang, BSN, RN, CPN, Clinical Nurse, 4E Pediatrics, was the co-investigator for a single site research study, "Incidence, healthcare utilization and cost of Bronchiolitis for children under 2 years of age at a large community hospital." Tsang partnered with Principal Investigator Patricia Woltz, PhD, RN, Director of Nursing Research, Evidence-Based Practice and Clinical Nursing Resource Services, along with Hayes McCaffrey, BSN, RN, CCRN-K, Nursing Administration Specialist; Nikki Angeli, MHA, BSN, RN, Pediatric Program Coordinator; Breana Chappuis, MSN, RN, CPN, Clinical Nurse, 4E Pediatrics; and Janice Lockridge Brown, MSN, APRN, AGCNS-BC, CDCES, Clinical Nurse Specialist.

The purpose of the study was to explore the incidence, healthcare utilization, and cost of bronchiolitis with either respiratory syncytial virus (RSV) or symptoms of nasal congestion among children under the age of 2 years who present at a large community emergency department in the southeastern United States, using standardized metrics and contributing factors. The study, conducted at WakeMed Health & Hospitals Children's Emergency Department (CED), received expedited approval from the WakeMed Health & Hospitals Institutional Review Board (IRB) on August 26, 2021. ([Evidence NK3a-1](#), [WakeMed IRB Approval](#)) The study was conducted from August 2021 to August 2022 and was completed and closed on January 3, 2023.

##### **Organization's Nursing Research**

The researchers conducted a retrospective chart review using data from the electronic health records of children seen at WakeMed CED between October 1, 2018 and September 30, 2019. The target population was identified using WakeMed's automated data query tool that integrates routinely collected clinical and administrative data from WakeMed's Epic Clarity and financial databases.

Children eligible for this study were aged 0-23 months with an ED visit during the study year and a primary diagnosis of nasal congestion, acute upper respiratory infection (URI), or acute bronchiolitis based on the International Classification of Diseases, Tenth Revision ICD-10-CM codes(22) J06.9, J21.0, J21.1, J21.8, J21.9, J84.115 and R09.81 (Supplemental table). Only a patient's first (index) ED encounter during the study period was eligible. Based on the researchers clinical judgment and the availability of retrospective data, potentially preventable ED or "low-risk" encounters in this study were defined as those that met all the following criteria:

- Discharged directly from ED to home
- ED length of stay (LOS) of under 12 hours
- No comorbidity or major complication diagnosis

- Emergency Severity Index (ESI) score of 4 or 5

To enable an estimate of potentially preventable ED encounters, the researchers conducted manual chart reviews of a 20% random sample of low-risk encounters with acute URI and bronchiolitis to determine the prevalence of nasal congestion in these populations.

### **Findings of the Study**

During the one year of the study, 2,109 of the 11,378 ED visits (18.5%) by patients 0-23 months of age had a diagnosis of nasal congestion, acute URI, or acute bronchiolitis. Of these encounters, 1,739 (82.5%) were index visits with a primary diagnosis of acute unspecified URI (43.8%), unspecified bronchiolitis (31.1%), nasal congestion (10.2%), bronchiolitis due to RSV (9.3%), bronchiolitis due to other specified organisms (5.6%), or bronchiolitis due to human metapneumovirus (.01%). This extrapolation suggests that in total, up to 606, or 80% of the 758 low-risk ED encounters identified in this study may have been preventable with better management of nasal secretions at home. Direct care costs for the 607 potentially preventable visits totaled \$867,460 per year.

### **Clinical Nurse Dissemination of Research Findings to Internal Audiences**

Tsang presented the results of the research at the WakeMed Nursing Research and Evidence-Based Practice Council (NREC) meeting on November 17, 2023, during the Think Tank portion of the meeting. Think Tank is a forum for WakeMed nurses to share best practices and learn from others. It welcomes anyone to present projects, share ideas, and seek support from colleagues for any type of quality improvement, evidence-based practice, or research project. ([Evidence NK3a-2, NREC Meeting Minutes](#)) ([Evidence NK3a-3, Certificate for Think Tank PowerPoint](#)) Tsang presented the process and research findings and discussed these with 13 committee members. Tsang answered members' questions, and their feedback was strongly positive, encouraging, and constructive.