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**Abstract Category:** DNP in Clinical Leadership

**Title:** Neonatal Nurses Preventing Maternal Smoking

**Purpose:** Maternal smoking is one of the most significant contributing factors for infant mortality and morbidity. Postpartum and neonatal hospitalization provides an opportunity for neonatal nurses to coordinate services and bridge the gap between the obstetric and outpatient pediatric setting, thereby helping mothers to quit smoking and remain abstinent. Research-based interventions were incorporated into an innovative performance improvement program aimed at increasing neonatal nurses™ knowledge and self-efficacy for providing smoking prevention interventions to postpartum mothers.

**Objective 1:** Describe a process for assessing and documenting maternal smoking status, providing advice to quit smoking or remain abstinent, and making a referral to treatment as needed.

**Objective 2:** Compare and contrast the advantages of live-instruction versus computer-based training for increasing nurses' knowledge and self-efficacy for providing smoking prevention interventions.

**Objective 3:** Formulate a plan for performance improvement in your own practice to involve neonatal nurses in smoking prevention interventions.

**Abstract:**

**Background/Synthesis of Evidence:** Smoking during and after pregnancy has a multitude of deleterious effects on infant health. Forty to fifty percent of women who quit smoking during pregnancy relapse within weeks of giving birth. Improvement in the integration of smoking prevention services along the continuum of care may help women quit smoking and remain abstinent. As one of the first healthcare providers for infants, neonatal nurses are respected advocates of health promotion and can play a valuable role in preventing maternal smoking. Postpartum and neonatal hospitalization provides a window of opportunity for neonatal nurses to coordinate services and bridge the gap between the obstetric and outpatient pediatric settings.

**Proposed Change in Practice:** The aim of the performance improvement project was to educate neonatal nurses working in the newborn nursery and neonatal intensive care unit (NICU) about the process for assessing and documenting maternal smoking status, providing advice to quit smoking or remain abstinent, and making a referral to treatment as needed. The specific project objectives were to: a) increase nurses™ knowledge related to smoking prevention strategies and the impact of smoking on infant health, and b) increase nurses™ self-efficacy for delivering smoking prevention interventions.
Implementation Strategies: Neonatal nurses from the newborn nursery and NICU (RNs and LPNs) participated in a mandatory educational program as part of a departmental performance improvement project. Four live-instruction classes were held. The educational program was converted to interactive computer-based training (CBT) to increase staff participation. A pre-and posttest design utilized a questionnaire with 9 general knowledge questions and 4 self-efficacy questions. Pre-and posttest results were compared for participants overall and for subgroups (CBT/LT and RN/LPN). A two-proportion test was used for data analysis.

Evaluation: The project outcomes were as follows: Overall Knowledge scores (n=41) were higher after the educational program [30.4% vs. 96.8%] (Est. Improve. 66.4%; p<.001, CI 61.4-71.4%); Overall Self-efficacy scores (n=41) were higher after the educational program [53.7% vs. 85.9%] (Est. Improve. 32.2%; p<.001, CI 28.0-36.4%); There were no differences in posttest scores between RNs (n=32) and LPNs (n=9) for knowledge (96.9% vs. 96.3%; p=.804) or self-efficacy (85.9% vs. 85.6%; p=.897); Posttest knowledge scores were higher with CBT compared to live-instruction (p=.01); Posttest self-efficacy scores were higher with live-instruction compared to CBT (p=.41). An educational program is an effective and feasible means to increase nurses’ knowledge and self-efficacy for providing smoking prevention interventions. Participants expressed satisfaction and acceptance of the educational program irrespective of mode of instruction. CBT increased participation rates by 128% and was found to be cost-effective. A departmental policy now requires all newly hired neonatal nurses to participate in the educational program and all nurses in the nursery and NICU to provide smoking prevention interventions to mothers during postpartum hospitalization. Maternal smoking status, including quit attempt, is documented on the infant H&P; therefore, pediatric providers have information to continue interventions and support after hospital discharge. The new process includes a state fax referral process which provides information about cessation and relapse rates for mothers referred.