IMPROVING OUTCOMES FOR NEONATES WHO WITHDRAW THROUGH CARE IN A LOW STIMULATION ENVIRONMENT

Janice Ancona, MSN, RN, and Susan Kannenberg, RHIA, Wheaton Franciscan – St. Joseph Campus, Milwaukee; 414-447-2700; Janice.Ancona@wfhc.org

Background: Neonatal Intensive Care Units (NICU) in the U.S. are caring for increasing numbers of infants withdrawing from methadone, multiple drugs of abuse, or medications taken for chronic pain. The cheap price of heroin and an emphasis on pain management in healthcare have contributed to the increase. Infants who withdraw have prolonged hospital stays to manage symptoms of withdrawal including feeding complications, and many infants require medications for symptom management. Withdrawal symptoms requiring pharmacologic intervention define a diagnosis of Neonatal Abstinence Syndrome (NAS). All NICUs are looking for potentially better clinical practices for this population of infants.

Purpose: The purpose of the improvement intervention was to decrease the occurrence and severity of withdrawal symptoms in neonates with NAS through a care setting lower in stimuli than routine NICU minimal stimulation. The primary outcome evaluated was length of hospital stay (LOS). Secondary outcomes included decreasing: the length of time to NAS symptom stability, the severity of symptoms and the days of medication.

Sample: This was a time-interrupted (before and after) prospective cohort study of all infants admitted to Wheaton Franciscan – St. Joseph Level III NICU with a diagnosis of NAS. Seventeen control infants admitted between 1/1/2013 and 8/31/21013 were compared to 19 neonates born during the intervention time period (9/1/2013-11/30/13).

Method: A Multidisciplinary NAS task force in the NICU planned each aspect of the practice improvement: operational; environmental; clinical interventions; family involvement; data management; and staff and physician relations. Up to 4 NAS neonates infants at a time were cared for in a separate nursery by 2 Registered Nurses. Access to the room was restricted; all conversations in the room were done in whispers. Light-screening window shades were used at all times; dim, indirect lighting was used. Strict grouping of cares was done for each infant. All infants remained in the intervention room for a minimum of two weeks.

Results: The control and intervention groups were similar with respect to severity of symptoms at admission and at initiation of treatment. The average length of stay was decreased by 50%, from 39 days for control infants to 18 days for neonates admitted during the intervention period. 24% fewer infants were treated with morphine for NAS symptom management, 50% fewer required phenobarbital, and 66% fewer required clonidine. Fifty-nine percent of control infants required medication at discharge compared to 30% of intervention infants.

Conclusions: The use of a low stimulation environment for care of infants with NAS was associated with a decrease in: length of stay; any pharmacologic intervention; and total days of medication. Changes have been made to medication protocols and to guidelines for use of breast milk with infants experiencing NAS, as infants receive some of the mother’s medication through the breast milk. Improved nurse and parent satisfaction with the care environment for NAS infants has been demonstrated. The outcomes of this practice improvement are being shared with NICUs in Wisconsin and nation-wide.