

NOVEL NEWS

New Opportunities for Verification of Enteral tube Location

From the Editor:

This is the first of what is likely to be several newsletters to provide updates on the NOVEL project activities. I would like to introduce you to our members as this is a project that involves several organizations and some very dedicated individuals:

Beth Lyman MSN RN CNSC, chair- Children's Mercy Kansas City	representing the ASPEN
Sharon Irving PhD RN –Children's Hospital of Philadelphia	representing AACN
LaDonna Northington DNS RN—University of Mississippi School of Nursing	representing SPN
Carol Kemper PhD RN CPHQ—Children's Mercy Kansas City	representing Patient Safety Officers
Kerry Wilder BSN RN MBA—Children's Medical Center of Dallas	representing NICU nurses
Candice Moore BSN RN CPN—Cincinnati Children's Hospital	representing Home Care nurses
Lori Duesing MSN RN CPNP-AC—Children's Hospital of Wisconsin	representing ASPEN
Jane Anne Yaworski MSN RN—Children's Hospital of Pittsburgh	representing ASPEN
Linda Muir MD—Oregon State Health Sciences	representing ASPEN
Deahna Visscher—Denver, CO	parent representative
Mary Beth Privitera –University of Cincinnati	representing biomedical engineers

Publications

This summer we published a review article in *NCP* and *CCN*:

Irving SY, Lyman B, Northington L, Bartlett JA, Kemper C, and the NOVEL Project Work Group. Nasogastric tube placement in children: review of the current literature. *NCP*. 2014;29(3):267-276. Or the same authors and title in *CCN*.2014;34:67-78.

We also published an Invited Commentary in *NCP*; Kemper C, Northington L, Wilder K, Visscher D. A call to action: the development of enteral access safety teams. *NCP*.2014;29(3)264-266. (This publication features comments written by a parent whose child had an NG tube placed into the lung and subsequently died along with comments by a nurse who accidentally placed a tube in the lung of a child who subsequently died. While the nurse and child situation are unrelated the impact of the errors is clearly described by these two women. I recommend you read this and share it with others.)

Use of Temporary Enteral Access Devices in Hospitalized Neonatal and Pediatric Patients

Abstract

Background: Temporary enteral access devices (EAD), such as nasogastric (NG), orogastric (OG) and post pyloric (PP), are used in pediatric and neonatal patients to administer nutrition, fluids, and medications. While the use of these Temporary EAD is common in pediatric care, it is not known how often these devices are used, what in-patient locations have the highest usage, what size tube is used for a given weight or age of patient and how placement is verified per hospital policy.

Materials and Methods: This was a multi-center one day prevalence study. Participating hospitals counted the number of NG, OG, and PP tubes present in their pediatric and neonatal in-patient population. Additional data collected included age, weight and location of the patient, type of hospital, census for that day and the method(s) used to verify initial tube placement.

Results: Of the 63 participating hospitals, there was an overall prevalence of 1991 Temporary EADs in a total pediatric and neonatal inpatient census of 8333 children (24% prevalence). There were 1316 NG (66%), 414 were OG (21%) and 261 PP (17%) EADs. The Neonatal Intensive Care Unit (NICU) had the highest prevalence (61%), followed by a medical/surgical unit (21%) and Pediatric Intensive Care Unit PICU (18%). Verification of EAD placement was reported to be aspiration from the tube (n=21), auscultation (n=18), measurement (n=8), pH (n=10, and xray (n=6).

Conclusion: The use of Temporary EADs is common in pediatric care. There is wide variation in how placement of these tubes is verified.

This is the abstract of the study YOU likely participated in. It has been submitted to JPEN. Preliminary results were presented at several regional and national meetings and the final results have been submitted for oral presentation at Clinical Nutrition Week. Please watch for the publication.



Announcing the start of a NICU Research Study group!

Based on the results of the prevalence study we felt compelled to address the NICU population with an intervention study. This group is being led by Kerry Wilder but we have 2 nurse scientists, 2 neonatologists and 2 staff nurses working as a subgroup of the NOVEL project. The nurse scientists will co-lead the research initiative which will begin with a pilot project involving their NICUs. From there we plan to seek funding from the NINR. Interestingly enough, we have also recently added a nurse from Brazil! As this is in the very formative stage, I am not giving out Kerry's email address as we know many of you are anxious to participate in a study involving NICU patients but at this point, the initial inquiry will be limited to a pilot study.



What's Next?

Well, we are not done trying to fix this issue of how best to verify NG tube placement—not by a long shot!

- ◆ Biomedical engineering students at the University of Cincinnati won 2nd place in a national contest using a concept to verify NG tube placement. A patent has been sought for the concept which was developed while working with our NOVEL project. While there cannot be many details given out at this early stage we will keep you posted on this as the concept is viable.
- ◆ We are working with other inventors regarding pH measurement and the use of a fiberoptic light source at the end of a small bore feeding tube but want to avoid endorsing a single product at this time.
- ◆ We have **ANOTHER STUDY** for you to consider helping us with. LaDonna Northington, Candy Moore and Lori Duesing have designed a survey monkey research study looking at NG tube use in the pediatric homecare patient population. There are 2 surveys: 1 for homecare companies and 1 for families. LaDonna can be reached at lnorthington@umc.edu. We hope to get IRB approval this fall and begin putting the word out soon after. This time you will not need to get IRB approval—YEAH!

In closing, has participation in our first study resulted in any kind of institutional recognition? I know some of you let me know it did. I would love to keep track of that so please email me if you received any kind of recognition or award. I can be reached at blyman@cmh.edu.

On behalf of the NOVEL Project members, I want to thank you for your interest in this very important project. If it was an easy fix, it would have been done long ago. We feel that by pooling our collective talents, rallying our respective memberships and by collaborating with biomedical engineers and inventors the issue of NG tube placement verification can be solved—finally! Rest assured there will be a time when we come back to you for help with another project. Please consider stepping up again as the numbers from this first prevalence study were impressive and that is greatly due to the number of participating organizations.

Thanks for that!