Promoting Nurse Advocacy and Activism Beyond the Bedside

Stephanie Abbu, DNP, RN, CNML, REC-C
Monroe Carell Jr. Children's Hospital at Vanderbilt – Nashville, TN

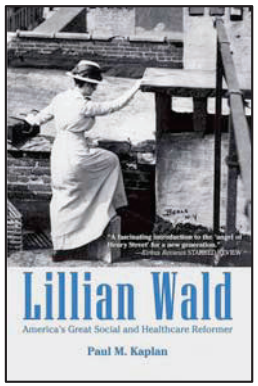
BACKGROUND

- Advocacy is the foundation of the nursing profession. Historically nurses advocated to improve the health and wellbeing of all members of society.
- Our legacy includes using social and political efforts to advocate for issues such as child welfare, poverty, sanitation, access to care, and reproductive rights.
- As members of the most trusted and ethical profession for over two decades in the United States and the healthcare professionals who spend the highest amount of direct care contact with patients, nurses today are still viewed by society as highly qualified to advocate for policy reforms.
- Currently most nurses focus their advocacy efforts on the individual patients in their care and the collective professional voice of nursing is not being heard by legislators or policymakers.

NURSE ADVOCATES

Florence Nightingale initiated public policy reforms in the 1800's. Nightingale advocated for suitable housing, clean air and water, adequate nutrition, and improved maternal and child health.

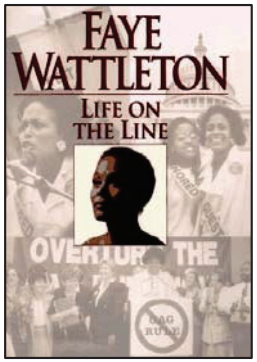
Other early nurse activists, such as Lillian Wald and Margaret Sanger used political discourse to promote health, prevention of disease, advocate for patient's rights, and reform public policies throughout the first half of the 20th century.



Beginning in the mid-twentieth century, there was a shift from home-based and community-based care to care given almost exclusively in hospitals. This care shift changed the nursing profession's focus from community/societal health and prevention needs to a primary focus on the needs of individual patients.

ADVOCACY

- National mandates require nurses to address social injustice, health inequity, health disparity, and socioeconomic disadvantages in society.
- Although nurses embrace the mandate of advocacy for patients, it is less consistently applied to advocating for themselves, the profession, or society-at-large.
- According to the Code of Ethics for Nurses with Interpretive Statements and Nursing: Scope and Standards of Practice responsibilities of a professional nurse include advocacy and to promote the profession through teaching, mentoring, peer review, professional association involvement, community service, and dissemination of new knowledge.



- Nurses experience the daily influence of policy and politics in healthcare yet are the group least likely to engage with lawmakers.
- The most significant barriers noted are time constraints, a lack of trust in politicians, dislike for conflict, and a lack of educational preparation.
- These barriers may seem insurmountable until nurses experience a defining moment in which they cannot overlook an issue or problem caused by a failure in the system, such as issues related to scope of practice, women's reproductive health, or gun violence.

NEXT STEPS

- The crucial role that nurses have in today's dynamically changing healthcare environment mirrors the needs of engagement in policy development and advocacy throughout nursing history.
- To shape policy within their organization and encourage health policy involvement, nurse leaders can role model using advocacy skills beyond the bedside.
- Nurse leaders can promote shared governance models, advocate for improved work conditions, and lead community health initiatives.
- Additionally, nurse leaders can join professional nursing organizations and get involved in local policy making on issues such as full practice authority, nursing school funding to increase the nurse pipeline, and gun reform.

- As the largest group in the global healthcare workforce, nurses are uniquely positioned to see how health policy impacts patients and communities.
- All nurses in all settings can advocate for change, whether within their workplace, nursing organizations, government agencies, or directly with policymakers and elected officials.
- Nurse leaders do not just have the ability, we have the responsibility to prepare future policy influencers.

CONTACT INFORMATION

Stephanie Abbu, DNP, RN, CNML, REC-C
(615) 936-3723
stephanie.n.abbu@vumc.org

Establishing a Neonatal Mock Code Team In A Level 2 Nursery

Ashley Adams, APRN, NNP-BC, Keleigh Warnke, DNP, APRN, NNP-BC, Maria Franco Fuenmayor, MD
Department of Pediatrics, Division of Neonatology, Clear Lake Campus NICU
The University of Texas Medical Branch, Galveston, TX

Abstract

With the reformation of a Level 2 Nursery at our community hospital in February 2022, the need arose for the development of a mock code team to combine disciplines across the Women's Service Department in order provide adequate resuscitation to patients born outside and within the hospital. The development of the mock code team has allowed for multidisciplinary learning integration amongst nurse practitioners, respiratory therapists, emergency department personnel, physicians, both obstetricians and pediatricians, and nursing, including neonatal, mother baby, and labor and delivery. The mock code team performed a needs assessment to identify education gaps to develop and plan monthly scenarios that would rotate across shifts and to include all services.

Objectives

- To identify gaps in education with resuscitation skills and equipment
- To identify education needs across multiple disciplines in emergency situations
- To empower the whole healthcare team during emergent situations

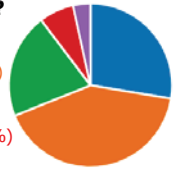
Methods

- Needs assessment survey with 28 questions sent to all RN's, RT's and Neonatal Providers at onset of project
- Example of questions:
  - Years of experience: NICU, newborn resuscitation/care
  - preferred learning style
  - Comfort with emergent situations involving babies
  - Familiarity with code cart and resuscitative and procedural equipment
  - Mock codes/Emergency scenarios beneficial for unit
  - Role in an emergent situation
- Development of unit wide equipment check offs focusing on Ambu bag, Manometer, and T-piece resuscitator
- Multidisciplinary code scenarios followed by debrief

Results

How comfortable are you with emergent skills/code situations for babies?

- Very comfortable (28%)
- Somewhat comfortable (41%)
- Neither comfortable/nor Uncomfortable (21%)
- Somewhat uncomfortable (7%)
- Very uncomfortable (3%)

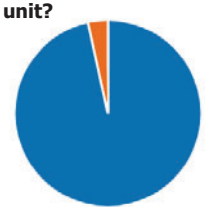


Are you familiar with what your role is in an emergent situation involving a baby?

- Yes (90%)
- No (10%)

Do you think having monthly mock codes/emergency scenarios would be educational and benefit the unit?

- Yes (97%)
- No (3%)



Suggestions on how the unit could work together better/facilitate ongoing learning opportunities:

- Trust, relationships, good communication, Teamwork
- Respect (personal and professional)
- Training agency staff
- Scenarios/Skills check offs
- Feedback without negative criticism, judgement/Debriefing
  - Without pressure/rushing
- Suggestion box
- Monthly in services on a variety of topics/peer presentations

On-Going/Next Steps

- Mock Code Team meetings
- Development of scenarios/mock codes

- Rotating different scenarios for a variety of potential situations
  - Day and night shift handoff
  - ED room transfers
  - Home deliveries and initial assessment

- Incorporate scenarios involving MBU and Emergency department units and staff
- Incorporate trainees
- Assessment of impact using post implementation surveys

Conclusions

- Majority of staff surveyed recommend or agree with ongoing education/monthly scenarios from initial survey
- Some (7%) staff members also request debriefing after scenarios (real and mock codes)
- There is a wide level of comfort with emergent skills and code situations for staff
- There is a variety of learning styles among staff members and further education will need to target all styles
- Education targeting airway management is crucial
- Themes regarding improvement are centered around core NRP skills and cross collaboration

References

[1]Blakey, T. M. (2007). Implementing Newborn Mock Codes. *MCN American Journal of Maternal and Child Nursing, 32* (4), 230-235. DOI: 10.1097/01.NMC.0000281962.56207.44.

[2]Hammontree, J., and Kinderknecht, C.G. (2022). An In Situ Mock Code Program in the Pediatric Intensive Care Unit: a Multimodal Nurse-Led Quality Improvement Initiative. *American Association of Critical Care Nurses*, 42 (2), 42-54. DOI: https://DOI.org/10.4037/ccn2022631.

[3]Rivera, E.K., Siple, L.M., Wicks, E.J., Johnson, H.S., and Skov, C.M. (2020). In Situations Neonatal Mock Codes: Assessing the Impact. *Neonatal Network*, 39 (1), 29-34. DOI: 10.1891/0730-0832.39.1.29.

Acknowledgements/Contacts

I would like to thank all the nurses, RTs and advanced providers who have participated in the surveys and provided feedback on their educational needs. Nursing/respiratory leadership for your support and investment in the needs of their staff.

I would especially like to thank the UTMB Galveston mock code team, specifically nursing lead Aubrey Scharbach RN, in providing the framework for getting this team started at CLC.

One last thank you to Keleigh Warnke, NNP for hiring me, pushing me to do this project, write it up and subsequently helping me put it all together. Your support does not go unrecognized and I am incredibly grateful for all of your help.

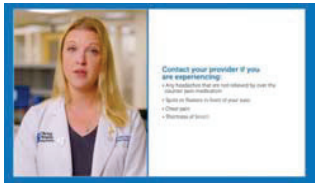
Improving the Discharge Process: Developing a Discharge Education Video

Kate Amin, BSN, RNC-MNN
Libby Frenkel, BSN
Erica Scalise, MSN, RNC-MNN

The Valley Hospital 223 North Van Dien Avenue Ridgewood, NJ 07450 201-447-8162 kamin@valleyhealth.com

SITUATION:

Postpartum discharge instructions are an important part of a patient's birth experience. Finding the method to provide those discharge instructions in a manner that provides accurate information as well as the parent's satisfaction with their hospital experience is important

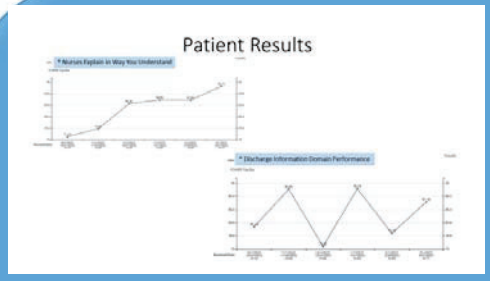


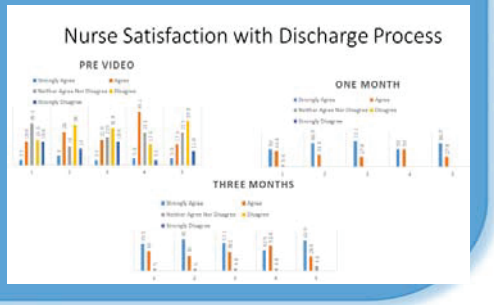
BACKGROUND:

During high census times and onboarding of many new staff members it is vital that the same clear information is given to all patients upon discharge. Leaving education to the morning of discharge leaves time for error or a rushed discharge process. Nurse satisfaction is also a very important factor in retention. Staff feelings on the length of time it took to perform a discharge were surveyed. Staff expressed a need for clear consistent information to be given to all patients.

GOALS:

- To improve the efficacy and effectiveness of the discharge process on the postpartum unit.
- To increase patient satisfaction with their discharge education.
- To improve staff satisfaction with giving discharge education.





Postpartum Discharge Video

Newborn Discharge Video

References:

Henshaw, E. J., Cooper, M. A., Jaramillo, M., Lamp, J. M., Jones, A. L., & Wood, T. L. (2018). "Trying to Figure out If You're Doing Things Right, and Where to Get the Info": Parents Recall Information and Support Needed During the First 6 weeks Postpartum. Maternal & Child Health Journal, 22(11), 1668–1675. https://doi. org.ezproxy.wpunj.edu/10.1007/s10995-018-2565-3

McCarter, D., Law, A. A., Caballo, H., & Pinto, K. (2022). Scoping Review of Postpartum Discharge Education Provided by Nurses. JOGNN: Journal of Obstetric, Gynecologic & Neonatal Nursing, 51(4), 377–387. https://doi.org.ezproxy.wpunj.edu/10.1016/j.jogn.2022.03.002

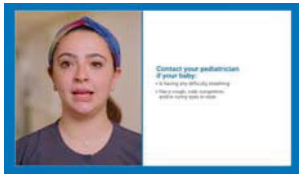
Sönmez, B., & Mamuk, R. (2021). The Effects of Postpartum Education in Primipara Mothers on Their Readiness for Hospital Discharge and Maternal Self-confidence. Medical Journal of Bakirkoy, 17(4), 286–292. https://doi.org.ezproxy.wpunj.edu/10.4274/BMJ.galenos.2021.86158

METHOD:

- Based on feedback and survey results from staff and Press Ganey reports from patients a discharge education video script was developed by the shared governance committee and then filmed using a professional company to create a video that was concise and accurate for both the postpartum patient and newborn baby. Video was then mapped into the patients orders and was able to be viewed on the patient's television.
- Staff were surveyed prior to the start of the process and then at one month and three months post implementation.
- Data was pulled from the Press Ganey reports to assess patient satisfaction.

OUTCOMES:

- After implementation of the discharge education video staff satisfaction with the discharge process increased.
- Patient satisfaction results also showed improvement in the way information was explained as well as signs and symptoms to report.



Use of ultrasound for early detection and intervention of Necrotizing Enterocolitis (NEC)

Benjamin R. Blue MSN, APN-NNP, BC

Clinical Inquiry

In the clinical settings, it has been noted that the utilization of bedside ultrasound seems to exhibit higher sensitivity in detecting pneumatosis compared to the established gold standard of a lateral decubitus abdominal film.

Why investigate: Approximately 7-10% of newborns weighing less than 1500gms experience NEC, with reported mortality rates reaching up to 57%.

Timely identification of NEC can result in decreased complications, encompassing reduced mortality rates and diminished surgical interventions. Additionally, there could be a decrease in both the duration and necessity of antibiotic administration.

PICOT

How Does the utilization of bedside abdominal ultrasound compared to a two-view abdominal film in the NICU population affect detection of Necrotizing Enterocolitis (pneumatosis)?

Literature Search

Keyword's: Necrotizing Enterocolitis (NEC), abdominal Film 2V, Abdominal ultrasound (AUS), KUB vs ABD ultrasound, Pneumatosis, diagnosing NEC, Specificity and Sensitivity of AUS for detection of NEC.

Data Base: Pubmed, Cochrane review, NIH

Articles: Initially, there were over 200 articles. Currently, I'm focusing on 15 articles by narrowing down the results based on the last 5 years. Which reduced to 16 articles based upon quality of research.

Evidence Appraisal

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Level I: Systematic review or meta-analysis											X				
Level II: Randomized controlled trial															
Level III: Controlled trial without randomization															
Level IV: Case-control or cohort study	X				X	X			X			X		X	
Level V: Systematic review of qualitative or descriptive studies															
Level VII: Qualitative or descriptive study (includes evidence implementation projects)		X					X			X			X		X
Level VII: Expert opinion or consensus			X	X				X							

Findings

- AUS plays a significant role in evaluating the presence or absence of pneumatosis when KUB yields inconclusive outcomes.
- A negative detection of pneumatosis through AUS can contribute to clinical decision-making, a decrease in unnecessary treatments and antibiotic administration.
- Notably, ultrasound is particularly advantageous in identifying very early signs of NEC that might elude abdominal radiographs, as well as in
- Identify imminent or complete bowel perforations that warrant prompt surgical intervention.
- Excludes bowel ischemia and NEC where there is uncertainty about abdominal radiographic findings, coupled with a low clinical suspicion. This is associated with shorter durations of antibiotic therapy, enables earlier resumption of feeding and exploration of alternative diagnoses.
- Existing literature underscores that AUS surpasses abdominal radiography in sensitivity when identifying numerous NEC-related indications. Abdominal radiography exhibits a specificity ranging from 92% to 100%, but its sensitivity is notably lower at 13% to 25%.
- In general, radiographic indicators that are highly specific for NEC often lack sensitivity, and those that are sensitive for NEC tend to lack specificity, frequently leading to inconclusive abdominal radiographs and necessitating the use of AUS.

Limitations

- Research is limited to single-site studies, lacking any multicenter studies involving a substantial patient cohort.
- The utilization of ultrasound is restricted by the accessibility of proficient sonographers, as well as the expertise of the sonographer and radiologist responsible for interpreting the study.
- Abdominal ultrasound evaluations could pose challenges for critically ill neonates due to their precarious health status.
- The effectiveness of abdominal ultrasound images can be undermined by the use of High Frequency Oscillator Ventilation (HFOV).

Potential Implementations

- The literature strongly suggests the utilization of AUS when KUB yields inconclusive results for confirming the presence of NEC.
- In a limited test conducted within our unit, AUS was employed for two patients with equivocal KUB:
  - In both instances, the presence of pneumatosis/NEC was ruled out.
  - In the first case, the symptoms were attributed to septicemia, while in the second case, the possible pneumatosis observed on the abdominal film was determined to be a result of the presence of stool.

References:

Acknowledgement: I extend my gratitude to Dr. Yohannan, the NICU director, and Shana Thompson, my team lead, for their support throughout my research. I am also grateful to Lisa Jasin and Karen Beekman, my mentors in evidence-based practice, for their valuable insights and guidance.

ICU Baby: Virtual Visitation From the Parents and Nurses' Perspective in the NICU

Ashley Brantley, DNP, MPH, CNS, RNC-NIC

KAISER PERMANENTE®

Kaiser Permanente Los Angeles Medical Center Neonatal Intensive Care Unit

Introduction:

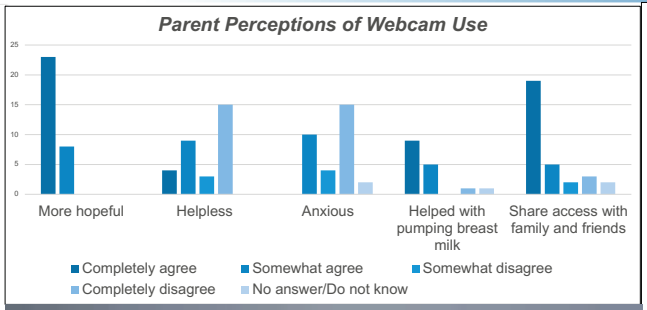
- In the United States, approximately 150,000 infants are admitted to the neonatal intensive care unit (NICU) annually.
- Although the survival rates and outcomes for hospitalized infants have improved, parents of infants admitted to the NICU can experience extreme psychological distress.
- A significant factor influencing parental stress in the NICU is the physical separation between parents and infants.
- Remote streaming webcams have been utilized to bridge the gap between parent-infant separation, which subsequently impacts parental stress.
- Because nursing staff are the primary operators of remote streaming webcam systems in the NICU, it is important to understand how remote video streaming in the NICU impacts nursing practice.

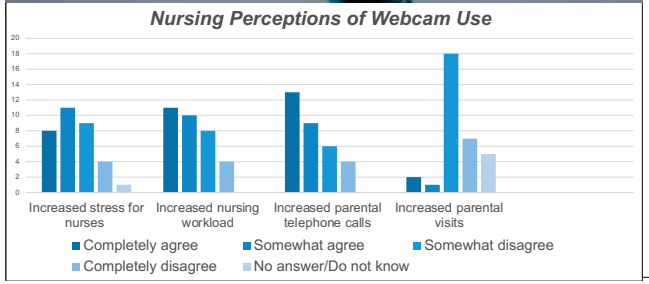
Objectives:

- To understand how the implementation of remote steaming webcams affected overall parental stress and nursing workflow in the NICU.

Methods:

- The remote streaming webcam system was implemented in May 2022.
- 16 mothers and 15 fathers whose infants had an anticipated length of stay of at least five days completed quantitative questionnaires about the remote streaming webcam system.
- 33 nursing participants completed quantitative questionnaires about the remote streaming webcam system, as well.
- Demographic data was collected on all parental and nursing participants.





Results:

- Parent participants provided responses about perceptions of webcam usage and effectiveness in the NICU.
- All parents agreed that viewing infants on a webcam made them feel more hopeful.
- Most parents reported that viewing the webcams provided reassurance about nursing care and reported willingness to share access to the remote streaming system with family and friends.
- Almost all participating mothers agreed that the webcam enhanced breastmilk production.
- Most parents reported rarely or never experiencing technical difficulties, calling the NICU with a concern, question, or request to “fix” the camera, and denied becoming upset or angry with nursing care accessing the remote streaming system.
- Slightly over half of the parent participants disagreed that viewing infants on the webcam created feelings of helplessness and that the use of webcams increased anxiety.
- All parents reported that the webcams did not increase stress.
- Over half of the nursing participants reported that the remote steaming system increased stress and increased the workload for nurses.
- Most nursing participants agreed that parental telephone calls into the NICU increased.
- Nursing participants disagreed that parental visits increased when webcams were used.
- Over half of the nursing participants reported experiencing technical difficulties.
- Over half of the nursing participants reported rarely experiencing parents becoming upset about nursing care while viewing the camera.
- Based on the nurses’ responses, there was no statistically significant evidence indicating that webcams in the NICU improved the quality of care or increased parental stress.

Conclusion:

- Results indicated that webcams decreased parental stress and that parents were more accepting and positive about webcam usage, while nurses reported experiencing increased stress and workload.

A Simple Teaching Tool to Improve Delivery of Discharge Medication Instructions in the Cardiac NICU

Betty M Corahua, BSN, RNC-NIC
Ming Li Herrera, MSN, PNP, RNC-NIC

NewYork-Presbyterian Kids
Morgan Stanley Children's Hospital

Background

- Admission to the Cardiac NICU presents a challenging time for the parents and families of the infant with congenital heart disease.
- In addition to the complex diagnosis, surgery, unexpected setbacks, and prolonged hospital stays, the parents receive an inordinate amount of information at discharge.
- A review in literature shows that families are often not well prepared for the discharge of their high-risk infant which can lead to anxiety and poor outcome. In particular, mothers have found that taking care of a medically fragile child leads to feelings of being stressed and overwhelmed.
- This led our group to examine areas in which we could improve the discharge process.
- The discharge process begins at at admission and our nurses play an important role in this.

Problem Identification

As we prepared our infants and their families for discharge, we noted that our current medication teaching guidelines needed enhancement with:

- Discharge medications sheets that are parent-friendly and easy to understand
- Standard bilingual sheets for all common medications that our infants go home on.
- Establish consistency by our nurses and interdisciplinary team with medication education and teach back for discharge.
- Our focus was our nursing staff, a pre-survey was sent, this showed that the staff felt that with the right tools they can better prepare caregivers for medication administration.

P – How can we improve the confidence and readiness of our parents? How can we make the transition home a successful one? Our target population were infants born with congenital heart disease and their families, with a focus on medication teaching.
I – We compiled a list of all current medications our patients are being discharged with. We implemented simple, parent-friendly medication reference sheets that we gave to caregivers to take home. They are available in English and Spanish.
C – The lack of comprehensive, consistent medication education for our families. Our nurses found teaching medication administration challenging when there was a language barrier and a lack of appropriate tools.
O – Parents who are knowledgeable and have the right tools to take care of their infant, are the parents that will have a successful transition home.
T –Nurses will be surveyed within a year of implementation. Improvements will be made upon the feedback received by our staff.

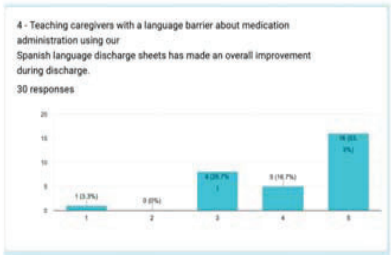
Methods

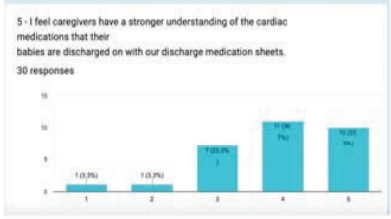
*With the help of our multidisciplinary team, parent-friendly medication sheets were developed as followed.

*Many of our families are Spanish-speaking in our unit, hence medication sheets were developed to ease the transition home and make the discharge process easier for our nurses.

Results and Discussion

The post-survey **shows an improvement** in feedback by our nurses regarding the discharge medication sheets and if they were helpful in the discharge teaching process. Some of the results are shown below.





- The improvement may be due to the standardized medication sheets provided by our multidisciplinary team.
- This is an ongoing project; we will continue to survey our staff to make the necessary improvements to our discharge medication sheets.
- Our goal is to give our families all the tools necessary to have a successful transition home.

Acknowledgment

We would like to thank our pediatric clinical pharmacy manager, Dimitrios A. Savva Pharm D, BCPPS, our clinical nurse educator Maria Cristina Brooks MN, RN, RNC-NIC, and our Infant Cardiac Unit Medical Director, Ganga Krishnamurthy MD, for their assistance with our project.

References

Smith, V., Hwang, S., Dukhovny, D. *et al.* (2013). Neonatal intensive care unit discharge preparation, family readiness and infant outcomes: connecting the dots. *J Perinatal 33,* 415-421. https://doi.org/10.1038/jp.2013.23

Imperial-Perez, F., & Heilemann, M.S.V. (2019). Having to be the one: Mothers providing home care to infants with complex cardiac needs. *American Journal of Critical Care, 28*(5), 354-360. https://doi.org/10.4037/ajcc2019887

Birth to Final Report: Turn-Around Time for Newborn Toxicology Testing

Donna Coy, Joseph Jones, and Mary Jones
United States Drug Testing Laboratories, Inc., Des Plaines, IL

INTRODUCTION

Prenatal exposure to drugs of abuse may lead to many healthcare concerns for the neonate and may lead to neglect once released from the hospital[1]. Meconium (MEC) and umbilical cord tissue segments (UC) are routinely used to assess exposure to drugs during the 3rd trimester[2-5]. Both specimen types offer the ability to determine in utero exposure to drugs of abuse[2-5]. However, very little has been reported in the literature regarding the turn-around-time (TAT) for each of these specimen types from birth to receipt of laboratory report. The specific aims of this retrospective study are twofold. We will report and compare the TAT for each of these specimen types submitted to a national reference laboratory for routine forensic toxicology analysis and the time it takes to perform the tests at the laboratory (LAB TAT).

METHOD

A secondary analysis was performed using historical data for MEC and UC samples received for routine toxicology analysis.

RESULTS

During the study period, our laboratory received 706 MEC and 5358 UC for analysis. The mean time from birth to final report for MEC and UC was 6.9 ± 3.8 days and 4.3 ± 2.4 days, respectively. The birth to final report TAT improvement of UC over MEC was 2.6 days ($p < 0.001$). The mean time from birth to receipt of the specimen at the laboratory for MEC and UC was 4.5 ± days and 2.8 ± days, respectively. UC positive results compared to negative resulted in TAT of 5.4 ± days and 3.5 ± days, respectively. MEC positive results compared to negative resulted in TAT of 8.4 ± days and 5.7 ± days, respectively.

CONCLUSION

Being able to determine the exposure of the neonate to drugs of abuse in utero prior to release of the neonate from the hospital is critical. This study shows that UC is a superior specimen type when results are needed to make informed decisions about the health and well-being of newborns.

REFERENCES

1. Ko, J. Y., D'Angelo, D. V., Haight, S. C., Morrow, B., Cox, S., von Essen, B. S., ... & Barfield, W. D. (2020). Vital signs: prescription opioid pain reliever use during pregnancy—34 US jurisdictions, 2019. *Morbidity and Mortality Weekly Report*, 69(28), 897.
2. 2. Pandya, V., Wilker, C., & McMillin, G. A. (2022). Can Umbilical Cord and Meconium Results Be Directly Compared? Analytical Approach Matters. *Journal of Analytical Toxicology*.
3. Labardee, R. M., Swartzwelder, J. R., Gebhardt, K. E., Pardi, J. A., Dawsey, A. C., Dixon, R. B., & Cotten, S. W. (2017). Method performance and clinical workflow outcomes associated with meconium and umbilical cord toxicology testing. *Clinical Biochemistry*, 50(18), 1093-1097.
4. Colby, J. M., Adams, B. C., Morad, A., Presley, L. D., & Patrick, S. W. (2019). Umbilical cord tissue and meconium may not be equivalent for confirming in utero substance exposure. The Journal of pediatrics, 205, 277-280.
5. Concheiro, M., & Huestis, M. A. (2018). Drug exposure during pregnancy: analytical methods and toxicological findings. *Bioanalysis*, 10(8), 587-606.
6. Images obtained from Adobe®

DISCLAIMER

All authors were employed by the United States Drug Testing Laboratories. All research was internally funded by the United States Drug Testing Laboratories.

Expressing Gratitude To Improve Well-Being In Advanced Practice Registered Nurses

Bridget Cross DNP, APRN, NNP-BC
bkcross@texaschildrens.org

Introduction + Background

- Advanced practice registered nurse (APRN) burnout is harmful:
  - Provider well-being: emotional exhaustion, fatigue, + lower sense of worth
  - Newborn center (NBC): complex + medically fragile patients with challenging family dynamics within acute practice environments
- Ongoing + added COVID-19 pandemic stress felt within high-stakes care units:
  - Amplifies provider moral distress and patient care impacts requiring system + individual well-being solutions
- Expressing gratitude benefits providers and patients by:
  - Lower stress + depression, improved work efficacy, and higher quality patient care
  - Gratitude expressions occur less often though in healthcare settings

Local Problem

- Persistent + fast-paced neonatal intensive care units (NICU) within a large academic specialty hospital in the Texas Medical Center in Houston, Texas

Resources & Knowledge

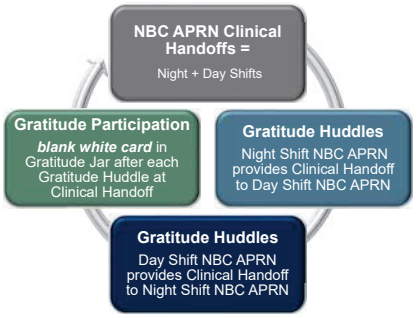
- Diverse APRN provider workforce impacted by NBC workforce challenges:
  - Irregular hours, uncovered shifts, workforce vacancies leading to higher turnover + operational costs
  - Sustained, added, + elevated stressors during the ongoing COVID-19 pandemic
  - Diminished gratitude practices, burnout impact awareness, + knowledge of employee well-being resources including lack of time to utilization them

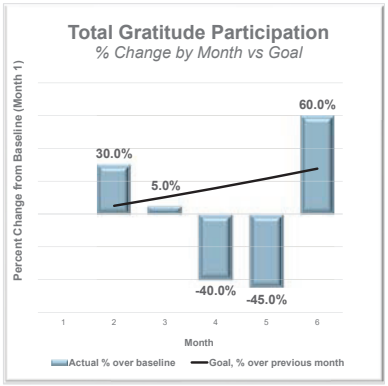
Aim + Goals

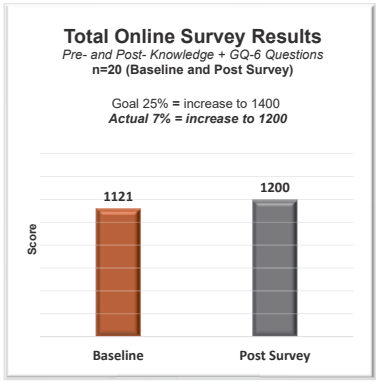
- Increase APRN knowledge of gratitude expressions to foster overall feelings of well-being by:
  - 25% increased knowledge on a post survey over baseline
  - Gratitude card increased 5% monthly

Methods + Implementation Plan

- Pre- + post -on-line knowledge + Gratitude Questionnaire (GQ-6) survey provided at start + project end with GQ-6 question survey only at 3rd month
  - Gratitude Disposition (GQ-6) = recognize, respond, + experience gratitude
- Gratitude Jar with monthly card tally dashboards shared at APRN meetings:
  - Huddles = blank white card dropped in gratitude jar during a proposed clinical handoff process change ***(shown in graphic)***
  - Expressions = positive written notes by APRNs put on monthly changing colored cards + placed anytime in gratitude jar
- Education on employee well-being resources at start, 3rd month, + as available
- Transtheoretical Health Behavior Change + Improving Joy in Work Models
  - Implemented for decreasing barriers to change + increase engagement
- Plan-Do-Study-Act cycles used to test for change improvements







GQ-6 Question #4 - I am grateful to a wide variety of people

	Total Responses	Mean Total Scores	Overall Scores	Goal	Actual %
Baseline	20	6.2	124		
Follow-up	14	6.6			
Post-Survey	20	6.7	134	140	+ 8.1%

Pre- and Post- On-line Survey Question #3:
I've utilized Employee Health + Well-Being resources during COVID-19

	Total Responses	Score	Goal	Actual
Baseline	20	31		
Post-Survey	20	70	38.75	+125.8%

Measures + Analysis

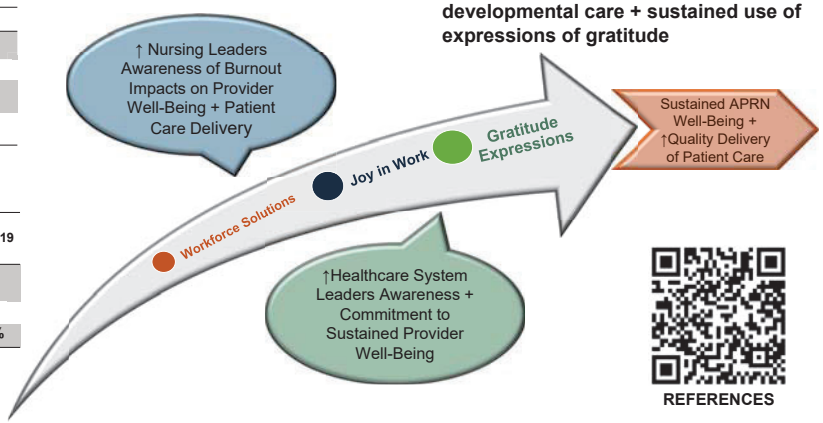
- Descriptive data analysis done monthly, 3rd,month + project end resulting in:
  - APRN Gratitude Participation from total monthly huddles + expressions card tallies
  - APRN Gratitude Knowledge from pre- + post- knowledge + GQ-6 surveys reviews

Results

- Twenty pre- + post- surveys demonstrated a 7% APRN increase knowledge, gratitude disposition + fostering of well-being
- Monthly gratitude jar tallies showed a 5% APRN increase in gratitude participation
- Increased APRN gratitude disposition by 8.1% (GQ-6 question 4) and employee well-being resources use by 125.8% (per question 3 on post survey over baseline)

Conclusion + Practice Implications

- Intensive NBC workplaces, APRN workforce effects + pandemic challenges:
  - Impact care delivery + APRN well-being
  - Compels healthcare systems + nursing leaders' commitment to well-being solutions: **sufficient patient/staff ratios, appropriate shift hour limits, expert + senior workforce retention policies, joy in work strategies, trauma-informed developmental care + sustained use of expressions of gratitude**



REFERENCES

Social Media Campaigns and Influence on Infant Safe Sleep

Peyton Kumpula, Sophia Sanders, Bianca Ventimiglia, BSN Students
Brenda Drury, DNP, RNC-MNN, Faculty Advisor
Illinois Wesleyan University School of Nursing

Literature Review Question

What is known about infant safe sleep and social media campaigns?

Introduction

- Each year, there are 3,400+ Sudden Unexpected Infant Deaths (SUID) in the United States (CDC, 2023). 72% of these deaths occurred due to unsafe sleep environments (Parks et al., 2021).
- The aim of this systematic literature review is to examine how social media messaging about infant sleep safety impacts parenting and caregiver knowledge of infant safe sleep recommendations.
- Current campaigns provide caregivers with information on:
  - Safe sleep recommendations for infants.
  - Infant sleep practices to avoid.
  - Outlets for caregivers to seek support.
- Themes identified:
  - Parents and caregivers frequently go to social media for guidance on parenting topics.
  - Information on infant safe sleep recommendations found on social media is often not reliable or correct.
  - Cultural considerations are important in delivering education about infant safe sleep.

Results

Instagram:

- Only 10% of images are consistent with American Academy of Pediatrics (AAP) guidelines
- Most common inconsistency with guidelines: bedding
  - Posts included stuffed animals, crib bumpers, pillows, unswaddled blankets
- Second most common inconsistency with guidelines: sleeping position
  - Sleeping on the stomach, held by an awake child, sleeping in a sitting position

Facebook:

- Mothers shared personal stories, provided encouragement, reassurance, support and common anxiety stories.
- Post included contraindicating stories from medical doctors, some not following AAP guidelines.
- Minimal posts practiced correct safe sleep environments.

Twitter:

- Common false claims: vaccines and formula cause SIDS
- Unsafe sleep devices advertised: Baby Box Co, Box University, Baby Hammock
- Correct advertisement of safe sleep included:
  - Post from public health agencies
  - Statewide efforts to reduce SIDS

American Academy of Pediatric Guidelines 2022	
Sleep Surface	Firm, flat, non-included sleep surfaces
Breastfeeding	Feeding of human milk is recommended exclusively for ~6 months with continued human milk feeding for 1 year or longer along with food.
Sleep Location	In parents/caregiver's room, close to their bed but on a separate sleep surface designed for infants. Room sharing but NO BED SHARING.
Sleep Bedding	Wearable blanket not loose blankets
Pacifier Use	Pacifier use is recommended at time of sleep. Delay introduction of pacifier in breastfed infant until breastfeeding is well established.
Prenatal and postnatal exposure to substances	Avoid smoke, nicotine, alcohol, marijuana, opioids and illicit drug use during pregnancy and after birth.
Overheating and Head Covering	Avoid use of hats indoors except in the first hours of life or in the NICU.
Use of home cardiorespiratory monitors	There is no data supporting the use of home cardiorespiratory monitors use to reduce the risk of death.
Tummy Time	Encourage tummy time is encourage with awake, supervised infant beginning soon after discharge home.
Swaddling	Stop swaddling when infant shows signs of attempting to roll (usually 3-4 months of age).
Health care professionals and childcare providers	It is essential that this category of professionals endorse and model safe infant sleep guidelines from the beginning of pregnancy.
Media and Manufacturers	Follow safe sleep guidelines in messaging, advertising, production and sales.
Education	Culturally appropriate, respectful and nonjudgmental communication is important as is the use of language interpreting services as needed. Education campaigns need to be well funded, strategically implemented and evaluated and innovative. Socially appropriate intervention methods need to be encouraged and funded.
Research and Surveillance	Research should be continued and funded.

Methods

- A literature search was performed using the 2020 Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines.
- Articles limited from 2018-2023.
- Databases searched included JMIR Publications, Elsevier, National Library of American, Wiley Journal, Springer Link Journals, and The American Academy of Pediatrics.
- The keywords used included SIDs, SUID, infant safe sleep, patient teaching, social media campaigns, and caregivers.
- A total of 9 articles are included in this review.

Conclusions

- SUID rate has not declined since 2000 despite evidence-based recommendations to prevent SUID.
- Infant safe sleep information currently on social media is frequently not consistent with safety recommendations.
- Social media could be one resource for infant safe sleep community outreach education.
- Further research needs to be done on the impact of social media messaging on infant safe sleep practices.

IMPROVING OUTCOMES THROUGH INFANT SAFE SLEEP

Brenda Drury, DNP, RNC-MNN & Denise Hammer, DNP, RNC-NIC
& Stephanie Wollenberg, MSN, RNC-OB

Background

- 3,500 infants age one year and younger die annually from Sudden Unexpected Infant Death (SUID).
- 72% of SUID deaths 2011-2017 occurred in unsafe sleep circumstances (Parks, et al, 2021).
- Identify families without safe infant sleep space and provide resources to remove barriers. (Moon, Hauck & Colson, 2016; Paul, et al., 2017; Moon & Hauck, 2016; Bartick & Tomori, 2018; Bombard, et al., 2018).
- Despite the recognition of the American Academy of Pediatrics (AAP) recommendations as the gold standard, hospital Emergency Department (ED), Obstetrics (OB) and Pediatrics nursing staff are not always knowledgeable of these recommendations (Bartlow, Cartwright & Shefferly, 2016).
- Nursing staff do not consistently model infant safe sleep recommendations (Cadematori, et al., 2016).
- Educating healthcare professionals is beneficial (Moon, Hauck & Colson, 2016).

Project Questions

1. Among ED, OB and Pediatric nursing staff and social workers, will knowledge and modeling of infant safe sleep practices increase following the education intervention?
2. In ED, OB and Pediatrics will there be an increase in families identified in need of a safe infant sleep space for home following implementation of the infant safe sleep intervention bundle compared to prior to the implementation?

Purpose

- Increase infant safe sleep recommendation knowledge and modeling by nursing staff in ED, OB and Pediatrics.
- Provide a safe infant sleep space to those in need.
- Decrease infant lives lost to SUID.

Project Summary

Implementation of a safe sleep bundle of individualized interventions that align with Cribs for Kids® Hospital Certification Toolkit.

- Education for ED, OB and Pediatric nursing staff, including a pre- and post-test, was provided through the People Fluent Learning Module System (PFLMS) with education credits.
- Education for all social workers, including a pre- and post-test was provided through PFLMS.
- Assessment of families with infants for safe sleep space in ED, OB and Pediatrics.
- Provision of safe sleep space (Cribette®) for families identified in need.
- Monthly crib audits on OB-assesses 6 elements of safe sleep.
- Disparities addressed in all educational materials for staff and families.
- Infant safe sleep community education-hospital system social media posts, page on system website and nursing student education module.

Data

- Pre- and post-test-ED, OB and Pediatric nursing staff (G power=35) and all social workers.
- Crib audits on 6 elements of safe sleep for 3 months both pre- and post-intervention.
- Number of social service consults for infants 3 months pre- and post-intervention.

Limitations

- Competing priorities of nursing staff delayed completion of learning modules.
- Difficult to measure gained from project interventions vs increased knowledge and awareness from 6/2022 AAP updated infant safe sleep recommendations.

Implications for Nursing Practice

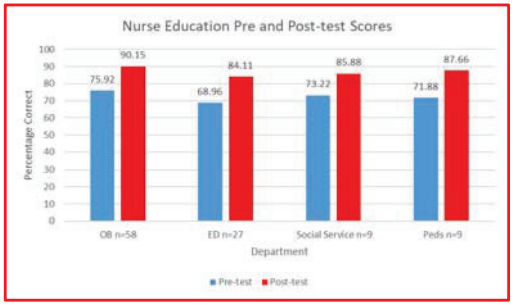
- Knowledge acquisition through education and modeling can change practice.
- Removing barriers to compliance with recommendations for safety and health is beneficial.

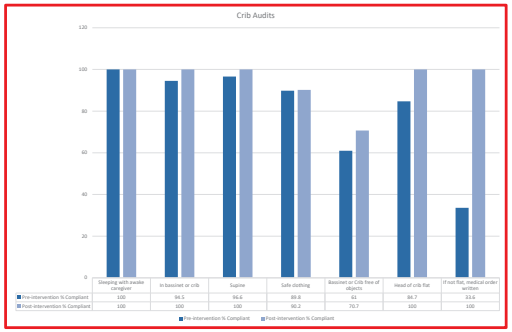
Further Research

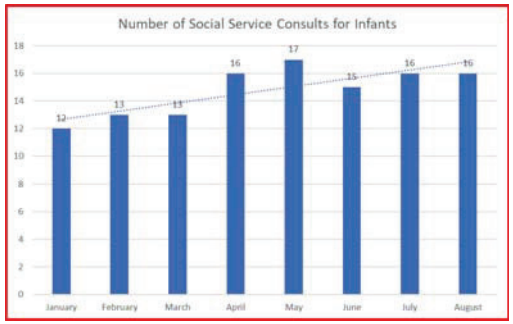
- 60 or 90 day post education post-test would be a good measure of knowledge retention.
- Collect pre and post-test data at annual education.

References
Bartlow, K., Cartwright, S. & Shefferly, R. (2016). Nurses' knowledge and adherence to sudden infant death syndrome prevention guidelines. Pediatric Nursing, 42(1), 7-13.
Bartick, M. & Tomori, C. (2019). Sudden infant death and social justice: A syndemics approach. Maternal and Child Nutrition, 15. https://doi.org/10.1111/mcn.12652
Bombard, J., Kortsmit, K., Cottengim, C. & Johnston, E. (2018). Infant safe sleep practices in the United States. Update from the CDC. American Journal of Nursing, 118(2). http://dx.doi.org/10.1097/01.NAJ.0000549685.59006.ad
Cardematori, M., Piranian, M., Skrzyped, P. & Pron, A. (2016). Caregiver compliance with safe sleep guidelines. Newborn & Infant Nursing Reviews, 16, 122-125. https://doi.org/10.1053/j.nainr.2016.08.004
Moon, R. & Hauck, F. (2016). SIDS risk: It's more than just the sleep environment.Pediatrics.137(1).https://doi.org10.1542/peds.2015-3665
Moon, R., Hauck, F. & Colson, E. (2016). Safe infant sleep interventions: What is the evidence for successful behavior change? Current Pediatric Reviews, 12(1), 67-75. https://dx.doi.org/10.2174%2F1573396311666151026110148
Parks, S., Lambert, A., Hauck, F., Cottengim, C., Faulkner, M. & Shapiro-Mendoza, C. (2021). Explaining sudden unexpected infant deaths, 2011-2017. Pediatrics, 147(5). https://doi.org/10.1542/peds.2020.035873
Paul, I., Hohman, E., Loken, E., Savage, J., Anzman-Frasca, S., Carper, P., Marini, M. & Birch, L. (2017). Mother-infant room-sharing and sleep outcomes in the INSIGHT study. Pediatrics, 140(1). https://doi.org/10.1542/peds.2017-1022

Results







5 Cribettes® distributed 4/1/2022-10/1/2022

Massage Therapy in the NICU: An Innovative Program

Travis Duffey, LMT, Deborah Zerkle, LMT, Ben Reader, PT, DPT

Department of Massage Therapy, Division of Clinical Therapies, Nationwide Children's Hospital, Columbus, OH

Introduction

The benefits of massage therapy (MT) for medically complex neonates are well established in existing literature.[1,2] Nationwide Children's Hospital's (NCH) MT team provides therapeutic intervention across four different neonatal intensive care units (NICUs) specializing in various diagnoses and treatment modalities.

Objective

Highlight the feasibility and utilization of MT for patients in the NICU.

RNs may call upon MT to provide treatments that aim to:

reduce anxiety and pain[3,4] | improve self-regulation[5] | motility[6] | circulation[7]
promote deeper/restorative sleep patterns[8,9]

Program Description

MT Program Highlight in 2022

20 Licensed Massage Therapists	5 Specializing in Neonates

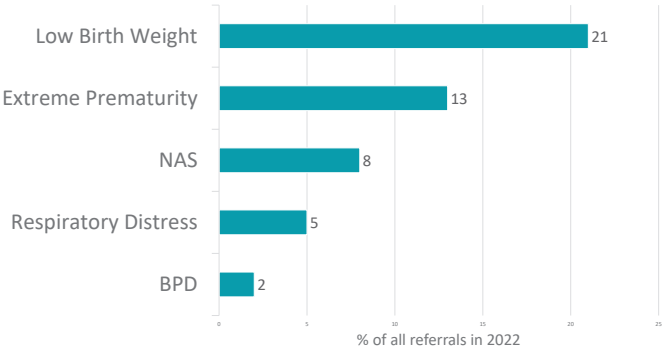
4 NICU Units

Monday-Friday Coverage	3.55 Dedicated FTE

Medical Team Initiated Consults

Referral Rate 55%	582 Consults Received

Fig. 1 Top 5 Diagnoses by Referral



3208 Unique MT Treatments
=
2525 Treatment Hours

Massage therapists not only deliver direct patient care, but also provide integrated hands-on education to facilitate increased parental/caregiver involvement.

Future Directions

The MT team at NCH is a national leader in pediatric MT and has demonstrated high utilization for patients in the NICU. Nurses should be aware of the indications for MT, treatment techniques, and positive effects of MT for neonates.

References

1. Pados BF, McGlothen-Bell K. Benefits of Infant Massage for Infants and Parents in the NICU. *Nurs Womens Health*. 2019;23(3):265-271. doi:10.1016/j.nwh.2019.03.004
2. Mrljak R, Arnsteg Danielsson A, Hedov G, Garmy P. Effects of Infant Massage: A Systematic Review. *Int J Environ Res Public Health*. 2022;19(11):6378. Published 2022 May 24. doi:10.3390/ijerph19116378
3. Sezer Efe Y, Erdem E, Caner N, Güneş T. The effect of gentle human touch on pain, comfort and physiological parameters in preterm infants during heel lancing. *Complement Ther Clin Pract*. 2022;48:101622. doi:10.1016/j.ctcp.2022.101622
4. Hsieh KH, Chen SJ, Tsao PC, et al. The analgesic effect of non-pharmacological interventions to reduce procedural pain in preterm neonates. *Pediatr Neonatol*. 2018;59(1):71-76. doi:10.1016/j.pedneo.2017.02.001
5. Farroni T, Della Longa L, Valori I. The self-regulatory affective touch: a speculative framework for the development of executive functioning. Current Opinion in Behavioral Sciences. 2022;43(1):167-73.
6. Lu LC, Lan SH, Hsieh YP, Lin LY, Chen JC, Lan SJ. Massage therapy for weight gain in preterm neonates: A systematic review and meta-analysis of randomized controlled trials. *Complement Ther Clin Pract*. 2020;39:101168. doi:10.1016/j.ctcp.2020.101168
7. Elsagh A, Lotfi R, Amiri S, Gooya HH. Comparison of Massage and Prone Position on Heart Rate and Blood Oxygen Saturation Level in Preterm Neonates Hospitalized in Neonatal Intensive Care Unit: A Randomized Controlled Trial. *Iran J Nurs Midwifery Res*. 2019;24(5):343-347. doi:10.4103/ijnmr.IJNMR_34_18
8. Budiarti D, Suryawan A. Massage stimulation's effect on melatonin levels in preterm infants via vagal activity. *Bali Medical Journal* . 2023;12(1):267-273.
9. Park J. Sleep Promotion for Preterm Infants in the NICU. *Nurs Womens Health*. 2020;24(1):24-35. doi:10.1016/j.nwh.2019.11.004

Reducing Unplanned Extubations in the Neonatal Intensive Care Unit

Elizabeth Felix, DNP, NNP-BC

CommonSpirit

Introduction

- Unplanned extubation (UE) is defined as the unintended removal of an endotracheal tube (ETT) from the trachea prior to a provider order
- UE is ranked 4th in the US for adverse events in the Neonatal Intensive Care Unit (NICU) [1]
- The acceptable UE rate used in many NICUs across the US is 1 per 100 ventilator days. [2]
- UE may cause an increase in morbidity among neonates by increasing the risk of chronic lung disease and intraventricular hemorrhage. [2]
- UE should be recognized as a preventable event that can lead to patient harm

Background

- **Why are neonates at higher risk than others for UE?**
  - Shorter tracheas, use of uncuffed ETT, lack of routine sedation [3]
  - Challenges of using adhesive tape on immature skin
- **Common causes of UE:**
  - Patient positioning and handling by care providers
  - Suctioning
  - Re-securing the ETT [4]
- **Patients at risk of UE:**
  - Birth weight <1500g
  - <28 weeks gestation or term infants
  - History of previous UE
  - Longer duration of mechanical ventilation [5]
- **Complications of UE:**
  - Acute respiratory and/or cardiovascular collapse requiring resuscitation [2]
    - ➢ Increased risk of intraventricular hemorrhage
  - 49-82% of infants require reintubation after an UE[2,7]
  - Increased risk of chronic lung disease, subglottic stenosis, ventilator associated pneumonia, and overall length of stay [2]
  - Longer hospital stay by 6.5 days [3]
  - Increase hospital costs by as much as $36,692 [3]
    - ➢ Increased ventilator days, length of stay, lab costs, pharmacy cost

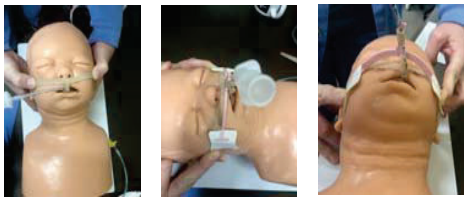


Figure 1. Steps to standardized securement of ETT with tape and commercial device

Methods

- 4-part UE prevention bundle was implemented in a 52-bed level III NICU
  1. Two-person patient positioning with ETT depth and securement verification by both caregivers
  2. Standardized double securement of ETT with H tape method and commercial securing device
  3. High risk airway bedside alert cards
  4. Unplanned Extubation debrief form for staff
     - Included open ended questions about ETT securement, activity during UE, staff perception on cause of UE, and suggestions
- Started January 2022 and is ongoing
- Data collected includes gestational age, birth weight, weight at UE, if the patient needed reintubated within 1 hour of UE and if the patient was diagnosed with BPD at 36 weeks

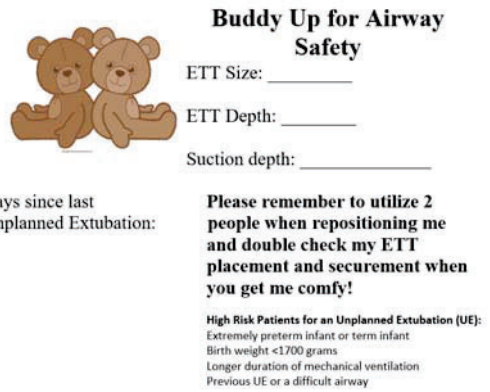
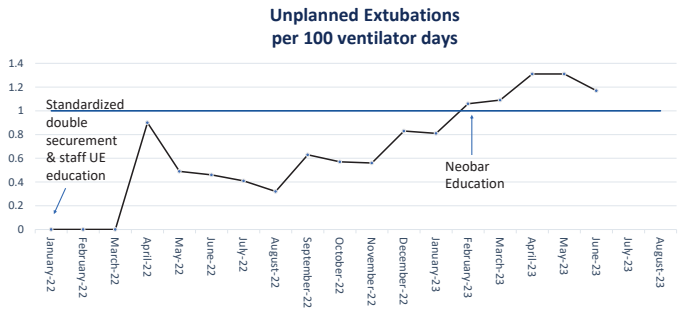
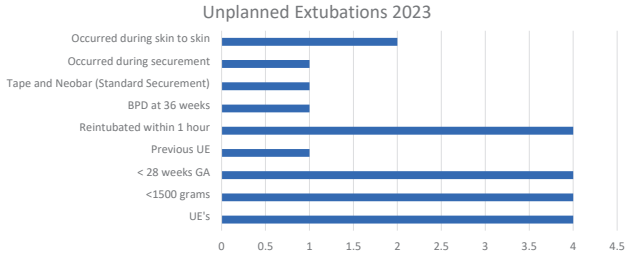


Figure 2. Bedside airway alert card





Results

- Cumulative UE rate decreased from 2.4 to 1.2 per 100 ventilator days
- 7 UEs occurred between January 2022 and July 2023 with a total of 594 ventilator days
- Only 3 had the standardized securement of tape and commercial securing device, 2 had a double tape method, 2 had only single tape method

Discussion

- Literature review revealed that two-person repositioning and standardized securement of the ETT resulted in fewer UEs [2,6]
  - Method of securement doesn't matter if it is standardized for all patients
  - Implementing a new securement method may result in a temporary increase in UE [2]
  - 2-person positioning requires both caregivers to verify securement of the ETT and allows 1 person to focus solely on the ETT
- Bedside alert cards draw immediate attention to the ETT for anyone responding to patient alarms
  - Ensures airway management is a priority for the care team
- UE debrief forms allow for bedside staff engagement in quality improvement
- UE was successfully prevented when utilizing the UE bundle and reduced our UE rate closer to the widely accepted goal of 1 UE per 100 ventilator days

Conclusions

- UEs can cause an increase in morbidity among already fragile neonates in the NICU and should be recognized as a preventable event
- UE can be prevented by implementation of an UE bundle, following the bundle closely, and making changes as needed
- Staff involvement and participation in change is crucial

References

1. Morriss, F. H. (2008). Adverse medical events in the NICU. *NeoReviews, 9*(1). DOI: https://doi-org.cuhsl.creighton.edu/10.1542/neo.9-1-e8
2. Merkel, L., Beers, K., Lewis, M. M., Stauffer, J., Mujsce, D. J., & Kresh, M. J. (2014). Reducing unplanned extubations in the NICU. *Pediatrics, 133*(5), 1367-1372. doi:10.1542/peds.2013-3334
3. Kandil, S. B., Emerson, B. L., Hooper, M., Ciaburri, R., Bruno, C. J., Cummins, N., DeFilippo, V., Blazevich, B., Loth, A., & Grossman, M. (2018). Reducing unplanned extubations across a children's hospital using quality improvement methods. *Pediatric Quality and Safety, 6*(3). DOI: 10.1097/pq9.0000000000000114
4. Hatch, L. D., Grubb, P. H., Markham, M. H., Scott, T. A., Walsh, W. F., Slaughter, J. C., Stark, A. R., & Ely, W. (2017). Effect of anatomical and developmental factors on the risk of unplanned extubation in critically ill newborns. *American Journal of Perinatology, 34*(12), 1234-1240. doi:10.1055/s-0037-1603341
5. Roddy, D. J., Spaeder, M. C., Pastor, W., Stockwell, D. C., & Klugman, D. (2015). Unplanned extubation in children: Impact on hospital cost and length of stay. *Pediatric Critical Care Medicine, 16*(6), 572-575). Doi: 10.1097/PCC.0000000000000406
6. Powell, B. M., Gilbert, E., & Volsko, T. A. (2016). Reducing unplanned extubations in the NICU using lean methodology. *Respiratory Care, 61*(12). 1567-1572. Doi: 10.4187/respcare.04540
7. Nelson, M. U., Pinheiro, J. M. B., Afzal, B. & Meyers, J. M. (2022). Experiences of a regional quality improvement collaborative to reduce unplanned extubations in the neonatal intensive care unit. *Children, 9*(1180). doi.org/10.3390/children9081180

A Standardized Bundle to Prevent SUPC (Sudden Unexpected Postnatal Collapse): A Perinatal Network Project

Lisa Festle, MSN, RNC-NIC, APRN/CNS, Neonatal Outreach Educator &
Stephanie Loiacono, BSN, MS, RNC-OB, CBC, Obstetric Outreach Educator
Loyola Administrative Perinatal Center (APC), Loyola University Medical Center, Maywood, IL

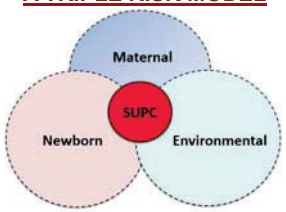
INTRODUCTION

Sudden Unexpected Postnatal Collapse (SUPC) of the newborn (NB) generally affects term/near-term newborns, with a 5 min Apgar score ≥8, who may or may not have needed oxygen, CPAP, or PPV breaths at delivery, and overall are considered "healthy".

Well intentioned hospital practices to initiate skin-to-skin care (SSC) and breastfeeding (BF) immediately after delivery may have the unintended consequence of SUPC, as seen in cases where the "heathy" infant unexpectedly and suddenly becomes limp, pale/cyanotic, bradycardic, apneic, unresponsive, and has cardiac and/or respiratory failure, requiring CPR in the first week of life (1, 2, 5). Death occurs in half of reported cases and neurologic damage with disabilities in the majority of survivors (1, 2).

This may appear to be rare (2.6 - 133/100,000 infants), but different definitions, inclusion/exclusion criteria, and under-reporting are most likely not capturing the true number of these serious events (1, 3, 4).

SUPC RISK FACTORS: A TRIPLE RISK MODEL



- Primip
- Obesity/Large breasts
- Sedations medications and/or Magnesium Sulfate
- General anesthesia
- Smoking during pregnancy

- Oxygen, CPAP, PPV at birth
- 5 min Apgar ≤ 8
- Physiologic changes
- Meconium staining
- Cardiac/respiratory distress

- Unsupervised SSC/BF
- Occluded mouth, nose, neck
- Head covered with blanket → carbon dioxide retention
- Wet blanket → cold stress
- Poor lighting
- Co-bedding/Bed-sharing
- Prone/Side-lying positioning in crib, blankets, pillows
- Maternal/Parental distractions (TV, phone, visitors)

Our Project: Part One

The Loyola Administrative Perinatal Center (APC) is designated by The Illinois Department of Public Health (IDPH) to provide education and quality improvement resources to its network hospitals that improve maternal and newborn outcomes.

PROBLEM - GAP IN EDUCATION:

- Most hospitals do not have standardized protocols or teaching materials regarding potential dangers during SSC/BF (4).
- All 6 of our birthing network hospitals had some safe sleep, SSC, BF, and falls prevention practices/education in place, but only half had some SUPC-specific education for nurses, parents and families.

Prevention of SUPC should focus on: **1)** *Safe, early SSC in the delivery room through day of life 7,* **2)** *Supervised BF,* and **3)** *Safe infant positioning during sleep* (2, 12, 13, 14, 15). In 2022, the APC and its six network hospitals created a standardized SUPC education program for nurses and parents/families focusing on these three areas.

AIM STATEMENTS:

1. Provide SUPC education for nurses and healthcare workers caring for postpartum women and newborns, as evidenced by nurse completion of required education activities, March 31, 2022.
2. Implement standardized parent education, April 1, 2022, with quarterly audits, starting July 1, 2022.
3. Determine effectiveness of education and retention by perinatal staff, as evidenced by 6 month post-assessment survey. Sept 30, 2022.
4. Determine the effectiveness of education and retention by parent, as documented during discharge follow-up phone call, Sept 30, 2022.

PART ONE: METHODS & TIMELINE

Dec 2021	❑ Review SUPC network materials and review literature
Jan-Feb 2022	❑ Standardized SUPC education module for staff, pre- & post-education assessment surveys
March 2022	❑ Assign/Complete online module in Learning Management System (LMS), Pre- and Post-education assessment surveys ❑ Parent Education: Create standardized in-hospital & discharge teaching materials
April 1, 2022 Q2: Apr, May, June	❑ Standardized SUPC education given to parents/families: Posters & Handouts ❑ Develop audit processes
July 2022	❑ Quarterly "Parent Education Given" audits
Aug 2022 Q3: July, Aug, Sept	❑ Parent education audits/results ❑ Parent education assessment: Discharge follow-up phone call question
Sept 2022	❑ Follow-up question included in DC phone calls ❑ 6 month Post-education staff survey re-administered
Oct-Nov 2022 Q4: Oct, Nov, Dec	❑ Parent education audits/results ❑ 6 month Post-education staff survey results ❑ Research checklists & tools

Our Project: Part Two

PROBLEM – SCREENING/ASSESSMENT TOOL:

- Most hospitals do not screen for "at-risk" newborns or mothers for SUPC (4). Screening/assessment tools can be implemented to help identify at risk newborns/mothers to prevent SUPC of the NB (4, 16, 17).

AIM STATEMENTS:

1. Loyola APC network hospitals will develop a SUPC assessment/surveillance tool for its perinatal nurses and healthcare workers, Feb 28, 2023.
2. SUPC Tool will be implemented, April 30, 2023.
3. Sustainability Plan, on-going.

PART TWO: METHODS & TIMELINE

Dec 2022	❑ Prenatal educators to include SUPC information in classes ❑ Review literature again regarding SUPC prevention tools ❑ Independently review SUPC risk assessment and surveillance tools
Jan 2023	❑ Discuss tools with all network educators ❑ Review what each hospital currently assesses newborns for after birth, how often
March 2023	❑ Review SUPC tools already in place at two network hospitals ❑ Share revised RAPPT™ with SpO2 Tool with all network educators
April 2023	❑ Decide on standardized tool and Implement tool at each network hospital ❑ SUPC events to be reported to the APC

SCREENING OPTIONS & COMMITTEE REVIEW:

- **Original RAPPT™ Tool (16):** Redundant to current assessments, time consuming, not user friendly
- **Other Checklist Tools (10, 20, 26):** Can adapt to current documentation
- **Eyes on patient and NB 1st 2 hours of life (5):** AWHONN states "professional" eyes, not patient's significant other/family; Not realistic with current staffing ratios
- **Pulse Oximetry for NB during 1st 2 hours of life (5, 26):** Concerns of frequent alarms, false sense of security, staffing issues
- **Apgar Competency (17):** Felt current education adequate; Consider as review/reminders
- **Revised RAPPT™ w/SpO2*:** Concise, easy to use, includes specific interventions

SELECTED BY NETWORK: *REVISED RAPPT™ with SpO2*

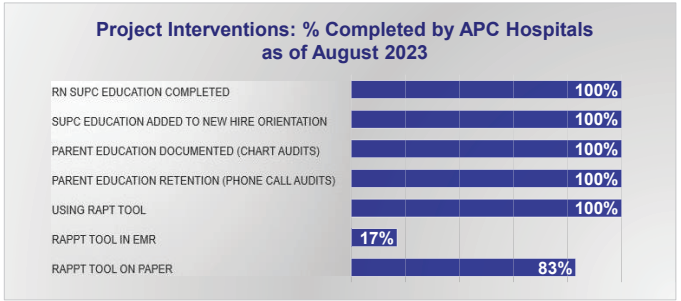
Sign	0	1	2
Respiratory	Apneic	Grunting / flaring/ retracting / irregular	No distress
Activity	No response	Whimpering, crying, hard crying &/or extremities moving	Arms and legs at rest, quiet alert or sleeping or breastfeeding
Perfusion	Pale &/or dusky SpO2 <90%	Acrocyanosis SpO2 90-94%	Visible body parts pink SpO2 ≥95%
Position	Face into chest/breast, and/or nares &/or mouth fully occluded and not visible, and/or neck fully extended or flexed	Partial head turn, Nares or mouth partially occluded or partially visible, &/or neck partially extended or flexed	Head turned to side, Nares and mouth uncovered and visible, neck midline
Tone	No flexion of extremities	Partial flexion of extremities or vigorous motion	Full flexion of extremities, &/or slow, deliberate movements

*Reprinted with permission – S. Ludington-Hoe (2022)

CHALLENGES:

- RN perception of "more work"/getting buy-in
- Staffing (lack of) and changes in leadership
- Risk of inadequate or missed parent education
- Provider Bias
- Different EMRs and delays in implementing change in EMR systems (time constraints/ systematic resistance to add documentation)
- Some hospitals scan completed RAPPT™ Tool into the medical record, but barriers may still exist with work flow efficiencies
- When to use the RAPPT™ Tool? All hospitals decided to assess the NB using every 15 min x 4, and every 30 min x 2, with ability to combine the RAPPT™ with standardized maternal assessments in the first 2 hrs post-delivery; Pulse oximeter as needed
- Special Care Nurseries & Neonatal Intensive Care Units (SCN/NICU) are not using the RAPPT™ Tool, but are still providing SUPC education to parents. Researching need for NICU staff to utilize RAPPT™ in rare instances, i.e. when mother still in OR and NB admitted to SCN/NICU for observation under Pediatric service.

RESULTS:



SUSTAINMENT PLAN:

- ❖ New hires complete education, pre- & post- surveys; monitor for knowledge gained
- ❖ Include SUPC education in annual competencies/unit-based education
- ❖ Update education module & surveys as new research available
- ❖ Audit parent education & retention of knowledge through follow-up phone calls
- ❖ Audit charts for surveillance done and correct assessment documentation
- ❖ Monitor sustainment concerns, frequent educator/leader role changes
- ❖ Report good catches and SUPC identified events
- ❖ Audit charts for documentation of RAPPT™ Tool completed
- ❖ Quarterly network SUPC team meetings

SUMMARY

The Loyola APC and six delivering hospitals (totaling over 10,000 deliveries/year) collaborated to implement a standardized SUPC education and prevention program. The standardized SUPC education and implementation of the RAPPT™ Tool will help perinatal nurses recognize at-risk mothers and newborns, prevent SUPC, and report events which would be previously unidentified and unreported.

Thank you to Roma Allen (Loyola APC Administrator), the network educators, managers, nurses, and staff, for their dedication to keeping perinatal patients safe.

Network Educators during this project:

- Stephanie Loiacono, Lisa Festle - Loyola APC (co-chairs)
- Julie Dervishoski & Lindsey Young - Loyola University Medical Center
- Crystal Antos (manager and co-chair), Allison Henke-Schotke, Kellie Smith, & Angelina Pasika - Ascension Saint Alexius
- Peggy Farrell, Samila Vilic - Ascension Alexian Brothers
- Kara Calhoun -Ascension Resurrection
- Karen Richardson - MacNeal Hospital
- Julie Kerr - Morris Hospital

A special thank you to Dr. Ludington-Hoe for granting us permission to refer to and share her SSC & SUPC work.

SUPC References/Resources

Contact Information
lfestle@lumc.edu
Stephanie.Loiacono@luhs.org

Addressing Inpatient Substance Use Stigma and Bias: An Examination to Support Training for Healthcare Professionals

Tara Flood, DNP, RN, CBC
Jefferson College of Nursing, Philadelphia, PA

Background

The current opioid crisis is a significant public health issue in the United States, especially amongst women of reproductive age. In the last two decades, the rate of opioid use disorder (OUD) in pregnant women has quadrupled.

Women with substance use disorders (SUD) experience more sociodemographic and health disadvantages, pre-existing health conditions, and co-morbid psychiatric diagnoses than their counterparts without SUDs. They are also more likely to experience emergency department visits and hospitalizations during the antenatal period and less likely to utilize prenatal healthcare services.

Significance

Inadequate training and education is provided to nurses around working with the population of pregnant and parenting women with opioid use disorder, especially around the inpatient stabilization process into methadone maintenance.

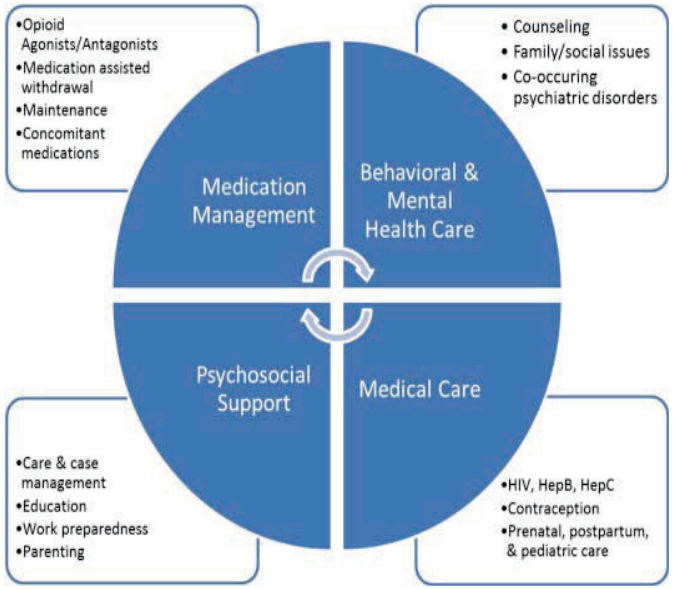
Minimal background training in nursing school is focused on caring for patients with OUD, leaving nurses to develop the necessary skills for optimal patient engagement to be formulated in practice. Newly practicing nurses already face challenges as they adjust from student to provider, creating an environment that doesn't foster self-care leading to eventual burnout and compassion fatigue

Ultimately, this training will have potential to mitigate current health disparities and the burden of stigma women in OUD treatment face.

Methodology

This study utilized mixed methodology to develop and pilot an OUD training for hospital nurses using a participatory research design. The OUD training program was developed using the expertise of faculty, clinical nurses from the antenatal, labor and delivery, and postpartum units.

It utilized a hybrid design, including both online asynchronous content and in-person sessions. The OUD training included content related to maternal opioid use and context, prevalence of maternal OUD, presentation of withdrawal, neonatal abstinence syndrome, effect of maternal OUD on child development, trauma and stress, stigma, implicit bias, the language of OUD/SUD. The training also included a self-compassion/mindfulness component for self-care to address nursing burnout and compassion fatigue.



Results

Our programmatic evaluation demonstrated a collaborative interest amongst both OUD treatment program staff and nursing leadership in the development and implementation of the further training.

Additionally, other nursing units within the academic teaching hospital exhibited interest in adapting the training for their nurses supporting care for populations experiencing opioid misuse.

Challenges identified in this work include stigma/bias, lack of knowledge of substance use (particularly opioids), and facilitation of post-discharge planning and care. The most significant systematic barrier identified was the scheduling of nurse training within the shift to accommodate in-person training components.

Conclusion

Results of this study uncovered gaps in knowledge related to OUD education. Next steps will include training programs for nurses working with pregnant women with OUD undergoing stabilization. This training will have potential to mitigate current health disparities and the burden of stigma women in OUD treatment face.

Lastly, the aim to further this innovative study by creating a multi-stakeholder coalition of healthcare providers, patients, OUD treatment program staff, and hospital administration to inform policy change within the healthcare system is planned.

References

- Cheetham, A., Picco, L., Barnett, A., Lubman, D. I., & Nielsen, S. (2022). The Impact of Stigma on People with Opioid Use Disorder, Opioid Treatment, and Policy. *Substance abuse and rehabilitation*, *13*, 1–12. https://doi.org/10.2147/SAR.S304566
- Kelly JF, Greene MC, Abry A. A US national randomized study to guide how best to reduce stigma when describing drug-related impairment in practice and policy. *Addiction*. 2021;116(7):1757–1767. doi: 10.1111/add.15333 [
- Knaak SM, Christie R, Stuart H. *Stigma and the Opioid Crisis: Final Report*. Ottawa, Canada: Mental Health Commission of Canada; 2019
- Werder K, Curtis A, Reynolds S, Satterfield J. Addressing Bias and Stigma in the Language We Use With Persons With Opioid Use Disorder: A Narrative Review. *Journal of the American Psychiatric Nurses Association*. 2022;28(1):9-22. doi:10.1177/1078390321105012

Opioid Use Disorder (OUD) and Neonatal Abstinence Syndrome (NAS) Education in an Undergraduate Nursing Program

Tara Flood, DNP, RN, CBC
Jefferson College of Nursing, Philadelphia, PA

Background

In 2018 the American Academy of Nursing urged all nursing schools to adopt curriculum to address the opioid epidemic, although few programs have begun this work.

Minimal background training in nursing school is focused on caring for patients with Opiate use disorder (OUD) and Neonatal Abstinence Syndrome (NAS) leaving nurses to develop the necessary skills for optimal patient engagement to be formulated in practice. An undergraduate nursing program in an urban setting developed OUD and NAS education into their curriculum.

Undergraduate nursing students are increasingly encountering patients with opioid use disorder in the clinical setting. Previous research indicates students are exposed to negative messages that might influence their views about patients with opioid use disorder.

Significance

The shortage of content hours related to substance use disorders specifically, opiate use disorder (OUD) and neonatal abstinence syndrome (NAS) in baccalaureate curricula has consequences. Nurse educators can be the driving force to support curriculum changes in undergraduate as well as advanced practice programs.

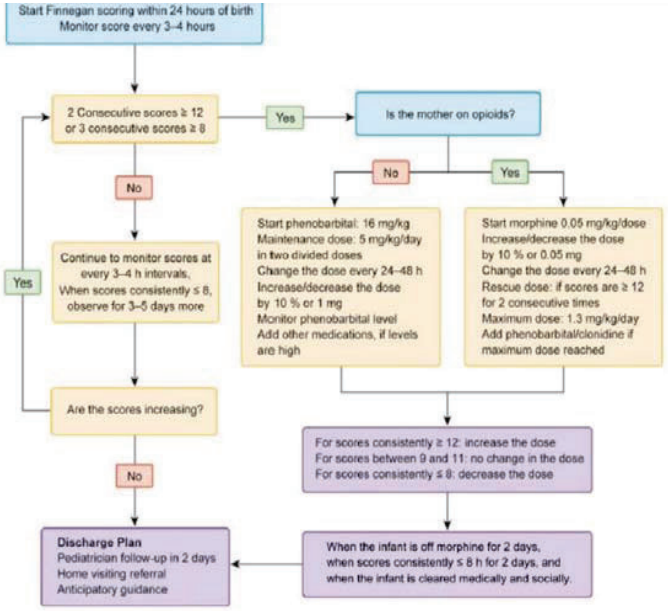
Exposure to individuals experiencing (OUD) in different settings allows nursing students to build competencies throughout their educational experiences. This diverse exposure will also increase students' awareness of the impact of OUD on individuals in multiple settings across the lifespan. Conceptual frameworks can provide an integrated approach throughout the curriculum to address student learning needs.

Clinical / Classroom Experiences

Students receive in person clinical in the Intensive care nursery, Labor and Delivery, and the Maternity floor at one of our 7 hospitals in the system. Students have 135 hours of clinical in this course.

Lecture content and case studies are used to enhance the learning experience. Topics include:

- Opiate use disorder for the pregnant person
- Assessment of a newborn experiencing signs of withdrawal after birth.
- The nursing care, treatment methods ,NAS scoring, and comforting interventions to support the infant with neonatal abstinence syndrome (NAS).
- Maternal bonding measures and family teaching



Outcomes

The inclusion of adequate educational preparation in OUD and NAS education can lead not just to more effective care but also to improved attitudes.

These experiential encounters in practice can facilitate improved attitudes toward working with patients who had OUD problems. Additionally,, students can gain professional satisfaction, and learn to decrease bias and stereotypes when providing care to this mother infant dyad. This education can also mitigate exposure to negative messages that might influence their views about patients with opioid use disorder.

References

- American Association of Colleges of Nursing. (2021). The essentials. Core competencies for professional nursing education. https://www.aacnnuring.org/Portals/42/AcademicNursing/pdf/Essentials-2021.pdf.
- Farrell, M.L., (January 21, 2020) "Substance Use Disorders: A Curriculum Response" *OJIN: The Online Journal of Issues in Nursing* Vol. 25, No. 1
- Lewis, L., & Jarvis, L. (2019). Undergraduate nursing students' experiences and attitudes towards working with patients with opioid use disorder in the clinical setting: A qualitative content analysis, Nurse Education Today, Volume 73, Pages 17-22, https://doi.org/10.1016/j.nedt.2018.11.001.
- Rassool GH, Rawaf S. Predictors of educational outcomes of undergraduate nursing students in alcohol and drug education. (2008) *Nurse Educ Today.*; 28(6):691-701.

@ResearchAtJeff

Multidisciplinary Team Approach to Reduce Unplanned Extubations in the NICU: Going Back to Basics

Jessica M. Dalton, BSN, RN, CCRN, Andrea Konno, MSN, RN, C-ELBW, RNC-NIC, Dolores Suzansky, MSN, RN, CRNP, PMHNP-BC, RNC-NIC

Lehigh Valley Reilly Children's Hospital, Allentown, Pa.

Background

- In spring 2022, a Neonatal Intensive Care Committee at a large, academic, Magnet® hospital noted an increase in the unplanned extubation rate (UER)
- Lack of interdisciplinary communication of all established UE bundle elements
  - FY22 (July 2021-June 2022): UE rate was 1.6
  - 33% of the UE events in FY22 related to tube securement
  - Prompted a multidisciplinary quality improvement initiative for a 'back to basics' approach to decrease the unit's UER

Purpose

- At the conclusion of the offering, the learner will be able to list three evidence-based tactics which reduce the incidence of UE in newborns in the neonatal intensive care setting

Evidence

- Unplanned extubation is the fourth most common adverse event occurring in Neonatal Intensive Care Units in North America (Mahaseth et al., 2020).
- Multi-disciplinary approaches to solve quality of care related issues in the NICU, especially the events surrounding unplanned extubations, have produced clinical outcome improvements (Bretz, et al., 2023).

Photos courtesy of Neotech

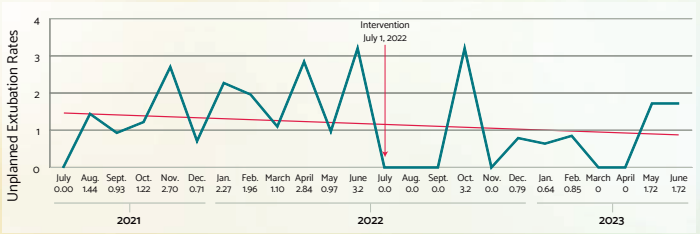
Methods

- April 2022: Tube securement device trialed upon NICU admission
- July 2022: Implementation of UE K-Card with SPS bundle elements and description
  - K-Card placed on unit huddle board at start of shift
  - Reviewed K-cards:
    - RN shift report
    - RN-RT huddle review
    - RN-RT-provider rounds
- Daily rounding by NICU leader and/or NICU respiratory committee member to audit for bundle compliance (QR code linked to survey)
  - Non-compliance addressed in real-time
  - Team to address non-compliance within one hour
  - Created UE champion tip sheet

Results

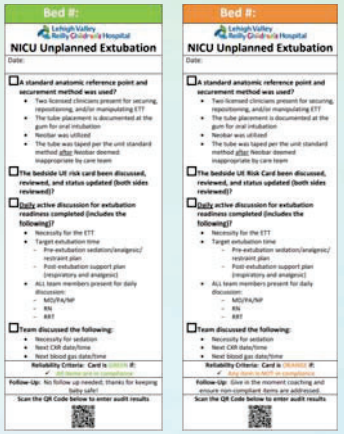
- Post-intervention: July 2022-June 2023: UER decreased to 0.7. This was a 56% reduction.
- July 1, 2022-June 2023 NICU target UER goal=1.39

UNPLANNED EXTUBATION RATES IN THE NICU JULY 2021-JUNE 2023



Future Direction

- Fostering regular multidisciplinary discussions related to the care of the intubated infant increases awareness and provides opportunity for discussion on care needs in the moment
- Ongoing review of each UE event by NICU respiratory committee to identify gaps in the current system and improvements in care
- Strive to maintain UER at or below 0.7 in FY23 and continue success of interventions



REFERENCES

Bretz, G., Change, G., & Bonner, T. (2023). Decreasing unplanned extubations in the NICU, an ongoing quality improvement project. *Neonatal Network, 42*(3), 129-136. https://doi.org/10.1891/NN-2022-0034

Loganathan, P.K., Nair, V., Vine, M., Kostecky, L., Kowal, D., & Soraisham, A. (2017). Quality improvement study on new endotracheal tube securing device (NeoBar) in Neonates. *The Indian Journal of Pediatrics, 84*, 20-24. https://doi.org/10.1007/s12098-016-2231-y

Mahaseth, M., Woldt, E., Zajac, M.E., Mazzeo, B., Basirico, J., & Natarajan, G. (2020). Reducing unplanned extubations in a level IV neonatal intensive care unit: The elusive benchmark. *Pediatric Quality & Safety, 6*(5), 1-7. https://doi.org/10.1097/pq9.0000000000000337

LVHN.org/children

Lehigh Valley Reilly Children's Hospital

Sanitizing Reusable Bottles & Nipples: Meeting Our Patients' Needs AND Following Infection Control Requirements

Lauren Edwards, BSN, RN · Lindsey Garcia, DNP, MBA, MS, RN-CENP · Denise Corso-Greene, MSN, RNC-NIC · Thomas Murray, MD, PhD
Kathy Krechevsky, BS, MT/ASCP, CIC/CBIC · Corinna Clark, PT, DPT, MHA · Jennifer M. Coutinho, MS, CCC-SLP
Kaitlyn McNabb, MS, CCC-SLP · Regina Morgan, OTR · Aimee Seiderer, MS, CCC-SLP

Yale NewHaven Health
Yale New Haven Children's Hospital

MAGNET RECOGNIZED
AMERICAN NURSES CREDENTIALING CENTER
Yale New Haven Hospital's York Street campus and associated ambulatory sites are Magnet-designated by the ANCC.

CLINICAL PROBLEM

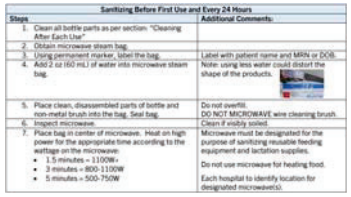
- Premature infants with feeding difficulties are at risk for aspiration and may require the use of specialized infant feeding equipment. This equipment is often not designed to be disposed of after single use.
- The CDC recommends daily sanitization of reusable bottles and nipples for infants that are less than 2 months of age, premature or with compromised immune systems.

STRATEGY

- A multidisciplinary team of nurses, physicians, infection preventionists, quality and safety specialists, and speech and occupational therapists was formed to identify methods for performing bottle sanitization.
- Several options were evaluated: electric bottle sterilizer, dishwasher, microwave steam sterilization, and autoclaving. Risks and benefits of each method were weighed.
- The team considered multiple factors in choosing a method: regulatory requirements for location and maintenance of devices, time spent by staff performing this task, cost, and staff safety.

PRACTICE CHANGE

- Ultimately, the group decided to address this issue in two ways:
  - We adopted the use of a ready-to-feed flow-regulating reusable nipple that is discarded after 24 hours, eliminating the need for daily sanitization.
  - The microwave steam sterilization method was implemented to sanitize other hospital issued reusable specialized feeding equipment before first use and every 24 hours.
  - This method is also utilized for patient's own bottles and nipples when evaluation in the hospital prior to discharge is necessary.
- These processes allow for safe feeding for every infant, regardless of what type of bottle they require, including bottles that they may use from home.



Sanitizing Before First Use and Every 24 Hours

Steps	Additional Comments:
1. Clean all bottle parts as per section: "Cleaning After Each Use"	
2. Obtain microwave steam bag.	
3. Using permanent marker, label the bag.	Label with patient name and MRN or DOB.
4. Add 2 oz (60 mL) of water into microwave steam bag.	Note: using less water could distort the shape of the products.
5. Place clean, disassembled parts of bottle and non-metal brush into the bag. Seal bag.	Do not overfill. DO NOT MICROWAVE wire cleaning brush.
6. Inspect microwave.	Clean if visibly soiled.
7. Place bag in center of microwave. Heat on high power for the appropriate time according to the wattage on the microwave: • 1.5 minutes = 1100W+ • 3 minutes = 800-1100W • 5 minutes = 500-750W	Microwave must be designated for the purpose of sanitizing reusable feeding equipment and lactation supplies. Do not use microwave for heating food. Each hospital to identify location for designated microwave(s).

Cleaning After Each Use

Steps	Additional Comments:
1. Collect supplies	See Materials Chart.
2. Disassemble all parts of system on a clean surface.	Use a clean basin, a disposable pad or a disinfected surface.
3. Thoroughly wash all parts with bottle brushes and warm soapy water. - Use non-metal bottle brush to eliminate debris from the interior of the bottle and collar. - Use the wire cleaning brush to clean the internal vent system, small parts and one-way valve (if present.) Do not use the wire brush on the nipple. - Use chevron tip at the bottom of the bottle brush to eliminate debris inside of the tip of the nipple/teat and assure the nipple/teat hole is clean and open.	
4. Rinse with warm water.	
5. Pull on the nipple/teat in all directions to make sure it does not tear.	Replace the nipple/teat prior to feeding if the integrity is compromised.
6. Allow bottle parts and brushes to dry on a clean surface.	Bottle parts and cleaning brushes can be dried on a clean basin or on a disposable pad. Keep away from dirty equipment and sinks where there may be splash.

EVALUATION

- A standard operating procedure was created outlining the process for cleaning and sanitizing reusable feeding equipment.
- Clinical staff was educated on the details of the procedures for cleaning and sanitizing this equipment.
- Visual job aides were made available near the dedicated microwaves for support and just-in-time training, if needed.
- This practice has been implemented outside of the NICU in inpatient units across the children's health system.

LESSONS LEARNED

- Frequent evaluation of processes allows for identification of evolving best practices in infection control.
- Innovative solutions are required to meet both regulatory requirements and the needs of our patient population.
- Collaboration involving subject matter experts from all perspectives is the key to successful problem solving.

REFERENCES

- Centers for Disease Control. (2023). How to Clean, Sanitize and Store Infant Feeding Items.
- Pediatric Nutrition Practice Group. (2019). Infant and pediatric feedings: Guidelines for preparation of human milk and formula in health care facilities (C. Steele & E. Collins, Eds.; 3rd ed.). American Dietetic Association.

Questions?
Contact us by scanning the QR code:

ENHANCING SpO2 ALARM MANAGEMENT FOR ROP USING THE AAMI TOOLKIT, VISUAL SIGNAGE, and DUAL SIGNATURE SIGN-OFF

Kelly Gilhousen DNP, MSN, RNC-NIC, NPD-BC and Emily Rollé MSN, APRN, NNP-BC

PRACTICE PROBLEM

- Retinopathy of Prematurity (ROP) affects 14,000 to 16,000 babies in the United States and is a leading cause of blindness (Dhingra et al., 2019; Tomita et al., 2021).
- The highest risk factors are a birth weight less than or equal to 1500 grams and/or a gestational age of less than or equal to 32 weeks.
- One nursing prevention measure of ROP includes strict adherence to narrow parameters of acceptable pulse oximetry (Harris et al., 2020).
- During the height of the Covid-19 pandemic, 19% of Neonatal Intensive Care Unit (NICU) nurses were brand new Registered Nurses (RNs) who did not benefit from pre-licensure in-person clinicals as well as delayed NICU specific in-person classes.

Project Aim: To enhance SpO2 alarm management through implementation of the AAMI guidelines, dual signature sign-off, and the development of visual signage.

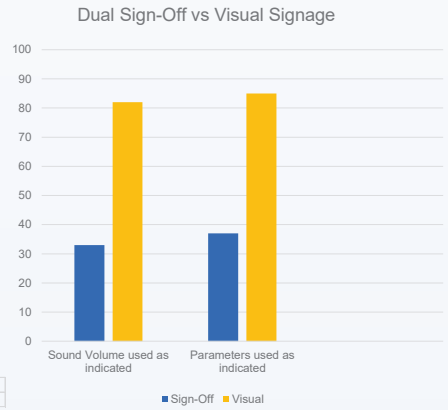
PRACTICE QUESTION

For RNs working in the NICU, will the implementation of the Association for the Advancement of Medical Instrumentation (AAMI) SpO2 Alarm Management Toolkit, dual signature sign-off, and visual signage compared to current practice impact SpO2 clinical alarm management over 10-weeks?

METHODOLOGY

- **Translational Science Model:** Knowledge to Action Framework
- **Setting:** 49-bed, Level III, NICU
- **Sample:** n=80 registered nurses
- **Inclusion Criteria:** All registered nurses working in the NICU
- **Exclusion Criteria:** None
- **Intervention:** The Association for the Advancement of Medical Instrumentation (AAMI) SpO2 Clinical Alarm Management (AAMI, 2018) was used as a guideline.
  - In addition, dual signatures in the Electronic Medical Record (EMR) were designed and visual signage was created to post on monitors of infants meeting criteria for targeted oxygen therapy.
- **Pre/Post Measures:**
  - Pulse oximetry sound volumes and parameters as indicated
  - Documentation of dual sign-off and posting of visual signage
- **Data Analysis:** Comparison of pre-/post-pulse oximetry sound volumes and parameters as indicated using chi-square analysis
- **Timeframe:** 10 weeks

RESULTS



- Nurses verbalized increased knowledge of their role in SpO2 alarm management as a ROP prevention measure.
- The posting of visual signage on monitors of infants receiving targeted oxygen therapy was more effective in ensuring alarm sound volumes and parameters were set as indicated rather than dual-signatures in the EMR.
- The use of visual signage on monitors of infants at-risk for ROP more than doubled the likelihood that alarm sound volume and parameters were set as indicated compared to dual sign-off.
- Pre/Post:
  - Parameters: n=146; $\chi 2$ <.001,
  - Volume: n=146; $\chi 2$ <.001

IMPLICATIONS

- The use of the AAMI Toolkit and visual signage contributes to:
  - Enhancing SpO2 alarm management
  - Empowers nurses, individually and collectively, in creating a safe environment for infants at-risk for developing ROP

CONCLUSIONS

Visual signage should be utilized to improve Spo2 clinical alarm management in neonates at-risk for developing ROP.

REFERENCES

AAMI Foundation. SpO2 alarm management toolkit (2018). https://www.aami.org/docs/default-source/foundation/alarmsaamifdn

Dhingra, D., Katoch, D., Dutta, S., Samanta, R., Aggarwal, K., & Dogra, M. R. (2019). Change in the incidence and severity of retinopathy of prematurity (ROP) in a neonatal intensive care unit in northern India after 20 years: Comparison of two similar prospective cohort studies. *Ophthalmic Epidemiology, 26*(3), 169-174. https://doi.org/10.1080/09286586.2018.1562082

Harris, Wolff, E., Beecroft, G., Troughton, R., & Austin, N. (2020). Neonatal oxygen saturation alarm compliance –an under-recognized source of iatrogenic harm? An audit and survey of nursing opinion. Journal of Neonatal Nursing 26(1), 43-48. https://doi.org/10.1016/j.jnn.2019.07.003

Tomita, Y., Usui-Ouchi, A., Nilsson, A. K., Yang, J., Ko, M., Hellström, A., & Fu, Z. (2021). Metabolism in retinopathy of prematurity. *Life, 11*(11), 1119. https:/doi:10.3390/life11111119/

LOYOLA UNIVERSITY CHICAGO

Preparing people to lead extraordinary lives

Pediatric Providers' Perception of Their Role in Early Detection of Postpartum Depression

Laura De La Pena, PHD, MSN, RNC, C-EFM

Postpartum Depression

- Postpartum depression (PPD) is the most common maternal health problem within the first year after childbirth.
- PPD has various specific negative short and long-term effects on maternal health, child health and development and the overall health of the family.
- The presence of PPD can have a significant impact on an infant's life ranging from delayed developmental milestones to damaging developmental effects on the child's brain.

Purpose and Significance

- Screening, assessing, and treating maternal mental health problems should be a main concern in pediatric care, since maternal depression has major effects on children.
- Although there is evidence of the impact PPD has on the mother-infant dyad, there continues to be a lack of implementation within the pediatric care areas, and the lack of national guidelines and policies.
- Pediatric providers play a significant role in prevention of negative outcomes for the infant-maternal dyad.

Methods

- Eleven providers who see infants within their first year of life from five different organizations were interviewed.
- Using a descriptive, qualitative methodology, the data was analyzed.
- Seven codes were identified consisting of thirteen sub-codes.

Results

- Findings from this study offer much insight into the perceptions of providers that see infants within their first year of life have regarding their role in early detection of PPD.
- Participants unanimously stated the importance of their role in early detection.
- Many issues and concerns did develop from the interviews.
- These issues ranged from inconsistencies regarding the lack of resources available to offer mothers, lack of collaboration, lack of screening protocols, and the lack of education the providers felt they received.

Implications

- Implications in public policy, nursing practice, education, and further research.
- This study demonstrates the urgency for a national and local policy that will assist providers who see infants.
- Nursing can implement proper education, collaboration and hand-off to all healthcare providers.
- Well-educated/well-trained/well-supported nurses and other healthcare providers will be able to provide assistance and prevent negative consequences.
- Further research needs to be conducted to find the best and effective way to screen and implement early detection of PPD.

Conclusion

- This study demonstrates the need to increase awareness, and ensure that proper national guidelines are implemented among healthcare providers, policy makers, and organizations to secure a proper and efficient protocol to ensure the practice of screening all mothers.

Mothers and Newborns Affected by Opioids (MNO)

Laura Gonzalez, PHD, MSN, RNC, C-EFM, Yara Torres, MSN, RNC, C-EFM,
Tracie Shelton, MSN, NEA-BC, RNC

LOYOLA UNIVERSITY HEALTH SYSTEM
We also treat the human spirit.®

MAGNET RECOGNIZED
AMERICAN NURSES CREDENTIALING CENTER

Background

- Opioid use in pregnancy has increased significantly in recent years.
- The increase of opioid use during pregnancy has had a direct impact on maternal mortality.
- In response to the rise in maternal mortality, the 'Mothers and Newborn affected by opioids' (MNO) initiative was implemented to improve care and decrease mortality rates for mothers and newborns.

Purpose/Aims

- The purpose of the MNO initiative was to improve early identification of Opioid Use Disorder (OUD) in pregnancy.
- Link mothers with community resources throughout her gestation.
- Optimize clinical care for mothers and newborns as well as raise awareness of OUD.
- Improve outcomes for opioid exposed newborns (OENs) through key interventions.
- Optimize prevention of OUD.

Methods

- At the outset of the initiative, our multidisciplinary care team received education on actions to foster maternal bonding by minimizing associated stigmas and increase bias awareness.
- Additionally, the care team implemented a validated screening tool, a SBIRT protocol and a process to link mothers with Opioid Use Disorder (OUD) to appropriate resources.
- Protocols and processes were developed to ensure that mothers were supported prenatally, received comfort during delivery with Medication Assisted therapy, and empowered after delivery to participate in the care of their newborns.
- Ongoing education, along with non-pharmacologic care such as breastfeeding, eat-sleep-console and rooming-in were primary initiatives to support mothers caring for newborns experiencing withdrawal.
- Implemented OUD Clinical Care Checklist for every MNO patient presenting to OB clinic or L&D to ensure continuity of MNO elements are in place throughout pregnancy and at discharge.

Sustainability Plan

- Early identification/Counseling
- Identify patients in morning huddle
- Ongoing staff education in Skills Days
- Early linkage to social services
- Educate new staff in orientation
- Assign new staff MNO Healthstream e-learning

Conclusion

- Healthcare providers are more skilled at identifying opioid use early in pregnancy after implementation of validated screening tools.
- Mothers are provided the necessary supported and linked to community resources throughout their gestation and postpartum.
- On admission, every pregnant woman is screened for opioid and substance use.
- To ensure proper management and support, patients identified with an OUD are discussed during Labor and Delivery morning huddles.

ORLANDO HEALTH
Winnie Palmer Hospital
For Women & Babies

Impact of Tissue Adhesive Use with PICC Dressings in the NICU

Prospective Quality Improvement Project

Leanne Gonzalez, DNP, APRN, NNP-BC, CCNS-Neonatal

PDSA Overview

SITUATION

PICC dressings, which included silver algidex and chlorohexidine discs, required frequent dressing changes per the manufacturer's recommendation. These routine dressing changes resulted in inadvertent malposition of the catheter and leaking at the hub was observed related to dressing changes. Nurses also experienced moral distress when an intact dressing needed to be changed because it was "due." A nurse led PICC team sought to find an alternative to placing antimicrobial discs to prevent complications and lengthen the duration of PICC dressings.

BACKGROUND

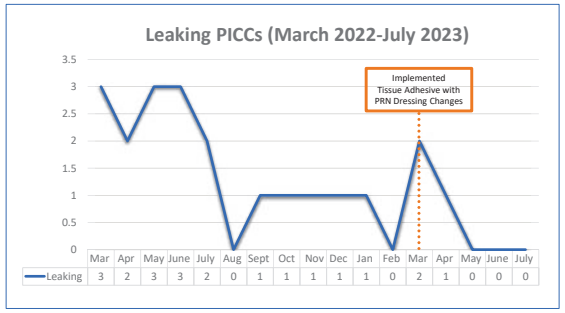
Frequent dressing changes can lead to catheter malposition, skin breakdown, increased risk for infection and may impair catheter integrity. Prior to implementation, several catheters were noted to be leaking at the hub prior to, during and after routine dressing changes. It was unclear if the leaking was due to catheter integrity or dressing removal. The PICC team worried without the patches in place, the catheter would be more likely to become dislodged during dressing removal. However, they wanted to reconsider their dressing change process.

ASSESSMENT

Tissue adhesives decrease catheter migration and dislodgement as well as it exhibits infection preventative properties. PICC team members implemented a quality improvement initiative over a three-month period when antimicrobial discs were replaced with drops of tissue adhesive for securement.

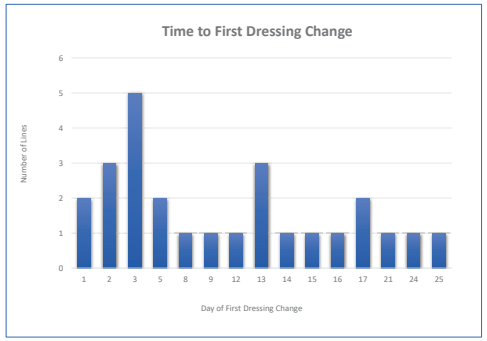
RECOMMENDATION

The dressing change process was changed to occur only when clinically indicated without additional agents and used only a transparent dressing with drops of tissue adhesive. NANN's PICC guidelines directs the change of dressings only when they become non-occlusive, no longer adhere to the catheter or when the skin is damp. Dressings with gauze under the dressing require changes within 48 hours. When there is bleeding which obscures the insertion site's visibility, the dressings need to be changed at 24 hours.



- ✓ 50 out of 80 lines **(63%)** required no dressing change (35 under previous practice)
- ✓ 108 dressing changes would have been expected under previous practice
- ✓ 52 dressing changes were done after implementation of tissue adhesive
- ✓ 56 dressings were avoided **(52%)**, average of 1.6 dressings were saved per line

	Mean	Mode	Median
Time to first dressing change	10	3	9



Methods

- Iowa Model of Evidence Based Practice
- Potential defective PICC catheter lot number found
- Unit wide education for nursing staff to promote longer intervals between dressing changes
- Antimicrobial discs were replaced with drops of tissue adhesive for securement
- Performed prospective chart reviews

Results

With the use of tissue adhesive, dressing durations lengthened to a max of 25 days in one case. Mean interval to first dressing change was 10 days. Fifty out of 80 lines (63%) did not require a dressing change before line removal. PICC line leakage rates dropped from 12% to 3.8%. One infant did experience a skin tear with dressing removal (adhesive remover not used).

Conclusion

The new practice of changing PICC dressings only when clinically indicated and the application of tissue adhesive reduced dressing change frequency, inadvertent malposition of the catheter, leaking and disruption of catheter integrity.

Ongoing Projects

The PICC team used new knowledge and current NANN guidelines to work towards more improvements within the NICU such as learning ultrasound guided insertions and midline placements to optimize success and decrease IV sticks.

Rectal versus Esophageal Temperature Monitoring during Whole-body Cooling – Is there a difference?

C Jaingue, RN; K Adam, MD; E Jano, MD; T Wu, MD, MSc.
Children's Hospital Los Angeles, Department of Pediatrics, Los Angeles, CA

Background

- Neonatal hypoxic-ischemic encephalopathy (HIE) occurs in 1-7 per 1000 live births and results in significant mortality and morbidity.
- Therapeutic hypothermia is effective in decreasing mortality and neurological morbidity in infants with HIE.
- Brain cooling to 33.5 degrees Celsius is neuroprotective, but real- time brain temperature measurement is invasive and not currently feasible.
- Rectal or esophageal temperature may approximate brain temperature and are accepted forms of core temperature monitoring during cooling. It is unclear if they are comparable.

Objective

To compare rectal and esophageal temperature simultaneously during whole body cooling in newborn with HIE.

Methods

- Infants >35 weeks of gestation, with perinatal acidosis and/or extensive resuscitation, and moderate to severe encephalopathy were cooled.
- Both rectal and esophageal temperature were simultaneously monitored.
- Rectal temperature probe was inserted to 5cm past the anus. Esophageal temperature probe were placed into the distal third of esophagus, confirmed by chest x-ray.

Patient Characteristics

	Esophageal Group (N=18)		Rectal Group (N=20)		
	Mean/Total	SD/Percent	Mean/Total	SD/Percent	p-value
Gestation Age (Weeks)	39.1	1.87	39.5	1.22	0.48
Birth Weight (Grams)	2989	488.8	3453	683.9	0.03
Sex					0.78
Male	10	55.6%	12	60.0%	
Female	8	44.4%	8	40.0%	
Apgar					
1 Minute	2	2.	3	2	0.53
5 Minute	5	3	5	3	0.60
HIE Severity					0.08
Moderate	16	88.9%	13	65.0%	
Severe	2	11.1%	7	35.0%	
Cord pH	7.00	0.2	7.0	0.1	0.54
Base Excess	-14.4	6.6	-14.4	7.4	0.97
Number of X-rays	4.8	3.98	5.8	3.41	0.40
Pressor Use	5	27.8%	12	60.0%	0.05
Hydrocortisone Use	2	11.1%	9	45.0%	0.02
Intubated during TH	17	94.4%	16	80.0%	0.19

Results

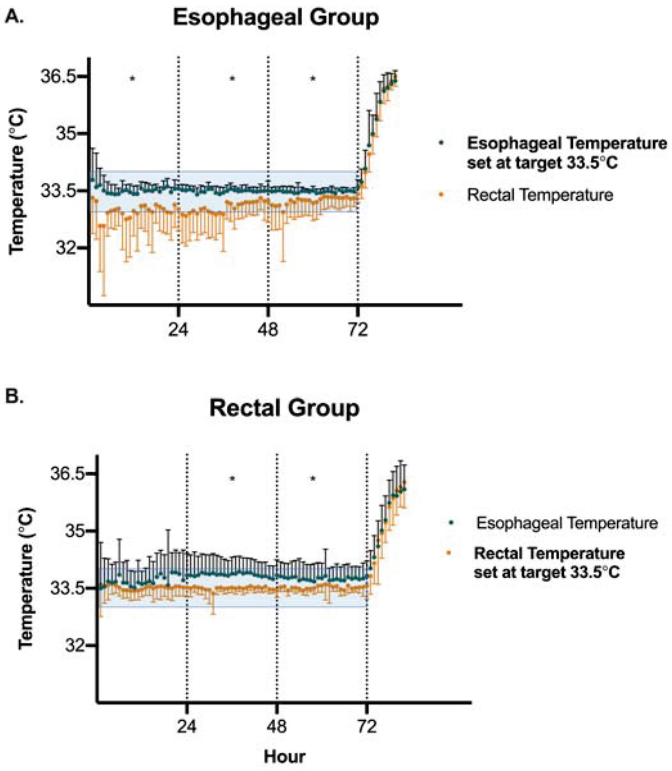
- When cooling by esophageal site, rectal temperature was lower than esophageal temperature in hours 1-24 (17% of the time), 25-48 (67%), and 49-72 (20%), Figure 1A.
- When cooling by rectal site, rectal temperature was lower than esophageal temperature in hours 25-48 (75% of the time) and 49-72 (38%), Figure 1B.

Conclusion

- The findings of this study provide important insights into the differences on the site of servo-controlled cooling.
- Based on variables presented, esophageal temperature may at times rise above 34˚C when TH is performed by servo-controlling rectal temperature.

Results (continued)

Figure 1. Comparison of core temperatures during TH



References

- Jegatheesan et al., Early Screening and Identification of Candidates for Neonatal Therapeutic Hypothermia Toolkit, California Perinatal Quality Care Collaborative 2015
- Chalak et al, ,Perinatal Asphyxia in the Delivery Room: Initial Management and Current Cooling Guidelines 2016
- Thoresen et al, Hypothermia after Perinatal Asphyxia:Selection for Treatment and Cooling Protocal,Journal of Pediatrics 2011

Congenital Syphilis with Maternal RPR Negative: A Case Study

Lisa R Jasin DNP, NNP-BC, Stephen Hunter, MD, FAAP

dayton children's

Diagnosis

- Initially admitted for evaluation for sepsis. After history and physical and diagnostic testing, confirmed diagnosis was:

Congenital syphilis with maternal RPR nonreactive. Infant then developed Pseudoparalysis of Parrot.

Incidence/Etiology

- Maternal RPR was likely negative due to the **Prozone phenomenon** in which a high titer results in a negative RPR with an incidence of 0.83%.
- Skeletal changes that are seen with **Pseudoparalysis of Parrot** are seen in up to 60-80% of case of congenital syphilis.
- **Pseudoparalysis of Parrot** typically involves the upper extremities, and is caused by periostitis typically involving the metaphysis of the long bones

Presentation

- Term female infant. Discharged from the birth hospital and seen in follow up at 3 weeks by pediatrician with macular rash.
- Treated with oral prednisone with no improvement
- Presented to the Emergency Department at 5 weeks with fever of 100.9 (R) and a crusted rash on her legs and face, bullae on her extremities.

Pictures show infant's presentation at the hospital at the time of admission

Mottling in legs with stimulation

Crusted rash on face

Bullae burst on feet/ ankles

Differential Diagnoses: Erythema Multiforme, herpes simplex virus, staphylococcus skin infection, respiratory viral illness, urinary tract infection, sepsis, and meningitis.

Overview of Diagnostic Process

- Testing in the Emergency Room included:
  - Blood, wound, urine, CSF cultures
  - HSV PCR of blood, wound, and CSF
- Review of maternal labs
  - GBS negative, RPR NR, HBSAG negative, HIV negative, Hx trichomonas (treated), HPV carrier
- In the NICU, further history and physical obtained which revealed an oval popular rash on lower extremities and chest for just over two weeks prior to admission.

Mother provided pictures of the rash that had been taken a week prior to admission.

- **In light of the initial papular rash, differential diagnosis expanded to include congenital syphilis and the infant's RPR was obtained.**
- Within 72 hours the infant's RPR returned positive with titer 1:16
- Maternal retesting was positive

Xrays showed **metaphyseal irregularity on multiple long bones, most striking at the distal femur** (as well as proximal and distal tibia and fibula, and distal radius and ulna bilaterally). A mild periosteal reaction was noted along multiple long bones, compatible with congenital syphilis.

- Ophthalmology exam demonstrated bilateral keratitis and anterior uveitis.
- **Approximately 96 hours after admission, the infant stopped moving her arms and made no antigravity movements of her upper extremities.**
- Cranial nerves intact, grasp absent, Moro reflex intact with weak shoulder abduction
- **Differential diagnoses**: encephalitis, meningitis, myelitis (low suspicion), brachial plexitis/plexopathy, or joint pathology
- Brain MRI normal, 24-hour video EEG showed no seizure activity.
- Improved by 72 hours after onset. Attributed to Pseudoparalysis of Parrot.

Management

Initial presentation

- Antibiotics started at admission (Ampicillin and Gentamicin) and discontinued at 48 hours when cultures remained negative
- ECHO obtained for heart murmur: Small PFO with left to right shunt
- HSV PCR remained negative, Acyclovir until negative
- Rash improved by 48 hours and the infant was feeding well

Positive RPR

- RPR returned at just under 72 hours and was reactive with a titer 1:16
- Penicillin G started for completion of treatment
- Infectious Disease and Social Work consulted
- Maternal repeat testing positive
- Infant HIV testing obtained secondary to concern for HIV correlation with the Prozone Phenomenon.
- Repeat ABR after treatment consistent with mild hearing loss in left ear

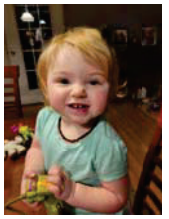
Lack of movement of upper extremities

- Neurology consulted, MRI and video EEG obtained
- Differential diagnoses considered less likely considering clinical exam with improvement
- Rest for upper extremities

Discussion of Outcomes

- Long term follow up with ophthalmology, cardiology, audiology, infectious disease
- Infant's uveitis and keratitis were resolved by 2 month ophthalmology visit
- Repeat ABR at 4 months showed normal hearing in both ears
- Echocardiogram at 7 months was normal
- Physical therapy for pseudoparalysis continued for 7 months outpatient and she was then discharged from
- Infectious Disease continues to follow her. Six months after treatment, T. Pallidum Ab (FTA-ABS, serum igG reactive, RPR non-reactive
- She is now 23 months old and is doing wonderfully. Her mother has requested any and all information to be shared to educate and help other children

"She is thriving! A very active and happy girl"



MAGNET RECOGNIZED AMERICAN NURSES CREDENTIALING CENTER

Brigid's Path: A Homelike Environment for Substance Exposed Infants

Lisa R Jasin DNP, NNP-BC and Stephen Hunter, MD, FAAP

Problem

Neonatal Abstinence Syndrome has taken a heavy toll on Ohio's healthcare system and on our communities.

- In 2015, the Ohio Department of Health estimated that there were 15.8 infants per 1,000 live births who were born with NAS; this estimate is 2.7 times higher than the average from 28 reporting states during the same period.
- **In 2015, there were 2100 babies born with NAS in Ohio.**
- Treatment of NAS only occurs in hospital settings, the cost of which was $133 million for 2,174 babies, on average $61,178 per stay.
- These costs did not include post-hospital care for infants nor costs involved in providing treatment for their families.
- **Dayton, OH is recognized nationally as the epicenter of the heroin epidemic.**

Out of this great need, Brigid's Path was founded. **Brigid's Path is a children's crisis care facility licensed by the Ohio Department of Job and Family Services and is the first of its kind in the state of Ohio and second in the nation.** We are a non-judgmental, family-centered, secured facility providing services in a home-like setting. The facility is open 24 hours a day, 7 days a week with around the clock staff meeting the needs of babies and families.

Each infant has a private room with a crib, rocking chair and a bed for a parent

Solution

Infant Care

- 24-hour medical care with a 2 baby to 1 medical professional ratio
- Nurses and Patient Care Assistants provide care
- Able to provide NG feeds
- Volunteer cuddlers available when families can not be there
- Emphasis on non-pharmacologic care: Kangaroo care, swaddling, rocking, cuddling, gentle swinging, responsive beds
- Family centered atmosphere, family can room in
- Transcutaneous and serum bilirubin, phototherapy
- Lab availability
- NNP and Neonatologists available for around the clock support

Caregiver Support

- Family advocates for family support
- Families receive education on their child's individual needs
- Provide bonding opportunities and education
- Follow up and support after baby leaves Brigid's Path with family advocate based on caregiver needs
- Help connect to resources in the community to support the baby and family
- Supervised family visitation with infants in foster care after discharge
- Nurses, patient care assistants, and volunteers receive special education to actively support strengths and abilities of mothers and the goals they have identified

Our Mission

Brigid's Path improves the health of newborn babies and mothers impacted by addiction. We offer grace for the past, support for the present, and hope for the future

Our Values

We are BOLD
We are FAMILY CHAMPIONS
We strive for a SPIRIT OF HUMILITY
We are GROUNDED IN FAITH
We are GOOD STEWARDS

Outcomes

Community Assessment completed by Wright State University MPH students

- **infants who came to Brigid's Path were four times less likely to be placed in foster care** and were able to be placed with mother or kinship care.
- 85% of infants cared for went home with mothers or family members and avoided foster care placement
- The combination of non-pharmacological and pharmacological care with low patient to staff ratios sets Brigid's Path apart from traditional programs dealing with NAS.

Qualitative Interview:

- "In the hospital setting just naturally you're, you have to react to those life-threatening events. Even if you have... a baby going through withdrawal, that's crying, that has to be put on the back burner until you care for the life threatening events, but here we don't, we don't have that. So we can intervene for her. And I think too, like I said, the smaller staff, we just get to know the babies a little bit better and can anticipate their needs a little bit quicker."

Financial

- More than 200 babies cared for since opening in 2017
- Decreased NICU stays results in money saved.
- Cost of treating 60 babies in a hospital + placement in foster care = **$6.7 million/year**
- Cost of treating 60 babies at Residential Infant Care Center with medically necessary services for baby + wraparound and social services for mom and baby = **$3.9 million/year**

A Family Center provides a kitchen for parents to gather. Cooking and nutrition classes are offered.