



NICU Performance: Missed Nursing Care and Infant Outcomes

AUDREY FRETZIN

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Project Overview

- ▶ National *multi* site study with 3 aims
- ▶ Purpose: to better understand the variation across NICUs in infant outcomes and parent satisfaction and how nursing care affects them
- ▶ Timetable: 9/30/16 - 7/31/20
- ▶ Investigators:
 - ▶ Eileen Lake, PI
 - ▶ Emily Cramer, Co-I (Kansas)
 - ▶ Jeaneette Rogowski, Co-I
 - ▶ Doug Staiger, Co-I (Dartmouth)
 - ▶ Linda Hatfield, Co-I (Penn)



Aims

- ▶ Aim 1: Determine associations between missed nursing care and NICU patient outcomes for Very Low Birth Weight infants
 - ▶ Hypothesis: VLBW babies with higher missed care -> higher mortality, infection and longer Length of Stay
 - ▶ Missed Nursing Care= any aspect of required patient care that is omitted or delayed
- ▶ Aim 2: Determine the association between missed nursing care and parent satisfaction with care in the NICU
 - ▶ Hypothesis: Higher missed care -> lower parent satisfaction
- ▶ Aim 3: Identify nurse and NICU organizational factors associated with missed nursing care
 - ▶ Hypothesis: higher workloads and poorer work environments -> higher missed care

Current Aim- Aim 2

- ▶ This project deals with **Aim 2**
 - ▶ **24** selected NICUs conduct a survey of 10 parents/guardians of infants about their NICU experience
- ▶ Data will be linked to survey
 - ▶ Compare nurse staffing, nurse work environment and **missed nursing care**
 - ▶ Goal: find strategies to improve **infant outcomes** and **parent satisfaction**

Aim 2- NICU Sample



Requirements for Hospital Participation

- ▶ Choose a project coordinator- someone not involved in clinical care of the patient
 - ▶ Asking to evaluate NICU care, seems unfair if they are providing the care
 - ▶ Ex. ANM, social worker, discharge coordinator, case manager
- ▶ Participate in a training conference call with Penn research team
- ▶ Obtain IRB approval
 - ▶ 14 sites added to Penn protocol for IRB Reliance on Penn
 - ▶ 13 sites used their own hospital IRB protocol approval
 - ▶ 2 sites added their project coordinators to our Penn research team
 - ▶ 4 sites needing their own IRB approval who have not completed it

Garnering Hospital Participation- Incentives

- ▶ \$25 per parent participant
- ▶ \$250 – hospital/NICU payment
- ▶ ANT subscription
 - ▶ Official Journal of American Nurses Association
- ▶ CEU (1.25)
- ▶ Study Results Report

American Nurse
today
Official journal of
ANA
AMERICAN NURSES
ASSOCIATION



Recruiting Parents for the Survey

- ▶ Recruit 10 parents/caregivers of NICU infants to complete a 15 minute survey
- ▶ Who is eligible?
 - ▶ Infant who's going to be discharged in next 24 hours
 - ▶ Infant who's been in the NICU for at least 48 hours at point of recruitment
- ▶ Parents should be consecutively recruited
 - ▶ Trying not to miss eligible parents

My Role

- ▶ 1. Training Webinar
- ▶ 2. Study Material Packets
- ▶ 3. Prepare Purchase Service Agreements
- ▶ 4. FAQ
- ▶ 5. Tracking Sheet with NICU Sites
- ▶ 6. Data Entry
- ▶ 7. Data Analysis and Table of Findings

Training Webinar Agenda- Week of June 11th

- ▶ Procedures
 - ▶ Intro of study
 - ▶ Description of research team
 - ▶ Project Timeline
 - ▶ Status of IRB approvals
 - ▶ PSA to transfer funds
 - ▶ Incentives
 - ▶ Study Material Packets

Training Webinar Agenda

- ▶ Study Materials
 - ▶ Invitation Page- provides informed consent
 - ▶ Parent Demographic Page
 - ▶ EMPATHIC Survey (English/Spanish)
- ▶ Data Collection Procedure
- ▶ Transferring Data to Penn
- ▶ One-to-One Consults if needed
- ▶ Plan: Share Preliminary Findings in Future Webinar 2019

Empathic Survey

- ▶ Sections:
 - ▶ Information- feeling informed about child care
 - ▶ Care and Treatment- comfort, who was responsible for care, prep for discharge
 - ▶ Organization- efficiency, cleanliness, noise volume
 - ▶ Parental Participation- involvement in decision-making, closeness to child
 - ▶ Professional Attitude- respecting privacy, attention, and cultural background
 - ▶ Overall Experience- Recommending NICU to others and returning themselves
 - ▶ Rate Doctors and Nurses
 - ▶ Free write their story/ experience

Script- English Sample

- ▶ “Good morning, my name is _____. Our NICU—that's the neonatal intensive care unit in which your child is currently being treated—is participating in a national study about parents' experiences in the NICU, funded by the U.S. quality and safety agency. You are eligible to be in the study because your child is expected to be discharged in the next day. I would like to tell you about the study and show you the survey, and you can decide if you would like to take it. It would take less than 10 minutes. You will receive \$25.00, and your responses would be sealed in an envelope and remain confidential.”

Study Package Table of Contents

- ▶ A tracking sheet
- ▶ Cash or gift cards as applicable
- ▶ Scripts (both English and Spanish)
- ▶ 20 copies of the informed consent cover letter (number of English vs. Spanish packets is tailored towards site-specific requests)

Study Package Table of Contents

- ▶ 20 copies of the parent survey (10 extra for parents who agree to provide demographic information, but not complete the survey) and the number of English vs. Spanish packets is tailored towards site-specific requests. Each survey contains:
 - ▶ Demographic page
 - ▶ 38 item English and Spanish EMPATHIC Survey
 - ▶ To code each survey, we will put an alphabet letter associated with each site and label survey packets with that letter and 01 through 20 (example: A01 – A20)
- ▶ 20 envelopes for parents to seal surveys in to return them to the project coordinator
- ▶ FedEx envelopes with prepaid shipping labels to mail back surveys to Penn

FAQ

- ▶ Created an FAQ to document and address what issues have come up with sites before and during documentation
- ▶ Address each question
- ▶ Update and circulate once a week during data collection period

FAQ

- ▶ Q: What if an infant is being transferred to a higher level of care?
 - ▶ A: This infant is not eligible, as we want to be consistent with patients being discharged to go home.
- ▶ Q: What does it mean to “miss” a patient?
 - ▶ A: This means the baby was discharged home during your data collection period but the parent was not recruited to be part of this study. This may happen if an infant is discharged rapidly or if you are not available to recruit that parent in the 24 hour window of eligibility.
- ▶ Q: Do we have to come in on weekends? How does this work with vacation days?
 - ▶ A: Data collection is continuous in this study. Therefore, the data need to be collected every day including weekends, but you can ask someone such as the Assistant Nurse Manager or Nurse Manager to collect the data instead of you on days you won't be in the NICU. If you wish to have the ANM or NM collect data for you, they need to have human subjects certification required by your hospital.

Tracking Sheet in Package

NICU Parent Survey Tracking Sheet

Please circle the outcome for each eligible parent below. (Site: __)

Eligible Parent	Date Recruited	Circle the Outcome for Each Eligible Parent				Language Survey was Given in:
1		survey and demographic sheet completed received incentive: X _____	survey declined; demographic sheet completed	survey and demographic sheet declined	parent missed	English Spanish Other: _____
2		survey and demographic sheet completed received incentive: X _____	survey declined; demographic sheet completed	survey and demographic sheet declined	parent missed	English Spanish Other: _____

Tracking Sheet with NICU Sites

Site code	# eligible	# complete d packets	# demogra phics only	# refusing both	# parents missed	First day of data collection	Last day of data collection	# Spanish
C	11	10	0	0	1	1-Jul	16-Jul	0
O	11	10	0	0	1	9-Jul	18-Jul	0
P	10	10	0	0	0	6-Jul	23-Jul	2
D	12	10	0	0	2	9-Jul	23-Jul	0
V	10	10	0	0	0	19-Jul	25-Jul	1
W	11	10	0	0	1	20-Jul	30-Jul	1
DD	13	10	1	0	2	26-Jul	6-Aug	0

Data Entry

- ▶ Working on a program called REDCap
- ▶ Has a codebook with specifications and parameters that help prevent data entry errors

REDCap™

Logged in as afretzin | Log out

My Projects
Project Home or Project Setup
REDCap Messenger
Project status: **Production**

Collection

Record Status Dashboard
Add / Edit Records
[Eligible Parent No. C1](#) Select other record

Collection Instruments:
Tracking Sheet
Demographics
Survey

Actions: Download PDF of instrument(s) | VIDEO: Basic data entry

NICU Parent Survey Tracking Sheet

Survey

Editing existing Eligible Parent No. C1

Eligible Parent No. C1

Who is completing this questionnaire?

Mother
 Father
 Mother and father together
 Other reset

How long was your infant's stay on this nursing unit? days

On a typical day during your infant's stay, how much time would you spend on the nursing unit? hours

PART 2: YOUR EXPERIENCES

In this part we invite you to rate your experiences related to the care in the Neonatal Intensive Care Unit (NICU). If you agree with a statement, you should check a box more to the right. If not, you should check a box more to the left. Certain statements may not apply to your situation. If so, please check the box in the 'not applicable' column.

Information

		certainly NO					certainly YES	not applicable
The doctors talked to us daily about the care and treatment of our child.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
The nurses talked to us daily about the care and treatment of our child.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

reset

Table Findings

- ▶ Created Template
- ▶ Compares each NICU
Parent demographic data
With cumulative
demographics

Table 2a
Characteristics of Parents
Data from Parent Survey

	Your NICU	Study NICUs (n=5)
<i>Percent of eligible parents who completed the questionnaire</i>		
		N=50 parents
<i>Are you Hispanic or Latino(a)?</i>		
Yes	30%	79.59%
No	70%	20.41%
<i>What is your race/ethnicity?</i>		
American Indian/Alaskan Native	0%	0%
Asian	0%	4.17%
Black or African American	10%	8.33%
Filipino	0%	0%
Native Hawaiian or Other Pacific Islander	0%	0%
White	60%	72.92%
Multiracial	10%	6.25%
Other	20%	8.33%
<i>What is your age range?</i>		
Under 17 years old	0%	0%
18-24 years old	30%	30%
25-34 years old	40%	50%
35-44 years old	30%	20%
45-64 years old	0%	0%
65 years or older	0%	0%

Findings

- ▶ Demographic Info included Education Level
- ▶ Comparing demographics of those who completed the survey and eligible parents who did not

<i>Highest level of completed education</i>	
Grade school not completed (less than 8 th grade completed)	0%
Grade school completed (8 th grade completed)	8%
High school/ GED or equivalent	36%
Trade/technical/vocational training	8%
Associate Degree	18%
Bachelor's Degree	20%
Professional degree or Doctorate	8%
Other (master's)	2%

Lessons Learned

- ▶ How many different people work together to collect primary data
- ▶ How to use both REDCap and STATA on a basic level
- ▶ How to communicate with multiple site coordinators
- ▶ How to make a research presentation
- ▶ How to approach adults who are leaders in their field and ask them questions