

Oregon Health & Science University
School of Medicine

Scholarly Projects Final Report

Title *(Must match poster title; include key words in the title to improve electronic search capabilities.)*

Clinicians' perspectives on telephone communication with parents during Neonatal Intensive Care Unit hospitalizations: a qualitative study

Student Investigator's Name

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Project Course *(Indicate whether the project was conducted in the Scholarly Projects Curriculum; Physician Scientist Experience; Combined Degree Program [MD/MPH, MD/PhD]; or other course.)*

Scholarly Projects Curriculum

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Project/Research Question

What are common themes surrounding the clinician's experience conversing with parents, whose children are in the NICU, over the telephone?

Type of Project *(Best description of your project; e.g., research study, quality improvement project, engineering project, etc.)*

Qualitative Study

Key words *(4-10 words describing key aspects of your project)*

Communication, NICU, Telephone Calls, Parent-Provider Relationship

Meeting Presentations

If your project was presented at a meeting besides the OHSU Capstone, please provide the meeting(s) name, location, date, and presentation format below (poster vs. podium presentation or other).

N/A

Publications *(Abstract, article, other)*

If your project was published, please provide reference(s) below in JAMA style.

N/A

Submission to Archive

Final reports will be archived in a central library to benefit other students and colleagues. Describe any restrictions below (e.g., hold until publication of article on a specific date).

N/A

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Next Steps

What are possible next steps that would build upon the results of this project? Could any data or tools resulting from the project have the potential to be used to answer new research questions by future medical students?

Develop of standardization for telephone calls with parents
Creation of best practice/tip sheet for clinicians to reference during telephone calls with parents
Implement a process to identify parental preferences for telephone communication in the NICU


Student's Signature/Date *(Electronic signatures on this form are acceptable.)*

This report describes work that I conducted in the Scholarly Projects Curriculum or alternative academic program at the OHSU School of Medicine. By typing my signature below, I attest to its authenticity and originality and agree to submit it to the Archive.

X *Rachel M Patterson* 03/16/2022

Student's full name

Mentor's Approval *(Signature/date)*

X  Ladawna Gievers, 3/17/22

Mentor Name

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Report: Information in the report should be consistent with the poster, but could include additional material. Insert text in the following sections targeting 1500-3000 words overall; include key figures and tables. Use Calibri 11-point font, single spaced and 1-inch margin; follow JAMA style conventions as detailed in the full instructions.

Introduction (≥250 words)

Communication between clinician and patient, or parent in the world of pediatrics, is a cornerstone to building relationship and administering medical care. There are different ways for this communication between clinician and patient/parent to occur. Many conversations happen face-to-face; however, some also occur over the telephone. The need for telephone communication has increased due to the COVID-19 pandemic and visitor restrictions, yet there were clinicians, such as those who work in the Neonatal Intensive Care Unit (NICU), who had many conversations over the telephone even before the pandemic. In the NICU, babies may stay for two or three months, and parent(s) may only be able to take time off work for a couple weeks. As a result, clinicians rely on communication via the telephone to update parents and have medical discussions when the parents are unable to be at bedside.

Regardless of the mode of communication, either face-to-face or over the telephone, communication is vital for parents whose children are in the NICU. One study found that the parents' experience in the NICU was largely influenced by their interactions with the clinicians and the effectiveness of communication.¹ This ties to the notion that communication maintained by clinicians helps establish relationships and better administer care. In the world of pediatrics, including the NICU, communication with parents is essential, as they are the decision-makers for their child. When parents whose child was in the Pediatric Intensive Care Unit (PICU) were asked about the type of communication they preferred from clinicians many wanted full disclosure of everything going on in terms they could understand.² This study is another depiction that parent and clinician communication in the PICU, and similarly the NICU, is paramount to the parents' experience and confidence in the medical care being provided to their child.² Through the improvement the communication between parents and clinicians, one can ascertain that the relationship between parents and clinicians along with the parents' confidence in clinicians can also improve.

This project addressed the clinician's perspective on telephone communication with parents during a NICU hospitalization. Studies have explored the parents' perspective throughout their child's NICU hospitalization, including their interactions with healthcare professionals and the type of information they would like communicated.^{1,3-4} However, these studies and others have not delved into the clinician's perspective on communication with parents in the NICU; understanding opinions from both sides of the patient-clinician relationship is necessary for continued improvement in medical communication. This project looked specifically at telephone communication, given the frequency of its use in maintaining strong parent-clinician communication in the NICU. The objective was to identify common themes surrounding clinicians' experiences with telephone communication in the NICU with a particular focus on the barriers to communicating with parents over the telephone phone and potential ways for improvement.

Methods (≥250 words)

This study was conducted at the Level IV NICU at Doernbecher Children's Hospital. A purposeful sample of nurses, resident physicians, and nurse practitioners were recruited through e-mail and/or word of mouth. Demographics of the clinicians were collected via a survey. An interview guide was created to establish open-ended questions and possible follow-up questions. These initial questions were focused on exploring

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topics such as timing/quality of telephone calls, barriers to making them, and potential ways for improvement of the overall experience. Using this interview guide, 30 to 60-minute semi-structured interviews were conducted by two investigators (RP/JW). Due to the COVID-19 pandemic, some interviews were conducted in-person, and other interviews were conducted over WebEx, a secure video call software. All interviews were audio-recorded with interviewees' verbal permission. The audio recordings were then transcribed. Two investigators (RP/JW) independently coded all transcripts with Dedoose qualitative software. A phenomenological approach was utilized, which means that the transcripts and the clinicians' experiences were analyzed without using pre-existing framework.⁵ The two coders reviewed and discussed the coded transcripts, identifying the overlap of quotes and determining common themes. The identified codes were additionally reviewed by a third researcher (KZ), who helped resolve disputes and reviewed the coding scheme pulled from the interview transcripts. With the identified coding scheme, the codes were collapsed into major categories with more specific themes. Within these main themes, sub-themes were described and assigned based on quotes from the interview transcripts. With the use of the phenomenological approach, the themes were identified solely based on the clinicians' experiences with no influence from previously defined frameworks or thought processes.

Results (*≥500 words*)

Of the nine clinicians who participated in the study, there were three nurses, four resident physicians, and two nurse practitioners. All but one resident physician were female. Most of the clinicians were white (67%) and less than forty years old (77%). Six out of the nine (66%) had less than five years' experience in the NICU. This demographic information can be found in Table 1.

The clinicians' perspectives on telephone communication with parents in the NICU could be summarized into five main themes. These themes are (1) multiple barriers to timely efficient telephone calls, (2) lack of establishing parental expectations, (3) lack of staff standardization and training with telephone calls, (4) telephone calls have the tendency to be one-sided conversations, and (5) improvements/additions to telephone communication.

Theme 1 - Multiple barriers to timely efficient telephone calls.

Residents and nurse practitioners shared that if they do not update the parents at the bedside, they will reach out via telephone call with the goal of talking to a parent of each baby they are assigned every day. However, given the fast pace of the NICU environment and how sick the babies can be, some clinicians admitted that these daily telephone calls did not occur every day.

Resident 3: "It's definitely the [task] that always slips to the end of the day for me, especially when things are busy or if we're trying to help out with more active, sicker patients."

The workload and nature of the NICU were not the only barriers discussed by the clinicians. The inability to reach parents due to telephone issues out of the clinician's controls also hinders the making of daily calls.

Nurse Practitioner 2: "Some [people] don't have access to a phone or they are relying on their parent's phone... Sometimes I don't have an accurate phone number for whatever reason, and it has definitely happened a few times where either they don't have an answering or mailbox set up or it's full."

The nurses shared some different barriers to telephone calls compared to the responses of resident physicians and nurse practitioners.

Nurse 1: "We take our calls in the pod; there have been times when it's really difficult to get off the phone... you want to be polite and respectful, but alarms are going off and babies need me."

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Theme 2 - Lack of establishing parental expectations.

When probed with questions regarding asking parents about their expectations regarding telephone calls, clinicians admitted to not asking parents all that often.

Nurse Practitioner 1: "Actually, no, that's not a typical question I ask"

Some did endorse that they should ask the question more to identify parental preferences and establish expectations.

Researcher: "Have you ever asked a family specifically what things they would like to be called about...?"

Nurse 3: "I definitely could do more of that and probably should."

Despite not always asking about parental preferences, clinicians recognized that there was variability in when parents wanted telephone calls related to changes in their baby's status and/or care.

Nurse 2: "Some families want updates on going from 21% to 25% [oxygen], and some families are like 'oh ok, they got intubated again overnight. I thought that might happen.'"

Theme 3 - Lack of staff standardization and training with telephone calls.

As these clinicians made many phone calls during their time in the NICU, they recognized that each telephone call differs from others, in part because of the interactions with various parents over the telephone. This variability though was also noted to be due to the clinicians, as they noticed differences in styles of telephone communication among their co-workers. Some clinicians shared that with these differences in telephone communication led to inconsistencies in the information shared with parents over the telephone.

Nurse 1: "Some people that talk a lot to families on the phone...and others that are just like 'any questions, got to get back to babies'"

Some clinicians associated the differences in structure of telephone calls with a lack of training related to making telephone calls to parents. The resident physicians noted that when they started their rotation in the NICU, they were just told to make daily telephone calls to update parents (if they were not able to be updated at bedside) but received little advice on how to have success in this style of communication.

Resident 3: "I don't know if it would help to just have some general tips for communication with patients, especially for interns who are just starting out. Like a quick orientation of expectations when reaching out to families and tips for effective phone communication... I don't think to ask interns about that myself. I just assume that everyone is muddling through it."

Theme 4 - Telephone calls have the tendency to be one-sided conversations.

Compared to conversations with parents face-to-face, clinicians acknowledged that conversations via a telephone involved more of the clinician talking and less of parents asking questions and/or voicing understanding. Some noted that this could be because of notable differences between face-to-face and telephone communications, to include lack of non-verbal cues and inconvenient timing. Telephone conversations were described by some clinicians as having limited, if any, questions asked by the parents; therefore, making it hard for the clinicians to gauge the parents understanding of the information and update.

Resident 1: "Sometimes I have felt like I was giving a really big update...and haven't gotten that many

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questions, ...makes you wonder...if [you] really communicated...what is going on”

At other times, parents would call the NICU, and clinicians expressed a lack of uncertainty regarding the nature of the call, due to lack of questions and/or discussion.

Nurse 1: “I wasn’t really sure why they had called by the end of the phone call. Had they called because they were just checking in? Did they have a concern, but they didn’t really voice it? You know that leaves me a little personally unsettled.”

Theme 5 - Improvements/additions to telephone communication.

When asked about ways to improve telephone communication, the majority of clinicians stated the addition of some visual component would be beneficial. Multiple clinicians recommended using video conferencing instead the telephone to communicate updates when parents are not able to be at bedside, as it would allow for some inclusion of non-verbal cues in the conversation.

Resident 2: “I don’t know if [emotional awareness] would be perfect over a camera, it would be better...I think information sharing and being able to show someone Bili lights or hold up an NG tube or show them what it looks like or something like that, could be really nice.”

Others mentioned video cameras that shared active recordings for the parents to watch at home. And others suggested the sending of smaller updates via text message or with pictures.

Nurse 3: “I’ve had so many parents ask me if I can send them photos of their baby while they’re gone for the weekend.”

Gender	
Female	8 (89)
Male	1 (11)
Age	
20-29	4 (44)
30-39	3 (33)
40+	2 (22)
Ethnicity	
White	6 (67)
Asian	2 (22)
Other	1 (11)
Staff Member Type	
Resident	4 (44)
Nurse Practitioner	2 (22)
Nurse	3 (33)
Amount of NICU Experience	
< 1 year	4 (44)
1-5 years	2 (22)
6-10 years	1 (11)
11-15 years	0 (0)
16-20 years	1 (11)
20+ years	1 (11)

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Discussion (*≥500 words*)

In using semi-structured interviews with clinicians of varying profession and experience, this project identified that there are many barriers and inadequacies with telephone communication, but there are also suggestions of improvement. These identified points can be organized into five main themes: (1) multiple barriers to timely efficient telephone calls, (2) lack of establishing parental expectations, (3) lack of staff standardization and training with telephone calls, (4) telephone calls have the tendency to be one-sided conversations, and (5) improvements/additions to telephone communication. It is important to note, however, that each theme did not appear in each transcript in the same manner. This provides insight that each clinician's interactions with parents via telephone communication are distinct from one another.

This project identified that telephone communication has many potential barriers to include clinicians' workload, inability to reach parents, and distractions. These barriers to telephone communication can lead to decreased communication between clinicians and parents, which unfortunately may have a negative impact on the parent-clinician relationship. Other studies have shown parents appreciate attentive communication and view the lack of communication as exclusion from their baby's care, which reinforces the effect these described barriers can have on parent-clinician relationships.³ Identifying ways to increase telephone communication with parents may lead to strengthening patient-clinician relationships and improve parent satisfaction during their NICU stay.

Clinicians, in this project, admitted to not establishing parental expectations, though they typically quickly added that it is something they should inquire more about to identify when parents do or do not want a telephone call. The lack of determining parental preferences is an area of improvement for telephone communication in the NICU, as the inclusion of parental preferences makes communication more effective and family centered.⁶ The exploration of parental expectations could be included a part of training for clinicians new to the NICU. The recommendation of training was brought up by some clinicians, as they noted that when they first started in the NICU, they felt overwhelmed with the best way to communicate via the telephone with parents. When new, they were uncertain with how best to approach conversations and share difficult news over the telephone. Providing some form of training could allow for increased confidence of clinicians. This training could also address standardization that was mentioned as an obstacle by some of the clinicians. Standardization was addressed in these interviews by recognizing that not every clinician shares the same information with parents or spends similar amounts of time on the telephone with parents. One previous study that looked at effective nurse parent communication found that parents appreciated the addition of informal chatting, when appropriate, in addition to formal updates.⁷ When standardizing communication with parents is discussed, it does not always seem like the initial best step, given each interaction with parents is unique. However, standardization does not need to happen to all components of the conversation. One part of the conversation was mentioned multiple times when clinicians shared the concept of standardization in their interviews; this part was the beginning, the part where clinicians identify themselves and hopefully provide some form of reassurance to the parents. The start of the telephone conversation is an important part, as it provides the foundation for the rest of the conversation. Building the best foundation possible for telephone communication is ideal, given some of the possible disadvantages of telephone communication that were discussed during these interviews.

Some potential disadvantages to telephone communication were shared by the clinicians during the interviews to include lack of non-verbal cues. A previous study looked at the role of non-verbal communication in the NICU and concluded that many clinicians could improve their communication skills by improving their non-verbal skills.⁸ Telephone communication provides challenges for ideal communication given the lack of non-verbal cues, which have been shown to play a major role in communication between parent and clinician. With the lack of non-verbal cues, clinicians felt inadequate in providing comfort and support to parents at times given they were less able to identify parental emotions

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over the telephone compared to during face-to-face conversations. This along with limited questions asked by parents over the telephone led to the determination that telephone communication tended to be one-sided. Multiple clinicians shared how these one-sided conversations left them uncomfortable, as they were not certain if the parents understood the information shared and/or had all their questions answered. A potential solution to telephone communications being one-sided was brought up at least once during each of the nine interviews: use of visual communication. The types of visual communication shared varied and included videoconferencing, messaging pictures, and/or baby cameras. A previous study conducted by Epstein et al. showed that though there is not a direct substitution for face-to-face conversations, videoconferences for updates in the NICU are a decent alternative that can increase involvement of parents in conversations and strengthen the parent-clinician relationship.⁹ This study confirms the benefit of the addition of visual communication, as clinicians recommended for improvement to telephone communication in their interviews.

A limitation of this project is that all the clinicians were from one academic institution in the United States. The structure of telephone communication in other NICUs may vary, which may influence barriers to telephone communication and proposed improvements. Continued research regarding telephone communication in the NICU could look at other institutions to identify common barriers and/or other obstacles faced by clinicians throughout the country. With further investigation at other institutions, the findings of this and future research can be more applicable to making changes and providing guidelines for telephone communication between parents and clinicians in the NICU.

Conclusions (2-3 summary sentences)

Through interviewing clinicians regarding telephone communication in the NICU, it was identified that many barriers, including workload, limited experience, and unanswered calls, prevent clinicians from arranging consistent and effective telephone calls with parents. Clinicians have a more difficult time identifying parental needs and emotions over the phone compared to in-person due to the lack of non-verbal cues. Clinicians are open to improving telephone communication through standardization and augmentation with visual components.

References (JAMA style format)

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