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A telehealth nursing intervention to improve the transition from the neonatal intensive care unit to home for infants & caregivers: Preliminary evaluation

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ABSTRACT

Purpose: The purpose of this nurse-led telehealth intervention was to support caregivers and infants during the difficult period of transition from the neonatal intensive care unit (NICU) to home.
Methods: The *Baby Steps* project was designed using quality improvement methodology, and was implemented in April 2020 at a stand-alone pediatric institution in South Florida. Using a nurse-led telehealth model, follow-up nursing care was provided in the home setting for two weeks after discharge. Any infant cared for in the NICU and discharged to a home setting in the state of Florida was eligible for services. Encounters included assessment, anticipatory guidance, connection with community resources, and general support. Caregiver satisfaction, unplanned emergency care use, and 30-day readmissions were assessed.
Results: Within the first 18 months of the program, a total of 378 infants were enrolled, and 74.6% received follow-up services in the home setting ($n = 282$). Caregivers reported high satisfaction with the program (100% strongly agree or agree). There was a 46% decrease in 30-day readmissions from baseline rates, and a substantial decrease in use of emergency care services within a month of discharge as compared to infants discharged during the same time period who did not receive services (30.9% vs.13.8%).
Discussion: This nurse-led intervention was found to be a feasible and highly satisfactory approach to improve NICU patient outcomes and support caregivers during transition from hospital to home.
Practice implications: Nurses can provide post-discharge telehealth support, which not only improves caregiver satisfaction but also decreases readmissions and emergency care use among NICU patients.
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Introduction

Problem description & available knowledge

Nearly 1 in 10 newborns are admitted to neonatal intensive care units (NICUs) annually in the US (Centers for Disease Control and Prevention, 2020). Although the birth of a child is generally viewed as a positive period for parents, seeing their fragile infant who just entered this world experience illness or medical conditions can be emotionally taxing. As a result, studies have shown that parents of NICU infants commonly suffer from elevated stress as well as depressive and anxiety symptoms (Galea et al., 2021; Roque et al., 2017).

With the shift of primary responsibility from healthcare providers in the NICU to caregivers in the home setting, additional support may be needed for the parents and caregivers (Green et al., 2021). However, caregivers face challenges in accessing needed healthcare services in a timely manner after discharge (Lopez et al., 2012). Infants discharged from NICUs are at a higher risk for hospital readmission and emergency department (ED) use (Doctor et al., 2017; Moyer et al., 2014; Paul et al., 2016), and may therefore benefit from additional transition of care support. Follow-up care provided by nurses with knowledge of the NICU course of care and specialty training may be helpful to prevent this costly and potentially avoidable use of health services.

Telehealth services are especially valuable for the population of complex and chronically ill children, which includes many infants discharged from the NICU (Ignatowicz et al., 2019; Willard et al., 2018). Telehealth has proven to be a valuable tool in managing the

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pediatric population, including high-risk children with medical complexity, by avoiding unnecessary trips to the hospital and preventing potential exposure to communicable diseases (Notario et al., 2019; Onofri et al., 2021; Ross et al., 2020). Studies suggest that telehealth services can be as effective as in-person care (Bican et al., 2021; Krasovsky et al., 2021) and are a cost-effective delivery model (Longacre et al., 2020; Nissen et al., 2018). As a Level III-C NICU which provides care to the most critically ill infants, the pediatric healthcare system included in this project provides intensive medical and surgical care, which often results in an extensive in-patient stay.

Specific aim

The Baby Steps program was developed to address the needs of caregivers and infants as they transitioned from the intensive support of the NICU to the home environment. The purpose of this quality improvement work is to describe the preliminary evaluation of the first 18 months of the Baby Steps program

Theoretical framework

The theoretical frameworks used to conceptualize this work are the Transitional Care Model (Meleis, 2010) and Donabedian's Model (Donabedian, 1980). The Transitional Care Model describes factors that influence this process, as well as the human responses, and how nurses can provide support during this timeframe. Recognizing the nature of care transition and its related challenges, nurses can provide support to caregivers through telehealth after discharge from the NICU to home. Donabedian's Model articulates a "structure-process-outcome" framework that is helpful to envision the steps linking structural or process changes to health outcomes. The model posits that improvement is possible through changes to structure (e.g., material/human resources, structure of an organization), which influences process (e.g., act of receiving and giving care), which in turn ultimately influences outcome (e.g., health indicators). The Baby Steps program provides telehealth nursing services to families whose children are recently discharged from the NICU (process) through its material resources (e.g., telehealth platform, internet access, access to cell phones/tablets), human resources (e.g., telehealth nurses), and organizational structure (e.g., supportive NICU organization, nursing leader). Subsequently, the team anticipates that outcomes– including 30-day readmission rate, ED use, and urgent care center (UCC) use–will decrease in frequency.

Methods

Context

This quality improvement work occurred in a freestanding, 309-bed children's hospital in South Florida. This hospital is not a birth facility, so all infants admitted to the level III-C, 40 bed NICU are transferred from outside facilities. Often, these transfers occur for infants with severe illness requiring surgical intervention, with primary diagnoses including cardiac conditions, genetic anomalies, and diaphragmatic hernia. Due to the high level of acuity for these patients, the average length of stay is approximately 40 days, which is substantially higher than the national average. The hospital serves a diverse population, with over 70% of patients and families who use Spanish as a primary language in the home, and over 70% of the population that uses public health insurance (Medicaid) to access care.

The organization was an early adopter of the use of virtual care services and has had a proprietary telehealth platform operational since 2013. The platform is fully HIPAA compliant and encrypted to ensure privacy and security. In 2016, a gap in the follow-up care of infants discharged from the NICU was identified, and the Telehealth and NICU Department attempted to launch a post-discharge telehealth program. Based on literature suggesting that best practice is to provide services in the home environment (Akhbari Ziegler & Hadder-Algra, 2020), this initiative aimed to provide care via telehealth. However, this early iteration was not successful partially due to a lack of dedicated staffing. In addition, at that time, providers were more reluctant to embrace telehealth as a service delivery model, a trend also seen in other settings (Peretti et al., 2017; Wood et al., 2021). Ultimately, the health system struggled with sustainability of the NICU post-discharge telehealth program due to lack of funding and limited viable business models. Lack of resources and decreased patient/provider engagement led to the discontinuation of the program's first iteration in 2018.

In 2019, the study team reviewed the gaps and challenges associated with the previous attempt at telehealth for the NICU population and developed a plan to reintroduce the service with modifications. The team successfully applied for and was awarded a grant from the Florida Blue Foundation's Quality and Safety of Patient Care grant program. This funding enabled the team to hire dedicated Baby Steps program staff and facilitated the planning and coordination activities necessary for program success.

Intervention

Building the team

The Baby Steps interprofessional project team was created in 2019. The NICU team included a Lead Telehealth Registered Nurse (RN, 0.5 FTE), as well as a Clinical Specialist, Manager, and Director who provided administrative support for Baby Steps. Additionally, a team of eight NICU RNs were trained to provide telehealth services, the majority of whom were bilingual in both English and Spanish. The telehealth components of Baby Steps were managed by the Director of the Telehealth Department. This team also provided technology support, as well as coordination and management of the post-encounter Baby Steps survey. Finally, the research team, comprised of the principle investigator (PI) and Co-PI, represented an academic-clinical partnership. This team provided leadership to Baby Steps, managed data collection and evaluation, communicated with the funder, and coordinated project management

Application development & project workflow

Telehealth, Web Development, and Information Technology (IT) teams at the health system worked closely to build structured telehealth encounter documentation to capture pertinent information from the telehealth visits. This ensured that clinical information could be securely shared between providers and allowed for continuity of care. Changes or updates to the application design were made through collaboration with the IT and Web Development Team. The implementation plan (Fig. 1) and workflow (Figs. 2a and b) are attached. This process was reviewed with our internal stakeholders as well as our Risk Department to ensure compliance. In order to assess the caregiver experience with the Baby Steps program, a series of post-encounter questions were developed, partially based on the work by Barnes and Adamson-Macedo (2007). This survey was automatically generated at the conclusion of each telehealth encounter, and its completion was optional. Real-time feedback on the service was reviewed biweekly.

A project workflow was developed to standardize the enrollment process prior to discharge (Fig. 2a). The NICU RN was responsible for training caregivers on the telehealth service, enrolling in Baby Steps, and creating a telehealth patient account prior to discharge. The telehealth team was responsible for enrolling patients into the Baby Steps telehealth service and ensuring they had access to the application. Additionally, the telehealth team was responsible for troubleshooting technology issues with caregivers and providers as needed.

Baby Steps training

After the project team was identified and workflows were finalized, telehealth training sessions were provided for all team members. As part of the training, team members reviewed institutional policies and

Baby Steps Implementation Plan

Activity	Deliverable description
Hire NICU RN	Hired dedicated NICU RN to provide program-related information to caregivers and assist with registration, take patient calls, and provide resources to families as needed. Back-up nurses also identified to provide coverage when needed.
Develop training documents and provide training to NICU RN	Telehealth team developed detailed patient and provider manuals with step-by-step instructions on how to create patient/family accounts and how to provide telehealth services. Created user accounts and passwords. Conducted in-person training and live demonstration for all nurses interested in serving as backup RN. Tested device connectivity and provided training to patients and families on the telehealth platform. Provided on-going training and support to all users.
Identify technology needs	Ensured NICU team had appropriate technology (laptop/PC and tablet) to conduct encounters and register patients at bedside prior to discharge.
Identify space needs	Identified private space within NICU for RN to provide telehealth services and speak with caregivers. The Telehealth Command Center at the hospital was also made available as needed.
Create service in telehealth platform	Created Baby Steps Post-NICU Discharge service to appear in drop-down list of options, so patients could be placed in NICU virtual waiting room and connected with Baby Steps RN.
Hold biweekly calls	Scheduled recurring biweekly calls to keep communication with team open, and discuss program updates and operational needs.
Develop survey	Team developed 8 questions survey to appear automatically at the end of each telehealth consult.
Develop metrics for data collection	Developed metrics to measure, track, and trend data specific to program and key performance indicators.

Fig. 1. Baby Steps implementation plan.

guidelines, telehealth legalities, and scope of practice for RNs providing services. Additionally, participants were taught how to access and manage the telehealth platform and participated in mock telehealth training exercises. Training specific to the lead NICU RN was provided, including how to maintain a blocked schedule and manage patient enrollment, how to develop a guided interview template for the telehealth intervention, and how to manage data. Technology needs were assessed to ensure Baby Steps providers had the necessary equipment to conduct virtual visits. Equipment requirements included a laptop or desktop computer, webcam with microphone, speakers, and a private, quiet space to conduct virtual visits.

Baby Steps intervention

Patient enrollment

Upon admission to the NICU, the lead RN assessed patient needs during interdisciplinary rounds on the unit. This facilitated creation of a plan based on expected length of stay with unique clinical and social needs of each patient in mind. All infants admitted to the NICU and discharged to a home environment in the state of Florida were eligible for program inclusion. After criteria for inclusion in the Baby Steps program was met, the RN introduced herself and explained the service. If the caregiver expressed interest in enrolling, demographic and contact information was obtained for the study team's records. The RN would then assist caregivers with downloading the telehealth platform onto their computer or smart device, assist with registration, and evaluate their competency with the technology. Additionally, the RN conducted mock telehealth encounters to allow caregivers to use the technology and receive guidance as needed.

Telehealth encounters

Prior to discharge, a follow-up telehealth appointment was scheduled within 24–48 h after return to home. For two weeks post-discharge, caregivers had access to on-demand nurse-led telehealth services, in addition to scheduled appointments. Additional follow-up appointments and referrals to higher levels of care were made as needed. The lead telehealth RN was bilingual in both English and Spanish and conducted visits in the caregiver's preferred language. For languages other than Spanish, a medical interpretation service was used.

During the telehealth encounter, the lead RN assessed for the needs of both the patient and caregivers while reinforcing education provided during the NICU hospitalization. Anticipatory guidance regarding infant care, including safe sleep and feeding, was reinforced. Any clinical concerns were addressed and, if needed, the nurse visually evaluated the infant during the video visit. Additionally, resources and guidance to prevent unnecessary visits to a UCC or ED were provided. Visits ranged from 15 to 60 min.

Measures & analysis

Several measures were used to assess the association of the Baby Steps intervention with patient and caregiver outcomes. Based on Donabedian's Model, the team anticipated that by changing the process

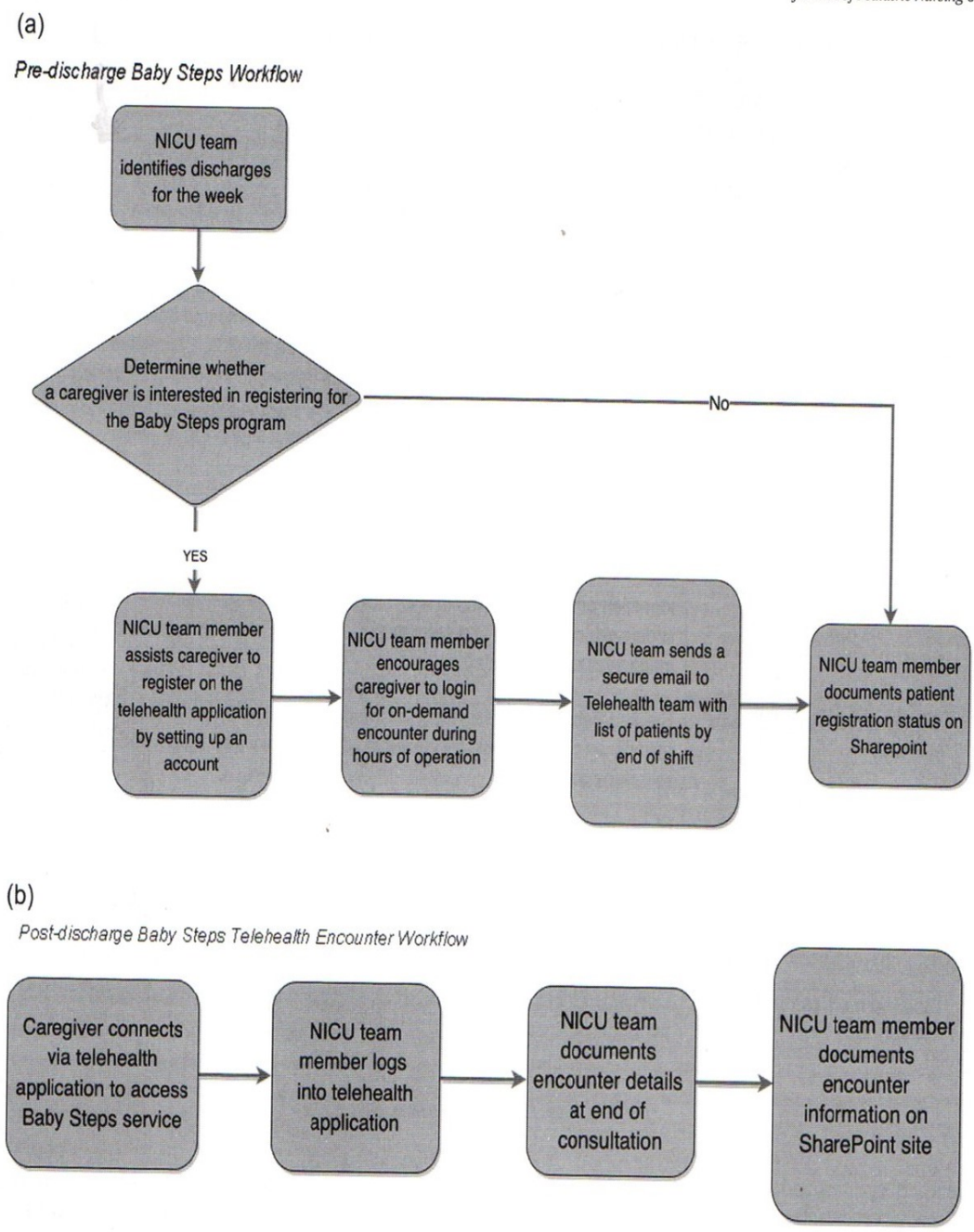

Fig. 2. a. Pre-discharge Baby Steps workflow. b. Post-discharge Baby Steps Telehealth Encounter Workflow.
Note: These figures were created to guide the Baby Steps team through the pre-and post-discharge workflow.

of discharge (providing nurse-led telehealth follow-up), we would see an associated improvement in patient outcomes. In order to observe for change, the team analyzed baseline data, as well as compared outcomes for infants who received services through Baby Steps to those who received NICU care during the same time period and did not enroll in the program.

Demographic characteristics of the infants such as their sex, race/ethnicity, primary language spoken in the home, and medical insurance type were collected from clinical and administrative datasets. Additionally, the number of unique program enrollees and number of telehealth/phone encounters were tracked. Clinical outcomes, including 30-day readmission as well as ED and UCC use within 30 days of discharge, were evaluated.

In order to evaluate the experience of caregivers using the service, a short post-visit survey was generated at the conclusion of each telehealth encounter. The survey consisted of selected questions from the Perceived Maternal Parenting Self-Efficacy [PMP S-E] Tool (Barnes & Adamson-Macedo, 2007), along with questions specific to overall experience, technology experience, and cohesiveness of the therapeutic session. The PMP S-E is a 20-item scale with good reliability as a whole (Cronbach's alpha = 0.91); however, the team was concerned about caregivers' burden in answering long questionnaires. Therefore, the most relevant questions (four items related to overall self-efficacy, feeding, reading baby's cues, and ability to determine when the baby is sick) were selected for survey inclusion. Using a Likert Scale (one (1) Strongly Disagree to five (5) Strongly Agree), caregivers also rated their satisfaction with the visit, likelihood of implementing advice received during the visit, whether they would recommend this service to others, and the usability of the telehealth application. For all data, descriptive statistics were calculated using excel spreadsheet or SPSS, version 26.

A proprietary "Distance and Time Travelled Tool" was created to look at the impact of telehealth services on costs to patients and families. This tool leveraged a Directions Application Programming Interface, which uses a machine learning algorithm to calculate total miles, total time saved, and estimated fuel cost. Using this tool, the overall cost savings for patients and families was calculated. In addition, a geographic information system (GIS) analysis was conducted to better visualize and

evaluate the geographic locations of patients and caregivers enrolled in Baby Steps. GIS enables users to integrate data on a map to allow for a geographical display and analysis (esri, 2022). The number of patients who were registered to the Baby Steps Program from each zip code was counted and displayed on a map of Florida.

The Baby Steps team met twice monthly via telephone/video-conference to assess program progress and identify challenges to implementation.

Ethical considerations

The organization's Regulatory Department provided review and designation as a quality improvement project. The authors have no conflict of interest to disclose related to this project.

Results

In the first 18 months of the program, 378 infants and their caregivers were enrolled in Baby Steps, with 406 total encounters (telehealth and phone). Of the families enrolled in the program, 74.6% received at least one Baby Steps encounter in the home setting ($n = 282$). Of the 406 total encounters, 227 were completed through the telehealth interface (55.9%). Of the families enrolled, 62.4% (236/378) resided in Miami-Dade County, with the remainder reporting primary residence in locations throughout South and Central Florida. Infants enrolled in the program were predominantly male (53.2%, $n = 201$), Hispanic (54.5%, $n = 206$), and accessed medical care using public health insurance (61.6%, $n = 233$). See Table 1 for full demographics.

Four infants enrolled in the program experienced a readmission within 30 days of discharge (1.06%) compared to a baseline readmission rate of 1.95% for infants discharge from the unit from 2019 to present, who were not enrolled in the program. This represents a 46% reduction in the 30-day readmission rate. Additionally, 13.8% (52/378) of enrolled patients received care at UCC or ED settings at least once within 30 days of discharge, compared to 30.9% (29/94) of patients not enrolled in the program during the same time period. Compared to patients not enrolled in the program, a 55% reduction in emergency care use in the first 30 days after discharge was noted.

Table 1
Baby Steps enrolled patient characteristics (n = 378).

Variable	*n*	%
County of Residence		
Miami-Dade County	236	62.4
Palm Beach County	50	13.2
Broward County	23	6.1
Monroe County	13	3.4
Collier	13	3.4
Other counties in Florida	43	11.4
Gender		
Female	177	46.8
Male	201	53.2
Race		
Asian	3	0.8
Black	24	6.4
White	217	57.4
Other	71	18.8
Unknown	63	16.6
Ethnicity		
Hispanic	206	54.5
Non-Hispanic	111	29.4
Unknown	61	16.1
Health Insurance Status		
Private	139	36.8
Public	208	55.0
Both Private and Public	25	6.6
None	5	1.3
Unknown	1	0.3

Post-consult survey results completed by caregivers ($n = 125$) demonstrated high satisfaction with the Baby Steps service. Of note, 96% of caregivers reported that they were highly satisfied with the service. Additionally, 93% reported the telehealth application was easy to use, and 93% noted they were likely to recommend the service to others (Fig. 3).

Funds were budgeted to cover technology costs for caregivers without access to a smart device, however in the first 18 months all participants reported access to a device that could be used for virtual visits. An internal report analyzing patient logins by device type demonstrated the majority of connections were through iOS (85.4%), followed by Android (10.4%), and internet from a laptop or personal computer (4.3%). Therefore, the majority (95.8%) of patient logins occurred from a smartphone device. Analysis using the proprietary "Distance and Time Traveled Tool" demonstrated that a total of 16,297 total miles of travel and 386 h were saved for families.

While the inclusion criteria allowed for any patient discharged to a home setting in the state of Florida to receive Baby Steps services, after analysis the majority of patients lived in South Florida, with some reach south into the Florida Keys, and north into Central Florida (Table 1). Fig. 4 illustrates the number of patients registered to the Baby Steps Program in the state of Florida. Although most registered patients reside in South Florida, the Baby Steps Program has been able to reach those living in other areas of Florida, including rural areas. Additionally, the high number of registered patients in the Key West area is notable. The 166-mile drive from Miami to Key West takes up to four hours in one direction, so access to telehealth services can benefit patients and their caregivers from that city.

Missing data

Although we were able to connect with the majority of enrolled families after discharge (74.6%), we do not have information on reasons for post-discharge attrition from the program. There may be quantifiable differences in participants who accessed services and those lost to follow-up (i.e., no post-discharge connection was established).

Discussion

The aim of the Baby Steps program was to support caregivers as they transitioned from inpatient NICU settings into the home or community environment. After 18 months of implementation, the Baby Steps program has demonstrated high enrollment, high connection rates after discharge, and improved patient outcomes. Of the 378 infants enrolled in the program, the lead RN was able to connect with 74.6% of the caregivers, either by phone or through the telehealth application. This connection rate is high, especially considering the time and resource demands on caregivers of infants recently discharged from the NICU.

The patient population in Baby Steps is representative of our geographic area, with a large percentage of infants from homes that identify a Hispanic ethnicity (54.5%), as well as a high proportion who use public health insurance (Medicaid) to access services. This aligns with a recent Community Needs Assessment conducted by the pediatric healthcare system which identified that 20.2% of the children in the community were linguistically isolated (compared to 4.5% nationally), 53.3% were living below 200% of the federal poverty level (compared to 43.3% nationally), and 57.1% reported difficulties accessing healthcare (versus 28.4% nationally (Professional Research Consultants, 2018). The Baby Steps team met the needs of this population by ensuring the use of a bilingual telehealth RN, or if needed, accessing a professional interpreter services.

Of primary interest to the study team was the potential for Baby Steps to increase access to a NICU-trained nurse after discharge, decrease unplanned emergency care use (ED and UCC), and reduce 30-day readmission. Based on tenets of the Transitional Care Model, Baby Steps utilized the NICU nurse as a key component of patient and family support during the period of transition to home. Nurses are well-positioned to provide discharge follow-up services, based on

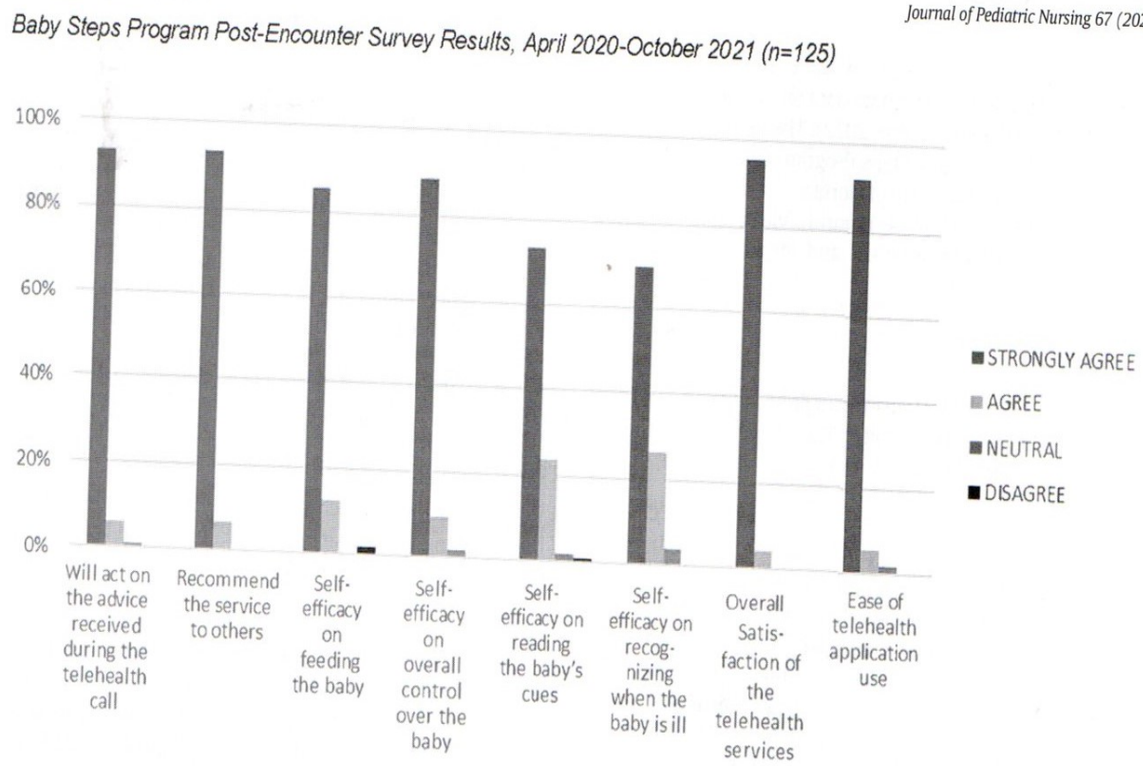

Fig. 3. Baby Steps program post-encounter survey results, April 2020–October 2021 (n = 125).

their clinical experience as well as their ability to connect with the patient and caregiver. Compared to infants not enrolled in Baby Steps during the same time period, there was a significant decrease in emergency care use (13.8% vs 30.9%) as well as a noted drop in 30-day readmission rates from baseline rates (46%). These improvements aligned with anticipated outcomes, and outperformed other published work examining transition of care services (Vohr et al., 2017).

The Baby Steps program offers the unique benefit of using telehealth as a means of interacting and increasing engagement with patients and caregivers after discharge from the NICU. Prior to the COVID-19 pandemic, poor telehealth adoption by patients, caregivers and providers was a barrier to implementation and sustainability of virtual care models of care. The pandemic and federal waivers were catalysts for transformation of care delivery and telehealth adoption. While telehealth is a valuable tool in ensuring continuity of care and reducing geographic and access barriers for underserved communities (Curfman et al., 2022), challenges still exist. One major challenge is that digital access is a prerequisite to participate in telehealth encounters, which can exacerbate digital health inequities (Clare, 2021; Eruchalu et al., 2021). The dedicated Baby Steps team provided an additional level of support for families in their home to mitigate connectivity issues, improve digital literacy, and mitigate disparities in telehealth. In this way, the program helped to bridge the digital divide from a social determinants of health lens (Baker-Smith et al., 2021; Hannemann et al., 2021) and improved patient outcomes.

Since the program launched in 2020, an entirely new process for NICU discharge and follow-up has been implemented. Due to Baby Steps, caregivers can now feel confident that they can easily access a NICU nurse and discuss any concerns or questions they may have for two weeks post-discharge. Additionally, potential exposures to COVID-19 and other illnesses were minimized due to the ability to access a telehealth consult, an important step to avoid infection in fragile infants. While a full analysis of the cost and time savings to caregivers has not yet been conducted, during the initial 18 months of implementation families were saved a total of 16,297 miles of travel and 386 h of time. Because of these positive impacts on infants and families, Baby Steps has garnered a great deal of attention within our organization and in the community (Granfield, 2022).

Practice implications

Baby Steps was developed to test for feasibility and to improve patient outcomes, with the desire for the model to be adaptable to other settings in which pediatric transitions of care occur. The nurse-led design was chosen because nurses often develop close and trusting relationships with NICU infants and caregivers. NICU RNs are specialized providers with a unique skill set, including infant expertise, anticipatory guidance, and knowledge of community resources. They are therefore in an ideal position to lead the growth of transition of care programs.

The major expense of the Baby Steps program is associated with the salary and benefits of the lead RN. To ensure that this program is sustainable, a model to pay for this service is needed. While some nurse-led telehealth interventions may be reimbursable, this is dependent on state regulations and legislation. For other organizations interested in implementing similar work, cost effectiveness and caregiver experience improvements associated with this model should be explored.

Limitations

We acknowledge several limitations of this work. First, generalizability is limited due to implementation in a single healthcare system, as well as the quality improvement design that was utilized. Second, the COVID-19 pandemic has influenced the Baby Steps program in several ways: 1) The program was launched during the onset of the COVID-19 pandemic; thus, the context and acceptability of a telehealth intervention may have been influenced; 2) Nationally, the rates of NICU admission, 30-day readmission, and ED and UCC visits fluctuated due to the pandemic without a clear pattern (Honeyford et al., 2021; Liu et al., 2022; Riley et al., 2021: Mokha et al., 2022), and the instability of the healthcare environment during the pandemic may have impacted observed outcomes of the Baby Steps program. Third, limited telehealth utilization by registered families was observed, and about half of enrolled caregivers opted to receive follow-up services via telephone as opposed to telehealth application. Caregiver choice to conduct a follow-up visit by phone may have been influenced by poor internet or WIFI connection, or limited digital literacy. Therefore, there was

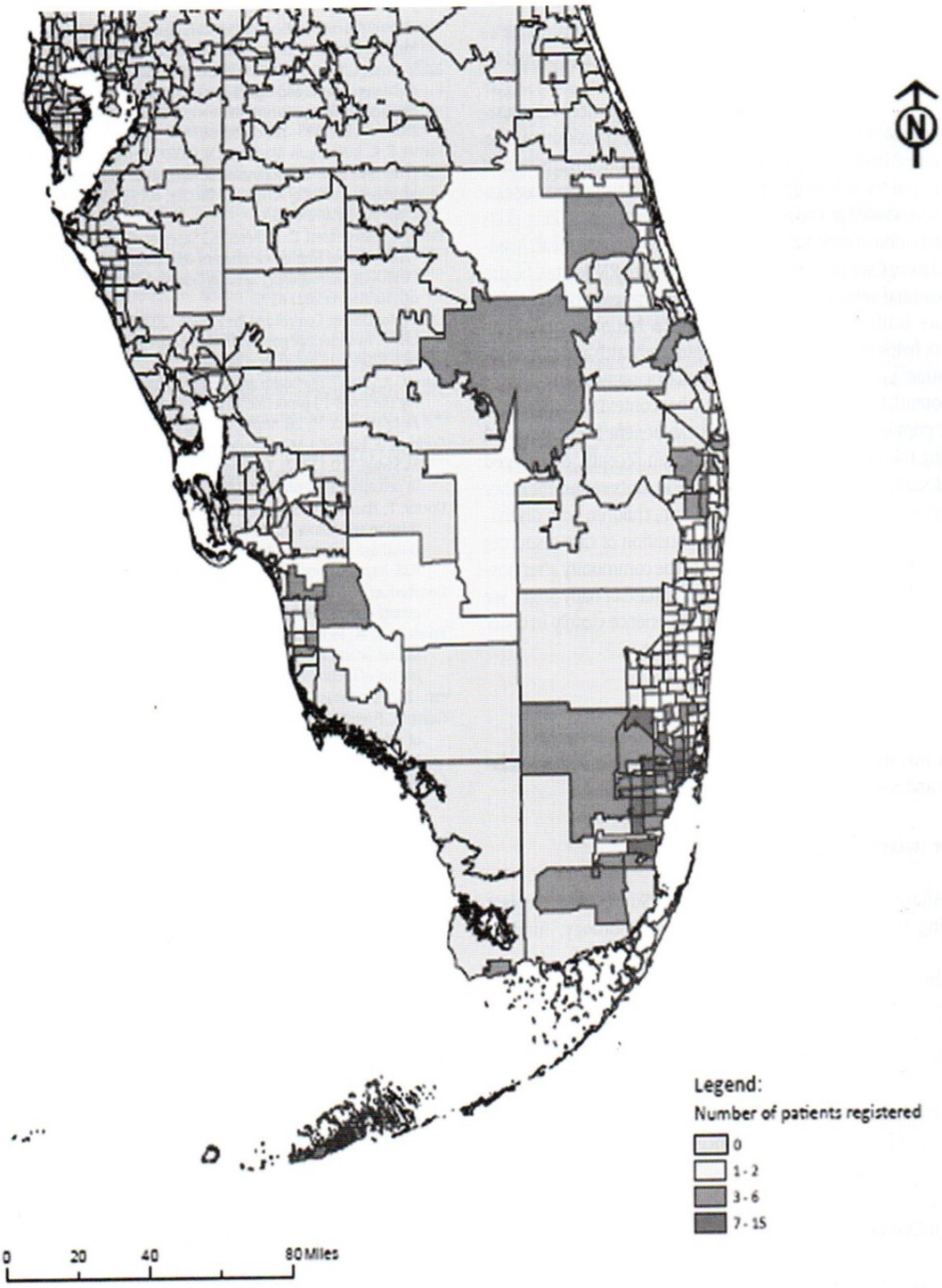

Fig. 4. Density of patients enrolled in Baby Steps in Florida.
Note: This GIS map demonstrates the density and distribution of patients registered for Baby Steps throughout the state of Florida.

variability in the method of follow-up provided. Fourth, while the Baby Steps lead RNs are bilingual (English and Spanish), when a caregiver identified a primary language other than English or Spanish, they were offered professional interpreter services via the hospital system. However, use of these services may have had an impact on the therapeutic relationship and could have negatively influenced the care provided if connectivity or infrastructure was limited (Payvandi et al., 2022).

Conclusions

Data from the first 18 months of program implementation demonstrate markers of success: families were highly satisfied with the program, there was an improvement in 30-day readmission rates, and ED and UCC visits decreased. To inform professional communities about our work, we are disseminating the project findings at national and international conferences in a variety of disciplines, such as neonatal nursing, pediatric nursing, telehealth care, nursing research, care management, and newborn care. The team is working on publishing peer-reviewed publications, and our work has been highlighted in our organizations' social media pages and magazine articles as well as via health-related podcasts (Tayyeb, 2022).

Program sustainability is a challenge, and we are seeking additional funding to continue our program. Expansion from a part-time to a full-time lead RN would allow for more availability of consultations, and potentially for an expansion of the program. At the same time, the team is

exploring ways to bill for telehealth care through health insurance as temporary changes in policy have allowed telehealth care provided by RNs to be reimbursed.

There is a need for the enculturation of discharge services accompanied by real-time connection with families during the transition of care. The data obtained from this work reinforce the need for transition of care programs and for follow-up care and support. RNs possess assessment skills and knowledge coupled with clinical decision-making skills to facilitate transition of care and disease management (American Academy of Ambulatory Care Nursing, 2022). Even though RN-led telehealth care offers essential services using RNs' professional expertise, RN-led telehealth care is often overlooked (Watkins & Neubrander, 2020). Thus, our work helps build evidence for RN-led telehealth as a standardized intervention, particularly among the pediatric population.

There is potential to expand our work to other contexts as well. High-risk pediatric populations beyond neonates can benefit from enhanced support during their transitions of care. Children recently discharged from medical/surgical, step down, or psychiatric units represent other such patient groups who may benefit. In addition, children with disability or chronic illness could also be aided by transition of care resources and ongoing assistance as they reintegrate into the community after hospitalization. As we move forward with the next phase of Baby Steps, we plan to monitor our outcomes and caregiver experience closely in order to adjust and respond to clinical needs as they arise.

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Declaration of Competing Interest

All authors state no conflict of interest.

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Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.pedn.2022.09.003.

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