

From Rough Waters to Smooth Sailing: NICU Population Management Model



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ABSTRACT

Patient and family navigation is an emerging strategy to address the complexity of care experienced during prolonged hospitalizations and extended follow-up care. An innovative navigator program for extremely premature infants was developed and implemented in an 85 bed level IV neonatal unit. The family navigator model addresses the psychological needs of the neonatal families by providing individualized anticipatory guidance and support as the family moves through their child's hospital experience. Program experts titled Neonatal Family Navigators serve as a consistent liaison to facilitate information sharing, offer education and promote a multidisciplinary team approach with the neonatal patient and family at the center of the team. This program demonstrated positive outcomes including improved family satisfaction metrics, decreased length of stay, and enhanced the overall coping mechanisms of families who experience an extended neonatal hospital stay.

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Background

The birth of a preterm or critically ill infant requiring neonatal intensive care precipitates a crisis for the family who may experience feelings of anxiety, grief, fear, anger, and guilt in response to this unanticipated event.¹ Feelings of anxiety stem from an unknown prognosis and uncertain long term outcomes of their new baby.¹ The family may also experience high stress levels related to financial burdens and separation from family members.² The family's perception of the neonatal intensive care (NIC) environment related to their infant's experience and their expected behavior is further compromised by the complex, busy, fragmented environment of the NIC.³ As a result, care frequently is less timely, safe, effective, and efficient.³ Additionally, the concerted focus of the neonatal team is placed on the tasks that must be completed to achieve the health goals of the infant, therefore the psychological needs of the family are often overlooked.⁴

Research has shown that the most stressful items reported by families involve the preemie's appearance and behavior, the alteration of the parental role, staff communication, and the NIC environment.⁵ Family navigation is an emerging trend to address the complexity of care experienced by patients and families requiring prolonged hospitalizations and extended follow-up care.⁶ Navigation programs have led to increased family support and satisfaction, better coordination of care, improved family understanding of disease and treatment, better preparation for discharge and improved coping mechanisms.^{7–9}

Overview

The challenge to create a defined innovative treatment model that addresses the psychological needs of the neonatal family while improving patient/family outcomes and satisfaction metrics was at hand. The family navigator model was developed to offer a seamless experience for the patient and their family during their hospitalization by providing personalized anticipatory guidance and support. The program utilizes a family navigator to eliminate perceived or actual barriers and act as a consistent liaison for all aspects of the patient and family's movement through the hospital and health care continuum. The family navigator offers various services including information, emotional, developmental, transition, and community supports. A comprehensive, standardized series of information is offered for family review but is presented with respect to the needs of the individual family. The navigator provides for a more consistent link in communication between the family and multidisciplinary team. The family navigator also helps bridge the gap from the hospital to the next level of care by sharing community resources, collaborating with follow-up coordinators, and completing post discharge calls to assure that the needs of the patient and family are met. The navigator program provides for the best possible hospital experience for families as it complements care and strengthens interdisciplinary collaboration (Table 1).

Methods

The goal of the navigator program is to bridge the gap of psychological/medical treatment plans while improving quality performance outcomes and patient satisfaction metrics. After an extensive literature search and review, a neonatal family navigator model was created for

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Table 1

Program objectives.

- Provide timely and efficient coordination of care
- Improve communication between the family and healthcare team
- Improve family understanding of disease process and treatment
- Improve family coping mechanisms
- Facilitate smoother transitions
- Provide guidance to facilitate discharge preparation
- Foster appropriate utilization of follow-up services
- Decrease length of stay
- Improve overall unit/family satisfaction and likelihood to recommend our hospital

an 85 bed level IV neonatal unit. Imperative leadership support was established as this initiative was a definite collaborative effort. Program objectives were identified to concur with overall facility goals. The family navigator role was defined and a job description was established. Trained professionals with a four-year degree lead by an experienced neonatal nurse coordinator set the criteria for this navigator program. A degree in social work, child development, or psychology with preference of neonatal intensive care experience or exposure was established as navigator qualifications. An extensive orientation process for the newly hired navigator followed with attention to all aspects of the role. A navigator's caseload averages from 12–35 patient and family dyads. Factors that influence caseload are dependent upon each navigator's scheduled work hours per week and the overall daily neonatal census. The program consists of full time, part time, and PRN navigator positions. Generally, a family navigator can accommodate one patient and family dyad per scheduled work hour.

A standardized guideline of information was developed to present to families during the course of their infant's hospitalization. The guideline includes orientation to unit and team members, unit protocols, internal resources, developmental education, anticipated routine tests/procedures, external resources including developmental follow-up, anticipated transitions, and preparation for discharge. An initial pilot including 25 patients and their families was conducted to evaluate program criteria and guidelines. Full implementation followed using the guidelines listed.

Families are assigned to a navigator who collaborates with the family to create goals and an individualized pathway. The first family contact occurs in the mom's hospital room where introduction of the navigator role is addressed. Weekly meetings with families are held for the course of the infant's hospitalization to provide information and support. The navigator orients the family to the unit, daily schedules, protocols, and members of the multidisciplinary team. Anticipatory guidance is offered to the family throughout their hospital stay. Rounds with multidisciplinary team members are attended to assure that the voice of the family is heard. The navigator serves as a family advocate throughout the infant's hospitalization. The family navigator provides education and support based on identified family needs. Developmental education including gestational age, behavioral cues, and comforting techniques are reviewed with each family. Monthly family care conferences are coordinated with the multidisciplinary team to provide a review of systems and plan of care. Families are connected with community resources for developmental follow-up services assisting to bridge the gap between hospital and home. Follow-up calls are completed post discharge (Fig. 1) (Table 2).

Results/Outcomes

Over 1000 infants are admitted to the neonatal units of Levine Children's Hospital each year. The 53 bed neonatal intensive care and the 32 bed Neonatal Progressive Care units together generate an average daily census of 75 patients with an average length of stay of 29 days. The inclusion criteria for the navigator program was initially defined as patients who were born at less than or equal to 27 weeks gestation and/or had a birth weight of less than or equal to 1000



Fig. 1. Navigator providing anticipatory guidance and support for mom at bedside.

grams. The criteria were progressively expanded to include patients born at less than or equal to 32 weeks and/or less than or equal to 1500 grams and also included patients born with congenital anomalies. Since the start of the navigator program, 963 infants and their families have participated. Of these participants, 797 patients were discharged. The remaining patients transferred, expired, or remained in the program.

Methods for program evaluation include a family and staff satisfaction survey, hospital satisfaction survey, and qualitative measures. Data collection included type of navigator encounter (face to face or phone), and type of services offered, (informational, support, or both). From 2012 to 2014, data analysis revealed that 65% of contacts were face to face, 35% were by phone. On average, families have 3 encounters with their navigator per month. Thirty-nine percent of services were of an education type, and 61% were for support. From 2012 to 2014, 145 families completed surveys related to navigator program effectiveness. Outcomes related to the surveys revealed that 98% of families found the program very helpful and 2% found it helpful. Staff surveys were also initially completed and feedback indicated that 99% of staff strongly agreed that the program was effective. Results point to a significant increase in overall family satisfaction from a preprogram report of 77% reported in 2010 to a 95.4% rating in 2015. A remarkable positive impact on length of stay has been noted with a 9.7-day reduction in length of stay from 2012 to 2014 (Figs. 2, 3).

Navigator family surveys reveal a positive impact on coping mechanisms of families as well as overall satisfaction with their hospital stay. Families report that “the navigator program gave us a sense of consistency, an ear to talk through questions and concerns, and it empowered us to speak up,” “It was nice having someone worry about me as the mom and making sure I was getting the info I needed to better support my baby and her health care providers,” “the program offered support

Table 2

Navigator role.

- Provide consistent professional who partners with family throughout hospitalization
- Coach the family through their hospital experience by maintaining weekly contact throughout hospitalization
- Orient families to services, daily routines, and the healthcare team
- Provide consistent information sensitive to family needs
- Provide anticipatory guidance, education and support
- Serve as a liaison between family and multidisciplinary team
- Coordinate family care conferences
- Refer families to appropriate internal and external resources/services
- Bridge the gap from the hospital to home by connecting to community resources and collaborating with follow-up coordinators

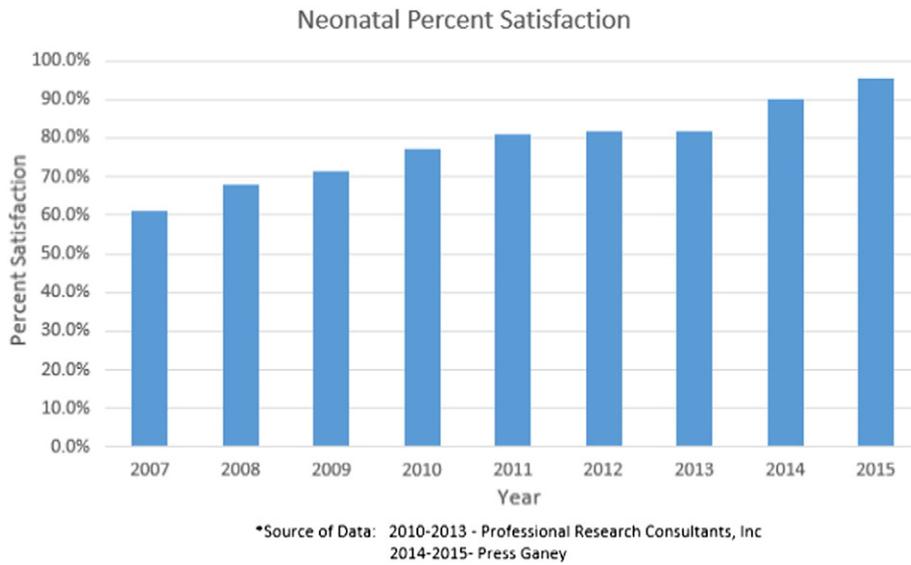


Fig. 2. Neonatal percent satisfaction.

and made sure the stay was nothing but excellent,” “I would have been totally lost without the Navigator Program.”

Additionally, the neonatal staff report very positive feedback regarding the navigator program. Voices from the neonatal staff include, the navigator program provides a “positive influence...like the idea of 1 person to go to,” “The family navigator has decreased barriers to care for our patients and families,” and “I feel this service is the “glue” that brings everything together. It is a way of making sure that families receive all information for a successful hospital stay.”

Decreases in length of stay as well as improved customer satisfaction have continued and this navigator model has greatly impacted the neonatal population. Thus, application of the concept has recently expanded to include all neonatal infants and their families requiring a hospital stay greater than one week. The successful outcomes of this program have proven this navigator role a standard practice and have implications for long term application. Additionally, the significant value of

this navigator model has been recognized by the leadership team as expansion of this role is now planned for all pediatric services.

Conclusion

The birth of a preterm or critically ill infant requiring neonatal intensive care precipitates a crisis for the family who may experience feelings of anxiety. The neonatal intensive care environment is a complex, busy, and fragmented environment and families have difficulty navigating the system. A navigator model was developed and implemented to address the complexity of care experienced by families of a neonatal population. Results of this study provide evidence that a standardized neonatal family navigator model improves the patient and family experience and overall quality of care. Program successes include improved family satisfaction metrics, decreased length of stay, and enhancement of the overall coping mechanisms of families who experience an extended

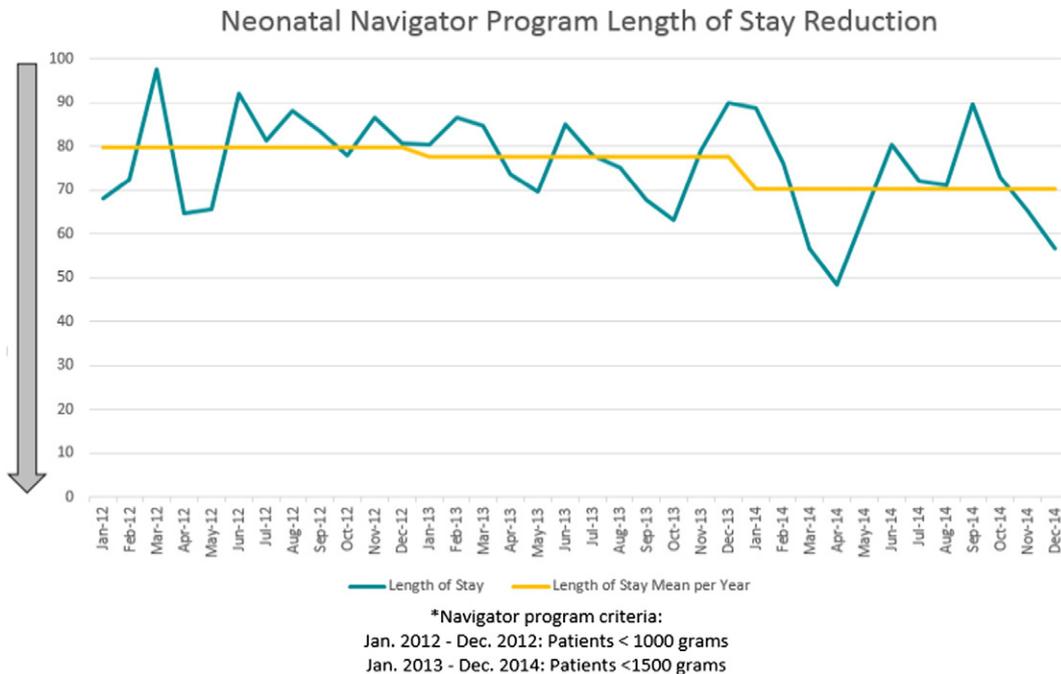


Fig. 3. Neonatal navigator program length of stay reduction.

neonatal hospital stay. This program has proven value for a more effective and efficient move of the patient and family through the hospital continuum while providing the best possible hospital experience.

Funding for innovative programs such as this navigator program can be challenging within constraints of hospital operational budgets. Program success has originated from a definitive process to promote positive change. It is imperative to identify evidence based research to support the model, partner with hospital administration for buy in, and align program goals with hospital metrics to demonstrate a positive impact for overall hospital benefit. This navigator program is funded by the hospital as outcomes have demonstrated that the benefits of this program far outweigh the costs.

Patient and family navigation is an evolving approach to address the complexity of care experienced by patients and families, yet limited consideration has been dedicated to the neonatal population. When entering uncharted waters, it is important to study the concept, develop a well-defined plan, begin with a small sample, and maintain thorough data to determine impact and outcomes. Program success stemmed from the initial development of small tests of change and continued evaluation throughout program implementation. The application of a navigator model to address the complexity of care experienced by families of a neonatal area has allowed for an innovative enhancement to care of the neonatal population. A unique but successful navigator

model has paved the way for advances in overall quality of care in neonatal areas. This concept is driving toward value for the healthcare dollar as we navigate healthcare reform.

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