Virtual visitation in Neonatal Unit – Improving patient experience in a district general hospital


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Background

Neonatal units within Northern Ireland have restrictions on visitation times and only parents and grandparents are allowed to visit. Siblings and extended family do not get the opportunity to meet the new baby until after discharge from NICU/SCBU. Families can therefore face emotional difficulties, challenges with bonding and changes in family dynamics when the sick newborns are hospitalized for a prolonged period.

SMART aim

We aim to obtain positive parental satisfaction scores in at least 60% of families, over a six-month period, following implementation of this programme. The broader aim is to improve family experience by allowing access to other family members at home who are not permitted to visit the NICU. We aim to encourage parents to visit and handle their infants more frequently, thus encouraging active parenting within the setting of the intensive care unit. We aim to make visitation policies within our unit more acceptable to the parents and extended family members.

Setting

The neonatal unit and special care baby unit in the Ulster hospital. This unit has a capacity of up to 16 patients. The delivery rate is approximately 4300/year with an average admission rate to the neonatal unit of 400 babies per year. Length of stay ranges from less than 24 hours to up to six months.

Mechanisms

The Ulster Hospital has been keen to focus on providing an improved quality of care and patient experience for both patients and families, highlighted by the recent Donaldson report.1 Feedback from parents suggested that restricted visiting times for their infants in the NICU/SCABU, added to an already stressful experience.

Previous research has shown an improvement in early neurobehaviour in preterm infants who are visited and handled more frequently by their parents.2 Increased visitation and handling is associated with better quality of movement, less arousal, and less excitability. Lack of visitation and bonding with the pre term infant interferes with early attachment processes.

Family centered care encourages a partnership between neonatal staff and families, with cornerstones of this model being unrestricted parental presence in NICU, active involvement in care-giving and open communication styles.3

Drivers of change

- Parent feedback
- Trust vision of patient centered care
- Improved patient experience
- Staff concerns and feedback
- Improved standard of care across NICU in Northern Ireland

Methods

In our unit in the Ulster Hospital, we introduced ‘virtual visitation’ where parents were able to transmit and view real time video images of their newborn through a secure portal to the newborns siblings / extended
families via videoconferencing portals on trust encrypted telecommunication devices, using child specific, confidential passwords. The pilot project (phase 1) was introduced for 6 months in 2014-2015. The initial phase involved 20 families and feedback utilized to improve the service we provided. This phase was used to test the feasibility of the service prior to formal implementation.

Currently we have implemented phase 2 of the project, which is a scaled-up programme, with families using the device on a more regular basis, and an increased number of families getting involved. Formal written feedback is obtained from each family, results reviewed on a three monthly basis and improvements actioned.

Study participants are the families of any infant admitted to the neonatal unit for at least 24 hours. Infants are enrolled if parents have consented and they are a current inpatient or admission to the neonatal unit during the study period.

We have used the quality improvement model; Plan, do, study, act to allow for ongoing improvements in the service.

Measures

The pilot project identified areas of improvement, which have now been acted upon prior to formal implementation. During the current phase, formal feedback questionnaires are used to determine family satisfaction, positive and negative feedback and ongoing areas of improvement. Feedback is obtained after every interaction, through both verbal and written means, from both staff and families of the patients.

- Communication measures- formal feedback in the form of questionnaires from parents, siblings, grandparents and extended families.
- Equipment issues- staff/parent verbal reporting of difficulties with use of equipment/internet access problems
- Security issues- verbal feedback from users of problems with secure passwords/ privacy of the communication period.

Data
During the initial pilot project period in August 2014- February 2015, 20 families participated in the virtual visitation pilot project. During August 2015, we are starting updated formal service. A formal feedback system has been devised to allow for ongoing improvements to be made.

**Results**

In the pilot project phase, all parents reported positive feedback in terms of improved family morale, less sibling disharmony and improved communication.

The feedback has also led us to constantly modify and improve our services in enhancing patient experience. We have addressed and implemented the areas of improvement highlighted during the initial period including - equipment problems, internet access problems, availability of the device, privacy issues and confidentiality.

**Discussion**

The use of telemedicine and virtual parenting had a positive impact on the families of babies in our neonatal unit. Previous studies have suggested that virtual parenting has a positive impact on parent and family experience in a stressful environment.\(^4\,^5\) The initial stages of this study have supported these findings.
Although the project remains in the early stages, phase one showed that virtual parenting can be successfully used as a tool to improve parent experience, improve bonding, enhance family dynamics and improve confidence in the neonatal team. Information was obtained from verbal feedback from participating families.

Feedback obtained from families involved was vital to allow the quality improvement cycle to continue. The positive response obtained through verbal feedback to staff from families involved in phase one, led to the project being up-scaled to allow for ongoing success.

Some of the problems highlighted by families centered on problems with device setup, which has been actioned through a new internet system and involvement of the IT team. Some families found it difficult to get online and calls would be dropped frequently, which compromised the quality of the interaction.

Some families had reported that more sensitive issues could not be discussed with other family members during the call, as the unit was busy with staff and other parents. Issues surrounding privacy and confidentiality during the telecommunication call have been actioned through use of a single trust device, patient-specific passwords and use of a side room where possible for the duration of the call.

Feedback from some families highlighted the lack of experience of some members of staff in setting up the device. This limited the number of times they could use the service. These issues have been actioned through implementing training for all staff on how to use the device, in order for families to have access to the service for as long as possible.

Implementing universal kangaroo care across Northern Ireland is an outcome, which we aim to achieve during the next phases of the project quality improvement cycle.

**Team Acknowledgement**

Dr Mugilan Anandarajan - Project lead

Dr Natalie Thompson - Implementing current study and obtaining feedback. Arranging meetings with team members to action goals.

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Staff nurse Stefanie Minnis - Setting up teleconferencing with families during pilot project and obtaining feedback. Assisting with telecommunication services.

Staff nurse Gemma Currie - Setting up teleconferencing with families during pilot project and obtaining verbal feedback. Assisting with telecommunication services.

Medical Student Sridhayani Mugilan – Assisting with feedback and data collection

IT department – Equipment, software and secure encrypted internet service.

**References**

Donaldson Report 2015

Birgitta Lingberg et al. Taking care of their baby at home but with nursing staff as support; The use of videoconferencing in providing neonatal support to parents of preterm infants. Journal of Neonatal Nursing April 200915(2): 47-55