ID: 38

TITLE: EVALUATING THE NEONATAL WARD ROUND: SHOULD PARENTS ONLY BE ALLOWED IN THE NEONATAL WARD WHILST THEIR CHILD IS BEING REVIEWED?

AUTHORS: Thomas Hixson 1, Jason Palman 2, Chinnappa Sanath Reddy 3.

AFFILIATIONS: 1 Neonatal Unit, Princess Alexandra Hospital, Harlow, Essex, United Kingdom.

CONTENT:

The ward round (WR) is a fundamental part of caring for newborn patients on a Neonatal Unit (NNU); recommendations to help support parents of patient include participation and collaboration between parents and healthcare professionals through attendance at WRs. This aims to establish parental views on the current WR process within the NNU at Princess Alexandra Hospital, Harlow focussing on the concept of confidentiality and satisfaction of parents with the WRs process. This project also uniquely aims to identify demographic or social factors that impact on the parents’ opinions of the WR process.

Our study recruited 36 parents with babies admitted to the NNU for more than two days between July 2017 and October 2017. Formal consent was given by each parent. Questionnaires were distributed to parents collecting demographic data and parent opinions on the WR process. Multiple choice questions and visual analogue scales were used within the questionnaire. Data was analysed using R (R Development Core Team 2010).

The majority of patients preferred communal ward rounds (CWR) (66%) rather than private ward rounds (PWR). Over 30% of parents felt the ward round was “too long” whilst none found it “too short”. Parents with babies born at a lower gestational age preferred a PWR (p=0.043). A logistic regression model accounting for the gestational age, length of stay and feeding modality, found the most influential factors distinguishing parents preferring CWR over PWR include higher frustration of leaving the ward whilst other babies are being reviewed, lower understanding of reason behind parents being asked to leave during the WR, and lower concern of CWR breaching confidentiality. Combining these three variables significantly contributed to the WR preference of parents with an area under the curve (AUC) of 0.914 (p=0.0002, figure 1).

By taking into account the demographics and significant factors we have identified, the WR process can be adapted to maintain confidentiality but improve parental satisfaction, doctor-patient relationships, and parental and baby bonding. A larger multi-centred version of our study, would be our next step to ensure generalisability.

IMAGES:
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Figure 1. Receiver operator curve of the 3 factors that independently contribute to the difference of the groups of parents.

COI: None declared

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TITLE: "YOUR BABY HAS TRISOMY 21": WHAT IS THE PREFERABLE WAY TO INFORM THE FAMILY?

AUTHORS: Michael S Schimmel 1,2, Francis B. Mimouni 1,3, Tali Mor Yosef 4, Netanel Wasserteil1

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2 Faculty of Medicine of the Hebrew University, Jerusalem, Israel
3 Sackler Faculty of Medicine, Tel Aviv University, Tel Aviv, Israel
4 Social work department, Shaare Zedek Medical Center

CONTENT:

Informing parents that a neonate has trisomy 21 (T21) can have major impact on his/her future care, including the possibility of child abandonment. There are two theoretical different approaches about providing this information: the 1-step approach consists of informing parents as soon as the mother is physically fit to hear the news; the 2-step approach consists of first conveying that there are findings that “may suggest the possibility of T21”, then at a follow up meeting to explicitly confirm the clinical diagnosis.

We hypothesized that the 2-step approach would be preferred by the mothers included in a retrospective cohort of infants with T21.

Mothers of T21 children filled a questionnaire, where they reported whether they had been informed using the one or the 2-step approach and whether they would have preferred the other approach. The questionnaires were filled with the help of interviewers who explained the parents its terms (if necessary) in person (at a routine encounter in a day care center for children with T21) or on the phone. The study was approved by our local Institutional Review Board, and a written informed consent was obtained from all the mothers involved in the study.

Maternal preferences were analyzed using Chi square tests and stepwise backward logistic regression analysis. The Minitab Statistical Package, version 16 (Minitab, State College, PA) was used for analyses.

Fifty six mothers agreed to participate into the study. Only 45 completed the questionnaire part dealing with which approach was taken with them and what was their preference. 40% reported that they were informed in the 1-step approach and 60% in the 2-step approach. 72.2% of women in the 1-step group stated that the 1-step approach was their preference, while 70.4% in the two-step group stated that the 2-step approach was their preference. The majority of women (75.6%) stated their preference to be informed in the maternity suite rather than the delivery room. In logistic backward stepwise regression analyses, only maternal age was significantly correlated with the approach chosen by the team (P=0.001) (women informed in a 1-step method ended up being older), while the type of approach preferred was only influenced by the actual type of approach that the team used (P=0.001).

Mothers were in general satisfied with the method used. Only 30% in each group would have preferred the other method. Empathy and the benevolence may be more important than the "technique" used to deliver the news. The team chose a different approach with different mothers. We suspect that choice of the method used was dictated by assessment of maternal readiness, and "adaptation" of the team to parental readiness may have made the difference.

COI: none declared
ID: 271
TITLE: SHARED DECISION MAKING IN NEONATAL CARE: A THEMATIC CONTENT ANALYSIS OF PARENTAL & PROFESSIONAL VIEWS
AUTHORS: Vimal Vasu
AFFILIATIONS: East Kent Hospitals University NHS Foundation Trust, Department of Neonatal Medicine, William Harvey Hospital, Ashford, Kent, TN24 0LZ

CONTENT:

Admission of a baby to neonatal care is often anxiety provoking for parents. Information provided by clinicians may not be understood or retained. In addition, establishing how much information should be provided for each of the myriad of different interventions which occur daily on neonatal units is complex with potential legal ramifications if the standard of information disclosure is not in accordance with the prevailing legal standard, the prudent patient test. Here, we present the qualitative data collected as parent of the Consent in Neonatal Medicine (CoNe) study to better understand parental and professional views regarding shared decision making.

With institutional research ethics approval and informed parental consent, we conducted a single-centre cohort study at a tertiary neonatal unit in the UK (June-November 2016) using thematic content analysis of interviews (face to face or via telephone) conducted with parents (n=8) and professionals (n=4) to identify and analyse themes regarding parental and professional views regarding shared decision making regarding 20 neonatal interventions. These were chosen on a pragmatic basis and included commonly performed, potentially low risk procedures along with less commonly performed, potentially higher risk procedures. Thematic content analysis was conducted to identify and analyse themes and an inductive analysis process was used without any a priori hypotheses being considered.

Thematic content analysis of parental data (n=8) revealed the following four key themes: 1. Trust in professional advice and deference to advice 2. Time urgency for intervention 3. Burden of decision-making 4. Mixed information. Thematic content analysis of professionals’ data (n=4) revealed the following six key themes: 1. Parent availability for clinicians to provide information/gain consent 2. Professional dilemma as to what constitutes an emergency and is thus exempt from information disclosure/consent under ‘best interest’ considerations 3. Professional dilemma as to the difference between information disclosure and consent and how to proceed should parents not agree with procedure/intervention 4. Time to provide information/obtain consent and the concept of neonatal care as a package 5. Risk of treatment and adverse outcome 6. Parental burden

The qualitative aspects of this study identify themes that are relevant for both parents and professionals. Further, the data indicate areas common between the groups: (1) the risk of burdening the parents with decisions, (2) the dilemma of what constitutes an emergency treatment and (3) time to discuss treatments. These data might help better inform clinicians in how to effectively communicate with parents of babies admitted to neonatal care.

COI: None declared
ID: 401

TITLE: OUR BABY & US: A SIMULATION PROGRAMME FOR PARENTS OF PRETERM INFANTS ON THE NEONATAL INTENSIVE CARE UNIT

AUTHORS: Sarah Williamson 1, Elizabeth Stockley 2, Emma Cawsey 3, Clare Raiman 4, Susan Johnson 5, Gemma Holder 6.

AFFILIATIONS: Birmingham Women’s & Children’s Hospital NHS Foundation Trust, Birmingham, United Kingdom.

CONTENT:

Introducing practices and facilities that encourage and support families to provide active care for their infants whilst on a neonatal unit is essential in providing effective Family Integrated Care (FIC). By implementing a reproducible educational-behavioural programme for families early in their neonatal admission, improvements have been shown in parental mental health, parent-infant interaction, and reduce hospital length of stay.

Our aim was to design and implement a parent simulation teaching programme to improve parental confidence in caring for their infant early in their admission to the neonatal intensive care unit (NICU).

A pilot questionnaire was initially distributed to parents of infants born < 31 weeks gestation age (GA) admitted to the tertiary NICU at Birmingham Women’s Hospital. The questionnaire was designed to self-report parental confidence in common daily care tasks, such as nappy changes, kangaroo care; as well as determining whether parents would attend a simulation teaching programme if available.

From this we designed a pilot simulation teaching programme for parents. The sessions were aimed at all parents of infants born < 31 weeks GA admitted to our NICU. The programme consisted of four 30-minute sessions, beginning within the first week of life. Preterm mannequins were used to teach parents skills to support them caring for their infant on the NICU.

The pilot questionnaire revealed that 58% of parents felt anxious when performing a nappy change and 70% felt anxious when doing kangaroo care. Seventy-nine percent of parents were interested in attending simulation sessions. From this feedback we implemented four parent simulation sessions;

1. Getting to know your baby
2. Caring for your baby
3. Kangaroo care
4. Feeding your baby

Following the implementation of the pilot simulation teaching programme, feedback from all parents has been positive in all sessions.

In our neonatal unit, the use of simulation to teach common daily care tasks to parents of infants born < 31 weeks GA has shown to be a very useful educational tool. We now plan to extend the programme to all parents with infants admitted to our NICU, regardless of gestational age.

IMAGES:
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Our Baby & Us: Parent Simulation Programme

COI: None declared
ID: 456

TITLE: DESTINATION TRANSITIONAL CARE; MINIMISING INAPPROPRIATE MOTHER/INFANT SEPARATION AFTER TERM BIRTH

AUTHORS: Sankara Narayanan 1; Lydia Gerrie 2; Ling Tan 3; Clare Dawson 4; Marcellina Coker 5; Elvira Baker 6; Anastasia Katana 7

AFFILIATIONS: 1, 3, 4, 6, 7: Department of Neonatology, Watford General Hospital, Watford, United Kingdom
2, 5: Department of Obstetrics and Gynaecology, Watford General Hospital, Watford, United Kingdom

CONTENT:

Emerging evidence demonstrates that mother/infant separation interrupts the bonding process and that can have a profound and lasting effect on maternal mental health, breastfeeding and long-term morbidity for mother and child. Our Neonatal service had high term admission rate (8.8% in 2017, national average 6%), against a low (25%) occupancy of the 6 transitional care beds, resulting in average 2.2 days separation per mother/infant pair. Our objective was to reduce term admissions and thereby mother/infant separation. Baseline data and process mapping revealed that neonatal hypoglycaemia was a primary preventable cause of term admission (10 admissions/month) and was an area of initial focus.

All inborn term infants admitted in NICU were included. Using quality-improvement methodology, a golden hour care protocol for at-risk infants for hypoglycaemia was implemented, including evidence-based pathways for neonatal hypoglycaemia, skin to skin and early breast feeding, at risk infant cards, and Glucogel posters. Perinatal service board rounds, daily patient safety meetings, weekly term admission review meetings were introduced to enhance collaborative working with Maternity Services. Improvement was defined as 50% reduction in term hypoglycaemia admissions and an overall reduction in term admissions. Changes were tested in iterative PDSA cycles. Monitoring process over time with ‘run charts’ helped us understand special cause variations that enabled timely action.

We achieved more than 50% reduction in hypoglycaemia admissions (Figure 1). The percent of at-risk infants receiving golden hour care increased from 50% to 90%. The proportion of babies with active feeding plan raised to 90% from 20%. Glucogel administration compliance on eligible babies reached 60% with rising trend following implementation of a simplified poster visual step by step administration aid. Transitional care occupancy increased from 25% to 70% in one financial year ensuring mother and infants remain together, avoiding unnecessary separation. Different workstreams running in parallel with the hypoglycaemia project, such as use of sepsis proforma, timely antibiotic treatment discontinuation, early discharge and antibiotic administration on postnatal ward on set times contributed to an overall reduction in term admissions from 8.8 % to 6.7 %.

The implementation of a quality improvement intervention promoting golden hour care for at risk infants for neonatal hypoglycaemia has reduced their admissions in our level 2 neonatal unit. We adopted a collaborative approach and data driven improvement actions to foster a culture of shared responsibility for mother/infant care. This minimized inappropriate mother infant separation and an overall reduction in term admissions to neonatal unit.

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Figure 1: Run charts showing trends for term admissions (overall and hypoglycaemia)

COI: none declared
ID: 492
TITLE: SKIN-TO-SKIN CONTACT – WHAT IS THE OPTIMAL DURATION FOR PREMATURE INFANTS?
AUTHORS: Halyna Pavlyshyn 1, Iryna Sarapuk 2, Olya Klishch 3
AFFILIATIONS: 1 Pediatrics Dept., I.Ya. Horbachevsky Ternopil National Medical University
2 Pediatrics Dept., I.Ya. Horbachevsky Ternopil National Medical University
3 Pediatrics Dept., I.Ya. Horbachevsky Ternopil National Medical University

CONTENT:

More than 1 in 10 infants born prematurely, that affects families worldwide. With the latest advanced perinatal and neonatal technologies the number of premature infants is rapidly increased. However, despite the positive results of survival, morbidity and complications associated with preterm birth are growing.

Many studies report about skin-to-skin contact (SSC) as an effective therapy to maintain physiological stability, decrease severe illness, relieve pain and improve neurological development in preterm infants. But evidence is still lacking about the SSC duration in preterm babies. Thus, the purpose of the study was to investigate the effectiveness of SSC depending on its duration.

The study involved 63 premature infants with gestational age (GA) less than 32 weeks. All infants had a skin-to-skin contact with their mother or father.

According to the GA neonates were divided into two groups – group with GA less than 29 weeks included 26 infants (41.3%) and group with GA 29-32 weeks – 37 infants (58.7%). According to the duration of SSC infants in each group were divided into subgroups – subgroup I (SSC was more than 3 hours a day) included 10 and 15 infants respectively; and subgroup II (SSC was less than 3 hours a day) – 16 and 22 infants.

“STATISTICA 13.0. FOR WINDOWS” was used for computations. Qualitative parameters were analysed by use of 2×2 contingency table and Fisher’s exact test, Odds Ratio and 95% confidence intervals. Significance was assumed at p<0.05.

Infants with GA less than 29 weeks of subgroup I had lower incidence of nosocomial infection comparing with subgroup II (30% vs 75.0%, OR = 7.00; 95% CI: 1.20-40.83; p=0.043). The percentage of infants who were breastfed at the moment of discharge was higher in subgroup I compared to subgroup II (70.0% vs 25.0%, OR = 7.00; 95% CI: 1.20-40.83; p=0.043).

The percentage of infants with GA 29-32 weeks of subgroup I who were breastfed at the moment of discharge was higher compared to subgroup II (86.7% vs 40.9%, OR = 9.39; 95% CI: 1.69-52.13; p=0.016).

No significant differences in the bronchopulmonary dysplasia, necrotizing enterocolitis and cholestasis incidences, the duration of parenteral nutrition and daily weight gain were found between studied groups (p>0.05).

Prolonged SSC has a positive impact on the preterm baby’s health preventing the nosocomial infections and promoting breastfeeding. Considering the positive effects of skin-to-skin care for very preterm infants, this type of care should be promoted in all clinics of developed and developing countries and should be regular and so lasting per day as possible according to parents’ opportunities.

COI: none declared
ID: 493

TITLE: THE EFFECT OF A DOUBLE-LAYER POLYETHYLENE SUIT AND CONTINUOUS SKIN TEMPERATURE MONITORING ON ADMISSION TEMPERATURE OF PRETERM INFANTS.

AUTHORS: Rebekka Jones, Jayne Sage, Claire Rose

AFFILIATIONS: Southmead NICU, North Bristol NHS Trust Southmead Rd, Westbury-on-Trym, Bristol, United Kingdom

CONTENT:

The Resuscitation Council (UK) Guidelines 2015 recommend the use of plastic wrapping of the head and body in combination with a heat source during the stabilisation of infants born less than 32 weeks gestation in order to maintain their body temperature between 36.5°C and 37.5°C. Much focus has been placed on the prevention of hypothermia in this patient group as this is well known to be associated with an increase in morbidity and mortality however both hypo- and hyperthermia are potentially harmful.

We replaced the use of food grade plastic bags with a sterile double-layer polyethylene suit covering the body and head for thermal control of preterm infants from September 2016. We examined Badgernet data to identify inborn infants admitted to our NICU at Southmead Hospital less than 33 weeks gestation prior to, and following the introduction of the suit. The first epoch data includes infants born between January 2015 and June 2016; the second epoch data was collected for infants born between January 2017 and June 2018. Following this initial data collection, continuous skin temperature monitoring during stabilisation was implemented for all infants less than 34 weeks gestation in February 2019. We collected data on reliability of measurements and the effect on admission temperature.

We identified 166 and 169 infants during the first and second epoch respectively. We observed an increase in our mean admission temperature from 36.61°C to 36.99°C following the introduction of the suit. Although we found a reduced proportion of babies to have a low admission temperature during the second epoch (42.77% vs. 19.53%), we found a higher proportion of babies with a high admission temperature during this time period (10.84% vs. 26.6% respectively). Following the introduction of continuous skin temperature monitoring during stabilisation, 19 infants have been admitted. The mean admission temperature was 36.75°C. 15.7% had a low admission temperature and 5.2% had a high admission temperature. Continuous skin temperature monitoring correlated well (within 0.2°C) with formal admission temperature. Data collection is ongoing.

Our results show that the use of a double-layer polyethylene suit is effective at raising the admission temperature of preterm infants. Although this reduced the risk of hypothermia, it increased the risk of hyperthermia in our clinical setting. Admission temperature can be further optimised through skin temperature monitoring at delivery allowing the intensity of any external heat source to be adjusted.

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Table showing percentage of infants with admission temperature within range for each epoch of the study.

COI: None declared
ID: 508

TITLE: AVOIDING TERM ADMISSIONS INTO THE NEONATAL UNIT (WHEN ASSOCIATED WITH HYPOTHERMIA): A SINGLE TRUST 1 YEAR REVIEW OF ADMISSIONS WITH REFERENCE TO NATIONAL ATAIN PROGRAMME

AUTHORS: Rachel Walsh 1; Nora Imolya 2; Dee Evans 3; Kumar Swamy 4

AFFILIATIONS: 1. Neonatal Unit, Queens Medical Centre, Nottingham, UK,
2. Neonatal Unit, Nottingham City Hospital, Nottingham, UK,
3. Neonatal Unit, Queens Medical Centre, Nottingham, UK,
4. Neonatal Unit, Nottingham City Hospital, Nottingham, UK,

CONTENT:

Between 2011 and 2014 the rate of live term births in the UK showed a declining trend. Over a similar time period, neonatal care days for the same population increased. The importance of early bonding between mother and baby is widely recognised. The national ATAIN programme reviewed term admissions across the UK, concluding that over 20% were potentially avoidable. This review concerns two level 3 neonatal units within the same city over a 1 year period. In particular, we present those babies with a temperature less than 36.5 degrees Celsius at admission. This group of babies is a cohort in which admission could be prevented with targeted measures.

The Badgernet database was used to identify all babies admitted over a 1 year period between 1/4/17 and 31/3/18. All babies were over 37 weeks completed gestation. There were no other filters. The admission details of each baby was reviewed by a team of 4 reviewers. Sources of information were; Badger admission and discharge summaries, electronic inpatient notes and online blood results databases. Data was compiled in spreadsheet form by all 4 reviewers and analysed using Microsoft Excel by 1 analyser. Babies admitted to the neonatal unit and as well as those attending for a septic screen were included in the analysis.

882 babies were identified. This accounts for approximately 4.5% of the live term birth rate locally and is comparable to national figures. 44% were admitted to the neonatal unit while 56% attended for a septic screen only. The predominant admission categories were; Respiratory (37%), Hypoglycaemia (14%), Jaundice (3%) and Neurological (1%). After excluding those therapeutically cooled, 198 (22%) were found to be hypothermic. This was most notable in babies admitted with respiratory symptoms and hypoglycaemia (15% of each group). This cohort was reviewed with regards to birth weight, time of admission and month of admission. None of these factors was shown to impact upon rates of hypothermia. There was a normal distribution of weights between 1760g and 4525g. The time and month of admission mirrored that of the group as a whole.

A large proportion of admissions to the neonatal unit are hypothermic. Although not the primary cause of admission, this contributes to the overall burden of morbidity and is preventable. Our data suggests that environmental factors do not contribute significantly and that universal measures to improve thermoregulation are required. This trust has commenced an initiative to improve thermoregulation across maternity and neonatal care.

COI: None declared
ID: 643

**TITLE:** EVALUATING MATERNAL CONFIDENCE IN PARENTING PRETERM INFANTS USING CLINICAL INTERVIEW FOR PARENTS OF HIGH-RISK INFANTS

**AUTHORS:** Anastasia Karkani 1; Sylvia Gancheva 1; Georgia Karavana 1; Martha Theodoraki 1

**AFFILIATIONS:** 1 General Hospital of Nikaia Agios Panteleimon

**CONTENT:**

The aim of this paper is:

A) to examine how the unique circumstances of the premature birth alternate the perception of the maternal self-confidence.

b) to compare parental confidence in parents of infants born preterm and at term. Maternal parenting ability can predict long-term outcome of mother-infant relationship and neuro and behavioral development of at-risk infants NICU. Mother’s belief in her effectiveness in performing and managing a variety of tasks in the parenting role is the key to self-efficacy theory and interventions targeted at restoring maternal confidence, including improved modified interaction between mother and infant, have claimed variable positive results.

This study is a part of a larger longitudinal study conducted in a Greek public Hospital among mothers with term and preterm infants. Participants were 25 mothers who have gave birth prematurely >37 weeks and their infants were hospitalized in our NICU. The control group was recruited from the same hospital in the maternity ward with 25 mothers of full-term infants.

The Clinical Interview for Parents of high-risk infants (CLIP) is a semi-structured interview exploring mothers’ experiences of the pregnancy, delivery, hospitalization period, thoughts and feelings about the infant, and impending discharge. In this presentation we analyze the forth parameter of CLIP concerning maternal competence. Descriptive statistics for al study are reported and were analyzed with thematic analysis.

Our results were in accordance with current literature that reports equal or even higher quality of mother–infant confidence in preterm dyads, compared with full term dyads. These findings emphasize the complexity of early parental experience and perceptions, regarding their competence. A special coding scheme was developed for this study to analyze the mother’s narrative content. Three major responses elicit from the NICU group 76% of mothers feel confident enough 16% were moderately confident and just 8% were not confident at all. Mothers of maternity group exhibit much different representation for their self-confidence as parents. 48% reported to be not at all confident while just 52% report to be confident enough.

It seems that readiness for motherhood it can be structured during hospitalization in NICU. The condition of preterm birth may not have only adverse outcome, mothers can be equally or even more confident as full-term mothers trough the experience of hospitalization. Designed interventions by the NICU team seem to improve the mother–infant relationship.

**IMAGES:**
[Link to image]

**COI:** none declared
ID: 766

TITLE: FAMILY CENTRED APPROACH TO CARE OF THE NEWBORN INFANT ADMITTED TO A LOW RESOURCE SETTING NEONATAL INTENSIVE CARE UNIT (NICU)

AUTHORS: Aoife Hurley 1; Kunda Mutesu-Kapembwa 2

AFFILIATIONS: 1 Neonatal Unit, University Teaching Hospital, Lusaka, Zambia
2. Neonatal Unit, Leeds Teaching Hospitals Trust, Leeds, UK

CONTENT:

The Neonatal Intensive Care Unit (NICU) at University Teaching Hospital Lusaka is Zambia’s only tertiary neonatal unit. It is a busy unit, with regularly 100 patients admitted with limited staffing and resources. Doctors and nurses in the low resourced NICU setting may be too busy with the patients to update and answer questions of family. There is a risk that infants get discharged without the families ever knowing what the initial problem and what happened to their child whilst on the unit. There is a shift towards a more family centred approach to neonatal care, involving them more in the infants care and take back some control they may feel they lack, in partnership with medical teams.

A questionnaire was distributed to families of NICU graduates attending outpatient clinic to assess their experiences. Both qualitative and quantitative aspects to it. Assessing maternal background, reasons for neonates admission, explanation to parents, fathers experiences and their overall impression of their child's care. Written feedback was also asked for. The forms were handed to family prior to appointment or if literacy skills an issue clinic workers filled forms out with the family.

115 questionnaires were completed by families in the clinics. The average length of stay was 12.1 days and average maternal age 27.5. 19% said they did not know why their baby was admitted, and 26% did not receive updates about the baby’s condition. Of the fathers that visited, 52% had restricted visits and of those 55% were updated. 36% of fathers did not have restricted visits, with 78% updated. 34% of families were not involved in discharge decisions. 69% were given safety advice prior to discharge. The average satisfaction score was 4.1/5. Whilst there was lots of positive feedback, the lack of communication, poor nursing staff attitudes and lack of clean were commented on. Other factors were mentioned such as distance from the mothers ward to NICU, lack of maternal facilities such as toilets and not being able to stay with their child on the unit all the time.

Parental experience is easily overlooked aspect of neonatal care. From this proposed changes include mothers wearing their own clothes, regular changing of linen, opening toilets nearer the NICU and a daily review sheet including a prompt to speak to parents. Nursing education days including sessions on staff attitudes. Parental experience will be re audited in outpatient clinic to see if this has helped improve the families experiences.

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Results table

COI: none declared
ID: 978
TITLE: SHORT-TERM MEDICAL OUTCOMES OF PREMATURE INFANTS IN A FAMILY-CENTERED CARE VS. STANDARD CARE IN NEONATAL INTENSIVE CARE UNITS
AUTHORS: Agnieszka Basiukajć 1, Piotr Ptak 1, Lucyna Kramer2, Liisa Lehtonen3, Jan Mazela1
AFFILIATIONS: 1 Department of Neonatology and Newborn Infectious Diseases, Gynecological-Obstetric University Hospital, Poznan University of Medical Sciences, Poland
2 Department of Computer Science and Statistics, Poznan University of Medical Sciences, Poland
3 Department of Pediatrics, University Hospital, Turku, Finland

CONTENT:
In modern technological environment of neonatal intensive care units (NICU), infants are physically and emotionally separated from their parents. Many family-centered (FC) care programs have been introduced to promote parental involvement. There is increasing evidence showing that family-integrated care practices do not only reduce parental anxiety and enhances parent-infant bonding but also have positive effects on clinical and neurodevelopmental outcomes of preterm neonates.

The aim of this retrospective study was to evaluate short-term clinical outcomes of preterm infants hospitalized in FC environment comparing with a standard care (SC) model.

The study population consisted of preterm neonates who were born at less than 32 gestational weeks or birth weight less than 1500 g and hospitalized in 2017 in two level III NICUs in university hospitals in Turku (Finland) and Poznan (Poland). In Turku close collaboration with parents is established, they are able to stay with their infant 24 hours/day from admission to discharge and are active participants in neonatal care. The NICU in Poznan is a standard open-bay ward with a supportive role of the parents. Patient medical charts were reviewed and data were statistically analyzed.

The study included 131 patients (FC group n=47 vs. SC n=84). The most significant findings included: shorter length of parenteral nutrition in FC group (9.58 vs. 13.06 days; p<0.05), earlier introduction of enteral feeding (1.4 vs. 2.09 day of life; p=0.05), earlier initiation of breastfeeding (32 vs. 34.92 week of postnatal age; p=0.05). In FC group gestational age at the end of incubator care was lower (30.76 vs. 33.57 weeks of postnatal age; p<0.05). Skin-to-skin care began remarkably earlier in FC (3.26 vs. 15.69 days; p<0.05) and was more common in the first 4 weeks of life (21.66 vs. 2.72 episodes; p<0.05). The incidence of bronchopulmonary dysplasia, retinopathy of prematurity, necrotizing enterocolitis (NEC), intraventricular hemorrhage (IVH) did not differ in both groups. However, the occurrence of NEC (0 vs. 10.17%) and IVH grade III-IV (0 vs. 8.47%) was lower in FC group.

Parental involvement in neonatal care is beneficial for preterm babies, especially regarding nutritional issues and has potential to improve other short- and long-term outcomes. A multi-centre randomized controlled trial is needed to evaluate feasibility and efficacy of family-integrated care in Poland.

COI: NONE DECLARED
ID: LATE BREAKER
TITLE: NICU TELEMEDICINE AND TELESIMULATION FOR NEONATAL RESUSCITATION
AUTHORS:
AFFILIATIONS:

CONTENT:
Background)
In Japan, more than 10 years have passed since the initiation of the project to promote neonatal resuscitation (Japanese Neonatal Cardio-Pulmonary Resuscitation (NCPR) Project) and more than 3,000 healthworkers have been certified as NCPR instructors. Since about half of deliveries are carried out in local obstetric clinics in Japan, NCPR instructors are expected to hold NCPR course sessions in each local region and improve resuscitation skills of healthworkers engaged in delivery room in local clinics. The association for the promotion of NCPR proposed ‘repetition of high-quality simulation-based education in each facility’, but specific measures other than nurturing instructors have not yet been presented. In this study, we developed an educational simulation tool for the remote support of neonatal resuscitation applicable for clinical practice as a tool for the Perinatal Medical Center to educate healthworkers at community delivery facilities, and performed an operational experiment.

**Method**

Seven simulation-based education tools were developed: 1) Stethoscope with a built-in speaker, 2) simulated pulse oximeter (iOS application operated using an iPad), 3) iPhone iOS application for wireless operation of 1) and 2), 4) compact camera for video recording of resuscitation training, and 5) iPad for debriefing of training. In addition, 6) a bag valve mask-equipped atmospheric pressure sensor and 7) Chest compression monitoring sensor were developed for remote evaluation of the reliability of resuscitation techniques of trainees. All these tools were wireless-linked through Wi-Fi and Bluetooth to prepare a remote support system.

To verify the efficacy and operation of this system, 64 trainees of an NCPR professional course held at Kyoto University Hospital participated in a remote scenario practice using the system described above after participating in scenario training of neonatal resuscitation in the curriculum of the NCPR course.

**Results**

Scenario operation was performed 6 times and could be carried out without equipment failure. There was no two-way communication time lag and facilitation by an instructor from a remote location was mostly the same as in a normal session. The instructor could easily evaluate the skills of the trainees through a streaming video and monitoring index.

**Conclusions**

It was suggested that the system contributes to cooperation between a hospital and delivery facilities in the community. Since the real cost was low, about 300 US dollars excluding the cost of the mobile device, introduction of the system may serve as an important social foundation for regional cooperation in not only Japan but also other countries worldwide. And it can be applied to the educational system of each region. There are technical problems, such as the setup of equipment and the angle of view for video recording, but if 4)-7) of the system described above and communication environment can be prepared, remote support of neonatal resuscitation in human clinical practice may be possible.

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CONTENT:

Background: In Canada, palivizumab has been provided for RSV prevention in premature infants (≤ 35 weeks gestational age [wGA]) since 2002. However, in 2015, the Quebec Ministry of Health revised their eligibility criteria to limit the use of palivizumab to infants <33 weeks wGA, unless other indications were present. A cost analysis was performed to assess the impact of withdrawing RSV immunoprophylaxis in otherwise healthy infants born at 33-35 wGA.

Methods: A cost-comparison model from the societal perspective was constructed using clinical inputs from a 2013-2017 retrospective cohort study of 25 Quebec hospitals. Based on chart review and parent interview, direct (immunoprophylaxis, hospital stay, procedures, specialist consultations and discharge) and indirect (resource utilization and productivity losses) costs were estimated. Costs were derived from the Ontario Case Costing Initiative, Régie de l’assurance maladie du Québec, the Ontario Health Insurance Plan, CHU-Sainte-Justine, Statistics Canada and the Fédération interprofessionnelle de la santé du Québec and converted to 2018 Canadian dollars. Costs were modeled for infants hospitalized for RSV lower respiratory tract infection (LRTI) pre- and post-revision of guidelines.

Results: The overall societal costs related to hospitalization due to RSV/LRTI for 33-35 wGA infants post-immunoprophylaxis guidelines revision (2015-2017; n=130) was higher at $3,659,785 compared to $1,701,496 for infants pre-revision (2013-2015; n=105). The societal costs were lower in the pre-revision years despite the added estimated costs of palivizumab and administration of prophylaxis ($93,184). Possible cost drivers in infants post-revision included more time spent in the pediatric intensive care unit (7.0 versus 5.9 days) and more days on mechanical ventilation (6.1 versus 4.8 days) and supplemental oxygen (4.4 versus 4 days), compared to infants pre-revision.

Conclusions: Immunoprophylaxis for RSV may be cost-saving in infants born at 33-35 wGA.

Conflict of interests:
JP has received consulting/speaker fees/honoraria from AbbVie, BD Diagnostics, and Cepheid and research grant funding outside of the current work from AbbVie, BD Diagnostics, MedImmune, Sanofi Pasteur, Hoffmann-La Roche, and Janssen Pharmaceuticals; received research funding from AbbVie for this study.
MS has no conflicts of interest.
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