Nursing Research & Clinical Innovations Symposium

Tuesday September 23, 2014
The Royal Children’s Hospital - Ella Latham Theatre

Program & Book of Abstracts
Welcome!

Thank you for joining The Royal Children’s Hospital, Murdoch Childrens Research Institute and the University of Melbourne in the inaugural Nursing Research and Clinical Innovations Symposium. 66 oral and poster presentations will be showcased at this event demonstrating the positive impact of nurses through new contributions to the care of infants, children and young people. We hope you enjoy the day.

Program at a glance

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- Bleeding risk during routine immunisation in children on long-term warfarin
- Topical lignocaine to improve oral intake in children with painful infectious mouth ulcers: a blinded, randomised placebo controlled trial
- Infant mortality associated with preterm birth <32 weeks gestation in non-tertiary hospitals in Victoria

- They don't know what they don't know": Planning for successful transition from student to registered nurse
- The first 3 minutes: Effective team paediatric resuscitation training
- Reflections on an electronic tool for enhanced care coordination in paediatric oncology: Bottlenecks, breakthroughs and benefits
- The utilisation of online webinar technology to provide health information to families of children with a disability
- A qualitative analysis of the experiences and needs of parents supporting young adolescents with intellectual disability through puberty and emerging sexuality
- The Roller Coaster Ride: Clinicians’ Recognition and Management of Emotions During Paediatric Palliative Care Conversations

- The right@home trial: evaluating a home visiting program through the universal maternal and child health service
- Nursing Documentation
- Patient and Blood Product Identification Observational Audit
- Medication Safety: Observing Nursing Practice in Action

- Oral Tramadol Preparation Audit
- Towards Improved Communication for Medication Safety in Hospitalised Children
- High Flow Nasal Prong Oxygen Therapy
- Evaluation of the Statewide Paediatric Observation and Response Charts in Victoria

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A Framework for Developing Competence

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Keywords:
Competence, Framework, Transition

Abstract Text:
Understanding the factors that enable nurses to develop competence is fundamental to ensure quality outcomes for patients. Despite the importance of a competent workforce, the most effective means through which competence develops and is assessed remains elusive. The aim of this study was to evaluate the Nursing Competency Framework (Framework) at the Royal Children’s Hospital.

The principles of Program Theory Evaluation were applied to a phased study. In Phase One 12 focus groups were conducted to gain understanding of the Framework’s theory. Phase Two was an explanatory sequential mixed method design. In the quantitative strand 47 graduate nurses were invited to complete the Nurse Competence Scale (NCS) three times over 6 months. This enabled a measure of the extent to which competence develops. In the qualitative strand 21 graduate nurses were interviewed to explain the variations in competence development in light of their NCS results.

Focus group participants articulated a range factors that contribute to the development of competence. Results from the NCS indicated nurses made significant gains in competence over 6 months. The findings from the interviews, in combination with the earlier findings, enabled identification of the factors in the Framework that most contribute to development of competence. These include; the individual within the team, asking questions, guidance, endeavors, and standards, all taking place in a particular context.

This study has led to articulation of the theory underpinning the Framework. The findings will contribute to local, national and international knowledge related to competence development in nursing.
A qualitative analysis of the experiences and needs of parents supporting young adolescents with intellectual disability through puberty and emerging sexuality

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Keywords:
intellectual disability
adolescence
sexuality

Abstract Text:
Background and Aims: Parents have a central role assisting their children with intellectual disability with the physical, social and sexual changes during puberty. However there is a gap in the literature exploring parental support needs in managing this transition. This study aimed to describe how parents of young adolescents with intellectual disability feel they are best supported.

Method: Using a qualitative descriptive study design, six mothers of adolescents aged between 11 and 15 with intellectual disability participated in open ended interviews. The interviews elicited mothers’ experiences of supporting their children through puberty and their views on the type of support and resources needed. Interviews were transcribed coded based on the framework developed by Burnard (1981).

Results: The major themes that emerged were (1) parental reactions to puberty and emerging sexuality; which included the subthemes of acceptance, anxiety and avoidance; and (2) parental support needs; which included the subthemes of preparing parents, individualising information, seeking support and exploring ethics.

Conclusion: This information highlights the challenges parents face in considering sexuality beyond pubertal changes in their adolescent child with an intellectual disability and will inform the development of focused health education services to better support these families.
Asymptomatic thrombosis following the use of Central Venous Lines in children

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Keywords:
Central venous line, thrombosis, post-thrombotic syndrome

Abstract Text:
Background and Aims
Over 50% of thromboses in children are related to central venous lines (CVLs). The rate of complications, such as Post Thrombotic Syndrome (PTS), from CVL-related thrombosis is unknown and hence the importance of treating children with anticoagulation to prevent these sequelae is unclear. This study will determine the frequency and clinical outcome of asymptomatic CVL-related thrombosis in children and determine the frequency and severity of PTS following CVL placement in children.

Research Methods
Prospective cohort study of 205 children admitted to PICU requiring a CVL in the jugular or femoral veins. Each child had a (blinded) ultrasound of the blood vessel in which the CVL was placed during their admission. Clinical data and plasma were collected to determine risk factors for thrombosis and markers of thrombotic activity. Another ultrasound and a PTS assessment will be performed approximately 24 months following CVL placement.

Results
Recruitment is complete and data collection and analysis of phase I data are underway. 205 patients have consented for the study. Preliminary demographic results from 146 patients reveal that 50% of children were aged less than 1 year and 82.8% of children had a cardiac diagnosis. Ultrasound results from 79 patients indicated an incidence of asymptomatic CVL-related thrombosis of 17.8%.

Conclusion
This study will determine both the incidence of CVL-related VTE in children in PICU and the incidence and severity of PTS. Additionally, this study will identify the clinical value of routine ultrasound screening of all children with a CVL for the presence of thrombosis.
Bleeding risk during routine immunisation in children on long-term warfarin

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Keywords:
Children, warfarin, immunisation

Abstract Text:
Background: Routine immunisations are recommended for all children in Australia, and recent advances in paediatric medicine have lead to an increase in children requiring long-term warfarin therapy. Bleeding risks associated with the immunisation of such children have been speculated, cautioned against, but never scientifically demonstrated.

Aim: To determine whether children receiving long-term warfarin therapy present a bleeding risk during routine immunisation.

Methods: A retrospective clinical audit was performed on paediatric patients who were undertaking warfarin therapy for an underlying cardiac condition and receiving routine immunisations during an 8-year period from November 2005 to November 2013.

Results: 193 immunisations were audited, the most common of which was influenza. Pre-immunisation, the mean INR was 2.3 (SD = 0.5) and warfarin dose was 3.0mg per day (SD = 1.6mg). 69.4% of immunisations were given to patients within their target therapeutic range (TTR), 20.2% were below TTR and 10.4% were above TTR. Zero instances of major bleeding occurred.

Conclusion: Although further research is required to devise best practice for the immunisation of anticoagulated children, results from this study suggest that no major bleeding risk exists.
Evaluation of the Statewide Paediatric Observation and Response Charts in Victoria

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Keywords:
Observation charts, paediatric deterioration

Abstract Text:
Background/Aim
A set of standardised observation charts suitable for children over a number of age ranges, and designed to ensure early detection of patient deterioration, were piloted in 12 hospitals across Victoria. Two types of charts were developed; one for the inpatient setting and another for short stay patients requiring admission < 24 hours. This study examines user satisfaction with the charts and determines their suitability for recording clinical observations and communicating clinical care.

Methods
Focus groups of approximately 30 minutes were conducted with nursing and medical staff from 12 hospitals across Victoria. A ‘Claims, Concerns and Issues’ framework was used to facilitate group discussion and determine what was working well and what could be improved. Together the participants established key themes and identified appropriate ways forward.

Results
17 focus groups were conducted across 12 hospitals with 145 participants (nurses, n=121, medical, n=24). Commonly identified Claims included the ease of identifying trends, the use of colours to identify abnormal ranges, clear criteria for escalating care and being able to view all the observations on the one page. Key Concerns related to an inability to visualise normal temperatures, difficulties when documenting in the middle of the chart, clinically well patients needing modifications, the modification section not being used well, and lack of space in the short stay charts.

Conclusion
Findings from the focus groups have informed changes to chart design, identified education needs for chart use and highlighted the importance of having adequate site-specific procedures in place, in preparation for a statewide roll out.
Growing research capacity in nursing students: the 'Melbourne' approach

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Keywords:
student nurses, clinical research

Abstract Text:

Background/Aim
Registration bodies recognise the need to prepare nursing students with the skills to think critically and use research to inform practice. A partnership between The University of Melbourne (UoM) and the Royal Children’s Hospital (RCH) has provided a platform to support nursing students and RCH staff to successfully integrate clinical inquiry and research skills in practice.

Methods
In 2008 UoM launched its Master of Nursing Science (MNSc), graduate entry to practice degree that incorporates a research training pathway. RCH developed a structured model of supervision and clinical mentorship for students in this program. Records detailing the RCH-based projects completed since 2009 were reviewed to identify outcomes generated.

Results
28 projects have been completed by MNSc students at RCH, representing 39% of total projects completed within the course (n=72), with 19 RCH nurses having provided mentorship, clinical expertise and research support. All RCH mentors are supported by the RCH Nursing Research Department, who provide additional research support as required. Three of these mentors have commenced PhD studies during or subsequent to providing this mentorship. Projects completed span a breadth of practice including patient safety, consumer engagement, clinical outcomes and effective workforce, resulting in 4 publications and six conference presentations.

Conclusion
The outcomes of MNSc projects completed at RCH have contributed significantly to the identification of evidence informing nursing practice. Data generated by these students has since been used to support the development and revision of Clinical Guidelines, Procedures and Education Programs in addition to data supporting benchmarking of clinical outcomes.
High Flow Nasal Prong Oxygen Therapy

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Affiliation(s):
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Keywords:
High Flow Nasal Prong Oxygen, Bronchiolitis

Abstract Text:
Introduction:
High Flow Nasal Prong Oxygen (HFNPO) therapy is an emerging treatment option in the PICU environment for the treatment of respiratory distress due to Bronchiolitis. There is little in the literature to support the safety and efficacy of its use in a non-acute (ward) environment.

Aim:
To assess the safety and efficacy of HFNPO on a ward environment, and evaluate its impact on demands of nursing care.

Method:
Eligible patients for inclusion in the study:
- age 1 – 24 months
- diagnosis – bronchiolitis
- demonstrate clinical signs of respiratory deterioration despite low flow oxygen therapy.

Results:
35 patients received HFNP over a 6 month period, 4 were lost to follow-up.
29 patients had improvement in their respiratory distress score (RDS) and vital signs within 2 hours of commencement of HFNPO.

There were 50 responses to each of the following qualitative questions asked of nursing staff:
- Did the therapy improve your patients condition: 47 = Yes, No = 3
- Were you comfortable with the patient on the ward: 47 = Yes, No = 3
- Was your workload manageable with a patient on HFNPO 46 = Yes, No = 4

Conclusion:
HFNP can be used safely on a ward environment without the requirement of additional nursing resources. In children on with bronchiolitis on HFNP, there was a significantly greater reduction in Respiratory Distress Score in the first 2 hours for those who stayed on the ward, compared to those transferred to PICU.
Immunisation of pre and post liver transplant recipients at RCH Melbourne

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Keywords:
Immunisation
Vaccine
Transplant

Abstract Text:
Background: The Royal Children’s Hospital (RCH) Melbourne has performed over 100 paediatric liver transplants since 1995. Solid organ transplant recipients remain on lifelong immunosuppression to prevent rejection, making them vulnerable to vaccine preventable diseases. Immunisation prior to transplant is ideal, aiming to maximise immune response and allow vaccination with live vaccines which would otherwise be contraindicated post-transplant.

Methods: Pre-solid organ transplant immunisation guidelines were developed. Immunisation assessment was promoted in the pre-transplant period. A special risk database was created to document vaccine preventable disease serology, tailored immunisation plans and record vaccine administration.

Results: In 2013, RCH performed 14 liver transplants. 37 pre- and post-transplant patients were reviewed by the Immunisation Service: 28 in RCH outpatient clinics, 2 via Telehealth, and 7 as inpatients or via telephone/email consultation. Recommended vaccines were administered in the RCH Drop in Centre, GP practices or at local hospitals.

Conclusion: The RCH Immunisation service has implemented recommendations for protection against vaccine preventable diseases in solid organ transplant recipients. Developing immunisation guidelines and the special risk database, together with good communication between the gastroenterology and immunisation departments were effective strategies in maximising immunisation opportunities in liver transplant patients. This initiative is being expanded to other special risk groups.
Infant mortality associated with preterm birth < 32 weeks’ gestation in non-tertiary hospitals in Victoria

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Keywords:
Mortality, prematurity, outborn

Abstract Text:
Background: Despite a highly organized system of regionalised perinatal care in Victoria, the proportion of very preterm births in non-tertiary hospitals is increasing. In 1997, 9\% of all livebirths <32 weeks’ were in non-tertiary hospitals. By 2009, this had nearly doubled to 17\%.

Aim: The aim of this study was to investigate infant mortality rates in a population-based cohort of livebirths <32 weeks’ gestation, comparing mortality in outborn (non-tertiary hospital) with inborn (tertiary centre) births.

Method: We analysed data for all livebirths, 22 to 31 weeks’ gestation, born in Victoria, Australia in 1990-2009. Outborn/inborn status, gestational age, and era of birth were analyzed as covariates in a logistic regression model.

Results: 13,352 livebirths were recorded; 1919 (14\%) were outborn, in whom infant mortality rate was 25\%, compared with 11\% for inborn livebirths (odds ratio adjusted for gestational age and era of birth [aOR] 2.5; 95\% confidence interval [CI] 2.1, 2.9; p <0.001). There was no significant difference in infant mortality rates for births at 22 weeks’ gestation: 99\% of outborns and 96\% of inborns (p=0.067). The infant mortality rate for outborn 23-27 week infants was 49\% compared with 24\% for inborns (OR 3.0; 95\% CI, 2.5, 3.6, p <0.001). The OR for infant mortality if outborn between 28 and 31 weeks’ compared with inborn was 1.3 (95\% CI, 0.9, 1.8, p=0.085).

Conclusions: Preterm infants <32 weeks’ born in non-tertiary hospitals remain at greater risk of mortality compared with inborn equivalents. Strategies to reduce the prevalence of outborn births are required.
Medication Safety: Observing Nursing Practice in Action

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Keywords:
Medication, Error, Distractions

Abstract Text:
Background. Medication administration is an integral part of the nursing role. Even minor errors in medication preparation and administration in paediatrics can impede patient safety. Whilst there have been a number of studies highlighting the contributing factors to medication errors, few studies have examined these factors through observation of nursing practice. This study explored medication processes, to elucidate the factors in the nurses' environment that increase the risk of medication error.

Research Method. This study employed a qualitative, observational design. During twenty half hour periods in two wards of a tertiary paediatric hospital, researchers observed nurses’ medication practice. During observations nurses were tailed into the medication room and observed from medication preparation to administration. Data was analysed using a thematic approach.

Results. Four themes were identified as the primary factors increasing the risk of medication error - distractions, process, environment and people. Secondary factors within the themes were also explored, encompassing independent double-checking (IDC), documentation, administration and hand hygiene; teamwork, education and availability; access, equipment, layout and size of space.

Conclusion. There are many different factors which can influence medication safety requiring ongoing revision of hospital procedures and nursing practice. Every step should be taken to minimise distraction. Inconsistencies in practice should be examined. The role of independent double checking in minimising risk requires further consideration. The location, size and climate of medication storage and preparation areas should be optimal. Finally strong teamwork and a good working environment acts as a safety mechanism to decrease the risk of medication errors.
Nursing Documentation

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Affiliation(s):
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Keywords:
Documentation, Assessment, Care Planning

Abstract Text:
The requirements of nursing documentation are a conundrum for many nurses. Often taking valuable time away from the bedside and direct patient care to meet multifaceted demands imposed by; organisational policies and procedures; various clinical guidelines; national standards; AHPRA mandates; medico legal requirements; clinical coding needs; previous education; and local unit expectations.

Documentation is a vital component of safe and effective nursing practice, regardless of the context of practice. At the Royal Children’s Hospital (RCH), initial examination and enquiry found considerable inconsistencies, lack of structure and duplication in nursing documentation across the hospital. Addressing these issues requires a whole of hospital approach to consider; how nurses document clinical information and the tools available to support them; what information should be documented to support best possible clinical outcomes and the myriad of organisational and national requirements; and when nurses document to ensure information is captured and communicated both efficiently and effectively.

The RCH nursing team has embarked on a journey to explore new and innovative ways to achieve sustainable improvements in clinical documentation. Guiding principles have been identified and minimum expectations established, articulated and made readily available. Daily routines have been challenged. Documentation tools have been amended and developed to support nurses meet the multitude of professional, organisational and legal requirements. These changes and improvements in documentation also provide nurses with early preparation for implementation of the electronic medical records in 2016; further evidence of nurses leading innovation.
Oral Tramadol Preparation Audit

Author(s):
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Affiliation(s):
RCH, RMH

Keywords:
Tramadol, capsules, safety, paediatric

Abstract Text:

Background:
Tramadol is an analgesic drug used in children for post-operative pain relief. At the Royal Children's Hospital (RCH) Melbourne, tramadol is only supplied in a 50mg or 100mg capsule. To administer oral tramadol in children requiring a dose of less than 50mg, nursing staff must disperse the contents of a 50mg capsule in water and draw up the prescribed dose as a proportion of the total diluent volume. The RCH Drug Usage Committee have intentionally not stocked the commercially available oral tramadol drops (CSL 100mg/ml) as they believe the preparation too concentrated and may lead to inadvertent overdose.

The potential for drug dilution and dosage error when dispersing the contents of a tramadol capsule into water may place children at risk. Underdosing may result in inadequate analgesia, whereas overdosing may result in vomiting, and in more serious cases convulsions.

Aims:
To determine the accuracy and variability of tramadol dosing when the capsule formulation is dispersed in a known volume of water.

Method:
Twenty nurses from an inpatient surgical ward gave their written informed consent to participate in this trial. Each was asked to prepare 15 mg of tramadol as they would for a patient. The syringe size and the volume of diluent used were recorded. Both the resultant samples, one containing 15mg of tramadol and the second containing the remaining 35mg were collected immediately and stored for analysis.

The results were examined for both accuracy and variability. A 5% deviation from 15mg was considered acceptable.

Results and Conclusion:
The mean mock tramadol dose was 15.3 (SD 0.8: range 13.9-17.1) mg with CV% 5.1%.

These results suggest that the current method of preparing doses of tramadol smaller than the commercially available capsule sizes for oral administration in children is accurate, and variability acceptable.
Patient and Blood Product Identification Observational Audit

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Affiliation(s):
RCH

Keywords:
Blood, transfusion, audit, identification,

Abstract Text:
Background:
Over 10,000 blood product transfusions are administered at the Royal Children's Hospital (RCH) each year. One of the major risks associated with transfusion is receiving blood that is meant for someone else. This can be fatal. The RCH Blood Product Transfusion Procedure details steps required to positively identify the patient and blood product to ensure the right blood is administered to the right patient. Aim:
To determine the rate of compliance with the RCH Blood Product Transfusion Procedure, specifically patient and blood product Identification.

Method:
An observational audit of 29 blood products was conducted. Products were followed from blood bank to clinical areas to watch the patient and blood product identification process. Previous audits were completed in 2010 and 2011. Results:
100% of patients were wearing ID bands. Patient identification was checked, including confirming details on the ID band 93% of the time. The blood product identification check occurred away from the patient's bedside 75% of the time. This does not comply with the procedure which states the whole check is to be done at the bedside.

Conclusion:
Compared 2010 the rate of positive patient identification improved significantly. An area for improvement is ensuring blood products are checked at the patient's bedside rather than medication rooms or nursing stations. Education has been delivered to many clinical areas and will continue to be promoted across the campus. The audit will be repeated in 2015.
Project planning supports improving the effectiveness of the RCH nursing workforce

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Affiliation(s):
RCH

Keywords:
nursing recruitment, nursing retention, agency nursing

Abstract Text:

Aim
In 2011/12 RCH Executive Director of Nursing was asked to review the use of agency nursing in RCH & reduce expenditure to 2% of nursing budget

Plan
An Agency Nursing Work Group was established and Project Plan approved by RCH Executive. Key goals;

1. Recruit RCH nurses - reduce churn, <10eft vacancy, grow own workforce
2. Retain RCH nurses - improve data capture/use, implement rostering guidelines
3 Benchmark & learn from others - contribute to Health Purchasing Victoria Agency Tender, implement improvements

Results
The Agency Work Group concluded meeting at the end of the 2012/13 financial year and operational improvements were moved into business as usual. In 2013/14 RCH consistently have RCH nurses working alongside each other 24/7 thereby providing patients with a more effective workforce. In May 2014 nursing vacancy was 4eft and expenditure on nursing agency 0.59% of the nursing budget. Retention of nurses has improved through the implementation of best practice from across the sector i.e reducing rotations & short term contracts

Conclusion
The Agency Working Group was a catalyst for RCH nursing to lead, manage and sustain organizational change. The strategies undertaken by the working group improved the recruitment and retention of nurses which in turn reduced dependency on agency. Connecting nursing leadership across an organization and engaging strongly with Human Resources ensured the success of the working and that the strategies are being sustained.
Reflections on an electronic tool for enhanced care coordination in paediatric oncology: Bottlenecks, breakthroughs and benefits

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Keywords:
care coordination, electronic tool, work-flow

Abstract Text:
In November 2011, the Children's Cancer Centre (CCC) at The Royal Children's Hospital (RCH) Melbourne implemented an electronic tool that translates complex oncology treatment plans into a simplified work-flow and allows the Clinical Nurse Coordinator (CNC) to visualise and plan care on an individual basis. The initial conception of this tool was to facilitate information for families. However, it was quickly recognised that functional aspects of the software held potential for supporting care coordination. The initial phase of the Family Roadmap (FRM) system was successfully implemented within the Leukaemia treatment stream, and, as of May 2014, 192 patients were being managed by the Leukaemia CNC using this system.

As Information Technology is rapidly integrated into daily work-flow, there is an expectation that electronic tools will improve the experience of nurses and health professionals. In order to evaluate if this was the experience in the CCC, a descriptive qualitative study using semi structured interviews was conducted to examine the perceptions and experiences of nursing and medical staff using the system.

Analysis of the themes emerging from this work revolve around communication, treatment flow and usability of the software. Within this framework, benefits and challenges of implementing and using an electronic system for care coordination are identified.

This review provides an insight into the experiences of end-users of an electronic system, and will inform the future direction of both the CCC and The RCH with the implementation of both an electronic clinical trials management system and complete electronic medical records.
The first 3 minutes: Effective team paediatric resuscitation training

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Keywords:
paediatric, resuscitation, training

Abstract Text:
Background and Aim: Inadequate resuscitation leads to death or brain injury. The infrequent incidence of paediatric cardiac arrest highlights the need for effective resuscitation training. This study aimed to evaluate and revise an interprofessional team training package which addressed roles and performance during provision of paediatric resuscitation, through incorporation of real-time, real team, simulated training episodes.

Research Method: This study was conducted applying the principles of action research. Two cycles of data collection, evaluation and refinement of a 30–40 minute resuscitation training program for nurses and doctors occurred. Data was collected via participant questionnaires, facilitator field notes, a researcher journal and focus groups which were held after training. In the first cycle, nine nurses and three doctors participated in one of three training groups. In the second cycle, three nurses and two doctors participated in one training group.

Results: Major themes to emerge from the data included ‘realism’, ‘teamwork’, and ‘reflective learning and practice’. Findings informed important training package changes. These changes included; targeting in-situ training, team diversity, addressing role definition and leadership, increased debriefing time and acknowledging real resources during the translation of resuscitation guidelines into practice.

Conclusions: Paediatric cardiac arrest is a rare event. As such, nurses and doctors require access to effective training to ensure competence. This study highlighted the value of in-situ interprofessional resuscitation training which addressed team roles and responsibilities. Incorporation of this program into standard nursing and medical training will enhance preparedness for participation in paediatric resuscitation.
The right@home trial: evaluating a home visiting program through the universal maternal and child health service

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Keywords:
Community Health Nursing; Early Childhood Intervention; Home Visits

Abstract Text:
Background:
Sustained nurse home visiting (SNHV) has potential to reduce the inequity in children's learning and development when delivered through universal health care. To evaluate the possible impact of this service reform within the existing Australian maternal and child health (MCH) nursing service, we established the "right@home" SNHV randomised controlled trial (RCT) in 2013. We will describe how the RCT will test this service delivery model.

Methods:
Design: prospective, longitudinal, community-based RCT.
Participants: Researchers approach pregnant women in waiting rooms of hospital antenatal clinics. Eligible, consenting women complete a comprehensive baseline questionnaire in their home with a researcher. Women are then randomised into the intervention or usual care arms, and followed up regularly until children's turn 2 years old.

Intervention: Intervention women are offered a SNHV program: 25 home visits with a MCH nurse from pregnancy until their child's second birthday in 2015-16. Usual Care women receive the usual MCH service, comprising approximately eight appointments from 0-2 years at a local centre. In some cases this includes additional home visits through the Enhanced MCH service.

Results: We will give an overview of the uptake and fidelity of the program to date. At submission, 675 participants are enrolled in right@home, with recruitment ending in September 2014. Six women have withdrawn from the trial.

Conclusion: This will be the first Australian trial to test the benefit and cost-benefit of SNHV at scale. The potential for accelerated practice and policy change to address inequalities suggests the outcomes from this RCT are unique in the Australian research landscape.
The Roller Coaster Ride: Clinicians' Recognition and Management of Emotions During Paediatric Palliative Care Conversations

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Keywords:
Communication, emotions, palliative care

Abstract Text:
Effective communication is a key enabler of palliative care. Every year the RCH Palliative Care team receives an overwhelming number of requests for communication skills training from clinicians who are struggling with these conversations on a daily basis.

Over the next 12 months a comprehensive communication skills training program will be implemented to improve the support provided to dying children and their families. By building the capacity of those involved in caring for them to skillfully manage the difficult conversations that arise when a child is facing life-threatening illness.

There is limited literature on how well clinicians recognise and manage their emotions during difficult conversations. This study will examine how well clinicians are attuned to their emotional states during difficult conversations – conversations with considerable emotional investment – with patients and families, and just what those emotions are. This is a collaborative, cross-cultural project between Boston Children’s Hospital and the Royal Children’s Hospital in Melbourne.

Likert scales and open-ended questions will be collected as part of the pre-questionnaires in the simulation-based workshops. Likert-scale items (1-5 scale) will focus on clinicians’ awareness of; reflection on; and management of their emotions during difficult conversations. Additionally, participants will be asked to describe qualitatively their most commonly experienced emotions and personal strategies developed to manage these.

Our hope is to better understand and quantify emotional states amongst clinicians and ultimately to create through this initiative a feasible, effective, and comprehensive educational approach to recognizing and managing emotions, translatable across healthcare professions and the challenging conversations they hold.
The utilisation of online webinar technology to provide health information to families of children with a disability

Author(s):

Affiliation(s):

Keywords:
webinar, education, developmental disability

Abstract Text:

Background & Aim:
Parents and caregivers of children with a developmental disability often need to become experts in their child's condition, potential complications, therapies and interventions in a short space of time. Modern technology provides opportunities for having this information to be accessible for families living in a range of geographical locations when they need it and in a way that does not create an additional time and care burden.

The aim of this pilot study was to determine the feasibility and acceptability of providing health information to families of children with a developmental disability using live online webinars. The webinars were designed to provide evidence based information on a range of topical issues and provide families with the opportunity to connect with developmental disability specialists.

Research methods:
A series of three webinars were presented on a range of developmental disability topics specifically for parents and carers of children with a developmental disability using the GoToTraining software. Parents who attended the live webinars completed a survey to assess the usability and acceptability of this mode of health information provision.

Results:
Twenty-eight parents completed the survey after attending one of the live webinar training events. The technology was reported to be easy to use by 82% of participants and 100% indicated that they were interested in attending future webinars.

Conclusion:
Evaluation of the webinar events demonstrated that live webinars were an acceptable and accessible mode of learning for parents and carers who are time poor due to the constant complex care needs of their child with a disability. This presentation will report the findings of the study and discuss the experience of providing web based education and support to families of children with a disability, outlining current e-learning innovations that are in progress as a result of this study.
"They don't know what they don't know": Planning for successful transition from student to registered nurse

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Keywords:
Graduate Nurse, Transition, Graduate nurse program

Abstract Text:
Graduate nurse programs (GNP) are recognised as an effective strategy to support transition from a newly graduate nurse to competent registered nurse. At The Royal Children’s Hospital, the GNP is underpinned by a nursing competency framework (NCF). A core component of the NCF is a 10 week familiarisation period during which time intensive support is provided for attainment of core clinical competencies.

Evaluation of the 2012 GNP revealed some graduate nurses had not attained the required core clinical competencies to work in a less supported capacity. Further investigation to determine why expectations had not been met revealed lack of structure and formal scaffolding to make explicit expectations and feedback on progress.

In 2013 departments with graduate nurses were consulted to create department specific development plans that would make explicit what was expected of graduate nurses on a weekly basis. In addition a weekly structured feedback process was established where preceptors and graduate nurses reflected on mutually agreed clinical objectives, achievements and areas for development.

An evaluation of the 2013 GNP revealed that in departments where the plans had been implemented, there was increased attainment of the clinical competencies within the familiarisation period. Additionally in those departments there was increased setting of, and attainment of individual goals including receipt of regular documented feedback from preceptors.

In 2014 all departments ensured graduate nurses have plans to enable development of competence in a timely manner. This successful transition supports the retention of nurses in the organisation and for future nursing workforce.
Topical lignocaine to improve oral intake in children with painful infectious mouth ulcers: a blinded, randomised placebo controlled trial

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Keywords:
Topical anesthesia, mouth ulcers, lignocaine

Abstract Text:
Background: Painful ulcerative infectious mouth ulcers in children are common and can lead to decreased oral intake, dehydration and the need for parenteral rehydration. Intra-oral topical oral agents are used with weak supporting evidence.

Objective: To establish the efficacy of 2% viscous lignocaine in increasing oral intake in children with painful infectious mouth conditions compared with placebo.

Design/Methods: This is a randomised blinded placebo-controlled trial of viscous lignocaine versus placebo. Participants were children (aged 6 months to 8 years) with painful infectious mouth conditions (gingivostomatitis-herpetic or non herpetic, ulcerative pharyngitis, herpangina or hand foot and mouth disease), in association with a history of poor oral fluid intake. Recruitment occurred in an emergency department at a single tertiary paediatric centre.

Participants received either a single dose of 2% viscous lignocaine or placebo with identical characteristics.

The primary outcome was the amount of fluid ingested in the 60 minutes after administration of the study drug.

Results: 100 participants were recruited (50 per treatment group) all of whom completed the 60 minute fluid trial period. Oral intake one hour after drug administration was similar in both groups: lignocaine- mean (SO) 9.48 ml/kg (7.02 ml/kg) vs. placebo 9.32 ml/kg (7.39 ml/kg); mean difference 0.15 ml/kg (95% CI -2.7 ml/kg to 3.0 ml/kg); p=0.9). No evidence for difference between groups was found in secondary outcomes and there were no adverse events in either group.

Conclusions: Viscous lignocaine is no better than a flavoured gel placebo in improving oral intake in children with painful infectious mouth ulcers.
Towards Improved Communication for Medication Safety in Hospitalised Children

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Keywords:
Medication safety, medication communication, patient safety

Abstract Text:
Towards Improved Communication for Medication Safety in Hospitalised Children

Background. Children are at high risk of experiencing medication incidents. Previous research relating to medication safety in children has largely involved the conduct of medication audits, highlighting inadequate communication between health care providers, children and family members as an important contributor to medication incidents in hospitals. Past work has lacked examining what happens in actual practice, which is important in determining the complexities of communication processes. The perspectives of children and family members have also not been adequately considered.

Innovation Plan. The current project involves an observational design incorporating a mixed-methods approach to investigate medication communication within a children’s hospital. Data will be collected from a variety of health professional disciplines, including doctors, nurses and pharmacists, as well as hospitalised children and their families situated in diverse ward settings.

Data about the Innovation. This research will use semi-structured interviews to obtain information on medication communication within the hospital from the perspectives of health professionals, patients and family members. Audio-taped observational data during actual health professional practice will be captured and analysed to identify effective communication practices within the context of a clinical setting. A concurrent medication audit will be conducted to link medication communication with medication incidents.

Conclusion. Investigation of medication communication using a mixed-methods approach is paramount to understanding the complexities of how communication occurs in inpatient hospital settings. The proposed study and its comprehensive methodology, although not without its challenges, will obtain rich and meaningful data for the purpose of informing paediatric medication safety processes.
A journey of discovery: Advancing nursing and improving clinical practice

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Keywords:
Advanced Nursing, Evidence based, Research, Masters

Abstract Text:
Background

Advanced practice nurses (APNs) provide leadership, expert clinical knowledge and skills to a number of clinical specialties within RCH. In collaboration with extensive clinical experience, the attainment of a Masters degree is desirable and encouraged. This process of further education provides the opportunity to directly influence clinical outcomes by reviewing and evaluating clinical practice. The University of Melbourne Masters of Advanced Nursing Practice degree with a Minor thesis pathway, provides nurses with the opportunity to gain academic qualification by undertaking a project within their specific area of practice.

Method

A clinical question was identified from practice within the PICU and developed into a research protocol suitable for completion within a minor thesis. A supportive supervision panel with research-prepared nurses based within the hospital was established and provided strategic support in this endeavor. The completion of a minor thesis required the conduct of a literature review, development of a study protocol and ethics approval.

Results

Within this study, a nurse-led protocol, focusing on cardiac surgical ECLS patients was reviewed and evaluated and in doing so, I successfully demonstrated a robust understanding of research processes. This study identified future recommendations for both research and clinical practice changes to improve patient outcomes, and results have been disseminated both internally and externally.

Conclusions

Undertaking a Master’s of advanced nursing practice facilitates understanding of the research process and implementation of evidence based practice. A successful experience requires guidance from clinical supervisors, a desire to improve clinical practice and a commitment to conducting robust research. The process can be challenging but also rewarding and should be considered by all APNs.
A nurse-led Adolescent Health Education Clinic for young people with developmental disabilities

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Keywords:
health education, nurse-led clinic, disability, adolescent

Abstract Text:
Background and Aim:
Adolescence is a difficult life stage for many teenagers particularly in the context of disability. Young people with disabilities often do not achieve full independence with self-care and can have difficulties in social interaction. Unlike typically developing peers, adolescents with disabilities do not have the same opportunities for information from social settings and peers. Therefore there is an increased demand on parents to ensure the changes in puberty and issues around sexuality are communicated while the literature suggests that parents feel underprepared to help their child with a disability through this transition. The aim of this clinic is to improve parental and child confidence in approaching puberty and dealing with common issues of adolescence.

Innovation Plan:
Two Advanced Practice Nurses in Developmental Medicine piloted an education clinic for families with adolescents with disabilities. This involved developing resources, planning consultations with the parents according to need and liaising with health care professionals across RCH.

Data about the Innovation:
40 young people and their parents have been seen in the clinic to date. Case studies will be presented to highlight some common presentations to the clinic, the education provided and the outcome. Initial data on parent satisfaction with the clinic will be discussed.

Conclusion:
This innovative clinic meets a gap in services for young people with disabilities. There is potential for this clinic to improve sexual health knowledge and practices and prevent adverse health outcomes as well as decreasing parental anxiety.
A practical guide to decreasing children's 'bother'... When is 'bother' too much?

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Keywords:
diabetes distress, needle bother, Type 1 Diabetes, children and families

Abstract Text:
Many children and their families who live with Type 1 Diabetes experience daily 'diabetes distress' of living with diabetes¹. Often the distress is linked to invasive, and often perceived as painful, self-care activities.

Self-care activities such as blood glucose testing and insulin administration are central to all diabetes management. 'Diabetes distress’ experienced during these self-care activities is often related to 'needle bother'. In the paediatric setting needle bother can significantly interfere with the essential self-care activities of BGL testing and insulin administration. Delayed performance of these activities can intensify anxiety, anger and often escalates into often difficult and challenging behaviours³.

When entering a therapeutic relationship with families with a child with Type 1 Diabetes, it is essential the framework and language we use in our interactions is positive about family coping and reflects a potential for change. Therapeutic play, guided imagery and family approaches to diabetes management provide a framework were we can facilitate a decrease ‘diabetes distress’ experienced while working alongside with a specialist social worker or psychologist²⁻³.

This poster will explore two families and their journey towards decreased ‘bother’ with their children's diabetes self-care management.

A review of documented pain management practices in paediatric oncology using a quality score card

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Keywords:
Pain, audit, quality of care, paediatric oncology

Abstract Text:
Background & Aim
All children with cancer experience pain at some point during their diagnosis or treatment. This pain is often underestimated, under-treated and associated with significant fear and distress. The aim of this paper is to present the findings from an audit of 258 inpatient medical records that reviewed and evaluated the current practices of pain assessment and management documented by health professionals within a Children’s Cancer Centre.

Research methods
A quality scorecard was designed to for this study, based upon recommendations of high quality pain management models of care, to provide a tool to audit current documented pain management practices by paediatric oncology health professionals. With this scorecard, a retrospective clinical audit of a typical week of pain management practices within the Children’s Cancer Centre at The Royal Children’s Hospital was repeated four times, resulting in 258 medical records being randomly selected and reviewed at 28 different time points over a 2 month period.

Results
Pain related to medical treatment for cancer was common in this cohort of children. Pain intensity scores were mild and the majority of children received pain management at Step 3 of the WHO analgesic ladder with opioids the mainstay of pain management interventions. Pain is clearly being managed, in line with some aspects of international standards. Although there were very little adverse outcomes related to pain management, it is difficult to assess if this is truly effective practice due to limitations in pain documentations.

Conclusions
There appears to be discordance between what is documented about the experiences of children’s pain and the actual management of pain. Additional research is needed to investigate the perspectives of the paediatric oncology in-patient and how pain is managed in real-time.
Advance Practice Nursing: establishing engagement, organisational clarity and clinical supervision

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Keywords:
advanced practice nursing, professional governance, clinical supervision

Abstract Text:
In 2011 the Royal Children’s Hospital commenced a project to make transparent the scope of our Advanced Practice Nursing (APN) workforce, establish professional governance and support for these nurses and engage them in process to support their professional development.

All nurses working in advanced practice roles in 2011 were invited to participate in an on-line survey based upon the work of Chang (2010). Nurses were then invited to participate in a series of workshops exploring themes identified from the survey. Quantitative and qualitative data was shared back with the participants and discussed by the Nursing Executive team, in order to identify future direction for service development.

As a result of the APN project, titles were streamlined and the Nursing Titles, Appointments & Credentialing Committee was established. All nursing appointments at a Grade 3 position or above require approval from this committee prior to advertising. A clear professional reporting structure was developed to ensure all APNs had an identified Professional Nursing Lead. A working group was formed to establish a process for Clinical Supervision of APNs. The APN Clinical Supervision program will commence piloting in July 2014.

The APN Project has improved organisational clarity regarding expectations of nurses working in advanced practice roles. Through participation in this project, connectedness of nurses employed in these roles has increased. The initiation of the Clinical Supervision program will provide these nurses with improved scope to support each other’s ongoing development and foster further engagement.
An element of competition can improve journal club engagement

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Affiliation(s):

Keywords:
Nursing, journal club, engagement

Abstract Text:
Background

Journal clubs (JC) can increase critical appraisal skills and promote evidence based practice. Often, after an initial flourish, a JC's popularity wanes. Innovative approaches to improving JC participation are required but few have been described. In 2013, to increase nurse’s engagement with a hospital-wide nursing JC, a competition format was convened.

Aim

To obtain an understanding of a competition elements impact on paediatric nurses’ JC engagement.

Method

Twelve departments were randomly assigned a month to present JC. Departmental nurses were supported to evaluate an article according to a framework. A predetermined rubric guided marking. Post competition, with ethics committee approval (HREC-33167), all hospital nurses received an anonymous online survey invitation. Demographic, Likert scale and freeform information was collected. Questions elicited attitudes and perceived barriers or facilitators to JC. Freeform data was themed.

Results

Compared to the previous year there was a significant increase in JC attendance (2013 mean=22 vs. 2012 mean=10, t-test p=0.00001). Full online survey responses were received from 289/1674 (response rate 17.3%) of sent invitations (non-attendees n=224, attendees n=65 (18 presenters).

Overall, attendees reported JC had a positive impact on their professional engagement. Presenters rated highly the JC format as it developed skills and increased JC confidence. Freeform themes indicated issues of time, session location, JC advertising and increased topics variety.

Conclusion

A competition format can increase nurses JC engagement and participation. In 2014 the JC competition format has continued, with a mean JC attendance of 45 nurses per session, demonstrating the ongoing influence of the competition format on engagement.
Assessing trauma management record use in a paediatric trauma centre

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Affiliation(s):

Keywords:

Abstract Text:
In order to ensure completeness and accuracy of medical documentation, many trauma centres have introduced trauma charts. At our paediatric institution, the Trauma Management Medical Record (TMMR) is primarily designed to improve documentation in patients who receive Trauma Team Activation (TTA), and includes space on the reverse side for tertiary survey documentation. The purposes of this study were to assess the rate of TMMR use, the completeness of information on the TMMR, and the association between use of the TMMR in the emergency department (ED) and completion of a tertiary survey.

Severely injured patients (according to statewide guidelines) and those receiving TTA over a nine-month period were identified and reviewed. A system for assessing TMMR completeness was devised and utilised.

The records of 195 children were reviewed, including 107 patients who received TTA. The rate of TMMR use in TTA patients was 88.3%, and for non-TTA severely injured patients was 38.4%. Seven of 18 sections of the TMMR were poorly completed (documented <70% of the time). These included documentation of non-ED unit involvement (contacts and attendances) and sections requiring a page turn. TTA increased the likelihood of TMMR use (OR 11.8; 95%CI 5.5-25.2), which in turn increased the likelihood of tertiary survey completion (OR 20.1; 95%CI 8.8-45.9).

The trauma team were mostly compliant with TMMR use and completion. Potential strategies for improving TMMR completeness are being explored, and include modifying the form layout. Wider TMMR use in trauma patients presenting to the ED may improve tertiary survey documentation following admission.
Associate Nurse Unit Managers: leading around the clock

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Affiliation(s):
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Keywords:
Associate Nurse Unit Managers, Expectations, Support

Abstract Text:
The role of the Associate Nurse Unit Manager (ANUM) is to support the Nurse Unit Manager (NUM) by providing management of, and leadership to staff, to facilitate great care. Given their pivotal contribution, it is vital ANUM are supported to develop their knowledge, skills, abilities and attributes for the role.

In 2014, work commenced to formulate an orientation and development plan for ANUM (ANUM Guide). NUM completed an audit about current ANUM numbers, responsibilities, qualifications, and required core competencies and about selection and support for nurses who act in ANUM positions. Following collation of audit data, ANUM and nurses were invited to complete a survey to expand on audit results.

As of June 2014 there were 97 appointed ANUM and a further 146 nurses recognised as acting as ANUM. Most ANUM have designated responsibilities such as performance reviews and/or allocated portfolios. Audit and survey responses demonstrate a high level of variation with regards selection and support for nurses who act as ANUM. The core competencies for ANUM in the audit and survey are extensive with some conflicting expectations and there are a number of areas in which opportunities for further development are recognised.

The first phases of this work demonstrate substantial variability in expectations and support for ANUM. In order to best enable ANUM to fulfil their role, more work is required to formulate an ANUM Guide. In July 2014 a series of workshops with Nursing Executive, NUM and ANUM will be conducted. This extended period of consultation will ensure expectations and support for ANUM is agreed upon and reduce variation.
Bleach baths for eczema

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Keywords:
Eczema, bleach baths, eczema severity

Abstract Text:
Introduction
Atopic eczema can be complicated by recurrent bacterial infections. The presence of staphylococcal aureus is also associated with the severity of the disease. Diluted bleach baths may reduce severity of eczema by halting the growth of S aureus.

Method
A single blinded randomised controlled evaluation of the effectiveness of using dilute sodium hypochlorite (bleach) baths, compared to emollient baths, for 3 months in reducing the severity of atopic eczema (measured by SCORAD).

Results
There was a greater reduction in severity of eczema in participants who used dilute bleach baths.

Implication for practice
Dilute bleach baths are more effective than emollient baths in reducing severity of eczema.

Dilute bleach baths should be recommended as part of standard care in the management of moderate to severe eczema.
Bowel care for the paediatric with buttock/perineal burns

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Keywords:
Burns
Wound Care

Abstract Text:
Burn injuries to the buttock and/or perineum present many challenges for the team caring for these patients. It is difficult and painful to apply and maintain dressings. This can delay healing and successful grafting may be difficult to achieve. Dressings contaminated by faeces can lead to infection, increased pain from frequent dressing changes, slow healing, graft loss and increased length of stay. Commercial bowel management systems are available but are for adult use only. They are not recommended for paediatric patients and if used can lead to extensive anorectal injuries.

A survey of paediatric burn units in Australia and New Zealand was undertaken to identify current practices. Results of this survey reveal that there are many different methods to care for these children and no formal protocols.

In 2013 a new treatment option for bowel management was developed and trialled on a patient with 30% Total Body Surface Area burns involving the buttock/perineum and both legs. Daily/twice daily bowel washouts using soft disposable rectal tubes were used to maintain continence. A schedule was developed and the child, parents and nursing staff reported decreased pain and distress, minimal faecal contamination and dressing changes. The child required grafting to his legs and buttocks and successful graft take was achieved through the prevention of faecal contamination post operatively.

Due to its success the treatment option will be developed into a formal policy to be used for these patients. The protocol will be reviewed yearly and modified as required.
Burns Bath & Burns Dressings Posters

Author(s):
Kate Glassford (Care Coordinator + CNS Platypus)
Nicole Cloke (Care Coordinator + CNS Platypus)
Kathy Bicknell (Burns CNC)

Affiliation(s):

Keywords:
Burns Bath & Dressings

Abstract Text:
Burns patients are a small percentage of our patient population on Platypus, but require complex and specialised nursing care including burns dressings and baths. Because of the infrequent nature of their admissions there is a challenge in up skilling staff for these procedures. After hours and on weekends there is no supernumerary staff available to provide assistance and often there are skill mix limitations, therefore a need was identified to provide staff with resources to support their practice.

Posters were developed to aid nursing staff in performing these procedures to ensure provision of best nursing care and to support specialised nursing practice. There are a number of burns dressing products available and each is specific to the wound healing stage as well as burn depth. The aim of the posters is allow nurses to use initiative in wound assessment and preparing for a burns bath.

The posters allow for a transfer of knowledge from advanced practice nursing staff to bedside staff. They provide visual and written information on the set up process for a burns bath as well as the different types of dressings used here at RCH. The dressing’s poster has visual pictures of the types of wounds nursing staff may come across and then identify the dressing product required. The posters are displayed in the burns bathroom located on the Platypus ward, as the dressings are performed on the unit. When the posters were developed and displayed the Platypus staff were informed via email and during handover. During hours staff have been supported and educated in the use of the posters as a step by step guide of preparing for a burns bath and dressing changes. We will begin surveying the nursing staff in the coming weeks to see if they find these tools useful and supportive of their nursing practice, and would be able to present these findings as well as any adjustment to the resources at the Symposium.
Central Line Associated Blood Stream Infection (CLABSI) Management - RCH

Author(s):
Terri Butcher

Affiliation(s):

Keywords:
Central lines
Blood stream infections
Bacteraemia

Abstract Text:
Objectives:
To review Central Venous Access Device (CVAD) management from insertion to removal against best practice evidence.
To decrease the rate of CLABSI's in the inpatient paediatric population in addition to the surveillance undertaken in the Intensive Care and Neonatal Units.

Method:
A web based "Central Venous Access Device (CVAD) register" has been implemented on the SQL Server at the Royal Children’s Hospital, Melbourne allowing for hospital wide collection of central line days.
A pathology database download provides all positive blood cultures for the month. These are reviewed to monitor the RCH CLABSI rate. All aspects of management is being reviewed to reduce the RCH CLABSI rate.

Results:
Hospital wide surveillance has been conducted from January 2009.
The CLABSI rate for 2009 was 2.8 infections per 1000 central line days and decreased to 1.8/1000 lines in 2013.
Each inpatient area receives a monthly CLABSI rate with a comparative table of other units.
A "Critical Incident Review" is requested for each infection identified.
Inconsistencies in management of CVADs was identified and a comprehensive review of the current literature undertaken to bring management inline with best practice.

Conclusion
Ongoing review and auditing of practice, education and use new technologies will further reduce the Central Line Associated Blood Stream Infection rate.
Clinical Supervision for Advanced Practice Nurses

Author(s):
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Sophie Linton RCH
Kylie Moon RCH

Keywords:
clinical supervision, advance practice nurse

Abstract Text:
There are more than 180 Advance Practice Nurse (APNs) working at the Royal Children’s Hospital (RCH) in roles with increasing complexities and competing demands. APNs are autonomous, frequently making decisions and judgements without input from peers or colleagues and they often report professional isolation.

Clinical supervision is defined as a formal process of professional support and learning between two or more nurses within a safe and supportive environment that enables a continuum of reflective critical analysis of care to ensure quality patient services and the wellbeing of the nurse.

A working group in conjunction with Nursing Executive have established a pilot program for APN clinical supervision. The pilot will be open to all APNs but limited to 48. Participation in the pilot study is voluntary and initial formal training and ongoing support will be provided. Over a 6 month period, clinical supervision will be conducted for 6 small APN groups, through regular, facilitated sessions with 2 supervisors. There will be a structured evaluation of the pilot program that will inform the expansion of the program for all APN roles.

The introduction of clinical supervision is a quality improvement for APNs. The objective of the APN clinical supervision pilot program is to evaluate, expand and embed clinical supervision within APN roles, ultimately improving confidence and support in their professional experience.
Community eczema program, failure to attend, audit

Author(s):
Danielle Paea, Claire Borlase and Tharanga Fernando

Affiliation(s):

Keywords:
Failure, Attend, Eczema

Abstract Text:
This study aimed to answer 2 questions;

1. What are the reasons for patients failing to attend (FTA) the Community Eczema Program (CEP) clinic appointments?
2. Can these identified reasons assist with identifying avenues to improve clinic attendance?

The CEP clinic has experienced FTA rates more than double the RCH standard (10%) for the last two years. The Royal Children’s Hospital current FTA KPI is 10% (Achieved 10% for 2011/2012).

This retrospective cohort study used the P value analysis, investigating all patients who attended CEP clinics between 01/07/2011 and 30/06/2012, conducted in two phases:

Phase 1 - Audit of all New and Review CEP patients
Phase 2 - Phone survey for families for who reasons for FTA was not available

There were no clear factors as to why patients FTA appointments. The analysis of the results did identify the following factors that may contribute to increased appointment FTA;

- Patients from a Non English speaking background (NESB)
- Patients aged 1-5 and 12-15 years
- Patients waiting more than 14 days for service
- Patients who had 2 ED presentations prior to referral

Strategies implemented to help improve FTA rates:

- Translation of RCH Eczema booklet and CEP appointment letter for NES clinic patients
- Promotion of the program within the ED, aiming to reduce the number of patients not referred until after second presentation
- An additional CEP clinic to help reduce wait for service (less than 14 days).
- Trial Saturday morning clinic. Unfortunately this has not been possible with limited space and GP support.
CSN Upskilling Shifts in PICU

Author(s):
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Affiliation(s):

Keywords:
Clinical Support Nurse (CSN), Paediatric Intensive Care Unit (PICU), Upskilling, Supernumerary

Abstract Text:
BACKGROUND AND AIM:
Nursing in single rooms can present challenges to staff development. Staff new to PICU reported a lack of opportunity to progress. The CSN up-skilling shift aims to facilitate the learning and development of staff entering into PICU without the support of a structured introductory program or post graduate course.

METHOD:
The participant works with a CSN in a supernumerary capacity. The mandatory completion of objectives relevant to existing skill level prior to the shift is essential to facilitate appropriate patient allocation. During the shift, the CSN provides formative feedback, assisting the nurse to ascertain knowledge gaps, whilst providing educational support as necessary. On shift completion, the CSN provides summative feedback and the participant completes a retrospective online survey. The management and education team receive a summary of the participant’s performance to aid future patient allocations.

RESULTS AND DATA:
71.4% of participants chose the primary reason for undertaking the shift as the opportunity to up-skill in the care of more complex patients and all respondents would recommend other staff to participate. Reasons related to the supported opportunity to care for and build a greater knowledge base of the complex patient and their multifaceted care needs. All participants required mild to moderate support from the CSN during the shift.

CONCLUSION:
The implementation of the up-skilling shifts balances challenge with support in an often intense environment. Staff are empowered to take ownership of their learning and the supported shift provides a platform on which they are able to build their confidence and competence through skill and knowledge acquisition.
Development of a paediatric spinal cord injury nursing & allied health course

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Keywords:

Abstract Text:

BACKGROUND:
Children with spinal cord injury (SCI) experience multiple unique health care needs. At the Royal Children’s Hospital Melbourne (RCH) we have responded to an increasing demand in caring for paediatric SCI patients and families, with a number of initiatives and strategies being developed and implemented to provide staff with appropriate tools for managing this unique cohort of patients. Despite these new resources, there was an identified need for specific paediatric spinal education of all relevant staff.

METHODS:
Collaborative meetings were initiated with the Victorian Spinal Cord Injury Service, the Victorian Paediatric Rehabilitation Service and the multidisciplinary team at RCH. We also conducted a hospital-wide survey on SCI knowledge and skills. As a result of these, a decision was made to develop a paediatric-specific spinal cord injuries nursing course.

RESULTS:
A three day course was piloted in 2011, with twenty two nurses from eleven disciplines across RCH attending. There were significant improvements in self-reported knowledge, skills and confidence amongst course participants. Participants' confidence in management of SCI patients also significantly increased, both overall and in the specific areas such as initial management, respiratory management, bowel and bladder care, and discussing sexuality and fertility with patients and families.

CONCLUSION:
Ongoing education is required to provide sustainable learning so that our patients continue to benefit from the skills and knowledge acquired from the course. The course is now offered annually to the wider Australasian trauma community, and was expanded to include allied health professionals in 2012.
Do nurses vary in their approach to wound management of ulcerated infantile haemangioma?

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Keywords:
infantile haemangioma, ulcer, wound management

Abstract Text:
Background and Aim: Infantile haemangioma (IH) is a benign tumour of blood vessels, which can ulcerate thus requiring prompt wound management. To date, there are no evidence-based studies to guide the most effective wound management of ulcerated IHs. Consequently, the individual nursing approach to wound management of ulcerated IH is likely to vary greatly. To determine if this is the case, we examined the individual nursing approach in management of ulcerated IH wounds in the Specialist Clinics at the Royal Children’s Hospital.

Research Method: Six nurses employed in the Specialist Clinics were asked to describe their approach to ulcerated IH wound assessment, wound preparation for dressing, pain relief, wound dressing used and evaluation of the outcome of the wound dressing regime.

Results: Five out of six nurses responded to the question. All five nurses differed in their approach to wound management of ulcerated IH with differences identified in all examined categories. The most common choice of wound dressing was Mepilex-Ag (4/5 nurses), as it was considered most user-friendly both for clinical use and at-home application by the parents.

Outcome: Identification of differences in nursing approach to wound management of ulcerated IH highlights the need to reduce the variability in practice by developing a clinical guideline protocol. In the absence of evidence-based literature, such a protocol will need to be evaluated after its implementation. This will determine the effectiveness of the protocol, assess the need for modifications and provide us with the ability to report our data and improve patient care.
Evaluation of an ECLS nurse-led anticoagulation protocol: a before & after study

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Keywords:
Extracorporeal Life Support (ECLS), Anticoagulation, nurse-led

Abstract Text:
Aim: Extracorporeal Life Support (ECLS) patients require continuous anticoagulation to minimise the risk of thrombosis. An ECLS anticoagulation and blood administration protocol was developed to provide a framework for clinical decision making, with the aim of improving consistency of practice and patient outcomes.

This study reviewed and evaluated the anticoagulation management of paediatric cardiac surgical patients receiving ECLS pre and post protocol implementation.

Methods: A retrospective observational “before’ and ‘after’ design was utilised. Two cohorts of ECLS paediatric cardiac surgery patients (pre and post protocol implementation) were matched. Key variables compared were Unfractionated Heparin (UFH) administration, chest drain losses (CDL), Blood product administration and duration of ECLS.

Results: 43 patients met the inclusion criteria.

UFH bolus documentation occurred in 50% of all participants. Delayed initiation of UFH infusion was noted across both cohorts and most participants required greater than 30 units/kilo/hour of UFH.

No significant differences were found between the two cohorts for CDLs.

Participants managed on the protocol were administrated fewer blood products than participants managed prior to protocol implementation.

Survival to hospital discharge was greater than 60% in all participants included.

Conclusions: Inconsistency in anticoagulation administration persisted post-protocol implementation. Strategies to improve adherence to the anticoagulation protocol are required. Administration of blood products was reduced post-protocol.

Clinical outcomes across both cohorts demonstrated a higher survival rate than commonly reported in the literature.

This study identified opportunities for further research, such as whether this type of protocol supports nurses’ clarity and confidence in managing complex challenging patients.
Family Function and Congenital Heart Disease

Author(s):
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Keywords:
Family function, Family Burden, Congenital Heart Disease Surgery

Abstract Text:
Congenital heart disease (CHD) is a common birth defect, and the most complex defects often require cardiac surgery in early infancy. This study describes family function and the burden of having an infant with operated CHD in the families of two year-olds who underwent surgery for CHD in early infancy.

The primary caregivers of 99 young infants (< 8 weeks age) that required cardiac surgery in Melbourne and Auckland completed a series of psychosocial questionnaires assessing family function, family burden, significant life stress, and coping style when their child with CHD was 2 years old.

Healthy family function was present in the majority (79%). Unhealthy family function related to significant life stress (p < 0.02) and less adaptive coping style (p < .02). Unhealthy family function did not relate to complexity of surgery, diagnostic class, need for reoperation, intensive care length of stay, or maternal education. A higher level of maternal education was associated with an adaptive style of coping, whereas a lower level of maternal education associated with a less adaptive style of coping. There was a greater family burden (p < 0.02) for those that required more complex surgery compared to less complex surgery and for those that required re-operation.

The majority of families of two year-olds with operated CHD had healthy family function. Diagnosis or complexity of surgery was not a key factor in determining family function or burden of disease. A subgroup of families was identified that may warrant earlier intervention with additional family support.
Improving the venous access service and introducing midline catheters for children with cystic fibrosis

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Keywords:
Cystic fibrosis, venous access, midline catheters

Abstract Text:
Background: The cystic fibrosis (CF) service at The Royal Children’s Hospital, Melbourne cares for 280 children. CF patients are commonly admitted for intravenous antibiotic therapy. In the past, junior doctors inserted intravenous cannulas on the ward. Multiple insertion attempts were common and lines frequently required replacement, thus disrupting treatment. When general anaesthesia was required, limited theatre access resulted in prolonged waiting. In 2010 a streamlined system for CF line insertion and the use of midline catheters were introduced

Aims: The revised system aimed to minimise patient distress, discomfort and complications, while preserving long-term venous patency.

Methods: Multiple initiatives were undertaken in collaboration with the Department of Anaesthesia. Protocols were developed to allow scheduling of venous access for the day of admission by an experienced proceduralist. Decision-making tools were developed to ensure that the appropriate line was selected, based on the patient’s size, vein status and duration of treatment. Ultrasound guided midline catheter insertion was introduced for appropriate patients. Catheter outcomes were audited.

Results: Since 2010 over 350 CF lines have been inserted. The majority were midline catheters inserted on the ward. Midline completion rate was 86%. Reasons for early removal of midlines included local pain, swelling or occlusion. Post insertion surveys showed a reduction in anxiety about admissions with high satisfaction rates for midlines.

Conclusion: The revised system has resulted in less requirement for general anaesthesia, theatre access and the use of x-ray, improved success rates with lines lasting the duration of the admission and minimal delay to commencement of treatment.
Infants referred to the Maternal & Child Health Nurse of a tertiary paediatric hospital: incorporating social-emotional assessment

Author(s):
Meredith Banks, Frances Thomson-Salo

Affiliation(s):

Keywords:
Ages & Stages Questionnaire: social-emotional (ASQ:SE), Infant, Maternal & Child Health Nurse

Abstract Text:
Objective: Provide a description of a cross section of infants referred to the Maternal & Child Health Nurse of a tertiary paediatric hospital, including path to referral and social-emotional wellbeing.

Method: Parents of infants aged 3 – 15 months referred to the MCHN of the Royal Children’s Hospital (RCH) over one month were recruited to a mixed methods study. 70 infants aged 0 – 16 months were referred over the study period. Only the 37 infants over the age of 3 months were eligible for screening with the Ages & Stages Questionnaire: social-emotional (ASQ:SE).

Results: 31 participants returned completed ASQ:SE. In the 3 to 8 month age range 12 infants returned scores above the cut off indicating a potential social-emotional problem, 5 of the 11 infants aged 9 to 15 months age returned scores suggestive of potential problems.

The mean number other professionals consulted in relation to the presenting problem was 5.25. One respondent consulted 10 other professionals and another had more than 7 admissions to hospitals before referral to the MCHN of the RCH.

A moderate positive correlation was found between the ASQ:SE score and the number of prior professionals consulted, which was statistically significant (rho=.48, p=.006). That is, the more professionals consulted the higher the ASQ:SE score. Themes of frustration, not being heard and conflicting opinions amongst health professionals arose within the study.

Conclusions: Providing parents with an opportunity to complete the ASQ:SE, and affording them an opportunity to discuss the findings, served to help parents consider their infant’s emotional state. Many study parents felt able to assist their infant to modulate his or her own regulatory states more confidently. This study highlights the benefit of social-emotional screening for infants for whom parents are seeking help.
Infection Prevention benefits of single patient rooms

Author(s):
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Terri Butcher

Affiliation(s):

Keywords:
Hospital acquired infections single rooms
single patient rooms

Abstract Text:
The Infection Prevention and Control Department worked with the New Hospital Design team on the design, construction, and furnishing of the new Royal Children's Hospital (RCH) to improve compliance to Infection Control practice.

This included the review and redesign single and shared room patient accommodation. Previously, due to a lack of single rooms, many patients who were admitted with a viral infection were nursed in a with four bed room in spaces were greater than 1 metre apart with a curtain divider. The new RCH however comprises of 80% single rooms. Literature suggests there is a reduction of hospital acquired infections in single room health care models.

The transmission of viral infection during hospitalisation is likely to prolong stay causing further interruption to the family setting and increasing the healthcare costs associated with their admission.

Ongoing surveillance for hospital acquired viral infections, in conjunction with monitoring for clusters and exposures to infectious diseases has been useful in determining effectiveness of single rooms to reduce hospital acquired infections.

Infection Prevention and Control principles in the design of new hospital facilities is essential to ensure there is flexibility to maintain a patient centred approach to prevention and management infections.
Introduction of a pain and sedation protocol can change paediatric intensive care practice

Author(s):
Ms Grace Larson & Dr Stephen McKeever

Affiliation(s):
RCH

Keywords:
Intensive care, Paediatric
Pain management
Sedation, Analgesia

Abstract Text:
Analgesics and sedatives are administered to children in paediatric intensive care unit (PICU) to treat pain and discomfort; however they can have negative sequelae. To guide analgesic and sedative administration a protocol was introduced into the Royal Children Hospital’s PICU in 2011.

To assess a pain and sedation protocol’s impact on; frequency of pain and sedation assessments, dosage and administration of analgesics and sedatives, level of sedation and duration of mechanical ventilation and PICU length of stay.

In 2013 a pre and post retrospective chart audit was conducted. Records of fifty children, post cardiac surgery, admitted before and after the introduction of the pain and sedation protocol were assessed.

Following protocol introduction, COMFORT B documentation increased (0.2 vs 0.3 assessments per ventilated hours, p=0.02). Administration of morphine administered via bolus increased (0.2 vs 0.41 mg/kg, p >0.0001) and midazolam administered via infusion decreased (median 57.6 vs 24.5 mcg/kg/hr, p=0.02). COMFORT B scores did in the time spent mechanically ventilated (median 11.5 vs 18.9 hours, p=0.008).

Introducing a pain and sedation protocol may have contributed to increased documentation of COMFORT B scores and moderation of sedative administration. Increased assessment may improve the management of children’s pain and sedation within PICU. However, an increased duration of ventilation is of concern due to its link to increased morbidity and therefore needs further investigation. For the future, ongoing evaluation of the long term impact of the protocol is important.
Lighting the way for reducing long stay

Author(s):
Lisa Stephens, Improvement Manager. Dr Penelope Bryant, Consultant RCH@home. Tamara Charteris, Nurse Unit Manager. Lisa vale, Director, Occupational Therapy. Bernadette Twomey, Executive Director, Nursing Services. Dr Peter McDougall, Executive Director, Medical Services and Clinical Governance.

Affiliation(s):

Keywords:
Long stay, governance, reporting

Abstract Text:
In the winter peak of 2012, patient flow across the hospital was a significant challenge. An increasing number of patients were staying in hospital greater than 29 days, comprising 18% of all inpatients and the number of bed days consumed by these patients had doubled in the last 12 months.

In response to this a long stay patient steering group was established, led by Executive Directors, medical and nursing with support from a Strategy and Improvement lead.

The aim of the steering group was to establish was to reduce the number of long stay patients by 10% and sustain practice changes.

Project management principles were applied. Auditing of long stay management processes was conducted which highlighted lack of visibility, governance and accountability of process. Weekly snapshots of patients staying longer than 29 days were recorded along with their collective number of bed days to monitor the effect of changes made.

A web based report was developed to monitor long stay patient discharge barriers and plans. Weekly meetings were established, reviewing reports and meeting with departments regarding their patients to explore barriers to discharge. These processes increased transparency and accountability for the management of long stay patients and provided an escalation point to the executive if additional support was required.

Organisational governance and nursing leadership across the organisation were key drivers to success. Long length of stay patients have been reduced by more than 10% with improvements in team communication, IT supports and revenue.
Machines that save lives: 25 years of Extra Corpeal Life Support

Author(s):
Best D, Butt W, Brizard C, Johansen A, Horton S

Affiliation(s):

Keywords:
ECMO, respiratory, cardiac, outcomes

Abstract Text:
Twenty five years ago, Extra Corporeal Membrane Oxygenation (ECMO) which, is an invasive supportive therapy used in life threatening cardiac and respiratory failure, commenced at the Royal Children’s Hospital. To date over five hundred children have now been treated with ECMO for a range of medical and surgical conditions. Since the commencement of the program substantial changes have occurred in the supporting equipment. From 1988-2001 support was achieved using the BiomedicusTM centrifugal pump and predominantly the Avecor TM oxygenator. Minimax TM and Lilliput TM oxygenators were also utilized during this period. The year 2001 saw the introduction of the Jostra Rotaflow centrifugal pump and the Quadrox D oxygenator. The year 2010 saw the introduction of the Medos LT TM oxygenator. Currently children are supported with both types of oxygenator. The year 2013 will see the introduction of the Medos Deltastream III TM system. Results of support (to January 2013) are as below.

<table>
<thead>
<tr>
<th></th>
<th>Total patients</th>
<th>Survived ECMO</th>
<th>Survived to discharge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neonatal</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Respiratory</td>
<td>108</td>
<td>78 (72%)</td>
<td>67 (62%)</td>
</tr>
<tr>
<td>Cardiac</td>
<td>89</td>
<td>57 (64%)</td>
<td>43 (48%)</td>
</tr>
<tr>
<td>ECPR</td>
<td>43</td>
<td>36 (84%)</td>
<td>22 (51%)</td>
</tr>
<tr>
<td>Pediatric</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Respiratory</td>
<td>75</td>
<td>42 (56%)</td>
<td>38 (51%)</td>
</tr>
<tr>
<td>Cardiac</td>
<td>128</td>
<td>85 (66%)</td>
<td>64 (50%)</td>
</tr>
<tr>
<td>ECPR</td>
<td>56</td>
<td>35 (63%)</td>
<td>26 (46%)</td>
</tr>
<tr>
<td>Adult</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ECPR</td>
<td>1</td>
<td>1 (100%)</td>
<td>1 (100%)</td>
</tr>
<tr>
<td>Total</td>
<td>500</td>
<td>334 (67%)</td>
<td>261 (52%)</td>
</tr>
</tbody>
</table>

ECMO equipment, and conditions supported continue to evolve, which presents new challenges to the ECMO team, medical, nursing and allied health.

(Thanks to Peter Rycus and ELSO for the ECMO data)
Abstract Text:
The incidence of measles rapidly declined following the introduction of the Measles vaccine into National Schedule for 12 month olds in 1975 and as a consequence is rarely seen and increasing difficult to identify. It remains a Group A Notifiable Disease to the Department of Health with 41 cases occurring in Victoria in 2013.

Early identification and isolation of the patient in the days preceding the rash and for 4 days post rash is essential to minimise airborne transmission to susceptible persons.

At the Royal Children's Hospital there are now 2 negative air pressure isolation rooms in each inpatient ward as well as the Emergency Department to manage suspected or confirmed cases.

Health alerts are issued by the Department Health when clusters or increasing incidence in the community are observed. Triage nurses are aware to be suspicious of children, particularly unimmunised or returned travellers, who are febrile with a maculopapular rash to suspect Measles.

Despite the highlighted awareness 2 recent episodes have occurred when undiagnosed cases had contact with other patients and visitors.

The process to follow up these contacts included use of the Australian Childhood Immunisation Register to determine patient susceptibility, Emergency Department patient data base to track patient movement, administration of vaccinations and immune globulin to susceptible contacts.

Ongoing vigilance by the Emergency Department and clinical staff remains a key to identifying possible cases and preventing transmission.
Measuring clinical practice of assessing children's pain in Australian EDs

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Research Assistants: Benjamin Briggs Zoë Carman Jai Chen Shanikka Dias Tara Handke

Affiliation(s):
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Keywords:
pain assessment, paediatric pain, emergency room pain

Abstract Text:
Aims and Background: Paediatric pain assessment is commonly overlooked in the emergency department, leading to inadequately managed pain in children. This study examines the assessment tools currently used by nurses to assess paediatric pain in an emergency setting across different age categories, along with potential facilitating and limiting factors of pain assessment frequency.

Methods: A quantitative descriptive survey was designed and distributed electronically to the College of Emergency Nursing Australasia (CENA) network. The questionnaire limited the data collection to include only nurses practicing in emergency departments who encounter paediatric patients, as this was the focus population for the study.

Results: Face Legs Activity Consolability Cry (FLACC), Wong Baker and Numeric Pain Score were identified as the predominant pain assessment tools implemented across the paediatric lifespan. However, of the hospitals represented, many were reported as not having established pain assessment guidelines. Furthermore, nurses reported a lack of trust in the accuracy of pain assessment tools in determining pain levels in children.

Conclusions: Although there are a number of hospital-based initiatives in Australia aimed at improving pain assessment in emergency departments, it appears that frequency of formal paediatric pain assessment remains inadequate. This is in spite of nurses reporting both awareness and confidence in their ability to use the tools available. Further work in this area is warranted, particularly looking at an increased sample size.
Multiple cannulation strategies for Extra Corporeal Membrane Oxygenation (ECMO)

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Affiliation(s):

Keywords:
ECMO, peanut allergy, cannulation

Abstract Text:
In the 1970’s veno-arterial (VA) ECMO was the only mode of extracorporeal support used. In the 1980’s, veno-venous (VV) ECMO became available. Today, ECMO is now applied in many varied and diverse clinical situations. Multiple sites and cannulation strategies are used. Today there are many varieties of VV ECMO; some circuits use two single lumen catheters, some a single catheter with multiple lumens (e.g. a dual lumen or a three lumen AvalonTM), or some circuits have three catheters (one drainage and two return catheters, one catheter above and one below the diaphragm). Similarly, VA can be central or peripheral, neck or groin, percutaneous or cut down. Even central ECMO can have different circuits involving left or right atrium and pulmonary artery or aorta. Each variation has its own benefits and its own set of complications.

Occasionally during an ECMO run, a single patient may require multiple cannulation strategies.

Case study.
Patient A, female age 12 years (40 kgs)
Diagnosis: Anaphylaxis to peanuts, severe respiratory distress, VF arrest
Medical management: ETT/ventilation/inotropes
Problems: ↓ pO2/↑ pCO2 Solution :VV ECMO (femoral)
Problems: Cardiac arrest Solution: VA ECMO (femoral/femoral plus back flow cannula)
Transfer from adult ICU to paediatric ICU.
Problems:
1. Decreased Leg perfusion
2. Cerebral de-saturation due to ongoing severe pulmonary pathology and recovery of ventricular function
3. Inadequate cardiac output contributing to lactic acidosis
Solution: Central high flow VA ECMO.
Patient Outcome. Successful decannulation and chest closure.
Total ECMO support 141 hours. Discharged to ward for ongoing rehabilitation with normal neurology, cardiac and respiratory function, resolving renal dysfunction. The above case study demonstrates the multiple cannulation strategies that were required in the medical management of patient A. The ability to respond to the type of ECMO support that the patient requires, is essential for best patient outcomes.
Nurse led clinics for patients requiring anticoagulant therapy

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Keywords:
anticoagulants, warfarin, clexane

Abstract Text:
Background
Warfarin and clexane are the most common anticoagulants used in paediatrics. The majority of children requiring anticoagulant therapy have complex underlying health conditions, including cardiac and gastro-intestinal anomalies. Warfarin has a low therapeutic index and requires frequent blood monitoring tests. Clexane affords very stable therapy, but must be injected subcutaneously.

Aim
The Anticoagulant Clinical Nurse Consultant (CNC) service aims to provide comprehensive education regarding anticoagulation to patients and their families in order to achieve better outcomes, safe medication administration and optimal quality of life.

Methods
The Anticoagulation CNC runs a nurse led clinic once a week for all RCH patients discharged on warfarin or clexane. Patients are referred to the nurse led clinic immediately post discharge and annually thereafter. Patients assessed with higher learning or support needs are seen more frequently. The consultation lasts between 30-60 minutes. Education delivery is supported by purpose-designed templates guiding the content and structure of the session, and focuses on safe administration, potential side effects and optimizing quality of life at age-appropriate levels.

Results
There are approximately 180 patients on warfarin and 5-10 patients on clexane at any one time within RCH. The nurse-led clinic offers families timely access to the education and support needs required when caring for a child requiring anticoagulant therapy.

Conclusion
This model of care enables the delivery of comprehensive education and support within the setting of limited nursing EFT. Partnership with ward-based Nurse Coordinators is essential to support timely and appropriate discharge of infants and children requiring anticoagulant therapy.
Nurse-Led Project Management in Action: A Statewide case example

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Keywords:
Project Management; Statewide

Abstract Text:
Background/Aim
The goal of the Victorian Statewide Paediatric Observation and Response Chart (SPORC) project is to reduce paediatric morbidity and mortality related to inadequate detection of, and response to, the deteriorating paediatric patient. This presentation outlines the project management cycle that was followed during the first two phases of the SPORC project.

Methods/Plan
Phases 1 – 2 of the SPORC project cycle included; securing funding, significant planning and development of a set of age specific track and trigger early warning observation charts and an accompanying education package, widespread implementation and an evaluation using a mixed methods approach.

Results
Initial funding was secured from the Department of Health for Phase 1 of the project, with a subsequent increase in budget and extension to project timeline. Planning commenced with the scoping of existing Victorian and Australian paediatric track and trigger charts. Development of the charts involved extensive stakeholder engagement including expert clinicians from both rural and metropolitan settings. Teleconferences or videoconferences were conducted monthly. An expression of interest to pilot the charts generated 21 applications. Informal interviews and site visits were conducted and 10 Victorian hospitals were chosen as pilot sites. Phase 2 of the project concluded with an evaluation of the usability of the charts, including their appropriateness to identify patient deterioration.

Conclusion/Summary
Following a clear project management cycle provided a logical and clear way to achieve large scale project implementation, which has resulted in the production of a set of standardised observation charts ready for Statewide rollout.
Nurse-led MOTIVATE method prior to Transcutaneous electrical stimulation method improves clinical outcomes

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Affiliation(s):

Keywords:
constipation, laxatives, MOTIVATE, Transcutaneous Electrical Stimulation (TES)

Abstract Text:
Background: Treatment-resistant motility disorders with protracted symptoms are very difficult to treat with conservative medical therapy. Previous Transcutaneous Electrical Stimulation (TES), without other changes to existing management took months to show improvement. Our objective was to pilot a novel nurse-led MOTIVATE method using combined high-dose medication and TES.

Materials/Methods: Patients (n=33, 4-16yrs/17 males) presented with moderate faecal loading were treated with MOTIVATE medicated disimpaction (Movicol, Dulcolax SP) administered at home over 3 days. Patients/parents administered TES (2 electrodes on abdomen, 2 on back using Fuji 1NF4160+/FD10 device connected to AC, 1hr/day before 9am) as adjunct therapy for 8-12 weeks in addition to prescribed maintenance laxatives. Primary efficacy criteria were total stool volume, frequency, consistency and soiling episodes per week. Patients were instructed on medications and correct toilet posture for defecation.

Results: High-dose oral medication was well tolerated. All patients had successful disimpaction over 2 days (mean 6 cups of stool total) followed by maintenance medication, and then TES therapy. TES produced improvement in defecation within 3-5 days. After 8-12 weeks of TES, median stool consistency and volume improved with soiling episodes decreasing.

Conclusions: This nurse-led combined laxative treatment and TES therapy successfully improved chronic constipation in patients with intractable symptoms. TES alone has effects in colonic motility over 2-3 months. Disimpaction with defined laxatives (MOTIVATE) prior to TES therapy resulted in much quicker response and improved symptoms in more patients. Improvement was more rapid than previously shown with TES alone.
Opioid Induced Pruritus

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Keywords:
Opioid, Pruritus, Naloxone

Abstract Text:
Pruritus is a recognized adverse reaction to opioid administration with a reported incidence ranging from 0-90%. Opioid-induced pruritus (OIP) can be distressing and sometimes more problematic than pain. Studies are limited in the paediatric population. The incidence of OIP at RCH needed to be established before initiating a change in practice.

From an audit of 372 children in 2008, the incidence of OIP in children receiving intravenous opioids was found to be 10.7%, with 75% of pruritic children requiring anti-pruritic intervention. The audit results did not support the use of prophylaxis for OIP given the low percentage of children affected.

The use of naloxone, an opioid antagonist, was introduced as the primary anti-pruritic treatment of choice. A standing order for 1mcg/kg of naloxone was made available on opioid charts for nurses to utilize. Naloxone was already standard practice for treatment of opioid induced sedation with no affect on analgesia. In 2011, a further audit of 437 children was undertaken with the addition of assessing opioid-induced urinary retention. It was also important at this stage to audit treatment compliance for OIP. 3.2% of children were pruritic an insignificant number. 4 children were identified as having urinary retention with a poor response to naloxone.

In 2013 355 children were audited to again review any variance in the incidence of OIP and urinary retention and if naloxone was used in clinical practice. These results are being collated.
Pain Assessment and Documentation practices in Neonatal Intensive Care Unit

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Keywords:
Sucrose, PAT scores, Neonates

Abstract Text:
The Royal Children’s Hospital (RCH) neonatal Intensive Care Unit (NICU) provides medical and surgical care to neonates. The Pain Assessment Tool (PAT) was developed by Hodgkinson et al in 1994 piloted and validated for assessing pain in surgical patients. Pain should be assessed regularly, however poor documentation was observed. The aim of the audit was to assess if PAT scores were being completed and documented when patients were receiving analgesia. First we needed to find out how many patients were receiving analgesia or who had a need for pain assessment (ventilation and surgery).

Methods: A comparative audit was taken at three points over a four year period that focused on the practices of pain assessment on the unit. The bedside nurse provided information, using the data collection sheet.

Results: In 2008 48% were receiving analgesia, 12% ventilated, 12% had PAT scores documented and 4% had pain discussed on the ward round. In 2009 52% were receiving analgesia, 23.8% ventilated, 42.8% had PAT scores documented and 4.76% had pain discussed on the ward round. In 2011 48% were receiving analgesia, 36% ventilated, 68% had PAT scores documented and 36% had pain discussed on the ward round.

Conclusions: The first audit showed the number of patients who had documented PAT scores did not reflect the number that required pain assessment. Education was implemented with the aim to improve practice. PAT score lanyards were produced as a reference for staff. The second audit showed an improvement in documentation but few patients had pain management discussed during ward rounds. Education continued and the importance of discussing PAT scores at a consultant level was highlighted. Neonatal pain assessment guidelines were created and available to all staff. The 2011 audit showed improvement in assessment and documentation and pain was discussed during ward rounds. Education and auditing should continue to maintain and further improve pain management.
Parent & patient survey of joint/muscle bleed management in children with haemophilia

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Keywords:
Haemophilia, joint bleed, home management

Abstract Text:
Background: Haemophilia, is a bleeding disorder typified by bleeding into joints and muscles. Recurrent joint and muscle bleeding can lead to pain and deformity resulting in permanent impact on developing joints of children and young people. Joint and muscle bleeds can be managed through the administration of clotting factors as well as adjunct therapy such as rest, ice, compression and elevation (RICE). However, few studies have been conducted on how adjunct therapy is used in bleed management. Aim: To investigate how children with haemophilia and/or their parents experience and manage joint and muscle bleeds in the home. Research Method: A survey was sent out to young people with haemophilia (under 18 years) and parents of children with haemophilia who had experienced at least one joint/muscle bleed as identified by the Royal Children’s Hospital, Melbourne bleeding disorder registry. Data analysis was conducted using descriptive statistics. Results: 36 completed parent surveys were returned. RICE was used by the participants in managing bleeds where 80% indicated resting was very helpful/helpful, 81% suggested that ice was very helpful/helpful and 70% suggested compression was very helpful/helpful. However, the duration of each component of RICE varied from recommended guidelines. Interestingly, parents used pain as a marker for bleed recovery but in fact, swelling is a better indicator for when to resume normal activity. Conclusion: This study indicated parents would benefit from more information on using RICE in the management of joint and muscle bleeds at home.
Preparing paediatric nurses to swim not sink in the resuscitation room

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Keywords:
Paediatric nurse, Resuscitation, Development Program

Abstract Text:
Preparing paediatric nurses to swim not sink in the resuscitation room.

The emergency resuscitation room is a high pressure environment, requiring a varied and complex skill set and the ability to apply knowledge and skills in a time critical manner. In order to prepare nurses new to the role of paediatric resuscitation nurse, a 6 month program titled the Paediatric Emergency Development Program (PEDP) was developed and implemented. This program is run as part of an overall career progression pathway. The aim of the program is to give paediatric emergency nurses the knowledge and skills required to function in the role of junior paediatric resuscitation nurse. It provides a combination of self-directed and supported learning. To date 29 nurses have participated in the program over a 24 month period. Evaluation of the program has involved participant feedback and interview survey of AUM in charge nurses. The preliminary evaluation appears to indicate the program is successful, participant satisfaction is high and AUM in charge nurses report an increase in the confidence and competence of staff entering the role of junior resuscitation nurse. The program will continue to be evaluated and developed with each group of participants. Although in its infancy the PEDP could be useful for the development of similar programs elsewhere to promote competence in the delivery of paediatric resuscitation nursing.
Promotion of Clinical Research Engagement Using a Clinical Governance Framework

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Keywords:
clinical governance, research, nursing

Abstract Text:
The benefits of engaging in quality and research activities are readily apparent but nonetheless challenging to achieve within clinical environments. This abstract demonstrates how a clinical governance framework informing nursing research activities enhances engagement of nurses in quality and research activities.

The Victorian Government Clinical Governance Framework was adapted, employing the domains of Consumer Participation, Clinical Outcomes, Patient Safety and Effective Workforce. Establishing initiatives to support the development of Effective Workforce, as related to research engagement and evidence-based practice, facilitated improved staff participation in activities aimed at improving the remaining 3 domains. The successful implementation of this strategy was supported by numerous processes, including the employment of academically prepared nurses, formation of the Melbourne Children’s Nursing Research Committee, strategies such as Journal Clubs, Tuesday @ 2sessions and Workshops, plus one-on-one mentoring to clinical nursing staff. Integration of evidence into practice was supported through the establishment of a Clinical Effectiveness Committee, the membership of which spanned all areas of nursing practice on campus. This committee supports and facilitates the development of evidence-based nursing guidelines.

Since initiating this approach to research development, involvement of nurses in research focused on organisational priorities has increased, clinical guideline revision and publication has improved and nurses’ access to professional development opportunities has been supported.

Embedding nursing research within a clinical governance framework promotes nursing participation in research and evidence-based practice by facilitating nurses to identify and direct the focus of research activities based on clinical priorities identified by nurses themselves.
Respiratory Syncytial Virus Immunoglobulin for Cardiology patients at the Royal Children's Hospital, Melbourne

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Keywords:
RSV; immunoglobulin; cardiology

Abstract Text:
Background
Respiratory Syncytial Virus (RSV) is associated with increased morbidity in high-risk infants. RSV immunoglobulin provides passive immunity when administered monthly in the bronchiolitis season (May-Sept). The Royal Children’s Hospital (RCH) funds RSV immunoglobulin for selected Cardiology patients, as RSV infection in this high risk group has previously resulted in ICU admission. The delivery of RSV immunoglobulin is co-ordinated by the RCH Immunisation service.

Methods
Cardiology care managers identified RSV immunoglobulin eligible patients. The patients were grouped together where possible, to maximise sharing of vials in an attempt to reduce wastage. The patients and their families were also provided immunisation advice and opportunistic catch-up vaccines. The hospital Infection Control team provided the list of RSV positive admissions to RCH for 2013, which was cross referenced with the Cardiology RSV immunoglobulin patient list.

Results
In 2013, a total of 93% (109/117) eligible cardiology patients received at least the 1st dose of RSV immunoglobulin. An impressive 39% (42/109) were provided other vaccines at the time of the visit for RSV immunoglobulin. The cost savings by sharing the vials of RSV product was estimated to be $64,100. None of the patients who received monthly RSV immunoglobulin were admitted to RCH with laboratory confirmed RSV infection.

Conclusion
The RCH 2013 RSV immunoglobulin program delivered cost savings and the opportunity for immunisation advice and catch-up vaccines.
Successful nurse-led method improves complex surgical patients symptoms prior to surgical intervention

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Affiliation(s):
constipation, laxatives, MOTIVATE,

Keywords:

Abstract Text:
Background: Slow Transit Constipation (STC) patients with protracted symptoms are very difficult to treat with conservative medical therapy. Surgical techniques suggest ACE may be beneficial in providing access for antegrade enemas however a high complication rate is often reported. Our objective was to pilot a new nurse-led disimpaction (MOTIVATE) method to improve complex surgical patient’s symptoms, prior to the introduction of the ACE management.

Method: Moderate faecal loading in STC patients (n=41) were treated over 3 consecutive days (average sodium picosulphate, 19.5 mg/PEG+E, 123.3g). Primary efficacy criteria consisted of the total volume of bowel movements and stool consistency. Patients were given instructions on medication administration, correct toilet posture to assist with defecation and how to administer the regimen at home over 3 days. Daily charts monitored medication dosage/output. PEG+E was dissolved in 125 ml water/sachet and mixed with an equal volume of juice, then drunk at 80 ml/ 30 min.

Results: All patients (n=41) were disimpacted following administration of well tolerated high-dose medication. Stool output ranged 5-7/cups over day 2 & 3. Stool output per week shifted from 0.88 to 6.57 defecations/week.

Conclusion: The success of this nurse-led method improves complex surgical patient’s symptoms, prior to the introduction of the ACE management. Alternatively, may delay the need for surgical intervention; particularly if the patient experiences chronic faecal loading. Further to this, overcoming faecal impaction in refractory STC patients' lessons a number of potential complications in ACE management.
Surgical Site Marking Practice in a Perioperative Unit: A Clinical Audit

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Affiliation(s):
surgical site marking, safety, compliance

Keywords:

Abstract Text:
Patients admitted into the perioperative environment can be at risk of harm due to a number of factors. One potential adverse event is surgery on the wrong site. This is considered to be an avoidable incident that can result in possible patient suffering, injury, disability or even death. The purpose of this audit was to assess surgical site marking (SSM) practice and compare the results to current hospital policy.

50 surgical cases were randomly sampled. Data was collected by observation with the use of a data collection tool. The results showed that 48 of the 50 sampled surgical cases had SSM. The 2 cases that were not marked were both laparoscopic procedures. 94% of cases had SSM present prior to the patient being sedated, with 67% of SSM being within 5cm of the incision site. 69% of SSM were still visible once the operative site was draped. Only 21% of SSM complied with hospital policy with regard to having the initial of the marker present with the SSM. Although there was a strong compliance with marking of the surgical site, results showed that there were inconsistencies in SSM practice regarding the symbols used for site marking, and the distance and location of site marking from the incision site.

As an outcome of this audit it is recommended that a review and update of current hospital policies regarding SSM be conducted to ensure it is based on best evidence and that education be provided regarding SSM to all perioperative staff.
The RCH Clinical Effectiveness Committee: a novel approach to supporting evidence based practice

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Keywords:
evidence based practice, clinical guidelines, nursing

Abstract Text:

Background

Globally, facilitating nurse's engagement in evidence-based care is a challenge for many health care providers. This paper reports an innovative approach to empowering and supporting nurses to provide evidence-based care through the establishment of a Nursing Clinical Effectiveness Committee (CEC)

Methods

The CEC was convened in December 2010 to establish a clear and consistent pathway to support the development of evidence based clinical nursing practice guidelines. All guidelines developed are identified and developed by clinical nurses involved in direct patient care. To promote consistency, a multistep guideline development process was established, along with guideline development templates. Regular workshops are conducted to support staff to develop skills in clinical guideline development.

Results

As of May 2014, the CEC activity manages 61 guidelines and continues to provide structured guidance in the development and implementation of evidence based clinical guidelines. Three projects have been completed with the aim of auditing compliance to published guidelines. Outputs from Google Analytics demonstrate a steady growth in Nursing Clinical Guidelines page-views. From May 2013 – May 2014 a total number of 842,226 page views have been tracked

Conclusions

Establishing a clinical effectiveness committee can overcome some barriers to nurse’s utilisation of evidence based practice. Along with guideline development the clinically embedded CEC model fosters the development of relevant clinical and academic skills in nursing staff. The CEC models utility in other settings is yet to be determined however, through online guideline publication its impact has already been far reaching.
To improve the efficiency, safety and cost of Intravenous Iron infusions at the RCH

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Keywords:
Fe infusions, cost savings

Abstract Text:
The mainstay of intravenous Iron therapy at the RCH has for many years been infusions of Ferrum H (Iron Polymaltose) and for those children who reacted to this, Venofer (Iron Sucrose). Recently there has been developed a new intravenous Iron formulation, Ferinject (Iron Carboxymaltose). Ferinject was initially not granted paediatric TGA approval making use at the RCH difficult, however RCH drug usage committee approval was obtained for use for children over 14 years old.

Data was analysed on Ferrum H and Venofer infusions to 27 children and Ferinject infusions to 26 children. Length of admission, length of infusion and reaction rates were analysed.

Iron Polymaltose and Sucrose infusions (Mean 369 mins) were shown to take 10 times longer than Ferinject infusions (Mean 38 mins) with a correspondingly longer admission time 440 mins V 155mins.

In the Iron Polymaltose and Sucrose group the reaction rate was 15% with a mean time to reaction of 8.25 mins, one patient in this group required 3 further admissions to achieve the required iron dose. The Ferinject group had no reactions.

Efficiency and cost benefits to the RCH occur by using Ferinject, as less nursing staff time is required, in addition there were no requirements for patient readmission and the short infusion and admission time allowed for admission of other patients into the Day Medical Unit. Drug costs resulted in a small saving to the RCH by using Ferinject. Safety is improved by the absence of reactions.
Background. Children are at high risk of experiencing medication incidents. Previous research relating to medication safety in children has largely involved the conduct of medication audits, highlighting inadequate communication between health care providers, children and family members as an important contributor to medication incidents in hospitals. Past work has lacked examining what happens in actual practice, which is important in determining the complexities of communication processes. The perspectives of children and family members have also not been adequately considered.

Innovation Plan. The current project involves an observational design incorporating a mixed-methods approach to investigate medication communication within a children’s hospital. Data will be collected from a variety of health professional disciplines, including doctors, nurses and pharmacists, as well as hospitalised children and their families situated in diverse ward settings.

Data about the Innovation. This research will use semi-structured interviews to obtain information on medication communication within the hospital from the perspectives of health professionals, patients and family members. Audio-taped observational data during actual health professional practice will be captured and analysed to identify effective communication practices within the context of a clinical setting. A concurrent medication audit will be conducted to link medication communication with medication incidents.

Conclusion. Investigation of medication communication using a mixed-methods approach is paramount to understanding the complexities of how communication occurs in inpatient hospital settings. The proposed study and its comprehensive methodology, although not without its challenges, will obtain rich and meaningful data for the purpose of informing paediatric medication safety processes.
What's the risk? Pressure Injury Risk Assessment in Paediatric Intensive Care Settings

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Keywords:
Pressure areas, risk assessment, tool validation

Abstract Text:
Aim
The aim of this study was to determine whether assessing patient risk of developing pressure injuries in Paediatric Intensive Care (PICU) and Neonatal Units (NNU) using the Glamorgan Scale (GS) compared to a modified Glamorgan Scale (mGS) would identify an increase in risk?

Method
Prospective data was collected from a convenience sample of patients admitted to PICU or NNU during a two month period. The patients’ pressure injury risk score using both instruments was collected by observing patients, reviewing patient records and clarifying information with bedside nurses. Chi square analysis was used to compare the risk category allocations.

Results
A total of 133 patients were assessed with complete data available for 112 (PICU = 68, NNU = 65). The total number of admissions during the data collection period was 202 in PICU and 100 in NNU. There was an extensive spread of patients allocated to the “High Risk” and “Very High Risk” categories in both units. Only one was in the lower “At Risk” category. There was little difference in allocated risk category between the mGS and the GS (p = 0.982). Only one patient was not allocated to the same risk category by both tools.

Conclusion
A simpler assessment tool (mGS) is effective at identifying patients at risk of pressure ulcers in the PICU and NNU. When a validated tool is modified for local use it is important to evaluate the modification to determine whether the effectiveness of the tool is impacted. The effectiveness of the modified tool should also be evaluated in other settings.
Why are children with Cerebral Palsy and their parents awake at night? A pilot study.

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Keywords:
Cerebral Palsy, Sleep, Children

Abstract Text:
Background and Aim:
Children with cerebral palsy (CP) and their caregivers often report poor quality sleep. A proportion of sleep problems can be linked to physical care needs associated with CP; repositioning, pain, hygiene. Simple but effective changes can be made to care regimes that may reduce sleep disturbance. However, sleep issues and the subsequent sleep solutions are frequently overlooked. The aim of this pilot study is to identify why children with CP and their parents/caregivers are awake overnight.

Method:
Parents of children with severe CP aged between 6 and 10 years were asked to complete a Time Use Diary (TUD) of their child’s night from 6pm until 9am for one weekend night and one weekday night.

Results:
Eight families returned the study documents, yielding a total of 16 nights of TUD data. Two children slept uninterrupted for both nights. Two children experienced 11 awakenings over the two nights. The remaining 4 children woke 0-2 times across both nights. Waking time ranged from 15 minutes to 4 hours. Reasons for children waking included; need for repositioning or comforting, distress, pain, boredom or restlessness.

Conclusion:
Children with CP and their parents are awake often and for long periods overnight. The TUD provided rich data in regards to night time awakenings for children with CP and their parents. This data can be used to design sleep interventions to address problematic sleep for this cohort. This study needs to be refined and repeated on a larger scale in order to gain validity.