Nursing Research and Clinical Innovations Symposium

Tuesday 15 September 2015
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<td><strong>Oral Presentations Session 3</strong>&lt;br&gt;  Clinical trials nursing fast-facts- is it useful for the nurses? Kasthoori Jeyachanthiran  &lt;br&gt; Long term VAD patients ECLS utilisation; pre implantation, Gabrielle Callea &amp; Amy Johansen  &lt;br&gt; Reducing anaesthetic risk in idiopathic pulmonary arterial hypertension, Michelle Rose  &lt;br&gt; Clinical care in PICU of the ebola suspected patient: lessons learned, Janine Evans</td>
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Oral Presentations
Nurse Led Clinic, Specialist Clinics

Author(s)
Sharon Trevorrow

Affiliation(s)
The Royal Children’s Hospital

Keyword(s)
Nurse Led, Specialist Clinics, referral

Background and Aim
Historically for many children and their families the need for a relatively quick procedure such as the replacement of a naso gastric tube or central line bloods taken, meant a long wait in the Emergency Department or an unexpected presentation to the ward asking for Nursing assistance. The aim of the Specialist Clinic nurses was to provide a service that addressed this need, thus improving timely access for children and improving their health care outcomes.

Research Method or Innovation Plan
The Nurse Led Clinic was established as an innovative initiative by the Specialist Clinic Nurses. As a Nursing unit we established what clinical skills and procedures we were able to offer families and examined where we might require further education. We also evaluated what clinical space we had available and what available time we could offer a new Nursing service and that would work with our existing Specialist Clinic commitments.

Results or Data about the Innovation
The results and data of the Nurse Led clinic are clearly positive. The numbers of children that present to the clinic are ever increasing. We have established a formal referral process for the clinic as well as maintaining a drop in service as required by families. Informal feedback from Medical staff, Nurse Coordinators and families has been very positive.

Conclusion
The Nurse Led clinic has met a need for families and has improved the health care outcomes for the children that attend. It has helped with timely access to Nursing care and support, provided continuity of care and provided a more positive experience for all involved.
Audit of Wound Management Practices in Treatment of Ulcerated Infantile Haemangioma at the Royal Children’s Hospital

Author(s)
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Keyword(s)
Infantile, haemangioma, ulcer

Background and Aim
Infantile haemangioma (IH), a benign tumour of blood vessels, can ulcerate and require wound management. Published reports show great disparity in wound management of ulcerated IH. By conducting a retrospective audit, we aimed to identify wound management strategies employed to treat ulcerated IH at the Royal Children’s Hospital (RCH), Melbourne, and determine if any of these strategies are associated with decreased referrals for surgical intervention.

Research Method or Innovation Plan
We identified and reviewed 352 patients with IH that presented to the RCH, Melbourne. We recorded patient health status, wound appearance and management, pain management and type of documentation. Data was analysed using Excel software.

Results or Data about the Innovation
Of 352 cases, 303 met the criteria of IH diagnosis. Of those, 88 cases (29%) had ulcerated IH. Only 57 (19%) cases had documentation on wound management. Of these, 39% were sourced from nursing notes. No wound charts were found. Silver-based wound dressings were reported most frequently (21%), of which only 10% cases had documented clinically diagnosed infection. Antimicrobial topical agents were the most frequently documented pharmaceutical agent (69% of cases) of which only 13% contained documented proven infection. Data was insufficient to identify wound management strategy resulting in the lowest referral for a surgical intervention.

Conclusion
Poor wound management documentation, including the absence of wound management chart, resulted in lack of informative data that could suggest a wound management strategy most likely to be associated with reduced need for surgical intervention. Cost-saving measures lie in reconsidering the use of silver dressings by first clinically diagnosing infection.
A retrospective audit examining the efficacy of the Biopatch™ at RCH

Author(s)

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Keyword(s)

Central venous access device, Biopatch™, exit site infection

Background and Aim

Central line infections are a significant cause of morbidity and mortality within the Australian healthcare system, causing an estimated 5-10% of all nosocomial infections. With studies suggesting that a majority of these infections are preventable, in July 2014 the Royal Children’s Hospital (RCH) introduced Biopatch™ within its inpatient cancer care unit. The Biopatch™ is a chlorhexidine-gluconate impregnated antimicrobial dressing designed for application at the site of CVAD insertion. The aim of this study was to explore whether the Biopatch™ reduces the incidence of exit-site infections (ESIs) as compared with standard anti-infection precautions.

Research Method or Innovation Plan

Medical records from 1 July 2013 to 31 December 2014 were analysed to determine the extent of ESIs pre and post implementation of the Biopatch™. Descriptive statistics were used to analyse and discuss findings.

Results or Data about the Innovation

The number of CVAD exit site pathology specimens (swabs) taken post Biopatch™ implementation reduced by 36% from the previous 6 months, and by 44% from the same time period in the previous year.

Conclusion

This study shows that the Biopatch™ is more effective than standard CVAD dressing regimes in reducing ESIs at the RCH within the cancer care unit.
Procedural pain assessment: what's the problem?

Author(s)

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Keyword(s)

Pain assessment, procedures, infant

Background and Aim

Pain is a common feature of illness and injury for infants and children presenting to the emergency department (ED). Furthermore, assessment and treatment frequently involve pain inducing procedures. Effective pain management is dependent on appropriate assessment. However, procedural pain assessment has received limited attention and the most appropriate scales for assessment are unclear. This paper aims to summarise the problems associated with current assessment options.

Research Method or Innovation Plan

Behavioural scales designed for and considerable suitable to assess procedural pain in infants and young children were identified from the literature, clinical practice guidelines and expert consensus statements. Systematic reviews to assess the measurement properties of the scales designed for procedural pain and suitable scales with at least three studies contributing to the scales validity were conducted.

Results or Data about the Innovation

Two scales designed for procedural pain and another 10 scales considered suitable were identified. Only 4 scales were suitable for systematic review and no scale is adequately supported by sufficient data to recommend the scale for procedural pain assessment.

Conclusion

Considerable gaps remain in our understanding of the best methods for procedural pain assessment. The capacity of these scales to differentiate between pain and distress is a significant limitation to their use in procedural pain assessment.
Staff perception of practice change to pain and sedation management

Author(s)
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Keyword(s)

Background and Aim

Pain and distress may be experienced by children admitted into the treatments in the intensive care unit as a result of the invasive treatments provided. Management of pain and distress includes the administration of analgesics and sedatives. In 2011 the paediatric intensive care unit (PICU) adopted a protocolled approach to the management of pain and distress. The aim of this survey is to assess the staff’s perceived impact the protocol on their practice.

Research Method or Innovation Plan

One year following the introduction of the protocol an online survey utilising was sent to existing staff via their hospital email. Response to the survey was voluntary and anonymous. Data were analysed within the surveymonkey survey tool.

Results or Data about the Innovation

A total of 88 respondents (18 medical, 70 nurses) responded to the survey. 77% of staff indicated that they almost always adhered to the pain and sedation protocol, 49% found the protocol useful in guiding interventions. Midazolam was felt to have decreased in use with 74% who agreed to strongly agree that use had decreased. Themes from the open ended questions indicated that the protocol was not practical for use in certain patient groups.

Conclusion

Feedback was useful in gauging the staff’s level of engagement in the practice change and provided an opportunity to revise certain parts of the protocol. Feedback also provided guidance for how future education of the protocols should be tailored to staff in order to address their concerns.
Managing clinical aggression within an adolescent mental health inpatient unit

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Keyword(s)
Safewards, aggression, adolescent

Background and Aim
Aggression within mental health units is an ongoing issue. With the move towards more recovery based management, staff working within mental health must re-evaluate the techniques and strategies used in the past. The “Safewards” model of care, introduced in many adult mental health inpatient units, offers solutions. However, the differences in the psychological needs, and in the triggers of aggression between adults and young people are well documented. Therefore the applicability of “Safewards” for young people is unknown.

Research Method or Innovation Plan
Prospective data was collected over a 6 week period. All staff working in the adolescent mental health unit were asked to complete a survey when they experienced or witnessed an episode of aggression. Questions on the survey were based on the “Safewards” Model

Results or Data about the Innovation
Of the 56 incidents reported, 39 were resolved by staff, with 17 escalated to a “Code Grey”. Results indicate most aggression is verbal, related to family, occurs out of structured program hours and is underpinned by a diagnosis of personality disorder. Strategies employed in 1:1 contact were most often used to de-escalate incidents, underpinned by unconditional positive regard. Those incidents that did not de-escalate were most often related to triggers associated with family or diagnosis. Anecdotally the researchers noted many episodes of aggression that were not reported as staff normalised aggressive behaviours.

Conclusion
The nature of youth aggression and its management is very different to that of adults. Results also show the importance of family centred care and unconditional positive regard in building rapport. This findings can be used as a guide for youth directed models of care and management. In addition, this study gives direction for further research regarding youth mental health.
Formative evaluation of a family psychosocial assessment framework

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Keyword(s)
psychosocial, paediatric, parental care

Background and Aim
Aim: To develop a family psychosocial assessment framework for implementation in paediatric hospitals.

Background: Paediatric healthcare providers understand that in the long-term it is the care given by parents that has the greatest influence on their children’s health and developmental outcomes. Parental care is especially important when a child is seriously or chronically ill. The life-stresses families’ experience, including the stress of having a seriously ill child, can reduce their capacity to provide optimal care. While healthcare providers spend much time in practice supporting parents to understand and respond appropriately to their child’s health care needs, there is currently no assessment framework available to focus their attention on the psychosocial needs of families.

Research Method or Innovation Plan
Research plan: Using a best-practice model of programme development, the parents of seriously ill children and paediatric healthcare providers in Perth and Melbourne were asked their views about family psychosocial assessment using questionnaires, interviews, and focus groups. Survey data allowed comparisons to be made between groups and qualitative data made it possible to examine participants’ perspectives and experiences in more detail.

Results or Data about the Innovation
Results: Most participants believed it is important to talk about maternal wellbeing, family life-stress, family functioning, and social support, while it is not important to ask about parents’ education and occupation. Healthcare providers with more experience were more positive about psychosocial assessment. Parents living in less advantaged areas were less positive about discussing psychosocial issues. Building relationships between parents and healthcare providers emerged as major theme.

Conclusion
Discussion: A family psychosocial assessment framework that focuses on parents’ capacity to provide care is warranted and timely.
Background and Aim
The Department of Developmental Medicine at The Royal Children’s Hospital (RCH) provides outpatient paediatric care for children with developmental disabilities. In 2014 there were approximately 3600 appointments in Developmental Medicine clinics, 10% were new referrals. Many families travel across Melbourne or from rural locations to attend Developmental Medicine, often throughout childhood. With this in mind, in addition to growing waiting lists, a triage team in Developmental Medicine has developed new ways of thinking about “best care, closest to home” for children with developmental disabilities.

Research Method or Innovation Plan
A paediatrician and a clinical nurse consultant meet weekly to review the referrals to Developmental Medicine. Referrals are sent for booking if they are clearly appropriate for tertiary level paediatric care. Where this is uncertain or more information is needed, the referring doctor is contacted to discuss the referral. If the child could be served by local paediatric services, the triage team assist with recommendations.

Results or Data about the Innovation
This method of triage involves several hours of work a week, however wait times for Developmental Medicine clinics have reduced by months. There are logistical, financial and quality-of-life benefits for families who can be linked in to local paediatric services from initial referral.

Conclusion
This method of triage has proven to be time well spent. Families are now seen within a timely manner and are less likely to be travelling into RCH when they can receive care closer to home. This triage method has also been beneficial in building relationships with general practitioners and paediatricians who refer to Developmental Medicine.
Associated Factors in Unplanned Transfers from a Paediatric HITH

Author(s)

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Affiliation(s)

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Keyword(s)

paediatric, home care, outcomes

Background and Aim

BACKGROUND: Every year, a proportion of patients from the Wallaby Ward at the Royal Children’s Hospital, Melbourne, undergo an unplanned transfer from their home to an alternative ward in the RCH precinct due to becoming medically unstable while under the clinical care of Wallaby.

OBJECTIVES: To identify patient groups that had the greatest rate of unplanned transfer and factors that influenced their unplanned transfer.

Research Method or Innovation Plan

DESIGN: A quantitative, retrospective clinical audit.

PATIENTS: 92 patients undertaking a cumulative total of 115 unplanned transfers over a 2-year period.

METHOD: This search identified 115 unplanned transfers, and assessed for common characteristics, including demographics and clinical course characteristics among transfers. The audit used descriptive statistics to explore the differences between patients, and to identify any characteristics that notably contributed to unplanned transfers.

Results or Data about the Innovation

RESULTS: The sample (n=115) was predominantly under the age of 5 (60.90%, n=70). The most common presenting treatment team was oncology (56.52%, n=65) and the most common treatment being received being granulocyte-colony stimulating factor (GCSF) (27.80%, n=32). The most common reason for transfer were deterioration (41.74%, n=48) and high-risk/febrile neutropenia (24.35%, n=28). Of the 65 oncology transfers, the most common reason was high-risk/febrile neutropenia (43.08%, n=28) and patients spent an average of 5.2 days in Wallaby prior to unplanned transfer.

Conclusion

CONCLUSIONS: This clinical audit provides the foundation for future research and development in key areas including paediatric oncology, early childhood health and early identification of high-risk patients. Important developments can include consideration of high-risk individuals to be transferred to Wallaby, and additional family education in recognising the early signs of deterioration.
An infusaport education package - addressing the needs of parents

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Keyword(s)
infusaport, parent education, consumer engagement

Background and Aim
Haemophilia is a potentially life threatening bleeding disorder for which treatment is administered intravenously. Infusaports are commonly used to establish reliable intravenous access in young children and most families learn to access their child’s infusaport to give treatment at home. Provision of education is critical to ensure families can safely carry out infusaport care. The purpose of this project was to develop and evaluate an infusaport education package based on the needs of parents as identified by a previous qualitative study at our centre.

Research Method or Innovation Plan
A draft teaching package was evaluated by four ‘expert’ parents who had previously learnt how to administer treatment to their child via infusaport. The suggestions of expert parents were incorporated and the package was then piloted by four ‘new’ parents undertaking infusaport education for the first time. Evaluation was via questionnaire.

Results or Data about the Innovation
All eight parents agreed or strongly agreed the package was easy to read and understand. Overall package content was rated as extremely useful and length of the booklet was considered ‘about right’ (likert scale value) by all eight parents. General comments were invited and were very positive.

Conclusion
The exploration of parents’ learning needs and the involvement of parents in the development and evaluation stages has led to the production of an infusaport education guide we believe will meet the needs of parents learning to access their child’s infusaport to administer clotting factor at home. The active involvement of families is critical in the development of targeted and meaningful education.
Engaging families via contemporary web based training approaches.

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Keyword(s)
eLearning; developmental disability; consumer engagement

Background and Aim

Leaders in health care education are using Web 2.0 technologies to communicate and interact with patients and families. One department at RCH is using a variety of eLearning formats to provide health information to parents/carers of a child with a developmental disability.

In phase 1 of this project, a pilot study evaluating the feasibility and acceptability of providing health information to families of children with a developmental disability using live online webinars was undertaken and demonstrated positive results. A range of online educational materials were developed as a result of this positive feedback.

The aim of phase 2 was to maximise consumer engagement with the web based learning resources. It was determined that a new application to manage and store content on the web was required.

Research Method or Innovation Plan

An 8 step project plan was devised to develop a purpose built content management system that would serve as a central repository for a range of web based learning products. A content management system (CMS) is a web application designed to make it easy for non-technical users to add, edit or manage content. The project manager, a senior advanced practice nurse, envisioned and lead the process.

Results or Data about the Innovation

A content management system incorporating contemporary features was designed and built as part of a larger project to redesign and build a new department website. Web analytics were utilised to measure web traffic changes following implementation of the new site to assess and inform improvement of the site.

Conclusion

An engaging, visually appealing website was built and launched. A library of disability focussed educational resources for families was created. Future implications of this work include a comprehensive evaluation of the site’s ability to support decision making in consumers with evaluation data informing the ongoing design process.
Clinical trials nursing fast-facts- is it useful for the nurses?

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Keyword(s)
Clinical trials - nursing fast facts - Investigational new drug

Background and Aim
Pediatric oncology often involves enrolling patients on clinical trials as part of their treatment. When a new clinical trial opens for enrollment on the Kookaburra ward, a nursing fast-facts (NFF) is created and its contents presented to the ward nurses via in-services. The purpose of the NFF is to provide nursing specific information about the new clinical trial and the investigational new drug (IND) associated with the trial-similar to that of found in pediatric pharmacopoeia.

Aim: NFF and its presentations were evaluated for its contents relevance to nursing management of patient receiving IND.

Research Method or Innovation Plan
Session feedback forms were provided for nurses to complete anonymously after each NFF presentation for two new clinical trials involving IND.

Results or Data about the Innovation
All of the nurses thought the contents of NFF was relevant and useful to their practise. Information on nursing considerations and management of toxicities related to IND was thought to be extremely useful. Suggestions were made to include either videos or diagrams to explain the IND mode of action. NFF presentations was thought to be memorable when it was related to potential patients who may benefit from receiving the IND.

Conclusion
Contents of NFFs are relevant to the ward nurses to ensure safe care and management of patients receiving IND. To continue safe patient care, incorporating NFF into the new EMR as part of patient’s chart when they are enrolled onto a clinical trial receiving IND. This will enable nurses to use NFF as a reference for managing patients receiving IND to maximize patient safety.
Long term VAD patients ECLS utilisation; pre implantation.

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Keyword(s)
Long-term, VAD, ECLS

Background and Aim
Children with severe heart failure may require multiple modes of mechanical cardiac support as a bridge-to-recovery or bridge-to-transplant.

Extracorporeal life support (ECLS) provides short term therapy and includes both Extracorporeal membrane oxygenation (ECMO) and centrifugal Ventricular Assist device (cVAD). Long term therapy is via an implantable Ventricular Assist Device (VAD).

Recent increasing demands for paediatric VAD have necessitated greater collaboration between the ECLS and VAD program teams.

Aim- Review all long term paediatric VAD patients to identify those who received ECLS pre implantation and examine survival outcomes. Gain further insight into this challenging complex patient group.

Research Method or Innovation Plan

Results or Data about the Innovation
A total of 36 patients received long term VAD during this time frame.

Group 1- ECLS prior to implantation n=23(64%). Survived VAD n=14(61%) (13 to transplant & 1 to recovery), currently supported n=1(4.3%). Survival to hospital discharge (SHD) n=13(56%).

Group 2- Directly implanted VAD n=13(36%). Survived VAD n=10(77%) (9 transplants & 1 recovery), currently supported n=1(7.6%). SHD n=10 (77%).

Conclusion
Results identified 64% of all VAD patients in this setting, received ECLS pre implantation. This emphasises the importance of ongoing effective collaboration, between the ECLS and VAD teams.

Directly implanted patients had a higher survival to hospital discharge rate, compared to those who received ECLS prior. Further research to identify and understand the contributing factors for this is recommended.
Reducing anaesthetic risk in idiopathic pulmonary arterial hypertension

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Keyword(s)
pulmonary arterial hypertension, anaesthesia, paediatric

Background and Aim
Children with Idiopathic Pulmonary Arterial Hypertension (IPAH) represent a small cohort of patients with severe cardiopulmonary disease, at risk of complications while undergoing interventions with general anaesthesia (GA) or procedural sedation (PS). Survival appears to have improved, but mortality during procedures remains unacceptably high.

Aims: Determine the incidence of anaesthesia-related complications in patients with IPAH; and retrospectively review anaesthesia-related complications after creation and implementation of the nursing guideline “Peri-operative management of patients with PAH”.

Research Method or Innovation Plan
A review of patients diagnosed with IPAH between 1980-2015, treated at The Royal Children’s Hospital, Melbourne who met inclusion criteria was undertaken. Data was collected on patients including details of GA or PS and major complications.

Results or Data about the Innovation
32 patients satisfied inclusion criteria and underwent a total of 90 interventions with GA or PS. Major complications occurred in 11 of 90 procedures (12%) with GA or PS across all 3 eras, with a mortality of 5.5%. Before the nursing guideline, 5% of cases were associated with complications, compared to 44% in the era before PAH therapies. There were no associated complications in the era following implementation of the nursing guideline. Mortality during procedures trended towards reduction from 17% in historic era to 3.4% in era 2, with no deaths in the current era since utilization of the nursing guideline.

Conclusion
Overall, the incidence of major complications and mortality has reduced significantly, but requires continued surveillance. Utilization of the newly created nursing guideline facilitates ongoing risk identification, diligent planning of interventions with specific strategies, coordination of peri-operative care and results in optimized patient outcomes.
Clinical Care in PICU of the Ebola Suspected Patient: Lessons Learned

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Keyword(s)

Ebola Virus, Personal Protective Equipment

Background and Aim

In 2014 West Africa experienced an outbreak of Ebola Virus Disease (EVD). With potential for persons who had recently travelled in EVD endemic areas to present to Victorian hospitals, The Royal Children’s Hospital (RCH) designated as the site for children. The Paediatric Intensive Care Unit (PICU) was identified as the area within RCH to admit all EVD suspected patients. Our aim is to describe our preparations, training, and experiences managing the EVD suspected patients admitted to PICU.

Research Method or Innovation Plan

An enormous body of work was undertaken by PICU nursing, medical and clinical technology staff in conjunction with Infection Control to prepare for EVD patients. This included identifying a patient space and obtaining essential equipment. Staff were trained in donning and doffing of PPE, and procedures on handling laboratory samples, body fluids, and waste management. A range of clinical scenarios had to be planned for, requiring considerable innovation as standard practice was often not possible. Staff safety had to remain paramount.

Results or Data about the Innovation

We have tested our training and systems with suspected EVD patients admitted on two occasions. These patients, even when well, required significant staff resources, generated huge amounts of waste and required continual planning & troubleshooting. Organisational debriefs post event demonstrated that PICU performed highly, managing these patients and their families effectively, whilst keeping our staff safe.

Conclusion

EVD suspected patients can be managed safely and effectively, but it requires extensive planning, preparation and innovation in practice. Our experiences have allowed us to refine our systems and remain ready for future admissions.
Clowning around: For what purpose?

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Keyword(s)
Clown doctors, Humour, Paediatrics

Background and Aim
Clown doctors, professional performers who gently parody medicine, have become a permanent feature in paediatric hospitals worldwide, and are much-loved figures at the Royal Children’s Hospital (RCH). Clown doctors visit children, both in an inpatient and outpatient setting, proving humour, distraction, mirth, and a welcome escape from the reality of hospitalisation. Overall, while the use of humour to improve health and wellbeing has been well documented, there is a paucity of information specifically exploring the role of clown doctors. The clown doctors research project aims to address this knowledge gap.

Research Method or Innovation Plan
The research will be undertaken as an ethnographic study. In order to capture and understand the role clown doctors play at RCH, a long-term immersion in their culture is required. Participants for this study include the clown doctors employed at RCH and every person they have a meaningful encounter with during the course of their work, including: patients, families, clinical and non-clinical staff. Data will be collected through participant observation, semi-structured interviews, and visual methods, with participants drawing depictions of the clown doctors.

Results or Data about the Innovation
An ethnographic methodology generates detailed data, giving an intricate view that is otherwise difficult to attain. Different methods of data collection, and varying participants, are utilised to build an inclusive and meticulous picture of the whole. This delivers a comprehensive examination of participants in a particular ‘natural’ environment rather than an artificially manufactured one. Notably, ethnography embeds the researcher as part of the process and recognises their identity as the researcher to be determinative in the study.

Conclusion
This innovative approach to paediatric research will provide valuable insight, and a comprehensive description of the role of clown doctors. Research outcomes could inform training and education for clown doctors; promote the use of clown doctors for paediatric wellbeing; suggest how healthcare professionals could effectively utilise clown doctors; and provide a rich qualitative foundation for future research in this area.
Addressing the complexities of medication communication in paediatrics

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Keyword(s)
communication, medication events, mixed-methods

Background and Aim
Communication has a critical role in the delivery of safe patient care. Within healthcare institutions, breakdowns in communication are a major contributing factor of medication events that lead to patient harm. The aim of this presentation is to examine the benefits of using a variety of data collection methods to reveal the complexities affecting communication processes between hospitalised children, family members, and health professionals of different disciplines.

Research Method or Innovation Plan
In one tertiary paediatric hospital we used a mixed-methods, “bottom-up” approach to examine medication communication, which included a clinical audit of documented medication events, interviews with hospitalised children, family members, and health professionals, audio-recorded observations of clinical practice and focus groups with health professionals.

Results or Data about the Innovation
Each data collection method enabled a different perspective to be considered. The clinical audit (2,003 medication incidents over a 3 year period) facilitated examining the linkages between actual medication events with associated problems relating to communicative processes. Interviews (n=59) provided information about perceived barriers and facilitators to effective communication from the perspective of particular individuals. Observations (n=200) revealed how actual communication encounters and contextual influences affected medication communication. Focus groups (n=6) with health professionals facilitated a process of reciprocity to determine taken-for-granted perspectives of how medication communication occurs.

Conclusion
Using a mixed-methods approach in medication communication provides rich data in considering the complexities of socio-cultural and environmental influences and actual communication encounters on medication management, and their links with the occurrence of medication events.
Challenges of Interdisciplinary Basic Life Support Training - Changing Practice at the RCH

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Keyword(s)
Basic Life Support, Inter-Professional Training, Simulation

Background and Aim
Over many years, Basic Life Support (BLS) training has taken many discipline specific guises. With increased focus on interdisciplinary training and simulation, a nursing minor thesis in 2013 provided evidence for conducting interdisciplinary in situ BLS training. As a result an interdisciplinary training program was developed to embed and deliver ‘just in time’ BLS training.

Research Method or Innovation Plan
The ‘Rolling Trolley’ commenced in October 2014. A fully equipped trolley to undertake BLS skills and simulation is taken to local areas to embed skills and run a simulation with active clinical staff in a planned session with the educators. These sessions support staff in their environment, with their equipment, in real time and in their teams.

Results or Data about the Innovation
In the first 8 months, the ‘Rolling Trolley’ attended all areas except critical care, between 13:30-15:00. Staff practised BLS skills and then 3 minute team scenarios around a deteriorating child to enable practise of leadership and effective teamwork. We offer alternate times to cater for all staff.

879 staff have been trained in skills and 910 in simulated scenarios. Whilst many staff had previously been signed off in BLS skills, the “Rolling Trolley” enabled correction and perfection of those skills in a simulated team setting. Initial outcomes have demonstrated increased BLS training for medical and allied health staff. Challenges remain in ensuring interdisciplinary training occurs and to overcome difficulties in identifying mutually convenient times. Silo training to get mass skills training will remain a necessity.

Conclusion
Anecdotal evidence collected following medical emergencies since the introduction of the “Rolling Trolley indicates increased confidence of staff in those situations. A more comprehensive evaluation in coming months will be conducted to determine the impact of the “Rolling Trolley” on staff confidence and competence in medical emergencies.
Implementing ViCTOR. Not just any old superhero.

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Keyword(s)
Deteriorating patient, organisational change, chart

Background and Aim
Track and trigger observation charts are globally recognised as a valuable healthcare tool to assist in the early recognition and response to the deteriorating patient. After Statewide development, spanning 18 months, the Victorian Children’s Tool for Observation and Response (ViCTOR) was available for implementation. There was an expectation that ViCTOR would be implemented across the RCH, ensuring best practice observation charting.

Research Method or Innovation Plan
It was essential to develop an implementation plan that was both practical and effective. Organisational support was secured through engagement with several key committees which specifically identified a need to redefine the RCH escalation response procedure. To assist in the implementation a number of readily accessible and user friendly resources were developed and a comprehensive communication plan was established.

Results or Data about the Innovation
The launch date for ViCTOR was revised numerous times to allow for the revised escalation response to be ratified. To minimise confusion, ViCTOR went ‘live’ throughout the hospital on a single day, rather than launching area by area. The lead team placed ViCTOR in bedside folders and transcribed the 4 previous sets of patient observations, allowing a seamless transition by midday. In the 24 hours post implementation staff demonstrated good compliance with the charts and there were no medical emergency calls which had initially been raised as a significant concern. Ongoing review and education at the unit level led to improvements in documentation and identification of some necessary unit specific escalation procedures.

Conclusion
The implementation of the ViCTOR charts was achieved at RCH through a clear implementation plan and hospital wide engagement. Staff concerns in the preparatory stage were addressed, ensuring minimal impact at implementation. Follow up has ensured ongoing improvements in utilisation of the charts resulting in minimisation of risk of deterioration for RCH patients.
Background and Aim

Clinical supervision (CS) is common practice in disciplines such as mental health and social work, however its uptake for nurses in acute care settings has been limited. In early 2014 a working group of APN, chaired by the Executive Director of Nursing was established to lead the development and implementation of CS for APN in acute care.

Research Method or Innovation Plan

The working group formulated a definition of CS that was congruent with the culture of the workplace. It was decided that a rigorously evaluated pilot would be implemented as the first phase. In the pilot, CS groups would: have 6-8 members including two co-supervisors, be initially conducted fortnightly for an hour, then extend to monthly for 6 months in total. All participants were required attend two days of training, with an additional day for supervisors. An academic partnership was established to provide advice and CS expertise through participation in the working group, facilitation of the training, and assistance with the evaluation.

Results or Data about the Innovation

34 APN voluntarily participated in the CS pilot. Prior to the pilot, the participants and their department heads were invited to complete a survey to demonstrate their understanding of CS. While most participants had a sound understanding of CS, department heads had varied conceptualisations. At the conclusion of the pilot three focus groups were conducted; two with supervisees and one with supervisors. Key themes to arise from the focus groups were; reduced stress, less isolation/more connectedness, increased ability to address issues with actions, having a safe space to share issues, professional support and development and extension of supervision skills.

Conclusion

Findings demonstrate CS has had a positive effect on APN practice and wellbeing in this setting.
Poster

10 Years of the Haemophilia Teachers' Seminar

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Keyword(s)
Haemophilia, Teachers, Seminar

Background and Aim

The Royal Children’s Hospital in Melbourne has held annual haemophilia teachers' seminars which run with the support of Haemophilia Foundation Victoria since 2006. The goal of the seminar was to address a perceived lack of information available to schools in assisting families dealing with the stress of a child with a bleeding disorder starting pre school or school. In addition there remains significant uncertainty amongst educators regarding haemophilia management and expectations of having to deal with a child with life threatening bleeding disorder.

Research Method or Innovation Plan

Formal evaluation of the seminars has occurred since 2009 using a standard qualitative questionnaire and open questions regarding value of the seminar and areas for improvement.

Results or Data about the Innovation

Tailoring of the seminars based on the feedback has resulted in a program designed to meet the needs of educators in providing information about children with bleeding disorders. The program includes a formal series of lectures with 3 health professionals, consultant, nurse and physiotherapist presenting for ½ hour on their specialty. After this we ask some boys with haemophilia to come along and talk about their experience of having haemophilia in the school environment. We try to get a good spread of primary and secondary school age children. The boys doing their presentation has proved to be the most popular part of the presentation.

Feedback from the participants has been overwhelmingly positive.

Conclusion

The current abstract presents the objectives and outcomes of the teachers’ seminars and highlights the potential for these types of seminars to be incorporated into a comprehensive haemophilia treatment center.
A series of fortunate events - the pathway from clinical problem to PhD thesis

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Keyword(s)
Nursing Research, Higher Degree, PhD

Background and Aim
Commonly, within nursing practice, clinical problems arise for which there are no solutions. Ideally nurses will develop evidence based approaches to solving these problems. However the pathway to developing a clinical problem into a research project is often unclear or non-existent. As a Nurse Consultant for children with Cerebral Palsy (CP) it became apparent that sleep disturbance within my patient cohort was common. Over time I hypothesized that it was possible some causes of sleep disturbance might be preventable, if care and comfort needs were addressed. This problem was a good fit for the focus of a nursing research project, however the process to secure funding, time and resources for this project was not straightforward.

Research Method or Innovation Plan
Through a series of successful scholarship applications, a supportive clinical team, and a large dose of patience and determination, a common clinical problem was developed into a research question. This question is now the subject of a PhD thesis. Along side this process was an obstacle course to gain funding and obtain entry to a PhD candidacy via an atypical pathway.

Results or Data about the Innovation
In 2012 and 2013 a series of nursing scholarships were won which funded travel and research time to initiate the project. In 2014 a pilot study to test the feasibility of the study design was completed and published.

In 2015 this project is now the subject of a PhD thesis.

Through a mixed methods study design the PhD will explore the sleep of children with Cerebral Palsy and their parents. The study aims to:

1. Quantify reasons for sleep disturbance for children with CP and their parents.
2. Explore the impact and experience of sleep disturbance for children with CP and their families.
3. Use the data collected to design an intervention that aims to reduce sleep disturbance for these tired families.

Conclusion
The process to find an evidence based solution to a clinical problem, within nursing practice, is often an unclear pathway. Persistence, resilience and a passion for the clinical problem and a determination to achieve the goal is required to be successful. Through designing a clinical intervention, within the context of a PhD thesis, significant evidence based knowledge will be added to this under-researched area. It is hoped that this nursing based research will improve the sleep, and consequently, the quality of life of children with CP and their families.
Anticoagulation Management of Ventricular Assist Devices: A Review

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Keyword(s)
Anticoagulation, Ventricular Assist Device (VAD)

Background and Aim

A ventricular assist device (VAD) is designed to provide long-term support for the left side, right side or both sides of the heart as a bridge to heart transplantation or recovery. Children who require a VAD are those who have exhausted maximal medical therapy to support cardiac function. The usual duration of VAD support may range from several weeks to months. The placement of a VAD results in interruption of blood flow, alteration in blood constituents and damage to the vascular endothelium, all of which confer thrombotic risk. For this reason, treatment with anticoagulant and antiplatelet agents is indicated.

Research Method or Innovation Plan

A literature review was conducted to identify key papers relating to antithrombotic therapy of children requiring a VAD from 2005 to present day. The purpose of the literature review is to identify the current evidence base for this therapy in children.

Results or Data about the Innovation

The literature review identified 10 papers specifically pertinent to this topic; three single centres, two multi-centres, one case study and four review articles. The most recent American College of CHEST Physicians’ guidelines for antithrombotic therapy in children requiring a VAD suggest a 2C level of evidence relating to antithrombotic recommendations.

Conclusion

The level of evidence identified relating to antithrombotic therapy guidelines for children requiring a VAD demonstrates significantly more research is required to support optimal clinical outcomes for these children. Given the relative infrequency of VAD support given to children, this will likely require multicentre international collaboration.
Are treatment rooms needed? A project looking at what parents want.

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Keyword(s)
Family centered care, treatment room, procedure

Background and Aim
It is considered best practice to perform potentially traumatic procedures in a separate room to the patient room in a paediatric hospital. The intention of using a treatment room is to keep the patient room a safe place. There is very little evidence to support this practice and even less information about where parents and caregivers would prefer to have these procedures performed. The aim of this study was to determine preference for location of procedure from a parent or caregiver’s perspective.

Research Method or Innovation Plan
This study was both quantitative and qualitative in nature. Data was collected through the use of surveys, which were delivered to participants on Cockatoo every day over a three-week time frame in March 2015.

Results or Data about the Innovation
66 surveys were returned. Findings demonstrated that a majority of procedures are performed in the patient room and that this is parent and caregiver preference. Although the majority of participants stated preference for patient room, they would still like the option for location to be provided each time a procedure is performed. The data indicates that parents and caregivers think their children feel safer in the patient room and that it is easier to distract them with their own toys in their own space. When the preference is for treatment room use, reasons are that it keeps the patient room safe, is quicker, and better equipment is available.

Conclusion
This study has provided insight into what families want when deciding on location of procedures for their children. It is evident that the question of where to perform a procedure needs to be asked of every patient, every time. It is apparent that the question is not currently being asked on Cockatoo and is an area for change. There is an opportunity to use these findings to guide our future practice to align with what our patients and families want.
Asymptomatic thrombosis following the use of Central Venous Lines in children

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Keyword(s)
catheter thrombosis, paediatric, post-thrombotic syndrome, venous thromboembolism

Background and Aim

Over 50% of thromboses in children are related to central venous lines (CVLs). The rate of complications, such as Post Thrombotic Syndrome (PTS), from asymptomatic CVL-related thrombosis is unknown and hence the importance of treating children with anticoagulation to prevent these sequelae is unclear.

Aim: To 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 Method or Innovation Plan

A prospective cohort study was conducted. 205 children admitted to a paediatric intensive care unit (PICU) requiring a CVL in the jugular or femoral veins participated. Each child had a (blinded) ultrasound (US) of the blood vessel in which the CVL was placed during their admission. A second US and a PTS assessment will be performed approximately 24 months following CVL placement (Phase II).

Results or Data about the Innovation

US were completed for 149 patients. US confirmed the incidence of CVL-related thrombosis was 22.1% (n=33). Only one patient was symptomatic. The table below provides the reasons US were not performed.

<table>
<thead>
<tr>
<th>US Data Collection N=205 (%)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>US complete</td>
<td>149 (72.7%)</td>
</tr>
<tr>
<td>US not performed</td>
<td>39 (19%)</td>
</tr>
<tr>
<td>Ineligible after consent</td>
<td>17 (8.3%)</td>
</tr>
<tr>
<td>Reasons US not performed</td>
<td>N=39</td>
</tr>
<tr>
<td>Dressing obstructed view of vessel</td>
<td>4 (10.3%)</td>
</tr>
<tr>
<td>Not completed in timeframe/ prior to discharge</td>
<td>33 (84.6%)</td>
</tr>
<tr>
<td>Parent refused</td>
<td>2 (5.12%)</td>
</tr>
</tbody>
</table>

Conclusion

This study has demonstrated that performing blinded US in a clinical study is feasible. This study will determine both the incidence of symptomatic and asymptomatic CVL-related thrombosis in children in PICU and the incidence and severity of PTS.
Bedside Handover - making it work for patients and their families.

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Keyword(s)
Bedside Handover

Background and Aim
Nursing handover occurs at change of shift where exchange of information is imperative to ensure continuity of care, improve communication and safety and involve patients and their families. Bedside handover was developed to better reflect the family centred care model. The better understanding of patients and their families’ perspectives of bedside handover could be critical for optimising family centred care.

The aim of the study was to identify how families would like to be involved in nursing bedside handover to better meet the needs of patients and families.

Research Method or Innovation Plan
Participants included parents/caregivers of patients admitted to the Platypus ward at least overnight. Parents/caregivers were interviewed with interviews being structured and adhering to a prescribed list of questions. Two forms of data were collected from the study both quantitative and qualitative to complement each other.

Results or Data about the Innovation
Study results indicate that bedside handover occurs 61% of the time, with it occurring otherwise at the nurses desk or the alcove beside the room. Of the 61% of participants present for bedside handover only 55% of participants were involved in the handover. The main benefits identified of bedside handover include; consistency of information and parental involvement. The major problems include; nurses talking amongst themselves and parents not being aware they can participate.

Conclusion
The findings of this study are important as it provides useful insight into the way parents/caregivers perceive bedside handover. Bedside handover provides parents/caregivers with empowerment into their child’s care. This study has indicated that parents/caregivers are in support of bedside nursing handover as it improves communication and feeling of involvement in their child’s care.
Cardiac monitoring in Anorexia Nervosa: What guides nursing decision making?

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Keyword(s)
Anorexia, cardiac, monitoring

Background and Aim
Inpatient admission on the Kelpie unit is often required for medical stabilisation of bradycardia in patients with Anorexia Nervosa (AN). Treatment for these patients is guided by an inpatient protocol which states the requirement for overnight cardiac monitoring but does not provide further rationale/guidance. The aim of this research project was to determine what currently guides nurses’ decision making in the care of these patients.

Research Method or Innovation Plan
A hard copy survey involving a case scenario and associated short and long answer questions was circulated to nursing staff on the Kelpie ward during double staff time. 20 Kelpie nurses participated in this project. A combination of qualitative and quantitative data was collected and then transcribed onto an Excel spreadsheet. Ethics approval was provided by the RCH HREC (35046A).

Results or Data about the Innovation
The most common resource cited by participants was the inpatient protocol (70%). Mean confidence level in interpreting cardiac rhythms was 3.5/10. 95% of participants would like more education on how to interpret cardiac rhythms. Mean understanding of the impact of AN on cardiac functioning was 5.8/10. 100% of participants would like more education on the rationale for cardiac monitoring. An online clinical practice guideline was cited as the majority preferred method for education (40%).

Conclusion
Nurses’ on the Kelpie unit have a low confidence level relating to how to interpret cardiac rhythms and the impact of AN on cardiac function. The vast majority of participants would like more education in these areas. A detailed online CPG would be recommended as the preferential method of education.
Changes in paediatric burn Care: A longitudinal review

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Keyword(s)
Burns
Dressings

Background and Aim
Across Australasia there are a number of different models of care for paediatric burns patients. Around a decade ago, it was anecdotally noted that the introduction of new burns dressings to the burns unit resulted in a reduction in median inpatient length of stay. However, the full profile of burns management within the burns unit (encompassing Emergency Department, Theatre, Outpatient and Inpatient resources) both before and after the new dressings were adopted remained unknown.

Research Method or Innovation Plan
In 2014 a retrospective audit was undertaken to investigate numbers of burns presentations, patterns of admission, length of stay and follow up in the burns service between 2001 and 2013. The aim of the audit was to determine how the introduction of silver burns dressings affected burns management at the hospital, in the context of changes in patient presentations to the service over the same period.

Results or Data about the Innovation
Total numbers of patients presenting after burn injury were reviewed, as was the level of their hospital contact (extending from Emergency Department, through to Outpatients and Inpatient admissions). The number of hospital attendances per burn injury were also noted. In addition to the anecdotally observed decrease in initial hospital length of stay, the number of burns outpatient visits correspondingly increased.

Conclusion
The adoption of a new model for burns care substantially affected how clinical care was delivered by the multidisciplinary service managing burns within the hospital. Implications of the introduction of this model for clinicians, patients, carers and administrators at the hospital will be discussed.
Comparing real-time and end-of-shift nursing progress notes: an observational audit

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Keyword(s)
Documentation; Progress Notes; Nursing

Background and Aim

‘Real-time’ progress notes introduced at the Royal Children’s Hospital serve as a stepping-stone between current documentation practice and the hospital’s forthcoming electronic medical records in 2016. Real-time entries are defined as clinical information being documented in a timely manner as soon as events take place, allowing health care professionals to detect trends in the patient’s health. The aim of our audit was to compare the quality between real-time and end-of-shift progress notes, and assess if the risk of overtime was reduced with real-time documentation.

Research Method or Innovation Plan

An observational and retrospective auditing design where data was collected during three phases: an observational phase, an auditing phase and an in-service focus group. The audit was conducted in a single ward, where a total of 12 nurses were followed for their entire shift.

Results or Data about the Innovation

From the total progress notes (n=37), 28 (75.7%) were written in real-time and 9 (24.3%) were written in end-of-shift. Only one of the 12 nurses followed stayed overtime, and they used end-of-shift documentation for all their patients. On average, the quality of real-time progress notes was 14.6% better than end-of-shift notes. A positive correlation between number of entries and quality with this rising trend was observed.

Conclusion

Real-time documentation was well-adopted by nurses on the ward. Additionally, progress note quality was improved with real-time documentation. There were several limitations to the audit and results cannot be easily transferable to other settings. Instead, it should be used as a guideline to further investigate real-time documentation.
Development of a Transition Model of Care for adolescents with Duchenne Muscular Dystrophy.

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Keyword(s)
Transition, Duchenne Muscular Dystrophy (DMD)

Background and Aim
Duchenne muscular dystrophy (DMD) is a severe X-linked condition causing progressive muscle weakness, joint contractures and cardiorespiratory impairment. As a result of improved clinical care, young men with DMD are now living longer than they ever have before, and most ultimately require transition from paediatric to adult services. This, in turn, opens up a range of medical, psychological and sociological issues around their long-term care. We have developed a specialised Transition Program to address these issues.

Aims of the DMD Transition Clinic Program

• To engage young people with DMD from the age of 15 and their parents/carers in dedicated transition appointments that are integrated into neuromuscular clinic appointments.

• To commence early planning, discussion and education to develop greater knowledge of DMD and medical treatments, self-care strategies (if appropriate) and the transfer of knowledge/information from parents/carers.

• To support young people with DMD and parents/carers in addressing other practical concerns around educational and vocational assistance, peer support and wellbeing.

Research Method or Innovation Plan

Method

• Transition appointments will be led by the Neuromuscular Advanced Practice Nurse and a Transition Youth Mentor.

• Appointments will be structured using checklists assessing healthcare skills, preparedness, adherence, educational, vocational and social needs with the opportunity to establish individualised goals.

• In the final year before transfer young adults and their families will be invited to attend two specific transitional appointments. A transition & transfer appointment will introduce then handover care to the adult multidisciplinary team.

Results or Data about the Innovation

Preliminary Outcomes and Conclusion

Since 2013, the DMD Transition Clinic Program has been trialled with 33 patients and their parents/carers however the development of joint transfer pathways involving multidisciplinary teams from the paediatric and adult services, is in development stages. Preliminary feedback from patients and parents/carers involved clearly demonstrate its value and benefit. The complete transition model of care will be evaluated to ensure it meets the medical, social, emotional and educational needs of this patient population.

Conclusion
ECMO Yes or No: Implementation of an ECMO eligibility form.

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Keyword(s)
ECMO, Eligibility, Form

Background and Aim
Extracorporeal membrane oxygenation (ECMO) is an established therapy within the Paediatric Intensive care unit (PICU). ECMO support may not be suitable for all patients. Lack of clarity around eligibility can lead to confusion, particular out of hours.

AIM: To have eligibility discussions and ensure decisions are clearly documented and communicated, with the entire clinical team and patient families.

Research Method or Innovation Plan
An ECMO Yes or No decision support form was implemented in January 2015. Cardiac services admissions were the initial focus. The form requires PICU consultant authorisation. Decision making is however intended to be a collaborative approach.

Technical information to assist with rapid deployment can also be documented by Perfusionists, ECMO specialists or PICU nurses.

The form provides clear documentation of patient’s eligibility for ECMO and ensuring the clinical team is aware of this decision. Promoting discussion amongst clinicians and families especially for patients who, are not eligible for support.

Results or Data about the Innovation
January 2015- April 2015, 246 Cardiac services patient admissions into PICU.

Patients who had decision support form n=96 (40%).

Patients who had a fully completed decision support form n=52 (21%), of those n=6(4.8%) patients were not for support.

Conclusion
Retrospective audit results demonstrated poor compliance. Further education is required to clarify the intention is for 100% of PICU cardiac services admissions to have a completed ECMO decision support form. Increasing awareness amongst clinical staff of the tool’s purpose and their responsibilities is essential and key to reducing confusion around ECMO eligibility.
Embedding nurse researchers in clinical settings to improve patient outcomes: a single-centre experience

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Keyword(s)

research, clinical practice, improving outcomes

Background and Aim

The last decade has been characterised by increased recognition of the need for translational health research to ensure findings from the “bench” find their way to the “bedside”. Concurrently, there has been increased recognition for health service delivery research that improves the way in which healthcare is provided. Despite these emphases, much research continues to be driven by those at least one step removed from the “bedside”, perpetuating the knowledge / practice gap.

Research Method or Innovation Plan

In June 2011 a clinically embedded Nursing Research team was established at the Royal Children’s Hospital (RCH) Melbourne with the aim of fostering critical inquiry and research within the clinical nursing team. The Nursing Research team consists of a Professor of Nursing Research (1 EFT), 2 Nurse Consultants (Research) (1.3 EFT) and Administrative support (0.4 EFT). The strategic plan includes developing evidence-based clinical guidelines and developing research capacity. The team’s focus is to support clinical nurses to identify and investigate practice-based issues with a view of improving the care delivered to children and their families.

Results or Data about the Innovation

Across 3½ years the Nursing Research Team has established active partnerships with 69% of areas led by Nurse Unit Managers (n=26) by supporting 38 individual nurses in those areas. In addition, the team has provided support to 38 nurses working in advanced practice roles. That support has enabled nurses to develop their capacity to engage in clinical projects and research, present at conferences, prepare manuscripts, apply for scholarships and grants, and complete higher research degrees. In each instance, the nurse has come to the Nursing Research team with a clinical question from the “bedside”, and with support reviewed, and where necessary generated new evidence to improve care.

Conclusion

Nurses working clinically are ideally situated to identify issues the most pressing issues impacting efficiency, effectiveness and quality of care. Yet they are not necessarily well equipped to address those issues in a rigorous fashion. A clinically embedded Nursing Research team enables those nurses be at the forefront of leading practice change.
Envisioning your service model

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Keyword(s)
Logic Models, nursing, service development

Background and Aim
The last five years have seen an exponential growth in the number of referrals into the RCH Gender Dysphoria Service (GDS). In 2011, the service received 8 referrals compared to 100 in 2014. In response a Clinical Nurse Consultant (CNC) was employed.

The efficacy of the CNC role necessitates not only responsiveness to existing workflow and service quality, but the capacity to visualize and strategically plan for the GDS to grow and evolve.

Research Method or Innovation Plan
A combination of skills, experience and postgraduate knowledge can equip advanced practice nurses to envision and plan for service development. As CNC for the GDS established nursing skills equip me to manage and triage the referral load; experience of the hospital system enables me to streamline services delivery; and post graduate education taught me to develop a logic model. This toolkit enables me to envision the GDS potential and develop a strategic plan for that vision to be realised.

Results or Data about the Innovation
A Logic Model that visually documents and details the GDS model was developed. The utility of this Model establishes a mutual understanding of what the GDS will offer, and how this can be realised by explicitly detailing the steps required to achieve our goal.

Furthermore it acts as a baseline for research to measure and evidence the work that we do.

Conclusion
The amalgamation of skills, experience and postgraduate education to be a CNC typically positions us into roles that require vision. Skills in Logic Model development can assist CNC's in planning the development their role and service.
ESTABLISHING A PAEDIATRIC CARDIAC SURGICAL PROGRAM IN BENGHAZI, LIBYA

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Keyword(s)
cardiac surgery; congenital heart disease; global health

Background and Aim
Until recently children in Libya had to travel to Tripoli, or abroad to receive cardiac surgery. The Ministry of Health and Benghazi Medical Centre invited International Children’s Heart Foundation (ICHF) to assist with the establishment of a paediatric cardiac surgical program in Benghazi. A 1 year program commenced in October, 2013 with a small team of ICHF staff residing in Benghazi to work alongside and train the Libyan staff. Our aim is to discuss the establishment of the 1 year program including education aims and outcomes, surgical and ICU outcomes, and issues encountered.

Research Method or Innovation Plan
A retrospective review of ICHF education records, surgical and ICU database, and risk register.

Results or Data about the Innovation
After the first four months: 70 patients underwent 79 procedures with a mean RACHS of 2.1, and survival to discharge of 97.1%. Median age was 20 months and weight of 8.8kg. 23 (29.1%) patients were extubated in theatre, with the remainder ventilated in ICU for a mean of 2.2 hours. Morbidity in ICU included bleeding (24.3%), stridor (10%), and arrhythmia (7.1%). Two patients (2.8%) had a surgical site infection, one patient (1.4%) had ventilator acquired pneumonia, no patient had a central line associated blood stream infection.

ICU nurses have received over 30 hours of lectures and tutorials and demonstrated essential skills such as basic life support.

Issues encountered in establishing the program included security concerns, identifying candidates for intensivist training, access to timely radiology services, and obtaining some essential hardware and disposables.

Conclusion
Establishing a program such as this is a significant undertaking. It is important to continuously review and monitor educational progress and patient outcomes.
Extracorporeal Membrane Oxygenation (ECMO) for Kawasaki Disease.

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Keyword(s)
Kawasaki Disease, ECMO.

Background and Aim
Kawasaki disease, an uncommon systemic vasculitis, occurring in childhood, can lead to life threatening abnormalities of the coronary arteries. Clinical signs may mimic toxic shock syndrome, but children with Kawasaki disease are generally not shocked. ECMO may be required for children that are unresponsive to conventional medical management.

Research Method or Innovation Plan
A single case report and data available from the Extracorporeal Life Support organisation for Kawasaki disease (1999-2014) were retrospectively reviewed.

Results or Data about the Innovation
Twenty two children (male n=15) median age 3.6yrs (0.13, 20), weight 14.5kgs (5, 71.3), required ECMO support. Median time from intubation to ECMO was 22.5hrs (1,460). Reason for support was cardiac failure (n=10, fail wean bypass 2), respiratory failure (n=8), and extra corporeal cardiopulmonary resuscitation (n=4). All children were receiving inotropes pre ECMO, seven received vasodilators and five nitric oxide. ECMO support mode was, veno-arterial (n=14), veno-arterial plus extra venous cannula (n=3), veno-venous (n=2), veno-venous (double lumen) (n=2), and veno-venous double lumen plus extra venous cannula (n=1). Median ECMO support time was 129 hours (1,611). Eleven children required inotropes on ECMO, seven renal replacement and oxygenator failure (n=2). Three children had clinical seizures, one a cerebral haemorrhage and one a cerebral infarct. Seventeen children survived ECMO, fifteen to hospital discharge.

Conclusion
Children with Kawasaki disease, who are unresponsive to conventional medical management may benefit from ECMO support, and this should be considered.
Families' Experiences of Medication Communication in a Paediatric Hospital

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Keyword(s)

Families Medication Communication

Background and Aim

Families of hospitalized children play a pivotal role in medication management. Familial involvement contributes to recognizing adverse drug events, shared decision-making and advocating for children’s medications needs. Despite an emphasis on family-centered care, actual practice may not reflect the experiences of families. Research aims are to better understand families’ experiences of communication in managing medications, and to explore barriers and facilitators to effective medication communication within a paediatric hospital.

Research Method or Innovation Plan

This study used a qualitative, thematic analysis of 59 semi-structured interviews and 200 hours of observations with paediatric inpatients, family members, nurses, doctors and pharmacists. Data were transcribed verbatim and prominent themes extracted.

Results or Data about the Innovation

Family members needed information about medications and their impact on children's future health. They perceived themselves as their children's advocates, though they varied in how much they wished to be involved in medication decisions. Barriers included a diminished capacity to synthesize information due to fatigue and stress; language difficulties; and miscommunications following transfer of care. Facilitators included having positive rapport with health professionals, accessibility of hospital staff through the use of technology and the tailored use of medical terminology when explaining the use of medications in children's care.

Conclusion

Insights gained from this study have the potential to improve relationships between families and health professionals, maximize engagement with medication management and foster medication adherence in paediatric settings. Recommendations include: being further attuned to families' anxieties, and their capacity to absorb verbal information; provision of written medication information; and improved communication of individualized medication needs, particularly surrounding staff changeovers.
Graduate nurses- a Paediatric Intensive Care Unit (PICU) perspective

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Keyword(s)
Graduate nurses, critical care, Paediatric intensive care

Background and Aim
The nursing workforce continues to experience shortage of nurses particularly in specialised areas. Newly recruited graduate nurses address this shortage, however they experience significant challenges and stressors in the first few months of their placement and the critical care environment can be even more challenging and overwhelming for newly registered nurses. Due to the growth of the paediatric intensive care unit at RCH, the recruitment of skilled nurses’ into the unit was an ongoing challenge and nursing leaders’ explored options that could attract and support newly registered nurses into the unit.

Research Method or Innovation Plan
Having graduate nurses in a paediatric speciality environment requires extensive training and ongoing support to promote a smooth transition from a newly registered nurse to a proficient nurse. The role of a registered nurse in paediatric intensive care environment requires mastering technology required for monitoring and stabilising acutely unwell children and having specialised skills in recognising and responding to the rapidly changing needs of critically ill infants and children.

Results or Data about the Innovation
The presentation will describe how the RCH leadership team developed and introduced a PICU orientation and development package combining with the existing Graduate nurse program structure offered at RCH. The strengths and challenges faced during the initial orientation period to support and nurture new graduate nurses in building their skills and confidence to practice in a Paediatric intensive care environment will also be detailed.

Conclusion
Developing confidence and skills in PICU Graduate nurses can be challenging, however with a well-structured supportive program, the development of these graduate nurses from a novice to a proficient critical care nurse can be a rewarding experience and will contribute towards building an effective nursing workforce.
Health-focused engagement of high-risk and vulnerable young people by YPHS

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Keyword(s)
health access engagement

Background and Aim
Young People’s Health Service (YPHS) aims to improve access to and engagement with high-risk young people experiencing homelessness and to subsequently work together to improve their health.

Background: Young people generally have good health. However their stage of development, risk taking behaviours, and exposure to risk / protective factors can all influence their health. Some participation in risky behaviours is considered normal, but some may have negative effects. As a result of the above influences, homeless young people have poorer health outcomes than their housed peers. However due to numerous factors, they are less likely to access appropriate health services.

Research Method or Innovation Plan

Innovation

Youth specific integrated services, e.g. YPHS operating out of co-located youth services, are most likely to meet needs. YPHS engages with young people through a variety of means including a free drop in clinic so appointments and cost are not a barrier.

Known barriers include confidentiality concerns, embarrassment and accessibility. Successful engagement of young people in their health-care requires the skills of specialised nurses and use of a psychosocial assessment tool (HEADSS) to assess risk and protective factors in the context of the social determinants of health. HEADSS allows development of rapport and opportunistic primary health care.

Results or Data about the Innovation

Innovation Result

An increase in the numbers of young people engaging with the health service, numbers who return for screening test results and those who return for subsequent Hepatitis B vaccine.

Conclusion

Successful health engagement and early access in a young person’s life facilitate opportunities to adopt healthier behaviours and positive long-term health benefits.
Human Papillomavirus vaccine coverage in adolescents with developmental disabi

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Keyword(s)
Human Papillomavirus
Developmental disability
Immunisation

Background and Aim
The Human Papillomavirus (HPV) vaccine in Australia is government-funded for all young people in early adolescence as part of the school immunisation schedule. This vaccine protects against four strains of the HPV, responsible for 70% of cervical cancer and most cases of genital warts. The uptake of all three doses is 73%. However the HPV vaccination status of the sub-group of young people with developmental disabilities has not previously been reported. The aim of this audit is to record the HPV vaccine coverage in adolescents with developmental disabilities who attend The Royal Children’s Hospital Developmental Medicine clinics.

Research Method or Innovation Plan
This descriptive audit recorded the HPV vaccination status for all 14-year-old adolescents who attended a Developmental Medicine Clinic at The Royal Children’s Hospital in 2014. Other information collated from hospital records included: primary diagnosis, motor function, intellectual impairment, type of schooling and previous immunisation status.

Results or Data about the Innovation
Only 43% of the adolescents in this audit had received the HPV vaccine. This is significantly lower than the general population. Immunisation in this group was not related to physical ability or type of schooling, but those with intellectual impairment were less likely to receive the vaccine.

Conclusion
This data is important in highlighting an at-risk group. This is significant given the research documenting poor sexual health and low cervical screening rates in those with disabilities. This data establishes the need for targeted interventions to address the disparity in HPV vaccination rates in those with developmental disabilities.
Idiopathic thrombosis in teenagers: the role of thrombophilia

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Keyword(s)
thrombophilia, teenagers, venous thromboembolism

Background and Aim
This study investigated the aetiology of spontaneous venous thrombosis and or pulmonary embolism (VTE) in teenagers who presented to the Royal Children’s Hospital (RCH), Melbourne, over the period of 2003-2014. This single centre retrospective cohort design study aimed to identify which markers of thrombophilia were identified in the specified population.

Research Method or Innovation Plan
The project determined which thrombophilia testing was performed on the subjects and the results of these tests. Patient information was taken from the RCH warfarin database and cross-referenced with patient medical records. The RCH laboratory results database was used to collect data relevant to the study. Rates of thrombophilia testing were determined and described descriptively. Other factors contributing to thrombosis risk in the subjects were also considered in data analysis, including vascular anomalies, dehydration, significant exercise and use of the oral contraceptive pill.

Results or Data about the Innovation
45 patients (33 with deep vein thrombosis (DVT), 9 with pulmonary embolism (PE), 2 with DVT/PE, and 1 with portal vein thrombosis) were identified. The median age at time of VTE episode was 15.4 years (range 11 to 17.5 years). 91.1% participants had a thrombophilia test done. The most common number of tests performed in the thrombophilia testing panel was seven (9 children). Antithrombin, prothrombin gene mutation, protein C, and protein S were the most commonly requested tests. 40% of children had one or more positive thrombophilia results identified on testing. 66.7% of participants had other non-haematological risk factors that may have contributed to thrombosis, including significant exercise, vascular anomalies and use of the oral contraceptive pill.

Conclusion
This study identified that most young people presenting with spontaneous VTE had a thrombophilia test performed and less than 50% had positive thrombophilia results. This study also suggested that non-haematological risk factors may play a role in the aetiology of spontaneous VTE in young people. Further research is required to determine the unique contribution of thrombophilia to spontaneous VTE in young people.
Improving influenza vaccination for patients with developmental disabilities

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Keyword(s)
Influenza, immunisation, disability

Background and Aim
Children with developmental disability are at higher risk of morbidity and mortality from influenza illness. The Royal Children’s Hospital (RCH) Immunisation Service recommends and provides influenza vaccine for patients with high-risk underlying medical conditions each year. Despite this, the number of patients with developmental disability immunised with influenza vaccine each year has remained low.

Research Method or Innovation Plan
In June 2014, the Immunisation Service at RCH met with medical and nursing staff from Developmental Medicine and developed a reminder letter which could be sent to their patient group to encourage influenza vaccine uptake.

Results or Data about the Innovation
In 2013, the Immunisation Service recorded 66 patients under the Developmental Medicine department, having received the influenza vaccine. In 2014, following the distribution of the reminder letter to families, a total of 133 patients from Developmental Medicine were vaccinated with the influenza vaccine. This was a 100% improvement on the previous year.

Conclusion
Reminder letters from the patient's treating medical team can be effective in improving influenza vaccine uptake in patients with developmental disability. The Developmental Medicine team have sent out reminder letters 4 weeks earlier in the influenza season in 2015 and the RCH Immunisation service will continue to facilitate the recording of patients immunised.
Improving nurses’ translation of evidence into practice: Evidence, context and facilitation

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Keyword(s)
Clinical question, Evidence, Improving practice

Background and Aim

Much emphasis in undergraduate nursing studies is placed on the development of critical thinking, utilisation of research, and implementation of evidence-based practice (EBP), to deliver quality care. Despite this focus, reports persist regarding the barriers to utilisation of these skills in practice. Indeed, evidence suggests registered nurses who work clinically are less competent in quality and research imperatives than other areas of professional nursing practice.

Research Method or Innovation Plan

In 2014, a clinically embedded Nursing Research department developed a program to address this gap, conceptualising the BEST Practice Program (Building Evidence with Support to Transform Practice). The PARIHS (Promoting Action on Research in Health Services) Framework provided the foundation for the program, recognising evidence, facilitation and context are the three cornerstones for ensuring evidence-informed quality care.

Results or Data about the Innovation

From 33 formal submissions, 9 nurses addressing 8 practice issues were selected to participate in the BEST Practice Program which included 9 program days over 6 months, with ongoing support provided between program days. The practice issues included central venous line care, bedside handover, location for painful procedures, oxygen administration post tonsillectomy, nasopharyngeal airway management, cardiac monitoring, clinical aggression and outpatient access. A comprehensive evaluation of the program was undertaken. Through recognition of the contexts in which they were working, and developing facilitation skills during the program, the participants were able to develop strategies to engage with their teams and key stakeholders. Using a pre-post program questionnaire, there was a substantial shift in the participants’ perceived competence in EBP. Each project has led to either a change in practice or identified next steps to inform change on a larger scale.

Conclusion

With support, nurses can develop the competence and confidence to question practice and lead change at the point of care.
Background and Aim
Asthma is the most common cause of paediatric hospital admissions, therefore, parent education is imperative for effective asthma management and in reducing recurrent exacerbations. Currently, a lack of knowledge surrounds the elements of nurse-provided asthma education at The Royal Children’s Hospital. This study aimed to establish the baseline of current nurse-provided asthma education delivered to parents of children with asthma on the Dolphin, Kelpie and Sugar Glider wards at The Royal Children’s Hospital and aimed to determine whether these elements met the parents needs.

Research Method or Innovation Plan
Electronic questionnaires were emailed to nurses on Dolphin, Kelpie and Sugar Glider wards and hard-copy surveys were distributed to parents of asthmatic patients admitted to these wards by nurses and clerical staff.

Results or Data about the Innovation
The majority of all nurses (78%, n=18) reported a lack of standardised parent asthma education and 39.1% (n=9) had not received any asthma education training. Most parents were educated in hospital (83.7%, n=36) and had no previous asthma management knowledge (62.8%, n=27). Gaps in the delivery of asthma education provided by nurses compared to that received by parents were identified. Of all parents, the following did not report receiving vital education on preventive asthma medication (62.8%, n=27), triggers (46.5%, n=20), spacer use (32.6%, n=14) and signs and symptoms (25.6%, n=11).

Conclusion
Our results provide novel insights into the current elements of nurse-provided asthma education at The Royal Children’s Hospital, which can be utilised to create a future, standardised form of education specific to the needs of parents of children with asthma.
Investigating documentation of observations and escalation of care procedures

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Keyword(s)
observation charts, compliance, documentation

Background and Aim
To support the detection and management of patient deterioration new observation charts (ViCTOR) were implemented at RCH in 2015. The charts identify thresholds that indicate physiological abnormalities, incorporating coloured zones that trigger a clinical review (orange) or Rapid Review or Medical Emergency Team call (purple). This audit was conducted to establish compliance with documentation of observations and the new mandatory escalation of care procedures.

Research Method or Innovation Plan
On a single day, three weeks after the charts were rolled out across the hospital, an audit of 149 patient charts in nine selected wards was conducted. Data was collected for the preceding 24 hour period.

Results or Data about the Innovation
30.2% (n=45) and 5.37% (n=8) of patients entered orange and purple zones respectively. Most breaches, both orange and purple, occurred between 9:01 pm and 7:59 am. Of the 62 breaches in the orange zone; 30 (48%) had a nursing review, 9 (14%) a non-urgent medical review, 5 (14%) a Rapid Review and 18 (29%) were not documented. Of the eight patients that entered purple zone, four had Rapid Reviews (doctor reviews patient within 30 minutes) while the other four patients no action was done or not documented. Escalation of care procedures were followed for 68.5% of charts.

Conclusion
Actions taken in response to breaches were not always documented which suggests there is a need for ongoing education regarding adequate documentation. Future research should establish reasons why escalation of care is not initiated, whether this is more likely to occur out of hours and establish the proportion of breaches that were transient.
Management of Anticoagulant Therapy Interruption in Children

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Keyword(s)
anticoagulation interruption, warfarin, paediatric

Background and Aim
There are no robust recommendations relating to the management of anticoagulant therapy interruption in children requiring oral anticoagulant therapy. This study sought to identify the clinical outcomes associated with current bridging practices employed at the Royal Children's Hospital for patients requiring warfarin therapy.

Research Method or Innovation Plan
Participants were selected from the warfarin management registry of the Clinical Haematology service between January 2004 and December 2013. The admission history of these patients was queried to identify admissions where anticoagulant therapy would typically be interrupted: dental extraction, cerebral angiography or cardiac angiography/catheterization. Data relating to demographics, anticoagulant therapy interruption +/- bridging and clinical outcomes were recorded.

Results or Data about the Innovation
61 admissions for children aged between 1 year and 17 years and 11 months were analysed (56% male; mean age 10 +/- 4.2 years). Congenital heart disease was the primary underlying disease. Cardiac catheterisation was most common reason for warfarin interruption (74%), followed by cerebral angiography (20%) and dental extractions (6%). Warfarin was ceased during all but one of admissions and was withheld for a median time of 4 (1-9) days prior to the procedure. Warfarin interruption for children with Moyamoya disease was more consistently managed compared to other underlying disease groups. There were no major bleeding or thrombotic events.

Conclusion
This study described the current practices and outcomes associated with bridging therapy at one institution, filling a gap in the paediatric bridging knowledge base. It achieved this by analysing the largest and most representative cohort to date. This project is a stepping stone for future studies investigating the safety and efficacy of paediatric bridging anticoagulation protocols.
Massive Transfusion Procedure

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Keyword(s)
Massive Transfusion
Critical bleed

Background and Aim
In the case of a critically bleeding patient, it is imperative that blood transfusions are provided in a timely, safe and appropriate manner.

Research Method or Innovation Plan
Development of a massive transfusion and critical bleeding procedure (MTP) that ensures organisational consistency of practice during the time of an acute critical event.

Results or Data about the Innovation
Through liaison with multiple clinical and laboratory departments the MTP was initiated in early 2015. The roll out of the MTP required significant education and training across the campus. Since its induction, the MTP has supported the effective management of children requiring more than 40mL/kg of blood products.

Conclusion
The MTP has been successfully rolled out across the organisation to date. Evaluation about the clinical outcomes and compliance with the protocol is ongoing.
Medication safety - Do We Do It Right?

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Keyword(s)
Medication, audit, safety

Background and Aim
To examine nurses’ adherence at the Royal Children Hospital (RCH) to local medication administration procedures; to identify specific parts of procedure that are not complied with by nurses and to reflect on the medication administration checking procedures taught in current tertiary education and the necessity, if any, to incorporate these additional elements into current practice.

Research Method or Innovation Plan
This study was an observational audit performed over 36 hours in 3 weeks in January 2015 at the Emergency Department and Short Stay Medical Unit of the RCH.

Results or Data about the Innovation
The most often performed element of the ‘rights’ of RCH medication administration procedure include the ‘right patient’, ‘right time’, ‘right route’, ‘right to refuse’. The nurses also performed to the ‘right documentation’ vigilantly and innately provide ‘right education’ to the patients and family. However, the part of ‘right medication’ that was mostly not adhered to was labeling of the syringe. The audit also revealed the lack of documentation of prescription time on STAT dose order on RCH.

Conclusion
The results of this study indicate that in the majority of incidence nurses of the Royal Children’s Hospital adhere to hospital policy regarding the ‘six rights’ of medication administration. It is also found that the additional ‘rights’ taught in tertiary education, regarding safe medication administration practices are innately complied with as part of basic pediatric nursing practice.
Natural history of peripheral intravenous cannulas in a paediatric population.

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Keyword(s)
Cannula, Removal, securement

Background and Aim
The study investigated the natural history of PIVCs at The Royal Children’s Hospital, Melbourne. Establishing prevalence, clinical characteristics and removal circumstances may identify strategies to improve PIVC management in children.

Research Method or Innovation Plan
This prospective observational audit collected predetermined data relating to PIVCs in patients admitted to the RCH across 5 consecutive days. A customised data collection tool was used to record data on each cannula included in the study. Data was obtained from daily observations, patient charts, medication records, fluid balance charts and nursing staff. A 3-day pilot study tested inter-rater reliability of the collection tool, auditor documentation, study protocols and procedures to achieve acceptable consistency (≥80%). Auditors received clinical education on vascular anatomy related to PIVC siting, securement methods and components.

Results or Data about the Innovation
56 PIVCs were identified at Day 1. The study documented 18 unplanned removals (33%) over the five audit days. Dorsal aspect of the hand was the most prevalent site (62.5%), followed by forearm (16%) and cubital fossa (16%). The 22GA(blue) cannula provided the primary method of cannulation (66%), delivered via the dorsal venous network (60%), with no splinting present (64%).

Conclusion
This describes the natural history of PIVCs in a tertiary paediatric hospital setting not described previously. The key finding suggests a higher-than-expected number of unplanned PIVC removals across the 5 days of observation. Further, this prospective audit has identified areas where further research should be conducted to improve the clinical outcomes related to PIVCs in paediatric populations.
Neonatal and Infant Skincare – Clinical Practice Guideline

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Keyword(s)
Neonates skincare

Background and Aim
Preserving the skin integrity of the newborn is important to maintain the function of the skin and avoid skin disorders in the future. Furthermore, the skin of premature infants is not fully developed, therefore exposing the neonate to infection, hypothermia and increased water loss. Environmental factors such as bathing, the use of emollients, adhesives, humidity and semi-permeable membranes may alter skin integrity for newborns. The guideline aims to provide recommendations for the best possible skincare of newborn babies.

Research Method or Innovation Plan

Literature Review

Results or Data about the Innovation
Clinical Guideline (Nursing), Neonatal and Infant Skincare - RCH

Conclusion
This poster will present the current Clinical Guideline (Nursing) at RCH, “Neonatal and Infant Skincare”, including special considerations for premature infants. By analysing the available research and literature, the most recent and accurate information was reviewed. The guideline is an excellent source for clinical staff in Neonatal intensive care units (NICU) at the Royal Children’s Hospital and The Women’s Hospital, Melbourne.
Nurse Managers; creating clarity of purpose to manage and lead nursing practice

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Keyword(s)
Nurse Managers, Standards, Leadership

Background and Aim
Until the latter part of the 20th Century, the role of the nurse who led a team of nurses was clear. Charge nurses were appointed to ensure shifts ran efficiently, that nurses in their charge were competent, and that patients received safe, quality care. In more recent times, expectations have changed. The nurses who lead teams now are Nurse Managers (NM), with the same responsibilities of old AND additional expectations. Nurse Managers (NM) must be fluent in business management and have well developed leadership skills.

Research Method or Innovation Plan
Recognising the need for greater clarity about the role and expectations of NM, a working group of NM in a tertiary paediatric hospital was supported to lead the development and implementation of Standards for Practice (Standards).

Results or Data about the Innovation
Initially data was gathered via survey from incumbent NM about EFT, qualifications and training, current responsibilities and recommended competencies. The extensive raw data provided the foundation for a series of facilitated workshops. Adapting the Strong Model for Advanced Practice, NM were provided with themed data to locate the competencies within one of five domains of practice: direct and comprehensive care, support of systems, education and professional development, research and quality, and professional leadership. A further set of workshops saw the transformation of the competencies into 16 Standards.

Conclusion
The Standards have enabled the role of nurse managers at the RCH to be clearly articulated. Variations in practice have been highlighted. An agreed orientation program with formal mentoring and ongoing professional support and development will enable standardisation of leadership and management practices to improve the patient experience, teamwork, and achievement of operational goals.
Parenteral Nutrition: A Project to Improve Safety and Quality.

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Keyword(s)
Parenteral Nutrition, Quality

Background and Aim
The Nutrition Support Team in our paediatric centre oversees all inpatient and outpatient Parenteral Nutrition (PN) prescribing and administration. Since establishment (1993) demand and complexity of patients requiring PN has more than doubled without concurrent escalation in resources to support, educate and monitor PN use.

The initial audit reviewed current practices and complications surrounding prescribing and administering PN within our cohort; subsequently interventions were designed to improve safety and quality.

Research Method or Innovation Plan
All inpatients receiving PN within our centre were included. The audit covered multiple specialties including ICU. A broad range of areas of practice reviewed included: adherence to guidelines, modification to standard solutions, complications and PN wastage.

Results or Data about the Innovation
The initial 2 week audit reviewed a total of 301 PN orders for 42 patients (male=22). Only 4.6% of patients received PN for ≤3 days an improvement from 2013 (17%) suggesting patient selection is consistent with guidelines. Ordering of standard PN solutions has improved (1997: 39% vs 2015: 75%) but there is scope for further development. Non-compliance to prescribing guidelines was common (n=24). Complications included hypoglycaemia [n=2]; IV set malfunction [n=1]; volume error [n=1]) and hypernatremia (n=1). Twenty eight PN bags (9% total bags ordered) were not administered representing significant wastage.

Conclusion
An increase in the demand for PN in highly complex children has presented a challenge within the resource limitations available to focus on ensuring safe, appropriate and cost effective PN in our centre. Interventions have been designed including revised Clinical Practice Guidelines, education and changes to processes and the impact of these interventions will be reassessed.
Retrospective audit of oxygen therapy guidelines and practice.

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Keyword(s)
oxygen guidelines, asthma, bronchiolitis

Background and Aim
According to the RCH oxygen delivery clinical guideline, oxygen is a drug that should be prescribed by medical staff and children receiving oxygen therapy should be closely monitored. The guideline does not provide advice about oxygen weaning and cessation practices, although potential complications of oxygen use are acknowledged. This audit examines adherence to current oxygen therapy guidelines and describes oxygen cessation practices.

Research Method or Innovation Plan
A retrospective audit of 60 patients admitted with bronchiolitis and 40 patients with asthma to the RCH between May and July 2014 was conducted. Compliance with the guideline was reviewed by observing nursing documentation of hourly observations of heart rate, respiratory rate, oxygen saturation (SpO2) and work of breathing (WOB). Oxygen cessation practices were examined by reviewing the period of time that SpO2 was deemed stable (i.e. SpO2 >95% in asthma patients; SpO2 >93% in bronchiolitis patients) before cessation of oxygen.

Results or Data about the Innovation
All observations were documented correctly in 75% (n=30) of asthma patients, and 28% (n=17) of bronchiolitis patients. WOB was the most frequent parameter not documented. 54% (n=54) of patients had a documented order for oxygen. Oxygen was ceased by a nurse 17% (n=17) of times and by a medical officer 49% (n=49) of times. 25% (n=25) of patients were stable for over 10 hours while continuing to receive oxygen therapy.

Conclusion
Current oxygen therapy guidelines are not consistently adhered to in patients with different diagnoses. Many patients were administered oxygen for potentially unnecessary prolonged periods. Oxygen cessation guidelines may be beneficial in identifying indications for ceasing oxygen and promoting use only when required.
Sector Collaboration - working together to improve outcomes across the State.

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Keyword(s)

Collaboration, Sector

Background and Aim

Throughout the State of Victoria there are 25 services with dedicated paediatric beds. Across these services there was no standardised approach to the documentation of paediatric vital signs, nor the recognition and response to patient deterioration. This paper outlines the sector collaboration in the development and implementation of standardised paediatric observation charts across the State.

Research Method or Innovation Plan

The Victorian Children’s Tool for Observation and Response (ViCTOR) was funded by the Paediatric Clinical Network (PCN) whereby a set of track and trigger charts were developed, by and for, the sector. The ViCTOR project was coordinated by a dedicated project lead and sector collaboration included the establishment of a working group, face to face meetings, site visits, teleconferences and regular reporting to the PCN.

Results or Data about the Innovation

This unique project resulted in a set of standardised paediatric track and trigger charts with estimated statewide savings of >$150,000 per annum, the development of custom-made bedside folders, an instructional video and the establishment of an improved paediatric escalation response across the State. To date 27 hospitals have implemented the ViCTOR charts and an additional 12 are undertaking a rural suitability pilot. Sector collaboration on the ViCTOR project has also improved communication between paediatric services regarding other practices and innovations such as the sharing of clinical guidelines and resources.

Conclusion

Through the commitment to this significant statewide project, Victorian paediatric services have demonstrated that effective collaboration resulted in positive outcomes at both a local service and State level, including improved communication across the sector, significant cost savings and expansion to small rural health settings.
Shaken Baby Prevention: a retrospective chart review to determine potential predictive factors

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Keyword(s)
Infant, abuse, education

Background and Aim
Shaken Baby Syndrome (SBS), the violent act of shaking a baby, can result in disabling injury including traumatic brain injury or death. Current evidence indicates that infant care provider education may play an important role in preventing SBS. The goal of this research project was to identify characteristics among infants, parents, and caregivers that may be independent predictors of SBS.

Research Method or Innovation Plan
A retrospective chart review of traumatic diagnoses associated with a potential end diagnosis of SBS to determine potential predictors among infants, parents and caregivers for SBS. Data were analyzed in SPSS to determine whether independent risk factors exist for SBS.

Results or Data about the Innovation
Among the infants who were abused, there were significant differences in those who bottle fed vs. breast fed (p < .001), who were cared for by a variety of caregivers vs. one primary care giver (p = .01), or whose mothers were primarily employed or unemployed but actively seeking employment (p = .004). On binary logistic regression, infant feeding status, type of caregiver, preterm delivery status, presence of both respiratory and gastrointestinal disorders since birth, maternal employment status, and the presence of other children in the home were independent predictors of abuse with a classification of SBS, collectively predicting 94.1% of abuse events (p < 0.001).

Conclusion
We cannot predict which infants will be abused or exactly who the perpetrator will be, but we do know which infant and care providers are at high risk. By understanding predictors of SBS, we can develop and implement targeted and detailed educational programming and support services for at risk families to reduce the overall incidence of SBS.
Background and Aim

- Small number of RCH patients with complex healthcare needs use disproportionately large number of bed days, impacting on access to services for other patients
- Literature review and benchmarking indicate that there are efficiencies to gain by improving the model, and systems, we use to care for these patients.
- Multiple medical teams are often involved, increasing the need for communication and coordination of care.

The RCH Executive convened a Steering Committee and consequently a project team, to review the legitimacy of a complex care program at the RCH.

Research Method or Innovation Plan

The pilot program began in March 2014 enrolling 20 complex patients over 3 months. During July to December 2014, these patients were supported with strategies to better integrate their care and treatment.

This integrated approach was built around three key components:

a. Care coordination, both within RCH and the community with improved partnerships with primary care providers
b. Timely access to support and advice (an escalation point for families if things went wrong)
c. Family partnership through empowerment and advocacy

Regular review of processes, issue identification and feedback from families directed this work.

Results or Data about the Innovation

The pilot program demonstrated success with both benefits to families and utilization of hospital resources.

There was a significant reduction (~50%) in bed days and emergency department presentations and an improved quality of care and satisfaction perceived by the patients and families.

Conclusion

This pilot has laid the foundations to scale up the program to address the needs of a broader group of complex patients.
Standardising Central Venous Access Device Management

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Keyword(s)
CVAD Competency Education

Background and Aim
There is anecdotal evidence within the Royal Children’s Hospital (RCH) that not all nurses’ practice in accordance with the central venous access device management (CVAD) procedure. In order to improve and standardise CVAD management by nurses’ there was a need to determine nurses’ current practice and assess their gaps in knowledge. The aim of this study was to increase adherence to the RCH CVAD management procedure by nurses.

Research Method or Innovation Plan
An online survey asking demographic data, multiple choice questions and open ended questions was created and emailed to 54 nurses on a surgical unit. Results were transcribed and analysed in Excel. Following data analysis, targeted education sessions were run to address gaps and the survey was repeated approximately two weeks later.

Results or Data about the Innovation
Response rates for the surveys were 27 (50%) pre, and 16 (29%) post. All participants were female and majority were Grade 2 Registered Nurses. From the pre survey, five questions highlighted knowledge gaps about CVAD care. Targeted education was provided and the survey repeated two weeks later which demonstrated improvements in nurses’ knowledge. Qualitative data highlighted a need for standardised care, hands on approaches to learning and accessing RCH Policies and Procedures website on the intranet or senior staff members if unsure of something.

Conclusion
Knowledge gaps can impact on the provision of standardised, quality care. Provision of targeted education to address identified knowledge gaps has the potential to improve knowledge and increase compliance with policies and procedures. Engaging nurses in discussion around practice issues potentially can have similar effects.
Temperature Control of the Extremely Preterm Neonate during Emergency Retrieval

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Keyword(s)
Temperature, Preterm, Retrieval

Background and Aim
Despite interventions from highly skilled neonatal retrieval staff, many outborn extremely preterm neonates arrive to the receiving hospital with suboptimal temperatures. Hypothermia and hyperthermia are known to contribute to an increased risk of morbidity and mortality. A retrospective clinical audit will provide PIPER Neonatal with thermoregulatory data for performance monitoring on a vulnerable patient cohort. Furthermore, it will provide initial data on the effectiveness of exothermic mattress use, and intervention implemented in 2011 and not yet audited.

Research Method or Innovation Plan
Data from January 2012 to December 2014 was extracted from the PIPER Neonatal database. Eligible infants were those transferred at <24 hours of age as a primary emergency retrieval, at <28 weeks gestation and weighing <1500g (n=68). Temperature outcomes at three points of retrieval (initial, stabilisation and at the receiving hospital) along with exothermic mattress use were specifically sought, with additional patient demographical data obtained. An axillary temperature 36.5-37.5 degrees Celsius was considered optimal.

Results or Data about the Innovation
At arrival to receiving hospitals, 53% of neonates had an optimal temperature, while 24% were hypothermic and 21% hyperthermic. Data stratification showed those <26 weeks gestation were 4.2 times more likely to have a suboptimal temperature (p: 0.006). Exothermic mattresses were provided for significantly more immature (p: 0.015) and smaller (p: 0.003) neonates. However, mattress use showed a wider range of final temperatures, and 12.5% of these neonates were hyperthermic.

Conclusion
Thermoregulation remains a challenge during retrieval of extremely preterm neonates. As hyperthermia is noted as an emerging theme, continued performance review regarding temperature control should include further auditing of exothermic mattress use.
The Community Asthma Program Written Asthma Action Plan Project

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Keyword(s)
Community Asthma Program

Background and Aim
The Royal Children’s Hospital (RCH) Community Asthma Program (CAP) collected and identified anecdotal evidence from parents and carers participating in the program over a period of time that the current RCH Written Asthma Action Plan (WAAP) was not consistently meeting their asthma management needs.

The aim of the project was to clarify what issues parents and carers identified with the current RCH WAAP and what further development of the RCH WAAP could be undertaken to improve parent and carer satisfaction and improved client outcomes.

Research Method or Innovation Plan
The Community Asthma Program formed a working group of program staff including CAP Asthma Educators, Intake Coordinator and the CAP Manager to identify a project plan. A consumer survey was developed to obtain information from the parents' and carer's of CAP Clients to determine what the issues were with the current RCH WAAP. The RCH WAAP was mapped against WAAP's from several other institutions and peak bodies to determine parent and carer needs in direct relation to their asthma management.

Results or Data about the Innovation
The data provided from the consumer survey did identify that the current RCH WAAP did not consistently meet the parent's and carer's needs in relation to clarity of individualised written instructions aimed at improving their understanding of asthma management.

Conclusion
It was evident that there was enough information from the data set to commence discussions with the RCH CAP Subclinical Governance Committee and key stakeholders to work collaboratively to redevelop the RCH WAAP to better meet client's, parents' and carer's asthma management needs and improve health outcomes.
The FLACC scale for assessing pain in infants and children

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Keyword(s)
Pain assessment, FLACC scale, infant

Background and Aim
The FLACC scale is one of the most commonly used behavioural observation pain scale and recommended at RCH. However, the validity of the scale have not been adequately summarised and evaluated to provide clear recommendations regarding its use. This paper aims summarise the results of a systematic review of the scales reliability, validity, feasibility and utility of the scale and provide contemporary recommendations regarding its use.

Research Method or Innovation Plan
A systematic search of the literature to identify studies reporting, feasibility, reliability validity or utility data for the FLACC scale applied to children (aged birth to 18 years) and randomised controlled trials using the FLACC scale to measure a study outcome was conducted. Data analysis involved; quality assessment of the studies and narrative synthesis of all results.

Results or Data about the Innovation
Twenty-five psychometric evaluations studies and 52 RCTs were included. The study population, circumstances and quality of the studies varied greatly. Sufficient data addressing postoperative pain assessment in infants (other than neonates) and children exists to draw conclusions. Some positive data details the psychometrics of the scale used to assess postoperative pain in children with cognitive impairment. Limited and some conflicting data addressing postoperative pain assessment exist. Content validity and scale feasibility have had very limited testing.

Conclusion
There is insufficient data to support the FLACC scale for use in all of the circumstances and populations to which is currently applied. Concerns about the face validity of the FLACC scale must be resolved before attempts to address the deficits in data are made.
Timely Access to paediatric plastic surgery specialist clinics for new patient referrals.

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Keyword(s)
Referral, wait time.

Background and Aim
The Plastic and Maxillofacial Surgery Department has received feedback from parents/guardians regarding the lengthy waiting period to access plastic surgery specialist clinics. Furthermore, clinicians are voicing their concerns about patients being booked into incorrect clinics or at incorrect times.

The aims of the study were-

1. To determine the wait time between initial referral and first consultation for new patients seen by the Department between the 1st of January 2014 to 31st December 2014
2. To identify if the referral was triaged appropriately
3. To determine via consensus of the consultant the appropriate wait times for specific conditions

Research Method or Innovation Plan
An audit of new patients seen in Plastic and Maxillofacial Surgery Specialist Clinics from the 1st of January to the 31st of December 2014 was conducted. This resulted in 1153 patients being identified. This number was reduced to a more manageable sample size by randomly selecting every 5th patient on the list.

Referrals for these patients were collected via Referral Management System or using the Electronic Scanned Medical Record. Plastic Surgery consultants were invited to complete a referral scenario survey for each referral to determine appropriate wait times for selected referrals and whether the referral contained adequate information.

Results or Data about the Innovation
Data is currently being analysed for this study. We have a total of approximately 175 referrals that are being analysed after excluding those that didn’t meet study criteria.

Conclusion
We will present the data on wait times for plastic surgery clinics in 2014; and make recommendations for future planning for triaging and booking processes.
Understanding the decision to prescribe oxygen to patients post tonsillectomy

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Keyword(s)
Oximetry, Obstructive sleep apnoea, tonsillectomy

Background and Aim
Children diagnosed with Obstructive Sleep Apnoea are routinely admitted to possum ward for overnight stay and downloadable oximetry. When awake these children have SpO2 >95% in air, however when asleep these drop to >85% <92%. Traditionally oxygen therapy has been contraindicated as the cause for desaturation is considered to be obstructive. There is variation in practice with regard to acceptable levels of SpO2 and the use of oxygen. This study aimed to understand the decision making process of surgical and anaesthetic staff when prescribing oxygen for desaturation in children post tonsillectomy.

Research Method or Innovation Plan
In excess of 30 members of the anaesthetic and ENT surgical teams were invited to participate in a short 10 minute audio-recorded interview. Questions were based on the years experience of the staff member and the strategies their strategies for improving SaO2 in this post operative patient group.

Results or Data about the Innovation
Seven interviews have been conducted to date. Preliminary analysis identified a reluctance to prescribe oxygen therapy, unless there was pre-existing issue (E.g. Chronic lung disease). All respondents suggested alternative ways of increasing oxygen saturation, such as repositioning and the use of a nasopharyngeal airway before implementing the use of oxygen. There was no consensus reached on the acceptable SpO2 before intervention. Responses varied from 85-93% (Mean 88%).

Conclusion
Findings from this study will inform the development of a clinical guideline to provide consistency in management of desaturation in children post tonsillectomy surgery. Further study is needed to establish acceptable SpO2 levels prior to the implementation of oxygen therapy.
Writing a guideline: then what? Governance, implementation and audits.

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Keyword(s)
Nursing clinical guidelines, implementation, governance

Background and Aim
The Nursing Clinical Effectiveness Committee (NCEC) formed late 2010 and established a clear and consistent pathway to support the development of evidence based clinical guidelines for nursing practice across the organisation. The aim of this review is to describe adherence to the pathway processes and report clinical audits of guideline implementation.

Research Method or Innovation Plan
As of mid-April NCEC actively managed 71 clinical guidelines. Each guideline was reviewed to determine the inclusion of disclaimer links, approval statements and date of publication. The NCEC data base was audited for review of Education and Implementation Plans and clinical audits.

Results or Data about the Innovation
Of the 71 published clinical guidelines, 68 had disclaimer links and 66 had approval statements and date of publication. Education and Implementation Plans were submitted for 34 guidelines.

Eight clinical audits have been completed: Pressure ulcer prevention, Falls prevention, Continuous monitoring, Peripheral intravenous device management, Observations and escalation of care, Procedural sedation, Oxygen delivery and Nursing Documentation. Clinical audit findings showed that consistency in nursing practice and nursing documentation had improved in many areas. The findings also informed specific education needs to foster improved uptake. Following the audits, minor modifications were made to some guidelines.

Conclusion
Writing a guideline is only one step in translating evidence into practice. Greater consideration to ensuring an Education and Implementation Plan is instigated is required. Ongoing clinical audits are important to ensure that the guidelines developed are appropriately implemented into practice.