Nursing Research and Clinical Innovations Symposium

10 September 2019
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Oral Presentations

HeartWare Ventricular Assist Device (VAD) discharge education: what patients and parents/carers want

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Keywords
Ventricular assist device (VAD), discharge, education

Background
HeartWare VAD allows patients to be discharged from hospital while awaiting a cardiac transplant or recovery. Currently, parents/carers are trained to manage the device yet patients are not educated. A review of the educational process had not been completed and it was not known if current practice was meeting the needs of this complex patient group.

Aim
To identify the educational requirements and preferences of paediatric patients implanted with HeartWare VAD, and their parents/carers, in preparing for hospital discharge.

Method
Patients, who had previously been supported by HeartWare VAD at RCH, and their parents/carers, were interviewed about their VAD educational experiences. Interview questions focused on educational experiences, preferences and suggestions for improvement.

This qualitative study followed a descriptive exploratory approach. Interviews were recorded, transcribed to text and thematically analysed.

Results
A total of seven interviews were conducted; 4 parents/carers and 3 patients.

Parent/carers reflected upon a positive educational experience with current educational delivery and resources meeting their needs. All parents/carers suggested the addition of videos to support their learning. Parents believed patients should also receive education. Two parents discussed parent/carer responsibility and the psychological impact upon the child.

Patients wanted to receive education on the HeartWare VAD, so they could be involved in their own care if needed. One patient discussed the psychological challenges of being on HeartWare VAD as an adolescent.

Conclusion
Current educational delivery is appropriate yet the addition of videos and inclusion of patients would be beneficial. The psychological impact upon the child was highlighted, and it would be beneficial to explore this further.
Ex-utero transfer for parenteral nutrition in preterm neonates

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Keywords
Preterm, neonatal transfer, parenteral nutrition

Background
Parenteral nutrition (PN) therapy is currently only available in tertiary NICUs in Victoria. All neonates “outborn” in non-tertiary hospitals who require PN must be transferred to a tertiary NICU after birth. There are limited data reporting characteristics of these neonates.

Aim
To investigate perinatal characteristics and outcomes of outborn neonates requiring ex-utero transfer and NICU admission for PN therapy.

Method
A retrospective state-wide cohort study of all liveborn, outborn 28 to 36 weeks’ gestation neonates transferred to a tertiary NICU by Paediatric Infant Perinatal Emergency Retrieval (PIPER) in 2014. Data were extracted PIPER records and databases at all four NICUs in Victoria. Perinatal risk factors associated with PN therapy were analysed by logistic regression.

Results
Overall, 219/5905 (6%) outborn 28-36 week neonates required ex-utero transfer and NICU admission. Of the 183 (84%) neonates with PN data available, 69/183 (38%) received PN. Of these 69 neonates, 62% received respiratory support, and 30% required specialist investigations, and/or surgery. Mean duration of PN therapy was 192 hours (SD 170, Range 23-860). PN therapy use increased as gestational age decreased. NICU length of stay was significantly longer in survivors who received PN compared with those who did not: 23.8 v 8.4 days, p<0.001. On multivariable regression, perinatal characteristics independently associated with PN use were gestational age (aOR 0.65, 95% CI 0.55 to 0.77, p<0.001) and being singleton (aOR 2.80, 95% CI 1.17, 6.70, p=0.021).

Conclusion
Outborn neonates admitted to NICU predominantly required other intensive care therapy in addition to PN.
Complete and Accessible Transport Bags to Facilitate Safer Neonatal Transfers

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Keywords
intra-hospital, transport, transport bags, neonatal

Background
Historically, Butterfly has had one industrial tool box containing clinical emergency equipment to be used amongst thirty-four patients during intra-hospital transfers. This led to critically-ill neonates transported within the hospital without any emergency equipment. Additionally, the contents of the tool box were not regularly checked and monitored if complete or expired which compromised patient safety.

Aim
To provide the ward with a more sophisticated design and greater number of transport bags to facilitate safe transport of Butterfly patients within the hospital.

Method
A proposal was made to the Nurse Unit Manager to provide more transport bags in Butterfly. Several samples of transport bags from different suppliers were acquired. One bag design was then approved and three transport bags were ordered for the ward. The items inside the bag were reviewed, and formal inventory and monitoring guidelines were implemented. Following the successful 3-month trial of the new transport bags, online surveys were utilised to collect feedback.

Results
Eighty-five percent of nurses who responded to the survey, perceived the new bags were highly useful and safe compared to the previous tool box. The bags are now checked on a daily basis, and complete inventory is performed every month to check for missing or expired items. All patients are now transported within the hospital safely with fully-equipped transport bags.

Conclusion
The transport bags have made intra-hospital transportation in Butterfly seamless and safe. Staff feel more confident to conduct transports knowing they have readily accessible transport bags that contain essential equipment for emergencies.
Paediatric oncology: lengthy treatment, multiple procedures, when do we sedate?

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Keywords
paediatric oncology, procedural sedation, pharmacological

Background
Cancer treatment involves frequent painful medical procedures that can cause distress for patients and families. There is strong evidence that pharmacological and non-pharmacological strategies are effective in enabling a more positive experience during procedures. Sedation practices in paediatric oncology are under-studied and what constitutes optimal use of sedation and non-pharmacological interventions is poorly understood.

Aim
To examine sedation practices within Kookaburra and obtain a baseline understanding of current sedation and supportive care practices.

Method
A prospective audit of treatment room procedures was undertaken over a 6-month period. Clinical staff, predominantly nurses, were asked to complete the audit tool. Data collected included procedure type, sedative agent/s utilised and other procedural and non-pharmacological interventions. Staff were blinded regarding the purpose of data collection. Data has been summarised with descriptive statistics.

Results
Data was collected on 100 consecutive procedures. The most common procedures were central venous access device (CVAD) care, port access and nasogastric tube (NGT) insertion. Sedation was used for 26% of the procedures; the majority of these were for NGT insertion (46%). Sedation most commonly involved administration of midazolam (52%). 41 procedures were CVAD care; only 3 of these patients required sedation. Comfort First Program was the most common non-pharmacological intervention utilised (46%).

Conclusion
Study results show sedation was used for a quarter of ward based oncology procedures. Suggesting sedation is used appropriately according to level of distress, type and frequency of procedure. Future auditing will be useful to monitor procedural pain practices.
Monitoring intravenous fluid therapy in paediatric patients

Author(s)
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Keywords
Guideline, adherence, paediatric

Background
Intravenous (IV) fluid administration is common practice in paediatric health but can be associated with adverse outcomes, such as hyponatraemia. The Royal Children’s Hospital (RCH) IV fluid clinical guidelines recommend monitoring of weight, serum sodium and blood glucose (BGL) before commencing IV fluids and daily thereafter. No literature is available on adherence to these clinical guidelines.

Aim
Determine adherence to the RCH IV fluid monitoring guidelines.

Method
A retrospective clinical audit of the electronic medical record was conducted on patients admitted between 31/07/2018 and 31/10/2018. Slicer Dicer (Epic©) identified 269 patients admitted for a minimum of two days and administered IV 0.9% sodium chloride + 5% Glucose +/- 20 mmol/L KCl. Patients were excluded if they received < 50% of their maintenance hydration or received IV fluids for < 36 hours.

Results
A total of 92 (34%) patients were eligible. Baseline weight was monitored in 95% of patients, serum sodium in 82% and BGL in 54%. 63% of patients had no follow-up weight, 25% had no follow-up sodium and 75% had no follow-up BGL documented within 36 hours of IV therapy. Only 25% of patients were able to have their fluid balance calculated due to unquantifiable input and/or output.

Conclusion
Whilst monitoring of baseline weight and serum sodium was acceptable, baseline BGL, and all follow-up parameters were suboptimal. Fluid balance charts cannot be relied on to reflect an accurate fluid balance and highlighting the importance of monitoring weight and serum sodium. Future research is needed to identify the barriers to optimal guideline adherence.
Defining optimal care: developing care pathways in paediatric oncology

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Paediatric Integrated Cancer Service

Keywords
Cancer, care pathways

Background
The need for health services to define high-quality care is recognised internationally. Recognising the need in paediatric oncology, the Paediatric Integrated Cancer Service in Victoria, Australia, led the development of Paediatric Oncology Care Pathways (POCPs) for the three tumour streams.

Aim
The objective was to document evidence-based, multidisciplinary best-practice pathways, tailored to the unique needs of children with cancer and their families.

Method
A literature review was undertaken and consultation with multisite key stakeholders initiated. Specialised, multidisciplinary health professionals and consumers participated directly in iterative draft revisions via statewide expert reference groups, with further external review from other Australian cancer services. Where there was a lack of available evidence, a consensus opinion was sought from the expert reference group.

Results
The pathways define cancer care across 7 timepoints, from early detection through to end-of-life care. They encompass leukaemia, solid and central nervous system tumours, as well as a section on fundamentals of paediatric oncology care, common to all diagnoses. They delineate key quality-of-care indicators, with rationale and where applicable, timeframes that enable clinical audits. Rather than comprehensive clinical specification, they are designed to be sensitive to developments and change in practice. To date, they have informed quality initiatives in areas such as clinical trials, infection prevention, fertility optimisation, multidisciplinary team meeting discussions and nutrition.

Conclusion
The POCPs guide delivery of optimal, evidence-based care for children with cancer. Aligning practice to the POCPs ensures consistency of care and articulates the expectations for high-quality care for the patient and their family.
POCUS IV Cannulation Improving Apheresis and the Patient Experience

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Keywords
Apheresis, POCUS, Cannulation

Background
Children with sickle cell disease require frequent venepuncture for treatment, often resulting in difficult venous access over time. Multiple cannulation attempts leads to procedural anxiety, increased infection risk, extended duration of admissions, and frequent reliance on anaesthetics/theatres to obtain adequate IV access.

Aim
Determine if Point of Care Ultrasound (POCUS) guided intravenous cannulation improves clinical outcomes and enhances the patient experience.

Method
Following training including a period of supervised practice the Apheresis Nurse was deemed competent in POCUS cannulation. The impact on Red Blood Cell Exchange (RBCx) procedures for a single patient was examined by comparing procedures performed before and after implementation of POCUS (pre and post procedure blood results, frequency of anaesthetic referral, procedure attempts/duration and patient feedback).

Results
Since implementing POCUS in August 2018 anaesthetic referrals have decreased with minimal unsuccessful cannulation attempts. RBCx procedures commenced within 1.5 hours of admission versus a delay of up to 4 hours. Machine alarms were significantly reduced due to better intravenous access resulting in reduced procedure time. Infection risk is reduced due to fewer venepunctures, decreased need to reposition cannulae, and reduced accessing of lines for flushing. The patient has noted less venepuncture attempts and shortened hospital stays, improving procedural comfort and satisfaction with RBCx. There are also significant cost savings due to shorter admissions, less consumables used and reduced reliance on anaesthetics/theatres.

Conclusion
The results indicate an opportunity to greatly improve clinical outcomes and deliver economical, sustainable healthcare by extending the scope of practice of nurses in relevant clinical areas to include proficiency in POCUS cannulation.
Keeping pace; bridging the gap in nursing practice

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Keywords
Pacing; Nursing; Education

Background
Temporary epicardial pacing can be a lifesaving adjunct for optimising cardiac output and for the suppression of arrhythmias in the post-operative period following cardiac surgery. On Rosella pacemaker checks, essential for effective treatment, is performed by doctors. However nurses are taught to complete these checks as part of post-graduate studies. Re-education would be required for nurses to perform these checks competently, ensuring patient safety.

Aim
Does the implementation of a temporary epicardial pacing learning package improve perceived confidence and readiness for Rosella critical care nurses to perform pacing checks?

Method
The pilot was a before-and-after study investigating the learning package. Eighty-eight Team Support Nurses (TSNs) were emailed to complete a survey before and after completing the learning package. The survey was designed from two areas of Kirkpatrick’s model of learning evaluation. Descriptive data analyses was undertaken for the survey results. Any comments from free text were themed and summarised.

Results
Fifteen TSNs consented to participate, all with post-graduate degrees or higher. Post-learning package there was a fifteen percent increase in the participant’s perceived knowledge of pacing check concepts. Post learning package seventy-three percent of TSNs felt confident they could safely perform output and sensitivity threshold checks, which was a fifty-eight percent increase from pre-learning package. Common themes arising from the survey comments included the requirement for more medical collaboration, nursing education, and guideline changes.

Conclusion
The learning package on temporary epicardial pacing improved perceived knowledge and confidence of Rosella nurses. More practical education is required to further improve readiness to perform pacing checks.
Sick Leave Management: the perspective of Nurse Unit Managers

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Keywords
Sick leave, Nurse Unit Managers, Management

Background
Sickness absence, or sick leave, is defined as the failure to attend the workplace, despite being scheduled to work, usually through illness or injury. Sick leave is influenced by the individual’s perception of their capability to work, based on their ability and motivation to attend. In addition, job resources are linked with employee motivation and commitment to work and the organisation, hence impacting on employee sick leave taking practices.

Aim
The aim of this study was to identify the key barriers and enablers to Nurse Unit Managers’ ability to lead effective ‘sick leave’ management practices among nurses.

Method
This was a single-centred qualitative study. Study participants were nurses employed as Nurse Unit Managers at the Royal Children’s Hospital. Informed consent was obtained from participants to take part in focus groups which were transcribed verbatim. An inductive approach that included elements of interpretive phenomenology was used to generate and analyse concepts from the data.

Results
Workplace culture and environments, lack of support systems for Nurse Unit Managers and wellbeing opportunities for all staff were recognised as barriers and enablers to managing sick leave. Burnout underpinned the Nurse Unit Managers’ perceptions of reasons for staff taking sick leave and impacted on all facets of sick-leave management and staff wellbeing.

Conclusion
The research suggested strategies, resources required of managers to enable reduced leave sick leave rates taken by nursing staff within the organisation. The findings and recommendations will contribute to the landscape of sick leave management among nurses and guide future practice and research within healthcare settings.
Simper and safer mental health care in the paediatric ED

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Keywords

Background
Paediatric mental health presentations to emergency departments (ED) are challenging and increasing in number. Current management is inefficient and impersonal due to a presumption of universal high risk. The Columbia Suicide Severity Rating Scale Screener (screener) is a promising tool to classify individual patient risk and possibly enable person-centred care.

Aim
To assess the suitability of the screener for implementation in the Royal Children’s Hospital ED.

Method
ED nursing staff performed the screener on mental health patients presenting to the ED without any subsequent change to routine care. Patient trajectory was assessed for any correlation with screener risk level. ED nursing staff were surveyed about their experiences using the screener.

Results
The screener was performed 45 times. Patient mean age was 14.7 years (range 9-17); 71% were female. There were no incidents of violence or physical restraint. 8 patients were identified as low risk by the screener, none of which were assessed as high risk by a mental health clinician. Of 34 patients identified as high risk by the screener, 24 were assessed as greater than low risk by a mental health clinician. 28 out of 31 eligible ED nurses completed the survey. 100%, 92%, and 82% felt at least somewhat confident, competent, and comfortable using the screener respectively.

Conclusion
The screener is a safe tool that prevents ED nursing staff underclassifying patient risk. It could be used to identify not high risk, and not low risk patient cohorts. ED nursing staff had mostly positive experiences using the screener. Its suitability has not been eliminated.
Self-perceived confidence and experiences of nurses managing clinical aggression at RCH

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Keywords
Aggression, confidence, nurses

Background
Since 2006 the RCH has responded to episodes of clinical aggression with a nurse led Code Grey response team. Since implementation this model has not been formally evaluated to determine the confidence or preparedness of these nurses to manage clinical aggression.

Aim
This project aimed to determine the self-perceived confidence and the factors influencing the confidence and preparedness of nurses responding to clinical aggression in the Code Grey team at RCH.

Method
A mixed-methods research design was employed including an online survey to measure confidence level using a validated tool and focus groups to contextualise these findings. Nurses from the Code Grey responder wards; Kelpie, Cockatoo and Sugar Glider were eligible to participate.

Results
The findings have identified that the confidence of nurses in the Code Grey team was not largely influenced by individual characteristics such as age, experience or job classification. The largest difference in confidence scores was observed between wards.

Insight into the experiences of these nurses identified a number of situational factors that impacted upon confidence, including anticipatory anxiety and the effectiveness of leadership and team work. Key organisational factors impacting upon the capacity of nurses to respond to Code Grey events were also identified.

Conclusion
These findings have provided a unique insight into the factors impacting upon the confidence and preparedness of nurses to respond to episodes of clinical aggression. A review of the nurse response model in addition to the ongoing training and support provided to nurses in the Code Grey team are key recommendations from this project.
Fostering the Future Nursing Workforce

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Keywords
Undergraduate Nurse Program, Service Delivery, Paediatrics

Background
The demand for undergraduate nurse clinical placements is increasing across Victoria. RCH has 19 legal partnerships with Australian based education providers and currently offers placements to 14 of these providers.

Aim
To explore the expansion and the efficacy of an undergraduate nurse program at RCH.

Method
A review of current services was conducted including identifying existing capacity of nursing clinical placement sites, exploring new opportunities for expansion and examining the organisational ability to manage student cohorts with varied scopes of practice. Stakeholder engagement, both internal and external, was utilised to support the growth of the program. Throughout the growth of the program, students experience continued to be evaluated to ensure the quality of the program was maintained.

Results
Over the past two years undergraduate nurse placements have increased by 29% (n=103) and clinical placement sites have also increased to 16 sites hospital wide. This has subsequently increased revenue. Continuous efforts have been made to strengthen partnerships with external education providers facilitating the exploration of ongoing opportunities for growth. Throughout the expansion of the program students reported their experiences have been positive and reflect the instillation of excellence in service delivery.

Conclusion
The expansion of the placements at the RCH has addressed the identified gap between the demand for and provision of undergraduate nurse clinical placements. Increased financial gain has enabled the provision of great quality care to patients and families through the implementation of education, training and support, and ensured self-sufficiency of the program.
Rovers and EMRs: Medication administration on Sugarglider ward

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Keywords
Medication safety, EMR

Background
Electronic medical records with their associated barcode medication administration systems have been shown to increase medication safety. However, barriers such as nursing workarounds and alert fatigue can undermine inbuilt safety mechanisms. Evaluation of these systems is vital to ensure they are being used in a way that promotes medication safety.

Aim
This project aimed to characterise the alerts and overrides that occur when nurses use the barcode medication administration system to prepare and administer medications.

Method
Clinical audit data was exported from the EMR relating to all medications administered over a two-month period. Additional data was collected through observation of nurses using the barcode medication administration system to prepare and administer medications. This data was summarised with descriptive statistics, frequencies and percentages.

Results
The overall medication scanning and patient scanning rates were 86% (n=16,713). Medications administered through the enteral & parenteral route had considerably higher patient scanning rates respectively (n= 10090, 92%; n= 4818, 88%) compared to other routes including inhaled (n=724, 56%) or topical (n=602, 66%). During clinical observation, the EMR system correctly detected an error in 1.8% of medications being prepared, however 37% of administered medications involved an alert or warning.

Conclusion
The use of a barcode medication administration system can detect and prevent medication errors. Despite this, nurses do not always use barcode scanning when administering medications. Medication alerts occurred in over a third of administered medications, and many were clinically non-significant. These findings can be used to optimise the EMR system and improve medication safety for inpatients.
'Are you free to help?' RCH Nurses understanding, use and perception of the After Hours Nurse Lead Clinical Nurse Consultant (AHNL CNC) role

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Keywords
Understanding, usefulness, effectiveness.

Background
The Clinical Nurse Consultant After Hours Nurse Lead (CNC AHNL) role was introduced to provide senior nursing support and education ‘after-hours’. Previously 9/200 Advanced Practice Nurses worked within the 74% of the time classified as ‘after-hours’ at RCH. No formal Nursing feedback has been acquired to identify the usefulness and effectiveness of the role.

Aim
To gain an understanding of how RCH Nurses use and perceive the CNC AHNL role.

Method
An electronic survey was sent to RCH Nursing staff working in clinical roles. Utilising Likert scales, multiple choice and self-reported questions regarding nurses’ understanding, perceptions and effectiveness of the CNC AHNL role. Both staff and patient outcomes were explored. Preliminary data has been summarised with descriptive statistics.

Results
151 nurses completed the survey at time of preliminary analysis. 66% of respondents selected ‘strongly agree’ regarding confidence that the CNC AHNL team has a range of nursing skills and knowledge to assist with clinical situations. 30% of nurses commented they were unsure of the CNC AHNL role.

Nurses stated that CNC AHNL team deliver great care in all their interactions with patients and families and they utilised the team for procedural support (64%), MET calls (61%) and general nursing duties (55%).

Conclusion
The preliminary results identified the CNC AHNL team are a valuable resource and utilised predominately for procedures, MET calls and general nursing duties. The need further understanding and education around the role may be beneficial. The CNC AHNL team has exhibited a positive impact and are a first point of call for nursing staff after-hours.
Exploring nurses’ experience on the transition to specialty practice nursing

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Keywords
Transplantation, orientation, oncology

Background
Bone marrow transplantation is a treatment for children with both malignant and non-malignant conditions, when no other curative treatment is available. It is an area of nursing that requires specialty knowledge and skill base, similar to critical care nursing. Limited evidence exists regarding the optimal approach to prepare, support, educate and orientate nurses to the specialty paediatric bone marrow transplant setting.

Aim
To explore the experience of paediatric oncology nurses, transitioning and orientating into bone marrow transplant (BMT) nursing.

Method
A phenomenological qualitative approach was utilised. Three focus groups were conducted, each containing four participants. Participants were stratified nursing cohorts of varying levels of experience. Discussion focused on the orientation needs, level of competence, nursing experience and skill acquisition staff believed were required to successfully transition into the role of a paediatric BMT nurse. Data was analysed utilising a thematic and interpretative framework.

Results
Four major themes emerged from the data: variability in orientation (provision of supernumerary time and theoretical education); expectations and pressures; barriers to successful orientation (transparency of available resources) and exposure and consistency. A concept that competency development within the area of paediatric BMT nursing is an ongoing and evolving cycle, was also identified.

Conclusion
Themes identified gaps in the current orientation pathway provided to BMT nurses and highlighted important elements necessitating incorporation. Results support the future development of a robust orientation framework, assisting the transition to BMT nursing. This could be further extrapolated to other specialty care areas, improving both clinical and patient outcomes across the trajectory of paediatric nursing.
Bedtime Stories: An exploratory study of the reasons for, experience and impact of, sleep disturbance for children with cerebral palsy and their parents

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Keywords
sleep, cerebral palsy, mixed methods

Background
Research and clinical experience suggests that sleep problems are common for children with Cerebral Palsy (CP). The reasons for and experience of sleep problems in children with CP, and the impact this has on their parents are are not well understood.

Aim
1) To determine the frequency and type of sleep problems for children with CP in Victoria
2) To explore the experience and impact of sleep problems for children with CP and their parents

Method
This qualitatively driven, exploratory sequential mixed methods doctoral study had three phases: 1) qualitative scoping interviews 2) a quantitative survey which included validated sleep screening tools 3) follow up qualitative interviews. Participants were Victorian parents or caregivers of children aged 6-12 with CP.

Results
The analysis of the three phases of this study were synthesised to produce a mixed methods interpretation. The key findings were: 1) finding effective sleep solutions can be challenging 2) Sleep problems are prevalent and persistent but are often untreated 3) Sleep problems are complex and multi-factorial 4) Sleep problems in children are associated with a negative impact on their parent’s sleep 5) Overnight care of children is often the responsibility of mothers. 6) It is possible to improve sleep for children with CP.

Conclusion
There is an urgent need to make sleep a health priority for children with CP and their parents. Interventions should focus on educating and empowering parents to better navigate the health care system to achieve effective individualised sleep solutions.
Children with Bleeding and Clotting Disorders: Reviewing Quality of Life Tools

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Keywords
Quality of Life, Haemophilia, Anticoagulant Therapy

Background
Haemophilia and anticoagulation therapy have a significant effect on children's quality of life (QoL) due to an increased risk of bleeding, repeated painful procedures and multiple hospital visits. Hence, the tools used to assess QoL in these children must accurately represent their lived experiences.

Aim
This scoping review aimed to identify the existing QoL tools for children with haemophilia or receiving anticoagulation therapy and evaluate the validity, reliability and responsiveness of each tool.

Method
A comprehensive search was undertaken using MEDLINE, CINAHL and Embase. Studies reporting the development or validation of QoL tools in children (aged 0-18) with haemophilia or receiving anticoagulation were included. The search was limited to articles published in English within the last 20 years. The Joanna Briggs Institute Methodology for Scoping Reviews was followed for methodological quality and data extraction. The COnsensus-based Standards for the selection of health status Measurement Instruments (COSMIN) checklist was used for evaluating the validity, reliability and responsiveness of the QoL tools.

Results
Nine QoL tools were identified, consisting of five haemophilia specific, one anticoagulant specific and three generic questionnaires. Each tool demonstrated validity and reliability to an extent, but were limited by poor methodological quality. The Haemo-QoL and KIDCLOT PAC QL© tools demonstrated the best methodological quality. The PedsQL™ 4.0 demonstrated strong measurement properties but lacked specificity.

Conclusion
Currently available QoL tools for children with haemophilia or receiving anticoagulation are apt and applicable. Further research is required to report on measurement error and construct validity of paediatric QoL for both disorders.
Mental health concerns in adolescents presenting with spontaneous venous thromboembolism

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Keywords
Mental health, thrombosis, adolescence

Background
Spontaneous (or idiopathic) venous thromboembolism (iVTE) is a relatively rare condition in adolescence. The diagnosis of iVTE requires anticoagulation therapy (AT) and resultant lifestyle modifications. The impact of this upon the mental health and wellbeing of adolescents has not previously been reported.

Aim
The study aimed to determine the prevalence of mental health issues in adolescents diagnosed with iVTE and commencing AT.

Method
This was a single centre retrospective cohort study. Eligibility included patients aged 10 to 19 years old when diagnosed with an iVTE and commenced AT between 2003 and 2014. Quantitative data was collected using REDCap. Qualitative data describing any assessment or management strategies implemented was collected through patient notes.

Results
Thirty-eight patients met eligibility criteria. The potential for mental health deterioration secondary to iVTE was discussed with 39.5% of patients.

A HEADSSS assessment was conducted in 15.8%.

29% of patients were referred to a mental health service with half subsequently diagnosed with a mental health disorder.

Three main themes were identified regarding the impact of AT on patients’ wellbeing:

• Impact on self-perception and mood
• Impact of medical treatment and resultant lifestyle implications
• Impact on peer perception.

Conclusion
This study identified the significant impact diagnosis of idiopathic VTE and subsequent commencement of AT has upon the mental health of young people. Greater adherence to the use of a psychosocial screening tools could optimise the timely identification and management of mental health concerns for young people.
Little tiny teams doing big programs: Immunisation in specialist schools

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Keywords
immunisation, disability, schools

Background
The School Immunisation Program offers the scheduled adolescent immunisations to students at all secondary schools in Victoria. Coverage rates for specialist schools which enroll students with disabilities is significantly lower than for mainstream schools. There is no qualitative research to date exploring the reasons for this discrepancy, which limits the development of interventions to address this.

Aim
To explore the barriers and facilitators of the School Immunisation program for young people with disabilities in specialist schools.

Method
The socio-ecological model was adopted as the framework for this inquiry. Ten observations of specialist school immunisation sessions, 39 in-depth semi-structured interviews and two focus groups of key stakeholders were undertaken. Data was then coded and themed using Thematic Analysis as described by Braun and Clark (2006).

Results
Five main themes were identified: an invisible population, searching for support, going the extra mile, competing priorities and trust takes time. The intersect of the themes across layers of the socio-ecological model varied, demonstrating the complex nature of the issue and the need for this multilayered approach.

Conclusion
This research provides in-depth information from a range of stakeholders involved in the School Immunisation Program in specialist schools. Further research could implement interventions arising from this data. Such interventions may include: policy changes to recognise difference in schools, stronger central support for immunisation teams, increased resources for follow-up and catch-up, and clearer guidelines for the use of restraint during immunisation.
Poster Presentations

A hospital-wide implementation of a Closed System Transfer Device

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Keywords
safety, exposure, implementation

Background
Chemotherapy is carcinogenic, mutagenic and tetrogenic. Without adequate safety precautions, it is an occupational hazard to healthcare staff who prepare and administer it. Implementation of a Closed System Transfer Device (CSTD) at the Royal Children's Hospital, was identified as a way to decrease occupational risk.

Aim
To implement a closed system intravenous administration device that enables safe delivery of chemotherapy and reduces the risk of occupational exposure to patients, carers and healthcare staff.

Method
In 2014 a CSTD working party formed, completing an initial product trial. Following this and extensive explorations of available products a business case was submitted by hospital executive. A second product trial commenced over a three week period on Kookaburra, Kelpie and Day Oncology in 2018. This trial included three CSTD products one for: intravenous infusions; syringe driver medications; and intravenous push medications. Feedback from nursing staff regarding each product was then collected and collated for evaluation.

Results
Feedback collected indicated that the CSTD’s were user-friendly and allowed safer practice when handling chemotherapy. Feedback was considered alongside key stakeholder investment and executive input in deciding that all three CSTD products would be implemented. Product implementation occurred in 2019, and included development of a procedure and education sessions (group and individual) incorporating both theory and audio-visual displays.

Conclusion
The implementation of the CSTD’s has reduced the risk of occupational exposure to patients, carers and healthcare staff. The CSTD’s have been well received by nursing staff, future steps include formal evaluation to establish the success of this hospital-wide implementation.
A Retrospective Review of Antithrombotic Therapy in Paediatric Patients with Moyamoya Disease

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Keywords
Moyamoya Disease, Antithrombotic Therapy, Paediatric

Background
Moyamoya Disease (MMD) is a rare cerebrovascular arteriopathy that results in significant neurological compromise in children secondary to strokes. There is uncertainty about the best antithrombotic regimen for these children. Treatment is guided by consultant opinion and preference, with practice tending towards antiplatelet therapy alone. At the Royal Children’s Hospital the patient population is unique in that there is a substantial number who are managed with dual antiplatelet and anticoagulant therapy. Study of the thrombotic and haemorrhagic outcomes of this specific population serves to fill the current gap in understanding about the outcomes for these children.

Aim
To describe the thrombotic and haemorrhagic outcomes of children with MMD who are given dual antiplatelet and anticoagulant therapy or single antiplatelet therapy alone.

Method
The patient population was selected from the Neurosurgical and Clinical Haematology registries of children diagnosed with MMD from 2000 to 2018. Data was collected regarding demographics, antithrombotic therapies, surgeries, and the number and severity of thrombotic or haemorrhagic events that occurred after therapy initiation. These events are defined as radiologically-confirmed thrombosis or major bleeding events.

Results
A population of 33 children have been identified. Preliminary data collection from 29 participants demonstrates 69.0% (n=20) received an antiplatelet alone, 27.6% (n=8) received dual anticoagulant and antiplatelet therapy and 3.45% (n=1) received an anticoagulant alone. Data collection and analysis is ongoing.

Conclusion
The findings from this study have the potential to inform future guidelines about the management of these children, with the aim to improve the outcomes for this highly vulnerable group.
A review of the safety and educational aspects involved in the transition of a cohort of severe haemophilia patients to an extended half-life product

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Keywords

Background
The National Blood Authority in 2018 released a framework for supply of EHL’s to a limited number of patients to be coordinated and managed through the Haemophilia Treatment Centre’s. In order to complete a smooth transition to the new product we had to ensure optimal safety requirements and educational needs were met for patients and families.

Aim
Facilitate a smooth transition to the EHL product meeting safety requirements and educational needs of families.

Method
Patients selected using the NBA criteria. Complete NBA consent form. Home delivery of EHL Pre transition bloods. Appointments for:

- first dose in hospital
- PK time points
- education with patient and family
- 3/12 clinic review and bloods.

Results
Twenty-seven patients transitioned to an Extended half life product.
First EHL doses administered in hospital. PK time points for haemophilia A, pre first dose, 15mins, 4, 24 and 48 hours post. For haemophilia B pre first dose, 15mins, 24hours and 7 days post. Education provided at all time points.
To date, twenty-four patients have completed 3 month follow-up appointments, reviewing bleeding episodes, safety bloods and follow-up education.
Seventeen haemophilia A patients continue on recommended twice weekly prophylaxis, with two on third daily, due to bleeding episodes. All haemophilia B patients have continued on the recommended once weekly prophylaxis.

Conclusion
Transitioning patients to a new product requires high level communication within the team and with the families to ensure smooth coordination of activities required. Transition activities must focus on patient safety including both patient monitoring and meeting education needs of the families.
Administration of Sedation and Analgesia in the Post-Operative Neonate

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Keywords
sedation, analgesia, neonate

Background
Analgesia and sedatives are frequently administered to post-operative neonates to treat pain and distress. Whilst these must be treated, the challenge of minimizing pharmacological exposure and complications such as iatrogenic withdrawal remains.

Aim
This study aims to explore the current practice of sedation and analgesic administration in the post-operative neonate in NICU.

Method
A retrospective clinical audit of postoperative neonates admitted to the NICU within three months, and who underwent their first surgical procedure. The data collected included any pain or withdrawal measurements taken, intravenous sedation and analgesic administration for one month or to discharge, whichever came first.

Results
mPAT (modified Pain Assessment Tool) scores and frequency were greatest immediately post-operatively, with opioid and benzodiazepine administration highest at this point. mPAT scores were performed regularly with 82% scoring below 5.

NAS (Neonatal Abstinence Score) measurement and frequency of scoring increased post day 14. Opioid and benzodiazepine bolus administration increasing and this time, opioid infusions were weaned and benzodiazepines remained steady. Approximately 10% of babies show signs of possible iatrogenic withdrawal.

Conclusion
The mPAT score is consistently used, suggesting usefulness to guide analgesia and sedation. There is a focus on optimising pain control in the immediate post-operative period when pain would be expected to be highest. As the analgesia and sedatives are weaned, there is evidence of withdrawal. This may suggest the need for slower weans and use of opioid-sparing adjuncts, especially in infants who are on opioids beyond 14 days.

A guideline could be useful to rationalise use of pharmacological agents and minimise exposure.
Being an outsider: Who helps the paediatric oncology patient after hours?

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Keywords
Oncology, Outliers, Safety

Background
With the increasing demand on oncology beds throughout the Royal Children’s hospital (RCH), there was a significant escalation of children with oncological conditions being placed on other units. A nurse coordinator role was created to support the oncology outliers throughout the hospital.

Aim
The objective of this poster is to highlight the patients, families and nurses experiences when taking care of an oncology patient on a different unit. This will examine how we can provide best care to all oncology patients throughout the hospital with the support of the outlier nurse coordinator.

Method
The role was initiated to improve access, flow and the discharge of patients through RCH. This also contributed to sharing specialist knowledge, skills and providing quality care for the paediatric oncology patient and families. The Nurse Co-ordinator provided education to patients and their families, ward nurses and members of the multidisciplinary team on organisational processes which facilitated the delivery of timely, clinically appropriate treatment to ensure achievement of agreed discharge planning dates.

Results
During the past three years the nurse coordinator has provided improved patient safety, improved patient care, and best practice support, timely treatment for oncology patients and support and education for nursing staff.

Conclusion
Post implementing this role we have seen a huge success in providing best practice to the outlier oncology patient. Feedback from nursing and medical team, patients and families has been overwhelming positive due to the support that they had after hours in this speciality.
Challenging routine hourly vital sign documentation in PICU

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Keywords
vital signs, PICU

Background
Vital sign documentation for paediatric intensive care (PICU) patients is routinely performed hourly. A recent study analysing the frequency of vital sign documentation in PICU suggested that more frequent vital sign documentation (15-minute or 30-minute intervals) would enable earlier recognition of clinical deterioration.

Aim
To determine if there were differences in the time selected indicating concerns about a patient’s clinical status when PICU nurses were presented with graphed vital signs at 15-minute, 30-minute and 1-hour intervals.

Method
256 PICU nurses were invited to participate in an online survey featuring two real-patient case studies with vital sign trends graphed at frequencies of 15-minute, 30-minute and 1-hour. The cases were chosen based on requirement for clinical interventions including fluid bolus or escalation of vasoactive drugs during a 6-hour time period. Nurses’ identification of concerns about the vital signs and their decision to seek a review of the patient were compared across three different frequencies of vital signs documentation.

Results
29 (11.3%) of PICU nurses completed the survey. More nurses were concerned about their patients’ clinical status, identified their concerns earlier and would escalate care earlier, when the frequency of vital sign documentation was presented at 15-minutes or 30-minutes intervals compared to hourly intervals.

Conclusion
These findings suggest that presenting graphed vital sign trends at more frequent intervals will enable nurses to recognise and act upon clinical deterioration earlier. Future research should explore the impact on nursing workload and the potential for EMR software to automatically file vital signs at more frequent intervals.
Characterising Deteriorating Paediatric Oncology Patients and Their Escalation of Care

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Keywords
Escalation of Care

Background
RCH supports staff to recognise and respond to clinical deterioration with criteria that guides staff when to seek a patient clinical review or a more urgent response via a rapid review or medical emergency team (MET). Despite this system, paediatric oncology patients have experienced adverse events due to their deterioration not being identified or appropriately managed earlier.

Aim
This study aimed to characterise patients who breach clinical review and MET criteria and understand the escalation of care processes followed on the kookaburra ward.

Method
Patients admitted to the ward for a 24-hour period on 3 separate days were identified via the electronic medical record. Data was extracted from 78 patients including age, diagnoses, escalation of care parameters breached, and current modifications to these parameters. Nursing and medical documentation of escalation of care processes were reviewed.

Results
Thirty-five patients (45%) were identified with 39 different documentations of vital signs within clinical review criteria, and 12 breaching MET criteria. Of these 35 patients, 12 had review criteria modifications, 3 of whom were in MET criteria. Actions taken by nurses after vital sign breaches included 1 nurse-in-charge review, 9 non-urgent medical reviews (5 led to criteria modifications), 20 had no nursing or medical documentation acknowledging abnormal vital signs, and there were 0 rapid reviews or MET calls.

Conclusion
Patients regularly transgressed clinical review and MET criteria, but the formal escalation of care procedure was often not followed. Further exploration of oncology ward-specific issues and barriers to adopting the escalation of care procedure is required.
Co-location of Ambulatory services on Saturdays

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Keywords
Delivery Great Care

Background
An increased demand for service and consumer feedback identified the need for Day Medical Unit to operate on Saturdays. Day Oncology Unit had a Saturday clinic in place with limited capacity and resources to meet all patient demands and effectively support nursing staff. This led to the innovation of a joint Saturday service for Ambulatory care in sharing resources, providing a greater capacity for patient treatment and the delivery of a robust service.

Aim
The aim of this innovation was to create an integrated ambulatory day service to meet the needs of the consumers and better support staff with shared resources.

Method
With a Saturday service already in operation in the Day Oncology unit it was recognized that a combined ambulatory services we could deliver a robust clinic to meet the demands of both patient populations in a well supported environment.

Several consultations were held jointly with nursing staff from both areas to develop a Saturday operational plan for nursing. They identified how they would work together and what support was needed for the successfully implementation. With shared supportive resources from allied health and medical teams the service has increased capacity for the delivery of great care.

Results
Implementation of a Saturday ambulatory combined service has improved patient / family experience with increased access to Day Medical Care & the Day Oncology Unit resulting in decreasing the demand across the week, improving workload and increased throughput.

With the introduction of new supportive care position, a child life therapist, a pharmacist and on call medical support, this has provided a comprehensive service for patients to continue to receive the same service as they would during the weekday appointments. This new service has formalized the current Day Oncology Saturday clinic and provides support to the DOU nursing staff. The collaboration of the units on the Saturday has provided an opportunity for sharing of knowledge and education across both units.

The initial feedback from family and staff has been very positive in the early stages of the new clinic’s operation.

Conclusion
With shared knowledge, resources and great team work we can deliver a service that meets the needs of different patient cohorts within the ambulatory day services.
Development of Butterfly Transport Checklist for Safer Neonatal Transport

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Keywords
intra-hospital, transport, checklist, neonates

Background
For patients in Butterfly, intra-hospital transports (IHT) occur when diagnostic imaging, ward transfers or surgical intervention in theatre are required. Research suggests that an IHT checklist can improve patient transfer outcomes and minimise the risk of adverse events. Unfortunately, a transport checklist was not available in Butterfly. Incidences reported during IHTs in Butterfly were mostly equipment-related resulting from a lack of preparation. And these incidences prompted the development of the checklist.

Aim
To develop a transport checklist in Butterfly to assist staff in transporting patients within the hospital.

Method
A rapid cycle improvement approach was utilised for this innovation. Relevant literatures were reviewed in conjunction with guidelines and checklists from other hospitals. Medical and nursing staff were interviewed to further discuss reported incidents during IHT. Interviews and reports were then analysed to help develop a Butterfly IHT checklist.

Results
The comprehensive paper-based checklist included four sections: preparation, transport, post-transport and feedback/adverse events. In addition to the general items required for all types of IHT, the checklist also outlined the necessary equipment and actions required for patients with complex respiratory support or pathological conditions. Additional considerations were also included for patients requiring complex medical imaging, such as MRI and CT scans. In 2018, the checklist was implemented in Butterfly.

Conclusion
The checklist was developed following a rigorous approach. The inclusion of the feedback/adverse event section allowed for rapid evaluation and subsequent improvements. Work on incorporating the checklist into the electronic medical record system is ongoing.
Do you know me? Caring for children with additional needs in hospital

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Keywords
Behaviour of concern, communication, documentation

Background
Hospital presentations for children with communication difficulties and behaviours of concern are rising at RCH. These patients often face traumatising experiences, with safety breaches occurring and increases in Code Grey’s and blocked beds. There was no standard way to document a behaviour or communication plan.

Aim
To test if implementing a documentation tool for patients with communication difficulties and behaviours of concern would improve experiences for staff and families.

Method
A multidisciplinary team of nurses, doctors, allied health and parents developed a tool called the Behaviour and Communication Profile used to document communication preferences, behaviours of concern and sensory needs. This was piloted on one ward at RCH over 4 months. Education sessions were run to inform staff on how to use the tool. Parents and staff were surveyed on how the tool impacted their experience and for any feedback.

Results
Code Grey’s and beds blocked decreased by 100%. 89% of parents felt the Behaviour and Communication Profile helped staff to understand their child’s needs (11% stated N/A) and 95% of parents found the profile improved the staff’s communication with their child (5% stated N/A). Factors outside of the profile may have contributed to these statistics, however anecdotally staff and parents felt the tool contributed to improved experiences.

Conclusion
Results showed that planning in advance and individualising plans leads to positive and smoother experiences for everyone. Having a paper based tool in an electronic environment was a limitation. Feedback from all parties suggested the tool should be built into the Electronic Medical Record (EMR).
Embedding Simulation training into an ECLS course: A 3 year Evaluation

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Keywords
Simulation, ECLS, Education

Background
Extracorporeal Life Support (ECLS) is an intensive therapy delivered within the Paediatric Intensive Care Unit (PICU). PICU nurses must undertake further training, to manage this therapy. Previous courses included wet labs or skills stations but not ‘real-time’ simulated scenarios or Human factor training.

Aim
This study aimed to evaluate the learning experience of participants following inclusion of ‘real time’ simulated clinical scenario and human factor training.

Method
Between 2017-2019, high fidelity simulated clinical ECLS scenarios with debriefs and Human Factor training, were embedded within a 4 day ECLS nurse training course. Human factor training included an interactive session where participants discussed non-technical skills, such as teamwork and communication. The ECLS simulation required participants to work together troubleshooting a clinical situation within real-time, utilising a high fidelity mannikin. Debriefs provided the opportunities to discuss what went well, challenges and future approaches. Course participants evaluated their experience via a questionnaire. Feedback was collated, analysed and evaluated.

Results
A total of 28 nurses were included.

Human factor training was rated extremely useful 68%(n=19), moderately useful, 21%(n=6) and useful 11% (3).

Simulation was rated as extremely useful 96%(n=27), 3.6%(n=1) stated it was moderately useful.

Thematic analysis highlighted the following key themes, feeling prepared, working as a team, real time and hands on practice troubleshooting. All participants stated more simulation sessions would be useful.

Conclusion
Simulated scenarios and human factor training are successful additions, to a didactic and skills-based training course. Providing opportunity for real-time hands on trouble shooting as a clinical team. Preparing participants for future clinical events, consolidating learning and enhancing teamwork and communication.
Establishing a suitable frequency of vital sign documentation in PICU

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Keywords
vital signs, PICU

Background
Interpreting changes in vital signs is essential for detecting clinical deterioration. The hourly frequency of vital sign documentation for paediatric intensive care (PICU) patients is based on traditional practices that precede the implementation of an electronic medical record (EMR) and other technological advances which enable more frequent documentation.

Aim
To determine the most suitable frequency for documenting vital signs which might better assist clinicians in earlier detection of patient deterioration in the PICU.

Method
Continuously monitored PICU patients aged 1 to 4 years were recruited during August 2018. Utilising medical device integration solution technology, vital signs (heart rate, respiratory rate, blood pressure and oxygen saturation) were extracted from physiologic monitors, at 15-minute, 30-minute and 1-hour intervals. Vital signs that were outside the acceptable ranges (orange or red zone) of the Victorian Children’s Tool for Observation and Response (ViCTOR) graph were analysed at these different frequencies.

Results
Up to 789 data points for each vital sign parameter from 33 patients over a 6-hour time period were analysed. The percentage of vital signs breaching the orange or red zone of the ViCTOR graph was fairly similar across all three time intervals, for each of the vital sign variables. As the frequency of vital sign measurements increased from hourly to 15-minutely, the actual number of documented vital signs breaching the orange and red zones increased.

Conclusion
Displaying vital sign documentation at an increased frequency may assist PICU clinicians to detect clinical deterioration earlier. Additional research should investigate the feasibility of adopting such a change of practice.
Evaluating the Role of a Single Session Nurse-led Assessment Clinic for Transgender Children and Adolescents

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Keywords
Nurse-led, Clinical care, Model

Background
The Royal Children’s Hospital Gender Service (RCHGS) cares for patients with gender dysphoria. The RCHGS has seen an exponential increase in the number of new referrals, creating long waiting lists and challenges in provision of timely, quality care. Delays in service delivery are concerning given the high rates of co-existing mental health difficulties, self-harm and suicidality for this population.

Aim
In response a front-end Single-Session Nurse-led Assessment Clinic (SSNac) was introduced into the clinical care pathway in 2016. The SSNac is a single-session, face-to-face consultation provided by the clinical nurse consultant that has reduced time to first clinical contact from 14 to 4 months. During the session, initial assessment and triage are performed, and information, support and recommendations are provided. Patients typically proceed to a comprehensive multidisciplinary assessment 5-12 months after. This study aims to determine the clinical impact of this novel intervention.

Method
A mixed methods approach was adopted. The quantitative component used standardised data collected as part of routine care at various points along the patient’s clinical pathway.

The qualitative component entailed 14 phone-interviews with patients who recently attended SSNac to gain an understanding of their experiences of SSNac’s. Content analysis was performed to identify key themes.

Results
After SSNac significantly more people had socially transitioned, and their mental health, quality-of-life and family functioning had improved.

Conclusion
This study helps to understand RCHGS patients’ experiences and changes associated with attending the SSNac. SSNac may be a useful model in the face of growing demand for clinical services and burgeoning waiting lists.
Exploring nurse perspectives of barriers to inpatient immunisation on a tertiary paediatrics ward

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Keywords
Opportunistic Immunisation, Inpatient, Paediatric

Background
Attaining high immunisation rates for children with medical conditions is vital. Presentation to a health service is an opportunity to bring children up-to-date with their immunisations. The aim of this study was to identify barriers to opportunistic-immunisation and explore nurse knowledge, opinion and practice in relation to vaccination.

Aim
What barriers do nursing staff working on a respiratory ward of a tertiary paediatric hospital believe exist to opportunistic immunisation?

Method
A convenience survey consisting of 86-items, measured knowledge, opinion and practices of nursing staff related to childhood vaccination.

All nursing staff (n = 105) working in the respiratory ward of a metropolitan, tertiary paediatric hospital were invited to complete the survey during a three-week period in early 2019.

The survey used in this study was a modified version taken from a study looking at opportunistic Immunising within an Emergency Department (Philip et al, 2014). Permission to use a modified version of this tool was granted by the lead investigator.

Results
All participants strongly agreed that childhood vaccines are safe, effective, necessary for child health and necessary for population health. Less than half (47%) of the staff correctly identified that antibiotic use does not contraindicate vaccination. Nurses identified the MMR (50%) vaccine as eliciting the most questions from parents. Most participants (21/36, 58%) felt that it is preferable for routine immunisations to be given in the community.

Conclusion
This study highlighted that nurse knowledge deficits about vaccines, parental concerns and nurse attitude towards OI may be barriers to vaccination on the ward.
Exploring purposes, outcomes and experiences of morbidity and mortality meetings in paediatric acute care. A research protocol

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Keywords
Patient safety, clinical education, adverse events

Background
A common thread in the heterogeneous conduct of the acute care Morbidity and Mortality meeting is to present and analyse cases amongst the clinical team. Amongst the many described functions of this forum is the goal to learn from preventable adverse events, however this learning is not value neutral. The Morbidity and Mortality meeting navigates the interests of stakeholders including clinicians, hospital governance, the patient affected and the family/caregivers. The Morbidity and Mortality meeting is not well explored in the academic literature, and this understanding is imperative to promote their effective conduct.

Aim
To explore the purposes, outcomes and experiences of Morbidity and Mortality meetings in paediatric acute care.

Method
A qualitative case study methodology is proposed to explore the complex and varied context of Morbidity and Mortality meetings at the Royal Children's Hospital. This incorporates both observation of the meetings themselves, and interviews with both meeting attendees and hospital executive/ those responsible for quality and safety governance. Meeting observation and interview data will be thematically analysed.

Results
Results from each phase of data collection will be integrated and presented back to the clinical areas and hospital executive.

Conclusion
The triangulation of data sources, and a commitment to rigorous data collection and analysis methods will enable a greater understanding of the place, contribution and risks that Morbidity and Mortality meetings have in acute paediatric hospitals.
Extended Practice Nurse: advancing scope of practice

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Keywords
Advanced, Nursing, Practice

Background
Senior emergency nurses have the potential to provide autonomous care to certain patients presenting to the emergency department (ED) without undertaking a Nurse Practitioner Candidacy. This could improve access to quality care and meet increasing departmental demands.

Aim
To develop an advanced nursing practice pathway for emergency nurses to extend their scope of practice and independently manage specific patient presentations.

Method
A comprehensive program was developed for participants to obtain the required knowledge and skills. Core learning objectives were outlined, and participants were supported through on-floor education, mentorship and clinical supervision. Formal evaluations were performed to ensure the program objectives were being met and participants were achieving competency and proficiency in their roles.

Results
We enrolled two participants for a six-month term. Participants self-reported a steep learning gradient which was extremely challenging, physically taxing but overall rewarding. They achieved proficiency in several advanced assessments and procedural skills, becoming more than competent in autonomously managing specific patient presentations. Post-completion this practice was seen to carry through into their subsequent nursing roles in the department. Both participants expressed a keen interest to pursue an advanced practice role should one become available and would recommend other nurses to participate. Mentors/supervisors reported improved role satisfaction through educating and seeing participant growth. They did however report significant cognitive fatigue providing supervision and maintaining their own workload.

Conclusion
The participants successfully extended their scope of practice and developed higher clinical decision-making skills that provided significant benefits to their ongoing nursing roles, improved access and timely care for patients and families.
GREAT care delivery, Family centred care, Attributes

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Keywords
GREAT care delivery, Family centred care, Attributes

Background
Great care at The Royal Children’s Hospital (RCH) means to deliver excellent clinical outcomes, positive experience for patients, families and staff, timely access to care, zero harm and sustainable healthcare. Currently there is an absence in knowledge of what attributes contribute to nursing staff delivering GREAT care.

Aim
To promote a culture of understanding that demonstration of certain attributes leads to delivery of GREAT care.

Method
A review of available academic and contemporary literature was undertaken to better understand the link between attributes, competency and GREAT care. A framework was then developed to further explore this concept on the Kelpie ward The RCH.

Results
A review of available literature highlighted nursing teams who display well versed professional attributes and behaviours lead to positive patient experiences.

Further exploration of this topic highlighted the lack of literature regarding the attributes and competency of nurses working with adolescent patients. To further investigate the importance of these concepts in the unique setting of adolescent nursing a research protocol will be developed. Methodology pertaining to focus groups will be utilized to gain an understanding of nurse’s perceptions of what behaviours and attributes GREAT nurses display. Data analysis of information shared during each focus group will be undertaken in order to generate emerging themes.

Conclusion
Further exploration of the concept of attributes and competency in adolescent nursing will provide insight into how these impact GREAT care and develop a framework for the culture of adolescent nursing on Kelpie. Findings will also inform development of practical plan for education, training and support in developing nurses professionally.
Immunisations under sedation at a paediatric hospital from 2012-2016

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Keywords
Immunisation, sedation

Background
Sedation for immunisations is of particular importance in a subset of paediatric patients with anxiety disorders, needle phobia, developmental or behavioural disorders. The Royal Children’s Hospital (RCH) Melbourne offers a unique immunisation under sedation service for these patients.

Aim
We aimed to evaluate the number and types of patients using inpatient sedation for immunisations, distraction and sedation techniques used, and outcomes of these procedures.

Method
A medical record review was conducted on all patients who had immunisation under sedation between January 2012 to December 2016 in the RCH Day Medical Unit (DMU).

Results
A total of 139 children and adolescents had 213 vaccination encounters. More than half of the vaccination encounters involved multiple vaccines. A total of 400 vaccines were administered. One third of patients (32.3%) had multiple DMU admissions for vaccinations. The median age of patients was 13 years. There were only 10 (4.7%) failed attempts at vaccination; all due to patient non-compliance with prescribed sedation. The majority of patients (58.9%) had a diagnosis of needle phobia. Sedation was most commonly achieved with inhaled nitrous oxide (54.7% sole agent). Midazolam was often used as an adjunct therapy (42.8%). Local anaesthetic cream or play therapy, were used in only 5.9% and 3.9% of patients respectively, though this may reflect poor documentation rather than actual practice.

Conclusion
For a subset of paediatric patients for which standard immunisation procedures have failed, distraction techniques and conscious sedation enable immunisations to be given safely and effectively. Future research will develop protocols to streamline immunisation procedures under sedation.
Improving access for young people to vaccinations: a nurse-led model

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Keywords
young people, homelessness, vaccinations.

Background
Young people made up 26% of the 24,817 persons classified as homeless in Victoria on Census night in 2016. When vulnerable young people are faced with homelessness, disengagement from schooling, and addictions, vaccinations may be of low priority.

Aim
The aim of this innovation plan is to determine if scheduled vaccination coverage in vulnerable young people can be improved by a targeted nurse-led model of care.

Method
A nurse-led vaccination outreach model was developed with crisis accommodation services, drug and alcohol services, and learning centres for people aged 12-24 years. The number of young people who were not up to date with vaccinations as per the Immunisation Schedule of Victoria will be quantified. The success of the nurse-led model will be evaluated by quantifying the number of young people who initiate immunisations and ultimately are up to date with scheduled vaccines.

Results
The innovation plan commenced in February 2019 and has found 97% (n=123) of vulnerable young people were not up to date with scheduled vaccinations. Vaccines were predominantly missed in secondary school, with some people also missing scheduled childhood vaccines such as Measles, Mumps and Rubella.

Preliminary data shows that 46% (n=57) of these young people initiated their first immunisation appointment. Five of the vulnerable young people have completed catch-up plans and are now fully up to date for their age.

Conclusion
Vulnerable young people are missing out on scheduled vaccinations. A targeted nurse-led model of care may be a step in the right direction to improve vaccination coverage in this at-risk group.
Improving Albumin infusion documentation at RCH

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Keywords
Albumin, documentation, infusion

Background
Blood products have minimum documentation requirements including prescription, administration and traceability. Traceability is vital in cases of donor infection or manufacturing contamination.

In 2017 the Blood Management Committee audited Albumin. Visibility of required documentation was challenging and the audit was abandoned.

Aim
To improve processes related to documenting Albumin infusion information, and all other batched (bottled) blood products, in the EMR and review this data.

Method
Albumin was previously prescribed in the blood order set and administered in the Blood Product Administration Module (BPAM) and blood flow sheet.

An EMR stage two improvement project was undertaken to move all batched (bottled) blood products, including Albumin, to the Medication Administration Record (MAR) and fluid balance flow sheet.

Results
Building the new batched blood orders in the MAR commenced in August 2018 and the transition to the MAR occurred as part of a major EMR upgrade on 7th May 2019.

Moving these blood products to the MAR has provided enhanced visibility and enabled detailed auditing including traceability, prescription and administration. Approximately 500 bottles of Albumin have been issued during May 2019. Analysis is ongoing to review adherence to documentation requirements.

Audit data will be used to guide changes to the Albumin guideline and education at RCH.

Conclusion
Improved visibility of Albumin in the MAR and flow sheets has enabled auditing of all required documentation for the first time at RCH.

Further work is required to explore how improved Albumin documentation will support quality and safety of Albumin prescription and administration.
Improving immunisation for Aboriginal and Torres Strait Islander peoples

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Keywords
Immunisation, Indigenous

Background
Delays in vaccination among Aboriginal and Torres Strait Islander children place them at increased risk of disease. The Royal Children’s Hospital (RCH) Immunisation Service provides opportunistic vaccines to all patients. Despite this, the number of Aboriginal and Torres Strait Islander patients immunised each year has remained low.

Aim
The aim of this study was to improve immunisation rates amongst Aboriginal and Torres Strait Islander patient's at RCH.

Method
The Immunisation Service at RCH met with the medical and nursing staff from the WADJA Aboriginal family place. Outpatients attending the weekly WADJA clinic had their immunisation status checked using the Australian Immunisation Register (AIR). Patients identified as due or overdue were encouraged to attend the Immunisation service for catch up vaccines. Data was collected on number of patient's immunised.

Results
Over a 10 week period, there were 44 patients who attended the WADJA clinic. Of these, 7 (16%) were identified as being due or overdue for a scheduled vaccine. Of the 7 patients, 1 (14%) received catch up vaccines. Despite influenza vaccine being recommended and funded, 98% of Aboriginal and Torres Strait Islander patients did not receive the vaccine.

Conclusion
Immunising Aboriginal and Torres Strait Islander patients has had limited success. It may be that the Immunisation centre is not considered a culturally safe space. Strategies have been implemented to improve engagement with the RCH Aboriginal liaison officers, to enable the Immunisation nursing staff to provide vaccines ‘on-the-spot’ at WADJA clinic. We will continue to improve and monitor the success of these interventions.
Link between organisational culture and practice change implementation at the Royal Children's Hospital - Operating Theatres

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Keywords
Organisational culture, healthcare implementation science, change management

Background
Nurses are required in all perioperative areas, yet in dental theatres at RCH, dental assistants still function as the “theatre nurses” to this day. Past attempts to change this practice failed, but would recognising the "way things are done around here" aid in successfully implementing a clinical innovation?

Aim
This innovation aimed to successfully implement a perioperative practice change through incorporation of cultural empowerment strategies.

Method
A three-month trial of nursing allocation in dental lists was introduced following discussions and resultant buy-in from key stakeholders. A four-membered high impact team (HIT) met weekly to monitor progress, discuss matters, and impact change using methodological pluralism. Communication lines were kept open all throughout and staff feedback were discussed in weekly HIT meetings.

Results
Numerous findings have unfolded throughout the trial and pre-trial stages of this practice innovation. Barriers to change were the dental assistants’ resistance due to the decades-long dysfunctional culture and fear of redundancy, organisational bureaucracy which resulted to the previous change agents’ disengagement, and the nurses’ fear of legal ramifications causing disinclination to quality and safety initiatives and service improvement. Enablers to change were supportive leadership, open communication lines, and clinical staff involvement. Clearly, a practice change is paramount to improve patient safety during dental surgeries in RCH, and the failure of past innovation attempts directly links to poor recognition of organisational culture.

Conclusion
Current implementation literature consistently highlights the importance of recognising organisational culture in healthcare change management and establishing a strong scientific evidence is opportune for future nursing and health policy treatises.
Minimising Immunisation Pain of childhood vaccines: The MIP Pilot Study

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Keywords
Immunisation, Procedural pain, Pilot Study

Background
The pain associated with routine scheduled immunisations may result in distress and/or anxiety for children and parents. Long-term effects of painful procedures may result in needle phobia or non-compliance with vaccination. It is therefore imperative that immunisation service providers optimise effective pain management strategies.

Aim
The aim of the MIP Pilot study was to provide feasibility of study design and inform sample size for a subsequent larger randomised controlled trial (RCT), evaluating the efficacy of two novel devices (Coolsense® and Buzzy® (with or without cooling pads (wings)) versus standard care) to minimise pain during childhood immunisations in young children aged 3.5 to 6 years of age inclusive.

Method
The MIP Study was a four-armed pilot project strategically set up within the RCH Immunisation Centre. The study commenced in peak flu season to ensure timely recruitment, and patients were sequentially randomised into four groups, with 10 in each group. Data collected was entered into REDCap Software© and analysed with Microsoft Excel.

Results
Feasibility of study design was demonstrated, and recruitment completed in 12 days. Based on observational assessment by the immunisation nurse, full patient compliance was highest in the group that received the Coolsense® device (80%) and the two groups receiving the Buzzy® device (70%). Based on parent report, intervention effectiveness for pain minimisation was highest in the Coolsense (70%) and Buzzy with wings (70%) groups.

Conclusion
A larger RCT in younger and older children is now needed to provide statistically powered results to inform practice for immunisation providers to improve the vaccination experience.
Neurodevelopment and Disability: Parent Wellbeing Service

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Keywords
Parent, wellbeing, disability

Background
Parents of children with a neurodevelopmental disability (NDD) have greater risk of mental health difficulties than parents with typically developing children. They also have difficulty accessing mental health supports, often prioritising their children’s healthcare requirements.

Aim
To develop a combined nursing and psychology service that supports the wellbeing of parents who have a child with a NDD.

Method
Service development involved reviewing existing research, consulting with staff and parents of children with a NDD. Action research methodology has provided flexibility to improve the service by reflection, learning and responding to interactions with participants.

In June 2018 we launched the parent wellbeing service, providing a single, combined psychology and nursing appointment, to parents of a child (0-5 years) with a NDD.

Results
Sixteen referrals were received in the first four months, with ten appointments attended (mothers = 10, fathers = 1; outpatient = 7; inpatient = 3). Two families declined the service and one mother failed to attend. Two referrals were redirected to RCH psychology and one was rejected as the family had existing support.

Common themes identified include feelings of trauma, grief and loss relating to child’s diagnosis, worry about other children, and care burden.

Conclusion
To increase referrals a period of education and consultation was undertaken. The age limitation was removed and families are offered up to six sessions. Increasing referrals (30 in past four months) and clinician limitations mean families are triaged to receive combined nursing and psychology or psychologist only appointment. Parents attending clinic receive ongoing nursing care as required
Nursing symptom assessment and management practices at the end of life.

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Keywords
Nursing, symptom, assessment

Background
Electronic Medical Record (EMR) tools show promise in managing symptoms in end of life care (EOLC). Structuring and systematising assessment helps clinicians shape practice. 56% of patients referred to Victorian Paediatric Palliative Care Program (VPPCP) die as inpatients. VPPCP staff provide a Symptom Management Plan (SMP) for generalist staff to use. Despite a SMP, patients experience untreated symptoms. It is difficult to determine whether the patient’s symptoms have been assessed, if medication has been administered, and its effect.

Aim
To describe the documentation of nursing notes regarding symptom assessment and management of paediatric inpatients at the end of life.

Method
A retrospective audit of nursing notes in the last two weeks of life of 20 patients who received EOLC at the RCH between 2017-2018.

Results
85% of patients had a SMP in the EMR. Reasons for no SMP were; families refused VPPCP, died before meeting VPPCP, or died shortly after admission. Nursing entries were inconsistent. Variations included a shift summary, multiple entries in 1 note or multiple single entries. Twice there was no documentation of an assessment or symptom. In over 4400 entries on symptoms and assessments, only 39 documented the nurse following a SMP and escalating care following the plan 36 times. The effects of medication given was documented in 65% of instances, with lessened reporting at 2 and 4 hours post administration. Efficacy of medication was not often reported even if the child had an infusion.

Conclusion
Initiatives are needed to help nursing staff better assess symptoms and document symptoms in alignment with medications.
Parents' experience of family centred care in the post anaesthetic care unit during non-clinical delays: a qualitative study

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Keywords
Family-centred care, Patient and family-centred care, Post anaesthetic care unit (PACU)

Background
Partnership between parents and nurses underpins the delivery of patient and family-centred care for children. However, parents' experience of family-centred care when transfer of care, from the post anaesthetic care unit (PACU) to inpatient wards, has been delayed is yet to be examined.

Aim
To explore parents’ experience of family-centred care during delayed transfer from a paediatric PACU.

Method
This study utilises a qualitative exploratory descriptive design. Participants contributed through in-depth, semi-structured interviews. Key elements of the family-centred care framework were used to guide qualitative thematic analysis.

Results
Respect and dignity was the element of the family-centred care framework most commonly identified by participants, expressed by three subthemes: 1) the caring behaviour of staff, 2) being present with their child, and 3) a journey shared with other families. Information sharing was also commonly described by participants, illustrated through two subthemes: 1) being told information, and 2) being heard. Participation, the third element of the family-centred care framework, was infrequently identified by participants in this study. Parents of children under six years of age, however, alluded to contributing to their child’s care. The final concept within the family-centred care framework, collaboration, was not identified in the study data.

Conclusion
Two elements of the family-centred care framework were evident in parent’s stories of delayed transfer from PACU; respect and dignity and information sharing. 'Being with' their child emerged as a central concern for parents, and was important in parents' perception of family-centred care. Opportunities for practice improvement and future research including supporting family participation and collaboration in care delivered in the PACU during non-clinical delays.
Patient and family experiences of k-wire removal in Specialist clinics

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Keywords
K-wire removal

Background
K-wire removal is a common procedure in specialist clinics that is a source of procedural pain and anxiety. Currently, there is no specific information leaflet for k-wire removal. It is important to explore patient and family experiences of k-wire removal to inform k-wire management.

Aim
To examine the patient and family experiences of k-wire removal in specialist clinics.

Method
Parents were asked to complete an electronic survey after k-wire removal. Qualitative and quantitative questions explored information sources used for preparation, procedural sedation, pain scoring using the Wong-Baker faces pain scale and parent recommendations for improvement. Preliminary data has been summarised with descriptive statistics.

Results
Parents’ greatest source of information was verbal information from the ward (90%, n=9). Other sources include friends knowledgeable in the procedure (20%, n=2). Parents described the need for clearer procedural information was important. 20% of respondents had procedural sedation expectations but described inadequate preparation (n=2). 80% of respondents described their child having no pain relief before the procedure (n=8) and average pain score was 4 on the Wong Baker faces pain scale during the procedure (n=3) with 50% of respondents describing a pain score 5 minutes after the procedure as 0 (n=5).

Conclusion
Parents described wanting more information about the procedure, pain relief and sedation. Parents reported their child experiencing higher pain during the procedure compared to afterwards. Creating an information leaflet would equip parents with the knowledge to prepare their child for k-wire removal.
Patient deterioration; why don't staff activate the MET system?

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Keywords
Medical Emergency Team, MET, Barieers

Background
The RCH Medical Emergency Team (MET) provides rapid medical assistance for the seriously-ill patient. Following a review of cases where a MET should have been called earlier, the Patient Safety Committee recommended a staff survey to understand the barriers for calling MET.

Aim
To understand the processes nursing and medical staff use to escalate care for the deteriorating patient and identify barriers for calling MET.

Method
In December 2018, medical and nursing staff from the wards, Medical imaging, Emergency Department and Recovery were targeted via email, intranet posts and staff walk arounds with IPADs to complete an online lime survey.

Results
156 medical staff and 257 nursing staff completed the survey. When a patient’s parameters breached the red zone of the ViCTOR graph, 80% ward nurses would call a rapid review/MET.

Reasons ward staff delayed MET included; a doctor told me not to (32% nurses, 3% doctors), a nurse told me not to (14% nurse, 11% doctors), fear of criticism (26% nurses, 10% doctors) and attitudes of MET team (20% nurses, 2% doctors), if the patient had a recent rapid review (9% medical, 34% nursing), a PICU outreach review (30% nurses, 35% doctors) and/or because they like to notify the bed card prior to calling a MET (15% nurses).

Conclusion
Staff may deviate from the RCH escalation of care procedure and make a decision to delay calling MET, because their patient recently had a medical review and because of other staff members attitudes towards their decision for calling MET.
Peripheral Intravenous Cannulas – A Burning Issue

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Keywords
PIVC, extravasation, complications

Background
Peripheral Intravenous Cannula (PIVC) is a frequently used invasive devices at the RCH. Knowledge of common characteristics of PIVC complications is limited.

Extravasation injuries are regularly reported through the incident reporting system (VHIMS) as per the recommendations in the RCH Extravasation Clinical Practice Guideline.

Aim
The aim of this retrospective audit was to determine common characteristics of the 41 incidents related to extravasation reported in 2018.

Method
All the incidents related to PIVC extravasation were manually identified by a clinician from automated reports produced through VHIMS.

A data set was developed in line with recent published point prevalence audits. Data was extracted from the electronic medical record and analysed using descriptive statistics.

Results
Of the 41 incidents reported, 62% of patients were less than six months of age. The underlying illnesses were predominately a gastrointestinal 31% or cardiac 24% condition. Insertion information was collected and showed that over 50% of the injuries occurred from devices located in the hand. The purpose of the PIVC was to deliver 14 types of medications with flucloxacillin featured most commonly at 27%. 56% of devices failed within one day of insertion. In 34% of records there was no insertion documentation and in 24% of records there was no evidence of assessment documentation within the first 24 hours.

Conclusion
The audit has provided baseline data that indicates a need for ongoing improvement for the insertion and maintenance of these commonly used devices. Further prospective auditing is required to support quality initiatives in this area.
Procedural pain assessment in infants and young children: a comparison of 3 behavioural scales

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Keywords
Pain assessment, infants, validation

Background
Infants and young children frequently experience painful procedures during hospitalisation, the management of which is contingent on accurate assessment. The most suitable tool for this purpose is unclear.

Aim
The aim of this study was to compare the performance of three observational pain scales to quantify procedural pain in infants and young children.

Method
Twenty-six clinicians applied the Face, Legs, Activity, Cry & Consolability (FLACC) scale, the Modified Behavioural Pain Scale (MBPS) and the Visual Analogue Scale applied by an observer (VASobs) to segments of video from 100 infants and children undergoing a procedure.

Results
Inter-rater reliability was poorest for VASobs pain (ICC – 0.55). VASobs pain scores were lower than FLACC and MBPS scores during the procedure (p < 0.001). MBPS scores were at least 2 even during non-painful phases. FLACC provided the best sensitivity (94.9%) and specificity (72.5%) for the lowest cut-off score. The FLACC scale resulted in more incomplete scores (p < 0.000). Reviewers liked the VASobs (pain) most, considered it quickest and easiest to apply but all scales were considered of limited clinical use.

Conclusion
This study supported the reliability and sensitivity of the FLACC and MBPS. There were practical concerns for application of the FLACC scale and the MBPS and doubt about the capacity of both scales to differentiate between pain- and non-pain related distress exist. The VASobs, although practical, was less reliable than either the FLACC scale or the MBPS. The results of this study demonstrated that the FLACC scale may be best suited for procedural pain assessment.
Putting the flow in flowsheets

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Keywords
Documentation, workflow, improvement

Background
Nursing documentation is essential for good clinical communication. The introduction of the electronic medical record (EMR) transformed the way nurses document in terms of processes and content. Routine review of the nursing documentation guideline provided a catalyst to explore poor shift required documentation compliance.

Aim
Improve shift required documentation by 30% across the inpatient population.

Method
The issue of poor compliance required further investigation. A working group of bedside nurses used a root cause analysis approach that revealed compliance was a symptom of bigger problems.

Using the Institute for Healthcare Improvement (IHI) Model for Improvement framework, the key change concepts were identified; eliminating waste and workflow improvements. Ward areas were invited to design and test changes.

Results
Nursing teams representative of ward expertise within management, education and clinical care were facilitated by the Nursing innovation and EMR consultants.

Mapping current EMR workflows supported the identification of waste in their documentation processes.

Together teams designed a new documentation workflow which addressed the waste and incorporated the new applications in the recent EMR upgrade.

The changes were tested using Plan, Do, Study, Act (PDSA) cycles. Throughout each cycle documentation compliance and nurse satisfaction were measured to determine if the change was an improvement. Although results were positive in the first PDSA, teams agreed further improvements were possible. A second PDSA cycle demonstrated additional improvements in both compliance and satisfaction.

Conclusion
The teams agreed the documentation change was an improvement and recommended it be adopted across inpatient areas.

Critical to the success of improvement is team engagement and participation. With those affected by the change leading the change there is a shared motivation for innovation.
Recovery Limbo: Why are we waiting

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Keywords
Recovery Clinical Indicators

Background
Clinical indicators (CI) were introduced by the Australian Council on Healthcare Standards to measure the incidence of defined clinical events in a recovery room setting. Indicator data is documented in the Electronic Medical Record (EMR) by Recovery Nurses and is a valuable tool for quality assurance. The focus of this study was CI Unplanned stay >2hrs in Recovery for medical reasons.

Aim
To evaluate patient characteristics commonly associated with 'unplanned stay >2hrs for medical reasons' in Recovery.

Method
Data regarding ‘unplanned stay >2 hrs for medical reasons’ was extracted from the EMR between January - December 2018. Data was analysed using descriptive statistics.

Results
323 patients were included in the study. Patients admitted under an Orthopaedic (24%, n=76) or Paediatric Surgery (23%, n=72) bed card were more likely experience a ‘unplanned stays of >2 hours for medical reasons’. Patients <2 years represented 30% (n=97) of unplanned stays. The occurrence of unplanned stays was increased on a Tuesday (22%, n=72) and during the Month of July (12%, n=38). Majority of patients had surgery times of less than <1 hour (47%, n=151) and 26% (n=87) arrived in recovery with a temperature <36°, almost directly related to short surgical times.

Conclusion
The results showed that the most common characteristics of patients staying >2hours in recovery were predominantly under 2 years of age, had orthopaedic surgery, had surgical times of <1hour and required active warming in recovery. Future recommendations include a CI committee to utilise this data to work towards lowering prolonged unplanned stays in recovery and improving CI outcomes.
Sham feeding promotes oral feeding success in long-gap oesophageal atresia.

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Keywords
Sham feeding, traction suture techniques, long-gap oesophageal atresia

Background
Sham feeding (SF) and staged repair using traction suture techniques (TST) were both introduced to the management of long-gap oesophageal atresia (LGOA) at The Royal Children’s Hospital in January 2012. Previous studies report SF to reduce time to full oral feeding (FOF) post-definitive repair.

Aim
The study objective was to investigate the impact of sham feeding infants with unrepaired LGOA on feeding outcomes.

Method
Patients admitted 2000-2018 with LGOA were identified from the Nate Myers OA Database. Patients were grouped into two epochs: Group 1 (2000-2011, no SF, no TST) and Group 2 (2012-2018, all offered SF, some TST). Demographics and time to FOF were compared between groups. Parametric data (mean, SD) were analysed with two sample t-test, and non-parametric data (median, IQR) with Mann Whitney test; p<0.05 significant. Ethics approval was obtained.

Results
31 LGOA patients, Group 1, n=13; Group 2, n=18. Groups did not differ in gestation (p=0.63), birthweight (p=0.91) or time to definitive repair (p=0.85). Compared with Group 1, FOF was significantly reduced in those 12 patients with successful SF (median FOF 730 days, IQR 125-1100 vs median FOF 75 days IQR 56-227; p=0.03). Small sample size precluded meaningful subgroup analyses of successful vs unsuccessful SF patients.

Conclusion
In LGOA, successful SF improves time to FOF post definitive repair. Further, we report success with SF in patients undergoing staged repair with TST, including following traction suture placement. To our knowledge, this is the first report of SF in LGOA patients during the period between traction suture placement and definitive repair.
Spiritual care in paediatric palliative care: A systematic review

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Keywords
spiritual care, paediatrics

Background
Paediatric palliative care (PPC) is an effective approach to help children and their families deal with life-limiting conditions. PPC encompasses holistic care, including spirituality, yet little is known about how nurses provide spiritual care.

Aim
To identify, evaluate and synthesise qualitative evidence exploring how nurses provide spiritual care in PPC.

Method
A systematic search for qualitative studies conducted during the last 25 years was undertaken in electronic databases. All studies meeting the inclusion criteria were assessed by at least two independent reviewers for methodological quality using a standardised critical appraisal tool from the Joanna Briggs Institute Qualitative Assessment and Review Instrument. Data were extracted from the papers using a standardised data extraction tool and findings categorised based on similarity in meaning and then subjected to a meta-synthesis.

Results
Fifteen studies were included and three synthesised statements were generated from seven categories of findings. Nurses provided spiritual care by engaging in therapeutic communication with the child and family, strengthening the relationship between the child and family and facilitating religious practices of the child and family. Most studies did not specifically focus on spiritual care, yet the findings were implicit when related to the definition of spiritual care. The findings were dominated by studies conducted during end-of-life care in neonatal and paediatric intensive care settings.

Conclusion
These findings inform nurses’ practice in PPC and provide a basis for integration of spirituality concepts into nursing curricula. More research specifically examining nurses’ practice of spiritual care for children is needed, including studies accounting for different cultural backgrounds.
Striving for Zero - prevention of CLABSIs in our tertiary paediatric home PN population

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Keywords
CLABSI, CVAD, Home Parenteral Nutrition

Background
Central venous access devices (CVADs) are essential for safe administration of home parental nutrition (HPN). As loss of CVAD sites is potentially fatal, expert care to prevent contamination and damage is essential. Recent guidelines from the European Society of Gastroenterology Hepatology and Nutrition (ESPGHAN, 2018) report HPN central line associated blood stream infection (CLABSI) rates range 0.34-3.94/1000 line days.

Aim
To assess outcomes for CVAD in the HPN population at our tertiary paediatric institution. Focussing on CLABSI rates, additionally demographics (underlying conditions, indwelling medical devices, stomas, HPN administration practices, CVAD care).

Method
A retrospective review of HPN patients between 1st January 2018 and 1st January 2019. Inclusion criteria: patients receiving ongoing HPN, patients discharged on HPN (from day of discharge), and those that ceased HPN during the audit (up to the day of ceasing). Episodes of lab confirmed positive blood cultures assessed against VICNISS (2019) CLABSI criteria.

Results
Total of 14 patients (male= 8) aged 2-20 years old were included. Half had Short gut syndrome secondary to surgical resection (n=7); remaining had intestinal failure of different aetiology. Total number line days = 3966. The CLABSI rate was 0.5/1000 line days.

Conclusion
The HPN CLABSI rate of 0.5/1000 line days represents the lower end of ESPGHAN rate and lowest documented in our institution. A current audit continues January 2019-January 2020; the last reported CLABSI in our HPN community was 10 months ago. Further research, including ongoing review of practice, new guidelines, use of products and education techniques for better patient safety is in place.
Telephone triage in paediatric oncology: exploring the nurse’s experience of working with a new standardised decision-support tool.

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Keywords
Oncology, telephone triage,

Background
The RCH Day Cancer Care introduced a standardised telephone triage and advice (TTA) service in 2018 to support remote symptom-monitoring for patients with cancer and their families at home. This involved adapting an international tool to the local context, to support nurse-led decision making.

Aim
To describe the experience of using a decision-support tool in paediatric oncology TTA and how it influences the nursing role.

Method
Nurses who currently deliver the TTA service provided feedback through a semi-structured interview. Open-ended questions included: Tell me about your experience of working with the tool, what have been the advantages/disadvantages of using the tool, and how has it influenced your decision-making? Nurses were asked to provide clinical examples to obtain richer and detailed experiences. The interview was recorded and analysed for themes/topics.

Results
Themes elicited included offering a structured approach whereby “families are getting the same answers” (providing a consistent message), a prompt to guide the nurse through the conversation which “keeps you on track” (providing a consistent assessment) and how the tool promotes self-assurance in your decision-making which acts “like a safety-net” (promoting confidence). There was consensus that it did not replace expert opinion but guides nurses with a high level of knowledge and expertise in paediatric oncology and understanding of individual patients and their families.

Conclusion
The TTA tool strengthened decision-making and provided consistency of the assessment and message, but should be a guide for use only by experienced paediatric oncology nurses, ideally those with a good understanding of their local patient cohort.
The NP Pocket Guide: How smart!

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Keywords
decision support, technology

Background
Recently we have seen the proliferation of memory and decision support tools in healthcare. However, the decision support needs of the emergency nurse practitioner team were unique. This gave rise to the NP Pocket Guide, which was a series of mnemonics, flow charts, images and other resources aimed at providing a clinically relevant and useful resource for NPs.

Aim
The aim of this project was to develop a smart device application to make the paper-based NP pocket guide accessible to a broader range of clinicians and ensure that it could be more easily updated.

Method
A Cas Kids grant supported the development of a smart device application to transfer, update and add to the resources of the Emergency NP Guide. Over eight months the NP team worked closely with the Creative Studio application development team to create an interface and modify the content for this format.

Results
The Emergency NP Guide app was released in October 2018 and made available for android and Apple devices. In the first month after release it was the most frequently downloaded medical application and has received a 5 star rating in both formats. Organisations such as Advanced Paediatric Life Support Australia and 'Don't Forget the Bubbles' have willingly promoted this application to their audiences. This presentation will demonstrate the app and explore the impact of development and release of this application on the NP team.

Conclusion
The Emergency NP Guide has been widely accepted and provides a contemporary resource for clinicians caring for children in the emergency department.
Using Your Gut to Stop the March

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Keywords
Eczema, probiotics

Background
Atopic dermatitis (AD) is a common condition in children. The evidence on the use of probiotics in preventing AD is contradictory.

Aim
A systematic review was conducted to determine whether probiotic supplementation during pregnancy and/or breastfeeding and/or direct infant supplementation prevents AD in children.

Method
The review was conducted following the PRISMA guidelines and undertaken from the August 23rd to October 15th 2018 using Ovid Medline, Embase, Pubmed and Cochrane. The studies included consisted of children aged 0-18 years whom were assessed to have AD and probiotics were administered to pregnant mothers and/or breastfeeding mothers and/or directly to the infants. The primary outcome measured was the onset of AD. The study designs included in the review were randomized controlled trials (RCTs), clinical trials and cohort studies.

Results
The literature search yielded a total of 1,098 articles. After applying eligibility criteria, 22 articles were included. Supplementation of Lactobacillus rhamnosus HN001 to mothers and infants appeared to have significant results in reducing the risk of AD from birth to 6 years of age. Two additional studies using Lactobacillus rhamnosus GG, Bifidobacterium lactis Bb-12 and Lactobacillus acidophilus La-5 supplementation to mothers found a significant reduction in the incidence of AD. Moreover, there are other studies that supplemented with various probiotic strains including mixed that showed significant results.

Conclusion
Some probiotic strains may influence reducing the risk of atopic dermatitis in children. Probiotic supplementation is best administered during pre and post-natal periods. However, high-quality trials are needed to determine specific probiotic strains and the best method of administration.
Validating current positive predictive values (PPV) in peanut allergy

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Keywords
Peanut allergy, skin prick test, Specific IgE

Background
Previous studies have generated 95% PPV for peanut specific IgE (sIgE) (=15 kUA/L) and skin prick test (SPT) (= 8 mm) that are highly suggestive of peanut allergy. However, one of the studies only studied 1 year old’s and another used a different PPV for the SPT.

Aim
This study aims to validate the 95% PPV of peanut sIgE and SPT commonly used in clinical practice.

Method
Children age 1-10 years underwent a screening double blind placebo-controlled food challenge (DBPCFC) as part of a multi-centre peanut oral immunotherapy trial (PPOIT-003). Peanut sIgE and SPT values were obtained. PPV and sensitivity values were calculated for SPT and sIgE cut-offs, ranging from 3-15 mm, and 0.2-30 kUA/L, respectively.

Results
232 children completed the DBPCFC. Of those, 22 children (10%) passed both parts (no reactions), 204 children (88%) failed (reacted to peanut but not placebo), and 6 children (2%) had an inconclusive challenge (reacted to both peanut and placebo). Only children that passed or failed the DBPCFC were included in the analyses (n=226).

Results obtained from our study showed that the PPV is 95.6% for a cut-off of 9 mm for SPT and the PPV is 93.6% for a cut-off of 7 kUA/L for sIgE.

Conclusion
In children aged 1-10 years, using a SPT cut-off of = 9 mm would reliably predict the likelihood of peanut allergy. A similar threshold level for peanut sIgE was not able to be replicated. Therefore, it is plausible that SPT results may be more reliable to assess the likelihood of peanut allergy.