

Australian College of Neonatal Nurses Inc.



25th Annual Conference



18 to 20 October, 2017

Kingfisher Resort, Fraser Island

Delegate information

Registration

The registration desk is located at the conference venue in the lobby area.

Opening hours

Wednesday – 12 to 5.30pm; Thursday and Friday – 7am to 4.30pm.

Venue

All conference and pre-conference meetings will be held at the Kingfisher Resort, Fraser Island.

Social program

The Welcome Reception will be held at the conference venue, 5.30 to 7.30pm.

The two dinner sessions on Thursday will be followed by a buffet dinner at the venue, 5.15 to 8.30pm.

The Silver Celebration Gala Dinner will be at the venue on Friday, 7.30 to 11.30pm.

Exhibitors

The trade exhibitors will be located in the conference venue exhibition space, near the plenary room. Please visit the exhibits as trade sponsorship forms an important part of the conference.

Program

The speakers, topics and times as shown are correct at time of printing. In the event of unforeseen circumstances the organisers reserve the right to alter the program or substitute speakers.

Catering

Morning and afternoon teas and lunch are included in the registration.

Liability

The ACNN 2017 Annual Conference does not include provisions for the insurance of participants against personal injuries, sickness, theft, and property damage. Neither the ACNN Conference Committee, nor its sponsors, assumes any responsibility for loss, theft, injury or damage to persons or belongings.

Conference Secretariat

Nikki Abercrombie CEM from Abercrombie Management. M: 0418 283 397



Welcome from the conference chair



It gives me great pleasure to welcome you to the 25th National Conference of the Australian College of Neonatal Nurses. This year we are in one of Queensland's glorious locations, world heritage-listed Fraser Island, located along the south-eastern coast of the state. Fraser Island is the world's largest sand island, stretching over 120km. It offers panoramic viewpoints, the Cathedrals, a cliff famous for sculpted ribbons of coloured sand and an ecotourism destination, with beaches and swimming sites of freshwater lakes. The Kingfisher Bay Resort, in a remarkable natural and tranquil region, sets the scene for a three-day exchange of knowledge and expert opinion – supported by a relaxed, friendly and enjoyable social program.

This year's conference is an occasion to celebrate as the peak national professional body for neonatal nurses has reached its 25th anniversary. It is very appropriate that the conference theme is *Shaping neonatal care, from past to future* as we reflect on the foundations laid over 25 years of neonatal nursing care, while also working towards enhancing care in the future. The programme encompasses diverse topics in neonatal care and specialist roles. Importantly, we are joined by many of the past ACNN presidents who played an integral role in establishing the national neonatal nursing professional body and in leading us to the success we are today. In addition, we are joined by international speakers from the USA and Canada, and Australian invited speakers sharing their expertise. We hope you will use the occasion to listen to and participate in the formal presentations, special interest groups and social networking.

The conference also offers a great social line-up and networking opportunities, starting with the Welcome Reception on Wednesday evening with Sundowners and Bush Tucker in the Dingo Den. On Thursday evening, enjoy cuisine inspired from Fraser Island's indigenous Butchulla tribe at a buffet dinner blending seasonal, local produce, and fresh seafood. A highlight this year will undoubtedly be the conference dinner, a Silver Gala affair to celebrate the 25th anniversary of ACNN. This will be held on the Friday evening at the conclusion of the conference to finish with an enjoyable and memorable occasion of celebration. We thank Karen Pearse who has been instrumental in adding unique features to make this 25th conference a time to remember.

I would like to take this opportunity to thank our sponsors, exhibitors and everyone involved for their generous support for this event, especially the conference organising committee. It is through this commitment, support and dedication that the conference provides such an impressive event.

It is an exciting time here on Fraser Island, celebrating 25 years of ACNN, so we extend a warm welcome to enjoy the programme, take a break, learn and be inspired by your profession.

Jane Roxburgh

Conference chairperson, on behalf of the conference organising committee



I would also like to extend a warm welcome to all ACNN members, partners and our guests to the 25th Anniversary Conference of the Australian College of Neonatal Nurses. We have an exciting and stimulating program with both national and international speakers, and the most beautiful island venue, Fraser Island. In particular I would like to acknowledge the past presidents of ACNN, most of whom will be attending the conference.

This is also the first year that we have invited international speakers and I am delighted that Linda, Denise and Marcia have come from Canada and the USA to share their knowledge and experiences. I would also like to welcome and thank our medical colleagues for coming and hope they enjoy our conference. We were delighted by the number and quality of the abstracts submitted and I'm sure that you will enjoy the diversity of talks.

Please enjoy networking with old and new friends, take time to learn, share and especially enjoy some 'island time' with us all.

Karen Walker

ACNN President

Invited speakers



Professor Linda Johnston

PhD FEANS FAAN

Dean and Professor Lawrence S. Bloomberg Faculty of Nursing, University of Toronto

Linda is Visiting Professor at Soochow University, China and Honorary Professor at The University of Melbourne, University of Hong Kong, Queens University Belfast and Vanderbilt University. Between 2003 and 2008 Linda held the first Chair in Neonatal Nursing Research in Australia at the Royal Children's Hospital and The University of Melbourne. Her research

interests include understanding the long term physical, social and emotional outcomes for babies and families experiencing surgery in the neonatal period and the impact of global health initiatives in neonatal care. Her policy interests include the development of clinical academic career pathways and the advancement of research in the discipline of nursing.



Associate Professor Denise Harrison

Chair in Nursing Care of Children, Youth and their Families at the University of Ottawa and Children's Hospital of Eastern Ontario (CHEO)

Her research program "BSweet2Babies" focuses on improving pain management for sick and healthy babies and young children. Her research includes using knowledge generation, synthesis and translation, and includes using and studying innovative ways to move pain treatment knowledge into action.



Associate Professor Marsha Campbell-Yeo

School of Nursing, Dalhousie University, Halifax, Canada

Dr Campbell-Yeo is an assistant professor, certified neonatal nurse practitioner and clinician scientist with a cross appointment in the Department of Pediatrics, Division of Perinatal-Neonatal Medicine at the IWK Health Centre and the Department of Psychology and Neuroscience at Dalhousie. She holds grants examining maternal driven interventions to improve outcomes of medically at risk newborns specifically related to pain, stress and neurodevelopment.



Associate Professor Jeanie Cheong

Neonatal Paediatrician with expertise in neonatal neurology, neuroimaging and long term follow up

Jeanie is based at the Royal Women's Hospital and is the lead clinician in the Growth and Development clinic. She has several affiliations; as the medical/neurological Team Leader of the Victorian

Infant Brain studies group within Murdoch Children's, the associate convener of the Victorian Infant Collaborative Study group, and Associate Professor with the Department of Obstetrics & Gynaecology at the University of Melbourne.



Angela Ratsch

RN, RM. Nursing Director, Wide Bay Hospital and Health Service

Angela's interests include the intrauterine environment, Indigenous health and health literacy. Her PhD research examined the use of chewing tobacco by central Australian Aboriginal women on pregnancy outcomes.



Dr Kathryn Browning Carmo

BMED FRACP, NETS Senior Retrieval Consultant, Deputy State Director, Director of Clinical Training

Kath is the Deputy State Director of NETS NSW and a Senior Staff Specialist in Neonatology in the Grace Centre for Newborn

Intensive Care. Her passion is delivering equitable care to rural babies and children. She advocates for better pain control for babies and hopes to see a future where heel lances for newborns are eradicated. Kath is finalising her PhD looking at the feasibility and benefits of neonatal ultrasound in transport, examining the utility of adding ultrasound assessment to clinical care and management of haemodynamics prior to and post transport of the critically ill and/or injured newborn.

Dr Paul Craven

Director of Newborn Services at John Hunter Children's Hospital in Newcastle NSW

Paul commenced his medical career in London as a paediatric neurologist. He came to Australia and took a 1-year break to work for the NSW Neonatal And Paediatric Emergency Transport Service then commenced neonatal training in Sydney. In 2004 he moved to Newcastle where he has followed his passion of medical education and medical leadership. He has been pivotal in the development of the neonatal intravenous fluid guidelines, 'between the flags' neonatal chart, the neonatal 'sepsis kills' chart and the NSW outreach program teaching neonatal resuscitation.



PROGRAMME - WEDNESDAY 18 OCTOBER

REGISTRATION FROM 1400	
1500	WELCOME & WELCOME TO COUNTRY <i>Associate Professor Karen Walker, ACNN President and Ranger Jay</i>
1510	AWARDS CEREMONY: Dr Linda Ng, Acting Professional Officer <ul style="list-style-type: none"> • Parker Healthcare & ACNN Scholarships • Neonatal Nurse Excellence Awards • Mark New Award
1530	Laying the foundations: reflecting on 25 years of neonatal nursing in Australia <i>A/Professor Kaye Spence AM (INAUGURAL PRESIDENT 1992-1994)</i>
1550	Normalising the abnormal: no room for complacency – Patricia Bromley
1600	Neonatal cardiac intensive care nursing – 25 years of nursing neonates with congenital heart disease – novice to Nurse Practitioner – Glenda Fleming
1610	“Rather, ten times, die in the surf, heralding the way to a new world, than stand idly on the shore”: the state of nursing leadership - Professor Linda Johnston
1650	Capturing the magic of a World Heritage Site – Mr Peter Meyers
1730 - 1930	WELCOME RECEPTION: SUNDOWNERS AND BUSH TUCKER IN THE DINGO DEN

We thank our sponsors and exhibitors

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Exhibitors



Laying the foundations: reflecting on 25 years of neonatal nursing in Australia

Kaye Spence AM

Inaugural President 1992 – 1994

Reflection is a powerful tool to enable us to see the building blocks that helped us get to where we are today. For neonatal nursing there have been so many people who have contributed to the development of the profession. Many of these influential persons have left a lasting impression on various members of the profession of neonatal nursing. Often it is the unassuming individuals who strive in their personal achievements and who have contributed to the development of the profession.

These individuals coupled with the changes that have occurred in neonatal care over the decades form our history. I believe we need to keep, acknowledge and enshrine our history for our future generations. Speaking to some of our newer nurses about their goals and aspirations for neonatal nursing has inspired me to ensure they know the history and why we work as we do today.

For this presentation I have chosen to reflect on the past 25 years of neonatal nursing and neonatal care as a memoir. Having lived through and contributed to much of the history has had an impact on where I believe we are today and where we are heading into the future. It is hard to identify everyone and each of us have different experiences and people who have contributed to our histories. I apologise for any omissions that are important to others as I take you on my journey.

Normalising the abnormal: no room for complacency

Bromley P

University of Tasmania, Hobart, Australia

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This presentation is a personal narrative of my neonatal experiences over the past 30 years. It will be a pictorial discussion of the changes in neonatal nursing practice, to which I have been witness. I will discuss sentinel moments in my career where I thought, “there must be a better way than this”, and in some small way I was part of the groundswell that changed practice.

Moments like leaving ‘non-viable’ babies to die, naked in a cot covered with a green drape, by the sluice in the pan-room, to contemporary palliative care; the belief that “babies do not feel pain” and therefore it was quite reasonable to undertake a thoracotomy and ligation of PDA with nothing more than a muscle relaxant “to stop the baby moving”, to gestation-appropriate pain-relieving practices; witnessing CPAP pressure injuries such as those resulting in the total destruction of the nasal septum, to age and size specific CPAP nasal-prongs and masks; when there were 24/7 fluorescent lights and *tripleM* blasting from the radio in the nursery, babies lying flat supine, naked on mattresses, to developmentally supportive care; from parents ‘visiting times’, to family integrated care.

These ‘norms’ were questioned, and as a result, practices changed. If there is one piece of advice I would give to neonatal nurses, be mindful that we are not normalizing the abnormal. Do not become complacent. If you are thinking “there must be a better way”, there probably is, it just hasn’t been thought of yet ... by you.

Neonatal cardiac intensive care nursing – 25 years of nursing neonates with congenital heart disease - novice to Nurse Practitioner

Fleming G

The Children's Hospital at Westmead, Sydney

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The speciality of neonatal cardiac intensive care has evolved exponentially over the last twenty-five years, with increasing survival and surgical procedures on more and more preterm babies. In parallel with this, neonatal nursing expertise in this specialised field has also developed as an integral component of care and outcomes. The complexity of surgical procedures for neonates has resulted in infants with congenital heart disease requiring medium to long-term inpatient admissions and often multiple staging surgical and interventional procedures. Complex congenital heart disease is a lifelong condition and in some cases life limiting.

In 2016 a Nurse Practitioner in paediatric cardiothoracic care was funded to provide the integration of neonatal and paediatric care, working across both NICU and PICU and into the wards. This novel position is another extension of advanced nursing practice and is an integral position which has helped fill a gap to ensure the optimal outcomes for our babies with congenital heart disease and their families. The importance of specialised cardiac nurses who provide continuity of care both in the inpatient setting and ongoing outpatient surveillance from the neonate and over the life of the child is significant. This presentation will discuss the evolution of this unique advanced practice role.

“Rather, ten times, die in the surf, heralding the way to a new world, than stand idly on the shore”: the state of nursing leadership

Professor Linda Johnston

Historically, curricula in nursing education, and the regulators of the profession, have articulated required competencies in the domain of ‘leadership’ expected of new graduates, and to a lesser extent, those with a graduate degree (at Masters and Doctoral level). The last decade has seen an apparently exponential increase in the number of ‘leadership training’ opportunities specifically designed for nurses, offered by professional associations, education institutions, clinical organisations and for-profit businesses. Is the profession currently lacking in individuals with leadership capacity and capability that warrants this focus on formal training? Have education programs failed to fulfill the requirement to produce graduates with the attributes of leadership? What type of leadership skills are necessary for the profession, and how should they be developed such that they meet the needs of patients, families, and the profession and health care system as a whole?

Professor Linda Johnston is Dean of the Lawrence S Bloomberg Faculty of Nursing at the University of Toronto. She is Visiting Professor at Soochow University, China and Honorary Professor at The University of Melbourne, University of Hong Kong, Queens University Belfast and Vanderbilt University. She is a Fellow of the American Academy of Nursing and the European Academy of Nursing Science. Between 2003 and 2008 Linda held the first Chair in Neonatal Nursing Research in Australia at the Royal Children’s Hospital and The University of Melbourne. Her research interests include understanding the long term physical, social and emotional outcomes for babies and families experiencing surgery in the neonatal period and the impact of global health initiatives in neonatal care. Her policy interests include the development of clinical academic career pathways and the advancement of research in the discipline of nursing.



Shaping neonatal care

From past to future

THURSDAY 19 OCTOBER

0700 - 0755	REGISTRATION AND CONTINENTAL BREAKFAST IN EXHIBITION AREA
0800 - 0930	CHAIR: VICKI CARSON (PAST PRESIDENT 2002-2004) & CHERYL NORRIS (PAST PRESIDENT 2006-2008)
0800	The power of mums – maternal led interventions to reduce neonatal pain – A/Professor Marsha Campbell-Yeo
0845	Cultural competency and quality of care provided to migrants/refugee families experiencing neonatal intensive care services (NICU) – Suza Trajkovski
0857	Fathers needs in a surgical NICU: reassuring the ‘other’ parent – Priya Govindaswamy
0909	Neonatal Nurse Navigator – navigating the neonatal journey - Anne Dawbney
0921	Family Integrated Care – putting parents at the centre of the care team – Joanne Sheils
0924	Scent bonding using fabric hearts – Carmel Fish
0927	Challenges and strategies for assisting cardiac infants in the neonatal intensive care unit to breastfeed – a case study – <i>Gabrielle Kerlake</i>
0930 - 1000	MORNING TEA, EXHIBITS, POSTERS
1000 - 1145	CHAIR: DIANA JOHANSSON (PAST PRESIDENT 1998-1999) & CAROL HUA
1000	Knowledge translation in neonatal pain research – A/Professor Denise Harrison (PAST PRESIDENT 2004-2006)
1039	Enough is enough: noise in the neonatal unit – translating evidence into practice – Kobi Best
1051	Collaborating with industry to facilitate evidence based practice for neonatal skin care – Bronwyn Jones
1103	Equipping graduate neonatal nurses to shape neonatal care through embedding evidence-based practice activities into the NCCU graduate program – Alison Michaels
1115	Education program delivers substantial increases in early expression of breast milk for mothers of preterm infants – Louise Goodchild
1127	Simulation, does it really make a difference to practice outcomes? – A/Professor Fiona Bogossian
1139	Taking simulation into the NCCU and beyond: working together to shape neonatal care - Alison Michaels
1142	Improving skin to skin care (SSC) in the surgical NICU: sustaining a culture of systematic support – Lois Aguanta
1145 - 1230	LUNCH, EXHIBITS, POSTERS
1230 - 1420	CHAIR: DENISE KINROSS (PAST PRESIDENT 2013-2015) & LINDA HACKETT
1230	Neonatal ultrasound use on transport – Dr Kath Carmo

1300	What do back transfers really cost? – <i>Donna Hovey</i>	
1312	Evacuating a special care baby unit – plans into practice (a New Zealand experience) – <i>Kristin Hughes</i>	
1324	Keeping the nurse in Nurse Practitioner – <i>Amy Barker</i>	
1336	Changing models of care in the NICU – <i>The Good, The Bad & The Way Forward</i> – <i>Emma Carey</i>	
1348	Developing a neonatal nursing workforce – <i>Meshell Curtis</i>	
1351	Minimising interventions for extremely low gestational age neonates: a nursing perspective of a local CPI project at Liverpool Hospital – <i>Nicolette Giannoutsos</i>	
1354	Quality and safety in health care - how can we improve? – <i>Dr Paul Craven</i>	
POSTERS AND SPECIAL INTEREST GROUP (SIG) MEETINGS		
Room 1: 2.30 – 5.00pm Leadership SIG meeting	Room 2: 2.30 – 3.30pm Low Resource Countries SIG meeting	Room 2: 3.30 – 5.00pm Education SIG
Open to all delegates	Open to all delegates	Open to all delegates
EVENING SESSION AND BUFFET DINNER*		
1730	Chair: Melissah Burnett (PAST PRESIDENT 2012-2013) & LOIS FITZSIMONS #Evening session presentation 1: Reducing morbidity and mortality in premature infants with probiotics and donor milk. The one stop shop? <i>Dr Pieter Koorts</i>	
1830	Evening session presentation 2: New guidelines in neonatal resuscitation - <i>Dr Paul Craven</i>	
1900	Evening session presentation 3: Making the most of neonatal neuroimaging in clinical practice – <i>A/Professor Jeanie Cheong</i>	
1930	Ticketed Buffet Dinner*	

Evening session is open to all full and Thursday day registrations

*Buffet dinner (inclusive of limited non-alcoholic drinks)

#Industry sponsored session.

The power of mums – maternal led interventions to reduce neonatal pain

A/Professor Marsha Campbell-Yeo

Involvement of parents in newborn pain management is of increased interest in both research and clinical settings. From an evolutionary view, the mother is the optimal source of physical and psychological support for the infant, both as a fetus and after birth. Hospital care and medical interventions are sources of separation and stress, leading to a diminished capacity for the infant to endure painful procedures. After decades of healthcare providers not recognizing newborn infants' capacity to feel pain and the associated adverse outcomes, most surgical and end-of-life pain is now prevented and treated with pharmacological methods. However, the drugs used are often not effective for the most commonly performed painful procedures, and their repeated and frequent use may have potential short and long-term adverse effects. Recent research has thus focused on finding non-pharmacological interventions or sweet tasting solutions as a substitute to drugs, or as a means to decrease the drug-doses needed for optimal analgesia associated with procedural pain. Several of these interventions involve parents, e.g. skin-to-skin care, breastfeeding, or facilitated tucking. Despite this knowledge, clinicians often struggle with incorporating these strategies into everyday practice. Moreover, most parents and many providers remain unaware of the powerful benefits of integrating parents as active participants in newborn pain management.

Dr Marsha Campbell-Yeo, a certified neonatal nurse practitioner, is an Associate Professor at the School of Nursing, Dalhousie University and a Clinician Scientist at the IWK Health Centre (cross appointment in the Department of Pediatrics and Psychology & Neuroscience) and a Canadian Institute of Health Research (CIHR) funded New Investigator. Her research lab, primarily funded by the CIHR and Canadian Foundation of Innovation (CFI), aptly named "Mechanisms, Outcomes, and Mobilization of maternally-Led Interventions for Newborn Care" (MOM-LINC), examines the effectiveness of maternal-led interventions to improve outcomes of at-risk infants related to stress, pain and neurodevelopment as well as improving uptake of pain relieving interventions by both parents and health care providers through innovative strategies and e-Health technology.

Cultural competency and quality of care provided to migrants/refugee families experiencing neonatal intensive care services (NICU)

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Background: The experience of having an infant admitted to NICU is potentially more difficult for parents from migrant and refugee backgrounds for whom the health system is foreign and poor communication with health professionals may hinder parents' understanding of their infant's condition. Yet, internationally, research addressing this remains limited. This study examined the experiences of migrant and refugee women and men / families who had an infant in the NICU. Primarily parents are from a middle-eastern or Vietnamese background.

Method: This study was conducted in a large tertiary neonatal unit in Sydney, Australia. This study used a qualitative participatory approach as it is an effective way of gathering rich data about individual experiences and practices and the meanings individuals attribute to these experiences.

Results: Data were analysed using thematic analysis. Preliminary findings from early interviews indicate parents are confused about their role in the NICU and where to get information. Most concerning is the high level of fear they have for the health of their baby and their understandings of disability.

Conclusions: The findings of this study will have implications for the community (more specifically neonates and their families) by highlighting the cultural needs of families experiencing a neonatal intensive care unit admission. Findings will assist to develop the skills health care professional require to deliver culturally competent care and may inform practice and policy development.

Fathers' needs in a surgical NICU: reassuring the 'other' parent

Govindaswamy P^{1, 3}, Laing S⁵, Waters D², Walker K^{1, 2, 3}, Spence K^{1, 4}, ⁵Badawi N^{1, 3}

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Background: Fathers of infants admitted to NICU play an important role and have individual needs that are often not recognised. While there is considerable evidence regarding mothers' needs in the NICU, information about fathers is limited. This study identified the needs of fathers in a surgical newborn intensive care unit (NICU).

Methods: Fifty-nine fathers of infants admitted for surgery between February 2014 and September 2015 were enrolled. Within 72 hours of admission and at discharge, fathers completed the Neonatal Family Needs Inventory comprising 56 items in five subscales: Assurance, Support, Information, Proximity, and Comfort, using a 4-point Likert scale (1 = not important, 4 = very important); and whether these needs were met. Forty-four health professionals provided matched data.

Results: Responses from 48 fathers showed Assurance was the most important subscale (M 3.8, SD .26). Having questions answered honestly (M 3.9, SD .20) and knowing staff provide comfort to their infant (M 3.94, SD .24) were most important. More than 91% indicated their ten most important needs were met, with no significant changes at discharge. Clergical visits (M 2.08, SD 1.21) were least important. Health-care professionals correctly identified the most important needs of fathers, but under-rated their level of importance (Kappa <0.50).

Conclusion: Our results show that fathers' need for reassurance is highly important. Traditionally seen as the 'other' parent, fathers are a vulnerable group at-risk of being 'forgotten'. It is important that health-care professionals consider the needs of fathers within the context of family-centred care.

Neonatal Nurse Navigator – navigating the neonatal journey

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Background: The Nurse Navigator program is a referral service which was designed to alleviate the stress on hospitals by navigating the patient journey from admission to discharge. The purpose is to keep hospitals as an acute setting and educate and support the patient and their family to remain at home, attending the hospital as an outpatient. Neonatal Navigators manage babies with complex needs, with the journey for some families commencing in the Maternal Foetal Medicine Unit and ending in the home. The long-term goal is to have 400 Nurse Navigators across Queensland by 2020.

Method: Fifty Nurse Navigators commenced across Queensland in February, 2016. The only Neonatal Navigator role for Queensland began taking referrals at Gold Coast University Hospital in May 2016. The criteria for enrolment into the service included chronicity, complexity, fragility and intensity of care.

Results: The total number of referrals to the service in 2016 was 53. Of these, 6 babies did not meet the criteria, 7 families declined the service, and 4 did not require assistance postnatally. A total of 4 babies required readmission < 28 days post discharge.

Conclusions: Positive feedback has been received from all families. Families are supported until 6 – 9 months corrected age. Referrals are made to community supports and Paediatric Navigators for infants with a lifelong illness early on. Good communication with families has resulted in less failure to attend at outpatient appointments.

Family integrated care – putting parents at the centre of the care team

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Background: the Royal Hospital for Women neonatal intensive care unit was the lead Australian site in a recent multinational family integrated care (FiCare) cluster randomised trial.

Method: Mothers of very preterm babies attended regular educational sessions, providing care for their babies for at least 8 hours daily, and participated actively in medical rounds.

Results: The trial demonstrated better weight gain, fewer adverse events, and at time of discharge parents had substantially less anxiety and stress than the controls. A modified model has become standard care in our unit since 2016. With greater flexibility in individualised parental educational sessions called the BEADS Program, participation in daily care and medical rounds, it resulted in a wider acceptance of parents as integral to the care team. A post-trial questionnaire given to the parents at RHW has shown improved confidence and skills and increased parental readiness for the transition from hospital to home. This would potential lead to a shorter length of stay for our families and more confident parenting skill development after discharged home

Conclusions: The FiCare model of care has been integrated into the everyday practice and culture of the Royal Hospital for Women. This is evidenced by the presence of parents presenting on ward rounds, the knowledge and confidence of parents, the increased amount of skin to skin care being performed by both mothers and fathers and the BEADS program coordinated by the social work team on a Monday afternoon in sharing knowledge and addressing questions regarding their babies clinical journey.

Scent bonding using fabric hearts

Fish C

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Background: Maternal anxiety, stress and separation from her baby add to the overall negativities of having a preterm or sick newborn. Research shows that the sense of smell is present in preterm babies, and that the scent of infants helps mothers bond with their baby and this may alleviate postnatal depression. The introduction of fabric hearts allow the sense of smell to continue to develop between mother and baby.

Method: Fabric hearts are sewn for the neonatal unit. As soon as possible after admission to the unit the mother is given a bag containing two hearts and a laminated poem that expresses love. One heart is placed on the baby and the other heart is placed on mum's chest, the hearts are then exchanged. A parent questionnaire was developed to evaluate the parent's response to the hearts project. The hospital ethics committee were consulted and stated that this project did not require HREC review.

Results: Between November 2015 and March 2016, 120 hearts were distributed to new mothers. Evaluations from staff and parents have all been positive. Twenty-six mothers were given surveys, with 100% response.

Conclusions: The parents love the hearts, with many commenting on the positive experience. Themes that emerged were comfort, closeness, attachment, smell, bonding and connection. "Knowing that this promotes bonding for both our baby and us as parents". This intervention has been adopted as a practice in the unit.

Challenges and strategies for assisting cardiac infants in the neonatal intensive care unit to breastfeed: a case study

Kerslake G, Mercieca H

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Background: Establishing breastfeeding for mothers and infants in the Neonatal Intensive Care Unit (NICU) can be a great challenge. When an infant has a cardiac anomaly and requires cardiac surgery, breastfeeding becomes an even greater challenge. Lactation specialists and neonatal nurses assist and support breastfeeding mothers and infants by using many different strategies, with a primary goal to helping more of these infants to be able to breastfeed when they are discharged.

Discussion: An infant that requires cardiac surgery will be discussed and challenges for this mother and her infant will be highlighted. These include: separation of mother and infant, low milk supply, low energy of the cardiac infant and long periods of being NBM. There will also be a focus on strategies used by lactation and nursing staff to assist the mother and infant to achieve breastfeeding. These include skin to skin cuddles, assistance with expressing and maintenance of milk supply, mouth care with expressed breast milk, non-nutritive sucking and providing accurate up to date breastfeeding information.

Conclusion: Spending time in a NICU and having cardiac surgery does not always prevent infants from breastfeeding on discharge, particularly when effective evidence based strategies are incorporated into their care.

Knowledge translation in neonatal pain research

A/Professor Denise Harrison

High quality evidence from randomized controlled trials and systematic reviews show that breastfeeding, skin-to-skin contact or small volumes of sweet solutions (sucrose or glucose) reduce pain in newborns during commonly performed painful procedures. Recommendations from national and international organizations include use of these strategies for heel lance, venepuncture, vaccinations and other painful procedures. However, this evidence has not been consistently translated into routine clinical practice in many settings. Studies show that this lack of use of evidence does not seem to be related to knowledge, as most clinicians are aware of the analgesic effects of these three strategies. This highlights the aptness of the quote, "The difference between what we know and what we don't know is often exceeded by the difference between what we know and what we do"(Unknown). This interactive presentation will begin by a brief summary of the current state of evidence supporting the three procedural pain management strategies, and then summarize knowledge translation (KT) strategies relating to improving neonatal pain which have been tried or are currently underway. The *Knowledge to Action* framework (Graham et al, 2006) will be used as a map to highlight KT efforts in this field.

Enough is enough: noise in the neonatal unit – translating evidence into practice

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Background: Despite long-standing recommendations for sound in neonatal environments, evidence from primary research studies throughout the world suggest that neonatal units are not meeting recommendations. The adverse effects of sustained and loud noise on preterm physiological parameters is well documented, with some evidence suggesting that long-term effects of suboptimal exposure are detrimental to growth and development.

Method: Sound meters were positioned inside 51 occupied incubators and open cots, and within the surrounding environment within each single-room of the neonatal unit over a 6-week period. A follow-up questionnaire was distributed to 126 nursing, medical and allied health staff to assess the level of knowledge regarding current guidelines, opinions of current sound exposure and implications on neonatal outcomes.

Results: All average sound equivalent levels (Leq) were higher than the recommended 45 dBA for both incubators and open cots. The Leq inside the incubator was higher than the surrounding environment for day (75 dBA vs. 68.85 dBA) and night (74.91 dBA vs. 68.24 dBA). Incubators were observed to have a higher total percentage of time above 45 dBA than open cots for both day (99.84% vs. 75.59%) and night (98.66% vs. 59.56%). Maximum sound levels (Lmax) peaked at 126.7 dBA inside the incubator and 124.7 dBA inside the open cot.

Conclusion: Sound levels in the neonatal unit are all higher than recommendations. The long-term sequelae of adverse sensory exposure on preterm neurodevelopment requires further investigation. Renewed attention on factors contributing to increased sound levels in the neonatal unit need to be addressed.

Collaborating with industry to facilitate evidence based practice for neonatal skin care

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Background: Neonatal skin injury is the fourth most common complication in neonatal care. Investigating and promoting best practice can be costly and time consuming. The aim of this collaboration was to bring Queensland neonatal clinical leaders together to provide professional insight into the latest research, practice patterns, consumer (parental) attitudes, trends and current beliefs. Prevention of skin injury and subsequent management is an area of high interest for a group of neonatal nurses in Queensland.

Method: An expression of interest was sent to the Queensland members of ACNN in April 2016. The first meeting was held in May 2016 and the group has met approximately every two months. Our industry partner facilitated communication and a meeting venue for the group. The group defined the terms of reference, agenda, prioritised the projects and set the goals for outputs in 2016.

Results: Within the first 12 months the group has developed two posters addressing product information for distribution by mid-2017; developed and distributed a survey regarding nappy rash prevention and management; put forward suggestions and subsequently been invited to contribute to the AWHONN neonatal skin care guideline update.

Conclusions: This initial collaboration with an industry partner has been driven and lead by clinical neonatal nurse leaders, resulting in outcomes. The financial sponsorship has facilitated the group in producing multiple outcomes related to gaps in knowledge, education and translation of best skin care practices for neonates without industry bias. Ongoing collaboration will facilitate the concern of medical adhesives and removal to reduce neonatal skin injuries.

Equipping graduate neonatal nurses to shape neonatal care through embedding evidence-based practice activities into the NCCU graduate program

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Background: Critical thinking, advanced clinical decision making and utilisation of evidence to guide clinical practice are key attributes of nurses in the provision of safe and clinically competent care. Evidence shows that despite inclusion of research curriculum in undergraduate nursing programs, a strong understanding of research or the ability to use it in practice does not translate. Evidence suggests that the implementation of evidence-based practice (EBP) education shows favourable results in improving utilisation of evidence to inform everyday clinical practice and EBP self-efficacy in non-graduate nursing cohorts.

Method: This project aimed to improve graduate nurses' evidence-based practice self-efficacy and was conducted over a six-month period in a tertiary neonatal critical care unit (NCCU) with a convenience sample of nine graduate nurses undertaking the NCCU graduate program. Practice change interventions included education sessions focussed on effective literature searching, clearly defining a clinical problem to formulate a clinical question, critical appraisal of evidence, a written literature review and a governing document review. The Self-Efficacy in Evidence-Based Practice Activities (SE-EBP) tool was utilised as the audit tool for the pre- and post-implementation audits.

Results: Preliminary analysis of results using the SE-EBP tool shows improvement across all areas of the SE-EBP tool between the pre- and post-implementation results.

Conclusions: The practice change interventions utilised in this project had positive results on the SE-EBP scores of graduate nurses and should be embedded into future graduate program content. Further research should investigate the same interventions on larger graduate cohorts across specialty areas.

Education program delivers substantial increases in early expression of breastmilk for mothers of preterm infants

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Background: There is strong evidence of the health and neurodevelopmental benefits that breastmilk confers to preterm infants. Yet, frequently, the clinical guidelines to support new mothers to establish breastmilk supply are not adhered to when they deliver prematurely. This creates a barrier to successful breastfeeding.

Method: To assess baseline compliance rates with clinical guidelines, we performed an audit of 20 women with infants born <34 weeks gestation, admitted to the neonatal unit. We then implemented a breastmilk information pack for mothers and an education program for staff. A follow-up audit was conducted to measure effectiveness of these interventions.

Results: Compliance to clinical guideline recommendations improved considerably, with a 55% increase in women expressing milk within 6 hours of delivery. Furthermore, a 40% increase in expressing within 6 hours, followed by expressing 8 to 12 times daily in the first 48 hours following preterm delivery.

Conclusions: This highly effective education program has resulted in clinical practice change. Information packs are now routinely given to all women at risk of delivering preterm and those with babies admitted for neonatal care.

Simulation, does it really make a difference to practice outcomes?

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Background: The last decade has seen significant investment and rapid uptake of simulation-based education. However, there has been limited attention to questions of transferability to practice, long term behaviour change and patient outcomes.

Method: A scoping review of the simulation literature was undertaken to determine practice outcomes in relation to the National Safety and Quality Health Service Standards (NSQHSS) - Australia (2011). To determine the extent to which simulation based education addresses contemporary patient safety priorities, we focused on studies that aligned with Kirkpatrick's Behavioural Change (transfer of learning from the simulation to the clinical context/situation), and Level 4: Results (improvements in patient outcomes and/or organisational change).

Results: A total of 15 international papers met the inclusion criteria. The studies aligned with four of the NSQHS Standards: 3. Preventing and controlling healthcare associated infections, 4. Medication safety, 6. Clinical handover and 9. Recognising and responding to clinical deterioration.

Conclusions: The lack of evidence from the Australian context suggests that the outcomes of simulation-based education in this region are not commensurate with the significant investment that has been made. However, the included studies provide a strong indication of the potential for simulation based education to have a significant impact on patient safety and, as a number of the studies demonstrated a long term impact of up to four years, is also testament to the value of this educational methodology.

Taking simulation into the NCCU and beyond: working together to shape neonatal care

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Background: The Neonatal Point Of Care (POC) Simulation program adopts a multifaceted inter-professional approach to address clinical, leadership, teamwork and process issues when caring for the deteriorating neonate. This program aims to scaffold concepts learnt through simulation training offered in Mater Education Practice Improvement Centre (MEPIC) and embed these in environments where clinicians would perform neonatal resuscitation events.

Method: Twenty neonatal POC simulations were held across a nine-month period. Scenarios were developed to encompass the most common situations requiring neonatal resuscitation. These sessions were delivered as short announced simulation events with a structured debrief to follow. The commencement of this program involved a unique strategic team approach with both medical and nursing co-faculty.

Results: Significant adaptations were applied throughout the journey of embedding this program. The inter-professional team engaged in working together to improve and innovate, with this resulting in enhanced engagement of private Visiting Medical Officers within the service. Preliminary data demonstrates increased clinician confidence across non-technical skills required to resuscitate a deteriorating neonate. Furthermore, several process and systems issues were identified and improved as a result of reviewing processes involved in POC simulations that were undertaken.

Conclusions: Successfully embedding the program into the clinical area saw improved engagement in simulation-based education. This program has allowed participants to identify process and communication issues inherent in the clinical environment and has energised these participants with the ability to be innovative in improving processes and communication to ensure the provision of low variability patient care.

Improving skin to skin care (SSC) in the surgical NICU: sustaining a culture of systematic support

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Background: Despite the known benefits of SSC within the NICU environment, limited research is available on the management of SSC practice for neonates who have experienced major surgery.

Aim: This research examines the current practice of SSC for pre and post-operative neonates within a single Surgical NICU. The study 1) explores nursing and medical staff confidence and practice of SSC benefits, 2) identifies enablers and barriers of SSC within the unit, and 3) assesses whether SSC was practiced as per the clinical guideline. By observing practice change within a project-based setting, the presentation aims to disseminate common issues and successes that arose when attempting to facilitate supportive SSC culture within the ward.

Method: This study was conducted in four phases: practice, education, intervention, and evaluation. Online surveys were distributed to staff and a cross-sectional audit of practices conducted before and after the intervention.

Results: Results showed increased confidence in providing SSC and that SSC was present within the ward, however the audit of documentation was not consistent. Results of the second online questionnaire were positive and barriers and enablers of SSC were identified.

Conclusions: By creating a culture of support and developing a sense of accountability in NICU staff, practice change can be sustained despite the contextual challenges present within the NICU environment. Proactively identifying and duplicating successful practice change is a vital factor needed to shape future neonatal care for the benefit of staff and patients alike.

Neonatal ultrasound use on transport

Dr Kath Carmo

Deputy State Director of NETS NSW

Senior Staff Specialist in Neonatology in the Grace Centre for Newborn Intensive Care

Kath has a passion for delivering equitable care to rural babies and children and her research is in the haemodynamic stability of the newborn in retrieval – can we improve survival and outcomes for those babies born critically unwell in rural locations?

Kath is finalising her PhD looking at the feasibility and benefits of neonatal ultrasound in transport. This study examined the utility of adding ultrasound assessment to clinical care and management of haemodynamics prior to and post transport of the critically ill and/or injured newborn.

What do back transfers really cost?

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Background: The Grantley Stable Neonatal Unit (GSNU) is a tertiary referral centre where neonates receive specialised care. As many families are not from the Brisbane region our priority is the safe and timely back transfer to regional centres. The impact of transfer delays includes ineffective utilisation of tertiary neonatal beds, state-wide cost inefficiencies and parental dissatisfaction.

Aim: To review the GSNU back transfer service, analyse those most affected by delays and consideration of service improvements.

Method: Retrospective data audit, utilising NeoData (neonatal database) and analysis of health care costs.

Results: From July 2015 to June 2016, 372 neonates were back transferred. Total bed delay equated to 761 days (\$2,487,709). Thirty-eight per cent (n=141) of families experienced greater than one day of delay (range 1-14). Central Queensland and Wide Bay regions were the most affected with 110 (29.5%) neonates being delayed a total of 299 (39%) days; 58% (n=172) due to aeromedical delay and 42% (n=127) regional bed unavailability.

Conclusions: This audit highlights that regional families cared for within GSNU experience significant back transfer delays with families from the Central QLD and Wide Bay regions being the most disadvantaged. The lengths of these delays are primarily as a result of medical flights being unavailable from Brisbane to the regional centres and beds being unavailable at the regional hospitals. To improve this service for families, focus now needs to be on expanding regional bed capacity and prioritising back transfers of neonates within the aeromedical services of Queensland.

Evacuating a special care baby unit – plans into practice: A New Zealand experience

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Background: Recent earthquakes and natural disasters in New Zealand necessitated a change in fire and evacuation training requirements at the Regional Hawkes Bay Hospital. Regular evacuation drills became a compulsory requirement for all units, challenging current evacuation procedures and staff preparedness. Initial analysis of current processes identified systemic inadequacies necessitating a comprehensive quality improvement project to facilitate safe execution of evacuations from SCBU.

Method: A detailed analysis of current processes was undertaken identifying problems with equipment, infrastructure and personnel. Complex planning was undertaken using a multi-level linear timeline to manage multiple stakeholder involvement. Preparation of staff, systems and equipment was achieved in line with the timeline through stakeholder engagement in education, consultation and communication strategies.

Results: SCBU successfully evacuated all babies including a ventilated simulator baby within 3 minutes. The safety of all babies, families and staff was maintained. Many equipment problems were highlighted as were problems with the emergency paging process, assistance rendered by other areas and suitability of the receiving evacuation point. A film of the event was made to aid in evaluation and to fulfil staff training needs.

Conclusions: Evacuating SCBU is an activity that can be done safely with detailed planning and regular practice. The training benefit delivered ultimately results in improved safety for babies in the nursery.

Keeping the nurse in Nurse Practitioner

Barker A

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I was lured to the journey of becoming a Nurse Practitioner by the capacity for increased autonomy in my practice. I adored my work as a neonatal nurse, yet desired a greater influence on the care of critically ill newborns and their families. However, now a Neonatal Nurse Practitioner, I am not working within a role that I had envisioned. The evolution of my vision of a Nurse Practitioner has changed vastly over time and has been influenced by the unavoidable blur between professional boundaries of the nursing and medical domains.

As a nurse with an advanced scope of practice I have found myself engaged in traditionally medical circumstances and expectations. On the outset of my journey, I accepted this change as the natural progression of my role. However, my final university assessment piece a viva voce, emphasized the importance of the essence of being a nurse as a Nurse Practitioner. My viva voce will be presented to highlight the unique insight and assessment of a nurse that enabled early detection of deterioration and diagnosis that prevented disease progression.

As a Nurse Practitioner my practice is different today than I ever imagined, but I am thrilled for the change because I am a Nurse (Practitioner) not a 'Noctor'.

Changing models of care in the NICU – *The Good, the Bad and the Way Forward*

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Background: I undertook a project looking at models of care in the NICU in an effort to provide an increase in supported learning opportunities within current resource levels, whilst optimising patient safety and providing excellent patient care. The project foundered with the second model not completing the trial period, the first model not being appropriately reviewed and staff not receiving feedback on either model.

Method: A review of the project was undertaken to determine where the weaknesses were, what insights were gained and why it did not reach completion. Personal reflection on project implementation, change management, people management and how my own leadership affected the project outcome.

Results: The trial and review process was hampered by illness, changes in management, inadequate feedback methods and a lack of engagement in the change process. There was no core team of stakeholders championing the change and available for support, guidance and feedback.

Conclusions: Elements of the project, particularly the first model trialled, provided useful information and evidence for change that could be utilised to reinvigorate the project and see it through to completion. Strong leadership of an engaged project team committed to change can see this project to completion and achievement of a NICU model of care that provides supported learning for staff whilst delivering safe, high quality, family centred care.

Developing a neonatal nursing workforce

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Background: Recruiting trained neonatal nurses to meet demand for adequate workforce leaves significant shortfalls in neonatal nursing numbers. To fill this gap the Grantley Stable Neonatal Unit (GSNU) has undertaken significant financial/professional investment to train and mentor nurses and midwives, including new graduates. This has been facilitated through the Queensland Health Transition Support Program (TSP) – Neonatal Nursing. The program combines self-directed modules, lectures, clinical and written assessments meeting articulation standards. For the delivery of quality service we strongly encourage all TSP students to continue onto postgraduate studies.

Aim: To review the success of the program by analysing completion, retention and articulation rates.

Method: Retrospective data audit, TSP database GSNU, 2012 to 2016.

Results: A total of 179 participants were audited: 76 (42.5%) completed to articulation, 30 (16.8%) are currently enrolled, 13 (7.2%) completed to Phase 3, 15 (8.4%) have deferred and 45 (25.1%) exited at various times. Of those who completed to articulation, 16/76 (21%) have taken up positions in other neonatal units. (Postgraduate data is being analysed).

Conclusions: Of concern is the 25% who exited the program prior to achieving any usable neonatal career milestones. Our priority now is to focus on recruitment techniques to lessen early career mismatch, consider providing undergraduate student exposure to the specialty, scrutinise and modify processes to lessen the financial burden of early exit of participants. It is critical for the profession to attract and retain the next generation of highly skilled registered nurses and midwives.

Minimising interventions for extremely low gestational age neonates: a nursing perspective of a local CPI project at Liverpool Hospital

Nicolette Giannoutsos

on behalf of all Ian Callander, Jacqueline Stack and all the staff at Liverpool NICU

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Background: The 'golden opportunity' clinical practice improvement (CPI) project was started at Liverpool hospital in 2014. This practise focuses on the management of extremely low gestational age neonates (ELGAN) within the first 72 hours of life.

Method: In order to continuously improve on this practice, monthly meetings are held whereby each episode is reflected upon by the neonatal team and changes made to the approach as needed. In this way the practice continues to be evolve with the aim of providing minimal intervention to the infant whilst maximising the expertise of the staff members and use of specific equipment

Results: The majority of ELGAN are now managed only on CPAP, compared to 50% previously. This practice has also enabled a dramatic decline in the use of umbilical catheters and administration of inotropes compared to previous practices. Although respiratory outcomes have remained unchanged, there has been a trend toward lower rates of death, major IVH, and NEC.

Conclusions: Liverpool NICU has been able to dramatically reduce the interventions given to ELGAN , improved short-term stability and outcomes with no detriments to the infants. Although there has been a trend across NSW/ACT toward reduction in interventions, the practice at Liverpool is dramatically different from the other hospitals. This presentation outlines the process of the Liverpool 'golden opportunity' CPI project from a practical nursing aspect with the aim of sharing our experiences.

Quality Health care systems

Dr Paul Craven

John Hunter Children's Hospital, NSW

It is widely recognised in healthcare that patients want to be kept safe and be involved in their care. Don Berwick, former President and Chief Executive Officer of the Institute for Healthcare Improvement summarized "What patients want" as:

- ▶ Don't kill me
- ▶ Don't harm me
- ▶ Don't do things that are unnecessary
- ▶ Relieve my pain – physical and emotional
- ▶ Do things that can help me
- ▶ Don't make me wait
- ▶ Don't make me feel helpless
- ▶ Share information

Despite these basic 'wants' of health care, 1 in 10 patients is harmed in the healthcare system worldwide, including unexpected death and permanent disability. Improving the quality of care we provide to our patients is imperative and individually we are involved in many clinical practice initiatives.

In this talk I will be concentrating on systemic improvement to the health care system, looking at experiences with one LHD, using tools and tactics to improve the quality of care and will present results of improvements. All tools presented will be easily generalizable to the healthcare system that we all work in.

Thursday evening dinner sessions

Reducing morbidity and mortality in premature infants with probiotics and donor milk. The one-stop shop?

Dr Peter Koorts

Dr Koorts is the current Director of Neonatology at the Grantley Stable Neonatal Unit at RBWH and have been working at RBWH for 10 years. He is the Medical Lead for NeoRESQ (Neonatal Retrieval Emergency Service South East Queensland) and the Medical Director of the RBWH Milk Bank, which will have its 5th birthday in November.



Neonatal resuscitation

Dr Paul Craven

Neonatal guidelines are updated by the International Liaison Committee on resuscitation every 5 years. Following this international agreement, Australia and New Zealand develop local guidelines based on best evidence. These are published on the Resuscitation Council website. (See resus.org.au and www.nzrc.org.nz for the full text of all guidelines).

In 2016 the Australian and New Zealand Council on resuscitation published 10 individual guidelines outlining areas including newborn at risk, assessment, airway and ventilation, intubation, chest compressions, medications and fluids and ethical and special considerations during resuscitation.

Despite a plethora of research in animal models, there is limited research in humans regarding neonatal resuscitation, resulting in few changes each quinquennium.

In this presentation I will discuss the process of updating guidelines, the changes that have been made and finally some of the science behind these changes. To complete this session I will outline some teaching programs developed to ensure the workforce involved in care of newborn infants has training in basic life support as well as those involved in providing advanced life support has access to adequate training.

Making the most of neonatal neuroimaging in clinical practice

A/Prof Jeannie Chong

Neonatal neuroimaging is an important tool for detection of acute brain injury, and also to track the consequent development of the brain in high-risk newborns. The main tools available include cranial ultrasound (cUS), computed tomography (CT) scan and magnetic resonance imaging (MRI). cUS is a portable bedside tool, thus repeated examinations are possible in sick newborns. With more widespread use of additional acoustic windows (i.e. posterior and mastoid fontanelle, in addition to the standard anterior fontanelle views), cUS is able to detect major brain injury in preterm newborns such as intraventricular haemorrhage, cystic periventricular leukomalacia, haemorrhagic parenchymal infarction, post-haemorrhagic ventricular dilatation and moderate to large cerebellar haemorrhages. CT scan is not as widely used with the advent of brain MRI. Brain MRI is the most sensitive mode of imaging the newborn brain. It has several sequences that give complementary information about brain structure, 'oedema' secondary to acute brain injury, and brain metabolites using magnetic resonance spectroscopy. Its diagnostic and prognostic utility is well characterised in term infants with hypoxic-ischaemic encephalopathy and perinatal stroke. In preterm newborns, the presence of moderate to severe white matter abnormality is predictive of later neurodevelopment. However, its universal use as a pre-discharge tool in preterm newborns is very much under debate. The most effective way is to use neonatal neuroimaging in concert with clinical history and examination, with a good knowledge of the strengths and limitations of each test.



Shaping neonatal care

From past to future

Friday 20 October

0700 - 0800	REGISTRATION AND CONTINENTAL BREAKFAST IN EXHIBITION AREA
0800 - 0940	CHAIR: KAREN NEW (PAST PRESIDENT 2010-2012) & ALEXIS FOX
0800	Moderate to late preterm birth – a new at-risk group – A/Professor Jeanie Cheong
0830	Maternal and perinatal outcomes of maternal smokeless tobacco use – Ms Angela Ratsch
0904	Online cross-sectional survey on how Australian neonatal nurses manage nappy dermatitis – Judith Macey
0916	Insertion and securement of peripheral intravenous catheters in neonates: a cross-sectional survey – Deanne August
0919	Central line associated blood stream infections (CLABSI) in NICU following introduction of a central line bundle – Leanne Ehrlich
0922	Perinatal factors that contribute to the prevalence of cerebral palsy in Townsville, North Queensland – Amy Forbes-Coe
0925	Update on state of the art palliative care in Australia – Vicki Kain
0928	Whatever happened to ‘First do no harm’? – Lisa-Kim Wright
0931	Is buccal gel dextrose an effective management of infants at risk of hypoglycaemia on the postnatal ward? – Barbara Rischitelli
0934	Food for thought: Use of breast milk as a potential immune therapy for neonates in NICU – Annette Wright
0937	Neurally adjusted ventilatory assist and non-invasive NAVA (NIV-NAVA) in newborns – a nursing guide – Joanne Sheils
0940 -1010	MORNING TEA, EXHIBITS, POSTERS
1010 - 1140	MODERATOR: DR TRUDI MANNIX (PAST PRESIDENT 1994-1996) PAST, PRESENT AND FUTURE ROLES OF THE NEONATAL NURSE PRACTITIONER
1010	The Canadian experience - A/Professor Marsha Campbell-Yeo
1025	Bridging the gap: the strengths and limitations of the current Australian model – Ms Amy Forbes-Coe
1040	The opportunities for the NNP role in regional areas – Ms Anndrea Flint
1055	The future role of NNPs in a transport service - Dr Kath Carmo
1110	Not only a clinical leader but a policy leader - Professor Linda Johnston
1125	Panel Discussion

1140-1230	LUNCH, EXHIBITS, POSTERS	
1230 - 1515	CHAIR: JANE ROXBURGH & BARBARA RISCHITELLI	
1230	Technology ensuring continuity of care - using medical consultation via teleconference and remote vision - <i>Dr Kath Carmo</i>	
1300	Towards reducing disparity, empowering parents and improving pregnancy outcomes via a mobile app - <i>Baby Buddy Australia</i> - <i>Dr Adrienne Gordon</i>	
1330	Developing a new virtual platform targeted at enhancing parental presence and active involvement in care in the NICU - <i>A/Professor Marsha Campbell-Yeo</i>	
1400	How can we use social media in our knowledge translation and research? – <i>A/Professor Denise Harrison</i>	
1430	PRESENTERS AWARDS AND CLOSE	
1440	ACNN ANNUAL GENERAL MEETING	
SPECIAL INTEREST GROUP (SIG) MEETINGS		
Room 1: 3.30 – 6.30pm Neonatal Nurse Practitioner SIG Meeting Open to all delegates	Room 2: 3.30 – 5.00pm Research SIG Open to all delegates	
1930	A 'SILVER CELEBRATION' GALA DINNER	

Moderate to late preterm birth – a new at-risk group

A/Prof Jeanie Chong

The majority of preterm births i.e. births before 37 weeks are moderate to late preterm (MLPT, born between 32-36 weeks). Yet, the focus of research has very much been on those born very preterm, prior to 32 weeks' gestation. Until recently, MLPT children were considered to have similar developmental outcomes to those born full-term, and as such, had very little or no developmental surveillance in childhood. In the last decade, there has been increasing concern that MLPT children have more health and developmental morbidity compared with their term-born peers. Data from several large cohort studies, including one based in Australia, have reported that MLPT children have more developmental delay in important areas of development including language, cognition and motor development. In addition, these developmental delays are associated with brain MRI features that are consistent with a more immature brain. There are in fact other early clues like aberrant neurobehaviour in the newborn period that are associated with later developmental delays in MLPT children. These early markers may be used to detect those at highest risk for developmental surveillance and early intervention. However, there is still much to learn about this group of children and future research will need to focus on school age outcomes, and the interventions that are most effective at optimising their outcomes.

A/Prof Jeanie Cheong is a Neonatal Paediatrician at the Royal Women's Hospital, Melbourne with expertise in neonatal neurology, neuroimaging and long-term follow up. She completed her undergraduate medical degree at the University of Melbourne, and trained in Paediatrics and Neonatology both in Victoria, Australia and also in London, United Kingdom. During the final years of her specialist neonatal training, she undertook a higher research MD in the area of high field magnetic resonance imaging at the cutting edge field strength of 4.7Tesla. Since 2007, she has taken on a consultant neonatologist role at the Royal Women's Hospital, Melbourne and is lead clinician in the Growth and Development clinic. She holds appointments with the University of Melbourne, as Associate Professor, and with the Murdoch children's Research Institute as a Principal Research Fellow. As of the beginning of 2015, Jeanie assumed the role as Convenor of the Victorian Infant Collaborative Study group and also takes on Team Leadership of the medical/neurological stream of the Victorian Infant Brain studies group. Jeanie's research areas encompass brain injury in high-risk newborns, and how structure-function relationships relate to long-term neurodevelopmental outcomes.

Maternal smokeless tobacco use: invisible foetal nicotine exposure

Dr Angela Ratsch

Maternal tobacco smoking is a recognised risk behaviour that has adverse impacts on maternal and foetal health. However in some populations, the use of smokeless tobacco exceeds the use of smoked tobacco. In central Australia, Aboriginal populations utilise wild *Nicotiana* spp. plants as a chewing tobacco (*pituri*). Pituri use continues throughout pregnancy and lactation.

In this research, a prospective cohort of 74 central Australian Aboriginal women, who were at least 28 weeks pregnant, were categorised into one of three tobacco exposure groups: non-tobacco users (n = 31), or smokers (n = 23) or pituri chewers (n = 20). A range of biological samples were collected and analysed for tobacco and nicotine metabolite concentrations. In parallel, a range of demographic and pregnancy outcome variables were collected and analysed to evaluate the impact of maternal tobacco exposure.

The results show that compared with smokers, pituri users have higher concentrations of tobacco and nicotine metabolites in maternal blood, cord blood, amniotic fluid, neonatal urine, and breast milk. In comparison with smokers, the neonates of pituri users have higher rates of admission to the Special Care Nursery (44% versus 26%) and weigh 490 g less than the neonates of smoking mothers. This research provides the first evidence as to the tobacco and nicotine concentration that is transferred to the foetus from maternal pituri use, and indicates that maternal pituri use is a risk factor in adverse pregnancy outcomes.

Online cross-sectional survey on how Australian neonatal nurses manage nappy dermatitis

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Background: Neonatal nappy dermatitis is an acute inflammatory reaction of the skin in the peri-anal area. Anecdotal evidence from Queensland skin care forum group members believe that there is inconsistent non-evidence based prevention and management of nappy dermatitis. The aim of this survey was to determine the extent of the problem of moderate to severe nappy rash and the current prevention and management practices by Australian neonatal nurses.

Method: An online cross-sectional survey of Australian College of Neonatal Nurses members. Survey consisted of ten multi-choice questions focused on nursing practice and management options. HREC approval was obtained.

Results: Of those who received and opened the invitation, 86 (23%) completed the survey. Inflamed peri-anal area was reported to be seen frequently (n=20, 23%), while moderate to severe nappy rash sometimes (n=32, 37%). Cleansing agent preferred was water alone (n=68, 79%). Most occurring management strategies were airing and/or zinc oxide (n=57, 86%). Crusting technique is never (n=37, 43%) to rarely (n=22, 26%) used. Only 24% of people felt confident in determining nappy rash and not a candida infection. The majority (n=44, 52%) of respondents felt that moderate to severe nappy rash is well managed. Most important product considerations (scores out of 10) were alcohol free (9.53) and pH neutral (8.09). Least important were organic (4.03) and emollient/moisturiser free (3.96).

Conclusions: The results indicate that some prevention and management strategies are in keeping with those recommended in the AWHONN neonatal skin care evidence based clinical practice guideline, while others are not.

Insertion and securement of peripheral intravenous catheters in neonates: a cross-sectional survey

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Background: Despite being one of the most ubiquitous medical devices, there remains little evidence to support effective neonatal peripheral intravenous catheter (PIVC) practice. To minimise this gap, members of the Australian College of Neonatal Nurses and the Alliance for Vascular Access Teaching and Research Group collaborated to identify key areas for inquiry into neonatal PIVC practice in order to make recommendations for future practice development.

Aim: To describe current practices for PIVC insertion and management from Australian and New Zealand neonatal nurses.

Method: A cross-sectional survey was distributed to the national conferences for Australian and New Zealand Neonatal Nurses Associations, with a secondary offer to participate through online distribution. The survey collected data on actual practice rather than local protocols or guidelines regarding current PIVC insertion and securement. HREC approval was obtained before distribution.

Results: A response of 180 participants was achieved. Majority of respondents had over seven years of neonatal experience (80%), observed 2 or more attempts for insertion (88.9%) and infrequently attended to insertion themselves (16%). Cleaning of PIVC sites demonstrated the most variance, compared to primary dressing choices which mirrored best practice recommendations (87%). Almost half (48%) reported skin reactions occurred regularly around PIVC sites.

Conclusions: This survey has provided an update to current practices related to neonatal PIVCs. Moving forward the collaborators will use these results to develop evidence to support decision-making surrounding PIVC decontamination, dressing and skin health.

Central line associated bloodstream infections (CLABSI) in NICU following introduction of a central line bundle

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Background: Central line associated bloodstream infections (CLABSI) are a leading cause of morbidity and mortality in neonates. There is increasing evidence that use of evidence based catheter care practices (bundles) reduces central line infections. We compared rates of CLABSIs and central line utilisation following introduction of a central line bundle in our unit.

Method: This was a retrospective cohort study. Newborn infants admitted to the Canberra Hospital Neonatal Intensive Care Unit between January 2011 and June 2016 who had a central line inserted were included in the study. Data regarding clinical characteristics, central line and bed days, and infection were collected before and after the introduction of a bundle of interventions. The bundles encompassed evidenced practice regarding (1) insertion of umbilical lines, (2) insertion of PICC lines, (3) maintenance of central line, (4) staff education and (5) ongoing surveillance and feedback. CLABSI rates per 1000 central line days and central line utilisation ratio were calculated before (2011 – 2013) and after (2014 – 2016) introduction of intervention.

Results: Overall there was a significant decrease in CLABSI rates from 8.8 per 1,000 central-line days before (2011 – 2013) to 4.9 per 1,000 (2014 – 2016) central line days.

Conclusion: The central line bundle was effective in reducing central line utilization ratio and CLABSI.

Perinatal factors that contribute to the prevalence of cerebral palsy in Townsville, North Queensland

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Background: The prevalence of cerebral palsy (CP) in Australia is 2 per 1000 live births¹. CP is an umbrella term which describes a group of disorders involving movement and posture causing activity limitations that can occur during fetal or infant brain development². CP is the most common childhood physical disability and in 94% of children who acquire CP, the brain injury occurs within the prenatal or perinatal period¹.

Method: A retrospective case control study was conducted, reviewing the medical records of neonates diagnosed with CP (cases) and 100 randomly selected neonates without CP (controls) over a five-year period. The control group was matched proportionally for admissions to neonatal intensive care. Antenatal, intrapartum and neonatal data as well as the child's severity of CP were collated.

Results: The prevalence of CP acquired in the pre/perinatal period was 1.8 per 1000 live births. A gestation of 28 – 32 weeks and a birthweight of less than 2500 g was significantly associated with CP. However, when the case group was compared to the current Queensland CP Register³, male gender and Aboriginal and Torres Strait Islander (ATSI) ethnicity were considerably higher in the case group.

Conclusions: In this study 28 – 32 weeks gestation and birthweight less than 2500 g were significantly associated with CP. Furthermore, preliminary findings indicate that male gender and ATSI ethnicity were factors that contribute to the prevalence of CP.

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Update on state of the art palliative care in Australia

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Background: Advances in neonatal and obstetric care have led to increased survival of preterm and critically ill neonates. The highly technological environment of the neonatal intensive care unit (NICU), with its abundance of life-sustaining medical equipment has allowed the boundaries of viability to be stretched. Despite these technological advances, however, the increase in margins of viability, and care provided by highly skilled health professionals, some infants will die in the NICU. The care of dying infants presents health professionals with many practical and ethical difficulties. However, withdrawal or withholding of life-sustaining therapy should be considered when there is little hope of survival or when quality of life is judged to be unacceptably poor. Palliative care is the comprehensive, holistic, family centred care of infants diagnosed with life threatening or life limiting conditions. It focuses on the needs of the infant and their entire family, striving to enhance dignity of the infant's life and support the family's experiences with empathy and respect. Palliative care requires an interdisciplinary approach to improving the condition of the infants living and dying.

Method: Comprehensive review of palliative care literature and clinical guidelines and practices to highlight current best practice in Australia, including the status of neonatal end of life care in Australia, comfort needs of the dying neonate, care options, cultural and environmental considerations.

Conclusions: This presentation will provide an update on the current state of the art palliative care in Australia.

Whatever happened to 'first do no harm'?

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Background: Twenty-first century neonatology has myriad evidence-based interventions available to inform the treatment of various conditions. This has increased the survival of smaller, critically ill neonates. Australia has one of the lowest neonatal mortality rates in the world, and considers resuscitation from 23 weeks gestation. The neonatal brain has an activity-dependant maturation which is particularly susceptible to damage by noxious stimuli.

Method: A review of the literature found that current provision of specialised neonatal care involves neonates receiving 7-17 painful procedures every day. Poor pain management alone significantly increases the incidence of poor neurodevelopmental outcomes in a population that is already compromised.

Results: Focus on survival has seen effective pain management relegated to a lower priority, which may lead to inhumane treatment. This contentious issue involves under-utilisation of appropriate pain assessment. There is no 'gold standard' for measuring neonatal pain, but without assessment and guidelines routine care may contribute to suffering. Effective pain management is a fundamental human right requiring multidisciplinary collaboration, and nurses are optimally placed to provide and advocate for ethically motivated evidence-based care with the potential to improve the quality of life for our patients and their families.

Conclusions: It is paramount to bring this to the agenda of every practitioner and facility that provides neonatal care.

Is buccal gel dextrose an effective management of infants at risk of hypoglycaemia on the postnatal ward?

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Background: Hypoglycaemia is a major cause of neonatal morbidity and may induce long-term developmental sequelae. A hypoglycaemia policy at The Northern Hospital (TNH) Special Care Nursery (SCN) was implemented including 40% buccal dextrose gel (BDG) administration which has been shown to be more effective than feeding alone in reversing neonatal hypoglycaemia.

Aim: To assess the effectiveness of 40% BDG administration to babies identified as being at risk of hypoglycaemia by evaluating SCN admission rates and breast feeding rates on discharge, both before and after the introduction of the new BDG regimen.

Method: Data were collected retrospectively from patient records on neonates born from 36-42 weeks gestation and birthweight ≥ 2.3 kg who were at high risk of developing hypoglycaemia defined as blood sugar level (BSL) screening < 2.6 mmol/L. Pre BDG (PrBG) and post BDG (PoBG) administration data were collected for the periods March 2015 – August 2015 and September 2015 – March 2016 respectively.

Results: PrBG group n=101 and PoBG group n=88. Gestational age (PrBG 38.4 ± 1.8 weeks; PoBG 38.3 ± 1.7 weeks) was similar as was birth weight (PrBG 3127.8 ± 708.6 g; PoBG 3156.8 ± 713.8 g). A non-significant increase occurred in babies with a true blood glucose > 2.6 mmol/L, one hour after a low BSL and concurrent feeding or BDG administration, from 49% for the PrBG group to 57% for the PoBG group. SCN admission for symptomatic hypoglycaemia management for the PrBG group was 57% and PoBG group was 39% ($p=0.010$). An almost significant increase in babies breast feeding at discharge occurred – PrBG group 28% and PoBG group 40% ($p=0.08$).

Conclusion: The introduction of BDG administration resulted in a marked reduction of admissions to SCN for symptomatic hypoglycaemia management. Results are consistent with BDG administration improving TBG post hypoglycaemia screening and increasing breastfeeding rates at discharge.

Food for thought: use of breast milk as a potential immune therapy for neonates in NICU

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Background: Oral care in the NICU has the potential to be at the forefront of family centred and medical care for preterm babies requiring immune development support. Immuno-supportive oral care (ISOC) is the innovation stemming from the work of the NSW NICU lactation group. ISOC uses the latest research across a range of medical and developmental frameworks, to provide a cost-effective, inclusive, and simple procedure when providing oral care.

Method: Provision of oral care is an important (often overlooked) part of daily routine for babies in NICU. Literature suggests that immune properties of colostrum/breastmilk may be absorbed by the oral mucosa, providing protection from infection. The NICU lactation group saw a way to not only provide immune properties to high risk babies but a developmentally sensitive way of delivering it.

Results: The NICU Lactation Group realised the potential to change thinking about oral care, being more than just a cleaning procedure, and provision of early fresh colostrum being more than 'only' food for the baby to help assist a paradigm shift in this regard.

Conclusions: With implementation of ISOC the group identified that this procedure needed to be linked with early expressing of the mother, opening the opportunity for improved breast milk production. ISOC has become the catalyst for helping to build our NICU baby's immunity and assisting in bringing the mother infant dyad together in the NICU as will be seen in the video clip.

Neurally adjusted ventilatory assist and non-Invasive NAVA (NIV-NAVA) in newborns – a nursing guide

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Neurally adjusted ventilatory assist (NAVA) is a new ventilatory technique in neonates. NAVA detects electrical excitation in the diaphragm and synchronises the mechanical breath with this electrical activity (neural trigger). Patient determines peak inspiratory time, respiratory rate, inspiratory and expiratory times in synchrony with the ventilator. The trigger for NAVA system is the electrical activity of the diaphragm (Edi), measured oesophageally using a special nasogastric tube with electrodes at the level of the diaphragm. The Edi signal represents the patient's neural respiratory drive and is used with NAVA ventilation to synchronize ventilatory support on a breath-by-breath basis. This is very different to the traditional flow sensor used in our mainstay ventilator, the Draeger VN500. NAVA mode is associated with improved patient ventilator synchrony and lower peak airway pressure suggesting greater patient comfort and possible lung protective ventilation (Breatnach, 2010; Lee 2010; Stein et al., 2012).

Since 2014, The Royal Hospital for Women, Sydney has been using this new technology. It was a steep learning curve for the nursing staff with the introduction of NIV- NAVA first and invasive NAVA in 2016. A large bulk of the education involved the introduction of the Edi catheters. This included trouble-shooting potential issues with Edi catheter placement and feeding with the catheter. The new terminology for ventilation modes with the Maquet Servo N and the Edi signal also took some time to integrate.

Panel discussion: past, present and future roles of the Neonatal Nurse Practitioner

NNP: the Canadian Experience

A/Prof Marsha Campbell-Yeo

In Canada, responsibilities previously limited to the medical practice have increasingly been incorporated into the role of the nurse practitioner, as the need for qualified, advance practice nurses has grown and evolved in the past several decades. This change in the traditional healthcare dynamic has increased the demand for nurse practitioners throughout the country, in turn increasing the demand for specialized neonatal nurse practitioners (NNP's) within the neonatal intensive care unit. Providing specialized care and management of neonates, NNPs play a critical role in both the clinical setting providing patient and family-centred care, as well as working diligently to improve practice and the overall health of the community and population. Despite the important contribution of this role, given the specialized area of study and relatively small numbers of NNP's compared to generalist family all ages nurse practitioners, concerns regarding the sustainability of educational programs across the country have been raised.

Bridging the gap: the strengths and limitations of the current Australian model

Ms Amy Forbes-Coe

Opportunities for the NNP role in regional areas

Ms Anndrea Flint

The future role of NNPs in a transport service

Dr Kath Carmo

Not only a clinical leader but a policy leader

Prof Linda Johnston

If the core role of a nurse practitioner is practice, professionalism and clinical leadership then where do they fit in the shifting landscape of the health care system as a whole? There's a perception that nurse practitioners have a reluctance to step outside their clinical practice roles and engage in the wider debates that are shaping health policy. Political engagement by nurse practitioners could influence regulatory and legislative requirements and ultimately the quality of care delivered to patients and families.

Technology ensuring continuity of care – using medical consultation via teleconference and remote vision

Dr Kath Carmo

Kath is the Deputy State Director of NETS NSW and a Senior Staff Specialist in Neonatology in the Grace Centre for Newborn Intensive Care. Her passion is delivering equitable care to rural babies and children.

In this presentation Kath will be discussing the launch of telemedicine and how it has impacted the way we triage and support retrieval calls in 2017.

Toward reducing disparity, empowering parents and improving pregnancy outcomes via a mobile app – Baby Buddy Australia

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A focus on a healthy start to life is critical for improving disparities in life-long health outcomes. However, despite universally-funded publicly available pregnancy care in Australia we often fail to support our most vulnerable populations. Babies born to younger mothers, Aboriginal and Torres Strait Islander mothers and from areas of higher socioeconomic disadvantage are more likely to be born preterm or low birth weight and twice as likely to be stillborn. Their mothers have higher rates of pregnancy complications and perinatal mental ill health. This combination can affect a child's social, emotional and neurobehavioural development and potentially perpetuate the cycle of disadvantage.

The same populations are traditionally less likely to access services early, more likely to not attend appointments and feel stigmatised, and less likely to access health information or support through books, leaflets or computers. However, smartphone use in Australia has exponentially grown across **all** socioeconomic groups with over 90 per cent of the population owning one and the nation having the sixth highest usage globally.

We have established a collaboration with a UK charity called *Best Beginnings* to adapt for an Australian population an interactive mobile app called Baby Buddy. The app aims to empower and inform expectant and new mothers and enhance existing health service delivery.

Baby Buddy has > 50,000 users in the UK, has been co-created with young and minority ethnic women and has early evidence of improved maternal and infant health outcomes. It is a low cost and highly translatable intervention. The app includes avatars and films specifically to engage younger women. The first stage of this project will develop in partnership with pregnant women and key stakeholders the Australian culturally-specific content and films that would be embedded into the existing app and pilot tested within the local health district for feasibility and acceptability.



Adrienne is a Neonatal Staff Specialist in the RPA centre for newborn care and an NHMRC Early Career Research Fellow at the University of Sydney. She has a Masters of Public Health and a PhD on risk factors for stillbirth. She is particularly interested in perinatal topics with a public health impact that have the potential to improve pregnancy and newborn outcomes.

Adrienne is Deputy Chair of the National Scientific Advisory Group of RedNose to increase their stillbirth advocacy, a member of the IMPACT network for improving health through perinatal clinical trials, a Board Director for the Perinatal Society of Australia and New Zealand and has close links with perinatal consumer groups such as Miracle babies, Stillbirth Foundation Australia, Still Aware and Best Beginnings.

She is an avid supporter of evidence based policy and practice and is passionate about translating research into clinical care and supporting families following loss, or the birth of babies born sick or early. Adrienne is also Project Lead for the Charles Perkins Centre's BABY1000 Study which aims to identify the modifiable risks and interventions prior to and during pregnancy that impact on later life health. It hopes to provide a major contribution to knowledge regarding early life predictors of health and disease and the interventions that will ultimately improve health for our future generations.

Developing a new virtual platform targeted at enhancing parental presence and active involvement in care in the NICU

A/Prof Marsha Campbell-Yeo

Parents of infants who are admitted to the neonatal intensive care unit (NICU) experience myriad emotions. Many parents are surprised by the early birth and may lack knowledge in regards to their baby's high-risk health needs. Studies have found that new NICU parents spend more than 20 hours per week seeking out information related to their baby's needs and care throughout the first months after birth. For this information, many parents are turning to the Internet; however, the information available online is not always current, evidence-based or reliable.

There is an emerging trend to increase the use of eHealth interventions in neonatal intensive care units (NICUs). Technology related to web cameras and interactive learning platforms is becoming more advanced, with many hospitals and NICUs interested in implementing technology to enhance and expand their family-centred care environments. Although there is substantial literature regarding paternal and maternal experiences in the NICU environment, little is known about the 'virtual' experience of parents and the role these advanced eHealth interventions have on parent-related and infant outcomes.

How can we use social media in our knowledge translation and research?

A/Prof Denise Harrison

High quality evidence of analgesic effects of breastfeeding, skin-to-skin contact or small volumes of sweet solutions (sucrose or glucose) during commonly performed painful procedures in neonates exists. However this evidence is not consistently used in routine clinical practice in many settings, highlighting an important knowledge to action gap. Developing and evaluating novel knowledge translation (KT) strategies to address this knowledge-to-action gap are therefore important.

To date, KT interventions aimed at improving neonatal pain management have primarily targeted healthcare providers. However, parents of healthy and sick newborns may have an important role to play in terms of understanding, and advocating for, pain management practices during painful procedures. One potential avenue to reach parents is through social media and video-sharing sites such as YouTube. YouTube has more than a billion users, creating unprecedented opportunities for healthcare providers and researchers to tap into this avenue for dissemination and translation of knowledge.

This presentation will include a summary of KT efforts using YouTube and other social media sites, relating to neonatal pain management. In addition, research evaluating the effectiveness of using social media in KT will be reviewed. Strengths and limitations of previous research and recommendations for future research will be highlighted in this interactive session.

