



➤ NEWSfeed

A word from PSANZ Headquarters

MEMBER BENEFITS

PSANZ values its members. Along with the opportunity to network with almost 700 other members, PSANZ membership offers discounted registration to the PSANZ Annual Congress, access to Branch Activities and Sub Committee Activities, New Investigator awards and access to our members-only section of the website.

We are currently working on some exciting new membership benefits – stay tuned! .

ARTICLES FOR THE NEWSLETTER

We are keen to make our newsletters informative and a little 'fun'. If you have any articles, links to interesting information, or just some entertaining pictures or 'gossip' we could share with our members, please send these to PSANZ Headquarters.

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ESTABLISHMENT OF THE PSANZ ACADEMY



Recently, members were asked to nominate for appointment to the PSANZ Academy. The Academy will be a group of members from all disciplines and career stages, who will assist organising committees with abstract assessment, chairing conference sessions and judging presentations.

Academy membership will provide an opportunity for junior members to be involved in planning and running PSANZ conferences, and gain experience with important academic activities. It will help junior members raise their profiles and demonstrate commitment to their discipline.

Senior PSANZ Academy members will provide mentorship and guidance, and contribute their extensive experience and expertise to activities of the Society.

The benefit of the PSANZ Academy to our society is that organising committees will have a group of willing and capable members to assist with tasks that are vital to running the best possible conference.

If you missed the email inviting nominations to the PSANZ Academy, you can nominate [here](#).

PSANZ IS CONNECTED

We are moving with the times and have a PSANZ Twitter account! Follow us on:



@mysanz

@PSANZCap

@PszanzImpact

A word from our President

This year has seen some notable developments and achievements that have direct association with or relevance for PSANZ. With respect to clinical trials I was fortunate to be invited to the Inaugural "On Track" Trial Development workshop in New Zealand, held in February. It was a terrific event held over two days that brought together a wide range of people with a wide range of research experience to contribute to the development of trial protocols to address important perinatal challenges. The Network is a national initiative led by many PSANZ members to ensure that practitioners, women and their babies across NZ have an opportunity to be involved in maternal and perinatal health research. Seven study protocols were discussed and developed over the two days. IMPACT are holding a Concept development workshop in August which will similarly bring together researchers, clinicians and consumers to work up study protocols.

More details can be found [here](#)

These are fabulous initiatives that provide both educational opportunities for people to learn about trial design and also refinement of study protocols. Another great highlight for PSANZ in the clinical trial space was the award of the runner up prize to William Tarnow Mordi and the BOOST 2 team from ACTA . This means that the IMPACT network of PSANZ has been awarded the first and runner up prize for the first two years of the ACTA trial of the year award scheme.

In addition to the work of IMPACT other subcommittees have been very active as is evidenced by the newsletter. Our subcommittees are the engines of our Society and it is pleasing that two new subcommittees are well into their stride: The Equity and Early Life Nutrition Subcommittees.

The Board have relooked at The Society's approach to sponsorship with respect to Formula Companies and have endorsed a position statement that is now available on the website



and this position statement outline the principles that will be applied.

Finally I visited the venue for the PSANZ Congress in 2018 this month. The Congress will be held in a stunning location on the waterfront in Auckland. Katie Groom and the Local Organising Committee are putting together a vibrant and engaging programme and I encourage all members and their colleagues to consider joining PSANZ at the home of the America's Cup next March.



➤ SUB COMMITTEE

POLICY MATTERS

It was standing room only at the PSANZ Canberra Congress Quality, Safety and Policy Symposium on Monday 3rd April 2017! Thank you to our policy subcommittee members and star-studded speakers who rocked this symposium, great work everyone. Who said quality, safety and policy was boring! Lynn Sinclair and Philippa Middleton provided an overview of the work of the committee, Johnny Taitz reminded us that quality and safety is everyone's business, Zsuzsoka Kecskes challenged us to do less harm to the infants in our care and Euan Wallace reminded us not to "wait until the plane crashes" if we want to provide safe, effective and quality health care.

A huge thank you also to policy subcommittee members who attended our 7am policy meeting on the Sunday morning before the congress (some of those who attended are in the photo below). What commitment! What a dynamic team! (Members listed below).

GUIDELINES/POSITION STATEMENTS IN DEVELOPMENT

- Perinatal Mortality Guidelines - lead - Vicki Flenady
- Decreased Fetal Movements Guidelines and e-Learning Package - lead - Vicki Flenady
- Pre-pregnancy Obesity Position Statement - lead - Julie Brown
- Fetal Growth Restriction Position Statement - lead - Glenn Gardner
- Smoking Cessation Position Statement - lead - Gillian Gould
- Care of Indigenous women - lead - Philippa Middleton & Stephanie Brown
- Infant Nutrition Guidelines - lead - Carmel Collins
- External invited comment – responses submitted
- National Framework for Maternity Services - lead - Natasha Donnolly

EXTERNAL INVITED COMMENT – RESPONSES IN PROGRESS

- Antenatal Care Guidelines - lead - Joanne Said & Vicki Flenady
- Perinatal Mental Health Guidelines - lead - Philippa Middleton & Stephanie Brown

ON THE HORIZON

- Palliative care guidelines - lead Vicki Xafis & Sarah Bellhouse
- Position Statement on Threshold of Viability

HOT OFF THE PRESS

The team working on smoking cessation have submitted an abstract (systematic review) for the 2017 Oceania Tobacco Control Conference. Watch this space for updates!

If you would like to contribute to the work of this committee or have any suggestions for future Guideline/Position Statement development please contact the chair of the subcommittee Lynn.Sinclair@uts.edu.au



Policy subcommittee members:

- Lynn Sinclair (chair)
- Vicki Flenady (Deputy Chair & PSANZ SANDA)
- Jane Alswailer (RACP Council)
- Julie Brown (GIN & Cochrane)
- Stephanie Brown (Vulnerable Populations)
- Alice Burnett (Long Term Outcomes)
- Carmel Collins (IMPACT)
- Paula Dellabarca (NNCA)
- Natasha Donnolly (CAP)
- Christine East (Midwifery)
- Glenn Gardner (Fetal Therapy)
- Deborah Harris (Nurse Practitioner)
- Helen Liley (ARC)
- Robert de Matteo (FNW)
- Philippa Middleton (IMPACT and Vulnerable Populations)
- Angela O'Conner (ACM)
- Diane Payton (RCPA)
- ACNN rep - vacant
- Antonia Shand (Obstetrics)
- John Sinn (RACP Education)
- Vicki Xafis (Perinatal Palliative Care)



CONSUMER ADVISORY PANEL

The PSANZ Annual Congress for 2017 in Canberra was quite a milestone for the Consumer Advisory Panel. Although our representation may have been small, with only two members able to attend, our impact was significant.

Natasha Donnelly in representation of the Consumer Advisory Panel presented the PSANZ Research Toolkit – Involving Consumers in Perinatal Research. The toolkit has been developed over the past 12 months by Natasha Donnelly, Tracy Reibel, Dell Horey and Victoria Bowring and was very positively received by researchers and consumer alike. This toolkit combines a dynamic repository of resources and a virtual Directory of Consumer Organisations (DoCO). The toolkit will be updated regularly by the PSANZ CAP. Each section in the toolkit provides a summary of supporting evidence and links to available resources and references to help researchers

locate these more readily. The DoCO contains contact information for consumer organisations relevant to perinatal health and medical research, to help locate potential consumers in areas related to your research. The directory will be updated regularly, so please make sure to check the website for the latest version. We are continuing to develop the New Zealand section of culturally safe research involving Maori and other indigenous NZ groups and is due to be completed soon.

The CAP will shortly be opening up expressions of interest for new membership to ensure a strong representation of consumers across all fields of perinatal health in the future. We look forward to playing an important role again at PSANZ 2018 in Auckland.

EARLY LIFE NUTRITION

NEW SUB-COMMITTEE PROMOTES IMPORTANCE OF NUTRITION DURING FIRST 1,000 DAYS OF LIFE

The Early Life Nutrition Coalition, an affiliation of professional, academic, advocacy, corporate and healthcare groups, has been formed to work collaboratively in promoting and communicating the importance of Early Life Nutrition as a long-term preventative health measure.

Recently established as a PSANZ sub-committee, the Coalition's aim is to drive awareness and action that supports empowerment and behavioural change for improved nutritional status during the First 1,000 Days of Life – that being prior to conception through to toddlerhood.

Key areas of focus include: maternal nutrition before, during and after pregnancy; paternal health and diet; promoting the importance of breastfeeding for as long as possible; introducing solids, including known allergens, at around six months; and positive nutritional role modelling by parents and caregivers, health care professionals, society and policy makers.

The Early Life Nutrition Coalition believes every child deserves the best possible start to life and will harness the growing body of evidence supporting that the First 1,000 Days of Life provides a critical window of opportunity where a healthy environment, particularly good nutrition, can

positively influence lifelong health by reducing the risk of obesity, allergy, type-2 diabetes, cardiovascular disease and improved mental wellbeing.

Organisations interested in joining the Early Life Nutrition Coalition should contact the Coalition Chairperson, Professor Peter SW Davies at ps.davies@uq.edu.au.

Coalition Members include:

Australian Diabetes Educators Association; Australian Diabetes Society; Caring and Living as Neighbours; The Children's Nutrition Research Centre, University of Queensland; Nutricia Early Life Nutrition; Developmental Origins of Health and Disease Society Australia and New Zealand; Dietitians Association of Australia; Healthy Start Workforce Project; The Liggins Institute; Menzies Institute for Medical Research; Murdoch Children's Research Institute; Pharmaceutical Society of Australia; United Way Australia; and the University of Auckland.



STILLBIRTH AND NEONATAL DEATH ALLIANCE (SANDA)

FETAL GROWTH RESTRICTION WORKSHOP

The first run of the PSANZ SANDA designed Fetal Growth Restriction workshop occurred on the Saturday before the PSANZ meeting in Canberra in April. It has been a long development process but the end result is an outstanding educational tool that we hope will be distributed across the country both in the live course format as well as an e-learning program that we hope to develop in conjunction with the live course this year. The FGR course has been designed in a similar fashion to the IMPROVE course utilising a 6 x 30 minute station format focussing on the following important aspects of pregnancy and fetal growth restriction – fundal height assessment, ultrasound assessment, risk factors for FGR, investigations for FGR, delivery options and neonatal management and psychosocial aspects. Seventeen attended the inaugural workshop with a mixture of midwives,

obstetricians, pathologists and a medical administrator. We received useful feedback on how to improve the program, but most importantly the evaluation of each of the station showed people's knowledge and confidence in each of the 6 areas improved significantly. We look forward to finalising the course based on the feedback received and developing the e-learning program over the next few months. Many thanks to the educators on the day – Euan Wallace, Sue McDonald, Glenn Gardner, Claire Whitehead, Farah Sethna, David Ellwood and Adrienne Gordon, and thanks again to Sue McDonald who helped with finalising a number of the stations with me. We are keeping our fingers crossed for funding to help continue to advance this important education program to reduce missed cases of FGR and to prevent stillbirths related to FGR.



CLINICAL PRACTICE GUIDELINE FOR THE CARE OF WOMEN WITH DECREASED FETAL MOVEMENTS

On behalf of the NHMRC Centre of Research Excellence in Stillbirth and PSANZ SANDA in partnership with the Stillbirth Foundation Australia, we are pleased to announce that the updated Clinical Practice Guideline for the Care of Women with Decreased Fetal Movements has just been released. Stillbirths are often preceded by maternal perception of decreased fetal movement (DFM), which is also strongly linked to stillbirth and other adverse perinatal outcomes. While evidence is still emerging in this area, some studies indicate that a reduction in stillbirth rates may be achieved by increasing maternal, clinician and community awareness about the importance of DFM. Accompanying brochures for women in a number of different languages are current also being updated.

This guideline targets health care professionals providing antenatal care in Australia and New Zealand and encourages them to provide consistent, best-practice management for women with singleton pregnancies who report or who are concerned about DFM in the third trimester of

pregnancy. Endorsements have been received by Stillbirth Foundation Australia, The Royal Australian and New Zealand College of Obstetricians and Gynaecologists (RANZCOG), Australian College of Midwives (ACM), Australian National Council for Stillbirth and Neonatal Death Support (SANDS); National SIDS Council of Australia Ltd (Red Nose) and Still Aware. In addition to the endorsing organisations above, these revised guidelines have been reviewed by the PSANZ Policy Committee, Consumer Advisory Panel, collaborators in the My Baby's Movements trial, and organisations who endorsed the previous version released in 2010.

PSANZ members are encouraged to review the guidelines and share amongst their colleagues, organisations and networks. Refer any further queries about this document to the Stillbirth CRE secretariat, at stillbirthcre@mater.uq.edu.au.

IMPACT NETWORK

The award-winning IMPACT Network does it again! The BOOST II trial led by members of IMPACT wins first runner up at the 2017 Australian Clinical Trials Alliance (ACTA) Clinical Trial of the Year Awards! The award was presented by the Hon Greg Hunt MP, Minister for Health and Minister for Sport on 19 May. Congratulations to chief investigator Professor William Tarnow-Mordi and the BOOST II team on this fantastic achievement. This follows on from the success of Professor Jonathan Morris and the PPROMT Trial team who won the inaugural ACTA Trial of Year in 2016. No pressure then for 2018



RECENT PUBLICATIONS OF IMPACT REVIEWED TRIALS

Enoxaparin for the prevention of preeclampsia and intrauterine growth restriction in women with a history: a randomized trial. K. M. Groom, L. M. McCowan, L. K. Mackay, A.C. Lee, J.M. Said, S.C. Kane, S.P. Walker, T.E van Mens, N.J. Hannan, S. Tong, L. C. Chamley, , P. R. Stone, C. McLintock and the EPPI trial Study Group.

[https://www.ajog.org/article/S0002-9378\(17\)30121-7/abstract](https://www.ajog.org/article/S0002-9378(17)30121-7/abstract)

Docosahexaenoic Acid and Bronchopulmonary Dysplasia in Preterm Infants. Carmel T. Collins, Maria Makrides, Andrew J. McPhee, Thomas R. Sullivan, et al.

<http://www.nejm.org/doi/full/10.1056/NEJMoa1611942?af=R&rss=currentIssue&>



Dr Katie Groom, IMPACT Chair, congratulates Dr Carmel Collins and the N3RO team on publication in the New England Journal of Medicine at the PSANZ Annual Congress in Canberra.

IMPACT TRIAL ENDORSEMENT/REVIEW PROCESS

Investigators undertaking clinical trials in maternal and perinatal health may wish to consider applying for formal recognition of their trials by the IMPACT Network. Trials can be considered for fully 'Endorsed' or 'Reviewed' status. IMPACT Network Endorsed Trials undergo prospective peer review and assessment by members of the Steering Committee and relevant experts in the field using a structured approach. The Network also review and support trials that are already underway, are of high quality but do not meet the criteria for endorsement or for some other reason do not wish to seek endorsement status.

IMPACT Network Endorsed trials will include the IMPACT Network in the authorship line of manuscripts or presentations using the phrase "on behalf of the IMPACT Clinical Trials Network for Mothers' and Babies' Health" and IMPACT Network Reviewed trials will indicate support from the Network in the acknowledgements section of the manuscripts or presentations by including "this trial has been presented to, and peer reviewed by, the IMPACT Clinical Trials Network for Mothers' and Babies' Health".

IMPACT Network Endorsed or Reviewed Trials will have free access to and are encouraged to use the IMPACT Network website. This will provide five trial specific pages that can be used as the main trial website and as a public repository for trial related documents. See our website for current Endorsed and Reviewed Trials and what the website can offer you.

<https://impact.psanz.com.au/research/impact-trial-endorsement/>

If you have any question about this process please contact us.

UPCOMING IMPACT MEETINGS

- 2-3 August 2017: Trial Concept Development Workshop, co-hosted with the NHMRC Clinical Trials Centre. Chris O-Bien Lifehouse, Camperdown, Sydney.
- 20 November 2017: Social Determinants and Equity in Maternal and Perinatal Health, co-hosted with PSANZ Policy Subcommittee and PSANZ Equity Subcommittee. SAHMRI, Adelaide.
- 24-25 March 2018: Embedding Research into Clinical Practice, co-hosted with the ON TRACK Network. ANZ Viaduct Events Centre, Auckland.

We hope you can join us at these future workshops. Look out for further details on our website <https://impact.psanz.com.au/meetings-and-events/>

FETAL NEONATAL WORKSHOP OF AUSTRALIA AND NEW ZEALAND

31ST ANNUAL MEETING

UNIVERSITY HOUSE | THE AUSTRALIAN NATIONAL UNIVERSITY | CANBERRA | ACT

30-31 MARCH 2017



The Fetal and Neonatal Workshop of Australia and New Zealand (FNWANZ) provides a forum for discussion of new ideas and presentation of experimental and clinical data in fetal and neonatal biology. It aims to encourage discussion and establish collaborations between basic scientists and researchers from all disciplines of perinatal science. The FNWANZ meetings consist of oral communications on completed studies, works in progress or planned studies

"The FNWANZ provides a fantastic opportunity for students to present their work in a relaxed and supportive environment and to receive constructive comments from experienced researchers from a variety of fields. The workshop is usually held so that everyone is staying in the same place and this facilitates discussion over meals and the social activities break down the barriers so students feel confident to speak to more senior researchers. It is fantastic to see the students grow in confidence as they present over the years". Prof Rosemary Horne, Hudson Institute of Medical Research.

The 31st FNWANZ was at University House, located on The Australian National University Campus, Canberra, ACT, Australia. The 31st FNWANZ attracted 61 delegates from Australia, New Zealand and Japan. A total of 31 oral presentations were given over the three days that included (but not limited to);

- developmental origins of health and disease (DOHaD)
- functional development of fetal and neonatal organ systems
- brain development
- brain injury and neuroprotection
- causes and consequences of preterm birth
- renal development and function
- placental development and function
- nutrition and neonatology
- effects of fetal and neonatal exposures

TAKE-HOME MESSAGES FROM THE WORKSHOP FOR PSANZ MEMBERS

"During therapeutic hypothermia after ischemic brain injury, rewarming before 72 hours is associated with partial loss of neuroprotection, with impaired EEG recovery and greater neuroinflammation"

Presenter: Prof Alistair Gunn (University of Auckland)

"Ibuprofen treatment in the growth restricted piglet reduces inflammatory markers in the brain and may be a useful treatment to reduce brain injury in growth restricted babies"

Presenter: Dr Julie Wixey (University of Queensland)

"The placental renin-angiotensin system appears to play an important role in trophoblast proliferation and migration, and is therefore important for adequate placental development"

Presenter: Samantha Rodrigues (University of Newcastle)

"Preliminary studies have suggested that low-dose postnatal dexamethasone may not have lasting adverse effects on the preterm thymus"

Presenter: Amy Woolridge (University of Western Australia)

"Postnatal dexamethasone increased passive aortic stiffness in the developing lamb aorta at 2 months after preterm delivery. As increased mechanical stiffness is an independent predictor of cardiovascular pathogenesis, postnatal dexamethasone may increase propensity to the development of cardiovascular disease later in life."

Presenter: Mr Ryley Macrae (University of Western Australia)

"Viability and function of human amnion epithelial cells (hAEC) is not altered by temperatures ranging from 33-39°C. Thus, hAECs are likely to have therapeutic efficacy in patients across a realistic range of body temperatures"

Presenter: Miss Paris Papagianis (Hudson Institute of Medical Research)

CONGRATULATIONS TO THE WINNERS OF BEST ORAL PRESENTATION:

Junior Student Investigator Award

Mr Ishmael Inocencio, Miss Lara Rijkmans,
Ms Samantha Rodrigues



Senior Student Investigator Award

Ms Nadia Bellofiore
(standing with Prof David Todd)



Early Career Researcher Award

Dr Erin McGillick, Dr Jonathan Davis



LONG-TERM OUTCOMES FOR HIGH-RISK BABIES

Considering the sustained clinical and research activity around long-term follow-up of high-risk babies from neonatal units in ANZ (as elsewhere) this Subcommittee has been a long-time coming. Our preliminary meeting to discuss the formation of the group, at PSANZ 2016, did indeed result in a significant amount of interest (an email list of 87). EOI to nominate the Executive Group, which was formed October 2016, saw the election of Chair: Alice Burnett (VIC), Secretary: Margo Pritchard (Qld) and Members: Sam Bora (Qld), Corrine Dickinson (Qld), Nathalie de Vries (NZ), Liza Edmonds (NZ).

Our Inaugural meeting, during the PSANZ 2017 Conference, was well attended with 28 enthusiastic attendees, representing a fairly good cross section of disciplines. Together we have now drafted our TOR.

The Subcommittee's **Purpose** is, *'To better understand and improve the outcomes for high-risk children, and their families, cared for in Australian and New Zealand neonatal nurseries in the infant period and beyond.'*

While our Purpose statement is broad our **Objectives** will be, *'To provide a multi-disciplinary forum to facilitate knowledge transfer and collaboration between clinicians, researchers, consumers, and other stakeholders and generating policy-relevant information to guide long-term follow-up and early intervention of high-risk infants and communicate this to relevant audiences.'*

We hope this platform of reference will enable an inclusiveness of activities to help engage our community and generate relevant and meaningful advances in long-term follow-up research and clinical care.

We are planning our first **Symposium** as a half day event preceding Cool Topics in Melbourne during October 2017. We encourage you all to attend and help set the tone and content for ongoing meetings. We will keep you informed.

Finally, we haven't agreed on a **catchy acronym** as yet, so we will leave you with these 3 to consider, please feel free to send us your preference or ideas for an alternative.

1. **L-TOHRB:** Long-Term Outcomes of High-Risk Babies
2. **PROF:** (Preterm and high-Risk infants: Outcomes and Follow-up; or Perinatal Risk: Outcomes and Follow-up)
3. **mONITOR:** (IONg-Term Outcomes of high-Risk infants)

Please contact us for more information, to make a comment or if you would like to be added to the group-list by email:

highriskbabies.psanzgroup@mcri.edu.au

PSANZ2017 ECR COMMITTEE REPORT

This year's meeting included many presentations from PSANZ ECRs. We had the most competitive year yet for the ECR travel awards, reflecting the strength of research being undertaken by the PSANZ ECR community. Being one of the most diverse groups of PSANZ in terms of career paths and research interests we had a variety of sessions targeted to our ECR members, including sessions on ECR funding 'How to be poor and happy' with Dr Graeme Polglase and Dr Brett Manley, as well as sessions on 'Breaking free from the flock: how to lead a research team' with Dr Hayley Dickinson, 'Successful grant writing and navigating the grant system in NZ' with Dr Chris McKinley and 'A warts and all story of leaving Australia to build a research career' with Dr Bobbi Fleiss. For those who missed out or are keen to get their hands on a copy, we will endeavour to provide links to the presentations from our guest speakers on our website: <https://ecr.psanz.com.au/resources/>.

With ongoing support from PSANZ, we're pleased to report that our ECRs continue to thrive. This was reflected in the high calibre of their presentations and the outstanding quality of perinatal research that they showcased at this year's congress. The ECR committee would particularly like to congratulate the recipients of the 2017 awards - keep up the great work! We look forward to seeing everyone in Auckland in 2018!

With best wishes,

The PSANZ ECR committee

PERINATAL PALLIATIVE CARE

The Perinatal Palliative Care SIG has been active in 2016-17, although continues to be driven principally by the executive committee, with a relatively small active membership.

The focus has been principally on education and policy development, together with cooperation with PSANZ in establishment of a presence on the PSANZ website to allow improved access to resources and links generated.

The principal activities for 2016-2017 activities have been:

1. SATELLITE MEETING AT TOWNSVILLE ASM OF PSANZ

The theme was "Critical Ethical issues in Perinatal Palliative Care" with principal areas examined being communication, legal aspects, decision making, clinical ethics and language use.

We were fortunate to have a very good session around cross-cultural communication and communication with families of Aboriginal and Torres Strait Islander background .

The session was well-attended, well supported by the organisers of the conference and feedback from participants was very favourable

2. SESSION PSANZ 4TH APRIL 2017

We did not run a separate day in 2017, as we felt that more teaching and promotional activity should be directed at the general membership of PSANZ , who may not have been able to take an additional day.

The themes were communication in perinatal palliative care, guideline development and parent engagement in policy development.

3. GUIDELINE DEVELOPMENT

Draft guidelines have been developed and will shortly be on the website

- Pain and Symptom Management
- Prenatal Diagnosis Parent Prompt list
- Marginal Viability

Other guidelines/resources will be developed

- Psychological grief/bereavement
- Cultural and Religious Issues
- Continuing pregnancy with a life limiting condition
- Going home with the baby

4. FURTHER GUIDELINE DEVELOPMENT

The Executive has identified a lack of authoritative, evidence based Guidelines for perinatal palliative care, especially in Australia.

One theme which has emerged strongly from the literature and from experience in practice is that provision of palliative care services antenatally and postnatally is very variable, also that decision making and information flow is commonly somewhat ad-hoc, perhaps because of local resources.

There may also be clinician discomfort or insecurity in dealing with death related issues in the fetus and newborn. This is particularly likely to be an issue in non tertiary centres, where some such care will unavoidably occur and in which much more could occur, given adequate support and training.

We believe that there is a place for more widely ranging evidence-based guidelines, relevant to wider Australian and New Zealand practice and covering diagnosis, antenatal, postnatal and bereavement care.

These would ideally be auspiced jointly by a number of bodies, representing all relevant disciplines

PSANZ is the only body with membership encompassing all relevant professional groups (with the exception of Palliative Care) and would be an appropriate central body for such an exercise.

A submission has been prepared, requesting support from PSANZ for a research assistant to undertake initial literature review to support the process of guideline development.

SECRETARY

Vicki Xafis has been our Secretary since 2013 and has contributed enormously. The SIG would not have achieved half of what we have without her wisdom, knowledge, drive and efficiency.

Vicki is stepping down as Secretary and will be sorely missed.

We are immensely grateful for her efforts and wish her well. We are very fortunate that she will continue to be active on the Executive of the SIG.

We are very fortunate that Sarah Bellhouse has agreed to take on this rôle and is now being oriented by Vicki to the ongoing activities of the group.

CONTACTS FOR PSANZ PERINATAL PALLIATIVE CARE SUBCOMMITTEE

Chair: Andrew Watkins awatkins@mercy.com.au

Secretary: Sarah Bellhouse SBellhouse@adhb.govt.nz

Treasurer: Robert Guaran r.guaran@unsw.edu.au



PSANZ 2018 Congress



Perinatal Society of Australia & New Zealand

Annual Scientific Congress

25 - 28 March 2018

ANZ Viaduct Events Centre, Auckland, New Zealand

Whenua ki Whānau
Nurturing the people of our land

Auckland will be hosting the 22nd PSANZ Annual Congress and plans are well under way for an exciting meeting. Not only is this meeting one not to be missed, it is also the perfect opportunity to extend your stay over the Easter break and enjoy some of what Auckland and New Zealand has to offer. Each day of our three-day meeting will feature our invited speakers from around the world and across Australasia - click here for details. They are leaders in their field and will present cutting edge research and providing expert guidance to improve our current day practice.

Our program format will include transdisciplinary themed plenary sessions, breakfast sessions, interactive workshops and expert sessions, research symposia, submitted oral presentations and informal poster viewing events with plenty of time for networking and social opportunities; time to catch up with old friends or enjoy the opportunity to meet new ones. www.psanz2018.org.au

www.psanz2018.com.au

Updates



NSWIPP

NSW Institute of
Psychoanalytic
Psychotherapy



INFANT OBSERVATION

Clinicians and those with an interest in making use of the observational experience are invited to apply to do an Infant Observation

This unit is available to those able to attend the supervision seminars in Sydney and is also offered via online technology if you are located outside of Sydney, either within Australia or located internationally

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WHAT IS INFANT OBSERVATION?

Infant Observation is a course for professional people who would like to deepen their understanding of how the mind and inner world grow and develop in infants, and to observe attachment & attunement patterns as they occur.

In a way that cannot be gained by reading or attending lectures, watching and wondering what is happening in an infant and mother in their home over time enhances understanding, observational skills and knowledge about how the mind and personality develop.

HOW DO FAMILIES BENEFIT

We have seen how the observer's ability to be present to the infant often gets picked up unknowingly by the mother, enabling her to be in a more responsive, reflective and attuned state with her infant. Parents often say how lovely it is to have a regular visitor who loves their infant. It is a validation of the importance of this stage of life for parents and infants.

THE PROCESS

Students find a couple in the latter stage of their pregnancy and meet with them to discuss the process and come to an understanding about what is involved in this undertaking. Once the infant is born, the student visits each week for an hour over a 12 month period at a time convenient to the family. They observe the infant and caregiver as they relate to each other in their daily lives.

During the weekly one hour observations the observer will watch the baby and will be interested to hear any observation that the mother or family has noticed during the week. No notes are taken during this time, but after the hour, the student is required to write down their observations

THE SEMINARS

The students begin meeting weekly in confidential small group seminars for one and a half hours prior to finding a family to observe. The initial meeting with the parents to be, and all observations once the infant is born are discussed in these seminars which are conducted by experienced members of NSWIPP.

FURTHER OPPORTUNITIES

Infant Observation is the first component of the NSWIPP training in psychoanalytic psychotherapy. It may be possible, following the completion of the Infant Observation, to join the full training program,

*subject to meeting the prerequisites for the training. A separate application for the training and interviews would be required. For further information, please visit our website or contact Lyndall Rees, details below.

For further information please contact Lyndal Rees on 0406 975 434 or email: nswipp4@bigpond.com



WHAT IS YOUR UNDERSTANDING OF PRECONCEPTION AND PREGNANCY HEALTH?

Preconception health focuses on taking steps now to protect the health of a baby in the future. Pregnancy health focuses on you and/or your partner's health during pregnancy. We want to know how we can improve what information you need and how you get it.

This survey takes approximately 15-20 minutes to complete and all responses are anonymous.

You can complete the survey using 1) or 2):

1) Go to this web address:

<https://redcap.sswahs.nsw.gov.au/surveys/>

Enter this code: 7XA8H7FM9

2) Scan the QR code using your phone:



The survey has been approved by the Ethics Review Committee of the Sydney Local Health District X15-0325. If you have any questions please email Imus9038@uni.sydney.edu.au

INVITATION TO PARTICIPATE IN RESEARCH

NURSES' AND MIDWIVES' EXPERIENCES IN SUPPORTING THE ATTACHMENT RELATIONSHIP FOR NEWBORNS WITH NEONATAL ABSTINENCE SYNDROME.

Are you a nurse or midwife who has had experience with providing care for a newborn with Neonatal Abstinence Syndrome? If so, you are invited to participate in a research project that seeks to understand your experiences.

Newborns with Neonatal Abstinence Syndrome (NAS) can often be separated from their mothers and cared for in Special Care or Intensive Care Nurseries for symptom management. In addition to the need for increased medical care in the post-natal period, newborns with NAS are also more vulnerable to experiencing difficulties with attachment and poor mental health outcomes later in life. However, little is known about the experiences of nurses and midwives in promoting the attachment relationship for babies with NAS. Your experience has the potential to inform future policy development which could better support nurses and midwives and enhance the development of an attachment relationship for infants with NAS and their caregivers.

Involvement in this research is voluntary, confidential and relatively easy. Participation involves a 20-60 minute interview which may be conducted

in person, via telephone or via Facetime, Skype or Zoom. The interview will be recorded and questions will be about your experience with caring for newborns with NAS.

If you would like more information about the research, please contact Jaylene Shannon (17806578@student.westernsydney.edu.au) or phone Dr Stacy Blythe: 45701930).

This research has been approved by the Western Sydney University Human Research Ethics Committee.

H12098 - Human Ethics Approval



MISCARRIAGE, STILLBIRTH AND NEWBORN DEATH SUPPORT ORGANISATION EXPANDS INTO NSW

In a bid to ensure that no bereaved parent in Australia is left feeling alone and isolated, miscarriage, stillbirth and newborn death support organisation – Sands Australia – has today confirmed that it will be expanding its services to New South Wales after a 16 year absence.

Although Sands operates a national support service, which means all bereaved parents in Australia, regardless of their location, can access Sands' telephone support line, email and live chat services, up until now they have only had a physical presence in five states (SA, VIC, QLD, WA, and TAS).

"Having a physical presence in NSW means that as well as accessing our national services, NSW bereaved parents can now also attend local support groups, memorials and other community events. NSW Health professionals will also benefit as we deliver training workshops and local events to help them deliver the best possible care to bereaved parents." Said Sands CEO, Andre Carvalho.

Every year, over 34,500 babies die as a result of miscarriage, stillbirth and newborn death in NSW.

The expansion comes as Sands delivers its *Strategic Plan: Providing Hope and Understanding to Bereaved Parents across Australia, 2015 – 2020*. The strategy outlines Sands' commitment to establishing a local presence in all states and territories by 2020, and today marks the start of that process.



"Over the last 35 years Sands has made great strides in supporting bereaved parents. We launched our first National 24/7 Helpline, created strong local support groups, launched our live web chat support service, distributed key resources and delivered thousands of information sessions to midwives and other healthcare professionals."

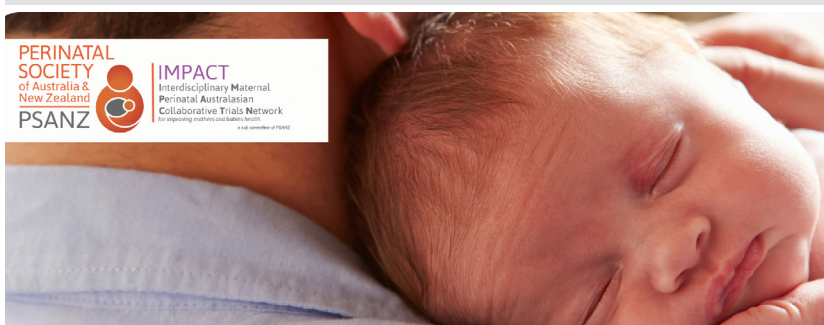
"But, we cannot rest on our laurels. There are still many bereaved parents who are suffering in isolation, feeling desperate, alone and without hope. With the move to restart operations in NSW, we are making a start on delivering on our strategy promise."

"We are reaching out to the NSW community for their support. We will soon start recruiting a team of volunteers to help us set up our operations." Concludes Carvalho.

Sands is a not-for-profit organisation that provides support and information to parents and families who experience the death of a baby, as well as offering resources and education to healthcare professionals. Sands Volunteer Parent Supporters offer a real sense of understanding and hope; they too have been through the devastating loss of a baby.



Special Events



IMPACT TRIAL CONCEPT DEVELOPMENT WORKSHOP

2-3 AUGUST, 2017

DO YOU HAVE AN IDEA FOR A CLINICAL TRIAL?

Then this Workshop will interest you.

Chris O'Brien Lifehouse Missenden Road Sydney

[Click here for more details ...](#)

2ND CONGRESS OF JOINT EUROPEAN NEONATAL SOCIETIES (JENS) IN VENICE FROM OCTOBER 31ST TO NOVEMBER 4TH, 2017

[Click here for more details](#)





➤ PSANZ 2017 AWARD WINNERS

CONGRATULATIONS TO ALL OF OUR AWARD WINNERS

New Investigator Award Winners:

- [Maria Saito-Benz](#)
- [Teresa McDonald](#)
- [Kerry Chen](#)
- [Karen McLaughlin](#)
- [Fiona Stenning](#)
- [Petra Verburg](#)
- [Alice Burnett](#)
- [Matthew Glasgow](#)

- [Hagar Haviv](#)
- [Bithi Roy](#)
- [Sarena Haji Hashim](#)
- [Shagun Narula](#)
- [Benjamin Nowotny](#)
- [Mia McLean](#)
- [Aidan Kashyap](#)
- [Adriana Marulli](#)

Nutrition Award Winner

[Wei Qi Fan](#)

Ritchie Award Winner

Aminath Azhan

Cerebral Palsy Award Winners

Caroline Crowther
Sarah Thompson

PSANZ David Henderson-Smart Award 2017

We are delighted to announce that Dr. Erin McGillick from the Ritchie Centre is the recipient of the 2017 David Henderson-Smart Award. Congratulations Erin!

REPORTS/ARTICLES FROM SOME OF OUR WINNERS

ALICE BURNETT

EXPLORING THE 'PRETERM BEHAVIOURAL PHENOTYPE' IN EXTREMELY PRETERM CHILDREN AT SCHOOL-AGE

Co-authors included George Youssef, Peter Anderson, Jeanie Cheong, Julianne Duff, Margaret Charlton, and Lex Doyle, on behalf of the Victorian Infant Collaborative Study Group.

Previous work into the behavioural outcomes of preterm children has suggested that there may be a 'preterm behavioural phenotype', comprising difficulties with attention, anxiety/internalising symptoms, and peer/social functioning. In this study, Dr Burnett and colleagues measured different aspects of behaviour and used latent profile analysis to explore whether extremely preterm children have similar behavioural outcomes to each other (an overall 'preterm behavioural phenotype'), or whether there are subgroups of children who have different profiles of behaviour. They found that individual participants fell into one of four different behavioural profiles, rather than a single pattern of behavioural strengths and difficulties.

Over half of the extremely preterm children had minimal behavioural difficulties, which is reassuring for many parents, while others had particular patterns of behaviour difficulties that are likely to benefit from different kinds of intervention or support. These findings will assist in finding early markers of later behavioural difficulties and devising interventions targeted to children's particular needs and strengths.

Dr Alice Burnett MPsych(Clin Neuro)/PhD Postdoctoral Fellow, CRE in Newborn Medicine Research Officer and Neuropsychology Team Leader, Victorian Infant Brain Studies (ViBeS), Clinical Sciences. Honorary Fellow, Department of Paediatrics, University of Melbourne

BITHI ROY

Epidermolysis Bullosa (EB) is a rare genetic disorder of skin, mucosa, eyes and nails. There is defect in the keratin protein causing skin to fall apart forming blisters; as keratin protein functions as scaffolding for skin. The incidence is 1 in every 50,000 live births. There are about a 1000 case in Australia and about 500,000 cases worldwide.

We present two rare challenging cases of neonatal EB of sufficient severity born at the Mater Hospital Sydney. They were term babies with a strong family history of EB, born by elective caesarean section. They presented at birth with cutaneous and mucosal blisters.

The cutaneous lesions were managed with multilayered wound dressing at the Special Care Nursery. Mepital dressing was applied around fingers and toes individually, to avoid digital fusion followed by Mepilex Lite dressing, to absorb the serous discharge. This was followed by PolyMem, a very soft non adhesive roll to keep dressings intact and lastly, Tubifast to further secure the dressings. Any new lesion was burst with sterile needle to prevent progression of lesion.

The 'feather touch' handling of the skin, innovative wound dressing and pain management was crucial part of management. These children also follow change in life style like using sheep skin seat cover and avoiding any contact sport.

FIONA STENNING

THE TIMING OF MATERNAL OXYTOCIN ADMINISTRATION DURING PHYSIOLOGICAL-BASED CORD CLAMPING

Oxytocin administration to the mother as the baby is being born is standard practice in Australia and New Zealand,

as well as most countries worldwide. Synthetic oxytocin is given as an injection into the leg or vein to reduce the risk of the mother bleeding at birth by causing contractions of the womb. However, the maternal administration of Syntocinon® at the time of birth occurs in conjunction with immediate clamping of the baby's umbilical cord. The timing of umbilical cord clamping appears to be of no consequence to the mother with regard to increase risk of postpartum haemorrhage or retained placenta. However, research is emerging that delaying umbilical cord clamping has benefits for the baby. A delay in cord clamping results in higher haemoglobin levels (red blood cells) and lower rates of neonatal anaemia, in infants born prematurely, it also reduces the severity of some of the consequences of preterm birth. As such, delaying umbilical cord clamping is becoming routine in delivery rooms worldwide. However, this also occurs in parallel with oxytocin administration and consequent uterine contractions. It is not known whether early oxytocin administration reduces the benefits of delayed cord clamping to the infant. Our initial study has shown that early maternal oxytocin administration and consequent uterine contractions reduce some of the benefits of delayed cord clamping in preterm babies. We are currently conducting a clinical trial at Monash health examining the effect of delaying oxytocin administration until after delayed cord clamping on oxygen levels and heart rate at birth in infants born at term.

HAGAR HAVIV

Our research looks at the rates of physician induced preterm birth (Induction of labour or prelabour Caesarean Section) in 2015 compared to 2005 at the Women's and Children's hospital in Adelaide, South Australia. Results showed a significant



increase in the rates of medically indicated preterm births in 2015 when compared to 2005. This difference was most evident in the later weeks of pregnancy. We then looked at the various indications for these deliveries, which included hypertensive disorders of pregnancy, preterm rupture of membranes and suspected fetal growth restriction. Of these, we found that the rate of preterm birth for suspected growth restriction in 2015 was double that seen in 2005. Following these findings, further research is currently underway looking into the driving force behind these changes.

KAREN MCLAUGHLIN

The FENO In Practice Study (FIPS) will examine what usual antenatal asthma management is currently offered in Australia. It will also investigate the acceptability and feasibility of implementing a FENO-based asthma management strategy in to antenatal care settings.

To date an appraisal of the current Asthma in Pregnancy guidelines has been completed using the AGREE II tool. Overall the guidelines were consistent with their recommendations but lacked specificity and validity in some areas which leave them open to interpretation.

The use of these guidelines and implementation of recommendations in antenatal asthma management will be examined through data collected via two online surveys. One survey will collect data from health professionals who currently provide antenatal care in Australia, and the other will collect data from pregnant women with a diagnosis of asthma currently or recently receiving antenatal care.

The use of a FENO-based asthma management strategy antenatally, has previously been shown to reduce the number of exacerbations experienced by women and consequently led to improved maternal and infant outcomes (MAP study 2011). A larger scale trial is currently underway again examining the use of FENO in antenatal asthma management with the primary outcome examining neonatal mortality and morbidity (BLT study). Examining the acceptability of feasibility of this strategy into antenatal care settings is therefore vital to ensure transition of this strategy into clinical practice. Video-cued, semi-structured interviews will be conducted across the sites undertaking the BLT study to determine the acceptability and feasibility of this process.

This study is being undertaken with approval from the University of Newcastle and the Hunter Medical Research Institute.

Karen Mclaughlin (Phd Candidate)

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Email: Karen.mclaughlin@uon.edu.au

KERRY CHEN

It is well known that both pain and common pharmacological analgesics may adversely affect newborn neurodevelopmental outcomes. Acupuncture is a traditional analgesic which has been used for the treatment of pain in adult and pediatric populations, but has not yet been evaluated in newborns. To investigate the safety, feasibility and efficacy of non-invasive magnetic acupuncture (MA) as an adjunctive analgesic for heel pricks in newborn infants, we conducted a single-blinded, randomised controlled pilot study (ACTRN12616001229460). 40 infants requiring heel pricks for blood collection were randomised to either MA (n=21) or placebo (P) (n=19) after parental consent. Five MA or placebo stickers were placed on auricular acupuncture sites on each ear for 3 days by an unblinded investigator. Pain responses were assessed with the Premature Infant Pain Profile (PIPP) by blinded clinicians 15 minutes before and after and during each heel prick. Infant and maternal characteristics were similar in each group. Our study found that mean (SD) PIPP scores were similar before and after heel pricks but were lower in MA infants during heel pricks (MA:5.9(3.7) v P: 8.3(4.7), p=0.04), suggesting infants receiving MA experienced less pain than those receiving placebo, during the heel prick. No differences were noted in heart rate, SpO₂ or incidence of adverse effects (e.g. local skin reactions, sticker displacement). In conclusion, auricular MA is feasible in neonates and may reduce PIPP scores during common procedures like heel pricks. Further studies are required to determine the impact of MA on other painful procedures and on neurodevelopmental outcomes, and our group is currently developing an international multicentre RCT investigating the role of MA in common painful procedures such as eye examinations for Retinopathy of Prematurity.

MARIA SAITO-BENZ

EFFECT OF ELECTIVE BLOOD TRANSFUSION ON CEREBRAL AND SOMATIC TISSUE OXYGENATION AND CARDIO-RESPIRATORY STABILITY IN INFANTS WITH ANAEMIA OF PREMATURITY

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Background: The optimal transfusion threshold for anaemia of prematurity

is currently unknown and duration of potential benefit unclear. The Wellington NICU transfusion policy is based on the restrictive transfusion thresholds used in the PINT study. We hypothesized that elective transfusion would lead to sustained improvement in tissue oxygenation and cardio-respiratory stability.

Method: Multiprobe Near Infrared Spectroscopy (Sensmart X-100, Nonin) was applied to 25 preterm infants receiving non-urgent blood transfusion. Cerebral, hepatic and muscle regional tissue oxygenation was studied before, during, immediately after, 1 and 5 days after transfusion. Cardio-respiratory stability was examined concurrently using pulse oximetry (Rad-7/8, Masimo) to determine Desaturation Index 4% (DI4) and time spent with SpO₂<90%, and Finapres (Human NIBP, ADInstruments) measurement of HR and BP.

Results: Overall, improvement in cerebral oxygenation was seen immediately after blood transfusion (76% vs. 79% p=0.0029) but this effect was not sustained 5 days after the transfusion (76% vs. 77%, p=0.8). However, in a subset of infants in whom baseline cerebral oxygenation was <78%, a sustained improvement in cerebral oxygenation was seen up to 5 days after transfusion (75% vs. 77%, p=0.035). There was no significant change in hepatic or muscle oxygenation, or in DI4, time spent with SpO₂<90%, mean HR or mean BP at any time following transfusion.

Conclusions: Elective blood transfusion, based on the current restrictive guideline, resulted in short-term, unsustained improvement in cerebral oxygenation. Further research is required to study the role of NIRS in rationalising transfusion guidelines for anaemia of prematurity.

MATTHEW GLASGOW

COST ANALYSIS COT-SIDE SCREENING METHODS FOR NEONATAL HYPOGLYCAEMIA

Neonatal hypoglycaemia is a common condition which is frequently asymptomatic, and which carries a risk of poor neurological outcome. Screening by regular measurement of blood glucose concentrations is recommended for infants at increased risk. Laboratory enzymatic methods of glucose measurement are considered the gold standard. Cot-side methods provide rapid results, but often utilise non-enzymatic glucometers which have been shown to both overestimate and underestimate blood glucose concentrations. International recommendations are that the use of non-enzymatic devices in neonates should be minimised, and if they are used as a screening method, results should be confirmed by laboratory testing. More accurate enzymatic glucometers are



available but at apparently higher costs, which deters their use.

We therefore undertook a cost analysis using a decision tree comparing bedside testing using non-enzymatic glucometers, which require abnormal results to be verified by laboratory testing, to enzymatic glucometers, which can directly inform management without re-testing.

In the primary analysis, screening using an enzymatic glucometer cost NZ\$86.94 while using a non-enzymatic glucometer cost NZ\$97.08 per baby. Sensitivity analyses showed that the cost saving of using the enzymatic glucometer was robust to most model assumptions.

Our analysis shows that a screening approach using enzymatic glucometers is likely to have lower direct costs, and also avoids the longer term risks and costs associated with false positive and false negative results. In view of their lower cost under most circumstances and greater accuracy, enzymatic glucometers should be routinely utilised for point-of-care screening for neonatal hypoglycaemia.

This project is a component of my PhD research, which involves a series of economic analyses examining the outcomes/burden of neonatal hypoglycaemia, and the costs of aspects of management both in the postnatal period and across the lifetime of the individual. Other components include a cost analysis of dextrose gel for the treatment of neonatal hypoglycaemia (showing that dextrose gel is cost saving), an analysis of the long-term cost burden of neonatal hypoglycaemia, and a cost-utility analysis of the use of dextrose gel for prevention of neonatal hypoglycaemia.

MIA MCLEAN

FLOOD-RELATED PRENATAL MATERNAL STRESS AFFECTS CHILDHOOD ANXIETY SYMPTOMATOLOGY: THE QF2011 QUEENSLAND FLOOD STUDY

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A growing body of literature suggests that maternal prenatal mood factors such as maternal anxiety and depression, predicts childhood anxiety symptoms. However, due to anxiety symptoms being in part heritable, such findings may be confounded by shared genetic contributions, passed down from mother to child. Moreover, the effects of specific types of prenatal maternal stress types have been less well studied.

In January 2011 the Australian state of Queensland experienced a severe flood that

saw 78% of the state declared a disaster zone (Queensland Floods Commission of Inquiry, 2012). This natural disaster afforded us, as researchers, the ability to examine the effect of exposure to what was an independent, sudden-onset stressor during pregnancy on women of all SES, age and personality factors. Due to the quasi-random assignment of exposure, we were able to disentangle the unique and additive effects of varying types of PNMS, on childhood anxiety symptomatology, independent of maternal psychosocial and personality factors.

Shortly after the floods, we recruited women who were pregnant at the time the flood hit, and assessed three types of PNMS: their level of objective exposure to the floods, subjective emotional stress (peritraumatic distress, peritraumatic dissociation and post-traumatic stress disorder symptoms) and cognitive appraisal of the flood's impact. Child symptoms at age 4 (N =115) were assessed using maternal report of internalizing behaviors (withdrawal, anxiety, depression and somatic complaints; Child Behavior Checklist; CBCL/1.5-5) as well as specific anxiety symptoms (Spence Preschool Anxiety Scale; SPAS).

We found that independent of a mother's emotional response to the floods and other psychosocial factors during development, the greater flood exposure a pregnant woman experienced, the greater the level of internalizing and anxiety symptoms displayed by her child at 4 years. Interestingly, earlier flood exposure was also associated with increased anxiety symptoms.

Our findings clearly have implications for pregnant women and their children following natural disasters, given that exposure to a disaster may have long-lasting programming effects on childhood anxiety.

PETRA VERBURG

LONG-TERM TRENDS IN SPONTANEOUS AND IATROGENIC LATE PRETERM BIRTH IN SOUTH AUSTRALIA – A POPULATION-BASED STUDY 1986-2014

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3. Adelaide Medical School, University of Adelaide, Australia

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Introduction

Late preterm birth (LPTB), either spontaneous or iatrogenic in labour onset, is an important cause of perinatal mortality and morbidity. We describe long term trends in spontaneous and iatrogenic LPTB in South Australia from 1986-2014.

Methods

We performed a retrospective population study of all live births from 1986-2014 recorded in the South Australian Perinatal Statistics Collection. We assessed trends in LPTB rates (34-36 weeks gestation), both spontaneous and iatrogenic (prelabour caesarean section or induction of labour), as well as common indications for iatrogenic birth [hypertensive disorders of pregnancy (HDP), small-for-gestational age (SGA) and preterm prelabour rupture of membranes (PPROM)] using Chi-square Mantel-Haenszel analyses for trends.

Results

In 539,234 births, the LPTB rate increased [3.7% (1986) to 5.4% (2014), $p < 0.001$]. While the incidences of HDP and SGA declined (HDP: 8.6%-6.9%; SGA: 12.7%-8.5%, both $p < 0.001$), the incidence of PPRM increased (1.4%-3.5%, $p < 0.001$). The proportion of LPTB in women with these conditions increased (HDP: 6.7%-12.8%; SGA 3.7%-6.5%; PPRM 35.9%-44.2%, all $p < 0.001$). LPTB with iatrogenic labour onset increased in HDP, SGA and PPRM (HDP: 69.1%-85.9%, SGA 56.7%-73.6%, PPRM 18.2%-33.0%, all $p < 0.001$).

Conclusion

In South Australia from 1986-2014, the LPTB rate has increased due to increasing iatrogenic LPTB rates in women with HDP, SGA and to a lesser extent PPRM. Whilst maternal characteristics have changed over this time, specifically age, BMI and ethnicity, improved screening technologies, particularly the recognition of the fetus with growth arrest, and improved neonatal care might explain this increase in iatrogenic late PTB but this warrants further investigation.

SARENA HAJI HASHIM

KNOWLEDGE OF SIGNS AND SYMPTOMS OF HYPERTENSIVE DISORDERS OF PREGNANCY AMONG PREGNANT WOMEN IN BRUNEI DARUSSALAM: A QUANTITATIVE STUDY

Summary of research

Background: Hypertensive disorders of pregnancy (HDP) may lead to complications for mother and baby, ranging from minor concerns through to possible death. In Brunei Darussalam, health professionals have observed that pregnant women, including those with HDP, do not always seek healthcare and may be reluctant to follow recommended treatments. One of the contributing factors may be the lack



of knowledge about the danger signs and symptoms of HDP.

Aims: Therefore, this study aims to assess the current status of knowledge of signs and symptoms of HDP among pregnant women in Brunei Darussalam.

Methods: A convenience sampling was used to recruit participants who attended their follow-up care for HDP at the three selected government hospitals in Brunei Darussalam. We distributed 230 surveys to pregnant women with HDP aged ≥ 18 years, including those women with HDP who have had other comorbid conditions such as chronic hypertension.

Results: Surveys were returned by 216 women (93.9% response rate). The survey revealed that of 216 respondents, n=166 (76.8%) were able to list the signs and/or symptoms of HDP. Nineteen percent of respondents noted that they had experienced some symptoms prior to diagnosis. The most commonly cited symptoms were dizziness (n=91, 54.8%), continuous headache (n=85, 51.2%), blurred vision (n=33, 19.8%), vomiting (n=22, 13.2%) and oedema (n=27, 16.2%). Additionally, the women's level of education or beliefs and practices were shown not to influence the findings as measured using Chi-Squared analysis. This study has provided an insight into pregnant women's knowledge about the danger signs and/or symptoms of HDP. Therefore, a considerable proportion of women were able to identify some of the danger signs and symptoms. However, generally, the respondents had low awareness of other serious signs or symptoms. Hence, a concerted effort is needed to increase pregnant women's awareness of danger signs and/or symptoms of HDP in Brunei Darussalam.

Conclusions: Therefore, interpretation of findings through the Health Belief Model may guide future culturally appropriate initiatives for education and support to women with HDP. Additionally, maternity healthcare professionals should design appropriate strategies aimed at improving Brunei Darussalam women's acceptance of appropriate healthcare when diagnosed with HDP.

SHAGUN NARULA

THE ROLE OF TROP2 IN TROPHOBLAST INVASION AND PLACENTAL DEVELOPMENT

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Background: Extravillous trophoblast (EVT) invasion into maternal endometrium is a critical process for placental development. Trop2 (trophoblast antigen 2) is a known protein marker of EVT cells and it regulates cell adhesion, invasion and proliferation in other cell types. However, its function in EVTs and role in placental development is not known.

Method: Trop2 mRNA levels were measured by real-time PCR. Trop2 protein localisation and levels were determined using fluorescent immunohistochemistry. Trop2 was overexpressed in the invasive first trimester HTR8 cell line using an overexpression vector. Cell adhesion, proliferation and invasion were measured in real-time using Xcelligence assays.

Results: In human first trimester placental tissue Trop2 was primarily localised to EVTs. Compared to cells that were transfected with a control vector, Trop2 overexpressing cells: adhered 10-25% more rapidly, proliferated 10-40% more rapidly and were more invasive (2-6 times increase in rate of invasion).

Conclusions: These results demonstrate that Trop2 is an important regulator of trophoblast cell adhesion, proliferation and invasion and suggest that Trop2 may play a role in placental formation and in clinical disorders associated with abnormal trophoblast invasion.

TERESA MACDONALD

REDUCED THIRD TRIMESTER GROWTH VELOCITY AMONG FETUSES OF A NORMAL BIRTHWEIGHT IS ASSOCIATED WITH PLACENTAL INSUFFICIENCY.

We know that babies that are small for their gestational age are at the greatest risk of stillbirth. However, half of babies that are stillborn are not small, but are born at a size considered appropriate for their gestational age.

We suspected that babies of a normal size, who display slow growth in pregnancy, may be suffering from a poorly functioning placenta, putting them at increased risk of stillbirth and so this research study was designed to look investigate this. We looked at the relationships between the rate of growth during pregnancy and different measures of placental function.

It is known that babies who are suffering from lower oxygen levels preferentially distribute more blood to their brain vessels than to other organs, and that they may have slightly higher blood flow resistance in the umbilical cord, so we measured these blood flow rates with ultrasound as an antenatal measure of placental function. It is also known that babies that have a poorly functioning placenta have less reserve to cope with labour, which is a stress test for babies, so we measured the babies' pH levels in their blood right after labour to assess this. Finally, babies with a poorly functioning placenta have less nutrition and ability to store fat during pregnancy, so we also measured babies' body fat percentage.

We found that babies with slow growth during pregnancy showed increased rates of low oxygen levels on ultrasound assessment and of low pH on assessment of their cord blood after labour, and had lower body fat percentages. We believe the results of this study highlight a previously unrecognised group of babies that may be suffering from poor placental function and are potentially at higher risk of stillbirth.

WEI FAN

EARLIER FORTIFICATION FOR LOW BIRTH WEIGHT BABIES – DOES IT MAKE A DIFFERENCE?

Providing adequate nutrition in the newborn period for preterm low birth weight infants (LBW) is pivotal for growth and development, but it is a challenge. Our randomised, prospective clinical study looked at whether outcomes could be improved by the simple approach of commencing fortified milk supplementation at an earlier stage – once total fluid intake had reached 80 ml/kg/day (day2), compared to the existing protocol of 160 ml/kg/day (day7). Our study showed that earlier fortification improves nutrition (a significant increase in protein intake and metabolism), significantly reduces the duration of post-birth weight loss (birth weight regained almost 2 days earlier), significantly reduces feeding intolerance (by almost a half) and has potential cost savings in reduced length of stay (by more than a day).