



To all our
Partners, Members
and Supporters we
wish you all a very
Merry Christmas and
Happy New Year.

This year has been
hard for all of us!
We thank you for
being a part of HDA.

We look forward to a
stronger year of HDA
programs in 2021.

Anne, Claire, Pammi, Carol
and Anna

OUR PARTNERS

PLATINUM



GOLD



University of
South Australia



SILVER



Government of South Australia
Department for Education



Women and Kids



Government of South Australia
Department for Child Protection

BRONZE



CONVENORSHIP DEPARTURE THANKS PAMMI!!



We would like to thank Associate/Professor Pammi Raghavendra who has stepped down as HDA Co-Convenor in November this year.

Pammi has been a truly wonderful asset to HDA as a research member for more than 10 years, and more recently as a member of our executive committee, steering group and of course Co-Convenor.

Pammi has presented and chaired at numerous HDA events over recent years.

In her role as Co-Convenor (January 2019 – November 2020) Pammi has brought a broad expertise and valuable experience in disability, allied health and community based sectors.

NEW CO-CONVENOR WELCOME DR ANNA KONTOS!!



Welcome to our new HDA Co-Convenor, Dr Anna Kontos!

Anna is an early career researcher within the Robinson Research Institute at the University of Adelaide and a MS McLeod Research Fellow within the Respiratory and Sleep Medicine unit at the Women's and Children's Hospital, Women's and Children's Health Network.

Anna is investigating the impact of sleep disordered breathing (sleep apnoea) on physiology during pregnancy, childhood and adolescents.

In particular, Anna is interested in integrated changes that occur to multiple physiological pathways that predispose individuals to early vascular ageing and cardiovascular disease. Her work also investigates the role that upper airway muscle tone, dental morphology and allergens plays in the disorder and whether treatment reverses or reduces any pathological consequence of sleep disordered breathing.

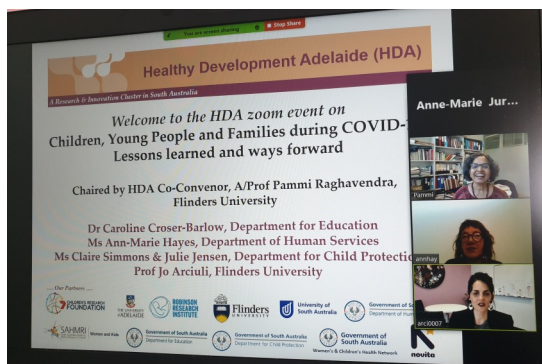
More about Anna here <https://researchers.adelaide.edu.au/profile/anna.kontos>

RECENT HDA EVENTS

The following HDA events were held online in November.

Children, Young People and Families during COVID-19: Lessons learned and ways forward

Chaired by A/Professor Pammi Raghavendra, HDA Co-Convenor, College of Nursing and Health Sciences, Flinders University.



Our speakers included:

Dr Caroline Croser-Barlow, Executive Director, Early Years and Child Development within the Department for Education on *Supporting vulnerable children during COVID-19.*

Ms Ann-Marie Hayes, Executive Director, Community & Family Services, Department of Human Services on *Innovative practice in response to COVID? better outcomes?.*

Ms Claire Simmons, Lead practitioner, Quality and Practice, Department for Child Protection and Ms Julie Jensen, Senior Manager, Disability and Development Services, Department for

Child Protection on *Child protection service delivery during COVID-19.*

Professor Joanne Arciuli, Dean of Research, College of Nursing and Health Sciences, Flinders University on *The promise of comprehensive early reading instruction and different modes of delivery for autistic children.*



5th annual HDA Women's Excellence in Research Award 2020 presentation

Chaired by Professor Claire Roberts, HDA Co-Convenor, College of Medicine and Public Health, Flinders University.

Our awardee and speaker was Dr Kylie Dunning, Hospital Research Foundation mid-career fellow from the Robinson Research Institute, University of Adelaide presenting on *A new light on diagnosing embryo health.*

Dr Kylie Dunning is motivated by creating a world where fewer couples struggle with infertility, an often invisible and stigmatised health challenge. Her research has been recognised through numerous prestigious awards including an ARC DECRA fellowship and the 2020 South Australian Tall Poppy of the Year Award.

Dr Kylie Dunning pictured here with Claire Roberts was presented with the Healthy Development Adelaide Women's Excellence in Research Award for 2020



HDA Grand Round in conjunction with The Women's and Children's Hospital, Women's and Children's Health Network was presented by Professor Maria Makrides, Deputy Director, South Australian Health and Medical Research Institute (SAHMRI) / Theme Leader for SAHMRI Women and Kids on *Omega-3 fatty acids and reducing the risk of preterm birth: who gets the most benefit?*

Chaired by Dr Jenny Fereday, Executive Director, Nursing & Midwifery, Women's and Children's Health Network.

After more than 20 years of studying how omega-3 fatty acid nutrition during pregnancy may influence pregnancy and childhood outcomes, I am delighted to share our latest data and the most recent developments in the field. Collectively, the data show that women who are deplete in omega-3 fatty acids in early pregnancy are at higher risk of early preterm birth and this risk can be significantly reduced by omega-3 supplementation. We look forward to expanding partnerships with health care providers to maximise the implementation of these findings to ultimately reduce the burden of early birth.

HDA PARTNER NEWS

CHANNEL 7 CHILDREN'S RESEARCH FOUNDATION (CRF)



Apply for a Fellowship in childhood health, welfare, or education

The Channel 7 Children's Research Foundation (CRF) is offering Research Fellowships to support mid-career researchers to pursue ground-breaking advances in childhood health, welfare, or education and build research capability in South Australia (SA).

The CRF are seeking mid-career researchers focusing on research that addresses the Fellowship theme of **Prevention and/or Management of Childhood Disability and Disease**.

Applications from scientists, clinicians, and allied health professionals are encouraged. Co-funding and hosting support from a University or recognised research organisation is required.

Available are two fixed-term, full-time Fellowships for three years (with an option for a further two years) of \$150,000 per annum to cover salary and research.

Applications close 4 December 2020. Further information on how to apply can be found at <https://crf.org.au/fellowships>

Congratulations to our HDA members in being awarded 2021 Channel 7 Children's Research Foundation Research Grants

A/Prof Dani-Louise Dixon, Flinders University

Defining endotypes in infant bronchiolitis: the first step to personalised treatment : \$93,493

Prof Rebecca Robker, Robinson Research Institute, University of Adelaide

Identifying therapies that reduce transmission of mitochondrial heteroplasmy from mother to child : \$92,000

Dr Michelle Short, Flinders University

A randomised controlled trial of cognitive behavioural therapy for insomnia in children on the Autism Spectrum : \$98,634

Dr Jacqueline Stephens, Flinders University

Optimising the early detection of ear disease and hearing impairment among Aboriginal and Torres Strait Islander children aged under 8 years : \$95,487

Dr Lesley-Anne Ey, UniSA

Children's problematic sexual behaviour in schools: identifying and addressing collaborative responses to incidents : \$99,919

HDA PARTNER NEWS ROBINSON RESEARCH INSTITUTE

The Robinson Research Institute, University of Adelaide has developed the Healthy Conception Tool in collaboration with VARTA (Victorian Assisted Reproductive Treatment Authority) for people trying for a family.

The tool provides information about fertility and what they can do to improve their chances of having a baby based on answers given in an online questionnaire.

Healthy conception tool

When trying for a baby it's important to be as healthy as possible. Whether you're a man or a woman, there are factors that can affect your chance of conceiving, as well as the health of a future pregnancy and child. If you are thinking of having a baby in the next year, see your GP for a pre-conception health check.

Further information here <https://www.yourfertility.org.au/general-resources/interactive-tools/healthy-conception-tool>

INDIGENOUS MEDIA MENTORING PROGRAM AUSTRALIAN SCIENCE MEDIA CENTRE

Following on from the success of our **Indigenous Media Mentoring program** in February 2020, we are pleased to announce our intention to re-run the program in collaboration with National Indigenous Television (NITV-SBS) on **8 and 9 of April 2021**.

We now invite Indigenous STEM researchers from around Australia to register their interest in joining us at the SBS studios in Sydney for the two days of intensive media training.

An up-to-date CV and short paragraph about yourself and your research interests to immp@smc.org.au. The closing date for expressions of interest is Monday 21 December 2020.

The training will develop practical skills in TV, radio and print media, as well as guiding discussions on the challenges and opportunities of being an Indigenous research voice in the media and on how best to navigate the media landscape. The program provides ongoing opportunities to build a media profile through avenues such as the Science Media Exchange ([Scimex.org](https://www.scimex.org)), the Australian Academy of Science and our network of science journalists. We also offer optional media placements with media partners. In the past these have included The Conversation, The Sydney Morning Herald and NITV/SBS. A flyer is attached about the program and details are also available on our website: <https://www.smc.org.au/immp>.

We seek expressions of interest from active researchers, who identify as Indigenous and work in any area of STEM:

- With at least two years postdoctoral experience (or similar experience)
- Who have an interesting research story to tell
- Want to learn how to communicate their research to the public

The small group will be mentored by Indigenous journalists and (where appropriate) Indigenous experts with media experience.

This program is proudly supported by CSL and some funding will be available to assist with travel and/or accommodation, should it be required. There are a limited number of places available.

We are also keen to develop a wider list of Indigenous research experts available to talk to the media and invite all Indigenous researchers to sign up to the Scimex database <https://www.scimex.org/register>.

HDA MEMBER NEWS - DR JODIE AVERY

SCOPING APPROPRIATE QUALITY OF LIFE DIMENSIONS FOR THE DEVELOPMENT OF A MEANINGFUL TOOL FOR PCOS



Scoping appropriate quality of life dimensions for the development of a meaningful quality of life tool for PCOS. Dr Jodie Avery, Research Fellow.

The NHMRC Centre for Research Excellence (CRE) in Polycystic Ovary Syndrome (PCOS) was the catalyst for a number of research collaborations, nationally as well as internationally. One of these was an interest in developing a new tool to assess quality of life in women with PCOS. A journal club meeting in July 2020 brought together many researchers with an interest in this area.

There are a number of PCOS quality of life tools available, but as a result of work done through the CRE PCOS, we felt we could design something much better, and that we also had the expertise to do so. Existing PCOS QoL measures may not capture the full physical, emotional, and social impact of PCOS, all of which need to be addressed within person-centred care in order to achieve the best possible health outcomes in both the short and long term.

Now with a new CRE – the *CRE for Women's Health in Reproductive Life (CRE WHiRL)*, a number of cross institutional collaborators, led by Dr Jodie Avery from the Robinson Research Institute, have received funding to progress this project in 2021. These collaborators include Dr Melanie Gibson-Helm, and Dr Stephanie Pirodda, from the Monash Centre for Health Research and Implementation (MCHRI) and Ms Geranne Jiskoot, a psychologist and PhD Candidate from Erasmus MC, Rotterdam, The Netherlands.

Patient Reported Outcome Measures (PROM) are increasingly being recognised as important in healthcare and healthcare research. One such outcome is Quality of Life (QoL), which can be measured by general or condition-specific questionnaires. The expert groups that developed the 2018 International Evidence Based Guideline for PCOS highlighted that QoL should be assessed in all clinical, health services and population health research in PCOS. This is to help us better understand the impact of PCOS on women, and the impact of existing or new treatment approaches. In healthcare, a high-quality QoL questionnaire could help to highlight women's specific priorities, and then could help to measure whether their healthcare addresses such priorities. Generic QoL questionnaires may miss some of the specific effects that PCOS has on daily life. The existing PCOS QoL questionnaires may not capture the full physical, emotional, and social impact of PCOS on daily life, for all women with PCOS (including different ages and ethnicities). This research will start by exploring with women which topics to include in a new PCOS QoL questionnaire. We will then draft a questionnaire to be fully tested with large diverse groups of women with PCOS in future research.

We hope to engage Australian, New Zealand and Dutch women in this project, then expand to the United Kingdom, and the United States, as we are highly engaged with PCOS support groups and researchers from these countries. Once we develop the PCOS instrument, we hope to expand to other women's chronic reproductive health conditions such as endometriosis, early menopause and infertility.

You can check out about the new CRE WHiRL here: <https://whirlcre.edu.au/>

HDA RESEARCH MEMBER PROFILE - DR MICHELLE SHORT SCHOOL OF PSYCHOLOGY, FLINDERS UNIVERSITY



Dr Michelle Short is a clinical psychologist who works in private practice and a research fellow in the School of Psychology at Flinders University.

Michelle completed her PhD at Flinders University under the supervision of Prof Michael Gradisar. Following this, Michelle worked as a postdoctoral research fellow and lecturer at the University of South Australia. Michelle was sole Chief Investigator of a Bushfire CRC project examining the impact of novel shift work rosters on firefighters during wildfire emergencies. Michelle taught into courses including Research Methods and Psychophysiology of Sleep. One of the highlights of her research career has been supervising research students. Michelle's desire to provide good quality mentorship to others has been borne from her own good fortune in having intellectually rigorous and supportive mentors. This began when she was an honours student working with Dr Helen Wright and Prof Leon Lack and continued with her PhD with Prof Michael Gradisar and since then, with world leaders in the field of sleep and circadian rhythms, including Prof Mary Carskadon at Brown University and Prof Peter Achermann at the University of Zurich.

Michelle's research has primarily focussed on sleep and circadian rhythms in adolescents and the impact of insufficient sleep on mood and cognition, while her clinical work involves working with teens and adults on the autism spectrum. These days, however, her research and clinical worlds are colliding much more. Together with Prof Robyn Young, Michelle was recently awarded a Channel 7 Children's Research Foundation grant to examine the effect of Cognitive Behaviour Therapy for insomnia in children with autism. This project will run over the next two years and help to determine whether the gold standard treatment for insomnia is also effective in children with autism. Michelle has also been fortunate to have received support and funding from the Australasian Sleep Association. Specifically, awards from the Rob Pierce Grant in Aid and the Helen Bearpark memorial scholarship have allowed Michelle to work with world leaders on innovative projects, including estimating sleep need in adolescents using dose-response modelling and evaluating whether the sleep homeostatic system of adolescents responds to sleep deprivation differently to adults.

✉ michelle.short@flinders.edu.au

VEGKIT: HOW CAN WE GET KIDS TO EAT MORE VEGETABLES?



We know that most Australian children do not eat enough vegetables. Only 6.3% of Australian children are eating the amount of vegetables recommended in the Australian Dietary Guidelines. Increasing children's vegetable intake cannot be achieved by one group alone. Large-scale improvements can only be realised when all those who influence children's eating habits are involved.

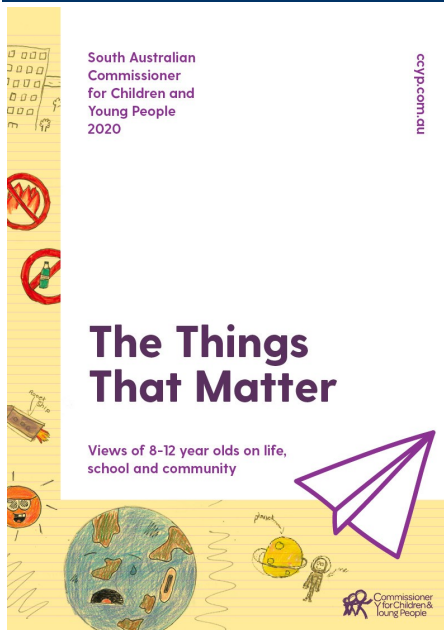
VegKIT project partners CSIRO, Flinders University and Nutrition Australia are excited to share with you **8 NEW BEST PRACTICE USER GUIDES**.

The VegKIT USER GUIDES are evidence-based, easy to understand, practical guides that have been expertly developed for the many settings that can influence vegetable intake, including: long day care centres, primary schools, out-of-school hours care (OSHC), government, research institutes and industry.

The VegKIT USER GUIDES are for those who may want to update existing initiatives or develop new programs or activities to increase children's vegetable intake. You can view and download all the VegKIT USER GUIDES from www.vegkit.com.au.

We trust that you will find these guides useful to support educators, carers and families in encouraging children to eat more vegetables. If you have any queries or would like more information, please email the VegKIT service team vegkit@nutritionaustralia.org

COMMISSIONER FOR CHILDREN AND YOUNG PEOPLE SA REPORT - THE THINGS THAT MATTER



As SA Commissioner for Children and Young People, I am committed to creating opportunities for kids to participate and express their opinions. However, children between the ages of 8 and 12 routinely tell me that they have few opportunities to have a say.

Last year, I sent thousands of postcards to 8 to 12 year olds in schools around SA. My purpose was to hear directly from this group what is important to them.

I received 8,429 postcards back and my latest report "The Things that Matter" summarises their aspirations, concerns and what they would change if they were the "boss of SA".

I invite you to read the report, reflect and act upon the contributions provided by these children. Go here to read the report <https://www.ccyp.com.au/ccyp-reports>

Helen Connolly
SA Commissioner for Children and Young People

CHILD DEVELOPMENT COUNCIL

Australian researchers find the secret ingredient to help children thrive – respect

The world's first data-driven study of parenting support based on the Respectful Approach intervention, finds that when parents treat young children as capable and independent, their stress levels fall dramatically.

Kids become food adventurers in new veggie program from CSIRO

The CSIRO Taste & Learn program is the result of research into how to get children to eat vegetables. After a successful trial in 16 South Australian schools the program is now freely available for teachers and parents.

Journey of Wellbeing: A Preliminary Aboriginal Model of Care

The Journey of Wellbeing outlines an Aboriginal social and emotional wellbeing model of care that emphasises the individual at the core of a healing plan.

Making space for learning resources

The Centre for Trauma Aware and Responsive Education is a central hub for information, training and resources for teachers, early childhood professionals and educational leaders.

Female-led Indigenous tech company connects youth with Elders in new app

Strengthening community connections, the Visual Dreaming app, which has been tested in both juvenile justice and out-of-home care systems, links young people and Elders to support individuals' wellbeing.

Five new interactive data snapshots of children and young people in South Australia are now available.

- Health snapshot: fast food consumption by children and young people under 18 years.
- Safety snapshot: victims of assault (excluding sexual assault) rates for children and young people under 20 years.
- Wellbeing snapshot: self-reporting by 15 to 19 year olds in terms of feeling concerned about body image.
- Education snapshot: proportion of Year 6 students at or above the nationally recognised proficient standard for science literacy.
- Citizenship snapshot: proportion of 15 to 19-year-olds providing unpaid assistance to another person with disability.

Further information at www.childrensa.sa.gov.au

**PARTICIPANTS NEEDED FOR RESEARCH STUDY:
EXPLORING HOW PACKAGING AND MARKETING INFLUENCES FOOD
AND MILK PURCHASES FOR TODDLERS**

Calling Australian parents and caregivers with a toddler aged 12-36 months!

Be part of an Institute for Physical Activity and Nutrition (IPAN), Deakin University research project exploring how packaging and marketing influences food and milk purchases for toddlers.

Take a 20 minute survey – you could win a WISH voucher: <http://bit.ly/2F0jMKg>



**What influences
parents and
caregivers when
purchasing
packaged foods
and milks for
toddlers?**

ABA Research Approval Number 2020-6



Lottery to support ACCM

The Australian Council on Children and the Media (ACCM) is raising funds through the 2020 People's Choice Community Lottery. Prizes include cars, and a house.

Tickets are \$2 each with 100% of each ticket sold going directly to the ACCM. Therefore, this is a valuable fund-raiser now that ACCM movie and app review services are not receiving SA government funding.

Tickets are being sold online only and close 19 February 2021.
The link for ACCM is <https://bit.ly/33Ftrja>

PARTICIPANTS NEEDED FOR RESEARCH STUDY: CONSUMER PERSPECTIVES OF PREGNANCY COUNSELLING AND EDUCATION IN WOMEN WITH KIDNEY DISEASE

We are currently conducting a survey on “**Consumer perspectives of pregnancy counselling and education in women with kidney disease**”.

We are looking for **Australian women diagnosed with kidney disease and their partners/family members**. The survey questions will be about kidney disease and pregnancy education.



Government of South Australia
SA Health



ANZ
DATA
CONSUMER
PERSPECTIVES
RESEARCH

What do you want to know and how do you want to know about it?

Consumer perspectives of **PREGNANCY COUNSELLING** and **EDUCATION** in
Australian women with kidney disease: a national survey



We are looking for Australian women diagnosed with kidney disease and their partners/family members. We are conducting a survey study looking to understand their thoughts and experiences on current pregnancy education, information needs and preferences.

If you are a woman aged 18 years and over and diagnosed with kidney disease (or woman's partner/family members), you can help us with this survey study.

This survey will take approximately 15-20 minutes. The survey questions will be about kidney disease and pregnancy education.

If you are interested in completing this survey, please visit
<https://www.anzdata.org.au/anzdata/resources/for-patients/consumer-perspective-surveys/>
and follow the icons or follow the QR codes below.



QR code for women's survey



QR code for partner/family member's survey

For any questions about the research study, please contact A/Prof Shilpanjali Jesudason (Shilpa.Jesudason@sa.gov.au) or Dr Belinda Stallard (Belinda.Stallard@health.qld.gov.au). This research has been reviewed by the Central Adelaide Local Health Network Ethics Committee.

V2.0
(23/09/2020)

A BETTER START TO LIFE FOR PRETERM BABIES

Media Release - 26 October, SAHMRI Women and Kids



Preterm babies could be given a better start to life thanks to research at SAHMRI that's being supported by the Ramaciotti Foundation's 2020 Health Investment Grants.

Led by Associate Professor Alice Rumbold and Associate Professor Amy Keir from SAHMRI Women and Kids, this project will investigate whether donor human milk can improve the nutrition and growth of moderate-to-late preterm infants who are born between 32 and 36 weeks of pregnancy.

"When mothers of very preterm babies born before 32 weeks have difficulty breastfeeding, it's become standard practice to give pasteurised donor human milk and we know this improves health outcomes," Associate Professor Keir said.

"Currently though, it is not given to moderate-to-late preterm infants as the benefits for this group have not been studied."

Each year in Australia almost 10 % of babies arrive too soon. Babies born between 32 and 36 weeks

make up the majority of these births. They often have difficulty breastfeeding and their mothers can find it hard to produce enough breast milk.

"They are often given infant formula when there is not enough maternal breast milk available," Associate Professor Rumbold said.

"This can be difficult to digest for these babies as their gut is often not fully developed. We desperately need well-designed studies to answer key questions about whether donor human milk will give them a healthier start to life and support their mothers to begin or continue breastfeeding."

SAHMRI is partnering with Australian Red Cross Lifeblood to undertake this potentially life-changing research. Donated milk is currently prioritised for extremely and very preterm infants but researchers hope this new project will determine whether there is a benefit in making it available for all babies who arrive too soon.

"We're so grateful to the Ramaciotti Health Investment Grant Board for recognising this vital work and providing the funding to make it happen," Associate Professor Rumbold said.

"This kind of support not only helps us directly but enables us to leverage additional funding from other partners and benefactors."

Complications relating to preterm birth are the leading cause of disability in Australian children aged under five years old. Infants born moderate to late preterm are at increased risk of neurological, behavioural and psychiatric problems, with the impact lasting well into adulthood.

Families in Australia Survey - Towards COVID Normal

The Australian Institute of Family Studies (AIFS) wants to understand what family life is like now the initial crisis of COVID-19 has passed.

The survey, only open until mid December will take 20–25 minutes to complete, but it may take less or more than that depending on your circumstances.

As a thank you for your time, at the conclusion of the survey, you will have an opportunity to opt into a random draw for **one of five \$500 shopping vouchers**.

Insights from the survey will be shared with government decision makers and service providers. They will help inform decisions on family policy programs and initiatives.

Everyone is part of a family, and every family matters. Make your experience count. Do the survey today and share it through your networks.

Go to survey here <https://aifs.gov.au/fia-survey-landing>

CHILDREN'S SPECIAL NEEDS FOCUS OF CHANNEL 7 GRANTS

Media Release - 27 October, Flinders University



Seven new Flinders University research projects have been funded by the Channel 7 Children's Research Foundation.

They include support for special studies to help homeless, at-risk, migrant and autistic children, Indigenous health, and more.

Nurse practitioners working with social service agencies is one way to help the estimated 22% of Australian children living in temporary or precarious living conditions, with families hit hard by unemployment and other problems created by the pandemic.

These children – some skipping health checks, vaccinations and even nutritional meals – may not have regular doctor appointments, and poorer access to health services, leading to more physical and mental health issues and emergency department presentations.

A pilot part-time nurse practitioner program, led by Flinders University child health experts in partnership with UnitingCare Wesley Bowden (UCWB), will expand to two other Adelaide metropolitan sites with support from the latest Channel 7 Children's Research Foundation grant round.

The Channel 7 Children's Research Foundation 2021 Grant Round will provide assistance to 18 projects in total that will channel \$1.5 million in funding into SA-led research into children's health, education and welfare. This latest round focused on priority areas of children's mental health, pro-

tection, obesity and the effects of social determinants.

Project leader, Flinders University senior lecturer Dr Yvonne Parry, says the grant will provide more early intervention and health support for marginalised families in a setting on the 'coalface' where nurses can "operate in their full scope of practice".

The program, currently available at UCWB's Marion office, will extend to two other sites, and give Flinders researchers insights into areas of demand and health needs in other metropolitan areas.

"In the past year, 74 children have been seen by a specialist paediatric nurse at Marion, where children and their families who engage with UCWB's homelessness services have access to professional and free health services," Dr Parry says.

UCWB's homelessness services support about 700 people each year of which around 150 are children aged under nine. UCWB chief executive Ms Fiona Kelly says extending the nurse practitioner service to additional locations will make it easier for families to access free healthcare while going through extremely difficult times.

"Having a nurse practitioner working along side our social workers will enable us to intervene early to disrupt patterns of ill health for these families," says Ms Kelly.

"These structured, community embedded interventions by a nurse practitioner with the skills to provide advanced paediatric full health assessments of children aged 0-18 living in housing instability, provides important health pathways to ensure their development and long-term wellbeing," says Dr Parry, from Flinders' College of Nursing and Health Sciences Caring Futures Institute which provided funding for the pilot.

Details of the seven grants awarded to Flinders University projects running from 2021-22 are:

LINKING homeless children and their families to community health and wellbeing services: Using a Nurse Practitioner model of care to improve child health outcomes (led by Dr Yvonne Parry – College of Nursing and Health Sciences).

DEFINING endotypes in infant bronchiolitis: the first step toward personalised treatment (led by Associate Professor Dani Dixon – College of Medicine and Public Health)

CHILDREN'S SPECIAL NEEDS FOCUS OF CHANNEL 7 GRANTS...CONTINUED

Continued....

Bronchiolitis is the most common severe respiratory tract illness in infants and remains the dominant cause of infant hospitalisation. There is no specific treatment apart from respiratory support as disease mechanisms are unknown. Bronchiolitis is predominantly caused by viral infections that induce an immune response which varies between patients. We, and others, have found measurable biomarkers associated variably with severity, length and chronic morbidity of bronchiolitis. By modelling clinical characteristics with combinations of these biomarkers we aim to be able to identify representative cohorts (endotypes) of bronchiolitis as a first step toward personalised treatment regimens, enhancing individual care and recovery.

CREATING positive educational futures for young people who are at risk of, or are already in, out-of-home care (Dr Priscilla Dunk-West – College of Education, Psychology and Social Work)

The link between child abuse and related trauma on young people's educational engagement is clear. Statutory removal into out-of-home care can lead to behavioural issues that result in school exclusion or disengagement. This project applies an educational intervention to work with young people aged 14-17 at risk of, or who are already in, out-of-home care. Using a tailored, trauma-informed approach to education will improve future employment prospects and wellbeing for this cohort by helping them to feel hopeful about their futures and competent heading into independent living.

DOES maternal obesity drive childhood obesity through interactions between the gut microbiome and gut endocrine cells? (Professor Damien Keating – College of Medicine and Public Health)

There is clear evidence that children born to obese mothers have increased obesity and cardiac problems in childhood and beyond. However, little is understood about how this occurs. This project will undertake proof of concept experiments that will test whether interactions between the gut microbiome and neighbouring endocrine cells lining the gut wall drive these effects. We will combine molecular genetics, pharmacology, diet perturbations and faecal matter transfer in mice to determine whether interventions targeting the gut microbiome and gut-derived hormones can prevent childhood obesity in progeny derived from obese mothers.

A **RANDOMISED** controlled trial of cognitive behavioural therapy for **insomnia in children on the autism spectrum** (Dr Michelle Short – College of Education, Psychology and Social Work)

Children with autism experience a markedly higher prevalence of sleep problems than their peers (78% versus 26%), predominantly, insomnia (Couturier et al., 2005). Thus, research into sleep problems is a core recommendation in NICE autism guidelines for children. This research will be a world-first clinical randomized controlled trial testing the efficacy of the gold standard insomnia treatment, Cognitive Behaviour Therapy for insomnia (CBTi) including sleep restriction in children with autism. Autistic children with co-occurring insomnia have significantly worse outcomes than those without. Untreated, insomnia frequently has a chronic course, impacting school, family, social, mental health and vocational outcomes.

OPTIMISING the early detection of **ear disease and hearing impairment** among Aboriginal and Torres Strait Islander children aged under 8 years (led by Dr Jacqueline Stephens – College of Medicine and Public Health)

All children should be able to hear well. However, Aboriginal and Torres Strait Islander children experience some of the highest levels of ear disease and hearing impairment in the world which can lead to lifelong consequences. In South Australia, children under 8 years undergo hearing assessments coordinated by a state-wide program lead by Aboriginal Health Council of South Australia. We propose a modification to current assessment protocols by replacing time consuming and technical audiometry with simpler and quicker otoacoustic emission testing in a bid to increase testing rates and increase the early detection and expedited care for these children.

SUPPORTING mental health and wellbeing for children from **migrant and refugee backgrounds with disability** (Associate Professor Anna Ziersch – Southgate Institute for Health, Society and Equity, College of Medicine and Public Health)

Refugee children experience higher rates of disability, including mental health and developmental disorders, than non-refugee children. In addition, migrant and refugee children with disability can experience negative mental health impacts as a result of their disability. They also face multiple potential service access barriers including issues with diagnosis, language and service navigation, a lack of culturally responsive services, and varying service eligibility – however, there is limited research examining this. This project will examine mental health support needs and engagement with services, and provide recommendations for promoting mental health and wellbeing for migrant and refugee children and their carers.

UNIVERSITY OF ADELAIDE USING MACHINE LEARNING FOR ENDOMETRIOSIS DIAGNOSIS

Media Release - 9 November, The Advertiser



Adelaide researchers are working on a less invasive way to diagnose endometriosis and prevent keyhole surgery.

Experts in reproductive health at the Robinson Research Institute are working with the Australian Institute for Machine Learning to teach computers how to search scans for signs of the disease.

As University of Adelaide A/Professor Louise Hull explains, gynaecologists with extra training have begun using ultrasound scans to detect endometriosis but these specialist skills are rare.

Some surgeons also use MRI (magnetic resonance imaging) scans to plan their operations. But artificial intelligence has the potential to combine the two, giving doctors access to information that has never been available before.

"We're hoping we can give them a platform, another way of looking, that's digital," she said. "And then if there's something coming up they can refer to a specialist, but it just allows more accessibility, we're really hoping that it would be something that, anyone could download their scans and MRIs on-to, and get some kind of an answer."

Endometriosis is the abnormal growth of cells where tissue similar to that which normally lines the uterus grows outside the uterus, often on the ovaries and fallopian tubes.

Having spent decades searching for answers, Libby Trainor-Parker, 43, says she's excited about the technology's potential to save many women from the pain and suffering including mental anguish that she's had to endure.

"I was having symptoms when I was 14, and was not diagnosed until I was 36, so that's a long, long time to be going to doctors and being misdiagnosed with all sorts of things," she said. "If it was as easy as having a scan, rather than diagnostic surgery, that would be something that doctors would probably prefer, so diagnosis would be a lot quicker."

So far, using a diagnostic dataset as a training sample, Professor Gustavo Carneiro has built a

computer program that can read specialist scans and recognise the imaging markers of endometriosis.

These can include lesions where tissues of the bowel and uterus have become stuck together, rather than sliding past each other. The diagnostic accuracy is now approaching that of a specialist doctor and will tend to improve over time.

"Machine learning is an iterative process," Professor Carneiro said. "As you give more and more training samples, the accuracy of the system improves."

The University's Robinson Research Institute is calling for volunteers to take part in the next phase of the study.

Email: endostudy@adelaide.edu.au or phone 0450 534 950 if you have had (or will have) gynaecological scans, or will have diagnostic surgery and want to be involved in this research.

COMMON CONDITION

One in ten women experience endometriosis, which occurs when some of the tissue similar to the lining of the uterus (womb), called the endometrium, grows outside of the uterus.

University of Adelaide A/Professor Louise Hull says the treatment depends on the symptoms, which can be many and varied.

"We think that the triggering event is when you get a period, the tissue breaks down and leaves your body, but in endometriosis, the tissue breaks down, and the immune system has to come and remove the cells, and that causes some inflammation and pain and swelling and bloating.

"Now once that happens, a nerve in your back, called the dorsal root ganglion gets activated. And that then can cause sensitisation of all the pelvic organs, so people can get bladder pain, bowel pain, back pain or pain with intercourse. And they can also have the muscles of the pelvic floor spasm, and that gives people stabbing pain.

"And then when your brain gets sensitised as well, and that's where you get headaches and fatigue and vomiting and low mood. And so you have to unpick all those symptoms."

For stabbing pain, physiotherapy is often the best option. For bladder pain, you might need to you know get some neurological therapy, for bowel pain you might need some dietary control, so different pains need different things.

Surgery tries to remove the triggering event.

AUSTRALIAN EARLY DEVELOPMENT CENSUS VIRTUAL CONFERENCE, 15-19 MARCH 2021



Our Children
Our Communities
Our Future

TRENDS IN CHILD DEVELOPMENT: THE FUTURE OF AUSTRALIA

HOSTED BY



“Share your work to keep building Australia’s early years evidence base”

In Australia, our world class national triennial census, provides a picture of the development of children in Australia at the start of school. Across the country the data is used to shape practices and policies for children. Present your work at the conference, hear how others have been using the data, and make new connections to foster collaborations and innovations.

To enable us to connect at this critical time we will be holding the conference virtually, with opportunities to meet, communicate, learn, and engage with a diverse audience from a range of professional backgrounds. Whilst we are all still discovering how to navigate this virtual world, here are some resources and videos to give you an idea of how the conference platform will work for presenters and attendees.

Community :: Presentations are invited that share how local initiatives have been informed by AEDC data to drive change for children, families and communities. Share your successes, challenges, and learnings about what has worked to improve the lives of children and families.

Education (ECEC & Schools) :: Presentations are invited that share the ways in which Early Childhood Education and Care (ECEC) and schools have interrogated and connected AEDC data with context and place. Share programs or initiatives which have worked or aimed to enhance practices to ensure all children are able to connect with and benefit from learning and development opportunities.

Government/Policy :: Presentations are invited which discuss the ways in which trends in the data have been interrogated, policies examined and changes made to ensure our health, social services and education systems and services are responsive and informed by evidence.

Research :: Presentations are invited from researchers who have used AEDC, EDI or other data in innovative ways to explore factors impacting on or impacted by children’s development in the early years.

For conference info: aedcconference.com.au or contact mail@conferencedesign.com.au

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