1st Western Pacific Regional Preconception Health Network Conference

Exploring Challenges, Opportunities and Partnerships to Advance Preconception Health and Care in the Western Pacific

(INAUGURAL HYBRID CONFERENCE)

MONASH UNIVERSITY
WESTERN PACIFIC PRECONCEPTION HEALTH NETWORK

22 - 23 NOVEMBER 2025 | 8AM-5PM

Plenary Hall 1, Ground Floor, Building 2
Monash University Malaysia (Sunway Campus)

Conference Program and Abstract Book

A collaboration between:

MONASH University | Western Pacific Preconception Health Network

Sponsors:

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CONFERENCE PROGRAM DAY 1

Pre-Conference Workshops

Registration	8.15am – 9.00am
HiPPP EMCR Session Dr Briony Hill and Dr Vanessa Shrewsbury	9.00am – 10.30am
Morning tea + Poster viewing	10:30am - 11.00am
PCH indicators workshop: screening tools and big data Prof Kirsten Black and Assoc Prof Jacqueline Boyle	11.00am – 12:30pm
Lunch + Poster viewing	12.30pm - 1.15pm
Conference Co-Chairs Welcome Associate Professor Jacqueline Boyle and Associate Professor Nisha Angela	1.15pm – 1.25pm
Opening Address Ms Debbie Muirhead	1.25pm – 1.40pm
Keynote Presentation: Clinical Assistant Prof Ku Chee Wai, Singapore Reframing Care and Services to Improve Preconception health	1.40pm – 2.00pm

For more information, please click here

CONFERENCE PROGRAM DAY 1

Preconception Health in the Pacific — 2.00pm – 2.10pm
Chair: Assoc Prof Nisha Angela
Dr Ulai Tapa Fidow, President PSRH, Online

Panel: focus on regional policies and current practices — 2.10pm – 3:10pm
Chair: Meera Siva Soathy
Dr Muniswaran Ganeshan, Malaysia
Clinical Assistant Professor Ku Chee Wai, Singapore
Associate Professor Eri Maeda, Japan
Associate Professor Jacqueline Boyle, Australia
Ms Ana Thomson, Fiji

Afternoon Break + Poster viewing — 3.10pm – 3.30pm

Climate, Environment and Preconception Health — 3.30pm – 4.00pm
Chair: Clinical Assistant Professor Ku Chee Wai
Dr Makiko Mitsunami, Japan
Association between ambient air pollution and risk of polycystic ovary syndrome from preconception to pre-menarche using an observational study

Networking Drinks + Poster viewing — 4.00pm – 5.00pm

For more information, please click here

CONFERENCE PROGRAM DAY 2

Young Investigator Presentations — 8.00am – 9.00am
Chair: Dr Asvini K Subasinghe and Ms Peng Xue

Ms Negin Mirzaei Damabi, Australia
Preconception Sexual Health Disparities Among Migrant and Refugee Women in Australia: A National Survey Compared with Australian-Born Counterparts

Mr Tristan Carter, Australia
The health behaviours of Australian males before fatherhood

Ms Shuxian Liu, Japan
Preconception Educational Interventions for Women: Current Landscape, Gaps and Future Directions — A Scoping Review

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Youth Panel: International Planned Parenthood Federation — 9.00am – 10.00am

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Morning Tea + Poster viewing — 10.00am – 10.30am

Interpregnancy Health and Wellbeing — 10.30am – 11.15am
Chair: Dr Edwina Dorney

Professor Kirsten Black, Australia
Interpregnancy care – an opportunity to grasp

Dr Nurzalinda Zalbahar, Malaysia
Factors associated with HRQoL among postpartum mothers in selected health clinics in Klang Valley

Dr Ida Dalina Bt Noordin, Malaysia
Reproductive Women's Health - Maternal care & beyond

For more information, please click here

CONFERENCE PROGRAM DAY 2

Men's Preconception Health — 11.15am – 12.00pm

Chair: Assistant Professor Loy See Ling

Dr Pek Jun Wei, Singapore
Metabolic health influences sperm motility via spermiogenesis gene expression

Dr Lauren Francis, Australia
Preconception modifiable health and behavioural risks for adverse pregnancy and offspring outcomes: Prevalence in Australian men

Dr Ebony Biden, Australia
Preconception Care Guidelines to Promote Future Fathers' Mental Health

Dr Candida Vaz, Singapore
Short-term diet intervention comprising of olive oil, vitamin D, and omega-3 fatty acids alters the small non-coding RNA landscape of human sperm

Lunch + Poster viewing — 12.00pm – 12.45pm

Nutrition — 12.45pm – 1.30pm

Chair: Dr Siew Lim

Assistant Professor Loy See Ling, Singapore
A New Model of Care for Maternal and Child Health: The Healthy Early Life Moments in Singapore (HELMS) programme

Dr Mok Kai Ting, Singapore
Relationships Between Mental Health, Chrononutrition, and Eating Behaviour among Preconception Women in Singapore

Professor Baeg-Ju Na, South Korea
Community-Based Preconception Care for Couples of Childbearing Age in Seoul

Professor Jung Yeol Han, South Korea
Is preconception folic acid intake associated with modifiable risk factors relevant to preconception care?

Associate Professor Snigdha Misra, Malaysia
Dietary Challenges and Opportunities to Improve Preconception Nutrition in Low- and Middle-Income Settings of the Western Pacific

For more information, please click here

CONFERENCE PROGRAM DAY 2

Non-communicable diseases — 1.30pm – 2.15pm

Chair: Professor Kirsten Black

Dr Karaponi Okesene-Gafa, New Zealand

Can Co-Design Improve Management of Diabetes in Pregnancy for Pasifika Women?

Dr Asako Mito, Japan

Feasibility Study on the Use of the Preconception Care–Focused App MyPrecca®

Dr Seow Neng Chan, Singapore

Exosomal RNAs as potential biomarkers for preconception health assessment

Mental Health — 2.15pm – 2:35pm

Chair: Dr Areni Altun

Associate Professor Amie Steel, Australia

Naturopaths' approach to primary care management of preconception mental health

Ms Yordanka Berg Blanc, Australia

Preconception care integrating a psychosocial lens: A midwifery perspective

Preconception Health Promotion — 2.35pm – 3.00pm

Chair: Dr Vithya Velaithan

Dr Asvini Subasinghe, Australia

Co-creating preconception health content for an Artificial Intelligence driven digital platform for women from priority populations

Dr Nitik Ram, Fiji

Preconception Care and Congenital Birth Defects in Fiji – A Focus at CWMH

Young Investigator Award: — 3.00pm – 3.10pm

Associate Professor Jacqueline Boyle

Afternoon Tea + Poster viewing — 3.10pm – 3.30pm

Collaborative Networking: Future Directions — 3.30pm – 4.30pm

Assoc Prof Jacqueline Boyle and Assoc Prof Nisha Angela

For more information, please click here

Keynote speaker: Clinical Assistant Prof Ku Chee Wai

Reframing Care and Services to Improve Preconception health

Consultant
Reproductive Medicine
KK Women's and Children's Hospital, Singapore

Clinical Assistant Professor Ku Chee Wai is a Consultant in the Department of Reproductive Medicine at KK Women's and Children's Hospital.

He received both his MD and PhD from Duke-NUS Medical School, reflecting his deep commitment to medical research and clinical practice.

He is passionate about maternal and child health, emphasizing a life course approach to health. His interests include preconception health and early pregnancy complications, and he is dedicated to innovation and harnessing the potential of mobile health interventions to improve metabolic and mental health of mothers, fathers, and children.

Climate, Environment and Preconception Health

Association between ambient air pollution and risk of polycystic ovary syndrome from preconception to pre-menarche using an observational study

Makiko Mitsunami,[1,2] Elizabeth Peebles,[2] Boya Zhang,[2,3] Jie Chen,[2,3] Brent A. Coull,[4] Tamarra James-Todd,[2,5] Jorge E. Chavarro,[3,5,6] Jaime E. Hart,[2,3] Francine Laden,[2,3,5] Shruthi Mahalingaiah[2,5,7]

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4. Department of Biostatistics, Harvard T.H. Chan School of Public Health, Boston, USA
5. Department of Epidemiology, Harvard T.H. Chan School of Public Health, Boston, USA
6. Department of Nutrition, Harvard T.H. Chan School of Public Health, Boston, USA
7. Division of Reproductive Endocrinology and Infertility, Department of Obstetrics and Gynecology, Massachusetts General Hospital, Boston, USA

Makiko Mitsunami is a board-certified obstetrician and gynecologist, Deputy Chief of Health Informatics division, and a member of the Preconception Care Center at the Integrated Center for Women's Health, National Center for Child Health and Development. She investigates how lifestyle and environment affect reproductive health and implements preconception care.

Abstracts:

Introduction: Polycystic ovary syndrome (PCOS) is an endocrine disorder with reproductive and metabolic complications. Evidence suggests some environmental toxins influence PCOS development, but the impact of ambient air pollution (AP) exposure during sensitive developmental periods on PCOS risk remains unclear.

Aims: To investigate the association between exposure to ambient AP (particulate matter (PM)2.5, PM2.5-10, PM10, and nitrogen dioxide (NO2)) from preconception to pre-menarche and the risk of PCOS.

Methods: We analyzed data from 3,712 females born between 1989 and 1994 in the Growing Up Today Study 2 (GUTS2), an ongoing U.S. cohort initiated in 2004. Monthly levels of PM (≤2.5, 2.5–10, ≤10 μm) and NO_2 were estimated using nationwide spatiotemporal models and linked to participants by biennially updated maternal addresses. The conception month was estimated from gestational age at delivery. Exposure periods included preconception (three months before conception), gestation (stratified by trimesters), and childhood (birth to menarche), which was subdivided into pre-puberty (birth to two years before menarche) and pre-menarche (two years before menarche). We averaged monthly AP levels for each period. PCOS was self-reported via questionnaires. Cox proportional hazards models with inverse probability weighting estimated hazard ratios (HRs) for PCOS per interquartile range increase in AP exposure.

Results: First trimester PM2.5 exposure was associated with higher PCOS risk (aHR 1.38, 95% CI: 1.03–1.85 per 5.4 μg/m³). Other exposures, aside from a suggestive association for first trimester PM10, were unrelated to PCOS. Discussion: These findings suggest that higher PM2.5 exposure in the first trimester may increase PCOS risk.

Young Investigator Presentations

Preconception Sexual Health Disparities Among Migrant and Refugee Women in Australia: A National Survey Compared with Australian-Born Counterparts

Negin Mirzaei Damabi,[1,2] Mumtaz Begum,[3,4] Jodie C. Avery,[1,3] Salima Meherali,[5] Zohra S. Lassi[1,2]

1. Robinson Research Institute, Faculty of Health and Medical Sciences, University of Adelaide, SA 5006, Australia
2. School of Public Health, Faculty of Health and Medical Sciences, University of Adelaide, SA 5000, Australia
3. Adelaide Medical School, Faculty of Health and Medical Sciences, University of Adelaide, SA 5000, Australia
4. Life Course and Intergenerational Health Research Group, Faculty of Health and Medical Sciences, University of Adelaide, SA 5005, Australia
5. Faculty of Nursing, University of Alberta, Edmonton, Canada

Negin Mirzaei Damabi is a dedicated public health researcher with a Bachelor's and Master's degree in Midwifery. Currently pursuing a PhD in Public Health at the University of Adelaide, she is committed to improving sexual health outcomes among marginalised communities through multidisciplinary expertise and rigorous research to drive meaningful change.

Abstracts:

Introduction: Sexual health is an important but often under-recognised component of reproductive health that can undermine preconception care engagement, contraceptive decision-making, and pregnancy planning. Among migrant and refugee women, cultural and structural barriers may further limit access to sexual health support and comprehensive preconception services.

Aims: This study examined sexual health among migrant and refugee women in Australia, compared it with Australian-born women, and identified socio-demographic factors influencing sexual wellbeing to inform culturally responsive preconception care.

Methods: A national cross-sectional survey was conducted among 868 reproductive-aged women (421 migrants/refugees and 447 Australian-born) planning or considering pregnancy. The Female Sexual Function Index (FSFI) measured sexual function alongside relevant socio-demographic factors. Analyses included descriptive statistics, chi-square tests, and logistic regression.

Results: Migrant and refugee women reported slightly higher FSFI scores (24.98 ± 7.18) than Australian-born women (23.57 ± 8.96), with a mean difference of 1.28 (95% CI: -2.36, -0.21). Overall, 52.19% of participants met criteria for sexual dysfunction, with rates of 54.36% in Australian-born women and 49.88% in migrants/refugees. Religious affiliation and region of origin were significant predictors, with higher odds observed among Buddhist migrants/refugees (adjusted OR: 2.84) and women from North Africa and the Middle East (adjusted OR: 9.72).

Discussion: These findings highlight cultural, religious, and regional influences on sexual health that must be considered in preconception care. Addressing sexual health through culturally tailored counselling and routine screening can help improve preconception care engagement and reproductive health outcomes for migrant and refugee communities.

Young Investigator Presentations

The health behaviours of Australian males before fatherhood

Tristan Carter,[1] Danielle Schoenaker,[2,3,4] Jon Adams,[1] Amie Steel[1]

1. School of Public Health, Faculty of Health, University of Technology Sydney, Sydney, Australia, 2006
2. School of Human Development and Health, Faculty of Medicine, University of Southampton, Southampton, UK
3. MRC Lifecourse Epidemiology Centre, University of Southampton, Southampton, UK
4. NIHR Southampton Biomedical Research Centre, University of Southampton and University Hospital Southampton NHS Foundation Trust, Southampton, United Kingdom

Tristan is an emerging early career researcher and associate within the Australian Research Consortium in Complementary and Integrative Medicine (ARCCIM) team at the University of Technology Sydney (UTS). Tristan has recently submitted his final dissertation for examination which investigates paternal preconception health and care for Australian males.

Abstracts:

Introduction: A focus on the health behaviours of Australian males before fatherhood, during the preconception period, is a public health issue which remains under reported in the research literature.

Aims: Exploration of the preconception health status and preconception health behaviours of Australian males is therefore warranted to identify their preconception health needs and to provide them with effective preconception care.

Methods: Data were utilised from Australian longitudinal study on male health, conducted over four waves. First-time fathers identified from each wave with health behaviours analysed from the previous waves, during preconception. Frequencies and proportions reported according to being a first-time father. Chi-square tests for statistical difference, α-value set 0.05. Backwards stepwise logistic regression conducted to provide a model for predicting characteristics of first-time fathers.

Results: A total of 572 adult males from all waves reported being a father for the first-time. Males who became fathers for the first-time were less likely to meet the recommended guidelines for moderate physical activity (aOR 0.63; 95% CI 0.52-0.76) or the guidelines for vigorous physical activity (0.66; 0.48-0.90) than others. Males who became fathers for the first-time were more likely to meet the recommended guidelines for daily safe alcohol consumption (1.44; 1.09-1.91).

Discussion: This study has identified several paternal preconception health behaviours that warrant action from clinicians, public health agencies and policymakers, particularly with regards to alcohol consumption and physical inactivity. Addressing these issues increases the potential health of not only men during their reproductive years, but also subsequent generations.

Young Investigator Presentations

Preconception Educational Interventions for Women: Current Landscape, Gaps and Future Directions — A Scoping Review

Shuxian Liu,[1] Gessica Augustin,[1] Ni Ning,[2] Erika Ota[1]

1. Global Health Nursing, Graduate School of Nursing Science, St. Luke's International University, Tokyo, Japan
2. Graduate School of Innovation and Practice for Smart Society, Hiroshima University, Hiroshima, Japan

Shuxian Liu, RN, is a second-year PhD candidate in Global Health Nursing at St. Luke's International University, Tokyo. Her research explores evidence-based strategies to improve preconception health through education and digital innovation. She has co-authored peer-reviewed articles on preconception care and mentors junior graduate students.

Abstracts:

Introduction: Educational interventions are a key component of preconception care, yet their overall characteristics and effectiveness have not been synthesised in recent years.

Aims: To map the types, contents, delivery modes and outcomes of educational interventions targeting non-pregnant women of reproductive age and to identify evidence gaps.

Methods: A scoping review following PRISMA-ScR searched seven databases through 19 April 2024; 29 studies (34 articles) met eligibility and were charted narratively.

Results: Studies were conducted in 11 countries; in-person group sessions (55 %) and one-to-one counselling (35 %) predominated, while technology-based approaches appeared in 41 % of studies. Interventions improved knowledge, attitudes and at least one health behaviour in all studies, but only half addressed multiple preconception domains and few reported long-term or maternal/neonatal outcomes.

Discussion: Educational programmes before conception enhance women's knowledge and selected behaviours, yet remain narrow in scope and unevenly distributed. Future trials should broaden content coverage, integrate digital and face-to-face modalities, and evaluate sustained clinical impacts.

Interpregnancy Health and Wellbeing

Interpregnancy care – an opportunity to grasp

Kirsten Black[1]

1. Faculty of Health and Medicine, University of Sydney, Sydney, NSW, Australia

Prof Kirsten Black is an academic gynaecologist and Professor of Sexual and Reproductive Health at the University of Sydney. She became a Fellow of the Royal Australian and New Zealand College of Obstetricians (RANZCOG) in 2002. Professor Black combines clinical practice, research and teaching, and has received multiple national and institutional awards, including the Professor J.A. Young Medal (2018) and the RANZCOG Presidents Medal (2025) for her outstanding contribution to sexual and reproductive health.

Abstracts:

There continue to be significant challenges in putting preconception care into practice, as many pregnancies are unplanned and healthcare providers often fail to initiate preconception discussions. The period between pregnancies, however, may provide a more effective window to address health concerns that influence pregnancy outcomes and future fertility. It also offers an opportunity to manage complications from a previous pregnancy that could affect long-term health. This talk will highlight the growing evidence for prioritising interconception health and will discuss five key areas that are critical to ensuring equitable access to quality care before the next pregnancy: spacing between pregnancies, contraception, body weight, nutrition, and follow-up for gestational diabetes. Several international initiatives have developed models for interconception care, and this presentation will discuss the features one such U.S.-based model designed to reach women from vulnerable populations who might not otherwise access preconception services.

Interpregnancy Health and Wellbeing

Factors associated with HRQoL among postpartum mothers in selected health clinics in Klang Valley

Nurzalinda Zalbahar,[1] Lim Wee Ting[1]

1. Department of Nutrition, Faculty of Medicine and Health Sciences, Universiti Putra Malaysia

Nurzalinda Zalbahar is a Senior Lecturer at the Department of Nutrition at UPM. Research interests are in maternal and child nutrition, prenatal nutrition, obesity, and community nutrition. Also, actively involved in health and nutrition programs across diverse community settings, including schools, higher educational institutions, indigenous communities, offices, and various government and private agencies.

Abstracts:

Introduction: Postpartum period characterised by significant physical, physiological and social changes following childbirth. Many women reported feeling unprepared, vulnerable, and helpless in coping with these changes.

Aims: This cross-sectional study aimed to determine the factors associated with health-related quality of life (HRQoL) among postpartum mothers in Klang Valley, Malaysia.

Methods: A total of 224 postpartum mothers from three conveniently selected government health clinics in Klang Valley participated in the study. An English or Malay language self-administered questionnaire were used consist of socio-demographic background, HRQoL, dietary diversity, confinement dietary practice, use of complementary and alternative medicine (CAM), breastfeeding difficulties, infant temperament, coping strategies, sense of mastery over maternal role, social support and sleep quality.

Results: Postpartum mothers had moderate HRQoL scores (70.33 ± 12.48), with the lowest scores observed in the physical and psychological health domains. HRQoL was negatively associated with breastfeeding difficulties, poor sleep quality, difficult infant temperament, emotion-focused coping strategies, avoidant coping strategies. In contrast, HRQoL was positively associated with sense of mastery over maternal role, partner, other family and friends' support. However, dietary diversity, confinement dietary practices, gestational weight gain, infant gestational age and problem-focused coping strategies showed no significant association with HRQoL ($p > 0.05$). Non-CAM users reporting higher HRQoL scores.

Discussion: This study highlights that postpartum HRQoL is associated by psychosocial support, coping strategies, and infant-related factors than by dietary or perinatal clinical variables. Improving postpartum mothers' HRQoL by focusing on comprehensive postpartum care and the social environment are crucial to meet the physical, psychological and social needs of mother.

Interpregnancy Health and Wellbeing

Reproductive Women's Health - Maternal care & beyond

Ida Dalina Bt Noordin[1]

1. Maternal and Child Health Sector, Family Health Development Division, Ministry of Health Malaysia (Johor State)

Dr. Ida Dalina Binti Noordin is a Public Health Medicine Specialist and Senior Principal Assistant Director (Johor State) at the Maternal and Child Health Sector, Family Health Development Division, Ministry of Health Malaysia. She obtained her Doctor of Public Health (DrPH) degree from Universiti Kebangsaan Malaysia in 2021.

Abstracts:
This presentation will share the challenges faced in Malaysia with a plateaued maternal mortality rate for the past 20 years despite excellent coverage of maternal health services. The main cause of maternal death also have shifted from obstetric causes to associated medical conditions.

As a woman's reproductive life-cycle is incontinuum, it is fitting that to achieve significant change in the status quo in maternal health, care for reproductive women should also extends beyond the post partum period.

The presentation narrates the challenges of rolling out the pre pregnancy care services in Malaysia, the current implementation status and aspirations for improvement in maternal health.

Men's Preconception Health

Metabolic health influences sperm motility via spermiogenesis gene expression

Pek Jun Wei[1,2]

1. Temasek Life Sciences Laboratory, 1 Research Link, National University of Singapore, Singapore, Singapore
2. Department of Biological Sciences, National University of Singapore, Singapore, Singapore

Dr. Pek Jun Wei is a Principal Investigator at the Temasek Life Sciences Laboratory and an Adjunct Assistant Professor at the National University of Singapore. His research focuses on how parental metabolic states, diet, and ageing influence offspring development, by investigating the molecular and cellular mechanisms of transgenerational epigenetic inheritance through gametes in the fruit fly Drosophila. Dr. Pek was awarded the SCSS – Dr. Susan Lim Award for Outstanding Young Investigator (2024).

Abstracts:

Poor metabolic health is associated with male subfertility in humans. While diet-induced obesity has been shown to impair male fertility in animal models, the underlying molecular mechanisms remain unclear.

By integrating human and *Drosophila* studies, we provide evidence that poor metabolic health adversely affects sperm motility in part through the regulation of spermiogenesis genes.

Poor metabolic health in men is associated with slower sperm motility and lower expression of spermiogenesis genes (TTLL3, TSSK, TSKS1B, PCSK4, IQCN) in whole blood and/or sperm.

Complementary studies in *Drosophila* show that *dTSSK* and *dTTLL3b* are essential for male fertility as they regulate sperm flagella tubulin glycylation.

Importantly, a high fat diet-induced obesity model in *Drosophila* leads to downregulation of *dTSSK* and *dTTLL3b* in testes, contributing to lower flagella tubulin glycylation and fertility rate.

Taken together, these findings underscore a conserved molecular pathway linking metabolic health to sperm motility in humans and *Drosophila*.

Men's Preconception Health

Preconception modifiable health and behavioural risks for adverse pregnancy and offspring outcomes: Prevalence in Australian men

Jacqui A Macdonald,[1,2,3] Elizabeth Spry,[1,2,3] Christopher J Greenwood,1 Ebony J Biden,[1] Craig A Olsson,[1,2,3] Craig Garfield,[4,5] Jacqueline A Boyle,[6] Milton Kotelchuck,[7] Delyse Hutchinson,[1,2,3,8] Zac Seidler,[9] Kayla Mansour,[1] Tina Kretschmer,[10,11] Robert Hancox,[12,13] Michael Wilson,[14,15] Tim Ross,[16] Samantha Teague,[1,17] Richard Fletcher,[18] Karen Wynter,[19,20] Sean Martin,[21] Lauren M Francis[1]

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7. Harvard Medical School, Department of Pediatrics, Division of General Academic Pediatrics Mass General Hospital for Children, Boston, USA
8. National Drug and Alcohol Research Centre, The University of New South Wales, Sydney, New South Wales, Australia
9. Movember Foundation, East Melbourne, Victoria, Australia
10. Faculty of Behavioural and Social Sciences, University of Groningen, Groningen, Netherlands
11. Department of Psychology, Friedrich-Alexander University Erlangen-Nuremberg, Erlangen, Germany
12. Respiratory Department, Te Whatu Ora Waikato, Hamilton, New Zealand
13. Department of Preventive and Social Medicine, University of Otago, Christchurch, New Zealand
14. Orygen, Parkville, Victoria, Australia
15. Centre for Youth Mental Health, The University of Melbourne, Parkville, Victoria, Australia
16. Healthy Male, Melbourne, Victoria, Australia
17. Department of Psychology, College of Healthcare Sciences, James Cook University, Townsville, Queensland, Australia
18. School of Health Sciences, University of Newcastle, Callaghan, New South Wales, Australia
19. Centre for Women's and Children's Mental Health, Department of Psychiatry, Monash University, Victoria, Australia
20. School of Nursing and Midwifery, Faculty of Health, Deakin University, Geelong, Victoria, Australia
21. Australian Institute of Family Studies, Southbank, Victoria, Australia

Dr Lauren M Francis is a postdoctoral research fellow and project manager of the 1 in 10 Men Project at Deakin University. Lauren's research centres on men's and fathers' mental health and access to mental health care.

Abstracts:

Introduction: Preconception care has potential to reduce disparities in the health outcomes of parents and children. However, little is known about the prevalence of men's preconception risk factors.

Aims: To estimate, prevalence of accumulated preconception risk factors for adverse pregnancy and offspring outcomes and identify subgroups at increased risk. Eight factors were assessed: harmful alcohol use, cigarette use, cannabis use, illicit drug use, occupational exposure to harmful substances, type 2 diabetes, depression, high body mass.

Methods: Data were from four waves of the Australian Longitudinal Study on Male Health (spanning 2013-2022). Included were fertile men aged 18-44 years at each wave (n_{w1}=8,727, n_{w2}=5,854, n_{w3}=3,267, n_{w4}=2,705). Analyses were weighted to be population representative.

Results: 82-83% of men had one or more risk factors, 48-51% had two or more risks. Men under financial stress reported the highest levels of accumulated risk (*b*=0.68 to 0.84), followed by men with lower education (*b*=0.41 to 0.52), unemployed men (*b*=0.34 to 0.56), and men in regional/remote locations (*b*=0.29 to 0.37). Men from culturally and/or linguistically diverse backgrounds reported comparatively low accumulated risk (*b*=-0.37 to -0.21). Aboriginal and Torres Strait Islander men had higher accumulated risk than non-Aboriginal counterparts in Waves 1 and 2 (*b*=0.68, 0.87), this difference reduced by Waves 3 and 4 (*b*=0.13, 0.18). Fathers reported more risks than non-fathers in Waves 1-2 (*b*=0.12, 0.13) and less in Waves 3-4 (*b*=-0.23, -0.18).

Discussion: Results present compelling evidence of preconception health needs in men and suggest considerable value in inclusion of men in preconception healthcare guidelines.

Men's Preconception Health

Preconception Care Guidelines to Promote Future Fathers' Mental Health

Ebony J Biden,[1] Lauren M Francis,[1] Michael J Wilson,[2,3] Jacqui A Macdonald[1,4,5]

1. SEED Lifespan Strategic Research Centre, School of Psychology, Faculty of Health, Deakin University, Burwood, Victoria, Australia
2. Orygen, Parkville, Victoria, Australia
3. Centre for Youth Mental Health, The University of Melbourne, Parkville, Victoria, Australia
4. Centre for Adolescent Health, Murdoch Children's Research Institute, Royal Children's Hospital, Melbourne, Victoria, Australia
5. Department of Paediatrics, Faculty of Medicine, Dentistry and Health Sciences, University of Melbourne, Parkville, Victoria, Australia

Dr Ebony Biden is a postdoctoral research fellow on the 1 in 10 Men Project at Deakin University, Melbourne, Australia. Ebony's primary research interest relates to preconception health and wellbeing and its longer-term role in the transition to parenthood and next generation development.

Abstracts:

Introduction: 1 in 10 fathers experience mental health challenges in early parenthood. Evidence suggests that the origins of fathers' mental health are evident before conception. Yet, it is not common for healthcare services and providers to consider the preconception needs of men.

Aims: To develop 'living' public health and clinical guidelines that inform preconception care of boys and men, specifically to promote good mental health in potential future fatherhood.

Methods: We first conducted a systematic review of longitudinal evidence of preconception predictors of paternal mental health assisted by artificial intelligence software. Guided by the GRADE Evidence to Decision framework, we then conducted focus groups with healthcare practitioners and with men, including men from culturally and linguistically diverse backgrounds, followed by a public consultation to elicit consumer values and preferences. As the guidelines are living, they will continue to evolve (e.g., to reflect emerging evidence identified in search updates to the review). The guideline development methods will be independently reviewed.

Results: The guidelines include 6 principles of care and 45 evidence-based recommendations for public health investments, clinical practice and future research in men's preconception mental healthcare. They are hosted on the international repository of clinical care guidelines, MAGICapp. The guidelines will be translated into workforce education materials by our partner, Healthy Male.

Discussion: Intervening early to support men's mental health yields a triple dividend, benefiting young men's development, their future mental health at the potential transition to fatherhood, and the health and wellbeing of their partner and children.

Men's Preconception Health

Short-term diet intervention comprising of olive oil, vitamin D, and omega-3 fatty acids alters the small non-coding RNA landscape of human sperm

Candida Vaz,[1#] Mark Burton,[2#] Alexandra J Kermack,[2,3,4,5#] Pei Fang Tan,[1,16#] Jason Huan,[1] Tessa P X Yoo,[2] Kerry Donnelly,[4] Susan J Wellstead,[4,5] Dennis Wang,[1,16] Helena L Fisk,[2] Franchesca D Houghton,[2] Sheena Lewis,[6,7] Yap Seng Chong,[1,8] Peter D Gluckman,[1,9] Ying Cheong,[2,3,4,5] Nicholas S Macklon,[2,3,10] Philip C Calder,[2,3] Anindya Dutta,[11,12] Keith M Godfrey,[3,13] Pankaj Kumar,[11] Karen A Lillycrop,[2,14] Neerja Karnani[1,15, 16]

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2. School of Human Development and Health, Faculty of Medicine, University of Southampton, Southampton, UK
3. NIHR Southampton Biomedical Research Centre, University Hospital Southampton NHS Foundation Trust and University of Southampton, Southampton, UK
4. Complete Fertility, Princess Anne Hospital, Southampton, UK
5. University Hospital Southampton NHS Foundation Trust, Southampton, UK
6. Queen's University, Belfast, Northern Ireland, UK
7. Examen Lab Ltd, Belfast, Northern Ireland, UK
8. Department of Obstetrics and Gynaecology, Yong Loo Lin School of Medicine, National University of Singapore, Singapore, Republic of Singapore
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# Contributed equally

Candida Vaz, Senior Scientist at A*STAR Institute for Human Development and Potential (IHDP), holds a PhD in Bioinformatics from Jawaharlal Nehru University. She specialises in paternal epigenetics and non-coding RNA, leading research on sperm RNA profiling and environmental influences, with a focus on their impact on men's health and fertility.

Abstracts:

Introduction: Parental experiences shape child health via epigenetic, non-genetic inheritance. While numerous studies have emphasized maternal preconception and pregnancy health in shaping child health outcomes, the role of fathers has received comparatively less attention. Understanding fathers' impact is vital for holistic intergenerational health and inclusive public health strategies involving both parents in preconception care.

Aims: In this study we aimed to characterise the small non-coding RNA (sncRNA) epigenetic profile of human sperm and examine the impact of a diet enriched with olive oil, vitamin D, and omega-3 fatty acids on its expression.

Methods: Sperm sncRNA profiling was performed on a subset (n=17) of participants enrolled in the PREconception dietary suPplements in Assisted REproduction (PREPARE) study in the UK (n=102). Sperm samples were collected before and after a six-week dietary intervention. The intervention group received olive oil for cooking and a fruit-based drink enriched with vitamin D and omega-3s, while the control group received sunflower oil and a similar drink without added nutrients.

Results and Discussion: The six-week dietary intervention significantly improved serum vitamin D and percentage EPA/DHA levels in red blood cells, including higher percentage EPA in the sperm in the intervention group. Small non-coding RNA profiling revealed 15 diet-altered miRNAs, seven of which targeted genes in fatty acid biosynthesis and metabolism. Fatty acids are essential for sperm function, supporting membrane integrity and energy production. These findings underscore the role of diet in modulating molecular pathways relevant to sperm health and advocates for improving paternal diet prior to conception.

Nutrition

A New Model of Care for Maternal and Child Health: The Healthy Early Life Moments in Singapore (HELMS) programme

Loy See Ling[1]

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Dr. Loy See Ling is a Principal Investigator at KK Women's and Children's Hospital and an Assistant Professor at Duke-NUS Medical School, Singapore. She holds a PhD in Human Nutrition from Universiti Sains Malaysia, with expertise in life course epidemiology, reproductive health, and chrononutrition. Her research focuses on improving metabolic and reproductive health in women and men. Dr. Loy has published over 100 peer-reviewed papers and received multiple national and international awards and grants, including NMRC Population Health Research funding in 2024. She is also actively involved in designing and leading intervention programs that utilize an early life course approach to optimize metabolic health in couples since preconception.

Abstracts:

Singapore faces a convergence of metabolic disorders, poor mental health, and ultra-low fertility, underscoring the need for upstream, preventive approaches. The Healthy Early Life Moments in Singapore (HELMS) initiative was developed as a clinician-led, digitally enabled, life-course model that integrates preconception, pregnancy, and postpartum care through a unified mHealth platform. Targeting women with overweight or obesity, HELMS empowers users to optimise health before conception and throughout motherhood via lifestyle counselling, clinical consultations, and milestone-specific digital nudges. Nutrition is a core pillar of HELMS, guided by the 6P Nutritional Intervention Tool that systematically assesses, advises, scores, and tracks dietary behaviours. Baseline data from 474 preconception participants revealed suboptimal diet quality, reinforcing the need for tailored nutritional guidance. Complemented by continuous monitoring of sleep, physical activity, and psychosocial wellbeing, HELMS delivers personalised feedback to promote sustainable behaviour change. This integrative approach demonstrates a scalable model for synchronised, participatory, and evidence-based maternal and child healthcare. By linking clinical care with behavioural insights and digital engagement, HELMS seeks to transform preventive health services, enhance reproductive readiness, and strengthen intergenerational health across the life course.

Nutrition

Relationships Between Mental Health, Chrononutrition, and Eating Behaviour among Preconception Women in Singapore

Kai Ting Mok,[1,2] Chee Wai Ku,[1,2,3] Fabian Yap,[2,3,4] Jerry Chan,[1,2,3] See Ling Loy,[1,2,3]

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Dr. Mok Kai Ting is a Postdoctoral Research Fellow at KK Women's and Children's Hospital, Singapore. She obtained her PhD from the Department of Food Science and Nutrition, Faculty of Applied Sciences, UCSI University, Malaysia. Her research focuses on nutrition, dietary behaviors, and public health. She is a Life Member of the Nutrition Society Malaysia and a Professional Member of the Malaysian Society of Body Composition (MSBC).

Abstracts:

Introduction: Improving preconception health is essential for optimising maternal and child outcomes, yet the roles of mental health and chrononutrition in shaping eating behaviours among preconception women remain underexplored.

Aims: This study examined the relationships between mental health, chrononutrition, and eating behaviours among preconception women in Singapore.

Methods: We conducted a nested cross-sectional study within the Healthy Early Life Moments in Singapore (HELMS) intervention cohort. Preconception women with overweight and obesity were enrolled between April 2022 and May 2025 in Singapore. Participants completed validated questionnaires at baseline, including the Edinburgh Postnatal Depression Scale (EPDS) to assess mental health; the Chrononutrition Profile Questionnaire to assess eating timing; and the Three-Factor Eating Questionnaire to assess eating behaviours (cognitive restraint, disinhibition, and hunger domains). We applied multivariable linear regression models, adjusting for sociodemographic and lifestyle covariates.

Results: A total of 451 women participated in this study (mean age 33.51±3.84 years; mean body mass index 30.02±3.72 kg/m2). Higher EPDS scores were associated with greater disinhibition (B 0.11; 95% Confidence Interval (CI) 0.04, 0.18) and hunger-driven eating (0.13; 0.06, 0.19), but not with cognitive restraint. Later weekday evening eating time was associated with lower cognitive restraint (-0.67; -1.21, -0.13).

Discussion: Poorer mental health was associated with greater disinhibition and hunger-driven eating, suggesting that emotional distress may compromise appetite regulation and eating control. Weekday evening eating was associated with lower cognitive restraint, possibly reflecting less structured routines and diminished dietary regulation during workdays. Addressing mental wellbeing and meal timing in preconception care may support healthier eating behaviours.

Nutrition

Community-Based Preconception Care for Couples of Childbearing Age in Seoul

Baeg-Ju Na,[1] Jeong-Yeol Hans[2]

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Dr. Baeg-ju Na MD, PhD, is a professor at Eulji University. He previously served as Director of Seoul Metropolitan Seobuk Hospital and Head of the Public Health Bureau in Seoul city.

Abstracts:

Introduction: South Korea's total fertility rate has declined significantly in recent years, reaching a low of 0.81 in 2021, with Seoul recording the lowest rate among all regions. Contributing factors include delayed age at first marriage and a rising number of individuals experiencing infertility. Furthermore, the rate of planned pregnancies remains below 65%, higher than the regional average for unintended pregnancies.

Aims: This project aimed to enhance preconception health among men and women of childbearing age in Seoul through community-based interventions, targeting both biological and psychosocial risk factors for healthy pregnancies.

Methods: Initiated in four districts in 2017 and expanded citywide by 2020, the program is a collaborative model involving the Seoul City Government, public health centers, the Korean Society of Maternal and Child Health, and the Urological Association. The initiative provides comprehensive counseling and screening (e.g., lifestyle surveys, clinical pathology, semen and ovarian function tests), as well as folic acid supplementation, to program participants of both genders. Participants are referred to specialized clinics as needed and linked to broader social welfare services post-delivery.

Results: The program has reported high satisfaction among participants and healthcare providers, with continuous operation and ongoing expansion. Evaluation and monitoring mechanisms are in place to assess the program's impact on infertility, miscarriage, and health disparities.

Discussion: The Seoul community-based preconception care project offers a promising model for addressing low fertility rates through multi-sectoral collaboration. Future directions include policy advocacy for scaling up universal outreach and integrating infant care services to improve early childhood outcomes.

Nutrition

Is preconception folic acid intake associated with modifiable risk factors relevant to preconception care?

Jung Yeol Han,[1,2] Dong Won Hwang,[1,2] Kyoung-Chul Chun,[2] Young Ah Kim,[2] Jae Whoan,[2] Baeg-Ju Na[3]

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Dr. Jung Yeol Han is a Professor of Obstetrics & Gynecology at Inje University Ilsan Paik Hospital and a key investigator at the Korean MotherSafe Counseling Center. His research focuses on the safety of drug exposure during pregnancy and lactation and the teratogenic risks.

Abstracts:

Introduction: Folic acid plays a key role in prevention of neural tube defects, growth and development of fetus.

Aims: This study aims to evaluate the rate and trends of folic acid intake among women receiving preconception care and examine its association with modifiable biomedical, behavioral, and social health risk factors during the preconception period.

Methods: This is a cross-sectional study. Total 42,730 women participated in preconception care program of Seoul City, Korea between Nov. 2017 and Dec.2023. Folic acid intake in preconception period and modifiable risk factors including biomedical, behavioral, and social risks were obtained from an organized questionnaire on online. We exclude cases having incomplete data for analysis.

Results: The rate of folic acid intake is 35.1% (5,003/42,730). The trend of folic acid intake in preconception period is significantly increased from 2017 to 2023 by year (P<0.001). Among biomedical risk factors associated with folic acid intake, positive risk factor are age(≥35y), BMI(≥23.0kg/m2), gravidity(≥1), spontaneous abortion(≥1), artificial abortion(≥1). On the other hand, negative risk factors are positive of depression screen, insomnia, and bulimia. And among behavioral risk factors, positive risk factor is exercise (≥1 per week). Negative risk factors are social drinking, positive of TWEK screen, and cigarette smoking. Finally, among social risk factors, negative risk factors are unmarried, family income (≥3million won a month), and white- collar worker.

Discussion: Our study found that folic acid intake during the preconception period remains low at 35.1%. Despite this, intake has significantly increased from 2017 to 2023. Its use is associated with various modifiable risk factors requiring pre-pregnancy intervention. Further research is needed.

Nutrition

Dietary Challenges and Opportunities to Improve Preconception Nutrition in Low- and Middle-Income Settings of the Western Pacific

Snigdha Misra[1]

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Dr. Snigdha Misra is an Associate Professor at the Jeffrey Cheah School of Medicine and Health Sciences, Monash University Malaysia, and a Nutritionist by training. She was awarded as the Fellow of Nutrition Society of Malaysia, in 2022. Trained in India with a PhD focusing on the nutritional status and food anthropology of migrant and tribal populations, she has over two decades of academic and leadership experience. Her research interests include public health nutrition, and maternal and child health.

Abstracts:

The nutritional status of women before pregnancy profoundly shapes the health of two generations, yet it remains a critical gap in public health efforts across the Western Pacific's LMICs. This presentation examines the complex reality of the "double burden" of malnutrition, where undernutrition and obesity coexist, creating intergenerational cycles of poor health. We explore the drivers, from food insecurity to the nutrition transition, and their consequences, including increased risks of anaemia and impaired child development. However, a path forward exists. Showcasing successful, culturally-attuned initiatives in Vietnam, the Philippines, and Fiji, demonstrates that a multi-pronged approach combining policy, fortification, and community engagement can break this cycle. Ultimately, empowering women with better nutrition preconception is not just a medical necessity but a cornerstone of sustainable human development.

Non-communicable Diseases

Can Co-Design Improve Management of Diabetes in Pregnancy for Pasifika Women?

Karaponi Okesene-Gafa[1,2]

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Dr Karaponi Okesene-Gafa is the Immediate Past President of the Pacific Society for Reproductive Health (PSRH) and a recognised leader in Pacific women's health. She currently serves as Head of Pacific Health and Co-Director of Te Poutoko Ora a Kiwa, Centre for Pacific and Global Health at the University of Auckland.

A practising obstetrician and gynaecologist, Dr Okesene-Gafa holds a Bachelor of Medicine and Surgery, a Diploma in Obstetrics and Clinical Gynaecology, is a Fellow of the Royal Australian and New Zealand College of Obstetricians and Gynaecologists and completed her PhD on maternal health.

Her career reflects deep commitment to advancing women's health through clinical care, teaching, and research. She has mentored and collaborated widely with colleagues across PSRH, RANZCOG and regional ministries of health, supporting programs that reduce maternal and perinatal mortality and address non-communicable diseases in pregnancy.

Guided by her faith, family, and strong Pacific values, Dr Okesene-Gafa advocates for Pacific governments to prioritise women's health as central to the well-being and sustainability of Pacific communities. Her vision is a region where health systems empower women, prevent cervical and endometrial cancers, and equip the health workforce to deliver safe, high-quality care for all Pacific families.

Abstracts:

Diabetes in pregnancy is a growing global concern, with particularly high prevalence across the Pacific region, in Aotearoa New Zealand, and most acutely in South Auckland — home to one of the country's most diverse populations. Māori, Pasifika, and Asian women are disproportionately affected, with rising rates posing serious risks to maternal and neonatal health. These include congenital abnormalities, hypertensive disorders, macrosomia, shoulder dystocia, assisted births, postpartum haemorrhage, stillbirth, neonatal hypoglycaemia, and NICU admissions.

Pasifika women in Aotearoa are experiencing a significant burden of this condition, prompting Pasifika health professionals and researchers to explore culturally grounded, community-led solutions. This presentation proposes a co-design approach, working in partnership with Pasifika families and communities to develop interventions that support better blood glucose control during pregnancy. Guided by Pasifika frameworks such as Fa'afaletui and the Kakala model, the initiative aims to secure funding to co-create tools and strategies that are meaningful, effective, and embedded within the lived realities of Pasifika women.

By centering indigenous knowledge and collective wisdom, this research seeks to improve outcomes and equity in maternal health through culturally responsive innovation.

Non-communicable Diseases

Feasibility Study on the Use of the Preconception Care–Focused App MyPrecca®

Asako Mito,[1] Kosuke Kirino,[2] Naoko Arata[1]

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Asako Mito is a clinician and clinical researcher focusing on preconception health and care and maternal medicine, especially hypertension and nephrology. She is one of the Directors of the Preconception Care Center in the National Center for Child Health and Development. She is also passionate about education for the young.

Abstracts:

Introduction: Intervention studies on preconception care (PCC) typically consist of health screening and assessment, followed by brief counseling or educational sessions. While such interventions show limited improvements in specific outcomes, further investigation is needed to promote behavioral change among young people. Given the limited resources available for time-intensive PCC, there is a need for reliable approaches that improve health literacy and promote healthier behavior change. In collaboration with Kaneka Corporation, the Preconception Care Center developed MyPrecca®, a personal health record app designed to deliver accurate information on PCC to users.

Aims: To evaluate the feasibility and potential impact of MyPrecca® on user awareness, literacy, and health behaviors.

Methods: Women aged 20–39 used MyPrecca® for one month. Feasibility outcomes included app use persistence, and changes in PCC literacy (knowledge and behavior scales) developed by Preconception Care Center in Japan were evaluated before and after use.

Results: Fifty-three women participated. Daily active users declined to about half by study completion, and recommended articles were not frequently read. Nevertheless, correct response rates improved for 10 of 13 items on the knowledge scale (short version). On the behavior scale (short version), the proportion responding "strongly agree" increased for all 17 items, and doubled for five items, including stress reduction, mindfulness/physical activity, regular weight monitoring, weight management, and self-directed search of vaccine side-effect information.

Discussion: One-month use of MyPrecca® improved PCC literacy in knowledge and behavior, although sustaining user engagement remains a challenge requiring further strategies.

Non-communicable Diseases

Exosomal RNAs as potential biomarkers for preconception health assessment

Seow Neng Chan,[1] Jun Wei Pek[1,2]

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Dr Chan Seow Neng is a research fellow in Dr Pek Jun Wei's lab at TLL where he explored the functions of noncoding RNAs in regulating important cellular processes and the underlying mechanisms. Currently, he is interested to elucidate the roles of dysregulated noncoding RNAs in affecting preconception health.

Abstracts:

Obesity and poor metabolic health are known risk factors in fertility and preconception health. One of the prevalent disorders linked to obesity is the development of polycystic ovary syndrome (PCOS). Currently there is no reliable molecular screening to diagnose for PCOS, assessing metabolic health status and potential pregnancy outcomes. It is also unclear how poor metabolic health may influence folliculogenesis and lead to subfertility. In this study, we aimed to explore the potentials of exosomal RNAs serving as candidates in discovery of biomarkers. Exosome is a type of extracellular vesicles that are found stably circulating in various bodily fluids and they are packed with different noncoding RNAs (ncRNAs), including microRNAs (miRNAs), circular RNAs (circRNAs) and long ncRNAs (lncRNAs) which can be reflective of the state of their cells of origin. Up-taking of these exosomes will influence the biological processes or signalling pathways of the recipient cells. We initially tested the idea by profiling the exosomal RNAs in maternal milk from mothers with contrasting metabolic health via RNA sequencing and performed differential expression analysis. Indeed, we found potential dysregulated miRNAs that are involved in pathways related to poor metabolic health. Next, we isolated exosomes from follicular fluids of subjects with PCOS vs control and profiled the differential RNAs expression via RNA sequencing. Pathway analysis indicated presences of dysregulated RNAs in pathways linked to PCOS like MAPK, Jak-STAT, growth hormone synthesis and metabolism. Our preliminary results suggest that exosomal RNAs have the potentials to be used as biomarkers in preconception health assessment.

Mental Health

Naturopaths' approach to primary care management of preconception mental health

Amie Steel,[1] Hope Foley,[1] Tristan Carter,[1] Deborah Debono,[1] Jon Adams[1]

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Amie Steel is an Associate Professor within the discipline of Public Health, CoDirector of the Australian Research Collaborative in Complementary and Integrative Medicine (University of Technology Sydney), and an Australian Research Council Future Fellow.

Abstracts:

Introduction: Mental health during the preconception period can affect fertility, pregnancy outcomes, and long-term parental and child wellbeing. However, little is known about how primary care practitioners, including naturopaths, manage preconception mental health.

Aims: This study explores how Australian naturopaths support mental health in individuals planning pregnancy.

Methods: A national survey of 100 naturopaths examined their approach to preventive health, focusing on discussions of key health risk behaviours with patients planning pregnancy within 12 months. Chi-square tests assessed associations between categorical variables.

Results: Over half (54.9%) of participants reported frequently treating patients with mental illness, though fewer (46.9%) felt very confident in providing mental health care. Mental health screening was conducted 'always' (37.2%) or 'most of the time'(23.3%), and 77.9% were 'extremely likely' to discuss mental health with affected patients. Pregnancy intention significantly influenced naturopaths initiating mental health discussions (77.7%). When mental health support was needed, naturopaths were 'extremely likely' to refer to a GP (75.3%), offer general advice (70.6%), or tailored advice (61.2%). These actions were more frequent among those highly influenced by pregnancy intention ($p \leq 0.05$).

Discussion: Naturopaths recognize preconception mental health as clinically important and respond through advice and referrals, offering new insights into primary care practices in Australia.

Mental Health

Preconception care integrating a psychosocial lens: A midwifery perspective

Yordanka Berg Blanc[1]

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She is a PhD candidate at Griffith University, clinical midwife, and certified Pre and Perinatal Educator through the Association of Pre and Perinatal Psychology and Health (APPPAH). She has provided maternity services in Central Australia to First Nations and migrant women since 2014, and previously in her home country of Cuba.

Abstracts:

Introduction: Preconception care has long focused on physical health, fertility optimisation, and genetic screening. However, health care professionals should not underestimate the profound impact of psychosocial factors such as mental health, past trauma, social support, and structural inequalities on reproductive outcomes and readiness for parenthood. From a midwifery perspective, incorporating a psychosocial lens into preconception care can have a positive and long-lasting impact on pregnancy outcomes and the postpartum period.

Aims: To highlight how midwives can collaborate within a multidisciplinary team to address mental health and social challenges with families planning to conceive, maintaining a woman-centred care approach.

Methods: A narrative review approach draws on interdisciplinary literature to examine how psychosocial factors influence reproductive outcomes and how midwifery philosophy and practice can address the deeply layered aspects of the preconception journey.

Results: Midwives are well-positioned to holistically address the complex, social and emotional dimensions of health and wellbeing that influence a conscious conception. Building a trusting relationship and maintaining a women-centred care approach with women planning to conceive is key. The discussion offers practical strategies for integrating psychosocial care into midwifery-led preconception services.

Preconception Health Promotion

Co-creating preconception health content for an Artificial Intelligence driven digital platform for women from priority populations

Asvini K Subasinghe,[1] Sanduni Madawala,[2] Dinali Fernando,[1] Patrick Olivier,[3] Grace Jue Xie,[3] Jessica Watterson,[3] Ling Wu,[3] Chris Prawira,[3] Jacqueline A Boyle[1]

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Dr. Subasinghe completed her PhD in Public Health in 2015 and has since focused on improving sexual and reproductive health among priority populations using epidemiological methods. She has published over 40 peer-reviewed papers, including studies on adolescents, socio-economically disadvantaged groups, and survivors of sexual abuse. Her postdoctoral work at the WHO Western Pacific HPV Reference Laboratory and Murdoch Children's Research Institute examined reproductive health in young women and led to a cervical cancer screening collaboration between India and Australia, supported by an Endeavour Fellowship. Currently, she is the Preconception Health Network Research Fellow at the NHMRC Centre of Research Excellence in Health in Preconception and Pregnancy (HiPP).

Abstracts:

Introduction: Planning pregnancy and optimal health prior to pregnancy can significantly reduce pregnancy complications and poor maternal health outcomes. Women from culturally and racially marginalised groups experience more unintended pregnancies, increased preconception risk factors and adverse pregnancy outcomes, including maternal and infant mortality, compared to native born Australians. Improving health literacy through culturally relevant and accessible resources may improve preconception health. We have previously shown women from migrant and refugee backgrounds would prefer receiving preconception information on digital platforms.

Aims: The aim of this study is to understand the focus and concerns of the women with regard to the content for a digital resource called "Babyready?"

Methods: We conducted virtual workshops with ten women from Chinese, Indian, Sri Lankan, African and Middle-Eastern backgrounds to understand more about cultural practices related to pregnancy preparation, preconception information sources and to identify topics that may be useful to include on a digital dashboard. Focus group discussions were transcribed and a content analysis was conducted.

Results: A range of culturally specific practices included eating warm foods, using acupuncture and alternative medicines to prepare for pregnancy. Expectations from family and friends induced high levels of stress and feeling controlled. Relatives were integral in decision making about pregnancy planning, particularly the mother-in-law. Women wanted to learn more about egg freezing, government benefits, adverse birth outcomes, how to navigate the healthcare system, interpreter services and where they could locate female health professionals.

Conclusion: Digital preconception health content may be optimised for use by women from ethnically diverse backgrounds if it includes information around stress management, how to balance cultural expectations and beliefs with health advice, how to locate female health practitioners who speak their language and appropriate pregnancy planning.

Preconception Health Promotion

Preconception Care and Congenital Birth Defects in Fiji – A Focus at CWMH

Nitik Ram[1]

1. University of Fiji, Fiji

Dr Nitik Ram works as a general obstetrician and gynaecologist at the Colonial War Memorial Hospital, in Suva, Fiji. He has over 14 years of experience at Fiji's largest tertiary hospital and a special interest in high-risk pregnancies, complex obstetrics surgery, and obstetrics ultrasound training models in a low-resource setting to empower medical officers, residents, and specialists in trimester-specific scanning skills to reduce maternal and foetal morbidity and mortality. He is currently an active researcher in congenital birth defects in Fiji and pre-conception care.

Abstracts:

Introduction: Congenital anomalies (CA) are a major contributor to perinatal mortality, with 94% occurring in low- and middle-income countries. In Fiji, WHO and national perinatal mortality reports show an increasing proportion of infant deaths due to CA, despite high antenatal attendance at the Colonial War Memorial Hospital (CWMH). Gaps remain in early detection, preconception care, and local epidemiological data, limiting targeted prevention and management strategies.

Methods: A mixed-method study will be conducted in two phases.
Retrospective audit (January 2020–December 2024): Review of all cases of CA, including stillbirths, neonatal deaths, and live births at CWMH, to determine incidence, types, risk factors, diagnostic timing, management, and outcomes. Data sources include paediatric anomaly registers, birth registers, and hospital records.
Prospective study (July–December 2025): Facility audit of preconception services; questionnaires to 150 healthcare providers (doctors, nurses midwives) and 50 antenatal patients; in-depth interviews with 30 mothers diagnosed with CA in pregnancy. Quantitative data will be analysed using SPSS with descriptive statistics and logistic regression; qualitative data will undergo thematic analysis.

Results (anticipated): The study will establish the five-year prevalence and trends of CA at CWMH identify modifiable and non-modifiable risk factors determine the proportion detected antenatally evaluate diagnostic accuracy. The prospective phase will highlight staff knowledge facility readiness patient awareness barriers to effective preconception prenatal care.

Discussion: Findings will address critical data gaps on CA in Fiji informing the development of locally tailored preconception care guidelines ultrasound training models multidisciplinary management protocols Improved early detection preventive strategies including timely folic acid supplementation are expected to reduce CA-related morbidity mortality.

Conclusion: This study will generate baseline epidemiological service delivery data essential for strengthening maternal–foetal health services in Fiji Outcomes will guide policy resource allocation training initiatives to improve CA prevention detection management.

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