

# SPEAKER ABSTRACTS

Asia Pacific Maternal & Child Health Conference & IPRAMHO International Meeting 2023

## IPRAMHO Initiatives for Maternal & Child Health

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Integrated Platform for Research in Advancing Maternal & Child Health Outcomes (IPRAMHO) is an expanded platform to develop a seamless integrated model of care through optimal translation, implementation and evaluation of effective population prevention strategies. It evolved from the original Integrated Platform for Research in Advancing Metabolic Health Outcomes of Women and Children. IPRAMHO started as a Singapore National Medical Research Council (NMRC) funded joint collaborative centre grant awarded to KK Women's and Children's Hospital (KKH), SingHealth Polyclinics (SHP) & National Healthcare Group Polyclinics (NHGP). This is a unique collaborative centre grant where both Singapore public primary health care providers (SHP & NGHP) have come together to work with KKH, the largest tertiary and main referral center for Paediatrics, Obstetrics and Gynaecology in Singapore, on collaborative health research in women and children, aligning with national goals. IPRAMHO have worked on metabolic health and is currently focusing on mental health of women and children.

Besides seeding grants to generate pilot data and nurturing healthcare research and implementation science professionals, IPRAMHO has been leading in building consensus for Singapore to improve health of mothers and children. Five local Guidelines initiated by IPRAMHO on GDM; Perinatal Nutrition; Physical Activity & Exercise in Pregnancy; and 24-Hour Activity for Early and Late Childhood are available:

1. Guidelines for the Management of Gestational Diabetes Mellitus. Tan KH, Tan T, Chi C, Thian S, Tan LK, Yong TT. College of Obstetricians and Gynaecologists, Singapore. Singapore Journal of Obstetrics & Gynaecology. 2018; 49(1):9-13
2. Guidelines for Optimal Perinatal Nutrition. Chua MC, Tan T, Han WM, Chong MFF, Ang SB, Rajadurai VS, Khin LW Chi C, Lee J, Tan KH. Perinatal Society of Singapore. Singapore Journal of Obstetrics & Gynaecology. 2019; 50(1):10-12
3. Guidelines on Physical Activity & Exercise in Pregnancy. Lee R, Thain S, Tan KH, Ang SB, Tan EL, Tan B, Aleste MN, Lim, I Tan LK. Perinatal Society of Singapore. Singapore Journal of Obstetrics & Gynaecology. 2020; 51(1):9-16
4. The Singapore Integrated 24-Hour Activity Guidelines for Children & Adolescents (7-18 Years). College of Paediatrics & Child Health of Academy of Medicine Singapore, January 2021. Integrated 24-Hour Activity Guidelines for Children and Adolescents Study Group. Ann Acad Med Singap. 2022 May;51(5):292-299. doi: 10.47102/annals-acadmedsg.202141.
5. The Singapore Integrated 24-Hour Activity Guidelines for Early Childhood Group. The Singapore Integrated 24-Hour Activity Guidelines for Early Childhood (Infants, Toddlers and Preschoolers). College of Paediatrics & Child Health of Academy of Medicine Singapore, January 2022

In addition, the IPRAMHO was involved in 5 Asia Pacific consensus statements correspondingly, of which all have been published:

1. Asia & Oceania Federation of Obstetrics and Gynaecology, Maternal Fetal Medicine Committee's consensus statements on screening for hyperglycemia in pregnancy. Tan TYT; Hyperglycemia in Pregnancy Consensus Working Group, Ounjai Kor-anantakul. J Obstet Gynaecol Res. 2018 Nov;44(11):2023-2024. doi: 10.1111/jog.13813. Epub 2018 Sep 19. PMID: 30230130.
2. An Asia Pacific Consensus on Perinatal Nutrition and Breastfeeding. Tan KH, Tan TYT, Chua MC, Kor-Anantakul O, IPRAMHO Study Group. Ann Nutr Metab. 2019;75(1):86-87. doi: 10.1159/000501192. Epub 2019 Jun 25. PMID: 31238321.
3. Asia-Pacific consensus on physical activity and exercise in pregnancy and the postpartum period. Lee R, Thain S, Tan LK, Teo T, Tan KH; IPRAMHO Exercise in Pregnancy Committee. BMJ Open Sport Exerc Med. 2021 May 17;7(2):e000967. doi: 10.1136/bmjsem-2020-000967. PMID: 34055384; PMCID: PMC8130752.
4. Asia-Pacific Consensus Statement on Integrated 24-hour Activity Guidelines for Children and Adolescents. Loo BKG, Okely AD, Pulungan A, Jalaludin MY; Asia-Pacific 24-Hour Activity Guidelines for Children and Adolescents Committee. Br J Sports Med. 2021 Nov 8;bjssports-2021-104527. doi: 10.1136/bjssports-2021-104527. Epub ahead of print. PMID: 34750119.

5. Asia-Pacific Consensus Statement on Integrated 24-Hour Activity Guidelines for Early Childhood. Asia-Pacific 24-Hour Activity Guidelines for Early Childhood Committee. The Lancet Regional Health - Western Pacific, 2022. 100641, ISSN 2666-6065, <https://doi.org/10.1016/j.lanwpc.2022.100641>.

There has been a lot of interest and concerns recently on population mental health. A recent IPRAMHO survey in 2022 was conducted on perinatal mental health literacy, in terms of knowledge, attitudes, and help-seeking among perinatal women and practices among healthcare professionals by Quah et al. This contemporaneous survey showed suboptimal knowledge, attitude and practices, and high levels of perinatal anxiety and depression. The study supports the urgent need for perinatal mental health guidelines to better guide and help our community.

The Singapore Perinatal Mental Health Guidelines on Depression and Anxiety under the auspices of College of Obstetricians & Gynaecologists Singapore, is indeed apt and well positioned to tackle the huge challenges of perinatal mental health in Singapore. The College of Obstetricians & Gynaecologists Singapore & IPRAMHO workgroup committee was timely convened by A/Prof Tan Lay Kok and ably chaired by A/Prof Helen Chen. The recommendations address the need for early intervention, with early screening, detection and treatment as well as the needs of vulnerable groups – particularly for women with special needs, adolescent mothers and those who have experienced severe obstetric adverse events. The dissemination, ownership & implementation of these guidelines can improve and make a positive impact on mental health for our population, enhancing and optimise the potential of every mother; and child born in Singapore and our region.

## **College of Obstetricians & Gynaecologists Singapore Initiatives for Maternal Health**

*A/Prof Tan Lay Kok*

*President, College of Obstetricians & Gynaecologists Singapore*

Mental health has often been given relatively short shrift in maternity care, where previous efforts and resources to improve obstetrical outcomes were concentrated towards the obstetrical syndromes like pre-eclampsia, postpartum hemorrhage and gestational diabetes, and promulgating best practices in antenatal, intrapartum and postpartum care, while mental health was relegated to the domain of psychiatrists, psychologists and social workers. IPRAMHO's current theme of improving maternal and child mental health in the Asia Pacific is therefore a very welcome affirmative action to redress the neglect of maternal mental health and give this extremely important area the due attention and priority it deserves.

Mental health issues in maternity are important. They affect behavior and adherence to medical advice and care, and therefore impact clinical outcomes both directly and indirectly. They are also not uncommon. Indeed the latest MBRRACE-UK (Mothers and Babies: Reducing Risk through Audits and confidential Enquiries) clearly show that mental health issues as a cause of direct and indirect maternal mortality have emerged as a leading cause, tying with cardiovascular disease causing maternal mortality. Worryingly, it also showed that 40% of deaths occurring within a year after the end of pregnancy were attributed to mental health, mostly due to suicide. While we do not have statistics in Singapore, we have all encountered patients in the course of our obstetric careers with mental health problems of varying degrees of severity, including suicide. Dr Helen Chen, Head of Psychological Medicine in KK Women's and Children's Hospital, highlighted the burden of maternal mental illness in Singapore society in her papers published in the Singapore Medical Journal in 2012 and Psychiatric Services 2011 where she showed that Postpartum depression is a recognised public health concern affecting some 8% of local postpartum women and shared psychiatric autopsy of a tragic local maternal death from suicide.

The College of Obstetricians and Gynaecologists Singapore is delighted to have collaborated with Dr Chen and her team, together with the IPRAMHO Mental Health Study Group, to produce the Singapore Perinatal Mental Health Guidelines which will be launched at this IPRAMHO Meeting. These guidelines are very timely, particularly as we emerge from the COVID-19 pandemic during which time the health restrictions and isolation imposed would have triggered mental health conditions and relapses in vulnerable and affected women. These guidelines will go a long way to equip obstetricians and midwives, and indeed all who look after pregnant women, with the necessary guidance to identify and manage mental health problems in their patients. The coverage is expansive and comprehensive, extending from the pre-conception to the postpartum periods, and highlights the importance of multidisciplinary and inter-professional management. It is the college's hope also that these guidelines will increase awareness of the prevalence of mental health issues among obstetricians, particularly when managing their patients who have suffered a pregnancy loss, be it termination, miscarriage, stillbirth or neonatal loss as there is good evidence that these events are associated with adverse mental health. Many affected women are unwilling to disclose symptoms of mental

health, and even fewer have had a formal, clearly diagnosed mental health condition, so obstetricians as front line clinicians meeting these women have an important role to play in identifying, treating and facilitating access to providers of specialist perinatal mental health expertise for early intervention and the development of a therapeutic professional relationship.

## **The Development of the Singapore Perinatal Mental Health Guidelines on Depression and Anxiety**

*A/Prof Helen Chen*

*Chair, COGS Perinatal Mental Health Guidelines for Depression and Anxiety*

Maternal depression is a public health problem with adverse outcomes for both mother and child including the tragic risk of suicide. Evidence from the local birth cohort study, Growing Up Towards Healthy Outcomes in Singapore (GUSTO) shows that maternal depression imprints on offspring neurodevelopment, affecting brain regions that prime for emotional dysregulation and mental health problems downstream. Likewise, maternal anxiety can influence offspring neurodevelopment, resulting in a greater likelihood for infant internalizing problems.

Findings suggest the adverse impact lasts beyond early childhood, supporting our efforts to develop guidelines on perinatal depression and anxiety to improve health outcomes for both mothers and children. Addressing perinatal depression and anxiety can help to break the cycle of intergenerational transmission of risks, and can shift the trajectory for their children in a way that translates to better population health.

Current recommendations are for early intervention, with early detection through screening at well child visits or during routine obstetric visits, or with greater awareness through public outreach efforts. These should be paired with ready access to care, as well as opportunistic guidance on lifestyle adjustments to keeping well mentally. The approach should also be tailored to address vulnerable groups – particularly for women with special needs, adolescent mothers and those who have experienced severe obstetric adverse events.

## **SYMPOSIUM I – NURTURING HEALTHY BEHAVIOURS TO PROMOTE PERINATAL MENTAL HEALTH**

### **Keynote Address: Minding the Five Trimesters Because It Matters**

*Dr Anne Rifkin-Graboi*

*Head, Infancy and Early Childhood Research, OER Centre for Research in Child Development, NIE*

Supporting women's psychological and interpersonal well-being before, during, and after pregnancy is important- not just for the women themselves, but also for their children. In this talk I will review local research examining the impact of maternal well-being through the perinatal and early postnatal phase upon offspring neurocognitive and emotional development. I will then link this evidence to the international literature and consider the mechanisms through which such transmission may occur both antenatally and postnatally. In this context I will also discuss associations between maternal well-being and parenting, and the role that insensitive care may also have on children's development.

### **Addressing Depression and Anxiety in the Four Trimesters from Preconception through the Antepartum**

*Dr Chua Tze Ern*

*Head & Senior Consultant, Women's Mental Wellness Service, KKH*

Antenatal depression and anxiety are public health concerns that are associated with adverse maternal and child health outcomes. The link with preconception mental health is clear, with pre-existing illness predicting for perinatal recurrence. Strategies to reduce risk and improve health outcomes can and should be implemented for maternal and child wellbeing. This should include whole health approach, addressing medical needs, as well as psychological, social, nutritional and physical aspects.

## **Addressing Postnatal Depression and Anxiety to Ensure Healthy Outcomes**

*Dr Theresa Lee Mei Ying*

*Senior Consultant, Women's Mental Wellness Service, KKH*

Postnatal depression and anxiety are often unnoticed by healthcare professionals because of the overlap of mood symptoms with that of general symptoms in the postnatal period and the reluctance of mothers to seek help. If untreated, this can lead to adverse outcomes in both mother and child. Maternal depression and anxiety have been found to be associated with reduced maternal sensitivity, infant negative temperament, child behavioural problems and decreased school readiness. Strategies for early detection and management and coordinated care amongst the agencies should be implemented to ensure better outcomes for both maternal and child well-being.

## **Addressing the needs in Special Groups**

*A/Prof Helen Chen*

*Head & Senior Consultant, Department of Psychological Medicine, KKH*

The traumatic experience of severe maternal adverse events such as pre-eclampsia, postpartum hemorrhage, stillbirth, etc, can lead to higher risk of depression and trauma related distress, as well as anxiety which can complicate a subsequent pregnancy. Women with special needs and adolescents also require care that is tailored to address their mental health needs. Infants are particularly vulnerable as maternal depression and anxiety bear significant impact on their neurodevelopment, temperament, behaviour and cognitive functioning. Addressing the needs of these special populations can mitigate for risks and improve health outcomes.

# **SYMPOSIUM II – MATERNAL AND CHILD HEALTH WELLNESS**

## **Healthy Early Life Moments in Singapore (HELMS) – Life Course Approach for a Healthier & More Resilient Population**

*Dr Loy See Ling*

*Junior Principal Investigator, Department of Reproductive Medicine, KKH*

Although the preconception, pregnancy and postpartum periods present critical windows of opportunity during early life to address intergenerational obesity and mental health problems in society, the current maternal and child health system is ill-equipped for the purpose. A structured care model that guides women to optimise their health before, during and after pregnancy is lacking. There is also minimal emphasis on establishing and shaping healthy nutrition and lifestyle habits in their children from birth. We propose an integrated life course model in a care continuum that encompasses preconception optimization, pregnancy participation, and postpartum synchronization of maternal-child health services in the first two years of life, namely the Healthy Early Life Moments in Singapore (HELMS). HELMS was conceived in 2019 and launched in 2022 at the Singapore KK Women's and Children's Hospital, to address both metabolic and mental health challenges to achieve the goal of a thriving, healthy nation. At each life course phase, specifically, HELMS aims to optimise (1) reproductive outcomes during preconception; (2) obstetric outcomes during pregnancy; and (3) postpartum physical and mental well-being, and healthy feeding habits and growth during infancy. Women planning to conceive are invited to participate in HELMS, followed through pregnancy, and during the first 18 months after delivery. The intervention is delivered using a mobile health application, to provide anticipatory guidance, raise awareness, and guide goal-setting on lifestyle behaviours that include diet, physical activity, mental wellness, and sleep hygiene from preconception to postpartum. This new model-of-care is designed to secure a population with healthy life cycles, by influencing each life course, early-in-life, to provide the best start for generations to come.

## **CRADLE (Community-enabled Readiness-for-1000-Days Learning Ecosystem)**

*A/Prof Ng Kee Chong*

*Chairman Medical Board, KKH*

The early stages of life from conception to 2 years has a critical role in shaping the development and long term health of an individual. The first 1000 days presents a unique opportunity to journey with the pregnant women to optimize the child's growth, development and emotional health.

CRADLE or the "Community Enabled Readiness for First 1000-Days Learning Ecosystem" Project seeks to improve the parenting self-efficacy and overall health (nutrition & wellbeing) of first-time families.

Our key hypothesis is that the use of an integrated choice architecture in a self-learning eco-community, with calibrated & targeted nudges with group interactions in the first 1000-days for first-time families will improve parenting self-efficacy.

First time parents were recruited from 1st and 2nd trimester and followed up to the first 2 years of the child's life (ie the first 1000 days).

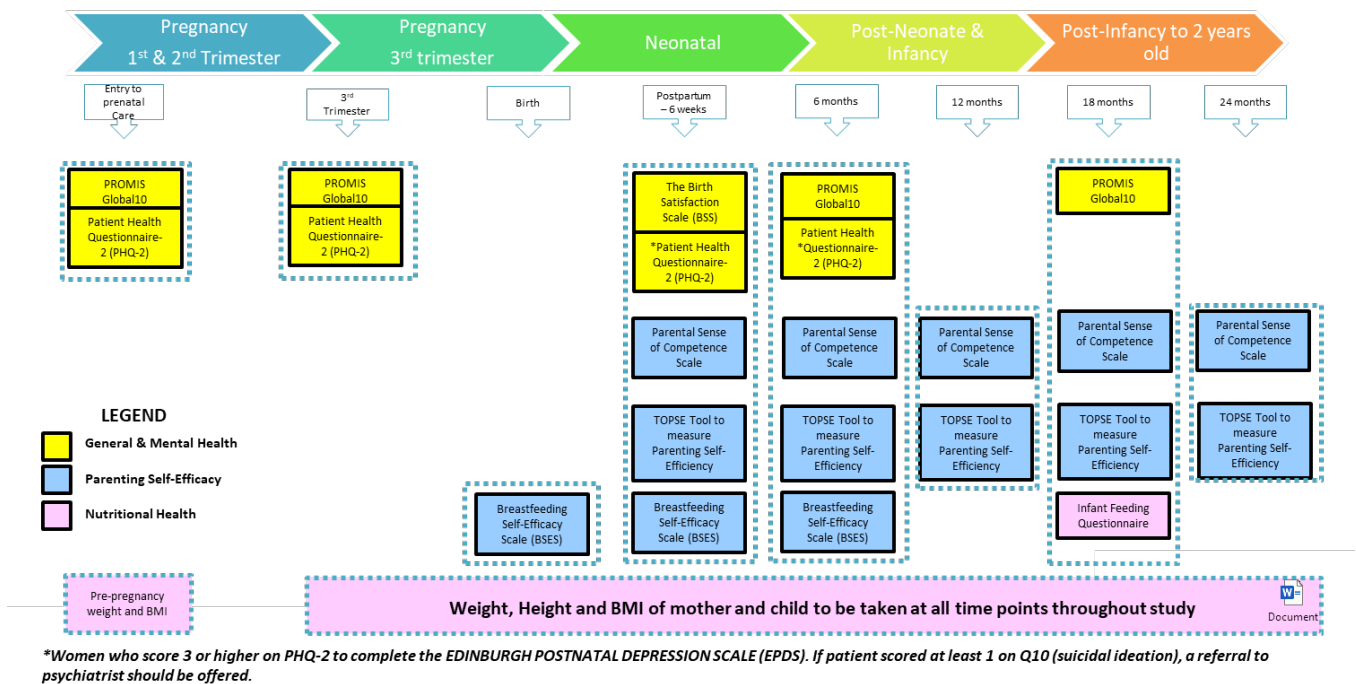
This is a randomised control trial and interventional cohort study with three arms -

- Arm 1 : Routine care / control group
- Arm 2 : Smart nudges & behavioural intervention with a sharing platform on Facebook
- Arm 3 : Community Intervention -Engagement by KKH Midwives during antenatal and postnatal period

All 3 arms were invited to ongoing 6 monthly webinar talks given by KKH Medical Professionals.

A total of 548 first-time parents were recruited with equal distribution in each of the 3 arms with recruitment over a 3-year period - from July 2020 and ending in December 2021.

Participants were followed-up with rigorous assessment measurement tools and surveys at designated time points.



## Wearable Technology for the Maternal Population

Prof Tan Kok Hian

Lead, IPRAMHO, Singapore

Senior Consultant & Head Perinatal Audit & Epidemiology, KKH

Wearable technology, known as "wearables," are electronic devices that can be worn as accessories, embedded in clothing, implanted in the user's body, or attached on the skin. The devices are hands-free gadgets with practical uses, powered by microprocessors with wireless or internet capability. The rapid adoption of wearable technology has placed it an important area

for healthcare and research. Factors affect the acceptance of wearable technology in the mainstream: wearability, ease of use, design, functionality, and price.

The growth of mobile & Wi-Fi networks enabled the rapid development of wearable technology. Fitness activity trackers, wristwatch screen, Bluetooth headsets, smartwatches & rings, and web-enabled glasses allow people to easily collect, transmit & receive data on the go. The gaming industry adds more wearables, with virtual reality and augmented reality headsets.

The global wearable pregnancy device market is growing rapidly and transforming healthcare for pregnant women. Uses in pregnancy and postpartum period include physical activity awareness & trackers, heart rate, temperature & vital signs monitoring, pulse oximetry, continuous glucose monitoring, sleep monitoring, screening for sleep disordered breathing in pregnancy, home fetal monitoring, cardiotocography monitoring, and preterm monitoring using electrohysterography. Neuromodulation device worn on the wrist has been used to generate electrical pulses to modulate the brain's anti-nausea feedback mechanisms. Research is ongoing of using wearables to help detect depression.

IN KKH, there are a number of trials on going using wearable devices. Continuous glucose monitoring (CGM) wearable device is being studied in Integrating the Use of Calibration-Free Continuous Monitoring for Pregnancy Glucose Profiling: I-Profile Study (I-PROFILE <https://clinicaltrials.gov/ct2/show/NCT05123248>) for its uses of predicting the development of GDM. In Integrated Hyperglycaemia Incentivised Postnatal Surveillance Study (I-HIPS <https://clinicaltrials.gov/ct2/show/NCT05081037>), the use of CGM and physical activity trackers are used to assess how they can impact on the risk of T2DM. The study, Integrating Smart Ring Wearable Technology in Pregnancy Health Monitoring (I-SMART) assesses the applicability and uses of smart rings in pregnancy.

## **SYMPOSIUM III – IPRAMHO EDUCATION SESSION: TRAINING PROGRAM FOR DOCTORS AND RESIDENTS ON PERINATAL MENTAL HEALTH FOR EXCELLENCE IN PERINATAL CARE**

### **Understanding Perinatal Depression and Anxiety**

*Dr Hong Lin Feng*

*Associate Consultant, Department of Psychological Medicine, KKH*

This talk will allow clinicians to learn about the epidemiology, etiological factors, signs and symptoms, course, assessment, common comorbidities and treatment approaches of depression and anxiety conditions during the peripartum period.

### **Case studies: Approach to Managing Perinatal Depression and Anxiety**

*Dr Elizabeth Siak*

*Consultant, Department of Psychological Medicine, KKH*

The speaker will present several case vignettes to illustrate principles guiding the management of perinatal depression and anxiety. Cases with varying care needs will be discussed to equip participants with an understanding of how a range of cases may be managed across different settings.

### **Supportive Counselling in Perinatal Mental Health: What Women Prefer**

*Ms Chng Ying Chia*

*Principal Clinical Counsellor, Department of Psychological Medicine, KKH*

The prevalence of antenatal depression is as common as about 12%, and about 7% for postpartum depression in Singapore. Although anti-depressant treatment remains the main stay of treatment for depression, women in pregnancy and the postpartum period are often hesitant to accept anti-depressants, due to concerns over the effects of medication on the fetus and in breastfeeding. This presentation aims to describe the role of supportive counselling for women with perinatal mental health problems, and discuss what women has found helpful in their journey towards recovery.

## **Approach to Addressing Maternal Mental Health Needs in Primary Health Setting**

*Dr Ng Lai Peng*

*Senior Consultant, SingHealth Polyclinics – Tampines*

Maternal mental health is closely linked to a child's neuro-behavioural development. Mothers experiencing mood disorders often feel inadequate and tend not to seek help. Family physicians and primary health care workers have multiple encounters with the mother in the postpartum period when the child comes for neonatal jaundice checks and well-child visits.

Postnatal depression screening incorporated at well-child visits provides opportunities for at-risk mothers to be identified. In a busy primary care setting, a two-step screening can be employed during the child's 8-week visit for vaccination. A brief 2-question screening tool can be administered to all, followed by 10-point Edinburgh Postpartum Depression Screening (EPDS) for patients who screened positive.

This can be administered by primary care nurses who can also provide brief supportive counselling and encourage mothers to seek help. Mothers with mild symptoms can receive support from the community mental health team with a follow-up visit with the family physician. Patients with persistent symptoms or clinical diagnosis of mood disorder can be referred to specialist care promptly.

## **Approach to Addressing Needs of the Dyad: What Matters for Infants**

*Ms Yasmin Mohamed Hassan*

*Senior Clinical Counsellor, Department of Psychological Medicine, KKH*

This talk will allow clinicians to have an understanding of maternal mental health and its impact on mother's engagement with their Infants. In order to improve maternal well-being and infant mental health, we will look into the detection, prevention, and treatment focusing on the mother-infant dyad.

## **Early Child Development: Getting It Right for the Little Ones**

*Dr Padmini Yeleswarapu*

*Senior Consultant, Department of Child Development, KKH*

Early childhood is the time when the brain rapidly develops and when it's maximally plastic. Hence providing with a window of opportunity when caregivers can provide a stimulating environment to support the child's early development. The speaker will highlight the importance of the first 1000 days and what the caregivers can do to 'get it right' for the little ones.

# **SYMPOSIUM IV – ASIA PACIFIC COUNTRIES ON STUDIES OF PERINATAL MENTAL HEALTH AND ITS MANAGEMENT IN ASIA PACIFIC COUNTRIES**

## **Clinical practice of Vitamin D screening and supplementation in pregnancy in Asia-Pacific Countries: a survey review**

*Dr Ryan Lee Wai Kheong*

*Consultant, Department of Maternal Fetal Medicine, KKH*

**Background:** Vitamin D deficiency is common in pregnant women. There are varying clinical knowledge gaps and different perceptions on Vitamin D screening and supplementation in pregnancy among healthcare professionals with no current survey review in the Asia-Pacific region. We performed a survey review among international health care professionals who are part of the Integrated Platform for Research in Advancing Metabolic Health outcomes of Women and Children (IPRMAHO) international study group on their understanding and perception of Vitamin D screening and supplementation in pregnancy.

**Methods:** The cross-sectional survey comprised 4 main sections on demographics, existing policies in their own practice, nutrient supplementation in pregnancy and various practices on screening, treatment and perceptions comprising a total of 22 questions. 16 surveys were completed by clinicians and academic attendees from eleven participating Asia-Pacific countries.



**Results:** Majority of the surveyed hospitals (11/16, 68.75%) did not have a national policy or regional guideline regarding Vitamin D screening and supplementation in pregnancy. Majority of respondents (13/16, 81.3%) indicated that their hospital did not screen for Vitamin D deficiencies in pregnancy, even amongst high risk pregnant women. In addition, majority of respondents expressed that their own centre did not have any written protocol (12/15, 80.00%) or were unsure if a protocol existed (2/15, 13.33%). Nevertheless, majority of respondents indicated a need (15/16, 93.75%) for a guideline or consensus regarding Vitamin D screening and supplementation in pregnancy.

**Conclusion:** Further research needs to be undertaken regarding the benefits and risks of universal screening and supplementation of Vitamin D in Asia Pacific region. This study review promotes collaboration among international healthcare professionals and enhances our understanding of global health perspectives on the effects of Vitamin D screening and supplementation in pregnancy for the benefit of pregnant women in the Asia-Pacific.

## **Progress update on the international 24-hour activity survey studies (ESAP & ISAP)**

*Dr Quah Phaik Ling, Elaine*

*Senior Research Fellow, Division of Obstetrics and Gynaecology, KKH*

Providing updates on the progress of the Integrated 24-hour activity survey on Asia Pacific Children and Adolescents (ISAP) and the Early Childhood Integrated 24-hour activity survey in Asia Pacific (ESAP) to study collaborators.

## **Early identification and management of perinatal mental health issues: why it is important to establish best practice and the barriers to doing so**

*Prof Anne Buist*

*Chair, Women's Mental Health, University of Melbourne, Australia*

This session will review current best practice in identification and management of perinatal mental illness and using the experience of the beyondblue postnatal depression program in Australia and its aftermath to illustrate some of the barriers and challenges. Perinatal mental illness is common and with clear implications for infant outcomes, but costs, staffing, attitudes, science and politics all play a part in navigating the best solution which may vary between countries and health services within each country, requiring leadership with clear goals and communication.

## **Postnatal depression scale during COVID-19 pandemic in Hong Kong**

*Dr Amelia Hui*

*Consultant, Department of Obstetrics & Gynaecology, Queen Mary Hospital, Hong Kong*

Alert of COVID-19 was first announced in Hong Kong on 4 January 2020. Childbirth companion suspended since 25 January 2020. It was periodically resumed but no hospital visiting was allowed as of 31 Oct 2022. We evaluated Edinburgh Postnatal Depression Scores (EPDS) and factors contributing to high EPDS. A higher level of depression was seen in pregnant women who delivered during COVID-19 pandemic, especially for women without childbirth companion.

## **The Associations of Sleep with Maternal and Child Health: A Sleep Series Study in China**

*Dr Shenghui Li*

*Professor, School of Public Health, Shanghai Jiaotong University, China*

**Background:** For a variety of reasons, either by societal changes or due to lifestyle choice, chronic sleep loss and sleep disturbance are increasingly common among both adults and children. Studies among adults have revealed that disrupted sleep is implicated in the pathogenesis of numerous co-morbidities, including type 2 diabetes, hypertension, coronary heart disease, dyslipidemia, endothelial dysfunction, and metabolic syndrome. However, compared to adults, little is known about sleep and its health effects among special population, such as children, adolescents, and pregnant women.

**Methods:** A sleep series epidemiological study was designed to obtain insight into sleep health among special population, including children, adolescents and pregnant women. Part I Study among Children and adolescents: 1) sleep patterns and their distribution in a large national cross-sectional survey; 2) a longitudinal associations of sleep with school performance, metabolic status, and neurobehavioral development in a prospective cohort study; 3) the effectiveness of a school-based sleep intervention scheme using a comparative cross-sectional analysis of pre- and post-intervention surveys. Part II Study among pregnant



women: 1) the trajectories of sleep quality and their associations with maternal BMI gain speed during pregnancy based on a maternal sleep cohort study; 2) the association between periconceptional poor sleep and the risk of congenital heart disease, and to examine if daytime napping could to some extent change the association.

**Results and conclusions:** The prevalence of daytime sleepiness was 64.4% in school-aged children and approximate 80% in adolescents. Sleep problems, daytime sleepiness, and in some cases, short sleep duration were significantly associated with impaired academic achievement, mental health problems, and childhood obesity. School schedule could be considered as a target for sleep intervention.

Poor sleep quality during pregnancy was associated with advanced BMI gain speed in pregnant women. Poor maternal sleep around periconceptional period seems to be an independent risk factor for congenital heart disease. The concurrence with daytime nap could to some extent reverse the effect.

## **Psychological Outcomes in COVID-19 positive pregnant mothers in the maternity isolation ward and postnatal mothers who have been positive for COVID-19 in the Professorial Unit of Colombo South Teaching Hospital**

*Dr Madura Jayawardane*

*Consultant & Senior Lecturer, Department of Obstetrics and Gynaecology, University of Sri Jayewardenepura, Sri Lanka*

**Background:** The current pandemic has significantly affected the mental wellbeing of pregnant mothers owing to the fear of contracting the virus and thus the fear of having an unsafe pregnancy. Also, various restrictions imposed to curtail the spread of COVID-19 have become an added burden to good mental health of mothers during their pregnancy.

**Objective:** To determine the level of anxiety and depression in mothers who had active infection and managed at the maternity isolation ward and to compare the difference in the level of their anxiety and depression upon their discharge from the isolation ward after being treated. To determine the association between levels of anxiety and depression and obstetric factors

**Study Design:** A cross sectional descriptive study that recruited maximum possible mothers (79) who were admitted to the maternity isolation ward at Colombo South Teaching after being tested positive for Covid by any accepted mode of testing. This was done over a period of 3 months.

**Method:** Socio demographic details, details pertaining to current and past pregnancies, COVID-19 status and management were collected via Interviewer Administered Questionnaire. Psychiatric assessment was done via Hospital Anxiety Depression Scale (HADS) upon admission and discharge on COVID-19 positive mothers who were managed at the Colombo South Teaching Hospital Maternity Isolation Ward.

**Results:** Most of the patients (72.2%) were not at all anxious upon admission to the isolation ward. 6.3% were anxious upon admission. However, none of the parameters such as the age of patients, severity of illness, associated medical disorders, blood group of patient showed any significant association with the level of anxiety. This anxiety didn't persist in patients who remained at the isolation ward till the completion of their quarantine period, because 97.8% on discharge were not at all anxious. Majority of the patients (78.5%) were normal for depression on admission to the isolation ward. 7.6% were depressed on admission. None of the obstetric or socio demographic factors showed a statistically significant association except for anaemia during pregnancy ( $p=0.028$ ). Majority (95.6%) of patients who were discharged following their accepted days of quarantine were normal and not depressed.

**Conclusion:** Majority had no anxiety and depression according to the Hospital Anxiety Depression Scale. Irrespective of the trimester at which they contracted the disease, severity of COVID-19 infection and other obstetric factors, the majority remained normal for both anxiety and depression. The anxiety and depression was among those were found to be transient as majority were recovered at the time of discharged.

There was a statistically significant association between the level of depression and anaemia in pregnancy, however further study on this is required to explain the association.

## **Survey on Perinatal Mental Care for Mothers in Korea and Proposal of the Feasible and Effective Perinatal Mental Care**

*Asst Prof Kim Seo-Yeon*

*Assistant Professor, Department of Obstetrics and Gynaecology, Kangbuk Samsung Hospital, Sungkyunkwan University School of Medicine, Korea*

Both pregnancy and birth are rightly happy and precious moments. However, maternal biochemical changes during pregnancy and stressful events during pregnancy, such as a lack of support from family or society, can cause depressive mood changes in perinatal period. The change also presents as behavioral symptoms, such as anxiety, insomnia, poor concentration and irritability. It is called as 'Maternity blue' and more severe form is 'Perinatal depression'.

Perinatal depression is a comprehensive term that includes both antepartum depression and postpartum depression, each of which means a major depression disorder that occurs during pregnancy and within 12 months after delivery. Antepartum depression is known to occur in 9% of all pregnant women, and postpartum depression in 10% of all women in puerperium. According to a study conducted on Korean mothers in 2014, however, the prevalence of antepartum depression was 26%, higher than previously known.

When perinatal depression is neglected, it has devastating effects not only on mothers, but also on infants and her families. Thus, the American College of Obstetricians and Gynecologists (2018) recommends the followings: (1) First, care providers need to assess maternal risk factors of perinatal depression at the first prenatal visit. (2) Second, care providers need to screen patients for depression and anxiety using a validated tool at least once during pregnancy and once in postpartum visit. (3) In addition, if there is a risk of suicide or homicide, care providers should immediately initiate medical treatment and refer patients to a specialized counseling center.

It is important not only to diagnose and intervene perinatal depression, but also to prevent such mental illnesses. Therefore, care providers should take care of perinatal mental care. Unfortunately, perinatal mental care is often overlooked because of its difficulties to implement in clinical practice. Moreover, maternal affection and sense of responsibility as a parent have been considered more important than mothers' mental health in Korean society. For these reasons, Korean mothers are often reluctant to express their mood changes during pregnancy.

We analyzed previous studies on perinatal mental care and subsequently investigated current perinatal mental care in Korea. We also reviewed perinatal mental care in other countries and evaluated its strengths and limitations. In addition, we examined the status of maternal mental health such as the prevalence of perinatal depression in Korea, and did a detailed survey targeting care providers, mothers, and her family members to find out their attitudes and needs toward perinatal mental care in Korea.

In conclusion, in addition to sharing the Korean perinatal mental care data, we would like to discuss the feasible and effective way of perinatal mental care based on the Korean and Federation of Asia and Oceania Perinatal Societies (FAOPS) member countries' data.

## **Mental Health Issues in Pregnancy in Thailand**

*Asst Prof Supachoke Singhakant*

*Vice Chair for Education, Department of Psychiatry, Siriraj Hospital, Thailand*

Mental health problems during pregnancy are among various challenging aspects in health care system in Thailand. The content of this talk will focus on the current situation of the mental health problems among pregnant women in Thailand including prevalence of each problem, screening and management in various settings.

## **An Obstetrician-Led Perinatal Mental Health Services: The Malaysian Experience**

*Dr Muniswaran s/o Ganesham @ Ganeshan*

*Maternal Fetal Medicine Specialist & Consultant Obstetrician & Gynaecologist, Women & Children's Hospital Kuala Lumpur (Hospital Tunku Azizah)*

The impact of perinatal mental health is extremely significant and forms an integral component of maternal medicine. Although the awareness on the importance to screen, diagnose, manage and to treat apart from the safety of available interventions are progressively on the rise; there are still numerous challenges and barriers with needs to be addressed by the experts within the fraternity as to ensure that mothers get optimal care and that their mental health needs are holistically addressed.

The mental health services have traditionally been provided by counselors and psychiatrists; but since 2018, a dedicated obstetrician lead combined perinatal mental health clinic was established within the maternal medicine clinic at the Women and Children's Hospital Kuala Lumpur as an endeavor to provide a one stop compressive holistic care for these patients.

This talk aims to highlight the importance and experiences from having such dedicated subspecialty clinics within the obstetric unit as it aims to remove stigma and barriers related to women seeking mental health needs and also to establish an evidence based comprehensive care with encompasses both physical and mental health well-being. The services, networks, challenges, and lessons learned will be highlighted in a systematic manner with the aim to improve the quality of perinatal mental health services.

## **Road to Establishing Maternal Mental Health Care in Primary Health Care (PHC) in Surabaya: The Role of Community Health Workers (kader posyandu)**

*Dr Endang Retno Surjaningrum*

*Lecturer, Faculty of Psychology, Airlangga University, Indonesia*

Since 2009 the Indonesia government has set a community-based mental health care, however maternal mental health service has not been established in primary health care (PHC). The speaker will introduce the development of research regarding the role of community health workers called kader posyandu in Surabaya to identify mothers' mental health. Kader posyandu are volunteers recruited from the community to assist community health centre or Puskesmas in maternal health care. Puskesmas is a government health service which is established in a subdistrict area and it is supported by community-based health service in every small area called post pelayanan terpadu or "posyandu" (integrated service post) which mostly focus on maternal and child health care. Women from the community are recruited and trained in providing the service and they called kader posyandu. A government document states the role of kader posyandu also includes identifying mental health of pregnant and postpartum mothers. This presentation will describe the potential of establishing an integrated maternal mental health care in PHC in Surabaya through the role of kader posyandu, from case identification to referral, based on research has been done between 2015-2021. It will show what has been done and what need to do next to realizing the idea.

## **Perinatal Mental Health in Japan**

*Dr Michiko Yamanaka*

*Chief, Department of Integrated Women's Health & Director, Center for Medical Genetics, St Luke's International Hospital, Japan*

For perinatal mental health care, it is important to cooperate between the medical institutions in charge of pregnancy and childbirth and the community. Also, it requires a smooth transition and continuation of support from childbirth to childcare. In Japan, the Ministry of Health, Labor and Welfare has played a central role in promoting the "Healthy Parents and Children 21" national movement in which all related people and organizations work together to promote the improvement of maternal and child health since 2001. Among them, "Seamless health measures for expectant and nursing mothers and infants" and "Measures to prevent child abuse start from pregnancy period" are the issues of the perinatal period. The maternal and child health services that have been established for a long time are developing into more substantial ones through this movement.

When a pregnancy is confirmed, "Maternal and Child Health Handbook" which record the child's growth and health from before birth is issued by the local government. This issuance will be the first touch point between the community and pregnant women, and support for expectant and nursing mothers and childrearing by the community will start. Expenses for prenatal checkups, including postnatal checkups, are subsidized by local governments. About 400,000 JPY will be paid for childbirth expenses from medical insurance. Within 28 days after the birth of a child, public health nurses or midwives visit each home to provide guidance on the growth, nutrition, living environment, disease prevention, etc. of the newborn. In addition, there is a "Home Visit Project for Infants (Hello Baby Project)," in which public health nurses or midwives visit all homes with babies up to the

age of 4 months to discuss concerns and worries about raising children. The Japanese version of the Edinburgh Postpartum Depression Questionnaire (EPDS) is widely used as a postpartum mental health check. The Ministry of Health, Labor and Welfare recommends comprehensively assessing the mental state using objective tools, not limited to EPDS. It also promotes the use of postpartum care facilities, which were not widely used in Japan. For families in need of assistance and advice, local public health centers, child and family support centers, child welfare facilities, child guidance centers, etc. work together to prevent child abuse and provide family support. For pregnant women with problems, there is also a system in which medical institutions and local governments work together to watch over and support them from the pregnant periods.

However, the lack of facilities with both psychiatric and obstetric departments that can treat pregnant women with mental disorders is often a problem, and there are reports that suicide is the number one cause of death among pregnant and puerperal women. Even if the local administrative system is completed, the future task is to improve the soft aspects related to it.

## **New Initiatives and Best Practices for Perinatal Mental Health in India**

*Professor Prabha S. Chandra*

*Dean of Faculty (Behavioural Sciences) & Senior Professor of Psychiatry, National Institute of Mental Health and Neurosciences, India*

The presentation will focus on the integration of mental health into routine maternal and child care in several states in India and the implementation of the WHO framework. It will also address training of health professionals in perinatal mental health and the running of an inpatient Mother Baby Unit.