MCHRI launches Singapore’s first set of guidelines on perinatal mental health

Guidelines to address rising incidence of maternal depression

17 February 2023, Singapore - Singapore’s first set of Guidelines on perinatal mental health was launched today at the MCHRI Asia Pacific Maternal and Child Health Conference and IPARAMHO International Meeting 2023 in KK Women’s and Children’s Hospital (KKH).

The Guidelines, unveiled by Dr Janil Puthucheary, Senior Minister of State, Ministry of Health and Ministry of Communications and Information, casts the spotlight on the rising incidence of maternal depression, and the urgent need to address the issue.

“In KKH, we saw a 47 per cent increase in patients who screened positive for postnatal depression between April 2019 to March 2020 and April 2021 to March 2022. This increase during the COVID-19 pandemic mirrors patterns seen in other countries. It is a major concern as it impacts not just the mother but also the child. Evidence has proven that anxiety and depression in the mother can lead to adverse consequences. Mothers who are mentally vulnerable are unable to function normally, or bond with their infants, and in severe cases, may be at risk of suicide. For the child, maternal depression can impact his or her brain development, and may affect his or her temperament, behaviour and readiness for school,” said Associate

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1 SingHealth Duke-NUS Maternal and Child Health Research Institute
Professor Helen Chen, Head and Senior Consultant, Department of Psychological Medicine, KKH, and Chairperson, Workgroup for the Guidelines.

In Singapore, postnatal depression affects one in 14 women while antenatal depression affects one in eight women pre-COVID-19. The pandemic has contributed to the rising incidence of maternal depression.

“There is an urgent need to address the situation, as Singapore moves into an endemic phase. The key to preventing these negative effects is early screening, prompt attention for anxiety and depression, preferably even before the women is pregnant. This is integral to what KKH and MCHRI hopes to achieve, to optimise the continuum of care from pregnancy to childbirth, infancy to adulthood. We are building on the foundation to improve our population health for mothers in Singapore,” added Associate Professor Chen.

A Healthier SG, starting from every woman

Developed by KKH-led IPRAMHO, Singapore’s first set of Guidelines for Perinatal Mental Health details clinical recommendations for women before, during and after childbirth to impact positive long-term outcomes.

Some of the key recommendations for the Guidelines for Perinatal Mental Health include:

Preconception

- Increasing awareness and availability of advice on preconception mental health
- Optimising preconception mental health with a holistic approach with lifestyle changes and medication use

Antenatal

- Early screening and assessment
- Optimising care, treatment and support for women with antenatal depression

Postnatal

- Early screening and assessment


8 Integrated Platform for Research in Advancing Maternal and Child Health Outcomes is one of the main programmes by MCHRI.
- Optimising care, treatment and support for women with postnatal depression

**Perinatal**

- Increasing accessibility to mental health support for women who have experienced severe medical trauma, and those with mental health needs during their pregnancy
- Tailoring mental healthcare needs for adolescents and women with special needs
- Promoting higher caregiver quality for perinatal and infant mental health needs

(Refer to Annex A for full details of the Guidelines)

“Since 2017, IPRAMHO has been launching programmes to address the burgeoning metabolic challenge in the maternal and child health landscape. This set of Guidelines looks at a different aspect - perinatal mental health from preconception through to postnatal. This is an area that has been overlooked, and require more awareness and guidance for patients and healthcare professionals. More importantly, this continues our work in developing a holistic approach to shaping the future of women and children and transform national health, for our generation and many generations to come,” said Professor Tan Kok Hian, Head and Senior Consultant, Perinatal Audit and Epidemiology Unit, KKH, and Lead Principal Investigator of IPRAMHO.

The development of the Guidelines was spurred by the findings from two recent surveys by IPRAMHO. The first survey involving 600 antenatal and postnatal women found that mental health education was poor despite the high prevalence of antenatal and postnatal anxiety as well as depression. 62 per cent did not receive assessments or education on mental health from healthcare professionals, and only one in six women cited that they would seek help from healthcare professionals if they were experiencing mental health symptoms.

Not surprising, a second survey involving 53 doctors revealed that more than 90 per cent of patients rarely report mental health concerns or symptoms during the antenatal or postnatal periods. More than half of the doctors also admitted that they seldom initiate a discussion about mental health with their patients, while the majority of the doctors were not confident or only

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“somewhat” confident about providing advice on perinatal mental health. (Refer to Annex B for details of the surveys)

The Singapore Perinatal Mental Health Guidelines is part of a series of guidelines designed by IPRAMHO, a main programme by MCHRI, to transform national health in Singapore.

The Guidelines will be made available to healthcare professionals through the College of Obstetricians & Gynaecologists Singapore.

Other guidelines launched by IPRAMHO include the Integrated Activity Guidelines for Early Childhood (under seven years) and Children and Adolescents (seven to 18 years) which were launched in 2022 and 2021 respectively, Guidelines for Pregnant Women focusing on the management of gestational diabetes, and physical activity, were launched in 2018 and 2020 respectively, and Guidelines for Perinatal Nutrition, in 2019.

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About KK Women's and Children's Hospital

KK Women's and Children's Hospital (KKH) is Singapore's largest tertiary referral centre for obstetrics, gynaecology, paediatrics and neonatology. The academic medical centre specialises in the management of high-risk conditions in women and children.

Driven by a commitment to deliver compassionate, multidisciplinary care to patients, KKH leverages innovation to advance care. In 2021, the hospital launched the SingHealth Duke-NUS Maternal and Child Health Research Institute (MCHRI). This centre of excellence aims to support the growth of every woman and child to their fullest potential through research and innovation, to transform national health in Singapore and the region.

Some of the hospital’s recent breakthroughs include uSINE®, a landmark identification system for the administration of spinal epidural, the discovery of new genetic diseases like Jamuar Syndrome, and a series of guidelines for women and children to improve metabolic and mental health.

The Academic Medical Centre is also a major teaching hospital for Duke-NUS Medical School, Yong Loo Lin School of Medicine and Lee Kong Chian School of Medicine. In addition, KKH runs the largest specialist training programme for Obstetrics and Gynaecology, and Paediatrics in
Singapore. The programmes are recognised by the Accreditation Council for Graduate Medical Education International (ACGME-I), and are highly rated for the quality of clinical teaching and translational research.

KKH was founded in 1858, and celebrates its 165th anniversary this year. For more information, visit www.kkh.com.sg

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Annex A – Summary statements of the Singapore Perinatal Mental Health Guidelines

Preconception

1. Increase awareness and provide advice for preconception mental health

A. Provide advice on pregnancy planning
   i) Consider pregnancy planning or contraception for women and girls of childbearing potential with a past or current depressive or anxiety disorder as they are particularly vulnerable to the stress of an unplanned pregnancy.
   ii) Consider any previous history of depression or anxiety, as this is a well-established risk factor for antenatal depression or anxiety (Biaggi 2016).
   iii) Plan well for pregnancy, as pregnancy unintendedness is a risk factor associated with perinatal depression (Abajobir et al, 2016).

B. Have preconception counselling on impact of maternal mental illness and treatment
   i) Provide information to women of childbearing potential with a severe depressive or anxiety disorder regarding how their mental health condition and its treatment might affect them or their baby if they become pregnant (McCloskey et al, 2020).
   ii) Tailor this information according to their individual needs, and illness pattern.
   iii) With information, women can make an informed decision about family planning, and make necessary arrangements to prepare for pregnancy (McCloskey et al, 2020).

2. Optimise preconception mental health

A. Make lifestyle adjustments to optimise preconception mental health
   i) Provide guidance to women of childbearing potential with pre-existing depressive or anxiety disorder to help them make lifestyle adjustments to optimise their mental wellbeing and general health (Van Lee et al, 2022).
   ii) Recommendations include improving nutrition with whole foods diet, weight management, smoking cessation, alcohol abstinence and folate supplementation to promote maternal mental wellbeing, and fetal development. Physical activity, exercise and mindfulness practice can also help reduce symptoms of depression or anxiety and promote wellbeing. (Dennis et al, 2022)
   iii) Tailor recommendations on lifestyle adjustments to pace individual needs.

B. Evaluate medication use in consideration of childbearing
   i) Consider carefully safe choices of psychotropic medication or mood stabiliser, particularly valproate, for women or girls of childbearing potential who might require long-term treatment for their mood disorder (UK Nice guidelines).
   ii) Restrict the use of valproate to when there are no effective or tolerated alternatives, and when pregnancy prevention plan is adequate, as valproate is teratogenic. (Shakespeare & Sisodiya 2020)

C. Have a holistic approach to preconception mental health
i) Consider psychological therapies, and address social stressors, to optimise the control of pre-existing depressive or anxiety disorder, as this can help to minimise the dose of antidepressant medication needed; any cessation should be discussed in preconception care planning.

ii) Aim to achieve minimum effective dose of psychotropic medication to maintain wellness during conception. Maternal mental health state tends to remain stable from preconception to pregnancy. (Kee et al 2021)

iii) Addressing any conflicts to ameliorate the risk of depression perinatally as couple relationship strength is particularly important. (Westdhal et al 2012)

### Antenatal

#### 3. Have screening and assessment for antenatal depression/anxiety

A. Provide screening for antenatal depression/anxiety
   i. Early screening for antenatal depression during obstetric visits provides an ideal opportunity for preventative care and treatment before delivery (Marcus et al, 2003).
   
   ii. A short screen such as the Patient Health Questionnaire PHQ-2 may be used:

   “Over the last 2 weeks, how often have you been bothered by:
   - Little interest or pleasure in doing things?
   - Feeling down, depressed or hopeless?”

   Women who experience either/both symptoms for most days, can be considered screen-positive, and will benefit from support or referral for further assessment.

   iii. Women may also be screened using a validated questionnaire such as the Edinburgh Postnatal Depression Scale EPDS, with follow-up actions according to clear referral and management protocols.

   iv. Consider that antenatal depression is more common than postnatal depression (Chee et al, 2005), and that antenatal depression and anxiety are significant risk factors for postnatal depression. (Norhayati et al, 2015)

   v. Consider using Generalised Anxiety Disorder 2-item (GAD-2) with further assessment to follow, but take note that there is currently no robust evidence for a reliable screening tool for antenatal anxiety. (Appendix 3)

B. Have assessment of antenatal depression/anxiety
   i. Clinical diagnoses should be made based on criteria listed in DSM-5 (Appendix 4) or ICD-10.

   ii. Consider holistic aspects of care such as: other psychiatric co-morbidities (such as learning disability, alcohol and substance use disorders), medical and obstetric health, quality of partner and other familial relationships, care of older children, financial and occupational stressors, lifestyle practices, bonding with unborn child.

   iii. Consider assessing for risk of harm to self and others (including fetus).

#### 4. Optimise care, treatment & support for antenatal depression/anxiety

A. Counsel on medication use in antenatal depression/anxiety
   i. Antidepressants are recommended for women with moderate to severe illness, or at risk of clinically significant relapse, with careful consideration
of potential benefits and risks of antenatal use of antidepressants (NICE, 2014)

ii. Factors to consider include: symptom severity, risk of relapse/worsening, impact of illness vs. medication on mother and fetus, patient’s response to previous treatment, stage of pregnancy, patient preference (Yonkers et al, 2009)

iii. Clinicians should provide information regarding the risk of septal defects with selective serotonin reuptake inhibitors, such as Paroxetine (Pedersen et al, 2009), and discuss risk-benefit considerations. (Molenaar et al. 2018)

iv. Good practices for prescribing safely include: lowest effective doses, divided over the day if necessary, avoiding first-trimester use if possible, frequent and regular reviews. (NICE, 2014)

v. Benzodiazepines, commonly used for anxiety, should be avoided in pregnancy as there is an increased risk of use of ventilatory support for the newborn. (Yonkers et al, 2017)

B. Provide holistic approach to care for patients with antenatal depression/anxiety

i. Care for women should be coordinated amongst relevant healthcare professionals, which may include general and family medicine practitioners, obstetricians and gynaecologists, paediatricians, psychiatrists, nurses, counsellors and midwives. (Yonkers et al, 2009)

ii. Having relevant mental health information enables women (and their partners/family, with their agreement) to make informed, collaborative decisions about their care.

iii. Information should include potential benefits and side effects of treatment, consequences of untreated illness, which may include poor maternal health, lower quality of life, difficulties with social relationships, poor mother-infant bonding, and poor overall development of the infant. (NICE, 2014)

iv. Lifestyle behavioural interventions targeting diet, sleep, physical activity, smoking and having social support helps to prevent and reduce antenatal depressive symptoms. (van Lee et al, 2020)

v. Non-pharmacological interventions, such as supportive therapy, psychology therapy and group therapy, may be beneficial, in addition to pharmacological interventions. (Bowen et al, 2014)

C. Provide monitoring and support for women receiving care for antenatal depression/anxiety

i. Regular monitoring of symptoms and response to treatment during the antenatal period is recommended (NICE, 2014).

ii. Consider referral to perinatal psychiatric services at KKH, NUH, IMH for women with severe depression or anxiety, or those not responding to treatment.

iii. Having adequate social and emotional support from husbands/partners and family in the antenatal period can help reduce depressive and anxiety symptoms. (Schetter, 2011)

Postnatal

5. Have screening and assessment for postnatal depression/anxiety

A. Provide screening for postnatal depression and anxiety
i. Early screening for postnatal depression during obstetric visits provide an ideal opportunity for preventative care and treatment. (McKinney et al. 2018; Chen 2011) Well child visits to the paediatrician or primary health practitioner are also an opportune time to screen the mother for postnatal depression. (Earl 2010)

ii. Screening is particularly important for women with risk factors of postnatal depression and anxiety, which include antenatal depression/anxiety, recent stressful life events and inadequate social support. (Beck 2001)

iii. A short screen such as the Patient Health Questionnaire PHQ-2 may be used:
“Over the last 2 weeks, how often have you been bothered by:
• Little interest or pleasure in doing things?
• Feeling down, depressed or hopeless?”
Women who experience either/both symptoms for most days, can be considered screen-positive, and will benefit from support or referral for further assessment. (see Appendix 1 for full version of PHQ-2)

iv. Women may also be screened using a validated questionnaire such as the Edinburgh Postnatal Depression Scale EPDS (Appendix 2), with follow-up actions according to clear referral and management protocols.

v. Consider using Generalised Anxiety Disorder 2-item (GAD-2) with further assessment to follow, but take note that there is currently no robust evidence for a reliable screening tool for postnatal anxiety. (Appendix 3)

B. Have assessment of postnatal depression and anxiety

i. Clinical diagnoses should be made based on criteria listed in DSM-5 or ICD-10.

ii. Consider holistic aspects of care such as: other psychiatric co-morbidities (such as learning disability, alcohol and substance use disorders), medical and obstetric health, quality of partner and other familial relationships, care of older children, financial and occupational stressors, lifestyle practices, bonding with baby.

iii. Consider assessing for risk of harm to self and others (including baby).

6. Optimise care, treatment and support for postnatal depression/ anxiety

A. Evaluate medication use in postnatal depression/ anxiety

i. Provide counselling on the risk and benefits of starting pharmacological treatment, including potential consequences of untreated depression/anxiety and adverse side effects of antidepressants. (Brown et al. 2021)

ii. Provide support for women in their decision about breastfeeding and be aware that antidepressant use is not an absolute contraindication to breastfeeding. (Brown et al. 2021)

B. Have a holistic approach towards care for patients with postnatal depression/ anxiety

i. Care for women should be coordinated amongst relevant healthcare professionals, which may include general and family medicine practitioners, obstetricians and gynaecologists, paediatricians, psychiatrists, nurses, counsellors and midwives.
ii. Having relevant mental health information enables women (and their partners/ family, with their agreement) to make informed, collaborative decisions about their care. (Donker et al. 2009)

iii. Information should include potential benefits and side effects of treatment, consequences of untreated illness, which may include poor maternal health, lower quality of life, difficulties with social relationships, poor mother-infant bonding, and poor overall development of the infant. (Slomian et al. 2019)

iv. Lifestyle advice such as those related to healthy eating, physical activity and sleep hygiene could be provided to women, in consideration of the adjustment of these activities during the postnatal period. (Wilson et al. 2017)

v. Supportive counselling or structured individual psychological intervention, such as cognitive behavioural therapy or interpersonal psychotherapy, may improve depressive symptoms. (NICE 2015, Wilson et al. 2017)

vi. Consider interventions to improve mother-baby bonding if there are concerns with their relationship as women with depressive symptoms may experience challenges with bonding. (NICE 2015)

C. Provide monitoring and support for women receiving care for postnatal depression/ anxiety

i. Regular monitoring of symptoms and response to treatment during the postnatal period is recommended.

ii. Consider referral to perinatal psychiatric services at KKH, NUH, or IMH for women with severe depression or anxiety, or those not responding to treatment.

iii. Having adequate social and emotional support from husbands/ partners and family in the postnatal period can help reduce depressive and anxiety symptoms. (Machado et al. 2020)

**Perinatal**

7. **Provide mental health support in severe maternal events and those with mental health needs**

Women who have experienced a severe maternal event - such as haemorrhage requiring massive transfusion and/or hysterectomy, severe hypertensive crises, eclamptic seizures, sepsis, thrombotic events and cardiovascular failure, miscarriage, stillbirth or intrauterine death – are particularly at risk of depression and anxiety, as well as post-traumatic stress disorder. (Furuta et al. 2014) Care and support should be provided for the patient, as well as the healthcare providers, who might experience emotional effects of severe adverse events. (Morton et al. 2021)

8. **Tailor perinatal mental healthcare for adolescents and women with special needs**

Women with special needs (such as neurodevelopmental disorders or intellectual disability) will benefit from care delivery that is tailored to address their needs (D’Angelo et al. 2020). Likewise, pregnant adolescents can be at higher risk of perinatal depression (Siegel & Brandon 2014). Additional effort to provide information and support for
these vulnerable mothers can mitigate the development of depression and anxiety in their perinatal experience.

9. Promote higher caregiving quality for perinatal and infant mental health needs

Infant neurodevelopment is related to the quality of caregiving. Maternal mental health can influence maternal attunement and sensitivity to infant needs (Rifkin-Gabrieli et al., 2015), and maternal mind-mindedness (Bigelow et al., 2018). Mothers are encouraged to spend quality time attending to and caring for their infants, by following baby’s cues and keeping mindful of baby’s needs. Research shows that mothers staying present, watching and wondering about their infants can improve maternal reflective capacity (Bakermans-Kranenburg et al., 2003). Red flags for dysfunction in mother-infant dyads include reduced maternal attunement, reduced child responsiveness to mother and restricted growth and development (Tsang et al., 2019).

10. Aim to integrate the above recommendations into healthcare framework for the best results.
Annex B – Details of surveys

I-MUM (Integrated Maternal Perinatal Mental Health Care) Survey
Led by Dr Elaine Quah, Senior Research Fellow, Division of Obstetrics and Gynaecology, KKH

Objective
To assess:
- Perinatal mental health literacy in terms of knowledge, attitudes, and help-seeking among perinatal women.

Method
- Online questionnaire

Target audience
- 600 pregnant women (from the first to the third trimester) and women up to 12 weeks post-delivery

Period of survey
- September to November 2022

Findings
- 12% of pregnant women and 28% of postnatal women were screened positive for depression
- 39% of pregnant women and 46% of postnatal women had depressive symptoms
- 48% of pregnant women and 57% of postnatal women were screened positive for anxiety
- 62% did not receive mental health assessments or education from their primary obstetrician and gynaecologist or any other healthcare professionals
- Only 16% would approach a healthcare professional if they were experiencing mental health symptoms
- 97% were aware of mental health disorders
- 94% were aware of the benefits that healthy lifestyle habits have on mental health wellness
- 99% agreed on positive benefits of mental health education
- 88% agreed on positive benefits of mental health screening
- 95% agreed that it is useful to have mental health guidelines for mothers
- 34% did not know or were unsure of signs and symptoms of mental health disorders
- 23% did not know or were unsure about the adverse outcomes of mental health disorders on pregnancy and child health

Conclusion
There is a high prevalence of antenatal and postnatal depression and anxiety amongst women, but mental health awareness is poor. These findings indicated a need for the Singapore Perinatal Mental Health Guidelines to better support and educate mothers.
I-DOC (Doctor’s Knowledge, Attitudes and Perceptions of Perinatal Mental Health) Survey
Led by Dr Elaine Quah, Senior Research Fellow, Division of Obstetrics and Gynaecology, KKH

Objective
To assess:
- Knowledge, attitudes, perceptions and practices towards perinatal mental health amongst obstetrics and gynaecology doctors.

Method
- Online questionnaire

Target audience
- 53 doctors specialising in obstetrics and gynaecology

Period of survey
- September to November 2022

Findings
- 98% and 94% of doctors in the antenatal and postnatal period respectively, reported that patients rarely/sometimes report mental health issues or symptoms
- 89% and 66% of doctors in the antenatal and postnatal period respectively, never or seldom initiate a discussion about mental health with their patients
- 85% are not confident/somewhat confident about providing advice on mental health
- 66% do not perform routine screening for mental health
- 94% were not aware of any guidelines on perinatal mental health for the Singapore population
- 40% were not aware of the adverse pregnancy or child developmental outcomes related to mental health issues
- 98% agreed that a set of standardised Singapore Perinatal Mental Health Guidelines will be useful for healthcare workers and patients
- 100% agreed that educating patients on mental health is important and that screening during pregnancy and post-pregnancy is important
- 28.3% seldom recommend healthy lifestyle habits for mental health
- 21% would only make recommendations if patients initiated a discussion about mental health

Conclusion
There is a need for a set of Perinatal Mental Health Guidelines for healthcare professionals to increase their levels of knowledge, as well as confidence and skills in the detection and management of maternal and perinatal mental health.