O&G
MAGAZINE

MIND MATTERS

Vol. 20 No. 3 | Spring 2018
a **RANZCOG** publication

O&G MAGAZINE

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O&G Magazine authorised by Ms Alana Killen

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ISSN 1442-5319

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Mind matters

Women's health

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From the President

Prof Steve Robson
President

This issue of *O&G Magazine* addresses the vitally important subject of mental health. As usual, the editorial team have brought together an outstanding group of experts to write. It is difficult to overstate the importance of mental health and it is gratifying to see such a detailed examination of so many clinical conundrums in this issue. *O&G Magazine*, in its current format, has been going strong for 15 years now and each issue seems to be better and more informative than the last.

FIGO

The International Federation of Gynaecology and Obstetrics (FIGO) will seem a remote and somewhat peripheral organisation to many of you. The College was successful in bidding for the FIGO scientific and clinical meeting for 2021. FIGO's meeting is held every three years and will be hosted in Rio de Janeiro, Brazil, in October of this year. The next meeting will be in Sydney in 2021. The FIGO congress is the largest global women's health scientific meeting. FIGO's member organisations (of which RANZCOG is one) comprise nearly every national obstetrics and gynaecology society in the world.

It is a great honour for our College to host this meeting, but with that honour comes considerable responsibility. I am chairing the local organising committee and will continue to do so in my capacity as College past-President. I have met with the FIGO President-elect, Prof Carlos Fuchtner of Bolivia, and arrangements for FIGO Sydney 2021 are well underway. On behalf of the College and the local organising group, we are intending to arrange the best FIGO meeting yet! I hope that all of you are able to make time for this event in your diaries.

Prof Steve Robson with American College of Obstetricians and Gynecologists (ACOG) President, Dr Lisa Hollier.

RANZCOG 2018 Annual Scientific Meeting

On a local scale, the RANZCOG 2018 ASM is set to run in Adelaide in September. For the first time, our Indigenous Women's Health Meeting is being held at the same time. The pre-meeting workshops look to be excellent and the Adelaide organising committee are hoping to top the programs of recent meetings in Perth and Auckland. I hope as many of you as possible will have the opportunity to travel to South Australia for what looks to be a fantastic College event.

Ministerial Advisory Committee on Out-of-Pocket Costs

The Ministerial Advisory Committee on Out-of-Pocket Costs was set up by Health Minister Greg Hunt in response to public concerns about transparency with regards to out-of-pocket costs in private healthcare. The group is chaired by the

Prof Steve Robson with FIGO President-elect, Dr Carlos Fuchtner (left), and Society of Obstetricians and Gynaecologists of Canada (SOGC) past-President, Dr Andre Lalonde (right).

Chief Medical Officer and has representatives from the procedural colleges, the Australian Medical Association (AMA), private health insurers and private hospital groups. We are working towards a transparency model that will hopefully assist women and their family doctors in selecting appropriate care. As with other Government endeavours, I am concerned that a heavy-handed response will either do little to solve the problem, or potentially make things worse. The work of this group is ongoing and I will report back to you later in the year, when I am allowed to speak publicly.

Private maternity care

I have a private obstetrics and gynaecology practice and the quality of private care is a matter very close to my heart. One of the main projects I wanted to pursue as College President has been to support private maternity care, a model that has proven results. Unfortunately, despite holding a number of discussions with relevant groups, including anaesthetists, private insurers, the AMA, the National Association of Specialist Obstetricians and Gynaecologists (NASOG), hospital bodies and others, matters seem to be getting worse. There appears to be a concerted media and social media campaign against private maternity services in Australia. I am pessimistic. Too many forces have now been unleashed to reverse the downward trend. However, I live in hope that we can again reach a healthy balance between private and public care for women.

Chief Executive Officer

Most of you will be aware that the College CEO, Alana Killen, has made a decision to complete her term with the College at the end of 2018. I was one of the team who appointed Alana to the College and it was a great decision. She came to RANZCOG in a leadership role at a very difficult time and has made an incredible contribution. In particular, her work on promoting respectful workplaces has been a major step in the right direction. On a personal level, I have found Alana to be a wonderful source of wise counsel and I have relied on her professionalism and enthusiasm to an enormous degree. It is very sad that Alana is leaving us, but I hope she will remain a good friend. I wish her well.

A big thank you

I first joined the RANZCOG Council in 2006 when Prof Chris Tippett was President. I served under a further three presidents: A/Prof Ted Weaver, Dr Rupert Sherwood and Prof Michael Permezel. They were extremely big shoes to fill. My time with the RANZCOG Council and College leadership has been incredibly rewarding. I hope I can impress upon you what an honour it has been to work with so many RANZCOG Councillors and Board colleagues over 12 tumultuous years. It would be impossible to achieve anything as College President without the support of many people. I should give a special thank you to Kylie Grose and Eleanor Bonikowski for the amazing job they do in keeping things running in the office of the President and CEO. I would like to wish incoming President, Dr Vijay Roach, and his Board all the best for what will be, no doubt, a very memorable term ahead. Thank you so much to all of you.

From the CEO

Alana Killen
CEO

In July, the College farewelled its longest-serving staff member, Carmel Walker, and paid tribute to her incredible contribution to women's health and to RANZCOG at a moving ceremony. Carmel began her career at the College in 1986, as Examinations Secretary, and, throughout her time at RANZCOG, held a number of positions, including the one for which she is most well known, as the Senior Coordinator for Global Women's Health. Carmel was appointed the inaugural Executive Assistant of the Pacific Society for Reproductive Health (PSRH) in 1995 and embarked upon an amazing journey to improve the health outcomes for women and children in low-resource settings.

Her achievements are too numerous to mention here, but have included: coordination of the Pacific Midwifery Leadership Fellowship Program; establishment of the Associate Membership program; facilitating the development of the Brian Spurrett Foundation; and helping establish the continuing professional development program for Pacific O&G specialists. A tireless advocate for women and families in the Pacific, Carmel also instigated the College House annual charity program, which has supplied birthing kits to midwives and practical supplies to Port Moresby General Hospital. Her most recent project is Beanies for Babies, which involved recruiting volunteers to knit beanies for premature babies in the Pacific.

Carmel is greatly loved and admired by all with whom she has worked over 32 years at RANZCOG. We thank you, Carmel, and wish you well in your retirement.

Accommodation update

Following much discussion and consultation, the Board have decided to move forward with the joint venture option presented as one of the recommendations for future College House accommodation. The next step in the process is the

(L to R) Angie Spry, Global Health and Provincial Fellows Coordinator, Carmel Walker and Tracey Wheeler, College House receptionist.

development of a detailed business plan, which will involve input from (among others), architects, town planners, heritage advisors and quantity surveyors. We will provide regular updates regarding the progress of this project, although it is anticipated to take several years to complete. The goal is to retain the important and significant heritage presence of the building that fronts onto Albert Street, while providing improved accommodation and facilities. The new building aims to include offices, meeting rooms, training spaces and areas suitable for web-based video conferencing.

Historical Collection

While visitors to College House are able to view a number of historical artefacts on display, there are a great many more that are currently being stored off site. Victorian Collections is a free collections management system that a number of organisations use to promote their collections to a wider audience. This will allow College members to view the College's Historical Collection online. I encourage you to visit the website to browse through this important collection. Please go to: https://victoriancollections.net.au/organisations/royal-australian-and-new-zealand-college-of-obstetricians-and-gynaecologists#collection-records.

RANZCOG Women's Health Foundation

In July, the first meeting of the 'reinvigorated' RANZCOG Women's Health Foundation Board was held and the Board welcomed five new external members. Each of the new members brings extensive skills to the group, including fundraising, public health, research, legal and social justice expertise. The Board will hold a strategic planning meeting later in the year to discuss the goals and specific projects upon which the RANZCOG Women's Health Foundation will focus. The Board also includes representatives from the Research Grants, Aboriginal and Torres Strait Islander, Global Women's Health and He Hono Wāhine committees.

Council

The Council Meeting in July was the final meeting for the current Council members. I would like to thank those Councillors whose terms have expired or whom have decided not to stand for re-election. Your contribution to the work of the College is absolutely invaluable. I would like to sincerely thank you on behalf of the members and staff of RANZCOG for your willingness to give up your time to help the College maintain the high-quality training, education and advocacy for which it is recognised.

LEADERS IN FOCUS

Dr Kirsten Connan
MBBS(Hons), FRANZCOG, DDU
MMedEd (Gender and Leadership)

This feature sees Dr Kirsten Connan in conversation with RANZCOG members in a broad range of leadership positions. We hope you find this an interesting and inspiring read.

Join the conversation on Twitter
#CelebratingLeadership @RANZCOG @connankf

Dr Marilyn Clarke
MBBS, Grad Dip Clin Epi, FRANZCOG

Dr Marilyn Clarke (nee Kong) graduated from the University of Sydney in 1997, obtaining her FRANZCOG in 2007. In doing so, she importantly became Australia's first Aboriginal O&G. Today, RANZCOG has three Fellows and five trainees who identify as Aboriginal or Torres Strait Islander.

Dr Clarke grew up in Port Stephens, north of Newcastle, NSW, with her twin sister, Dr Marlene Kong (GP) and younger brother, A/Prof Kelvin Kong (ENT surgeon). Dr Clarke credits her mother, Grace Kinsella, a Woromi woman and passionate community nurse, for inspiring her and her siblings to become doctors. Her father, Malaysian-Chinese Dr Kong Cheok Seng (Tony) is also a doctor, living in Malaysia. Dr Clarke, until recently, was the only Provincial Fellow in Grafton, NSW. Along with her 12-year-old daughter and eight-year-old son, she is deeply engaged with her extended family and community.

What led you to a career in O&G?
I had my first real exposure to O&G as a medical student at King George V Memorial Hospital, where I befriended Sister Alison Bush, renowned Aboriginal midwife and Honorary RANZCOG Fellow, and then at Westmead Hospital during my residency, falling in love with women's health. I then spent 12 months with Australian Volunteers Abroad in Kavieng, New Ireland Province, Papua New Guinea. Here, every mother was high risk, with endemic malaria and domestic violence. This solidified my decision to commit to the O&G specialty. I was based at John Hunter Hospital for the majority of my training and soon realised I love every area of O&G, leading me to life as a Provincial Fellow.

Who have been the mentors in your life?
Firstly, my mother, an unsung hero. She was an enormous inspiration to me. Not many people would know, but she was the first and only Aboriginal women's health practitioner in NSW.

Secondly, Alison Bush. Alison was a truly skilled midwife and a passionate advocate for Aboriginal and Torres Strait Islander women and babies. She taught so many of us the essential foundations of 'normal birth'.

Did you aspire to leadership?
I was not looking for leadership. I think some people are born with natural leadership qualities and have the opportunity to use them. Others find themselves in positions of leadership and learn. My brother is the former, a natural leader.

As an Aboriginal and Torres Strait Islander doctor and trainee, I was expected to participate in many extra committees and take on roles not held by my peers. I did so willingly, as we needed advocacy for Aboriginal and Torres Strait Islander health, but it was certainly difficult juggling this with my training. During these registrar years, I had work, study, family, Aboriginal community responsibilities, Aboriginal land council commitments, and numerous committee representative expectations. Like most Aboriginal and Torres Strait Islanders, I also had more sickness and death happening in my family and community than most of my peers.

Do you now yourself as a leader?
Yes. Initially this happened without choice, but now it is a choice, a privilege and a pleasure. Aboriginal and Torres Strait Islander trainees are more likely to hold further responsibilities beyond training. No one else had been in my situation before, so there was no mentoring. I would like to see this happen for our next generation of Aboriginal and Torres Strait Islander trainees.

What has been most challenging in your career?
Balancing everything! I think even in households with the reversal of traditional roles, it is still hard.

I have many Aunties and extended family. They have been invaluable.

What do you feel RANZCOG could do to further facilitate leadership training?
For our Aboriginal and Torres Strait Islander trainees, it would be great if we could establish a formal mentoring program. Issues for Aboriginal and Torres Strait Islander trainees are both the same, and also very different, to other trainees.

Aboriginal and Torres Strait Islander women's health should be part of core business for RANZCOG and incorporating this into the mainstream curriculum should occur. Aboriginal and Torres Strait Islander cultural competence training should occur for all RANZCOG members. Advocacy can't just be the responsibility of the few Aboriginal and Torres Strait Islander trainees and Fellows.

What do you see as your primary role as an O&G?
To empower women to understand what their options are, informing them in a way they can understand. I want to empower women to make decisions about their healthcare. This should always be our everyday practice.

Has your Aboriginal and Torres Strait Islander heritage influenced your practice of medicine?
Growing up and experiencing disadvantage to a greater degree than most of my peers certainly provided a different perspective. I am always conscious of this for others and work hard to remove barriers to their healthcare.

Do you see yourself as a feminist?
Yes. We should all be advocating for women to participate equally in society.

What would you do differently in your career?
I would say no a lot more! I would spend less time at meetings.

Do you have any regrets?
No regrets. I do remember I was terrified to tell my employers when I was pregnant and felt guilty for taking time off. We shouldn't have a culture that leads us to feel guilty. I wish I hadn't felt that way.

Image by Brad Newton Photography.

Dr Marilyn Clarke.

What role has RANZCOG played in Aboriginal and Torres Strait Islander healthcare?
They have invested in the Indigenous Women's Health Committee (IWHC). With each new president and council, there is more enthusiasm and more action initiated for Aboriginal and Torres Strait Islander women's healthcare.

There are now lots of Fellows investing into the IWHC and Aboriginal and Torres Strait Islander women's healthcare. Prof Mike O'Connor, Dr Chris Hughes, Dr Margaret O'Brien, Dr Jacqui Boyle, Prof Michael Permezel and Prof Steve Robson have all been particularly prominent supporters of Aboriginal and Torres Strait Islander women's healthcare during my time as a Fellow.

What words best describe your life?
Hectic and fulfilling!

In 2018, a scholarship will be established for an Aboriginal and Torres Strait Islander nurse to pursue a career in women's health, in honour of Dr Clarke's mother.

Dr Clarke is willing to be contacted for career advice and mentoring by trainees who are interested in pursuing a career as a Provincial Fellow in Australia.

Aboriginal and Torres Strait Islander women's health

In 2016, there were 16,479 births registered in Australia, where one or both parents identified as Aboriginal or Torres Strait Islander peoples (5.2 per cent of all registered births). Again the statistics revealed a disproportionate burden of adverse perinatal outcomes for Aboriginal and Torres Strait Islander mothers and their babies, including increased maternal mortality (four times that of other women), preterm birth (14 per cent versus eight per cent), low birth weight (11.6 per cent versus 6.3 per cent) and perinatal deaths (15 versus nine per 1000 births).

On 15–16 September 2018, RANZCOG will host 'Turning Tides', the Aboriginal and Torres Strait Islander Women's Health Meeting in Adelaide, prior to the RANZCOG 2018 Annual Scientific Meeting. As healthcare professionals, we must acknowledge the disparity for Aboriginal and Torres Strait Islander mothers and their babies and work to improve their care, in order to 'close the gap'. Please join Dr Marilyn Clarke for this great meeting.

Changes to RANZCOG CPD

What is changing?

1. Fellowship Certificates and Subspecialty Certifications with the original qualification date will be reissued.
2. Individual CPD transition plans will be sent to all Fellows. The plans will explain the CPD requirements needed to transition to the standard CPD triennium on 1 July 2019.
3. A draft of the revised CPD Framework based on the Medical Board of Australia's Professional Performance Framework will be circulated for consultation.

Why is the College making changes?

The Medical Board of Australia (MBA) has released the Professional Performance Framework (PPF) and is currently revising the CPD registration standards. RANZCOG Board approved changes to RANZCOG's CPD program to ensure the College is proactively working towards meeting current and future MBA requirements, along with the requirements of the Medical Council of New Zealand (MCNZ). Consultations with members will be an important part of the process as the College works to align to the regulatory requirements. Consultation on the revised RANZCOG CPD Framework is now open and more information is available on the College website.

How will the College support Fellows through the transition?

The College will contact all active Fellows via email and post to advise them on individual transition arrangements. The College will provide support to Fellows as they transition to the standard triennium. Information and FAQs about the transition will be published on the College website. The CPD team is available to assist with any CPD questions or concerns and can be contacted via email cpd@ranzcog.edu.au or phone +61 3 9417 1699.

The Royal Australian and New Zealand College of Obstetricians and Gynaecologists

Excellence in Women's Health

Editorial

Dr Brett Daniels
PhD, MBBS, FRANZCOG

The most recent mental health services report from the Australian Institute of Health and Welfare estimates that four million people in Australia experienced a common mental disorder in 2015.[1] Similarly, in the 2017–18 New Zealand Health Survey, 7.6 per cent of respondents reported experiencing psychological distress in the previous four weeks.[2] With such a high prevalence of psychological distress and mental illness, it is not surprising that mental health issues play an increasingly well-recognised role in women's health.

The interaction between mental illness and pregnancy is well known and is covered extensively in this issue of *O&G Magazine*. Topics range from the emergence of perinatal mental health as a subspecialty within psychology and psychiatry, and psychotic illness and antidepressant use in pregnancy, to post-traumatic stress disorder in childbirth and the rare, but tragic, phenomenon of infanticide. There is a comprehensive article on postnatal depression, including screening and multidisciplinary approaches to treatment, and an article on the management of acute postpartum psychosis. Vijay Roach provides a personal account of his own family's experience of postnatal depression and its professional and personal impact on him, including his support of the Gidget Foundation. In 2017, the Australian Government mandated that mental health screening should become an integral part of routine antenatal care, and has provided a new MBS item number for an optional postnatal consultation focused on mental health, substance abuse and domestic violence.

Articles with a gynaecological focus include those on eating disorders, the psychological aspects of pelvic pain and how the menopause can affect mental health. Premenstrual psychological changes are addressed in an interesting article by Snellen et al, which describes the historical, diagnostic and therapeutic difficulties of a complaint, which is common, but at times, can appear difficult to define explicitly. Other articles explore personality disorders in women's health and offer a valuable practical perspective on breaking bad news.

With the high prevalence of mental illness and psychological distress reported in Australia and New Zealand, many doctors will, themselves, experience mental health problems at some time in their career. RANZCOG, the general medical profession, indemnity providers and regulatory agencies, are increasingly taking steps to help doctors improve their own mental health and that of their colleagues. With suicide by doctors being reported more often in the media, I would implore all of you to read the article on mental health in medical practitioners and to note the supports offered by RANZCOG and other organisations. We cannot expect that we can provide the best care for our patients if we don't look after our own mental health and the welfare of our colleagues.

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Perinatal mental health: an area of specialty

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The introduction of Medicare-funded antenatal and postnatal mental health screening raises questions around referral to appropriately qualified mental health clinicians. The assessment, diagnosis and treatment of perinatal patients requires specific knowledge and expertise beyond the general training received by psychologists, psychiatrists and other mental health practitioners.[1] Pregnancy and the postnatal period pose increased risk for manifesting mental health problems,[2] influenced by biological, psychological and social factors.[3] Mental health disorders are associated with adverse pregnancy outcomes such as intrauterine growth restriction, low birth weight and prematurity,[2,4] as well as harmful longer term effects on emotional, behavioural and cognitive development in children.[5,6]

Postnatal mental health disorders range from mild to severe, with suicide being one of the leading causes of maternal death.[7] Not only is the mother's safety at risk, the infant's physical and emotional wellbeing is of primary concern. Infanticide is rare, but can be a devastating complication of untreated or poorly managed maternal mental illness.[8] This article outlines the essential components of mental health care for perinatal women.

What mental health clinicians should know

Perinatal mental health clinicians need to be aware of a number of factors:

- A heightened risk for pre-existing psychiatric conditions to re-emerge
- The impact of changes to the hormonal environment and the physical and emotional difficulties that can be associated with breastfeeding
- The difference between the 'baby blues' and postnatal depression
- The difference between typical 'new mother anxiety' and clinical anxiety
- The effect of sleep deprivation and fatigue on mood stability
- The social pressures that impact new mothers
- The difficulties of becoming a mother when one's own parenting was problematic or traumatic
- The common changes to the partner relationship after periods of infertility and after the birth of a baby
- The importance of an attuned parent-infant relationship for the baby's ongoing wellbeing
- The psychiatric emergency that is postpartum psychosis.

Pre-conception, pregnancy and birth

Pre-conception and obstetric factors are of significance, requiring investigation by a mental health clinician.

History

Pre-conception planning is recommended when there is previous or current psychiatric disturbance. Medication may need to be assessed and revised in preparation for pregnancy and the postnatal period.[1,9] History-taking is relevant for the pregnancy and the postnatal period:

- Was the pregnancy planned?

- Was there a history of infertility, assisted reproduction or donor conception and what are the ongoing implications?
- Was/is there an extreme fear of childbirth (tocophobia)?
- If there has been a previous pregnancy, is there a history of antenatal or postnatal mood, anxiety or psychotic disorder?

Reproductive loss

Reproductive loss can cause significant grief, which can have psychological implications for subsequent pregnancies[10] and the postnatal period.[3] Therapists need to explore the implications of previous losses. How have reproductive losses such as miscarriage, stillbirth or termination affected the woman and her relationship? Is there internal conflict regarding attachment to a baby following the loss of a previous baby?

Pregnancy

Antenatal depression and anxiety are common complications of pregnancy, increasing the risk for postnatal mental health problems.[11] During pregnancy, a woman's aberrant psychological state can be dismissed as heightened emotions due to hormonal fluctuations. Conversely, the non-trained clinician may pathologise pregnancy by over-representing confounding symptoms, such as increased heart rate, sleep disturbance and appetite disturbance, that may be sequelae of pregnancy rather than symptoms of depression or anxiety. Obsessive thoughts about harm to the baby are also common and can cause significant distress.[12]

When assessing the woman's emotional state during pregnancy or after delivery (depending on when she first presents), the following factors may be relevant:

- Is there a current, previous or family history of psychiatric disturbance?
- Have fetal anomalies or medical complications been diagnosed during the pregnancy?
- Does she have concerns about her changing body image or weight? Is there a history of eating disorders?
- How did the woman's mood during pregnancy affect her birth and postnatal experience?

Pregnancy, labour and birth are formidable events. Extreme pain and a sense of loss of control can increase the traumatic potential of birth.[13] Women with a history of post-traumatic stress disorder (PTSD) or sexual assault may be predisposed to developing PTSD following childbirth.[13,14] When women present prior to giving birth, the perinatal mental health clinician can play a role in collaborating with obstetric practitioners to plan for a sensitive birth,[13] as well as advising obstetric staff on strategies for reducing postnatal stress in highly vulnerable women.

Birth

Issues to be aware of following birth:

- How did the woman experience her birth? Did she feel out of control or traumatised?
- Was a history of sexual abuse triggered during birth?
- Did she experience severe sleep disturbance following the birth?
- Was a difficult birth acknowledged and debriefed by health professionals?
- Were her expectations of birth met?
- Did she deliver prematurely? Was the baby in special care?
- In what way did the woman's birth experience contribute to postnatal adjustment difficulties?

The postnatal period

Postnatal literature focuses heavily on depression. This has contributed to a universal diagnosis of 'postnatal depression' to capture emotional distress in the postnatal period.[15] However, the presence of anxiety and stress (as distinct from depression) requires particular attention to identify treatment plans for specific symptom presentations. Co-morbid depression and anxiety can pose further risk for the mother.[16] PTSD, adjustment disorder, panic disorder, generalised anxiety disorder and obsessive-compulsive disorder may manifest and require treatment at this vulnerable time.[12]

Relationship and social support

The quality of a woman's relationship with her partner and her available social supports have been well established risk and protective factors for postnatal adjustment.[3] What is the quality of her relationship? What functional and emotional support does the woman have and is she comfortable asking for help?

Bipolarity and postpartum psychosis

Particular attention should be paid to bipolar disorder with perinatal onset. The postnatal period represents significant risk for the relapse of bipolar disorder, especially when mood stabilising treatment was discontinued for pregnancy.[17] Patients typically first present with depressive symptoms, contributing to bipolar disorder being commonly misdiagnosed as unipolar depression, in many cases taking years for the correct diagnosis to be reached.[18,19] Inappropriate prescription of antidepressants can induce a rebound mania at a time in a woman's life when her baby is dependent on her functioning as a mother.[18] It is vital that prudent history-taking (including family history), planning and appropriate psychiatric review be conducted.

Perinatal mental health practitioners need to be aware of the relatively rare, but acute, nature of postpartum psychosis (PPP). Prior to birth, possible risk factors should be identified in a woman's history that may increase the likelihood of PPP developing in the postnatal period. A history of PPP is a strong risk factor for future postpartum episodes.[20] In addition, practitioners should discern and be comfortable with a woman's reports of intrusive thoughts (typically associated with an obsessive-compulsive disorder profile), which, although not psychotic, can be frightening for the patient and therapist. Perinatal mental health practitioners need to be well acquainted with perinatal psychiatrists and emergency services to ensure women are treated promptly if PPP arises.

Mother-infant attachment

The postnatal period is a highly sensitive period for an infant's development. The quality of care provided by the parent has consequences for the child's later outcomes. The mental health practitioner needs to understand attachment theory and the impact of ruptures of attachment on the ongoing relationship between mother and child. Links should be drawn to the attachment history of the woman in her own parenting past.

Working through past attachment experiences in relation to current bonding difficulties, in part, distinguishes the perinatal mental health practitioner from the generalist. Training in parent-infant attachment is central to working effectively with new mothers. In extreme cases of attachment rupture, clinicians need to determine whether the baby is safe,[1] especially for women with psychosis, bipolar disorder or borderline personality disorder.

Medication

The prescription of medication in pregnancy and postpartum is an emotionally fraught issue that can cause stress and indecision for pregnant and breastfeeding women. Specialist perinatal psychiatrists are well-versed in helping women weigh up the costs and benefits of medication with regard to the mother, the fetus and the breastfed infant. Awareness of current research on medication in pregnancy and the postnatal period is partly what distinguishes perinatal psychiatrists from general adult psychiatrists.

Services and information

The perinatal mental health clinician needs to be well acquainted with maternal and child health services, supported playgroups and other community services that support vulnerable families. Given the reliance among childbearing women on seeking information and social connection through the internet and social media sites, it is fitting for the clinician to provide patients with good quality, evidence-based information.

Summary

We have highlighted some important considerations for obstetric providers regarding mental health support services for perinatal patients. Along with the general life upheaval of pregnancy and the postnatal period, patients are vulnerable to the emergence and re-emergence of mental health problems, with far-reaching implications for infants and families. It is recommended that obstetricians consider the qualifications and training of mental health practitioners to ensure the effective assessment, diagnosis and treatment of perinatal patients.

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Resources

Centre of Perinatal Excellence (COPE)
Perinatal Anxiety & Depression Australia (PANDA)
Miscarriage, Stillbirth and Neonatal Death Support (SANDS)
Beyond Blue

Schizophrenia and psychotic disorders

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Sufficient evidence shows that women with schizophrenia and related psychotic disorders have high rates of obstetric complications.[1] These include an association with high rates of gestational diabetes, low and high birth weight babies, preterm delivery and increased risk of neonatal complications and hospitalisation. It is unclear what underlies this increased rate of complications in pregnancy and poor neonatal outcomes. While some attribution can be made to mental illness, equally important is the role of treatment and lifestyle factors. Many of the risks in pregnancy are also associated with poor lifelong outcomes for children.

In an attempt to understand the aetiology of severe psychotic disorders, there is now consensus that there is a multifactorial developmental risk pathway from genetic vulnerability, to environmental factors, to the final development of a psychotic disorder. While risk factors such as genetic vulnerability are unlikely to be modifiable, obstetric care and complications are a potential target for the future prevention of severe mental disorders. When managing a pregnant woman with a psychotic disorder, there is an opportunity to optimise maternal wellbeing and improve the health of the next generation.

Obstetric management

The obstetric management of women with psychotic disorders poses many challenges:

- The peripartum (antenatal, delivery and postpartum periods) can affect the course of the illness and alterations in treatment may be required
- Treatment that may be effective for the mother may be harmful to the unborn child
- Most psychotropic agents taken by the mother reach breastmilk, so their potential effects on the nursing infant need to be considered
- The mother may have physical illnesses associated with her psychotic illness
- There is a higher rate of cigarette smoking, drug and alcohol use, with risks to the unborn baby, including intrauterine growth retardation and preterm delivery
- The quality of the mother's parenting may be compromised by her illness and social circumstances and may require detailed assessment.

Ideally, consideration of these factors occurs pre-conception; however, like many women in the community, the rate of unplanned pregnancy is high. Mental health services are encouraged to consider principles of pregnancy management when treating any woman of childbearing age.

Given this level of complexity, the management of childbearing women with psychosis requires a multidisciplinary approach, integrating services from obstetrics, midwifery, psychiatry and social work.

Antenatal assessment

Universal screening measures, such as the Edinburgh Postnatal Depression Scale (EPDS), screen for depression and anxiety but do not detect psychotic disorders. As psychotic disorders are low prevalence but have potential implications for pregnancy, it is recommended that enquiry into past and current mental disorders becomes part of the routine antenatal assessment. Enquiry should include psychotic disorders and any current psychotropic medication, including antipsychotic medications.

Sample clinical booking questions:

- Have you ever had mental health problems?
- Have you been admitted to hospital for a mental health problem?
- Have you been prescribed medications such as lithium, mood stabilisers (for example, sodium valproate, lamotrigine or carbamazepine) or antipsychotics?
- Have you had mental health problems after having a baby?
- Has anyone in your family had mental health problems, including schizophrenia or bipolar disorder?

- Did your mother/sisters/aunts have any mental health problems after their babies were born? If so, were they admitted to hospital?

Drug, alcohol and smoking questions are incorporated routinely into screening, which should be culturally and linguistically appropriate.

Care pathways

Referral to specialist perinatal psychiatric services for assessment during (and preferably before) pregnancy should be considered for women with psychotic disorders. While not always possible, it is recommended that women deliver in large hospital settings with neonatal paediatric services on hand, including access to a neonatal intensive care unit.

Preconception

Ideally, women should be offered pre-conception counselling by a perinatal psychiatrist in order to carefully weigh treatment options. It is important to have an honest conversation about the paucity of good evidence around safety in pregnancy. It also provides an opportunity to discuss other lifestyle and physical health factors associated with the illness and medications. This may include consideration of exposures that can be modified (for example, obesity, smoking, alcohol and prescribed or illicit drugs).

Pregnancy

For many women with psychotic illness, discontinuation of prophylactic medication may pose a risk of relapse. After discussion with the woman (and partner or other family members) about the balance of risks and benefits to herself and the unborn baby of continuing versus ceasing the medications, many will opt for ongoing pharmacological treatment.

Medications include, broadly, two groups: typical antipsychotics, such as haloperidol; and atypical second generation antipsychotics, such as olanzapine, risperidone, quetiapine, aripiprazole and clozapine. They are administered orally or as long-acting depot medications given parenterally, fortnightly or monthly.

The latest National Perinatal Mental Health Guidelines for Australia recommend considering the use of antipsychotic medication for treatment of psychosis in pregnancy.[4] Recommendations for monitoring use of these drugs in pregnancy[5,6] include:

- Regular monitoring of full blood examination, urea and electrolytes, liver function tests, magnesium, calcium, folate, iron and vitamin D, ECG
- Regular weight and blood pressure checks
- Early glucose tolerance test at 16 weeks, particularly if on antipsychotic agents such as olanzapine, clozapine or quetiapine
- Close monitoring of fetal growth
- Neonatal assessment, including for extrapyramidal side effects
- Avoidance of pharmacological agents for lactation suppression

Antipsychotic medication

Manufacturers of antipsychotic drugs warn against use in pregnancy. Clinicians must administer these agents, against licensed indications, according to the individual balance of risk-benefit to mother and baby with the available teratology databases, published research and national guidelines.[2,4]

The risks associated with antipsychotic treatments in pregnancy are based on limited research, often hampered by a lack of consideration of confounding variables such as obesity, smoking, alcohol and illicit substance use, all of which occur at high rates and increase risks in pregnancy. Currently, there is no clear association with increased risk of specific malformation, with the exception of a single study finding an association with risperidone and a small increase in risk.[9] However, the overall number of studies across agents and participants is limited and any conclusions are cautious. There is no clear indication of an association with miscarriage. There is research to suggest an association with increased risk of gestational diabetes for specific antipsychotics, including olanzapine, quetiapine and clozapine.[10,11] Studies have also found antipsychotic use to be associated with low and high birth weight babies, preterm delivery and poorer neonatal adaptation with higher rates of neonatal admission.[1,2] The research into long-term child outcomes from exposure to antipsychotic medication in pregnancy is currently too limited to draw conclusions.

Clozapine is an antipsychotic associated with serious side effects, such as neutropenia, agranulocytosis and myocarditis. As a result, it has a mandated monitoring protocol and is usually reserved for treatment-resistant schizophrenia. With these associated risks, the national guidelines do not advise initiation of clozapine in pregnancy and advise only to use it with caution in breastfeeding with appropriate monitoring of the infant.[4]

The general principle is to choose the lowest effective dose of an agent and monotherapy over polytherapy where possible.[3] Frequently, the decision is made to continue pharmacotherapy because the illness (psychosis and associated hospitalisation and suicidality) is of greater concern than the treatment. A careful review of the illness history, including associated risks such as suicidality, is helpful in making decisions around management.

Medication dosage

The dosage required to maintain plasma levels will likely vary across pregnancy, due to changes in hepatic metabolism and volume of distribution (particularly in the third trimester).

For management of acute relapse, reference to local hospital guidelines is important, as well as consideration of the specific conditions of pregnancy, such as avoidance of management in a supine position and the safety of agents in pregnancy.

Planning for delivery and the postnatal period

If there are doubts about whether a woman is capable of agreeing to obstetric interventions, the criteria for capacity need to be (re)examined; this should be done collaboratively by the obstetrician and psychiatrist. The assessment includes whether the woman is able to believe the information and weigh up advantages and disadvantages of procedures, (such as induction of labour and caesarean section), as part of the process of arriving at a decision. Even if a woman with psychosis is deemed to have capacity, her mental state may fluctuate and she may lose capacity later. If this is likely, an advance directive may be helpful.

Some women with psychotic disorders may be under a state Mental Health Act as an involuntary inpatient or on a community treatment order. If

this is the case, understanding the processes for consent to treatment under the Act is important and communication with the treating mental health team is essential.

Paediatric input

The neonatal paediatrician should be informed of the woman's psychotropic medications so that signs of neonatal toxicity, withdrawal or other complications can be managed.

Preparation for labour

The woman (and partner or carer) should be familiar with the early signs of labour and know what to do at its onset. If the psychotic illness is severe, obstetric and midwifery staff may find the presence of psychiatric nursing staff helpful during labour and after delivery.

Breastfeeding and early postnatal care

It is useful to agree on postnatal care in advance; a perinatal mental health care plan should be clearly documented in the medical file. Breastfeeding requires discussion before delivery, as does the possibility of elective or non-elective transfer to a psychiatric mother and baby unit (MBU) or mental health ward if no MBU is available. It should be noted that most psychotropic medications do transfer into breastmilk and many only have limited safety data.

Many women with a psychotic illness will lack confidence in caring for their newborn, have sleeping problems and require extra nursing attention. These women will benefit from a single room and a longer stay on the maternity ward. Insomnia may be a sign of recurrence of mania and sleep deprivation can be pivotal in the development of an acute episode of psychosis. Measures to maintain sleep may include use of a short-acting hypnotic medication or a sedative antipsychotic and the baby remaining in nursing staff care overnight during admission. Ideally, a psychiatrist will monitor the woman's mental state closely and discuss her (and family members') anxieties during the hospital stay. The risk of relapse in the early postpartum period is high and having a clear plan for monitoring, assessment and pathways to care, if required, is crucial to ensure safety for mother and baby. Use of pharmacological agents that suppress lactation should be avoided.[5]

Discharge

Ideally, the woman will have a collaborative perinatal mental health plan developed in pregnancy to include intrapartum and postpartum management. This includes care following discharge, such as follow-up psychiatric appointments, community mental health professionals, child health nurse and general practitioner. Health professionals should help the woman identify and reduce stress. Continued vigilance for early warning signs is vital. The woman and her partner (or carer) should ensure sufficient uninterrupted sleep, particularly in the first three months when she is most likely to become ill. A social worker may be involved to organise community support and, if required, coordinate involvement of child protective agencies.

Postpartum psychosis

Postpartum psychosis (PPP) is a reasonably rare illness (affecting about one in 1000 women), but potentially devastating for mother and infant.[1] PPP may be the first presentation of mental illness, a recurrence of a chronic pre-existing illness, or may be an acute confusional state caused by delirium or other organic cause. It is important to exclude organic causes, including delirium, autoimmune encephalitis and other rare causes.[1,7] If a woman has a previous history of PPP, there is a 50–60 per cent risk of relapse, if untreated.

Prompt psychiatric assessment is essential due to the risk of delusional beliefs leading to infanticide or suicide. A woman with a postpartum psychotic episode requires urgent psychiatric admission. Ideally, she will be admitted with her baby to a specialised MBU. This provides a safe treating environment, with supervised contact with her baby and support of her relationship with her baby as the woman improves.

The evidence-supported treatments for PPP are lithium and electroconvulsive therapy (ECT). Lithium is the gold standard treatment. However, most guidelines advise against breastfeeding with lithium, due to the risks of toxicity and potential complications for the baby.[8]

Advice for women who have a previous history of PPP, but no other episodes of serious mental illness outside the puerperal period, would generally be to initiate lithium immediately after delivery.[1]

Conclusion

Hopefully, growing awareness of the importance of the mental health of childbearing women with psychotic disorders will lead to improved care. There is an urgent need to further research the risks and benefits of treatment options, so we can improve models of care and ensure optimal outcomes for both mother and child.

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Perinatal depression and anxiety

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Perinatal depression and anxiety are common problems, often co-occurring, with combined rates of 16 per cent of women in the first year postpartum and 10 per cent in pregnancy.[1] Increasingly well-documented obstetric effects of these conditions include preterm birth and low birth weight, increased admissions to special care nurseries and disruption to the normal transition to parenthood for the mother and her partner.[2] Given the frequency of health system contact, there is ample opportunity to detect these significant personal and public health problems antenatally. Postnatal depression (PND) and anxiety derail the development of healthy parenting and attachment relationships, due to the mother's impairment in reading her infant's cues and ability to provide responsive and sensitive care to her infant, with subsequent increased risk of emotional and behavioural disorders in children of severely depressed mothers.[3] Intervention provides an opportunity to prevent intergenerational transmission of mental health burden and cost. In 2017, changes to the Medicare Benefits Schedule (MBS), allowing private obstetricians to take the time to complete a mental health assessment, recognised the key role that obstetricians can take in detecting perinatal mental illness.

Underlying risks factors include: previous episodes of depression or anxiety (any anxiety disorder); a stressful pregnancy or traumatic birth; poverty; social isolation and lack of support; conflict with a partner, particularly domestic violence; previous physical, sexual or emotional abuse, especially in childhood; pregnancy loss; and perfectionistic or borderline personality traits or disorders.[4,5]

Fathers matter, too. A father's health affects obstetric outcomes,[6,7] and there is increasing attention on the mental health of fathers perinatally. Ten per cent of fathers can also develop perinatal anxiety and depression,[8] sometimes in response to the mother's distress, especially when he is solely reliant on his partner for emotional support, or he has a history of depression or anxiety and work/life stress.

Screening for perinatal depression and anxiety

Most Australian public maternity settings, and some in New Zealand, screen women antenatally for depression and anxiety with the Edinburgh Postnatal Depression Scale (EPDS),[9] and for psychosocial stress, with the AnteNatal Risk Questionnaire (ANRQ)[10] at their first booking visit. Screening, although not diagnostic, identifies women in need of extra support and further referral for mental health assessment and treatment. The EPDS is sensitive to fluctuations in environmental stressors and concerns about the pregnancy or fetus, so the score should be seen in this context, as well as pre-existing vulnerabilities and symptoms. If temporary environmental stress or difficulties with the pregnancy are suspected and the score is 13 or above, it is worth repeating the EPDS again in four weeks. Guidelines are available on how to use the EPDS.[11]

Pregnant women, in general, welcome enquiry about their emotional wellbeing. This, in itself, can bring relief and reduce feelings of stress and isolation, as there may be social pressure to be happy and excited at this time. Introducing discussion early as part of routine obstetric care reduces stigma and increases the chance that problems will be identified early and as they arise.

Postnatal screening with the EPDS is recommended six to 12 weeks after the birth, with further assessment to be arranged for those with scores of 13 or more.[11] In most jurisdictions, this is carried out by maternal and child health nurses and GPs, however, obstetricians offering mental health assessments at the six-week check will also find it a useful tool.

Treatment in pregnancy

The obstetrician's role is firstly to identify a woman with depression and/or anxiety and to understand this in the context of her pregnancy and close family relationships. Some women may initially find a mental health diagnosis unacceptable and refuse referral elsewhere, but will feel more encouraged after discussion and accept help.[12]

The National Perinatal Mental Health Guideline,[13] approved by the National Health and Medical Research Council (NHMRC), articulates best practice for all aspects of assessment and treatment. It advises that treatment selection needs to be founded upon a thorough assessment of the woman's current illness, as well as any prior psychiatric history, including the severity of past episodes, intensity of any past suicidal ideation or behaviour, and whether any particular medication has been proven to be effective.

The available options need to be clearly explained to the woman and her partner/family, with the open acknowledgment that information about risks is not complete, but that her recovery is crucial to her and her baby's health, and efforts will be made to accommodate her preferences in the treatment approach. Mild depression may improve with non-medication interventions, so these are

the first option. Severe depression, by nature of its risks to both mother and baby, has a very strong mandate for rapid effective treatment. The time lag to improvement of up to six weeks for all antidepressants must be considered in light of the relative brevity of pregnancy. Patients cannot afford the time that multiple drug trials may require. A drug proven to be effective in the past may therefore be selected, even where it has less evidence in pregnancy than others.

The guideline[14] further recommends that women undertaking antidepressant therapy in pregnancy warrant regular mental health monitoring by an appropriate professional, whether a GP or a general psychiatrist. If the history or presentation is complex, then an opinion from a perinatal psychiatrist is indicated. The 18–20 week morphology scan will be important if any agents are used with possible risks for malformations. Adjunctive agents such as quetiapine or olanzapine are often used to treat anxiety or augment the antidepressant, in which case an increased schedule of screening for metabolic effects such as hyperglycaemia and hypercholesterolaemia has been suggested.[15]

The degree of mental health support in public maternity hospitals varies greatly, ranging from no specialised workers, often the case in rural areas, to trained perinatal mental health clinicians and psychiatrists. Finding and knowing local referral pathways to assist women with perinatal mental health problems is an important part of obstetric care and can lead to a more timely response after screening and clinical assessment. GPs are often central to this process and, in Australia, they may refer to a Medicare-registered mental health professional with a mental health care plan.

Social work has a powerful role to play in assuring, where possible, basic access to income, housing, legal or other supports in the case of domestic violence.

Psychotherapy can be an effective treatment for depression, though research specifically in pregnancy is still limited.[5,17] There is some evidence for efficacy for interpersonal psychotherapy, peer support, massage and aerobic exercise.

Mindfulness-based cognitive therapy is an effective treatment for depression. Many perinatal therapists are using mindfulness-based approaches, individually[18] or in groups[19], as there is evidence it is effective in relapse prevention of depression and reduction of stress. Some group interventions have demonstrated positive effects, but results overall are somewhat disappointing, as treatment[20] and as prevention.[21] Internet-based treatments may be the way of the future and will perhaps provide accessibility at lower cost.[22]

Overall, the biopsychosocial model is recommended, which presupposes that treatment does not begin or end with medication. Rather, it may be one element among many that are aimed at the underlying causes and may determine direction of referral. Only one-third of depressed pregnant women will consider taking an antidepressant.[16]

PND and anxiety

While many factors identified antenatally are still present, new considerations develop postnatally. Particularly relevant are deficient social support, sleep deprivation and the urgent need to mitigate the impact of PND on the newborn's developing attachment. It is also important to understand the risks of exposing infants to psychotropic medication through breastmilk and the possibility of neonatal adaption syndrome, a short-lived response in the newborn exposed to antidepressants in utero. These risks should be discussed with women prior to commencing medication in pregnancy. Online resources (see the end of the article) and the pharmacy departments of major maternity hospitals can offer information on breastmilk drug exposure.

Biological considerations include screening for underlying organic disease that may be causal or contributory, such as thyroid disorder, iron deficiency anaemia and vitamin deficiencies, such as D, B12 and folate. This is especially true for the new onset of depression or anxiety in the postnatal period.

Education about the nature of depression is essential. We often find patients may not understand that, rather than sadness, postnatal depression can be experienced as a state of restless, numb agitation with prominent guilt and worthlessness and/or co-morbid anxiety.[23] Suicidal and infanticidal ideation, while important to identify, are not universal features, nor is disconnection from or dislike of the infant. Often, women mistakenly think they cannot be depressed because they lack these features. A careful and tactful assessment of suicidal and infanticidal ideation assists in distinguishing whether there is any urge to act upon these thoughts. This dictates the appropriate level of supervision, whether at home with family support, with a home-visiting mental health team, or in a mental health ward, preferably a mother and baby inpatient psychiatric unit where available. Intrusive thoughts of accidental or deliberate harm to the baby, accompanied by guilt or shame in harbouring these thoughts, is common. Reassurance will be valued when this is identified and discussed as a symptom of PND.[24]

The woman and her family should be encouraged to rally all possible supports to assist in the task of reducing stress and maximising sleep for the mother, while still facilitating positive experiences between mother and baby. It is ideal for the infant if there are other loving family members who can provide emotional care while the mother recovers, as sustained exposure to maternal depression has been demonstrated to have impact on the infant's developing attachment and future emotional and cognitive development.[5,17] There is some evidence for efficacy of a wide range of psychological and psychosocial interventions for reducing maternal depression,[25] helping postpartum stress[26] and for positive impact on the mother-infant relationship and child development.[17] There is also some evidence that professional home-visiting support and psychotherapy may prevent PND in women at high risk,[29] highlighting the value of identifying such women as early in pregnancy as possible.

In summary, perinatal depression and anxiety are common, with potentially serious short and long-term consequences for mothers, their infants and fathers/partners. Effective treatments are available; however, social and systemic barriers to accessing treatment exist. Obstetricians are well-positioned to facilitate increased awareness, detection and treatment.

Further reading

Centre for Perinatal Excellence (COPE): www.cope.org.au. Information for women, who can sign up to receive a regular newsletter throughout pregnancy and the postpartum.

For professionals, the NHMRC-approved Perinatal Mental Health Guideline and online training in best practice for perinatal mental health disorders.

iCope, a web-based screening platform, can be downloaded onto any device to allow rapid screening and autoscoring of depression and psychosocial risk factors by patients and professionals.

Perinatal Anxiety and Depression Australia (PANDA):www.panda.org.au. Information, resources and how to access PANDA phone counselling. Professionals can refer patients online to the phone counselling service, find information and request training sessions.

Lactmed: toxnet.nlm.nih.gov/newtoxnet/lactmed.htm.
Online database of chemical and drug exposure in breastfeeding, maintained by the US National Library of Medicine.

Sms4dads.com
Expectant fathers can sign up to receive information about their baby's development via SMS, as well as online support, if they wish, from Prof Richard Fletcher's team in Newcastle.

Mummoodbooster.com
An online research project led by the Parent-Infant Research Institute (Australia) and the Oregon Research Institute (USA). Women who sign up receive an eight-week online treatment program.

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Antidepressants in pregnancy

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Pregnancy is not protective for mental health. However, more than half of women abruptly discontinue antidepressant medication upon confirming pregnancy. Up to 68 per cent of these women suffer a relapse of depression, often occurring by the second trimester.[1] The decision to continue or cease antidepressants in pregnancy ideally should be made prior to conception, by consultation with the woman, her partner and her doctor.

This decision should be a sensible balance between risk and benefit to mother, fetus and, later, the infant. It should be based on the mother's psychiatric history, including the severity of her past and current condition, whether the condition has remitted and what treatments were required, tolerated and successful. Important factors include whether admission was required and the frequency, severity and duration of depressive episodes. No decision to continue or withhold medication is complete without a comprehensive assessment of the woman's mental state and psychosocial circumstances.

If a woman is currently euthymic and has been for the past 12 months, she may elect to:

- Cease medication during pregnancy
- Cease and reintroduce medication if symptoms recur
- Reduce dose (not recommended)
- Change to alternate medication or therapy
- Continue current medication

If a woman is depressed or has suffered serious and/or recurrent depression in the past, then medication should be continued throughout the pregnancy. Antidepressants should not be routinely changed for the sake of a pregnancy if the woman has been well on this medication. There are rare exceptions to this.[1]

Antidepressants are prescribed for a number of conditions, including depressive, anxiety and pain disorders. Antidepressants may, at times, also be prescribed in bipolar disorder. The use of antidepressants without the co-prescription of other thymoleptic medications may risk a manic or hypomanic swing.

Approximately eight per cent of pregnant women in the US take antidepressants.[2] The most commonly prescribed and researched medications are selective serotonin reuptake inhibitors (SSRIs). SSRIs and selective noradrenaline reuptake inhibitors (SNRIs) are commonly prescribed for significant depression and anxiety disorders. Mild depression may be successfully treated with psychotherapies (cognitive behavioural and interpersonal therapies) and lifestyle changes including diet, exercise and sleep patterns.

Fetal exposure

Fetal exposure to antidepressants is via the placenta, amniotic fluid and the crossing of the blood brain barrier. There are potential pregnancy complications associated with antidepressants. The absolute risk for any negative outcome for the fetus (and the pregnancy) is low but not zero.[3]

Outcome studies

Distortions in any study regarding outcomes for psychotropic medication use in pregnancy may be the result of low- or medium-quality methods. Observational studies may involve databases relying on prescriptions supplied. Patient adherence and recall bias are further complications.[4] The timing of medication in pregnancy is also important. First trimester exposure to drugs may be implicated in congenital malformation, while second and third trimester exposures may be associated with neurobehavioural and growth challenge.[5]

Tolerability

Tolerability of antidepressant agents is important, especially in pregnancy. Nausea may be exaggerated in hyperemesis with SSRI or SNRI agents. Postural hypotension, oversedation and constipation may all be unwanted side effects of antidepressant agents in pregnancy, particularly of tricyclic antidepressant drugs (TCADs). Suicidal ideation is a significant contraindication to using TCADs, as they are potentially fatal in overdose.

Pharmacogenomics

Pharmacogenomics are becoming more useful in selecting the best medications in treatment-resistant depression. While this is still a relatively new clinical tool, it may assist, especially if a woman appears either to have significant side effects at low dose (possible poor metaboliser), or no benefit from higher doses of an antidepressant (extensive or ultrarapid metaboliser).[3]

Bioavailability

Pregnancy affects the bioavailability of antidepressants through increased maternal blood volume, reduced gut motility, increased

renal function and reduction in plasma protein concentrations. The dose of antidepressant may therefore need to be increased in advanced pregnancy. Changes in hepatic P450 enzymes in later pregnancy may also affect doses required. Smoking, cruciferous vegetables and chargrilled foods may further affect therapeutic levels of antidepressants.[3] Proton pump inhibitors, dexamethasone and nifedipine are among medications that may affect certain P450 enzymes, thereby altering therapeutic antidepressant levels.[3]

Negative outcomes

There have been many associations made between negative outcomes and the use of antidepressants in pregnancy, but direct causality is yet to be established. The severity of the mother's depression, any co-morbidities and use of other medications and substances all affect the outcome. An untreated severe major depressive episode may result in poor attendance at antenatal clinic, poor diet and low self-care. The risk of self-medication with substances is also significant. Suicide is the final risk, aside from high incidence of postnatal depression, poor attachment to the infant and long-term risk of poor child developmental outcomes through neglect.

SSRIs and SNRIs

With respect to SSRIs, the major concern for malformation relates to congenital cardiac defects. The only medication significantly implicated here is paroxetine, and even in these studies, the prevalence was only minimally greater than the background risk.[5]

The studies relating to preterm delivery and low birth weight with SSRIs are fraught with discrepancies in methodology. These outcomes are unlikely to be clinically significant.[6] Postnatal growth impairment, delayed fine or gross motor skills, and cognitive and intellectual impairment have not been shown conclusively to be a consequence of exposure of the fetus to antidepressants in pregnancy. Major depression in the mother remains a serious consideration.

The only significant potential risk for use of SSRIs and SNRIs obstetrically appears to be postpartum haemorrhage. This risk seems small, but clinically significant (four per cent in exposed women versus three per cent in non-exposed women).[7] Persistent pulmonary hypertension of the newborn (PPHN) has been reported in late pregnancy exposure to SSRIs, SNRIs and TCADs. The incidence is low (increase from 1.2 to 3 per 1000 in SSRI exposure).[8]

Poor neonatal adaptation syndrome

Poor neonatal adaptation syndrome (PNAS) can be a risk when antidepressants are taken in late pregnancy. Infants may be jittery and suffer hypotonia, respiratory distress, hypoglycaemia and seizures. The reported incidence of PNAS varies, but appears to be higher in infants exposed late in the pregnancy. Confounding variables include infant genotype.[9] This condition is usually self-limiting and minor. Admission to NICU may be warranted.[8]

Despite the risk of PNAS, the practice of reducing the dose of antidepressants from mid to late third trimester is not recommended.[9] The medication may clear the maternal compartment, thereby predisposing the mother to an increase in depressive symptoms at a time when she is most vulnerable. It does not necessarily clear the fetal compartment and the neonate may still suffer from PNAS. It is best to engage the neonatology team prior to delivery.[9]

Conclusion

While there are risks to the mother and infant with the use of antidepressants in pregnancy, the negative impact of an untreated major mental health disorder in pregnancy cannot be overstated. The Obstetrics Clinical Committee of the Medicare Benefits Schedule (MBS) Review Taskforce have recently reminded us of this with the launch of the new MBS item numbers recommending mental health assessments of all women, both in pregnancy and postnatally.[10] Pathways to care for all pregnant women should include access to comprehensive perinatal mental health teams.

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Eating disorders in adolescents and young women

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Dieting is not unusual, although many of us will still reach for the chocolate on a stressful day and enjoy it, perhaps with a half-hearted plan to resume the diet at another time. Individuals with anorexia nervosa (AN) are unlikely to have such a relaxed reaction. First described by 19th century medical reports,[1] AN is characterised by significant weight loss driven by an intense fear of weight gain. These symptoms can also occur in individuals who lose a significant amount of weight in a short time, but are not underweight, a diagnosis referred to as atypical AN. While the cause of AN is unknown, there are likely to be biological, psychosocial and environmental factors at play, as risk factors include female gender, residence in a developed country, genetic heritability and personality traits such as perfectionism.[2] Dieting is also a major risk factor, especially in the context of increasing rates of obesity with a focus on weight reduction and physical activity.[3]

In contrast to AN, adolescents with bulimia nervosa (BN) experience recurrent episodes of binge eating and restriction, exercise or purging, but they do not lose weight. Binge eating disorder (BED) is characterised by recurrent episodes of binge eating without the compensatory behaviours.

A newly described heterogenous eating disorder, avoidant restrictive food intake disorder (ARFID), refers to a significant eating disturbance that is not driven by concern over body shape or weight, unlike AN or BN. Adolescents with ARFID restrict their food intake for a variety of reasons, such as sensory issues, lack of interest, or fear of choking or vomiting. Table 1 shows the diagnostic criteria for these eating disorders.[4]

The rates of eating disorders vary depending on whether they are population, community or clinic-based samples. Recent studies suggest that lifetime prevalence rates for AN range from 0.3–1.7 per cent, 0.8–0.9 per cent for BN, and 1.6–2.3 per cent for BED. Subthreshold eating disorders occur at much higher rates.[5,6] ARFID has not been as well studied. Despite the different aetiologies, each of these disorders has serious medical consequences.

Complications of eating disorders

While eating disorders can occur in adulthood, they commonly present in the adolescent years, a significant time for growth and development. Disordered eating behaviours can lead to malnutrition or overweight/obesity, affecting multiple organ systems and impacting short and long-term health. The impacts on the major organ systems are discussed below. Typical presentations to the O&G include menstrual disturbance and concerns about fertility.

Menstrual concerns and pubertal development

There is a clear relationship between significant weight loss, excessive exercise and low BMI in AN and amenorrhoea, with suppression of the hypothalamic-pituitary-ovarian axis and low oestrogen levels. On the other hand, BN and BED can also be associated with irregular menstruation and polycystic ovarian syndrome.[7] Delayed growth and delayed puberty are common features, especially when restrictive eating disorders such as AN and ARFID occur during the peripubertal period and early adolescence.

Bone health

Restrictive eating disorders pose a significant threat to long-term bone health, as the greatest increase in bone mineral density occurs during the adolescent years. Oestrogen deficiency, hypercortisolaemia, changes in growth hormone, and IGF-1 occurring in malnutrition affect bone formation, as well as

playing a role in bone resorption. The best predictive factor of decreased bone density is the duration of amenorrhoea.[8] Fifty per cent of adolescents with AN have bone mineral density values of greater than one standard deviation (1 SD) below their healthy peers.[9] Up to 30 per cent of adolescent girls and adult women report having sustained a fracture. In addition, women of normal weight with BN were found to have lower spinal bone mineral density compared to their healthy peers, suggesting that factors other than weight loss influence bone metabolism.[10]

Treatment of amenorrhoea and low bone density should focus on weight gain and restoration of menstrual function, as well as optimisation of calcium and vitamin D. Studies suggest that oestrogen replacement using the combined oral contraceptive pill in adolescents and adults with AN is not effective in improving bone density. There is some research suggesting that transdermal physiologic oestrogen (17β oestradiol) may be useful in increasing bone mineral density, although complete catch up does not occur.[11] Bisphosphonates have been effective in improving bone density in adults, however, concerns about long half-lives and potential for teratogenicity limit its use in adolescents and women of childbearing age.

Reproductive health and obstetric concerns

Research on how fertility is affected by eating disorders (even when in remission) is mixed, with

Table 1. Diagnostic criteria for AN, ARFID, BN and BED.

Anorexia nervosa (AN)	Avoidant restrictive food intake disorder (ARFID)
• Restriction of energy intake, leading to a significantly low body weight in the context of age, sex, developmental trajectory and physical health • Intense fear of gaining weight or persistent behaviour that interferes with weight gain • Disturbance in the way in which body weight or shape is experienced, undue influence of body weight or shape on self-evaluation, or persistent lack of recognition of the seriousness of the current low body weight Specify whether: • Restricting type: weight loss is accomplished primarily through dieting, fasting and/or excessive exercise • Binge-eating/purging type: during the last three months, the individual has engaged in recurrent episodes of binge eating or purging behaviour (self-induced vomiting or the misuse of laxatives, diuretics or enemas)	An eating or feeding disturbance manifested by persistent failure to meet appropriate nutritional and/or energy needs associated with one (or more) of the following: • Significant weight loss/failure to achieve expected weight gain • Significant nutritional deficiency • Dependence on enteral feeding or oral nutritional supplements • Marked interference with psychosocial functioning The eating disturbance: • Is not better explained by lack of available food or by an associated culturally sanctioned practice • Does not occur exclusively during the course of AN or BN and there is no evidence of a disturbance in the way in which one's body weight or shape is experienced • Is not attributable to a concurrent medical condition or another mental disorder. When the eating disturbance occurs in the context of another condition or disorder, the severity of the eating disturbance exceeds that routinely associated with the condition or disorder and warrants additional clinical attention.
Bulimia nervosa (BN)	**Binge eating disorder (BED)**
Recurrent episodes of binge eating. An episode of binge eating is characterised by: • Eating, in a discrete period of time (for example, within any two-hour period), an amount of food that is definitely larger than what most individuals would eat in a similar period of time under similar circumstances • A sense of lack of control over eating during the episode Recurrent, inappropriate compensatory behaviours in order to prevent weight gain, such as: self-induced vomiting; misuse of laxatives, diuretics or other medications; fasting; or excessive exercise. The binge eating and inappropriate compensatory behaviours both occur, on average, at least once a week for three months. Self-evaluation is unduly influenced by body shape and weight. The disturbance does not occur exclusively during episodes of AN.	Recurrent episodes of binge eating. An episode of binge eating is characterised by: • Eating, in a discrete period of time (for example, within any two-hour period), an amount of food that is definitely larger than what most individuals would eat in a similar period of time under similar circumstances • A sense of lack of control over eating during the episode Marked distress regarding binge eating is present. Binge eating occurs, on average, at least once a week for three months. Binge eating is not associated with the recurrent use of inappropriate compensatory behaviours as in BN and does not occur exclusively during the course of BN or AN methods to compensate for overeating, such as self-induced vomiting.

clinical samples reporting lower rates of pregnancy compared to matched controls.[12] However, population-based studies indicate no difference between rates of pregnancy and infertility treatment in women with a history of AN compared to the normal population.[13] There is also a complex association between BN, BED, polycystic ovary syndrome, obesity and infertility.[14] Women with BED may have a greater risk of miscarriage.[12]

A number of large cohort studies have shown that the risk of unplanned pregnancy is higher in women with AN and BN, despite the high prevalence of menstrual disturbance.[12] Negative feelings regarding pregnancy are common in women with eating disorders.[15] Remission can occur during pregnancy, but relapse may also be triggered.[16] Women with BN and BED risk excessive gestational weight gain.[17]

Studies also show that women with eating disorders experience increased perinatal problems, including postnatal depression and relapse. Infants born to mothers with an eating disorder are more likely to be born prematurely, have lower birth weights, lower Apgar scores and feeding difficulties.[18]

Cardiac

Common findings in restrictive eating disorders include bradycardia, postural tachycardia, hypotension and postural hypotension. With progressive malnutrition, structural, functional and conduction abnormalities occur more frequently. About half of deaths in AN can be attributed to cardiovascular causes, such as tachyarrhythmias and cardiac failure. Misuse of laxatives, diuretics or purging can lead to electrolyte abnormalities, contributing to predisposition for arrhythmias.[19] Metabolic complications and risk of cardiovascular disease are complications of obesity as a result of BED.

Neurological

Patients with eating disorders often complain about headaches and difficulties in concentration. With increasing malnutrition, they can present with psychomotor retardation and inflexible thinking styles. Neuroimaging studies, mostly in patients with AN, report a reduction in both grey and white matter. Studies show that many of these changes were reversible with weight gain. There were similar findings in patients with BN, although less pronounced. Functional brain imaging studies have also shown changes in neural circuitry related to cognitive control, reward and emotion processing. The impact of BED on the brain is still being studied.[20]

Treatment

Given the significant long-term complications of eating disorders, treatment must focus on improved nutritional status in all eating disorders and weight recovery in restrictive disorders.

Family-based treatment (FBT) has the strongest evidence base for treatment of adolescent AN.[21] The aim of FBT is to remove control from the adolescent by tasking the parents with the role of re-feeding. The FBT therapist coaches the parents to support and supervise the adolescent in eating meals and snacks to enable weight gain or maintenance. Due to the success of FBT in adolescent AN, modified forms of FBT have been adapted for use in adults.[22] FBT is also used for adolescents with ARFID because of its success in achieving weight gain, although there is currently little data on efficacy given the newness of the disorder.

First-line treatment for BN in adults is cognitive based therapy (CBT).[23] CBT aims to normalise eating patterns and reduce binge-purge episodes. In adolescent BN, both FBT and CBT are effective treatment modalities.[24] CBT can also be delivered through self-help books when professional therapy is unobtainable. Selective serotonin reuptake inhibitors (SSRIs), particularly high dose (60mg) fluoxetine, may also be used as an adjunct to therapy in patients with BN.[23]

There is empirical evidence for the use of CBT in BEDs in adults. Pharmacological measures include SSRIs and topiramate may confer additional benefit.[23] The management of co-morbid obesity also needs to be taken into account, however, focus only on weight control measures such as diet and exercise may exacerbate restriction, binge eating and purging.

Inpatient treatment has been generally reserved for management of haemodynamic instability, electrolyte abnormalities or suicidality.

Conclusion

Eating disorders are serious mental illnesses that can present at any age, but most commonly in adolescents and young women. These disorders are associated with multiple medical complications and high rates of morbidity and mortality. Early identification and treatment is crucial for better outcomes for young women and their offspring. Young women often present to O&Gs for menstrual disturbance or fertility concerns. This means that O&Gs are well placed to enquire about disordered eating and weight-related behaviours, counsel for pregnancy and refer to, or collaborate with, multidisciplinary teams for treatment.

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Substance misuse and dependence in pregnancy

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Dependence syndrome, which has replaced the term 'addiction' in the International Statistical Classification of Diseases and Related Health Problems, 10th revision (ICD-10),[1] is a cluster of physiological, behavioural and cognitive phenomena in which the use of a substance takes on a much higher priority for an individual than other behaviours that once had greater value.[1] It has been defined as a primary chronic disease of brain reward, motivation, memory and related circuitry. Dependence syndrome involves an inability to abstain, coupled with cycles of relapse and remission. Without treatment or engagement with recovery efforts, dependence syndrome is progressive and can result in permanent disability and death.[2]

In 2011, the New Zealand National Committee for Addiction Treatment (NCAT) described alcohol and drug misuse as the sixth highest contributor to the national burden of disease.[3] In 2010, the New Zealand Ministry of Health (MoH) estimated that 12.3 per cent of the New Zealand population would encounter a substance use disorder during their lifetime.[4] The Australian National Drug Strategy Household Survey, in 2016, reported that 15.6 per cent of the population over the age of 12 had used an illicit drug in the previous 12 months, and over 17 per cent of the population consumed alcohol in quantities that exceeded lifetime risk guidelines.[5]

Among those with dependence syndrome, rates of psychiatric illness are up to 70 per cent.[6] Psychiatric illness is strongly associated with increased suicide risk during pregnancy. Suicide is the leading single cause of maternal mortality in New Zealand and the fifth most common cause of maternal death in Australia. These rates are significantly higher among Maori, Aboriginal and Torres Strait Islander women.[7,8]

Antenatal care

Universal screening and referral for treatment of pregnant women for drug and alcohol misuse is recommended at the first antenatal visit. Several scoring systems have been validated to identify women at high risk for ongoing substance use in pregnancy.[9,10] Patients who use drugs during pregnancy represent a diverse group and there may be features present that increase the likelihood of substance misuse and dependence. These include late booking or presenting unbooked in labour, detection of blood-borne infection on antenatal screening, itinerant lifestyle and pre-existing psychiatric illness. The involvement of child protection services in previous pregnancies is also common for women with a history of substance misuse. It is important to perform a comprehensive clinical examination to look for the long-term sequelae of drug misuse, such as chronic liver disease and valvular heart disease.

Key to providing care for women and families with dependence disorders is a multidisciplinary team (MDT) approach, involving midwives, obstetricians, addiction specialists, counsellors and primary support or social workers. Continuity of care should be maintained throughout the pregnancy and provided in a confidential, non-judgemental and culturally sensitive manner. A pregnancy care agreement should be drawn up between the patient and the MDT for the pregnancy and postpartum period, and for transfer of care at discharge from maternity services. Compliance with the care agreement should be reviewed at every visit, particularly if the woman is receiving withdrawal treatment.[13]

Abrupt cessation of some substances, particularly opiates and benzodiazepines, is not recommended during pregnancy, due to the risk of spontaneous miscarriage and preterm birth.[11] Agonist treatment, such as methadone, is recommended during pregnancy, with the safest time for conversion being the second trimester.[12] Increased monitoring of fetal growth is recommended, due to the increased incidence of low birth weight. Other sequelae of addiction on the fetus include birth defects and long-term neurodevelopmental delay.

It is not uncommon for pregnant women with dependence disorders to present out of hours to emergency departments or obstetric units with intoxication, acute withdrawal, social issues and obstetric emergencies, such as placental abruption. For presentations out of hours, the pregnancy care plan should be easily accessible and its recommendations followed as closely as possible.

It is often necessary to admit women to hospital for stabilisation and support, however, if they are not admitted, there must be rapid notification of their key support workers.[13]

Labour and birth

Early attendance to hospital in labour is imperative to reduce self-medication, monitor substance use and confirm fetal wellbeing.[13] If induction of labour is indicated, the risk of neonatal abstinence syndrome (NAS) requiring admission to a neonatal unit should be considered when timing delivery.[11] The anaesthetist should be contacted early in the admission to review potential issues with venous access and plan for adequate analgesia. Women on long-term opioid medications should be advised to continue these in labour, however, dosages used to control withdrawal symptoms do not provide analgesia in labour or postpartum.[13]

Postnatal care

Planned postnatal admission to hospital is commonly indicated to ensure safety and wellbeing of mother and baby. Neonates at risk of NAS should be admitted with their mothers, often for at least a week, depending on the drug of misuse, social factors and need for Finnegan scoring.[13,14] Risk factors for sudden infant death syndrome (SIDS) should be discussed and women and their families informed of recommended safe sleeping practices. It is important to bear in mind that co-sleeping may be a cultural practice and this must be sensitively addressed.

Ongoing community support, including drug and alcohol services, should be introduced before the end of the postnatal period to ensure a smooth transition of care. Women with dependence are at high risk of drug relapse, postpartum depression and postpartum psychosis in the immediate postpartum period. Reductions in maintenance dosing may need to be made postpartum to reduce the risk of intoxication.[13]

There should be an antenatal plan for postpartum contraception, ideally a long-acting reversible option, which should be in use by the time of discharge from maternity services.[15]

Breastfeeding

For a small number of women, breastfeeding may not be recommended, however, even in such cases, the importance of skin-to-skin contact must be emphasised.[13] Consultation with a lactation specialist is of utmost importance and advice must be tailored to the needs of each mother and baby. In the absence of HIV infection, most mothers are encouraged to breastfeed.

Discharge

A formal handover should take place when the family are discharged from maternity services. Ongoing engagement with community services and adherence to the MDT agreement and withdrawal treatment program must be ensured. For the newborn, home safety, as well as milestone development, needs to be monitored. For children significantly affected by drug and alcohol misuse (for example, fetal alcohol syndrome), referral to community paediatric services or early intervention programs may be appropriate.[13]

While it is ideal for those with dependence disorders to voluntarily enter treatment programs, legislation exists that allows those with severe addiction to undergo compulsory treatment if they are considered to have a severe substance dependence and to lack capacity. Several Australian states have compulsory treatment programs, while others, including Western Australia, are considering implementation. In February 2018, the New Zealand Substance Addiction Act came into effect. It aims to protect individuals from harm, allow assessment of specific needs, and to provide individualised treatment that includes medically managed withdrawal. Individuals are assessed by approved specialists, looking for features of neuroadaptation to the substance, evidence of

Table 1. Recommendations for management of substance misuse in pregnancy and postpartum.

Substance	Recommendations
Alcohol	• Abstinence is ideal • A maximum of two standard drinks daily is recommended • Expressing prior to drinking, with formula supplementation, is an option if intake is above recommended levels.[13]
Opiates	• If stable on substitution treatment, breastfeeding is encouraged • Passage of methadone into breastmilk is minimal • Levels of buprenorphine are considered insignificant • Stop if there is evidence of oversedation • If unstable on withdrawal treatment or using short-acting opiates, breastfeeding is not recommended.[13,16]
Cannabis	• Associated with neonatal agitation, irritability and long-term developmental delay • For heavy users, without intention to cut down, the risks of breastfeeding may outweigh the benefits.[13,16]
Benzodiazepines	• Ideally, the woman will have undergone supervised withdrawal during pregnancy. Substitution can be commenced while breastfeeding.[11] • Advise against breastfeeding immediately after use, due to risk of maternal sedation and unsafe sleeping.[13,18]
Stimulants	• The Australian National Health and Medical Research Council (NHMRC) and NZ MoH advise against breastfeeding, due to harmful neonatal effects.[11,16] • Amphetamine levels in breastmilk can reach seven times the levels in maternal serum.[18] Women who choose to breastfeed while using must be carefully counselled on how to minimise neonatal exposure. A supplementary feeding plan should be prepared. Advise women not to breastfeed for 24–48 hours after use.[13]

craving, previous unsuccessful attempts to control usage, and ongoing use despite harmful effects, of which two must be present for the act to apply. An assessment of capacity is made according to NZ MoH guidelines and reviewed regularly. The treatment order initially stands for eight weeks, but may be extended by the courts.[19]

Substance dependence is a complex disease that is difficult to treat. This is, in part, due to the persistent alterations to reward circuitry and impulse control in the brain, leading to a pathophysiological process that is difficult to undo. Underlying psychological and social aspects of health play a pivotal role in the development of the disease process. By the time most people enter treatment, addiction has taken over their lives, replacing the things they once enjoyed, isolating them from their communities and putting them at risk of life-long illness and poverty. Rates of relapse are high, with some studies suggesting that 85 per cent will return to drug use within 12 months.[20] However, relapse is also considered a normal part of the process of recovery and does not necessarily indicate failure.[21] It is important that, as clinicians, we recognise that pregnancy presents an opportunity to identify dependence and engage an individual and their family in a rehabilitative treatment program that has the potential to bring about long-term change.

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Personality disorders in clinical practice

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Individuals with a personality disorder (PD) have persistent difficulties in functioning and social relationships. PD occurs in 4–12 per cent of the adult population. Affected individuals are high users of clinical services, with increased rates of medical morbidity, mental illness and mortality.[1]

PD refers to enduring qualities of a person that influence interpersonal functioning, self-concept and emotional control. Disturbances in personality development are influenced by genetic factors, early attachment experiences and parenting, and neurodevelopmental factors. Individuals with vulnerable personalities are less able to cope with stressful experiences, such as illness and clinical treatment, presenting challenges for clinicians in terms of engagement and rapport. They are also at risk of experiencing anxiety, depression and distress as a result of limited coping strategies. Difficulties with interpersonal functioning affect one's ability to use others for support, avoid conflict and maintain healthy relationships. Many clinicians are familiar with the challenges of treating these individuals, who have high levels of service use and excess medical morbidity and mortality.

Classification

The Diagnostic and Statistical Manual of Mental Disorders (DSM-5)[2] system of psychiatric classification gives a definition of general PD as the enduring pattern of inner experience and behaviour that is inflexible, pervasive and not within cultural norms. These conditions impact at least two of the following domains:

- Cognition – ways of perceiving and interpreting self, others and events
- Affectivity – the range, intensity, lability and appropriateness of emotional response
- Interpersonal functioning
- Impulse control

Personality disorders are developmental disorders with several early risk factors, usually evident in adolescence and young adulthood, although earlier features may present in childhood. The diagnosis of PD requires an evaluation of long-term patterns of function and a clear history of early onset of particular features of personality difficulty. It is important to exclude transient difficulties that may be an acute response to stress, the impact of mental illness or substance abuse. Diagnosis should also take into account cultural influences and differences in the management of self, relationships and emotional expression. PD as a label should be avoided when seeing distress and disturbance in individuals experiencing difficulty in acculturation or asylum-seeking.

The DSM system describes 11 specific types of PD, with three clusters of themes. Similarities and overlaps are common between the groups and the discrete types are sometimes difficult to define in a clinical setting:

- **Cluster A: Eccentric** – paranoid, schizoid, schizotypal
- **Cluster B: Emotional** – antisocial, borderline, histrionic, narcissistic
- **Cluster C: Anxious** – avoidant, dependent, obsessive compulsive, passive aggressive

Cluster A disorders

Cluster A disorders include individuals with: a pervasive distrust and suspiciousness of others, interpreting motives as malevolent (paranoid); a pattern of detachment from social relationships and restricted range of emotional expression (schizoid); and discomfort in relationships, cognitive distortions and eccentricities (schizotypal). Clinicians find it difficult to establish a therapeutic relationship with these individuals, who may be anxious, guarded and suspicious. Clear and formal communication, avoiding familiarity, may be a helpful approach. Cluster A disorders are found in 0.5–3 per cent of the general population, with increased rates in mental health settings.

Cluster B disorders

Cluster B disorders include individuals with: disregard for and violation of the rights of others (antisocial); instability in relationships, self-image, emotional regulation and impulsivity (borderline); patterns of grandiosity, need for admiration and lack of empathy (narcissistic); and patterns of excessive emotionality and attention seeking (histrionic).

Borderline PD occurs in around two per cent of the general population and is one of the most studied in terms of aetiology and response to psychological and psychopharmacological treatment. Clinical issues managing borderline PD relate to the rapid shifts in emotional states, angry outbursts and demands, and interpersonal crises. These women are particularly at risk during pregnancy and the perinatal period, with major challenges in transition to parenthood.

Cluster C disorders

Cluster C disorders include: patterns of feelings of inadequacy and hypersensitivity to negative

evaluation (avoidant); preoccupation with orderliness, perfectionism and control (obsessive compulsive); and patterns of submissive, clinging behaviour with an excessive need to be taken care of (dependent). Cluster C disorders are found in 0.5–2.4 per cent of the general population.

Personality disorder in everyday practice

PD impacts the doctor-patient relationship, compliance with treatment recommendations and clinical outcomes. Commonly described as severe PD, patients with borderline personality disorder (BPD) are frequently seen as chaotic, crisis-prone, self-defeating and emotionally unstable. They have poor stress tolerance and may engage in self-harm and suicidal behaviour. People with PD can develop clinical depression, anxiety and substance abuse problems. Women with BPD and a history of childhood abuse and trauma are more likely to experience abusive patterns in current relationships and parenting difficulties.

Maternity care and BPD

BPD is associated with significant difficulties in maintaining healthy relationships, emotional fluctuations and poor impulse control. Many women describe histories of child abuse and attachment disruptions, which have a long-term impact on function and increase risk of post-traumatic symptoms and difficulties in parenting. Pregnancy may be complicated by significant anxiety and memories of child abuse. The pregnancy is more likely to be unplanned or the result of sexual assault. Supportive relationships may be limited, increasing psychosocial stress.

Cohort studies of women diagnosed with BPD in pregnancy report higher rates of smoking, drug and alcohol use, financial stress and co-morbid mood disorder. Rates of obstetric complications are elevated, including gestational diabetes, premature rupture of membranes, chorioamnionitis, caesarean delivery and preterm birth.[3]

Australian data found a similar range of obstetric issues and poor neonatal outcomes, including low Apgar scores and need for special care nursery admission. Importantly, the data found 30 per cent of women reported the pregnancy to be traumatic, increased rates of request to end the pregnancy early, and low levels of engagement in antenatal care.

Women with severe PD raise concerns around parenting capacity and child protection.[4] The broad range of complications highlights the need for integrated multidisciplinary management, involving mental health services in the maternity setting. Early discussion with women about the psychological stress of pregnancy and involvement of supportive interventions is an important preventive strategy.

High rates of protective concerns underlie the challenges for women in parenting, particularly when there is a history of child abuse and/or current relationship trauma. Women with severe PD may have core difficulties in transition to parenthood and in function as a consistent attachment figure for their infant. They may also have difficulty in understanding infant communication and tolerating negative emotional responses in the infant, becoming distressed themselves.[5] Rates of postnatal depression are elevated in women with histories of child abuse, contributing to parenting difficulties and resulting attachment insecurity in the infant.[6] While there is limited evidence for the efficacy of clinical interventions for BPD, current approaches aim to improve the parent's emotional understanding of the child and support them in their role as an attachment figure. Emphasis is placed on building the parent's capacity to focus on the child, as well as supporting recovery from early trauma.[7,8] There is clear evidence for the effectiveness of structured psychological therapies, including dialectical behaviour therapy, mentalisation based treatment and cognitive analytic therapy, as reviewed in the National Heath and Medical Research Council (NHMRC) clinical guidelines.[9]

Overall, these approaches promote emotional regulation, relationship function and reduction in impulsivity. Psychopharmacological interventions may be useful to target specific severe symptoms, such as depression and agitation, and include mood stabilisers and antipsychotics. These are usually prescribed following psychiatric assessment.[10]

Principles of management

The general principles of management of PD aim to maintain a clear and consistent treatment plan and provide support for the individual, who may be anxious, angry or emotionally volatile. Recognition of the personality, vulnerability and anxiety, and avoidance of an overreaction to difficult behaviour helps to maintain the therapeutic relationship. It is important to clarify emergency and crisis supports for women with a history of decompensation or self-harming behaviours and to liaise with existing mental health services. Consistent and available supports, with clear parameters for regular contact, help to contain anxiety and should be coordinated across community and hospital services.

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Psychosomatic disorders

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Medicine has historically separated disease into either the mind (psyche) or the body (soma). This dualism is evident in how diseases are separated among specialties and how hospitals are structured. Psychosomatic illnesses challenge this paradigm because they present physically, but are thought to have, at least in part, a psychological origin. This is not a new concept and has had a number of iterations over time, such as 'somatisation', 'medically unexplained symptoms' and earlier clinicians, such as Freud, describing the phenomena as 'conversion hysteria'.[1] However, in more recent times, there has been a shift away from symptoms being psychological in origin and medically unexplained, with greater emphasis placed on the distress and disruption to life created by the condition. In the fifth and current version of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5), such disorders are captured under the diagnostic umbrella of 'somatic symptom and other related disorders' and include 'somatic symptom disorder', 'illness anxiety disorder', 'conversion disorder' and 'factitious disorder'.

Psychosomatic disorder is characterised by somatic symptoms (such as pain, fatigue and gastrointestinal problems) that are distressing or result in significant disruption to daily functioning, and are persistent (greater than six months duration), although the actual nature of the symptom may vary over time. Associated with this are excessive thoughts, feelings or behaviours related to the symptoms or health concerns, such as disproportionate and persistent thoughts about the seriousness of symptoms, high levels of anxiety related to symptoms, and/or excessive time and energy devoted to these symptoms. If the predominant somatic symptom is pain, this can also be specified. Individuals typically present in medical (as opposed to psychiatric) settings and the disorder is recognised as more prevalent in females.[2] Given this, the disorder may be of particular interest to clinicians working in obstetric and/or gynaecological settings.

Epidemiology

Rates of psychosomatic disorder in the United States are estimated to be between four to six per cent,[3] and it affects many more women than men (approximate female-to-male ratio of 10:1).[2] An estimated 20–25 per cent of patients who present with acute somatic symptoms will develop a chronic somatic illness.[2] Patients with psychosomatic disorders have twice the annual medical care expenses and utilise twice as many outpatient and inpatient services as controls.[4]

Aetiology

Although we have not identified the exact aetiology of psychosomatic disorders, a number of theories have been proposed based on observed and studied patterns. It is likely that the population with these diagnoses are heterogeneous in both their clinical presentation and aetiology. Nevertheless, certain risk factors have been identified, including: childhood neglect, sexual abuse, chaotic lifestyle, and a history of alcohol and substance abuse.[2]

There are a number of proposed models that provide explanations for why and how certain individuals develop a psychosomatic disorder:

- Neurobiological theory: In chronic pain conditions, the central sensitisation hypothesis describes an up-regulation of central nervous system pain pathways over time, and an eventual increased sensitivity to minimal stimulation.[5]
- Cognitive theory: People with these disorders often have an increased awareness of their own bodily functions and are likely to misattribute symptoms as the presence of a medical illness. Cognitive theory would describe this as a faulty cognitive scheme.[1]
- Sick role: An unconscious (without awareness) means of avoiding noxious obligations and postpone unwelcome challenges.[1]
- Psychodynamic theory: 'Somatisation' is seen as a lesser-developed psychological defence (coping mechanism) to distress. Thoughts or emotions are repressed and transferred inwards, and expressed in physical symptoms.[1]

Gynaecological context

There are a number of established clinical syndromes that commonly present in gynaecological settings, with both physical and psychological features. Some examples include: premenstrual dysphoric disorder, mood disorders in the perimenopausal period and chronic pelvic pain. In particular, chronic pelvic pain provides a good example of how both psychological and physical pathology can present in a complex way.

Chronic pelvic pain is a common disorder that is often difficult to manage. It has an estimated prevalence of 38 per 1000 women aged 15–73.[6] An estimated £158 million is spent annually on the management of this condition in the National Health

Table 1. CARE MD framework.[9]

C	Consultation with psychiatry/cognitive behavioural therapy (CBT)	Follow the CBT treatment plan developed between the patient and therapist.
A	Assess	Rule out medical illness, treat co-morbid depression/anxiety.
R	Regular visits	Short regular consults, agreement to stop overuse of medical care.
E	Empathy	Form a trusting therapeutic alliance, listen to the patient's distress and symptoms during 'counselling' sessions, acknowledge the distress and discomfort.
M	Medical-psychiatric interface	Help the patient self-discover the connection between physical complaints and emotional stressors. Avoid comments such as, 'Your symptoms are all psychological'.
D	Do no harm	No unnecessary diagnostic procedures or referrals to other specialists (when not indicated).

Service (NHS) in the UK, and $881.5 million a year on its outpatient management in the United States.[7] Chronic pelvic pain is often thought to have a psychosomatic component because organic pathology is not established in many cases, or the pain persists despite the treatment of the organic pathology. This is exemplified by a study that found that organic pathology, such as endometriosis or adhesions, were reported in only half of the cases where diagnostic laparoscopy was performed.[7] Psychosocial factors recognised in patients with chronic pelvic pain are similar to psychosomatic disorders, and include sexual abuse, physical abuse and co-morbid mental illness.[6] Furthermore, the persisting pain in the context of treatment options being exhausted can lead to frustration, hopelessness, and possible development or worsening of depression. In cases where the thoughts, feelings or behaviour related to the pain appear excessive and disabling, psychosomatic disorder may be diagnosed.

General principles of management

Collaboration is the cornerstone of management of psychosomatic disorders. It is ideal to have a multidisciplinary approach that targets the biological, psychological and social factors contributing to the development and perpetuation of the illness.[2] A multidisciplinary approach is also suggested with chronic pelvic pain management.[8]

The CARE MD model provides an effective framework for the management of patients presenting with psychosomatic disorders (Table 1).[9] It was developed for people working in primary care settings, however, the principles remain relevant in other settings. The framework suggests collaboration with mental health practitioners, having an empathic approach, treating co-morbid illness, and encouraging an understanding of the mind-body connection.[9]

Specific psychological methods that are evidence-based include cognitive behavioural therapy and mindfulness-based therapies.[2] Psychological therapies should be tailored to the patient's presentation. Pharmacological treatments with the greatest evidence include selective serotonin reuptake inhibitors (SSRIs) and tricyclic antidepressants (TCAs).[2] Of course, treating co-morbid mental illness is important.

Conclusion

Patients presenting with medically unexplained physical symptoms should be assessed and treated with a multidisciplinary approach that manages the biological, psychological and social aspects of the disorder. Doctors often find treating patients with these diseases challenging because the presentations do not neatly fit into our paradigms of illness and treatment. Psychosomatic disorders are often chronically disabling and require rehabilitation aiming at improvement of quality of life and social participation. It is important to try and shift our thinking, work together and help manage what is a significant disease affecting many people (especially women) in our community.

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Postpartum psychosis: a practical management guide for obstetricians

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Postpartum or 'puerperal' psychosis, the acute onset of severe psychiatric symptoms early postpartum, was first characterised in the 19th century. At that time, many cases were likely organic as a result of blood loss or sepsis. However, in some cases, there were no underlying medical risk factors and the concept of non-organic postpartum psychosis was developed. In the 21st century, the rate of postpartum psychotic episodes is 1–2/1000 deliveries in the parturient population, increasing dramatically to 30 per cent of women with a history of bipolar disorder and more than 50 per cent in women with a past postpartum psychosis (Figure 1).[1] A woman has a 30-fold increased risk for acute psychosis in the first three weeks postpartum.[2]

Clinical features

Very early signs of postpartum psychosis include increasingly anxious affect and poor sleep (independent of baby waking). As these symptoms are common in parturient women, it is important to review at regular intervals for symptom evolution. As psychosis evolves, women develop irrational and frightening beliefs (for example, harm will befall them, their family or infant; close family can no longer be trusted; they are 'going mad'; or the baby will be removed because they are a 'bad' mother). Women are very likely to minimise symptoms and go undiagnosed early on. At mental state examination, they present as preoccupied, suspicious, difficult to engage, restless, distractable or disorganised. Depending on symptom severity, their speech may be illogical and difficult to follow, and they may experience frank delusions (for example, grandiose, persecutory, guilt). More often, these women may express vague suspicions that close family members can't be trusted or concerns about their baby's welfare. They may experience suicidal thoughts, especially if distressed by persecutory or depressive delusions. These women may have partial or no insight into their disturbed mental state. Psychotic symptoms and insight often fluctuate day to day, and, as the episode worsens, symptoms are associated with significantly impaired ability to care for the baby. Both suicidality and possible thoughts of harm to

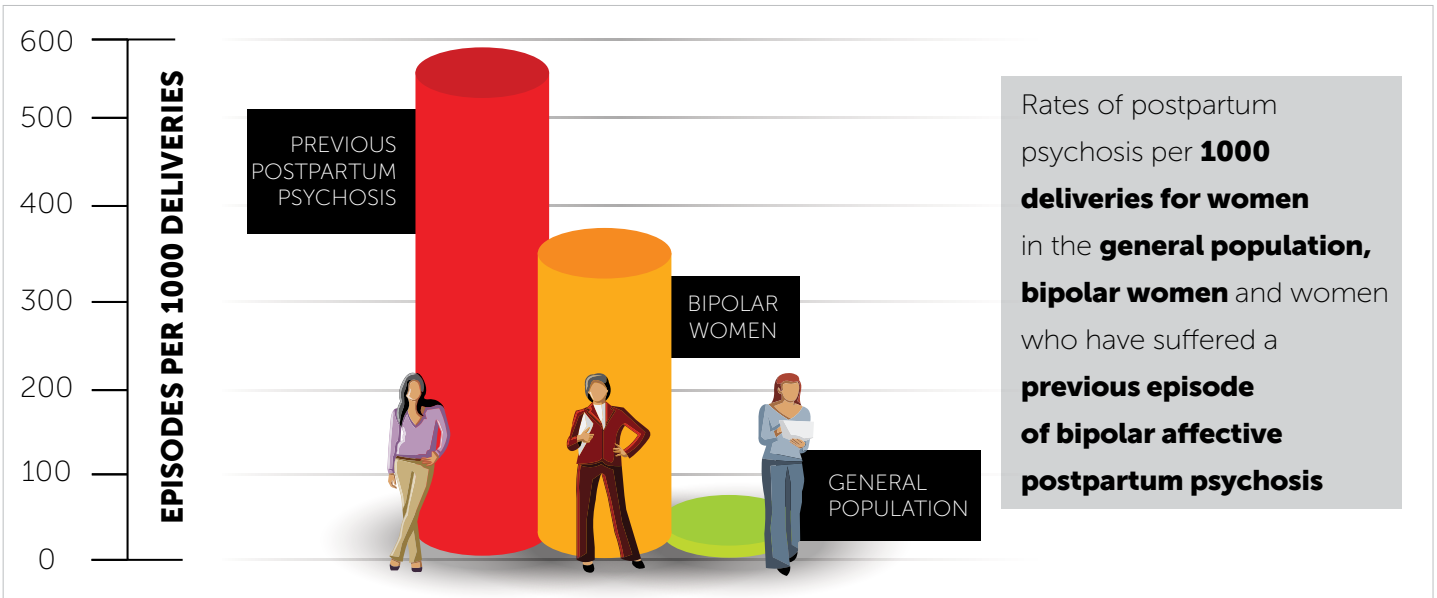

Figure 1. Rates of postpartum psychosis in women.

baby, as part of a psychotic belief system or severe depression, need to be specifically explored.

Diagnosis

Diagnosis of acute psychosis is very straightforward when symptoms are severe. However, in milder cases where there is commonly symptom minimisation, partial insight and day-to-day fluctuation, these women may present well at cross-sectional assessment. It is thus critical to obtain corroborative history from significant others and, if possible, to review the woman at regular, close intervals. If unsure, urgent psychiatric consultation is essential.

An obstetrician's immediate management plan:

- Engage both the woman and her significant other/s and try to destigmatise the mental health issues as much as possible while highlighting the need for urgent care.
- Ensure the safety of infant and mother.
- Discuss the diagnosis in broad terms: avoid the term psychosis; use terms like 'more severe postnatal depression'.
- Emphasise that sleep deprivation is a key risk factor and highlight the need to urgently commence a hypnotic.
- Consider a hypnotic with a long half-life. For example, half to one tablet of zopiclone (Imovane) or doxylamine (Restavit). Temazepam is unlikely to be useful. Hypnotics are relatively safe in breastfeeding, as there is minimal secretion into breastmilk.
- Discuss possible admission to a mother and baby unit (MBU). Emphasise the value of the MBU for support with the baby. Again, try to reduce the mother's/family's stigma with a psychiatric admission.
- As soon as possible, seek advice from and hand over care to psychiatry and the local mental health team.

Short and longer-term management

Medication

Once the woman is engaged with psychiatry, a sedating antipsychotic, such as quetiapine (Seroquel), will need to be commenced. Initially, this is to reduce symptoms of agitation, distress and insomnia while the antipsychotic takes effect within one to three weeks. Response to the antipsychotic needs close monitoring and, all going well, reduction and cessation after six months (if this is the woman's first episode of psychosis) can be undertaken.

Where a woman has a pre-existing diagnosis of bipolar disorder or schizophrenia or develops such a diagnosis, appropriate longer-term antipsychotic and/or mood stabilisers will need to be re/commenced. If lithium is to be commenced while breastfeeding, it is best to seek a second opinion, where possible from a perinatal psychiatrist.

Psychoeducation

It is important to explain the difference between postnatal depression and postpartum psychosis. Reassure the woman and her family about the overall good prognosis of postpartum psychosis, while emphasising the need for psychiatric monitoring and medication in subsequent months. Women and their families need to learn about the early signs of relapse of psychosis, most commonly: insomnia, independent of baby's waking; racing thoughts; erratic mood shift or severe anxiety; distractibility; or unfounded preoccupation with the baby or family's welfare.

Future pregnancy planning

Subsequent pregnancy is not contraindicated, but best deferred until the woman has been free of symptoms for over a year. Families also need to be aware that having had one postpartum psychosis increases a woman's chance of a recurrence to about 50 per cent, but early management of postnatal insomnia with medication and close mental health monitoring is likely to reduce the chance of relapse substantially. It is important to devise a clear mental healthcare plan with the woman and her family for any subsequent pregnancy. Copies of this plan need to be made available to the woman and all key healthcare providers.

Prognosis

Postpartum psychosis usually responds fairly quickly (within two to three weeks) to antipsychotic medication and sleep restoration. However, some cases take much longer to resolve and it is possible these women are developing a longer-term

Case vignette one

A 35-year-old married woman with bipolar disorder, requiring several admissions in her teens, responded fully to lithium at the time, but ceased all medication and psychiatric follow-up in her 20s. She remained well on a regimen of regular sleep, supportive work situation and partner relationship, cessation of alcohol or drug use; and minimising of life stressors. Occasional bursts of mood lability lasting a few days would resolve with improved sleep. At enquiry in pregnancy, she reported having been 'a bit depressed' after a relationship breakup in her teens, but did not mention the bipolar disorder.

Pregnancy was uneventful until she was admitted to hospital at 26 weeks for management of severe hypertension. In hospital, sleep was broken. She missed the support of her husband and the structure of work. She became increasingly anxious about the delivery as her blood pressure worsened and had to stay in hospital to term. Following caesarean section, she became severely sleep deprived and suspicious of staff, labile in mood, wanting to go home against medical advice, and declining a hypnotic. By day three, she was chaotic and pressured in speech, irritable, voicing persecutory delusions (staff wanting to poison her with medication), unable to be contained on the postnatal ward and was transferred to a locked psychiatric unit. After several trials of antipsychotic and electroconvulsive therapy (ECT), she finally accepted lithium which rapidly led to full symptomatic recovery, though it took another year before she was functioning optimally and able to return to work. A great deal of planning took place for her second pregnancy, which was managed with low-dose seroquel in late pregnancy and postpartum to guarantee good sleep while her husband did expressed feeds at night. She did not relapse or need to recommence lithium and, two years later, remained well unmedicated, but vigilant around sleep hygiene and managing stress.

Case vignette two

A 40-year-old married woman was ambivalent about having a child. There was no past psychiatric history, but her sister had suffered severe postnatal depression. An unremarkable pregnancy was followed by a traumatic emergency caesarean section for fetal distress. She reported a sense of not being connected to the baby and not wanting to breastfeed or care for her baby. She was finding sleep deprivation very challenging, but declined a hypnotic. On the morning of postpartum day four, she expressed vague concerns about the presence of CCTV cameras in the hospital, was wanting baby to stay with staff, and worried that some staff had taken a dislike to her. That afternoon, however, she was settled and not voicing any concerns. On the afternoon of day five, she shoved the baby aside when it was brought in to feed and narrowly missed dropping the baby. She was scheduled to the psychiatric unit and discharged home three weeks later, much improved on a moderate dose of quetiapine.

Case vignette three

A 40-year-old married woman was having her first baby and did not report a psychiatric history. She had an induction and forceps delivery, with moderate postpartum haemorrhage of 700ml and Hb 9.5 (no prior level was available). At review 36 hours later, staff reported she had been 'inappropriate' during the second stage of labour and had not slept for two nights because of high anxiety levels. No hypnotic had been offered. She was concerned that her baby might not be safe on the ward unless she watched over it day and night. At times, she was noted to be walking up and down the corridor vaguely 'looking for my baby'. At mental state examination, her affect was a little odd and fearful. It was difficult to follow her train of thought. She expressed fears for her baby's welfare and a belief that he had been kidnapped by the Australian Security Intelligence Organisation (ASIO). She was intermittently confused about the date and time of delivery and whether she should breastfeed as 'baby told me it was not hungry'. She lacked insight into her disturbed mental state.

A working diagnosis of acute confusional state was made, pending investigations, with differential diagnosis of postpartum psychosis. Hb that day returned as 5.3. After transfusion and regular hypnotic, her mental state settled back to normal over the next three days, confirming the diagnosis of acute confusional state.

psychiatric condition, either a bipolar disorder or, less commonly, a schizophrenia-like illness. While the majority of women with a de novo episode don't relapse into psychosis later in life, 14 per cent will go on to develop a manic or depressive episode sometime in the next 15 or more years,[3] consistent with an emerging bipolar disorder.

Conclusions

The first two cases illustrate the need to carefully seek past or family psychiatric history (though this may be denied or understated). All cases demonstrate a lack of response by staff to severe sleep deprivation, with lack of use of hypnotic medication and the need to review symptoms at very regular intervals. Symptoms often rapidly evolve. The fluctuating nature and subtlety of symptoms was associated with difficulty with early detection in case two. Case three had some features suggestive of an acute confusional state, with fleeting auditory hallucinations, disorientation to time and worsening symptoms at night. However, it also met criteria for postpartum psychosis. Case three emphasises the need to routinely exclude organic pathology, however unlikely that might be.

Acute postpartum mental disturbance can range from mild symptoms, resolving with sleep restoration, through to more severe and florid presentations requiring antipsychotic treatment, and often hospitalisation. Severe cases are considered a psychiatric emergency, while possible incipient cases need to be assessed at close repeated intervals, ideally after sleep restoration and with as much corroborative history as possible.

Obstetricians and midwives must be mindful of the possibility of postpartum psychosis and the risk of rapid escalation, with the need for early involvement of a psychiatrist. In patients with a prior history, a multidisciplinary team approach, a management plan, attention to avoidance of sleep deprivation in the third trimester, early intervention with hypnotic or antipsychotic medication, and a low threshold for transfer to a psychiatric facility or mother and baby unit, should be considered.

Acknowledgement

I gratefully acknowledge feedback from Dr Vijay Roach, President-elect of the Royal Australian and New Zealand College of Obstetricians and Gynaecologists.

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Mental health and pelvic pain

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When we chose a career in O&G we committed to caring for girls and women with pain. Over the last decade, rapid changes in neuroscience have laid to rest the concept that pelvic pain is just in the pelvis. Once any pain has been present for more than three to six months, central sensitisation in the spinal cord and brain will be present. Pain becomes more complex and the spectrum of symptoms will often include anxiety or depression. While pain is part of our working lives, coping with distressed patients may seem overwhelming. This article provides suggestions to enhance and support your management of patients with chronic pain, anxiety and depression.

Streamlining the consultation

Pre-appointment questionnaire

Asking your patient to complete a questionnaire before their appointment provides a history and brief mental health assessment at a glance. Suggested freely available questionnaires include the Pelvic Pain Questionnaire for Girls and Women (www.pelvicpain.org.au) and the DASS-21 questionnaire for depression, anxiety and stress (https://headspace.org.au/assets/Uploads/Resource-library/Health-professionals/Clinical-Toolkit/DASS-21-with-Scoring-Sheet.pdf).

Early pain validation

Negative tests, disappointing past treatments and community misunderstanding may result in a patient feeling fearful that her pain will not be taken seriously. She may spend much of her consultation explaining that her pain is real and severe.

A positive rapport can be established quickly with prompt initial pain validation, for example, 'Thanks for coming to see me today. I hear you've had a really difficult time with pain'. This ensures that she knows you understand her pain is severe. Allowing the woman to speak for the first few minutes, describing her main concerns, guides the consultation to the areas she is most anxious about.

Sentences with two phrases joined by 'but' imply that you do not believe the first phrase to be true and are best avoided. For example, 'Your pain is real, but I think you should see a psychologist', suggests that you do not believe her pain is real. Joining phrases with 'and' is more effective.

Previous sexual assault

While a history of distressing sexual events may be important, not all women will wish to discuss this with you or consider it relevant to their pain.

A questionnaire item with a range of possible answers, such as the one below, allows the woman to decide the focus of her consultation. It is time efficient and demonstrates a readiness to discuss the assault if she wishes to.

Have you experienced distressing sexual events during your life, including sexual assault? Yes/No
I prefer not to answer this question.
I would like to discuss this during my appointment.
I prefer not to discuss this during my appointment.

Motivational interviewing and reflective listening

Prolonged pain may have left your patient emotionally and physically exhausted, with limited energy to take on new treatment options. Building momentum for change is enhanced by 'reflective listening' and a psychologist may use this technique. For example, the woman explains: 'I've been on opioids for pain for ten years'. You reply: 'So, despite using opioids for ten years, you're saying that it's not helping your pain?' She nods. You ask: 'What do you think would help with this pain?'

This process involves listening and then reflecting back her findings. Patients are more motivated by their own thinking and there is less pressure on the practitioner to come up with solutions for complex issues. When listening reflectively, an opportunity will come to make suggestions. For example, when listening to a description of stabbing pelvic pain: You: 'That sounds like pelvic muscle spasm. What do you think would help your muscle spasm?' Where she doesn't know, you have the opportunity to suggest options that accord with her own thinking.

Mobilisation

Exercise is the best non-drug treatment for pain, but it is also highly advantageous for mental health conditions. As many women with persistent pelvic pain will have obturator internus muscle spasm,

pacing and choosing an exercise that is 'away from the core' works best. These may include stretches, a daily walk, or free-flowing dancing styles, such as salsa.

Avoid opioids

The regular use of opioids for pain began with palliative care, where death provides an exit strategy and there is no expectation of a normal life. Unfortunately, regular opioid use increases chronic pain by inducing central pain sensitisation.

Referral to a psychologist

A psychologist offers a series of long consultations and will work with your patient on:

- Education about pain processes and the link to psychology and the brain
- Thinking and behaviour patterns for people with chronic health conditions
- Pacing behaviours to avoid the boom/bust cycle of energy and fatigue
- The management of co-morbid mental health pain conditions to improve their engagement with health services

After years of negative experiences, your patient may be sensitive to the suggestion that psychology could be of benefit. It is important to explain that including a psychologist will not reduce your efforts to manage her pain. Useful phrases might include: 'Your pain is real and pain is a complex illness. Your brain has a role, your thinking has a role, and therefore psychology has a role in assisting you manage your pain.'

How referral to a psychologist works

Masters of Psychology graduates are eligible for registration as a psychologist. However, a health psychologist has undertaken further training and works within the specific overlap between health and mental illness, often within specific areas such as chronic pain. Effective treatment means finding the right psychologist, as well as the right treatment. Asking your patient to 'Let me know how it goes', or enquiring 'Did it go well?' provides you with feedback.

A mental health care plan (MHCP), prescribed by a GP, provides ten Medicare-subsidised sessions with a psychologist where your patient has been referred for anxiety or depression. While pain alone is not a current indication for a MHCP, these conditions frequently co-exist. As acknowledging the presence of either anxiety or depression may have implications for her workplace, some women may prefer to pay for consultations privately.

Confidentiality limitations require a psychologist to obtain informed consent prior to divulging any information to a third party. Psychologists place similar importance on this as we place on informed operative consent. Special privilege is provided to the referring doctor, who should expect a progress report after six and ten sessions, and can request earlier feedback if required. If you are not the referring doctor, then the psychologist will need to meet with your patient to obtain their written informed consent before providing you with information. Unless urgent, this may take one to two weeks to obtain, depending on how often your patient attends their psychologist.

Psychology therapies

Cognitive behavioural therapy (CBT) works with the fear-avoidance model, where fear and anxiety responses to pain lead to more fear and consequent avoidance of that pain and fear (Figure 1). This is functional and normal for acute pain, but for chronic pain it can lead to more pain, disability, catastrophising and worse mental health outcomes. CBT works by targeting each aspect of this cycle, by providing accurate information, building awareness of this cycle, challenging dysfunctional beliefs and thinking patterns, and adjusting unhelpful behaviours.

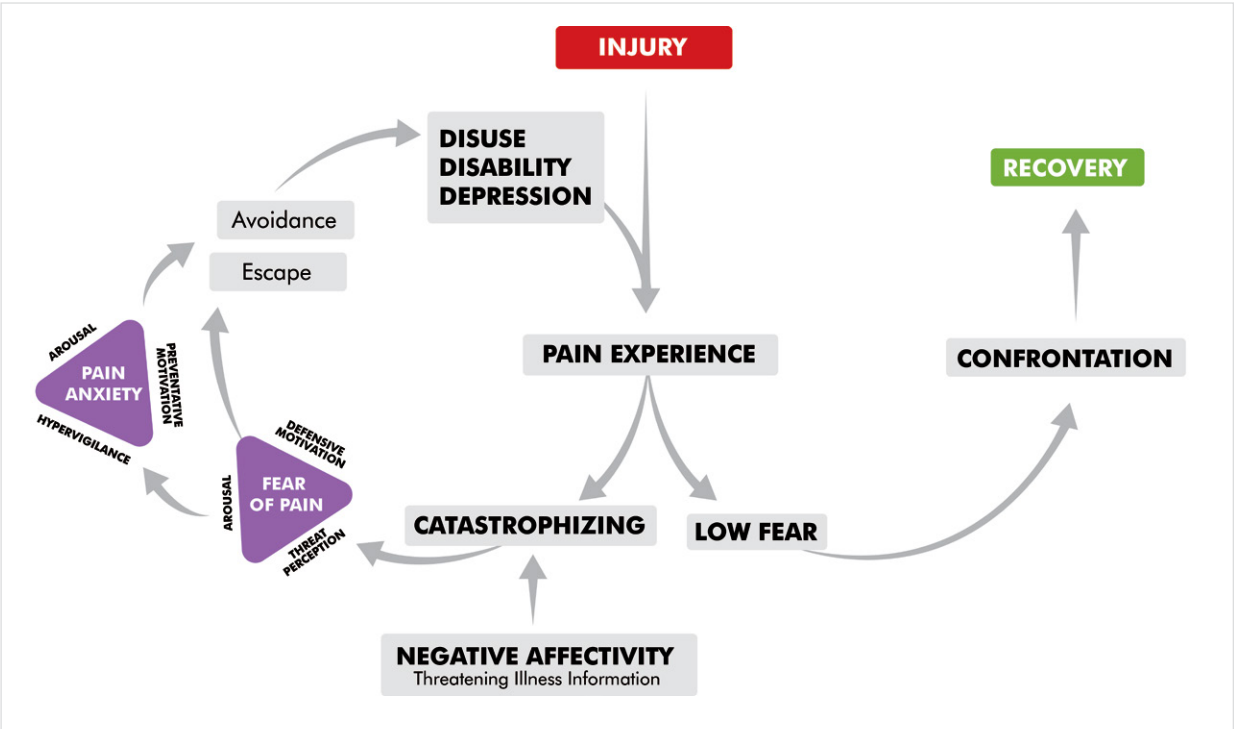

Figure 1. Cognitive Behavioural Therapy (CBT).[5]

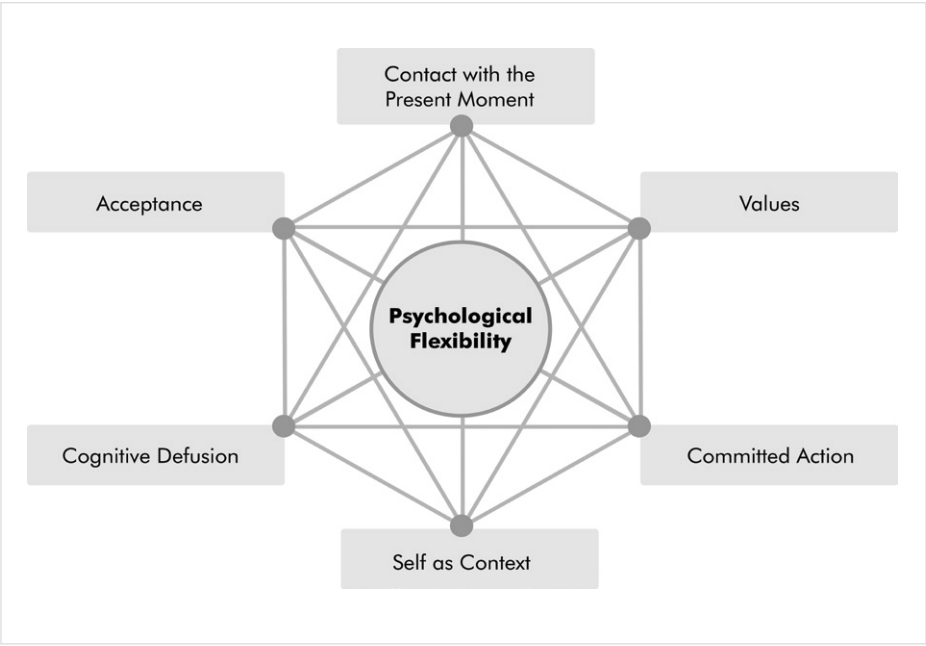

Figure 2. The six domains of Acceptance and Commitment Therapy (ACT).[3]

Acceptance and commitment therapy (ACT) works on increasing each of the six domains (Figure 2) in order to facilitate aspects such as mindfulness, increased pain tolerance, and values-based activities in order to improve functioning.

Pacing is used to breakdown activities, facilitate increased activity levels, reverse pain sensitisation, improve strength and enhance pain management in the long term.

Online pain and mental health courses for patients

Over the last few years, validated and successful online courses have become available for patients with chronic pain associated with anxiety or depression. These bring together pain education, mental health support, mobilisation and pain self-management techniques. These courses are particularly useful for patients who are unable to attend, afford or access pain psychology services:

- The Pain Course (Macquarie University) is a free online course with five weekly lessons that teaches neuroscience and pain self-management techniques. It is particularly useful for any person with pain associated with anxiety or depression. Patients register at: www.ecentreclinic.org.au.
- Chronic Pain Reboot (St Vincent's Hospital, Sydney) is a comic-based education and mobilisation course with eight weekly lessons and the option of weekly GP feedback. It costs A$59 for four month's access and is suitable for any level of mobility or chronic pain. Patients register at: https://thiswayup.org.au/how-we-can-help/courses/chronic-pain.

While improvement in absolute pain scores following completion of these courses may be modest, they have been shown to significantly reduce the impact of pain on patients' lives.

Medications for central sensitisation

Many of our patients arrive at our care already using a selective serotonin reuptake inhibitor (SSRI) medication. A more effective choice, with higher likelihood of pain improvement, would be a serotonin noradrenalin reuptake inhibitor (SNRI) such as duloxetine or venlafaxine. These medications offer the dual benefit of anxiety or depression management via the serotonin receptor and pain management via the noradrenaline receptor.

While duloxetine is usually started with 30mg in the morning (mane) for two weeks, then 60mg mane, young female patients may find starting at a lower dose easier. Starting with a lower dose makes initiating treatment more acceptable. To initiate treatment with a 15mg dose, open a 30mg capsule, discard half the contents and close the capsule.

Amitriptyline is the drug with the lowest number needed to treat (NNT=2.1) of any medication for central sensitisation. A dose of 5–10mg in the early evening can reduce pain, improve sleep, reduce bloating, reduce vulval pain, reduce background headaches and slow the bladder. A dose of 10–25mg may be required for bladder overactivity or further reduction of chronic headache. These doses are ineffective for depression and improved compliance requires an explanation that amitriptyline has been prescribed for pain rather than depression.

Detailed information on prescribing for women with pelvic pain is outlined in the article, *Medication management of chronic pelvic pain*, available at www.pelvicpain.org.au.

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Birth trauma and post-traumatic stress disorder

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Perinatal mental health difficulties related to depression, anxiety and trauma are more common than often thought. Such difficulties are likely to recur in other pregnancies, can become chronic and have long-term consequences for the mother, her infant and relationships with others. Stressful childbirth events have been found to contribute to poor maternal mental health and have been associated with symptoms of post-traumatic stress disorder (PTSD).

Although PTSD symptoms are characteristic of anxiety disorders, the latest edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) placed PTSD into a new class of 'trauma and stress-related disorders'.[1] Several changes to the diagnostic criteria for PTSD were made. These changes included modification of the A1 stressor criterion, which now requires exposure to 'actual or threatened death, serious injury or sexual violation'.[1] Such exposure may be direct, witnessing, learning that a significant other was exposed to trauma, or indirect (through the course of one's professional role). Determining the extent to which a stressor is traumatic may be a highly subjective process. However, numerous studies show that even common childbirth events can be experienced as traumatic.

As a consequence, women may: persistently re-experience the event through nightmares or flashbacks (Criterion B); avoid trauma-related stimuli (Criterion C); have worsening negative thoughts or feelings (Criterion D); or trauma-related arousal, such as irritability, hypervigilance or difficulty concentrating (Criterion E). These symptoms need to persist for at least one month, create distress or functional impairment and not be due to other causes.[1]

While the majority of births are not traumatic, two to six per cent of women meet the diagnostic criteria for PTSD following childbirth. However, many women report symptoms of trauma following childbirth. Rates of trauma symptoms range from 21 per cent in the Netherlands,[2] 33 per cent in Australia[3] and 34 per cent in a US sample.[4] A high proportion of women experiencing trauma are also likely to report co-morbid anxiety and depressive symptoms.

Factors contributing to trauma symptoms

Differences between the expectation and reality of childbirth may contribute to trauma. Distressing experiences during labour and birth often relate to interpersonal factors, pain and adverse clinical outcomes. Longitudinal studies examining psychological trauma after childbirth found a direct relationship between perceptions of poor technical and interpersonal care and development of trauma symptoms.[5] Negative birth experiences associated with perceived poor care during labour and birth include, disrespect or neglect by maternity staff, attitudes and behaviours of caregivers that inhibit a woman's choice and/or control, and high levels of obstetric intervention.[6] The woman's world view is shaken when expectations of constancy, fidelity and support are replaced with actual or perceived harm.[6]

Consequences

Consequences of birth-related trauma include debilitating anxiety symptoms and panic attacks, depression and suicidal thoughts, marital and family breakdown, sexual dysfunction, and emotional detachment from the baby. Obsession with seeking answers about the traumatic episode, flashbacks and nightmares, hypervigilance with regard to the baby, and social withdrawal are consistently reported by women who experienced a distressing birth.[7] Some women also report fear of becoming pregnant, which contributes to a lack of intimacy and conflict with partners, and voluntary infertility.

Women who have experienced a traumatic childbirth tend to 'reframe' birth as frightening and dangerous. Some women may choose to not have more children or request an elective caesarean section for subsequent births.[7] Women who do become pregnant again report sleep difficulties, depression, suicidal thoughts and panic attacks, particularly when attending maternity appointments. Conversely,

becoming pregnant again can provide opportunities to develop new coping strategies. Some women have reported that, in a subsequent pregnancy, strategies such as proactive planning, use of a birth plan and seeking supportive and empathetic care providers, helped them to regain a sense of control during pregnancy, labour and birth.[8]

Psychological and psychosocial interventions

There has been little systematic research into early interventions to reduce or prevent acute trauma symptoms in childbearing women. A recent *Cochrane Review* of 'debriefing' to prevent postpartum depression reported variable outcomes.[9] Of the seven included studies, not all specifically targeted women at risk. Although 'debriefing' is intended to prevent anxiety disorders such as acute stress reactions and PTSD, the main outcome measure in many studies was depression. Debriefing interventions are also not effective for women with serious post-traumatic reactions or serious mental distress. The authors suggest that women may require considerable time to process their distress.

A major challenge in offering counselling and emotional support to new mothers is the availability of trained staff. Our work has evaluated the feasibility of a midwife-led counselling intervention, with new mothers randomly assigned to receive counselling or an active parenting support group. At three months postpartum, PTSD total symptom and depressive symptom scores were reduced for women in the counselling support group, but, overall, there were no significant differences between groups. Mothers receiving either counselling or parenting support reported high or very high satisfaction with the interventions offered by midwives.[10] Given the inconclusive nature of research to date, but potential significance of outcomes, further research in this area is needed.

The transition to motherhood is complex. Birth-related trauma symptoms may be exacerbated by the complex intersecting issues experienced by women during pregnancy and postpartum. Sensitive personal issues, such as relationship conflict, domestic violence, previous sexual assault and a history of childhood abuse, are rarely addressed in pregnancy and may adversely affect women's abilities to cope during labour.[11] Furthermore, psychological issues – such as grief and loss associated with fetal or neonatal death, illness or disability, loss of a hoped-for normal birth, and processing the birth experience – can be overlooked in fragmented service models where the health professional present during labour and birth is not the person providing immediate or postpartum care. Current fragmented models of maternity care diminish the likelihood of health professionals 'knowing' a woman and responding effectively to her needs over time. Even though many women would like more assistance, problems arising from childbirth are frequently not discussed and few women receive the mental health help they need.

WHO[12] recommends the integration of maternal mental health into all health services received by childbearing women. However, the attempted integration of specialised perinatal mental health services into maternity care has met with mixed results. Although there is a reported increase in referrals to these services, assessment may be based on a single screening or presence of risk factors. As Matthey et al argue, mental health symptoms identified by various screening and diagnostic tools cannot be easily distilled from the significant psychosocial and physiological changes of pregnancy and postpartum.[13] The new Mental Health Care in the Perinatal Period: Australian Clinical Practice Guideline[14] aims to improve prevention and early detection of antenatal and postnatal depression, anxiety and psychosocial risk through better screening, referral and treatment for expectant and new mothers. However, we argue that maternity care providers need to establish a therapeutic relationship with women in early pregnancy, undertake psychosocial risk and mental health assessments at multiple points, and respond to the changing needs of women throughout the perinatal period. Providing women with a 'known' caseload midwife has the potential to minimise childbirth trauma. Caseload midwifery routinely integrates mental health and psychosocial risk screening, and support for women and families throughout pregnancy, labour, birth and postpartum. A *Cochrane* meta-analysis of 15 RCTs, with over 17,000 participants, unequivocally demonstrated that women receiving caseload midwifery care were more likely to have a spontaneous vaginal birth, require less pain relief and have fewer adverse outcomes,[15] thereby minimising the likelihood of a traumatic birth.

Childbirth trauma is complex and multifactorial. Caseload midwifery offers a fresh and potentially cost-effective approach to preventing and detecting risk for trauma and development of perinatal mental health disorders. Caseload midwifery frames the mental health challenges women may experience in pregnancy, birth and early motherhood as a physiological and psychosocial transition. A midwife who is known and trusted can detect mental health and psychosocial risk in a timely way and respond within the context of a woman's maternity care.

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Finding meaning in bad news: critical conversations in medicine

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'The call to protect life – and not merely life but another's identity – was obvious in its sacredness. Before operating on a patient's brain, I realised, I must first understand his mind: his identity, his values, what makes his life worth living and what devastation makes it reasonable to let that life end. The cost of my dedication to succeed was high and the ineluctable failures brought me nearly unbearable guilt. Those burdens are what make medicine holy and wholly impossible: in taking up another's cross, one must sometimes get crushed by the weight.'

– Paul Kalanithi, When Breath Becomes Air[1]

As I sit with my patient, supporting her towards the medical procedures that will interrupt her pregnancy just a few days after learning her baby has life-limiting abnormalities, I have the opportunity to 'watch, wait and wonder' about how this patient and her doctor have come to navigate this sad day. How their conversations on this day reflect previous conversations they've already had. This relationship, I notice, is bidirectional: to trust and to be trustworthy. It is conveyed verbally, of course, but mostly I notice the intensity of eye contact between them, the reassurance he offers when he touches her hand and the softness of his tone as he reminds her that she is safe. This doctor has had this conversation before; he is skilled, but not rehearsed. The difference between acting empathically and genuine empathy is obvious. It reminds me of other conversations between doctors and parents of infant patients who are not likely to graduate from our neonatal intensive care unit, or of those who have informed their patient of a terminal cancer diagnosis, or of the limits of reproductive assistance.

One of my senior neonatal colleagues offers her reflections on the meaning of bad news and how this meaning is represented in conversations differently for each patient:

'I remember distinctly how anxious I felt about how to best broach this [dysmorphic features of trisomy 21] with mum, who was overjoyed by the live birth of her baby after so many losses. I started talking to mum gently and to the best of my ability, with a reassuring tone, though my thoughts were racing. I must have put a lot of numbers into my monologue, as mum's only comment was, 'Thank you, doctor. I love him as he is. At least he is here to fulfil my empty life'. Since this first attempt, and after plenty of self-reflection, I come to these conversations now with more compassion. Each time I come away emotionally drained, and I have, on occasion, shed a tear with my patients, sharing in their pain. I believe this is the purest form of human emotion and as a doctor I am human too. I have been observer and leader of these consults and often think about what my juniors must think of me, possibly that I am weak and unable to offer that strong, calm face. However, over time, I have found it helpful to develop a clear and open stance toward the family's beliefs and values, helping them to draw meaning and make decisions that fall in line with their values by painting the most honest picture of the condition that I can. Patients remember different things about these conversations. I have come to value that what I can offer, always, is kindness and compassion.'

Bad news risks interrupting a patient's sense of self, relationships, future, values and hope. This disruption can cause intense pain. It is a moment by moment unfolding of meaning and it is inescapable. From the auxiliary posture of the clinical psychologist working in healthcare, therapeutic principles of Carl Rogers' person-centred practice offer a way of organising the interpersonal texture of the conversation between doctor and patient. What my colleagues in these vignettes demonstrate, perhaps without self-consciousness, is their capacity to 'see' the person before them and place a higher order value on the 'holding' in their helping relationship. This approach reflects a departure from a more linear transaction of medicine (giving facts) and gives place to translation of meaning.

While there seems to be a common structure to the pitch of 'illness' conversations across clinical contexts, in itself, structure and content is not sufficient. It seems from the outside, through observation and involvement in simulation training and peer consults, that it is rarely a lack of knowledge about particular conditions, diagnosis or prognosis that concern our trainees. They are concerned with how to deliver their knowledge while maintaining compassion and hope, all in the context of the patient's fear and the doctor's own experience of

feeling vulnerable. It can be helpful to think about these communication skills as stages of development in the life of the doctor. In early professional development, teaching about content and structure takes priority. In advanced trainees, the interpersonal process comes into sharper focus.

Delivering unsettling news

The practice-informed and evidence-based literature contains useful communication strategies for delivering sad and illness-related information that makes up mandatory reading for all healthcare professionals, whether they fulfil direct or supportive roles. Within this literature you will find structural guidelines for critical conversations:

- Prepare the setting, the message and yourself
- Start by assessing the patient's existing understanding of their situation
- Deliver information clearly and slowly
- Become familiar with common emotional and stress responses
- Give patients permission to ask questions, invite their family
- Be curious about the impact of illness on the patient's life
- Summarise information into two to three key points
- Make a plan to follow-up.

More broadly, communication skills training for senior trainees are encouraged through experiential-led training options. Conceptual distillation of micro-counselling skills has emerged in recent literature. For example, Back et al recommend avoiding 'blocking, dismissing or redirecting' habits, lecturing, colluding and premature reassurance.[5] Instead, these authors encourage their reader to cultivate skills such as 'ask-tell-ask', expansive questioning (for example, tell me more), naming and validating emotional responses.

The relationship

Whatever structure and counselling techniques are followed, or the clinical context, the best examples of critical conversations are characterised by something special in the space that sits between a doctor and their patient, between the lines of the words spoken. This human binding agent might be best described as relational dynamics. It involves empathy, a capacity to be authentic and wholly present, and an unconditional preparedness to see the world view of the person before you. To facilitate at this conversational level, we must be available to 'see', as wholly as possible, the patient's understanding, decisions, intentions and proposals, emotions, beliefs and thoughts. The bad news consult is not a time to defend a diagnosis or expertise, but to bear the patient's pain (expressed in whatever form) by recognising that illness transforms lives. Indeed, the doctor's capacity to support a patient's adjustment to bad news is best served from a position of curiosity about the person being treated, rather than from the more closed position of knowing. This reflective and reflexive interpersonal process offers the opportunity to consider the unique qualities of the patient that serve to potentiate, enable and extend themselves to cope with bad news and its meaning. Learning to feel comfortable with the 'holding' space is reflected in another of my colleague's comments about the role of silence:

'Even now, after 20 years working in neonatal medicine, I approach these conversations with a sense of trepidation, as I am acutely aware that the parents' lives will be forever changed. I have learned not to be afraid of silence. A period of silence is often "right" as it conveys respect for the enormity of the news. Taking time to explore with parents what the news means for them is as important as getting the facts correct. This allows decisions to be made without rushing.'

Any suffering has the power to transform lives. Suffering comes in many forms. The doctor's duty is not to return a patient to a previous life, but instead, to hold and contain projections of the person's unbearable feelings, while they take up the space to think through and understand what makes up their experience; and ultimately, what will come to carve out their new normal.

Hope

Never destroy a patient's hope. Through exploring perceptions we widen our lens for possibility. Hope may be found in many places, even in the face of despairing odds. Doctors often view hope through a different lens from their patients, as an expression of statistical likelihood, rather than an expression of wishing. Hope is found in the quality of the living; of a motherhood story (however short); of a relational experience, in broader reflections about the life lived. Searching for hope in the face of despair is a delicate art form of 'meaning-making' and central to illness-related conversations in medicine. While hope may reflect a period of denial as the patient seeks to maintain a protective stance, as they develop readiness to 'hear' the bad news, it can also be about the emergence of a new beginning, a wish for a different future. Hope prepares the ground for healing, movement, change, acceptance and, ultimately, growth.

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Are mothers convicted of infanticide mentally ill?

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Infanticide – the killing of an infant under the age of 12 months (or two years in Victoria) by the biological mother – is rare. Australia currently ranks as the ninth lowest worldwide for child homicides (0.8/100,000).[1] However, it is sobering to remind ourselves that infancy is still the age at which there is the highest risk of being murdered. Ten per cent of filicides occur in the first week of life and 30 per cent in the first year, mostly by women. After the age of one, men and women are both represented, as are step-parents.[2]

Culturally, there is repugnance for child murders, yet male or female family perpetrators are rarely 'pure evil' (psychopathic). Issues that lead to the tragedy include mental illness, drugs, history of abuse and high levels of stress. For men, many have never learnt to deal with emotions, especially anger. The crimes can be particularly violent and imply belief of rights and ownership of the child and partner.

History

Filicide – the killing of a child under 18 years of age by a parent – is a definition that has no legal validity. Infanticide on the other hand, where included in the law and when invoked, has specific legal ramifications, as well as being suggestive of being based in science: the balance of mind is seen to have been affected by the act of giving birth or lactation. The maximum sentence for infanticide is reduced as in manslaughter (five years). It is an offence and a defence that can only be used by the biological mother.

There is little evidence, however, for postpartum mental illness being biological, except postpartum psychosis. The origin of the law and postpartum depression and anxiety both have a strong psychosocial basis. In the 19th century, working class women pregnant out of wedlock had no financial options to raise a child, and if without family support, babies were left; the Infanticide Act in the UK of 1922 prevented these women from being hanged. Many countries, notably not the US, adopted this Act. The 15 per cent of women who have perinatal mental illness[3] have a higher rate of past and family psychiatric history (suggesting a genetic component). They also have lower levels of support and higher levels of stress.[4] Overlapping with this group are families where abuse is prevalent (more than 350,000 notifications and more than 60,000 substantiated claims each year),[5] but in only a small number of cases does the child die.

Australian states do not all recognise the infanticide law, and even when they do, it is not always used. Until recently, the state of Victoria generally put these women on bail and gave them community treatment orders, while jail time has been common in NSW. In a recent Victorian case, the woman was given a 20-year sentence. Although she killed an infant, her older children also died and she was convicted of murder. It is curious that her state of mind was seen to be affected in one case, but not the others, even though the act was simultaneous.

Classification

For the purposes of making sense of infanticide, it is important to separate a subvariety, neonaticide (the killing of an infant under the age of 24 hours), almost always perpetrated by the mother.[6] Neonaticide differs from infanticide, demonstrating a strong association with denial of pregnancy. These women are often young (or at least naive and immature), have had limited sex education, and often rigid and/or religious upbringings. They may have complete or partial lack of knowledge of their state, may continue to spot or have periods, and deny it to family. For these young women, labour is sudden, dramatic and terrifying. The baby is unplanned and not wanted, an 'alien' who has torn through their body. The infants are often left or occasionally bashed brutally.[7] In the six cases I have been involved with, three survived. One infant went home with the mother. Providing the case comes to light, these women are unlikely to be a risk to anyone else, although occasionally, they do have further pregnancies they deny.[8]

Characteristics

Xinran[9] writes about the horrific impact of disposal of unwanted female babies in China, a primarily socio-cultural phenomena echoed in India. In Australia, the same cultural issues are not in play, but the neonaticide cases are generally unwanted psychologically and within the social context of their families.

Uniting characteristics beyond the neonaticide group are hard to establish. Studies are retrospective and often have small numbers. The strongest links are with a history of psychosis, suicidality and use of psychiatric services. Other common factors identified were isolation, domestic violence, history of abuse and maternal abandonment, unmarried status and drug abuse.[10]

The women I see, mostly, rather than being 'bad' (psychopathic) or 'mad' (psychotic), have done a bad thing. In a case I was involved in recently, both the prosecution psychiatrist and I agreed (as did many people who knew her) that the woman loved her child. How then can one make sense of such a murder unless it is madness? Does the psychiatric diagnosis fit the legal need for her, at the time of the offence, to not know what she was doing? To not know killing your child was against the law?

Association with mental illness

In Resnick's study[11] of the diagnoses of men and women who commit filicide, while nearly half had a diagnosis of severe mental illness (psychosis and severe depression), the remainder did not. Drug use, personality disorders, disordered relationships, family and poverty make up the 'reason' for the tragedy occurring, and the perpetrators were charged with murder. The research, however, included cases going back to the 1800s with very different social circumstances at play and his classification is unhelpful for infanticide, which involved only women. More useful is Meyer and Oberman's[12] classification of maternal filicide:

1. Neonaticide with potential denial of pregnancy and dissociation at birth
2. Women who kill in conjunction with their violent or abusive partners
3. Neglect secondary to distraction or preoccupation (which could be psychotic)
4. Secondary to child abuse
5. Purposeful, which could be related to mental illness.

Of the 14 cases I have dealt with, six were neonaticides (or attempted). Four were infanticides only; one psychosis, two abuse and domestic violence-related, and one complex mental health with cultural and isolation issues. One case was an infanticide-murder (of an older child) suicide, which was almost certainly psychosis. Three cases were infanticide-murder (older children), of which one was psychotic and the other three complex cultural and personality issues.

Outcomes, prevention and intervention

Sex education and readily available contraception are probably the key strategies to prevent neonaticides. However, these tragedies, like the broader group of infanticides, need better community awareness of the psychological costs and risks of motherhood, and the importance of family and community support. Beyondblue has achieved a significant change in community awareness and in routine screening for risk of depression, but after screening the intervention needs to be timely and include repeated assessments and respite, where needed. The woman I mentioned earlier who loved her baby had scored high on the Edinburgh Postnatal Depression Scale (EPDS), but was never followed up. While it was assumed that her circumstances (isolation) were the root cause of the score, the deeper psychological problems went undiagnosed and untreated. It is these problems we want to identify early and treat assertively. Parenting is not easy. Loneliness and isolation make parenting harder still.

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PMT, PMS and PMDD: is there a difference?

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The name says it all. Or does it? Are premenstrual tension (PMT), premenstrual syndrome (PMS) and premenstrual dysphoric disorder (PMDD) one and the same or variants of the same affliction, or are they separate entities? Are they afflictions at all, or just part of the human condition? We aim to disentangle any confusion that has arisen.

It has long been recognised that many women experience a predictable, cyclic pattern of moliminal symptoms, which begin in the late luteal phase of the menstrual cycle and end shortly after menstruation begins. The symptoms may cluster and include physical, emotional, psychological and behavioural components and constitute a syndrome or a disorder, depending on their impact. However, from the outset, it needs to be recognised that for many women, symptoms represent a premenstrual exacerbation of an underlying condition (PME), such as a major depressive disorder, bipolar disorder, anxiety disorder or eating disorder that may be undiagnosed and untreated, partially treated, or treatment non-responsive. It has been suggested that a significant percentage of women who seek treatment for premenstrual symptoms are in this category.[1]

PMT is said to involve the experience of one or more of the following symptoms: tender swollen breasts, headaches and/or migraines, abdominal cramping and bloating, backache, acne outbreaks, fluid retention, weight gain, constipation and/or diarrhoea, food cravings, emotional irritability, anxiety, nervous tension, lowered coping ability, impairment of concentration, reduced libido, aggression, mood swings, depression, clumsiness, lethargy, insomnia and tearfulness. PMS is the same thing. However, many argue that the latter label better describes the symptom cluster, with the term 'syndrome' de-emphasising the emotional and psychological symptoms implied in the term 'tension'. Overall, diagnostically, it is a loose and informal label, as it only requires one or two symptoms to qualify and is reported to be experienced by up to 50 per cent of women globally.[2]

While PMS is generally manageable and minimally impairs psychosocial functioning, it has been recognised that three to eight per cent of women experience multiple symptoms that can significantly affect their quality of life and daily interpersonal and occupational functioning, to the point of transient impairment.[3] The term premenstrual dysphoric disorder aims to capture this sub-group.

The clustering of more severe premenstrual symptoms was first described by Frank in 1931 and he coined the phrase PMT.[4] His view was that ovarian functioning needed to be obliterated with oophorectomy or radiation therapy in order to restore order in the home and the workplace. The term PMS was later introduced in 1953 by Green and Dalton, who felt that the condition was responsible for decreased worker productivity, increased divorce rates and even murder.[5] Later, Mortola was the first to recognise that depressive mood symptoms sometimes only occur during the luteal phase of the menstrual cycle.[6]

In 1987, the Diagnostic and Statistical Manual of Mental Disorders (DSM-III-R) introduced the diagnostic category of late luteal phase dysphoric disorder in the appendix as a proposed diagnostic category needing further study. Prior to the release of the DSM-IV in 1994, there was much debate as to whether the category should be elevated to a distinct diagnosis, kept in the appendix, or entirely eradicated. They decided to keep it in the appendix with an elaboration of diagnostic criteria to aid further study. In 1995, a large study, subsidised by Eli Lilly, suggested that the selective serotonin reuptake inhibitor (SSRI) fluoxetine assisted 60 per cent of women with symptom relief.[7] In reaction, some argued that such symptoms were a culture-bound syndrome and represented 'an unnecessary pathologising of cyclical changes in women', with the diagnostic category potentially being harmful, as it could lead to women believing that they are mentally ill, leading others to mistrust them in situations as important as job promotions or child custody cases.[8] Others argued that it represented a valid condition that was only poorly studied because it didn't affect men.

The DSM-IV-TR, published in 2000, again decided to keep the condition in the appendix. This view was further supported in 2003 by the Committee for Proprietary Medicinal Products requirement for the manufacturer of Prozac (fluoxetine) to remove PMDD from the list of indications for fluoxetine sold in Europe. However, with the 2013 introduction of DSM-V, PMDD was introduced as a formal diagnostic category. Soon afterwards, in 2014, a published review addressed reservations regarding this introduction, finding that such a label does not harm women economically, politically, domestically or legally, that financial conflict of interest concerns did not render the diagnosis invalid or the research unusable, and that the condition had been identified worldwide.[9] The International

Classification of Diseases, 10th revision (ICD-10), first published in 2010, introduced the diagnostic category of premenstrual tension syndrome, with broad and easily endorsed criteria compared with the DSM-V's narrow and specific criteria. This difference in diagnostic criteria has impaired research and therapeutic guideline development, as the former criteria captures 91.4 per cent of the female population and the latter only 3.7 per cent, when applied to a sample of college students.[10] In Australia, the Therapeutic Goods Administration recognises the validity of the diagnosis of PMDD, however, the Pharmaceutical Benefits Scheme does not reimburse the cost of SSRIs used for its treatment.

In order to meet the DSM-V definition of PMDD, a patient must meet the following specific criteria.

Criterion A

For most menstrual cycles during the past year, at least five of the following 11 symptoms (including at least one of the first four) must be present in the final week before the onset of menses, start to improve within a few days after the onset of menses, and become minimal or absent in the week post-menses:

- Marked lability (for example, mood swings)
- Marked irritability or anger
- Markedly depressed mood
- Marked anxiety and tension
- Decreased interest in usual activities
- Difficulty in concentration
- Lethargy and marked lack of energy
- Marked change in appetite (for example, overeating or specific food cravings)
- Hypersomnia or insomnia
- Feeling overwhelmed or out of control
- Physical symptoms (for example, breast tenderness or swelling, joint or muscle pain, a sensation of 'bloating' and weight gain).

Criterion B

One (or more) of the following symptoms must be present:

- Marked affective lability (for example, mood swings, feeling suddenly sad or tearful, or increased sensitivity to rejection)
- Marked irritability, anger or increased interpersonal conflicts
- Marked depressed mood, feelings of hopelessness or self-deprecating thoughts
- Marked anxiety, tension and/or feelings of being 'keyed up' or on edge.

Criterion C

One (or more) of the following symptoms must be present, additionally, to reach a total of five symptoms when combined with symptoms from Criterion B above:

- Decreased interest in usual activities (for example, work, school, friends, hobbies)
- Subjective difficulty in concentration
- Lethargy, easy fatigability or marked lack of energy
- Marked change in appetite, overeating or specific food cravings
- Hypersomnia or insomnia
- A sense of being overwhelmed or out of control
- Physical symptoms, such as breast tenderness or swelling, joint or muscle pain, a sensation of 'bloating' or weight gain.

The aetiology of PMS and PMDD remains an active area of research. While the timing of symptom occurrence and disappearance suggests that sex hormone flux is relevant, there are no demonstrable differences in reproductive hormone levels in women who do or don't experience symptoms.[11] Thus, hormone levels and flux alone appear to be irrelevant, however, the relevant neurobiological and physiological changes may represent an underlying sensitivity to such changes. There is evidence that oestrogen acts as a neuro-modulator, with diverse effects on the central nervous system through its influence on the serotonergic, dopaminergic and GABA neurotransmitter systems, as well as exerting influence on the expression and responsiveness of androgens, progesterone, prolactin and gonadotropin-releasing hormone, all of which have been shown to have effects on immunomodulation.[1] Some women may thus have an abnormal central nervous system response to normal hormone levels and variation. Symptoms are no longer considered to be simply cultural or psychological phenomenon, but biologically based occurrences, with hormonal, neurobiological, genetic and epigenetic aetiological components.

In a recent publication, Jablensky suggests that 'there is little evidence that the majority of recognised mental disorders are separated by natural boundaries and that diagnostic categories defined by their clinical syndromes should be regarded as 'valid' only if they have been shown to be truly discrete entities'.[12] The disorders PMT, PMS and PMDD, to date, have not met such a standard. However, they may possess 'utility' by virtue of the information they convey about presenting symptoms, outcome and treatment response. A greater understanding of aetiology is essential before we commit to these diagnostic categories unconditionally. Hopefully, research into genetics, epigenetics, neurobiology and population epidemiology will allow a conceptual reconciliation between the emerging continuum and dimensional view of the variation in symptomatology, and the categorical approach embodied in current classifications such as ICD-10 and DSM-5.

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Menopause and mental health

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The menopause transition can be a challenging time for women, bringing about changes in physical wellbeing, including vasomotor symptoms, sleep disturbance and vaginal dryness. Women may experience significant psychosocial change, including loss of identity associated with family, employment and reproductive changes. This article provides an overview of the mental health implications of the menopause transition and outlines important points for clinical practice in providing comprehensive care in the menopause setting.

Symptoms

Mood disturbance associated with the menopause transition may present with a variety of symptoms. Studies in this setting often use screening tools such as the Center for Epidemiologic Studies Depression Scale Revised (CESD-R) to classify symptoms, which may include low mood, sleep disturbance, loss of appetite, low libido, feelings of worthlessness and loss of interest in usual activities.

Depressive symptoms may be of significant severity to amount to a depressive disorder. However, some depressive symptoms, including sleep disturbance and low libido, are common experiences of menopause independent of mood disturbance. This distinction is clinically significant for the provision of patient-focused care, guiding management decisions and monitoring response to treatment. Furthermore, it highlights the broad nature of menopausal symptoms and the potential clinical value in creating menopause-specific tools for mental health.

Potential causes

There is extensive evidence of the connection between the menopause transition and depressive symptoms. Several longitudinal studies have shown that women in the menopause transition are up to twice as likely to experience a depressive disorder, compared to the premenopausal period, independent of a history of depression, with an overall prevalence that may be as high 40 per cent.[1-4]

Data regarding the postmenopausal period is conflicting. Bromberger et al and Mulhall et al have demonstrated increased risk of having a depressive disorder during the postmenopausal period.[5,6] However, observational data from Freeman et al showed that this was only the case for women with a history of depression, who were eight times more likely to have postmenopausal depression. In contrast, women with no prior history of depression who experienced a perimenopausal depressive disorder had no higher risk of postmenopausal depression than women who had not had any depressive symptoms associated with the menopause transition.[2]

There is no high-level evidence demonstrating a clear relationship between basal hormone levels and symptom onset. However, there are several factors clearly suggesting a hormonal basis to the disorder. Depressive symptoms in the menopause transition remain prevalent in the absence of a history of mental illness. There is extensive data from both animal and human studies demonstrating the involvement of ovarian steroids in neuroregulatory pathways, particularly those involving serotonin and noradrenaline, known to be implicated in depression.[7] There are also randomised controlled data demonstrating significant improvement in depressive symptoms with the use of hormonal replacement therapy[8,9] and, moreover, recurrence of depressive symptoms in women with perimenopausal depression following withdrawal of hormone treatment.[10]

There are several other aspects to the menopause transition involved in the development of depressive symptoms. Worsley et al undertook a systematic review that demonstrated the relationship between depressive and vasomotor symptoms during the menopause transition. The presence of vasomotor symptoms increased the risk of developing depressive symptoms and depressive symptoms increased the prevalence of vasomotor symptoms.[11]

Poor sleep quality during the menopause transition has also been implicated. Vasomotor symptoms may predispose to depression by reducing sleep quality. However, evidence has been conflicting and reduced sleep quality occurs during this time independent of vasomotor symptoms.[12-15]

Management

Depressive symptoms during the menopause transition are multifactorial and treatment should address the individual history and clinical experience. Antidepressants remain first-line pharmacological treatment in the management of perimenopausal mood disturbance. Oestrogen hormonal therapy has been shown to be effective in improving depressive symptoms in perimenopausal women.[8,9,16] However, a clinical consideration is the need for concomitant progesterone therapy for women with an intact uterus, which has been shown to potentially worsen depressive symptoms.[17] While hormonal therapy may offer additional benefit to mood disturbance when used for the treatment of vasomotor symptoms, current guidelines advise against the use of hormonal

therapy for the primary treatment of perimenopausal depressive symptoms.[18]

Consideration should also be given to the use of psychological management to address the biopsychosocial issues arising during the menopause transition. Cognitive-behavioural therapy has been shown to be effective in improving both physical and psychological symptoms of menopause and is an important alternative or adjunct to pharmacological treatment.[19]

Conclusion

The menopause transition involves a challenging period of physical and psychological change for many women. Clinicians should be mindful of predisposing factors for developing perimenopausal mood disturbance, such as a history of depressive disorders, including postnatal depression and premenstrual mood disturbance. Comprehensive, patient-focused care requires an understanding of the symptoms of menopause and depression and a targeted approach to managing the individual experience of both.

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Obstetricians and mental health: more than delivering babies

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The perinatal period may be defined as the time between conception and one year postpartum. For many women and their partners, it is a time of great joy, a journey of excitement and happiness. Pregnancy and the arrival of a baby are celebrated in all communities. A newborn is a source of wonder, love and adoration by parents, family and friends. The societal expectations of a new mother (and a new father) are that everything is good, happy, and, in particular, that their emotional health is stable. It isn't always so.

One in five women and one in ten men experience perinatal anxiety and/or depression. The disease may arise de novo or be an exacerbation of a pre-existing illness. The perinatal period is a time of great adjustment – biological, psychological and social change. For many, this pathway is negotiated with minimal disruption. For a significant minority, pregnancy, birth and early parenting can lead to distressing emotional turmoil. This may manifest in a continuum of symptoms from mild anxiety and the 'baby blues' to overt mental illness, depression, post-traumatic stress disorder, adjustment disorder or psychosis. In many countries, including Australia and New Zealand, suicide is a leading cause of maternal death.

It is self-evident in every other aspect of medical practice that 'you won't know if you don't ask'. Screening for mental health disorders in pregnancy has been demonstrated to be effective and is a key recommendation of the Australian National Perinatal Mental Health Guideline.[1] In November 2017, the Obstetrics Clinical Committee of the Medicare Benefits Schedule (MBS) Review Taskforce, with representation from RANZCOG, recommended that screening for mental health disorders, substance misuse and domestic violence be part of routine care. The importance and complexity of looking after women with mental health disorders is also now recognised in the MBS Schedule. To the best of our knowledge, Australia is the first country to legislate the requirement to screen for mental health conditions in pregnancy, with modification of existing item numbers and the introduction of new ones.

Mandating screening is a first step. For this to be successful, there needs to be adequate training. There must be clearly defined and accessible pathways for those who screen positive. Validated screening tools include the Edinburgh Postnatal Depression Scale (EPDS),[2] and an antenatal psychological screen, the ANRQ,[3] which assesses

Box 1. Changes to the MBS Schedule..

Complex birth item 16522

(m) mental health disorder (whether arising prior to pregnancy, during pregnancy or postpartum) that is demonstrated by:
- (i) the patient requiring hospitalisation; or
- (ii) the patient receiving ongoing care by a psychologist or psychiatrist to treat the symptoms of a mental health disorder; or
- (iii) the patient having a GP mental health treatment plan; or
- (iv) the patient having a management plan prepared in accordance with item 291.

(n) disclosure or evidence of domestic violence

Planning and management of pregnancy where the doctor intends (16590)/does not intend (16591) to attend the birth

The item will also include a mental health assessment, including screening for drug and alcohol use and domestic violence. The mental health service will be offered to every patient, however, if the patient chooses not to undertake the assessment, they will not be disadvantaged.

Postnatal consultation (new item) 16407

A new item will be introduced for a postnatal attendance lasting at least 20 minutes between four and eight weeks after birth. The item will also include a mental health assessment of the patient, including screening for drug and alcohol use and domestic violence. The mental health service will be offered to every patient, however, if the patient chooses not to undertake the assessment, they will not be disadvantaged. This item can only be claimed once per pregnancy.

a woman in the context of her personality, life experiences, and social and community environment. This is new territory for many practitioners, often outsourced to midwifery staff, but it needn't be so. The hope is that routine screening will change the culture of obstetric practice, recognising that mental health is an integral part of obstetric care.

Does mental health really matter? In 1991, a 32-year-old woman gave birth to her first son. While the pregnancy was unplanned, it was wanted. She was happily married, economically secure, intelligent and healthy. She embraced pregnancy and was keen to have an intervention-free birth experience. That wasn't to be. At 34 weeks, her blood pressure went up and she was hospitalised, medicated and told to stop work. She was induced at term and had tonic contractions, an epidural and a forceps delivery. A beautiful baby boy was born to two deeply traumatised parents. The doctors and midwives were amazing. They saved the woman's life ... but they never asked her how she felt. In fact, she had developed an anxiety disorder during pregnancy. She had post-traumatic stress disorder after the birth and spent the next two years with anxiety, depression and suicidal ideation. Her husband didn't understand. He went back to work, not realising that when he left she would sit on the kitchen floor, rocking herself, paralysed by anxiety and thoughts of self-harm.

The diagnosis of postnatal depression was made by chance. The journey to recovery included admission to a mother and baby unit for six weeks, medication, psychotherapy and couple counselling over the next five years. A lot of damage was done because nobody asked.

That woman was my wife, Cathie, and that man was me. This is not a condition that discriminates. It can affect any pregnant woman and the implications are profound. Mental healthcare in pregnancy is our responsibility and should be as integral to obstetric care as blood pressure, gestational diabetes and the complexities of caesarean and vaginal birth. Your patient is your mother, your sister, your daughter, yourself. Mental healthcare is not the sole domain of midwives. It is the responsibility of obstetricians and GPs. It should not be outsourced.

Cathie and I recovered and now have five children. We are happy and content, but permanently scarred by the events of 26 years ago. It could have been better. We have channelled our passion into the Gidget Foundation, a charity to raise awareness of emotional wellbeing in pregnancy and early parenting. Gidget was a real woman with a loving family, husband and friends. She took her own life 17 years ago, suffering from undiagnosed postnatal depression. The Foundation now runs screening programs in private hospitals,[4] offering free consultations with psychologists, psychiatrists and social workers, both face to face and via telehealth. We hold numerous events to raise awareness of a disease that has hitherto received insufficient attention.

Make mental healthcare part of your obstetric practice. Ask about emotional wellbeing at every visit. Then listen to the answer. You can identify high blood pressure, perform an instrumental delivery and manage a complex pregnancy or birth. FRANZCOG and DRANZCOG qualify you for that, but being a doctor qualifies you for so much more. You can identify, manage and support women with mental illness in pregnancy and beyond. If we make the care of emotional wellbeing integral to our practice, the culture around pregnancy, birth and parenting will change, for the betterment of all.

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Gidget Foundation Australia exists to promote the importance of emotional wellbeing among expectant and new parents, their health providers and the wider community to ensure that those in need receive timely, appropriate and supportive care.

The Foundation is a registered not-for-profit based in Sydney, Australia, with a national footprint.

For more information or to make an appointment, go to http://gidgetfoundation.org.au/ or call 1300-851-758.

GidgetFoundationAustralia
Promoting emotional wellbeing for expectant & new parents

Mental health in medical practitioners

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Being an O&G specialist is rewarding, but it takes hard work, determination and sacrifice. The hours are long, while coping with the demands of a busy profession. Developing skills and building knowledge, as well as balancing family and personal commitments, can be challenging.[1] Medical practitioners have higher levels of depression than the general population.[2] They also experience significantly greater levels of psychological distress and thoughts of suicide than that of the general population. Younger doctors and female doctors are at particular risk.

The problem of poor mental health in the medical profession comes at great cost. In 2017, the media reported on the suicide of four doctors in five months in NSW.[3] The State coroner went on to declare that his records show 20 doctors killed themselves between 2007 and 2016. In the first published study of suicide by health professionals in Australia, female doctors were reported as killing themselves at a greater rate than women in other employed populations (6.4 versus 2.8 per 100,000).[4] Statistics from 2017 show that 83 per cent of RANZCOG Fellowship trainees are female, a potential 'sex-related stressor'[5] for current trainees.

In addition to personal factors and the demands of clinical practice, including adverse events, trainees may be left feeling unsupported by their professional organisations.[6] People in high-risk jobs who are exposed to tragedy can benefit from readily available training and resources, to assist them in processing and recovering from the trauma they regularly deal with. It has been suggested that there should be systematic mental health checks on staff exposed to such trauma and that mental health breaks should be scheduled and encouraged, to ensure all staff perform at an optimum standard.[7]

A possible exacerbating factor is the resistance of medical practitioners to seek assistance for their own mental health concerns. There are many reasons for a culture of silence among medical practitioners, coupled with the general stigma of compromised mental health. Doctors are concerned that their career development could be in jeopardy, or that their professional integrity could be compromised.

More concerning is the fear that doctors will have their registration to practise medicine cancelled.[8]

Warning signs of mental health changes

Warning signs of potential mental health changes in yourself or others include the following:

- Extreme tiredness
- Absenteeism or presenteeism
- Withdrawal or self-neglect
- Acute stress reactions
- Eating disorders or drug or alcohol dependence.

Early intervention and not being afraid to tell a colleague you are worried about them is the best approach to avoiding escalation of these warning signs.[9]

What can you do to further promote your health and wellbeing and that of your colleagues?

- Become self-aware. What are your particular stressors? How do you know when you are too stressed or have reached your threshold? While doctors can perform during periods of high anxiety or stress,[10] it is important to develop awareness of when you are becoming overwhelmed.
- Meet regularly with peers and encourage open discussion about the difficulties you are experiencing.
- Access supervisor support, as it promotes collegiality and can protect against burnout.[11]
- For yourself, accept that at times, a period of leave is necessary or a reduction in hours could be discussed and mutually agreed upon within your workplace.
- Refer yourself to a GP who promotes the importance of doctor wellbeing. Such GPs can be found through the Doctors' Health Advisory Service website and helplines in each state or region.
- Consider activities, such as mindfulness, to reduce the risk of emotional exhaustion and burnout.[12]

RANZCOG's response

Medical colleges, among other stakeholders, have been urged to examine their practices and take an interest in the health of the whole medical workforce. RANZCOG has responded with the formation of the Training Support Unit (TSU). The TSU demonstrates a systematic approach and has put in place well-defined programs and pathways of response for a trainee or supervisor in need.[13] A Trainee Liaison and Training Supervisor Liaison, with backgrounds in mental health, counselling, medical education and clinical practice, have been employed to assist and support RANZCOG members. The TSU encourages trainees, consultants and training supervisors to get in touch at times of difficulty.

The TSU has also put in place an external assistance program, Converge International. This program is available to all trainees and supervisors and can be accessed up to three times. The service can be contacted 24 hours a day, seven days a week and tailored to meet the needs of the individual.

Medical registration authorities

A concern of many doctors in dealing with personal mental health issues, and that of their colleagues, is the potential response by medical registration boards. Doctors fear that seeking help, or the mandatory reporting of colleagues, may place restrictions on their practice.

Organisations, such as the Australian Medical Association (AMA), the New Zealand Medical Association (NZMA) and a host of professional indemnity insurers, can be consulted and provide doctor-focused support services and education for members.

In Australia, doctors can call the Australian Health Practitioner Regulation Agency (AHPRA) for confidential advice if they have concerns or queries about voluntary or mandatory reporting. AHPRA has provided some information on reporting:

- The Medical Board of Australia receives around 3500 notifications each year.
- The fact that a notification is made does not mean that action will follow.
- Most notifications (around 80 per cent) will result in no regulatory action being taken.
- More than half of the notifications received are closed at assessment, the first stage in the process under which all notifications are considered by a group of medical practitioners and community members to decide if further information is required. The average length of time to assess notifications about medical practitioners in 2017–18 was 49 days. This process is getting faster each year.

RANZCOG's submission to the Australian Health Ministers' Advisory Council in 2017 is that, while all practitioners and employers remain under a mandatory obligation to report impairment and other forms of notifiable conduct, practitioners treating said doctors would have a complete exemption from the statutory requirement to report. If this recommendation is adopted, it will be another step in the right direction for doctors who need help.

Summary

Doctors are inherently caregivers and yet they find it increasingly difficult to care for themselves. RANZCOG has acted in response to the mounting evidence of poor mental health and wellbeing in the medical profession, by forming the TSU as a means of providing support to trainees and supervisors. This is one aspect of a safety net that includes employers, insurers and a range of easily accessible resources.

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World Contraception Day: LARC in focus

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World Contraception Day (WCD) is on 26 September. This annual worldwide campaign seeks to increase awareness of contraceptive options so that women and their partners have greater informed choice and fewer unwanted pregnancies. The vision of WCD, to ensure that every pregnancy is wanted, remains elusive in many countries, as an estimated half of all pregnancies globally are unplanned. Around one-third to a half of Australian women experience an unintended pregnancy in their lifetime[1] and up to a third of Australian women will undergo an abortion.[2] Fifty per cent of women who present for abortion in Australia and New Zealand are using a method of contraception. Many are relying on user-dependent methods, such as condoms or the oral contraceptive pill.[3,4] Unintended pregnancies that do not result in abortion may result in poorer pregnancy outcomes than those that have been planned, with a higher incidence of adverse birth outcomes[5] and serious social and psychological consequences for women and their families.

Evidence for the superior efficacy of LARC

Long-acting reversible contraceptive methods (LARC), in particular, intrauterine contraception (IUC) and subdermal etonogestrel (ENG) implants, are significantly less likely to result in unintended pregnancy than short-acting user-dependent methods, such as the oral contraceptive pill.[6,7] In a large cohort study, these methods were found to be 20 times less likely to result in unintended pregnancy, compared to combined hormonal methods (the pill, patch or ring)[6] (Figure 1). In addition, immediate initiation of LARC after abortion has been shown to reduce the rate of repeat abortion.[8-10] IUC (copper intrauterine devices and the levonorgestrel intrauterine system) and ENG implants provide 'fit and forget' contraception for three to ten years and have higher continuation rates than short-acting contraception. LARC are more cost-effective than the contraceptive pill, even at one year of use.[11] Despite this, the uptake of LARC methods in Australia remains low compared to other developed countries, with only 11 per cent of women using them.[12,13] In contrast, 24 per cent of reproductive-aged women in Sweden use a LARC method.[14] Although the progestogen-only injectable contraceptive, Depo Provera®, fits the definition of LARC, it is regarded as a second-tier option, due to its lower efficacy.[15] A self-administered, subcutaneous formulation of depot-medroxyprogesterone acetate, Sayana Press®, is available in the US and Europe. Self-administration of this contraceptive enables women to be given a yearly supply, offering greater choice and more autonomy over their contraception.[16,17]

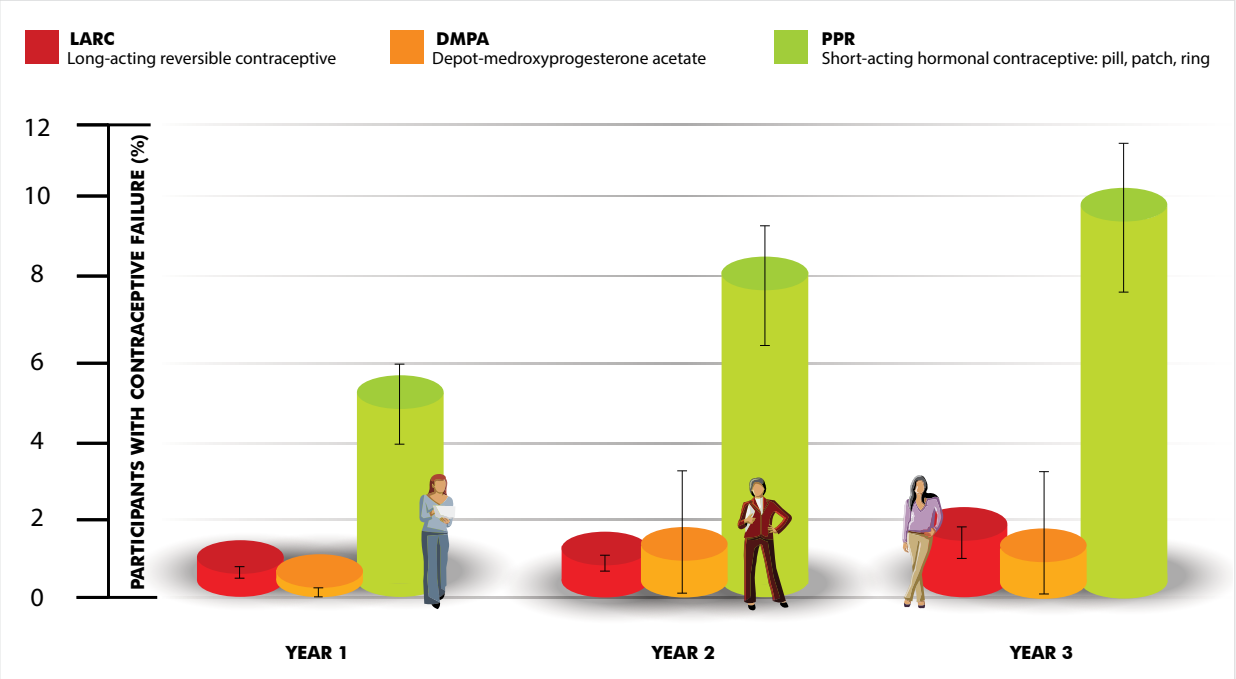

Figure 1. Comparison of unintended pregnancies by contraceptive method.[6]

Recommendations for initiation of LARC

Historically, healthcare providers delayed commencement of a contraceptive method until the beginning of a normal menstrual period, to ensure there was no risk of pregnancy and that the method would become effective immediately. However, women present to their providers at different times of their menstrual cycle requesting contraception. Delaying initiation of her chosen method potentially exposes the woman to risk of an unintended pregnancy in the intervening time. This requirement for repeat visits adds an additional layer of complexity when, in many cases, taking a 'quick start' approach, initiating a contraceptive method at a time other than the start of the menstrual cycle will be safe and appropriate. In cases where pregnancy cannot be excluded, quick starting the levonorgestrel intrauterine system is not recommended and the copper intrauterine device should only be used if the criteria for its use as an emergency contraceptive are met.[18]

All LARC methods can be initiated immediately after surgical abortion. ENG implants can be inserted at the time of mifepristone administration for medical abortion and IUC can be inserted any time after expulsion of the pregnancy has been confirmed. Increasingly, women are choosing medical abortion or accessing services through telemedicine, with the procedure occurring at home, which makes early initiation of LARC more challenging. Women have high rates of non-attendance for a LARC interval insertion following abortion. In one study, only half of women fast-tracked to a contraceptive clinic after medical abortion actually attended, with the authors concluding that immediate insertion after medical abortion is preferable.[19] If immediate insertion is not possible, greater likelihood of follow up is achieved if the appointment is scheduled within a few weeks of the abortion.[20]

Barriers to LARC

Knowledge and training

As advocates for women, healthcare professionals must ensure that women have access to a wide range of contraceptive options appropriate for their needs. A detailed understanding about the risks and benefits of LARC methods is paramount, both for contraceptive providers and consumers.[21] Conveying the facts to women can be challenging, especially in light of recent adverse media coverage of LARC methods in Australia.[22] Informing women of the advantages of LARC methods can be difficult, with research demonstrating that women's knowledge regarding contraception is suboptimal and that misconceptions regarding side effects are common.[23,24] Providing balanced information about the benefits of LARC, along with free provision, can result in as many as 70 per cent of women choosing IUC or an implant over other reversible methods[6] and dispel misconceptions about their suitability.[25]

Provider-based barriers

Gaps in knowledge and training of LARC providers have been found to be a key barrier.[26] A recent mixed methods study from the UK highlighted a number of issues, including a discordance between practitioner knowledge of eligibility for IUC and the medical eligibility criteria guidelines, lack of access to training, and risk aversion to undertaking procedures.[26] Barriers among Australia primary care providers identified included a lack of: training in LARC insertion and removal, effective funding models for nurses to perform them, and availability of pathways for rapid referral.[27]

International research indicates a professional knowledge gap in familiarity with provision of IUC, with one of the major issues being misperceptions around the suitability of women for this method. Some providers are still reluctant to recommend or provide IUC methods for young or nulliparous women.[23-25] This contradicts Australian and international evidence-based guidelines,[28,29] which advocate the use of IUC in women of all ages and parity. Another barrier to accessing IUC may be the custom of mandating separate and multiple appointments for inserting devices.[23,24] Many health services still initially offer a contraceptive counselling consultation and then request that the woman return at a later date for an insertion appointment. However, many women will be suitable for same-day insertion.

User barriers

There is a continued trend for young women to use short-term hormonal and barrier methods of contraception rather than LARC.[16,17] A cross-sectional survey of more than 1500 men and women of reproductive age found that, despite the availability of highly effective methods of contraception in Australia, a considerable proportion of respondents used methods of low effectiveness, such as withdrawal and fertility awareness-based methods (FAMs).[30] The increased use of FAMs may be associated with increased availability of smartphone applications, such as Clue and Kindara. Users of these methods should be aware that, with typical use, FAMs are only 76 per cent effective.[31]

The cost implications of LARC must also be considered in the Australian healthcare system. Removal of financial barriers has been shown to increase uptake of LARC in the United States.[32]

Overcoming barriers

1. **Developing national standards and guidance**
   Scotland's first National Sexual Health and Relationships Strategy, Respect and Responsibility: Scotland's Strategy and Action Plan For Improving Sexual Health,[33] was launched in 2005 with £15 million of funding over three years. This funding was extended by the Scottish government within the Better Health, Better Care: Action Plan.[34] A range of actions were set out in this strategy to enhance sexual health promotion, education and service provision. National Health Service Quality Improvement Scotland (NHS QIS) developed clinical sexual health standards for services provided by, or secured by, NHS Scotland. NHS QIS also set standards for measuring the uptake of LARC methods and targets for increasing their use.[35] Objectives for effective contraception after abortion were included in these standards. Additionally, the 2005 National Institute for Health and Clinical Effectiveness (NICE) guidance on the use of LARC[36] was accepted by sexual health staff as having relevance to Scotland, as its findings addressed the same contraceptive issues that affected women and professionals in Scotland.

2. **Empowering clinicians to address barriers**
   The NHS QIS standards and guidelines empowered clinicians to consider novel ways of overcoming barriers to LARC provision. One simple strategy employed in many settings in Scotland was to abolish the necessity for a pre-LARC fitting consultation. This reduced the time and inconvenience experienced by women and providers associated with multiple

appointments, and lessened the risk of an unplanned pregnancy in the period between consultations. LARC fitting at the initial appointment is now available at a range of sexual and reproductive services in Scotland. This approach is also recommended in the United States.[37,38] Other innovative approaches were the introduction of pre-appointment telephone consultations[39] and the use of information DVDs viewed by women prior to their appointment.[40] However, in many general practice settings, same-day LARC provision remains a challenge, due to time constraints and the need for advance prescriptions.[26] Some general practices have overcome this obstacle by storing small supplies of LARCs, which are replenished as required.

3. LARC provision after pregnancy

There has been a strong focus on the provision of LARC in the abortion setting in Scotland, in line with NHS QIS standards[35] and Faculty of Sexual and Reproductive Health guidelines.[41] Doctors and nurses providing abortion care in Scotland have been trained to provide LARC methods. Access to immediate postnatal provision of subdermal implants has also been a focus of intervention, based on concern about the adverse impact of short inter-pregnancy intervals on perinatal outcomes.[42,43] IUC is offered at the time of elective caesarean section.[44] The Access to Post Partum Contraception in Edinburgh South East (APPLES) project is an example of a collaborative approach to postpartum contraceptive provision, where midwives were trained and identified as 'contraceptive champions', able to insert implants, as well as administer Depo Provera.[45] A home ENG implant insertion service was also introduced for vulnerable women, in recognition of the fact that immediate postpartum provision is not always possible.[46] If maternity services are to be engaged in providing quality postpartum contraception, it is crucial that midwives and other members of the multidisciplinary team are provided with training and support to offer this service. Contraceptive ENG implant training for midwives has added enormous capacity to the system and ensures that better use is made of the valuable resources,[47] although time pressures and adequate knowledge remain ongoing challenges.[48]

RANZCOG initiative in increasing LARC uptake

1. Development of training modules and guidance

RANZCOG's special interest group in sexual and reproductive health has developed online modules in LARC. The training package contains three modules:

- Introduction to LARC
- Introduction to IUC insertion
- Insertion and management of IUC.

These modules are available to RANZCOG members through Climate and free to non-RANZCOG members through the shop portal (https://shop.ranzcog.edu.au/index.php). These modules provide theory and clinical guidance for IUC methods.

Implant training is no longer being provided by the pharmaceutical company. They have, however, been instrumental in the development of a guidance document: The safe and effective insertion and removal of Implanon NXT by health care professionals in Australia. The document, which has been endorsed by the Family Planning Alliance, includes competencies and examples of learning outcomes for implant insertion.

2. Development of a pathway for training in sexual and reproductive health

RANZCOG has developed an Advanced Training Module (ATM) in contraception and abortion care and a sexual health online module. These modules will enable trainees to develop high-level skills and be able to provide clinical leadership.

Table 1. Summary of LARC methods: components, duration, efficacy and absolute contraindications.[49]

Method	Trade name	Active ingredient	Duration of action	Efficacy	Absolute contraindications
ENG implant	Implanon NXT	The single rod (4cm) implant contains 68mg of the progestogen etonogestrel	3 years	99.95%	Breast cancer
LNG implant	Jadelle (available in NZ)	2 rods, each containing 75mg levonorgestrel	5 years	99.95%	Breast cancer
Copper-IUD	TT380 Standard TT380 short Load-Cu 375	Copper surface area from 375–380mm^2	5–10 years	99.2%	Unexplained vaginal bleeding, puerperal sepsis, GTD* (persistently elevated BHCG levels or malignant disease), current PID#, symptomatic untreated STIs, reproductive tract tumours
LNG-IUS	Mirena	Levonorgestrel 52mg	5 years	99.8%	Unexplained vaginal bleeding, breast cancer, postpartum or postabortal sepsis, GTD (persistently elevated BHCG levels or malignant disease), current PID, symptomatic untreated STIs, reproductive tract tumours

*GTD = gestational trophoblastic disease #PID = pelvic inflammatory disease

Ongoing challenges

Ensuring adequate training of general practitioners remains a challenge, particularly for IUC. Increasingly, hospitals are not providing contraceptive services and the community training opportunities in state-based family planning clinics are limited. New models of care are being considered, such as a hub and spoke design, whereby hospitals and some GP practices are identified as centres of excellence and develop recognition as training centres.

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New guidelines for care during pregnancy

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Getting a good, healthy start in life is essential for our children. Best-practice care for mothers during pregnancy is vital to ensure the best possible outcomes for mother and baby. It is not just about the postnatal period, it is also about the pregnancy and the birth itself.

Our health system provides excellent care for mothers and babies. In maintaining high quality of services, it is important to ensure that clinical practice reflects current research and best practice.

To assist health professionals in staying abreast of current recommendations for practice, the Australian Department of Health has released a revised version of the Pregnancy Care Clinical Practice Guidelines.

The 2018 edition of the guidelines combines Module One and Two of the Antenatal Care Guidelines, published in 2012 and 2014 respectively. A number of chapters were reviewed and updated in 2016–17 for this edition, in accordance with the National Health and Medical Research Council (NHRMC) requirements for guideline development.

The 2018 edition comprises the first part of a rolling review of the guidelines, with the second stage to be completed next year. The guidelines reflect the latest scientific evidence and changes in the health environment. They highlight specific approaches to pregnancy care for a range of groups, with a focus on improving the experience of antenatal care for Aboriginal and Torres Strait Islander women, migrant and refugee women and women with severe mental illness.

The guidelines encourage health professionals to ensure the broad context of a woman's life is considered in planning and providing pregnancy care, to ensure that her social, emotional, physical, psychological, spiritual and cultural needs are considered and respected.

The guidelines are designed for all health professionals caring for pregnant women, including midwives, obstetricians, GPs, Aboriginal and Torres Strait Islander health workers and allied health professionals.

Among the changes is a new recommendation to encourage routine Hepatitis C testing at the first antenatal visit. Routine testing for vitamin D status is now discouraged, unless there is a specific indication.

The guidelines recognise body mass index prior to pregnancy and weight gain during pregnancy as important determinants of health for mothers and babies. They recommend health professionals discuss weight gain, diet and physical activity with all pregnant women, offer the opportunity to be weighed at every antenatal visit, and encourage women to monitor their weight at home.

The second stage of review of the pregnancy care guidelines, published in 2019, will include updates on anaemia, prolonged pregnancy and diabetes, and consider new information on vaccines and genetic carrier screening. Guidelines relating to nutrition, physical activity and weight will also be reviewed, with work to commence later this year.

Revision of the guidelines for pregnancy care is just one aspect of a commitment to improved maternity care for Australian women. I am pleased to be working with my colleagues in the states and territories, as well as stakeholders, on the development of a National Strategic Approach to Maternity Services.

The first stage of consultation has now closed and we have received a considerable number of thoughtful contributions from consumers, health professionals and organisations. In the coming months, our key stakeholder group, as well as the states and territories, will be considering the feedback received and discussing potential strategies to address the key themes identified. It has been great to see the high level of engagement across the sector and I look forward to working with them on this next stage. The National Strategic Approach to Maternity Services will be finalised by mid-2019.

In addition, since November 2017, all pregnant women have been eligible for Medicare-funded mental health assessments during their pregnancy and within two months of giving birth. The new benefit was introduced as a result of the review of the Medicare Benefits Schedule (MBS), which has also resulted in changes to a number of MBS obstetrics items and introduction of six new items to align MBS obstetrics items with clinical best practice.

The Pregnancy Care Guidelines can be downloaded at: www.health.gov.au/pregnancycareguidelines.

Comparing maternal mortality in the UK and Australia

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Recent reports on maternal mortality from the UK covering the years 2013–2015[1] and Australia for the years 2006–2010 and 2012–2014,[2,3] highlight slight differences in the cause of maternal mortality in the two countries. Although the populations and demographics are significantly different, reviewing the reports together gives additional insights into the current causes of maternal deaths. It is important to stress that maternal deaths are rare in both the UK and Australia. Accordingly, the data should be interpreted with caution due to the relative small numbers, which can fluctuate, and the different methods of data collection.

Maternal deaths in the UK are reported to Mothers and Babies: Reducing Risk through Audits and Confidential Enquiries across the UK (MBRRACE-UK), who run the national program conducting surveillance into the causes of maternal and perinatal deaths. It is based at the National Perinatal Epidemiology Unit at the University of Oxford. The information provided to MBRRACE-UK is from the staff caring for the women concerned, or through other sources including coroners, Scottish procurators, pathologists and media reports. Identification of deaths is cross-checked with national records, such as death certificates. The importance of these additional sources is highlighted by the fact that the use of death certificates alone only identified 110 cases out of the final total of 202 maternal deaths.

In Australia, the data sources and the quality of maternal death reporting vary by state and territory. The initial process for data collection is through State and Territory Maternal Mortality Committees (STMMC). The data is obtained from a number of sources, including clinicians, midwives, coronial reports, and the Registry of Births, Deaths and Marriages. The data from the STMMCs is passed on to the Australian Institute of Health and Welfare, for compilation into a National Maternal Mortality Data Collection.

In Western Australia, only data on maternal deaths are available, due to the health and privacy legislation in that state. In addition, the Australian report for 2006–2010 noted that 'for some states and territories, the maternal mortality committees and subcommittees were not active for periods during 2006–2013'. As an example, there was no committee active in the Northern Territory between 2006 and 2014.

The formula for the calculation of the frequency of maternal deaths and the terminology differ slightly in the two countries. In the UK, the maternal mortality rate is the number of maternal deaths divided by the number of 'maternities' (women who were at least 24 weeks pregnant), multiplied by 100,000. In Australia, the maternal mortality ratio is the number of maternal deaths divided by women who gave birth (who were at least 20 weeks pregnant, or delivered a fetus weighing at least 400g), multiplied by 100,000.

In the years 2013–2015, the maternal mortality rate in the UK was calculated as 8.76 per 100,000 maternities. In the two Australian reports, the overall maternal mortality ratio was 6.83 per 100,000 births. However, it is generally accepted that the UK processes of identifying all maternal deaths within the country is more comprehensive than the systems in place in other countries.

In June 2015, the population of the UK was estimated as 65,110,000,[4] and from 2013–2015, there were 2,305,920 maternities. In Australia, as of June 2015, the population was estimated to be 23,781,200.[5] In Australia, apart from the reports mentioned above, an additional report[6] was released covering the years 2008–2012. As these reports overlap, it was not possible to ascertain the exact details of the causes of death for the year 2011. Accordingly, a decision was made to use the two Australian reports covering the years 2006–2010 and 2012–2014. The total number of women giving birth in Australia in these two time periods was 2,368,540, which allows a reasonable comparison with the UK experience.

In the UK, 240 pregnant women died between 2013 and 2015. The deaths of 38 of these women were considered to be coincidental to the pregnancy, such as from motor vehicle accidents, leaving 202 maternal deaths. In the two Australian reports, there was a total of 198 pregnant women who died. The cause of death was considered to be coincidental in 36 cases, leaving 162 maternal deaths.

Maternal deaths are divided into a number of categories (Table I), as outlined by the World Health Organization classification (WHO, 1992).

Late pregnancy deaths are included in the UK report, but in Australia late pregnancy deaths are not identified.

The demographics of pregnant women in each country is outlined in the reports. In both countries, approximately three-quarters of the women who died were born in the country of study. The UK's immigrant population comes largely from South Asia, Africa and Eastern Europe, while Australia's immigrant population comes mainly from New Zealand and Asian countries. In the UK, women from Jamaica,

Pakistan and Bangladesh were over-represented among the women who died during pregnancy. However, in Australia, the maternal mortality ratio of women who were born overseas is actually lower than that of women born in Australia. On the other hand, the maternal mortality rate among Aboriginal and Torres Strait Islanders is approximately three times that of non-indigenous Australian women, largely due to cardiac conditions and sepsis.

In the UK, the maternal mortality rate from 2013–2015 was found to be higher among older women, those living in the most deprived areas, and women from ethnic minority groups, especially women of African descent. Fifty-three per cent of the women who died were either obese or overweight. In Australia, the incidence of maternal death was higher for women over 35 and under 20 years of age, and for Aboriginal women. In the Australian report of 2012–2014, of the 33 women who died and whose BMI was calculated, 70 per cent were either overweight or obese.

There are differences in the classification of suicide. In 2012, WHO recommended classifying all maternal suicides as direct maternal deaths.[7] This classification was adopted in the UK report. However, the Australian National Maternal Mortality Advisory Committee, with advice from the Royal Australian and New Zealand College of Psychiatrists, came to the conclusion that puerperal psychosis is rare. The committee concluded that suicides where there was evidence of a pre-existing mental health disorder should be regarded as indirect deaths, whereas suicides in the setting of no previously diagnosed mental health illness should be regarded as direct deaths. Accordingly, suicides in Australia associated with a previous psychiatric illness are classified as indirect deaths, while suicides due to the development of a puerperal psychosis are classified as direct deaths.

In addition, in Australia, maternal deaths associated with external events, such as homicide, are classified as either an indirect or incidental death, depending on the circumstances. A homicide occurring in a situation of domestic violence is classified as an indirect death, while homicide occurring outside a domestic setting is classified as a coincidental death. In the UK report, homicide is classified only as a coincidental death.

In the Australian reports, women who died from haemorrhage are categorised as dying from either obstetric or non-obstetric haemorrhage. A non-obstetric haemorrhage is bleeding from a site other than the uterus. A cerebral haemorrhage associated with severe pre-eclampsia is categorised as a direct death, while a cerebral haemorrhage without associated hypertension is considered an indirect death. In the UK reports, the term non-obstetric haemorrhage is not used. Patients who died from non-obstetric haemorrhages in the UK, such as from a ruptured splenic artery aneurysm, are included in the category of 'Other indirect causes'.

Among indirect deaths, the UK report has a category entitled 'Neurological conditions', which is not used in the Australian reports. These neurological cases comprise mainly patients who died following strokes or epilepsy. Deaths due to epilepsy in Australia are included under 'Other causes'. The UK report also includes chapters that review some of the conditions that can cause maternal death. Some of these chapters also include data from the Republic of Ireland. The causes of direct and indirect maternal deaths in the UK and Australia are listed in Table 2.

Results

The traditional 'big five' causes of direct maternal deaths (thrombo-embolism, obstetric haemorrhage, hypertension, sepsis and amniotic fluid emboli) continue to make up the majority of cases of maternal deaths in both countries. In the Australian report, 57 out of 71 direct deaths (80 per cent) were from these causes, while in the UK, they accounted for 68 out of 88 deaths (77 per cent).

Thrombo-embolism is the leading cause of direct deaths in both countries. In the UK, there were 26 deaths between 2013 and 2015. In the two Australian time periods, there were 15 deaths. The recognised risk factors, such as obesity, older maternal age, smoking and operative delivery, were prevalent in the women who died from this condition in both countries.

In the UK, between 2013–2015, 21 women died from obstetric haemorrhage. In the Australian reports, 13 such deaths were recorded. The UK report included a chapter[8] that reviewed the details of deaths from obstetric haemorrhage in both the UK and the

Table 1. Definitions of maternal deaths (WHO, 1992).

Maternal death	The death of a women while pregnant or within 42 days of the end of the pregnancy from any cause related to, or aggravated by, the pregnancy or its management, including ectopic pregnancy, miscarriage or termination of pregnancy, but not from accidental or incidental causes.
Direct death	A death resulting from complications of the pregnant state (pregnancy, labour and the puerperium), from interventions, omissions, incorrect treatment, or from a chain of events resulting from any of the above.
Indirect death	A death resulting from previous existing disease, or disease that developed during pregnancy and which was not the result of direct obstetric causes, but was aggravated by the physiological effects of pregnancy.
Coincidental death	A death from unrelated causes that happens to occur in pregnancy or the puerperium, such as motor vehicle accidents.
Unclassified death	A maternal death from unspecified or undetermined cause, occurring during pregnancy, labour, delivery or the puerperium.
Late death	A death occurring between 42 days and one year after the end of pregnancy that is the result of direct or indirect maternal causes.

Republic of Ireland. The breakdown of 22 cases was: three deaths from placental abruption; nine deaths from placenta praevia/accreta; nine deaths from postpartum atony (of which five were post-caesarean section); and one death from genital tract trauma.

In the two Australian reports, there was a total of ten deaths from hypertensive disorders, such as eclampsia. There were only three deaths from hypertensive causes in the UK. Hypertensive deaths are now much reduced in the UK. From 1985–1987, there were 27 such cases.[9]

In both the UK and Australia, there were 14 deaths following sepsis, of which four were indirect deaths in both countries. Three of the Australian deaths were due to H1N1 influenza (swine flu), and there was one confirmed case among the British deaths. Most cases of direct obstetric sepsis occurred postpartum. Group A beta haemolytic streptococcus was the most common pathogen associated with maternal mortality, with five cases in Australia and two in the UK.

There were 11 deaths from amniotic fluid emboli in the Australian reports, and eight in the UK. Among the UK cases were two women undergoing induction because of intra-uterine deaths, who received excessive doses of misoprostol and collapsed following hyperstimulation. Two multiparous women, who were induced to establish labour, also developed hyperstimulation after the use of prostaglandins and died from amniotic fluid emboli.

The number of suicides in the UK report was 12; in the Australian reports, it was 14. However, in the UK, there were 46 suicides between six weeks and 12 months postpartum, almost four times as many as during the pregnancy. Many of these patients had pre-existing psychiatric histories. It appeared that many women with postpartum psychiatric conditions that placed them at risk of suicide were not recognised, and were not 'owned' by any one group of the woman's healthcare team.

In 2013–2015, eight women in the UK with epilepsy died during pregnancy or in the immediate

Table 2. Causes of direct and indirect maternal deaths in the UK and Australia.

Direct deaths	**UK 2013–15**		**Australia, 2006–10 & 2012–14**	
	No.	**%**	**No.**	**%**
Thrombo-embolism	26	29.5	15	21.1
Obstetric haemorrhage	21	23.9	13	18.3
Suicide	12	13.6	2*	2.8
Sepsis	10	11.4	8	11.3
Amniotic fluid embolism	8	9.1	11	15.5
Early pregnancy death	4	4.5	5	7.0
Hypertension	3	3.4	10	14.1
Anaesthetic	2	2.3	2	2.8
Non-obstetric haemorrhage	–	–	4	5.6
Cardiovascular	–	–	1	1.4
Unclassified	2	2.3	–	–
Total	**88**	**100%**	**71**	**100%**
Indirect deaths	**UK 2013–15**		**Australia, 2006–10 & 2012–14**	
	No.	**%**	**No.**	**%**
Cardiovascular	54	47.4	24	27.9
Other causes	26	22.8	20	23.3
Neurological causes	19	16.7	–	–
Cancer	7	6.1	–	–
Psychosocial	4	3.5	4	4.6
Sepsis	3	2.6	3	3.5
Sepsis (H1N1 flu)	1	0.9	3	3.5
Suicide	–	–	12	14.0
Non-obstetric haemorrhage	–	–	17	19.8
Obstetric haemorrhage	–	–	1#	1.2
Early pregnancy death	–	–	2	2.3
Unclassified	–	–	5	–
Total	**114**	**100%**	**91**	**100%**
Total maternal deaths	**202**		**162**	

* In the Australian reports, 12 cases of suicide were classified as indirect deaths. All suicides in the UK report were considered direct deaths.
# The haemorrhage resulted from blunt trauma to the uterus.

postpartum period. A further five women with epilepsy died between six weeks and one year after delivery. The two Australian reports recorded four epilepsy deaths.

The UK report included a chapter[11] on sudden unexplained death in epilepsy (SUDEP). SUDEP is defined as the sudden and unexpected death during pregnancy of a woman with epilepsy, without a toxicological or anatomical cause of death detected during pregnancy. The cause is not understood. Among the UK cases were several women who discontinued their anti-epileptic medication without specialist advice. Another risk factor for a pregnant woman with epilepsy is drowning. In these reports, two women in Australia drowned in the bath and one such case was reported in the UK.

One of the least appreciated causes of maternal death is from a ruptured splenic artery aneurysm, which is not on the radar of many obstetricians. In Australia, from 2006–2010, five women died from this cause. The UK report[12] noted that in the UK and Republic of Ireland, nine women died from this condition. Most cases are asymptomatic prior to rupture. In many cases, the accompanying acute abdominal pain was misdiagnosed. Where patients had already collapsed, emergency staff were often focused on other diagnoses, such as a pulmonary embolism or an amniotic fluid embolism. A literature review of reported cases of splenic artery aneurysm rupture in pregnancy, published in 2009,[13] found that early involvement of a general or vascular surgeon reduced mortality. An earlier report from 2003 argued that 'it is therefore important to increase awareness of this condition, so that obstetricians and other front-line staff can entertain the diagnosis of a ruptured splenic artery aneurysm in any pregnant woman who presents with severe upper abdominal pain'.[14] That sentiment remains valid today.

In developed countries, cardiovascular disease is currently the most common cause, not just of indirect deaths, but of maternal deaths overall. In the UK, between 2013–2015, 51 women died. In the Australian reports, there were 25 deaths. The main contributing factors appear to be increasing maternal age, obesity and the increasing number of women with congenital heart defects who, following surgical treatment, survive into adult life, and who subsequently become pregnant. Both reports recommended that pregnant women with pre-existing cardiac conditions should be reviewed by physicians with particular experience in treating cardiac conditions in pregnancy.

Most early deaths were from ruptured ectopic pregnancies. There were four deaths in the UK report. In Australia, there were five deaths due to ectopic pregnancies and one death following complications associated with termination of pregnancy. The UK report also listed a small number of rare causes of maternal death from medical causes that most obstetricians would probably not encounter during their career. These include deaths from cystic fibrosis, sickle cell anaemia, systemic lupus erythematosus, Addison's disease, pancreatitis and thombo-cytopenic purpura. Four women in the UK from ethnic minorities died from haemophagocytic lympho-histiocytosis. Managing these unfamiliar conditions would be problematic for most obstetricians. In the face of atypical symptoms and disorders, the appropriate management would be to obtain an opinion from a physician experienced in medical conditions in pregnancy.

The two Australian reports recorded 16 deaths among the Indigenous population. This was almost ten per cent of the overall total of 162 deaths. The Aboriginal community constitutes approximately three per cent of the Australian population.

Ninety-three of the women in the UK report were delivered by caesarean section. Of these operations, 35 (38 per cent) were performed as perimortem procedures. Of the babies born following perimortem caesarean sections, 14 survived. In the Australian report for 2012–2014, 23 women were delivered by caesarean section. Of these, six (26 per cent) were perimortem operations and four babies survived.

Conclusions

Beyond the statistics, it is stating the obvious to say that a maternal death is a catastrophe, leaving behind a devastated family and, often, other children who no longer have a mother.

In the UK, the Confidential Enquiries into Maternal Deaths in England and Wales began in 1952. Since that time, maternal death rates in the UK have fallen from approximately 90 per 100,000 women giving birth[15] to around nine per 100,000 currently.

Maternal mortality data was first recorded in Australia for the years 1964–1966.[16] In that report, the maternal mortality rate for direct deaths was reported as 30.3 per 100,000 confinements. In the 2012–2014 report, using the same definitions, the incidence was 6.8 per 100,000 women giving birth.

The reduced numbers of maternal deaths in the UK and Australia over the last 50 years is, of course, very welcome. However, the decrease is predominantly due to a reduction in direct deaths. There has not been a similar reduction in indirect deaths. To reduce the number of indirect deaths, multidisciplinary care coordinated across primary and secondary healthcare teams remains a priority. A similar situation applies to deaths in late pregnancy. In the UK, from 2013–2015, 326 women died between six weeks and 12 months postpartum, over 60 per cent more than the 202 women who died during the pregnancy. As mentioned above, almost four times as many women in the UK committed suicide in late pregnancy (n=46), as during the pregnancy (n=12). Over the last half-century, obstetricians have understandably focused on addressing the 'big five' direct obstetric deaths. The ongoing challenge is to direct the same energy to addressing indirect and late pregnancy deaths.

Acknowledgements.
I would like to gratefully acknowledge the assistance of Prof Marian Knight of the National Perinatal Epidemiology Unit/MBRRACE-UK.

In Australia, I would like to acknowledge Prof Georgina Chambers of the National Perinatal Epidemiology and Statistics Unit, as well as all editors, authors and contributors to the maternal mortality reports in the UK and Australia.

I would also like to thank Prof Roger Pepperell for reviewing an earlier draft of this article.

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Training Support Unit

RANZCOG recognises that trainees may experience periods of professional and personal difficulty, and that coping with the demands of a busy profession, developing skills, building knowledge as well as balancing family and personal commitments can be challenging. The College also recognises the importance of supporting training supervisors as they work to ensure trainees have vital training and learning opportunities; are taken through new procedures and given adequate time to develop their skills under supervision.

RANZCOG is committed to supporting trainees and training supervisors and has established the Training Support Unit. This is a safe, professional and impartial service for Trainees and Training Supervisors to contact and be guided and supported along the most effective response pathway.

Trainees are encouraged to contact Ms Paula Fernandez, Senior Coordinator, Trainee Liaison in times of stress, anxiety or poor health. Supervisors are encouraged to contact Ms Alana Gilbee, Senior Coordinator, Supervisor Liaison if they are concerned about a trainee they are supervising.

The TSU also manages trainee training complaints in a fair and responsive manner.

For further information visit:
www.ranzcog.edu.au/Training/TSU
or contact the **Training Support Unit**:
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Case report

Antenatal management of anorexia nervosa

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Managing anorexia nervosa (AN) is a challenging area of mental health, requiring a multidisciplinary team approach to ensure both physical and mental health are considered as part of assessment, management and recovery. AN is an eating disorder characterised by restriction of intake and low body weight, intense fear of weight gain and disturbance in body image. It can be associated with restricting and/or binging and purging behaviours. Body mass index (BMI) determines disease severity, with a BMI of 17–20 considered mild, 16–17 moderate, 15–16 severe and less than 15 extreme. It had been thought, for pregnancy to occur, AN needed to be in remission. However, this is not always the case. Unlike depression, anxiety and psychotic disorders, there is little guidance and research into AN and pregnancy. The most recent Australian National Guidelines for Perinatal Mental Health provide no mention of the assessment and management of eating disorders in pregnancy.[1]

Case description

The patient was a 30-year-old G2P1 transferred from a tertiary general hospital to the maternal-fetal medicine unit of a tertiary O&G hospital at 24 weeks gestation. Transfer occurred to facilitate the ongoing management of her complex obstetric care. This entailed intensive multidisciplinary team involvement, including maternal-fetal medicine, midwifery, psychiatry, physician and dietetics weekly to fortnightly review.

The patient had a 15-year history of AN for which she had received minimal treatment in the past. Following the diagnosis of her second pregnancy, she was booked into a maternity service within a tertiary general hospital. Her antenatal care appeared unremarkable, despite noting her low BMI of 15 at the booking visit. Following the routine administration of the Edinburgh Postnatal Depression Scale (EPDS), she was referred for a mental health consultation at 20 weeks gestation. At this psychiatric consultation, it was recognised that her BMI remained low at 17, she had active symptoms throughout her pregnancy associated with AN, had insufficient weight gain over the 20 weeks of pregnancy, and had significantly lowered mood with associated risk. On physical examination, she had significant postural tachycardia, resting bradycardia, and postural symptoms. She had been restricting her dietary intake to well below normal requirements. She described purging up to twice daily with binging behaviour around three times per week. She did not use laxatives, exercise excessively or engage in other compensatory behaviours. She feared weight gain, with her self-worth heavily influenced by her body weight.

The patient also presented with significant depressive symptoms characterised by pervasively low mood, irritability, demotivation, low energy, initial insomnia, passive suicidal ideation, and feelings of being generally overwhelmed and unable to cope. She described long-standing generalised anxiety characterised by excessive worry. Her personality construct was notable for self-criticism and a focus on achievement. She did not meet the diagnostic criteria for any other mood, anxiety, trauma-based or psychotic disorder.

The patient's eating disorder commenced when she was in her teenage years during a period of significant stress for her family. Strict restriction of her dietary intake gave her a sense of control when she otherwise felt helpless.

The patient had previously seen a psychiatrist, but had no recent contact with mental health services. She had never had an inpatient psychiatric admission and never received any intensive eating disorder treatment. She was previously trialled on fluoxetine once and found this helpful. There was no history of suicide attempts. Drug and alcohol assessment was unremarkable. There was a family history of both anxiety and depression.

Following her initial assessment by a psychiatrist, she was admitted to a general medical ward for 23 days where her physical health was stabilised. Hypokalaemia (2.7mmol/L) was present on the admission bloods. She received nasogastric tube (NGT) continuous feeds initially, with gradual progression to bolus feeds. Re-feeding syndrome was evident with the development of hypophosphataemia on re-feeding requiring replacement. Initial attempts to transition from nasogastric to oral intake were complicated by hypoglycaemia, with eventual successful introduction of meals and full diet. Unstable calcium levels were monitored and corrected throughout the admission.

Given the concerns about prolonged low weight over her pregnancy, with associated physiological and electrolyte disturbances and the potential effects on the fetal growth, her care was transferred to a tertiary women's hospital with a maternal-fetal medicine unit. She was initially assessed as an inpatient and then discharged for weekly review. At each review, she was seen by obstetrics, midwifery, psychiatry, physicians and dietetics, with close collaboration between all of those involved in her care. Despite initial concerns expressed about the distance from home, the patient's overall attendance at the antenatal clinic was very reliable.

Her obstetric history included an uncomplicated, term spontaneous vaginal delivery two years earlier of a 3.8kg baby. Routine antenatal investigations were all normal, including a low probability first trimester screen and an unremarkable second trimester morphology ultrasound.

Electrolyte studies throughout the pregnancy were normal following removal of the nasogastric tube at 24 weeks gestation. Low albumin, low total protein and low calcium levels were treated with oral supplementation and were well tolerated, with improvement to near normal ranges by the end of pregnancy.

Her tendency to restrict dietary intake appeared greatest during times of increased psychosocial stress. Serial growth scans of the fetus revealed plateauing fetal growth between the 26th and 28th gestational week, with the abdominal circumference falling from the 50th to the 10th centile. This correlated with a period of increased stress in the family environment, an associated reduction in clinic attendance and lack of weight gain. As maternal nutrition improved in the third trimester, abdominal circumference continued to track along the 10th centile with reassuring fetal Doppler studies.

The patient was provided with extensive psycho-education around the potential risks associated with restricted dietary intake on the developing fetus. Sertraline was up-titrated to 150mg, with good effect on depressive and anxious symptomatology. Towards the end of her pregnancy, she was further engaged with a perinatal clinical psychologist to facilitate treatment and support in the postpartum period.

Throughout the pregnancy, she reported anxiety around meal times and the occasional desire to purge, particularly related to the bodily sensations of nausea, bloating and fullness. These sensations were exacerbated during the latter part of the third trimester, with subsequent lack of maternal weight gain after 34 weeks gestation. In view of this, the patient was admitted for a two-day inpatient stay at 37 weeks gestation. The admission provided an opportunity to ensure physiological stability and optimised nutritional intake in preparation for delivery. Electrolyte and ECG monitoring were all unremarkable, with ongoing hypocalcaemia and low, but acceptable blood sugar levels recorded. A maternal ECG in the late third trimester was performed to ensure cardiac function would support vaginal delivery and reassuringly showed normal ventricular size and function.

An uncomplicated induction of labour occurred at 38+2 weeks of gestational age and the patient had a spontaneous vaginal delivery of a live male infant weighing 3.2kg (35th centile). She was assessed prior to delivery and postpartum by the mental health team. After discharge, she was supported with 10 days of midwifery group practice home visits. Two weeks after discharge, she was reviewed by a psychiatry and midwifery team at the hospital. She was well, reported no symptoms of depression or anxiety, had stable weight and her baby was thriving. She had commenced but then ceased breastfeeding, however, she felt supported by her visiting midwife in this decision. She also felt well equipped with adapting plans from dietetics around her diet and nutritional intake. Her postpartum follow up will include general practice, psychiatry, clinical psychology and dietetics.

Discussion

AN in pregnancy is uncommon, with prevalence estimates from the UK and Norway at 0.05–0.5 per cent of pregnant women.[2] However, despite a low prevalence, there have been several large studies that have confirmed increased risks in pregnancy for women with eating disorders. For women with AN, this has included associations with slower fetal growth, low birth weight and small for gestational age, lower Apgar scores, and higher risk of neonatal resuscitation and perinatal death.[3] Furthermore, poorer growth in offspring have been shown to continue across the first year of life.[4] AN is associated with a higher rate of depression and anxiety, including perinatal depression, and is also associated with low rates of breastfeeding.[5,6]

This case report illustrates the risk of untreated AN on maternal morbidity and the potential for impact on fetal growth. Equally, it illustrates that with a coordinated approach across the key disciplines, a good outcome for mother and infant was able to be achieved. This positive outcome was not only pregnancy and neonatal parameters, but equally mental health, with a remission of depression and anxiety symptoms and a growing awareness and commitment to treatment for her eating disorder. This case also illustrates that beyond these tangible clinical outcomes was the less measurable, but equally important, aspects of engagement, support and collaborative care. This brought together a team that drew on expertise in midwifery care, maternal fetal medicine, obstetric medicine, dietetics and perinatal mental health.

Conclusion

In managing a pregnant woman with AN, there are key principles.[5] These include:

- Ensuring there is a mental health referral to assess both the eating disorder, co-morbidity of depression and anxiety and also any impact on the developing relationship with the fetus/infant
- Regular monitoring of electrolytes, particularly for active purging behaviours
- Regular growth monitoring of the fetus, particularly for active restrictive behaviours
- Maternal ECG prior to delivery if there are concerns that an eating disorder has impacted on cardiac function
- Ensuring coordination of multidisciplinary care, including obstetrics, midwifery, mental health, dietetics and, when necessary, obstetric medicine
- Having a clear threshold for admission based on parameters of maternal health and fetal wellbeing that are likely to be affected by an eating disorder, which include maternal hypoglycaemia, bradycardia, Long QT syndrome, restrictive cardiac failure from cardiac atrophy, bone marrow dysfunction, especially neutropenia etc
- Long-term health, including assessing for peripartum osteopenia/osteoporosis.

Case report

A brain in the pelvis: anti-NMDA-receptor encephalitis and ovarian teratoma

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Anti-N-methyl-D-aspartate receptor (NMDA-R) encephalitis is a paraneoplastic limbic syndrome caused by ovarian teratomas. Neural tissue in a teratoma can trigger the production of anti-NMDA-R antibodies,[1] which causes neuronal dysfunction and loss by altering the neuronal cell-surface NMDA receptors in the limbic system.[2] This syndrome presents with a range of psychiatric, neurological and autonomic features[3] and is associated with long-term morbidity and mortality. We will review the three cases that presented to our institution over a period of 12 months.

Case one

A 23-year-old woman presented with a two-week history of lethargy, emotional lability, involuntary movements, increasing forgetfulness and falls. On examination, the patient was alert but acutely confused. Examination and initial investigations were normal. The patient was admitted for empiric intravenous antibiotics for meningitis, as the lumbar puncture revealed a high white cell count, but her clinical condition deteriorated. An EEG and brain MRI was normal. A CT scan of the abdomen and pelvis revealed a 12cm multi-loculated pelvic mass, likely an ovarian teratoma (Figure 1).

After anti-NMDA-R antibodies were detected in serum and cerebrospinal fluid (CSF), the gynaecological oncology team performed a right salpingo-oophrectomy on day eight of admission. Histopathology was consistent with mature cystic teratoma (Figure 2).

After surgery, the patient continued to experience depression, suicidal ideation and psychosis with auditory hallucinations and was treated with

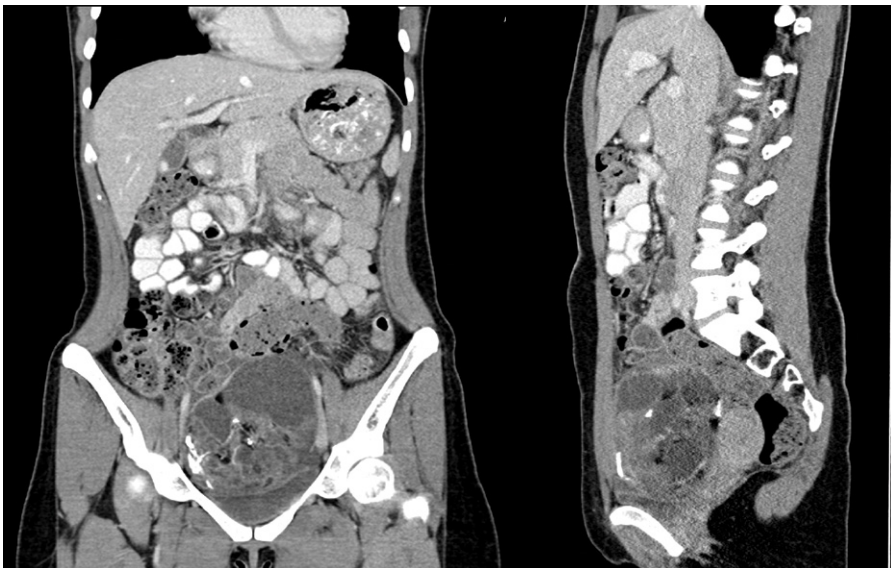

Figure 1. CT abdomen/pelvis (Coronal and Sagittal): A 12x7x11cm multi-loculated solid and cystic pelvic mass, with punctate calcified and fat density foci in keeping with a large ovarian teratoma. No ascites, peritoneal or pulmonary disease, lymphadenopathy or bony lesions. Courtesy of Liverpool Hospital Radiology Department.

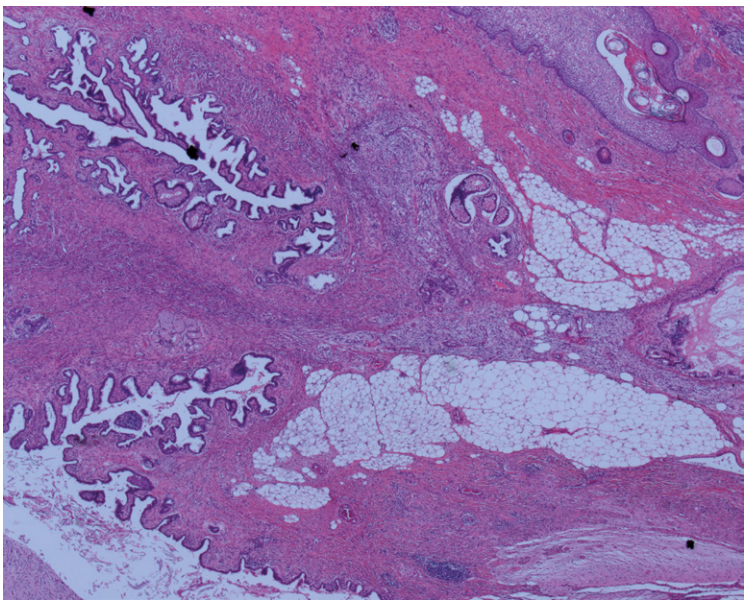

Figure 2. Histology slide. Right ovary specimen weight 427g. The ovarian mass contains a multi-loculated cyst with solid and cystic areas. Findings are consistent with a mature teratoma containing focal calcification, with hair-like material, skin with adnexal structures, bone, cartilage, serous fluid, abundant mature neural tissue and tissue resembling choroid plexus. [H&E stain]. Image courtesy of Liverpool Hospital Anatomical Pathology.

haloperidol, risperidone and midazolam. She also experienced recurrent syncope secondary to bradycardia, due to autonomic dysfunction. She received intravenous immunoglobulin (IVIG), methylprednisolone, rituximab and oral prednisone. She slowly improved neurologically and was discharged on day 27 of admission. She is currently on IVIG and mycophenolate.

Case two

A 25-year-old woman presented with headache, lethargy, acute confusion and a subjective fever. She was known to have hypertension and type 2 diabetes.

On review, she was acutely disoriented and her BP was 184/126. The initial examination, investigations and imaging were normal. She had a high white cell count on lumbar puncture and treatment was started for suspected meningitis/encephalitis with benzylpenicillin, ceftriaxone and acyclovir. Soon after, methylprednisolone was added for autoimmune encephalitis and the antibiotics were changed to tazocin for suspected sepsis, as she developed low grade temperatures. Her blood pressure remained refractory to multiple drugs.

The patient continued to have behavioural disturbances with aggression, violent outbursts, disinhibition and hyperactivity, requiring olanzapine and quetiapine. Despite a normal EEG, the patient had tonic-clonic and focal seizures, requiring sodium valproate, levetiracetam and midazolam. Anti-NMDA-R antibodies were found in the CSF and serum. It became apparent that she had autonomic dysfunction, causing severe hypertension, tachycardia and pyrexia.

Due to a fluctuating Glasgow Coma Scale (GCS), she was intubated and sedated, but continued to demonstrate focal rhythmic eye and upper limb movements. A pelvic ultrasound and CT scan reported a small right ovarian teratoma for which she had a laparoscopic right salpingo-oophrectomy on day 11 of admission, confirming mature cystic teratoma. Unfortunately, her clinical condition didn't improve and she continued to have involuntary facial and limb movements, catatonia and status epilepticus. She proceeded to have IVIG, steroid therapy, rituximab, plasmapheresis and plasma exchange. The presence of a left teratoma could not be confirmed on imaging and after extensive multidisciplinary consultation, the decision was made to remove the left ovary as well. The final pathology was negative for a teratoma.

Twelve months after her first surgery, this patient still has persisting neurological and autonomic dysfunction and remains hospitalised. She was intubated for eight months and is receiving immunotherapy to date.

Case three

A 37-year-old presented with syncope, seizure activity, confusion and behavioural changes. She was initially discharged with a presumed new diagnosis of epilepsy. She was admitted after her third presentation, eight days after the initial presentation. On this admission, she was diagnosed with anti-NMDA-R encephalitis on serum and CSF serology, secondary to an 18mm left ovarian dermoid seen on imaging. She underwent a laparoscopic left salpingo-oophrectomy on day 15 of her admission (Figure 3). Histology confirmed mature cystic teratoma. Postoperatively, she received IVIG, plasmapheresis and rituximab and was extubated on day 25.

Discussion

Anti-NMDA-R encephalitis was initially described in 1997 in two young women who presented with psychiatric symptoms, an ovarian teratoma and altered levels of consciousness, with improvement upon removal of the tumour.[4]

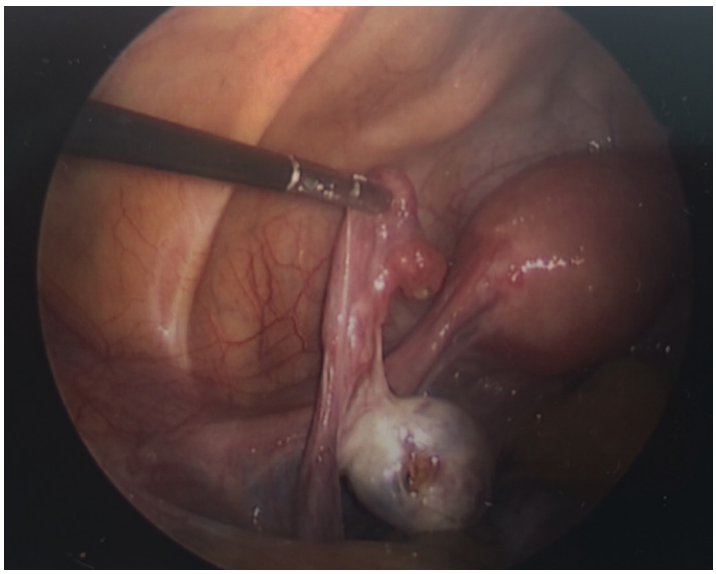

Figure 3. Left ovarian dermoid seen on laparoscopy.

The mean age is 24[1] and the syndrome starts with a viral-like illness, including headache, nausea, vomiting, fever and lethargy and then progresses to a spectrum of neuropsychiatric symptoms.[1]

Early stage symptoms include confusion, personality changes, memory deficits, psychosis, mood disturbances, self-harming behaviours, seizures and facial and limb movement disorders.[1,4,5] This can progress to decreased GCS requiring ventilator support,[1,5] hypoventilation, autonomic instability including hypotension or hypertension, bradycardia or tachycardia and hyperthermia.[4] As anti-NMDA-R encephalitis is uncommon, diagnosis is often delayed, while more common conditions such as neuro-psychotic conditions and infective encephalitis are being considered.[4]

In patients with acute neurologic findings, initial investigations for encephalitis should be initiated, including serum and CSF studies.[4] Definitive diagnosis is made by the confirmation of anti-NMDA-R antibodies in the blood or CSF.[4] This is followed by imaging to confirm ovarian teratoma. Timely diagnosis and surgery are essential to reduce risk of permanent neurological injury,[2,4] as delayed surgery can result in autonomic instability, catatonia, status epilepticus, coma and death.[4] There is substantial neurological improvement in 80 per cent of patients who undergo tumour excision and immunotherapy.[4]

In two of our cases, the symptoms improved within a month of surgery and immunosuppressive treatment, although recovery can continue for up to 24 months.[4] First-line treatment includes immunotherapy with IV steroids, IVIG or plasmapheresis and second line treatment is rituximab and cyclophosphamide.[3,5] Anticonvulsive therapy is often employed.[1]

Occasionally, the syndrome may be caused by microscopic tumours undetectable by imaging.[4] In these scenarios, treatment should be medical with immunotherapy. Surgery is not recommended, as it may result in removal of histologically normal ovaries.[1] There have been a few cases of ovarian teratomas being detected years after a diagnosis of anti-NMDA-R encephalitis. Patients without detectable tumours should continue immunotherapy for a minimum of 12 months and be screened with imaging every six months for four years for the presence of an ovarian teratoma.[4] There have also been reports of recurrent teratomas with recurrent encephalitis,[1,3] while others have presented with encephalitis months to years following removal of the teratoma. The mean time to recovery is around 3.6 months, but permanent sequelae is seen in 10 per cent of patients, and seven per cent die from encephalitis-related complications.[1]

Contraceptive use is essential while on long-term immunotherapy, especially long-acting reversible contraceptives, as patients often have residual cognitive and memory impairment that makes compliance difficult.[4]

Conclusion

The gynaecologist has an important role to play within the multidisciplinary team caring for these patients.[4] A high index of suspicion for this serious and potentially fatal condition,[1] and early tumour detection and removal result in improved prognosis.[4] While the majority of ovarian teratomas won't trigger the development of anti-NMDA-R encephalitis, the patient and their family should be alerted to report any new onset neuropsychiatric or behavioural changes if a teratoma is diagnosed and expectant management is pursued.[2]

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Case report

Acute abdomen in the third trimester

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An acute abdomen in pregnancy is rare, but a ruptured tubo-ovarian abscess should be considered despite being a rare occurrence in pregnancy.[1] Rupture can occur in approximately 15 per cent of cases of tubo-ovarian abscess.[1] There are a few case reports of ruptured tubo-ovarian abscess in pregnancy.[2-5]

Case report

A 24-year-old woman (G3P2) had a history of two normal vaginal births. Her previous pregnancies were uncomplicated and she had no significant medical history. During her current pregnancy, she had attended two antenatal visits where her fundal height was consistent with her dates. A venereal disease research laboratory (VDRL) test had been collected at the first visit and shown to be positive with a titre of 1:4. The first dose of benzathine penicillin had already been given.

She presented to the emergency department in the National Referral Hospital, Solomon Islands, at approximately 32 weeks (based on her last menstrual period) at 6pm with severe abdominal pain. The pain was worse in the right upper quadrant and right iliac fossa. She also complained of fever. There was no dysuria or bowel symptoms and no nausea or vomiting. She denied any trauma or falls. There was no history of ruptured membranes or per vaginal (PV) bleeding.

On examination, her blood pressure was 90/59, pulse 98 and temperature 38 degrees. Her abdomen was markedly tender on the right side with bilateral renal angle tenderness. Fundal height was 32cm with the fetus in cephalic presentation, not engaged. No contractions were palpated. On vaginal examination the cervix was closed, with some tenderness noted in the right fornix. The fetal heart rate was normal.

At this stage, the differential diagnosis was appendicitis, placental abruption, urinary tract infection/pyelonephritis and torted ovarian cyst.

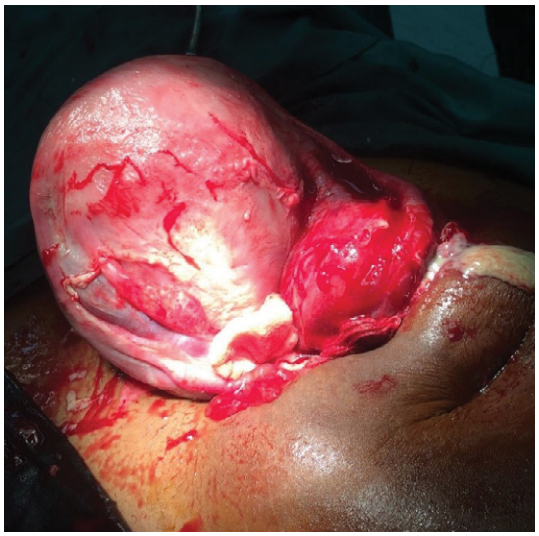

Figure 1. Right tubo-ovarian abscess.

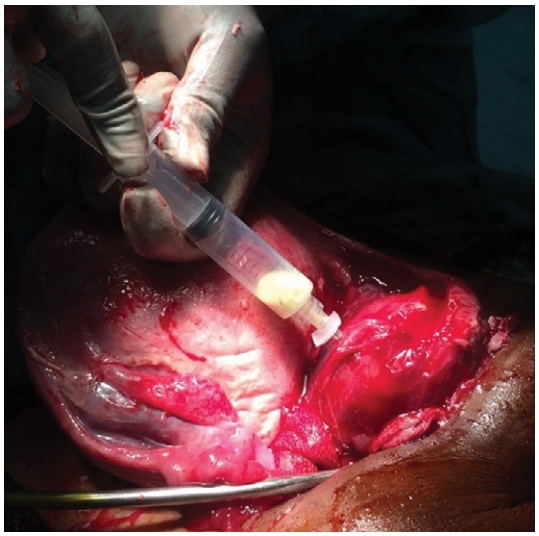

Figure 2. Drainage of abscess.

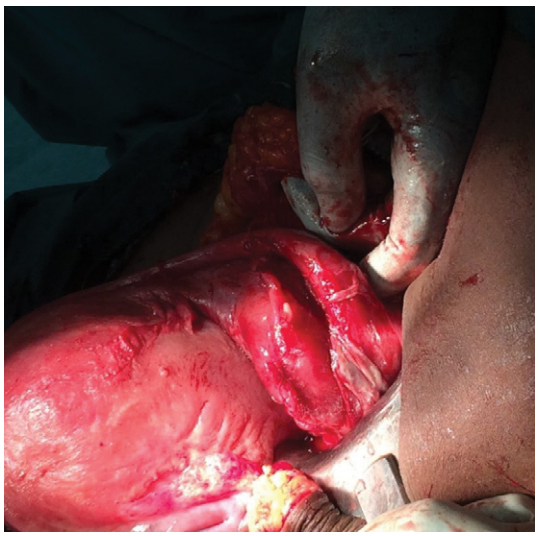

Figure 3. Post-incision and drainage.

A surgical consult was requested and dexamethasone was administered for fetal lung immaturity. The surgeons requested FBC, UEC, LFT, MPS (malaria parasite screen) and renal/obstetric ultrasound.

Further review at 1:30am by surgeons was that the woman had likely pyelonephritis and IV antibiotics were commenced.

The following morning, she had generalised abdominal tenderness and a tense uterus. She was diagnosed as having an acute abdomen in pregnancy. The CTG showed a baseline of 155, variability 5–7, no accelerations and complicated variable decelerations down to 50bpm (unprovoked).

An urgent abdominal ultrasound confirmed a large placental abruption with a live fetus (measurements not done). She was taken to theatre at approximately 12pm for urgent caesarean section. A general anaesthetic was performed using suxamethonium, thiopentone and vecuronium.

Upon entry into the peritoneum, there was a large amount of pus oozing through the incision site, thought to be from a ruptured appendix. Triple IV antibiotics were commenced (metronidazole, cephazolin and gentamicin). The surgeons were called to remove the appendix which, interestingly, appeared normal. The abdomen was irrigated with saline. A lower segment caesarean section was then performed. The liquor appeared clear and the baby was born in fair condition. The uterus was closed and exteriorised to examine the tubes and ovaries. A large mass was seen on the right ovary/tube, measuring at least 10cmx6cm. The pfannenstiel incision was converted into a midline laparotomy incision. The remainder of the bowel was examined by the surgeons.

The tubo-ovarian mass was aspirated and shown to contain thick purulent discharge. The mass was incised and the loculations broken up. It was marsupialised, washed out and a drain inserted upon closing the abdomen.

Post-operation, mother and baby recovered well. The intra-operative wound swab subsequently grew coagulase-negative staphylococci. Mother and baby were discharged one week later.

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The leg-up

Your regular legal update to keep you informed on current medicolegal issues in the practice of obstetrics and gynaecology

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AHPRA publication of unfounded patient complaints

The Australian Health Practitioner Regulation Agency (AHPRA) recently commenced publicly linking disciplinary and court decisions to medical practitioner registration details, even in cases where no adverse findings were made. This followed the 2016 recommendation of the 'independent review of the use of chaperones to protect patients', that quotes the Chair of the Medical Board of Australia, Dr Joanna Flynn: '... the public has a right to know if there are conditions on a doctor's registration or if there have been serious disciplinary or criminal offences proven against a doctor.'

The Medical Board noted that where a claim was unfounded, the link would be published with 'no adverse finding' recorded. The principle of transparency and 'information' about health practitioners was thought to strengthen the informed decision-making of patients seeking medical care. However, concerns were raised by the Australian Medical Association (AMA) and medical defence groups that the stance was unfair and punitive to doctors. The smear of the allegation could outweigh the exoneration, with a serious loss of reputation. It involved no small number of health practitioners. Of the 3557 notifications to the Medical Board in 2016–2017, 76.3 per cent resulted in no further action being taken. Those complaints resulting in 'no adverse finding' were to remain linked for the entire career of the doctor.

Dr Steel Scott, a doctor in Geelong, Victoria, created a petition through change.org, with more than 17,000 signatures, in an effort to stop AHPRA linking unfounded complaints on its register. The webpage was widely shared, with emotional comments from doctors who had been vindicated in disciplinary hearings, saying that the 'no adverse finding' link would increase the rate of post-traumatic stress disorder and destroy their reputational capital. Further concerns related to what constitutes 'information' for the public, in line with principles of patient protection and 'knowledge', to help patients choose their doctor wisely.

On 28 July 2018, the Medical Board and AHPRA released a media statement announcing a radical reversal of their decision regarding the publication of non-adverse finding tribunal results. Steel Scott proclaimed, 'Doctors are people and patients as well. We expect the same level of due diligence in policy-making, rather than ... a knee-jerk decision, without adequately consulting with the relevant stakeholders.'

Are you committing human rights violations on the labour ward?

Last year, Marlène Schiappa, French minister for gender equality, reported that up to 75 per cent of French women were undergoing episiotomies, often without their consent. The remarks drew strong rebuke from the French Union of Gynaecologists and Obstetricians, who called for her resignation, as they believed the quoted figures to be inaccurate and alarmist.

The Minister's comments, however, were not made in isolation. In 2014, the World Health Organization labeled 'disrespectful and abusive care' in pregnancy and labour, such as physical and verbal abuse, denial of analgesic medication or procedures, and forced or unconsented medical procedures, as human rights violations. Subsequently, several organisations have formed, most notably across Europe, to bring attention to birthing rights and call out episodes of 'obstetric violence'.

The term 'obstetric violence' was coined in Venezula in 2010 and is defined as '... the appropriation of the body and reproductive processes of women by health personnel, which is expressed as dehumanised treatment, an abuse of medication, and to convert the natural processes into pathological ones, bringing with it loss of autonomy and the ability to decide freely about their bodies and sexuality, negatively impacting the quality of life of women.'[1]

Among other nations, Argentina, Venezuela and Mexico have now introduced formal legislation to enforce women's rights during birth. This brings us to the case of LC, who is taking Spain to the European Court of Human Rights for violation of her 'physical and moral integrity'. LC alleges that she had a forced caesarean section, following on from a 'cascade

of unnecessary medical interventions'. These interventions ranged from amniotomy and use of oxytocin infusion, to the placement of an intravenous cannula 'just in case'.[2]

It is alleged that there is no justification documented in the partogram for the above interventions and, moreover, consent was not documented for each procedure or management decision. Furthermore, LC states that, as a consequence of a pre-existing hiatus hernia, labouring in the lithotomy position exacerbated her gastrointestinal reflux, causing stinging of the throat. It is alleged that instructions given by the anaesthetic supervisor to the trainee were overheard by the patient, which added to her distress. After repeated failed attempts by the trainee, the supervisor then placed the epidural successfully. LC states that a caesarean section was then performed without her consent at 8cm dilatation. LC now suffers ongoing pain, anxiety and insomnia and seeks damages.

Claims of institutional gender-based violence cases are increasing in number and prominence globally. Our readership should be aware of this phenomenon.

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Is there a right of all doctors to universal indemnity cover?

A recent Australian Department of Health publication (benignly titled), 'First Principles Review of the Medical Indemnity Insurance Fund', radically recommends scrapping the capped fee for the 120 doctors covered by this arrangement. Who are these 120 doctors who receive such emphasis in the report? These doctors have a long history of complaints and under the current rules, introduced in the aftermath of the indemnity crisis, an insurer of last resort was beholden to offer medical insurance cover to all doctors, including those at the highest risk.

Removing the surcharge cap will potentially make the premium unaffordable for these doctors, abolishing their legal right to practise in the private sector. Their ability to work as a health practitioner will be restricted to the public health industry, where they will need to competitively obtain a position allowing them to obtain employer-indemnified insurance. Potentially, this may have the 'patient protection' advantage by forcing high-risk doctors to practise in workplaces with better governance and oversight.

There are few recommendations for privately practising midwives, except a consideration as to 'whether there is an ongoing need to cap premiums paid by privately practising midwives and to subsidise the cost of high claims'. No concrete advice is given regarding the indemnity exemption for intrapartum care by privately practising midwives for homebirths.

Do you know about the Simulation Training Advisory Group (STAG)?

The STAG advises the College about how simulation can best be incorporated into the RANZCOG training program.

Who is on the STAG?

Sarah Janssens (Chair) Lenore Ellett Katrina Calvert

Doug Barclay Bec Szabo

Members of STAG can help with advice on equipment and simulation training curricula. (Access to simulation training equipment is now a requirement for site accreditation.)

Feel free to contact us via: edu@ranzcog.edu.au

Learn more about sim

Join a community of practice to find resources and information via social media. Twitter is a great way to be involved with a simulation community of practice. Follow topics: #FOAMObGyn #FOAMSim #SimObGyn #Simulation #ObGyn

The Royal Australian and New Zealand College of Obstetricians and Gynaecologists

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Q&A

For the broader *O&G Magazine* readership, balanced answers to those curly-yet-common questions in obstetrics and gynaecology.

Q What is the role of endometrial pipelle sampling in general practice?

Dr Natasha Trpkovska Ilievska
MBBS, RNZCGP trainee
Senior House Officer, Dept O&G Auckland District Health Board

Dr Sue Tutty
MBChB, FRNZCGP
General Practitioner Liaison
Counties Manukau District Health Board

A

What is endometrial sampling?

Endometrial sampling, also known as endometrial biopsy, is a common medical procedure performed in women with abnormal uterine bleeding (AUB). It involves taking a tissue sample from the endometrium, the lining of the uterus. This sample undergoes a histological evaluation that can show cell changes due to abnormal tissue, variations in hormone levels or infection. First introduced in the 1930s, endometrial sampling originally used a narrow metal cannula with a side opening, serrated edges and syringe attached for suction as the instrument was removed. Today, the most widely used device is the disposable pipelle. It is cost-effective, safe and usually well-tolerated by patients.[1]

Indications and contraindications

Indications for pipelle biopsy:

- Failed medical treatment of menorrhagia after three months
- Significant risk factors such as BMI over 30 and older than 35 years of age
- Inter-menstrual bleeding for more than three months in a 12-month period
- Endometrial cells on cervical smears, with abnormal symptoms.

Absolute contraindications for pipelle biopsy:

- Pregnancy
- Endometritis or acute pelvic inflammatory disease (PID).

Relative contraindications for pipelle biopsy:

- Coagulation disorders or anti-coagulant therapy
- Synthetic heart valves or heart murmurs/valve disease. Procedure is preceded by a dose of antibiotics two hours beforehand
- Previous LLETZ (large loop excision of the transformation zone) or cone biopsy. These can stenose the cervical canal and make insertion difficult.

Aetiology of AUB

AUB refers to uterine bleeding that is excessive or occurs outside of normal cyclic menstruation. AUB can be classified in two major categories.

AUB in non-pregnant reproductive-age women

A comprehensive, but flexible, classification system for underlying aetiologies of AUB has been developed by the International Federation of Gynaecology and Obstetrics Menstrual Disorders Committee (FIGO MDC).

The classification system is stratified into nine basic categories arranged according to the acronym PALM-COEIN: polyp; adenomyosis; leiomyoma; malignancy and hyperplasia; coagulopathy; ovulatory dysfunction; endometrial dysfunction; Iatrogenic; and 'not otherwise classified'.

The FIGO MDC advised that the diagnoses should be classified under three definable headings:

- Systemic disorders of hemostasis (the coagulopathies) (AUB-C)
- Ovulatory disorders (AUB-O) – Generally reflecting dysfunctional relationships in the hypothalamic-pituitary-ovarian axis that typically manifest with symptoms of the irregular onset of uterine bleeding
- Primary disorders of endometrial origin (AUB-E) – Disturbances principally caused by the molecular and cellular mechanisms responsible for regulation of the volume of blood lost at menstruation. Other infectious endometrial disorders, such as chlamydial endometritis, should be included here.[2]

Postmenopausal bleeding

All postmenopausal women with unexpected uterine bleeding should be evaluated for endometrial carcinoma since this potentially lethal disease will be the cause of bleeding in 10 per cent of cases.

The differential diagnosis of bleeding in postmenopausal women is less broad than for abnormal bleeding in premenopausal women, since the various causes of anovulation are not relevant. Causes include: atrophy, cancer (endometrial, fallopian tube or ovarian, vaginal), polyps, endometrial hyperplasia, disease in adjacent organs, anticoagulant therapy, or infection. The management of postmenopausal bleeding (PMB) will depend on ultrasound results:

- If the endometrium is less than 5mm, no further treatment is required (except to treat atrophic vaginitis) and follow up is within two months

- If the endometrium is more than 5mm thick, or the scan reports fluid or cystic spaces within the endometrium regardless of thickness, a pipelle biopsy is performed.

When the pipelle biopsy is done in the community, further management will depend on the histology report, taking the endometrial thickness into consideration as well.

Gynaecology assessment will be required if:

- The sample is inadequate, insufficient or limited
- Histology is abnormal
- The sample is normal but the thickness is greater than 8mm: then a gynaecology assessment needs to look for other pathology, such as a polyp.[3]

Using a pipelle

Generally, a pipelle biopsy follows this process:

- A vaginal exam is performed to assess cervix position, whether the uterus is anteverted or retroverted, and whether it is enlarged
- A speculum is inserted to expose the cervix. A tenaculum may be required to hold the cervix steady for the biopsy
- The pipelle is inserted through the external cervical os until the fundus is reached (touching the fundus is best avoided, as it causes discomfort)
- The central piston is withdrawn to create a vacuum, then the device is rotated while moving back and forth/up and down the cavity, three to five times. The sample should be seen in the chamber of the device
- The sample obtained is placed in a container with formalin, which is labeled and sent to histology
- The pipelle procedure takes one minute.

There are a small number of risks: spotting or bleeding after the procedure (for less than one hour); crampy period-like discomfort (which is usually short-lived); and an extremely small risk of infection or uterine perforation.[4,5]

Pathway of care incorporated by GPs

Counties Manukau District Health Board (DHB) in Auckland, New Zealand, has a funded pathway for the management of AUB. The model of care incorporates a credentialing module for GPs to diagnose and provide non-surgical treatment and management for women of reproductive age presenting in primary care with symptoms of AUB. Postmenopausal bleeding is excluded from this funding package. The intent is that as many GPs as possible will be credentialed, so a patient can be treated and managed by her 'regular' GP without requiring referral to secondary care.

Training and oversight to maintain quality of care is provided by the secondary care clinical lead for gynaecology, in partnership with primary care. GPs are encouraged to manage women completely, however, assistance is readily available for further management or interpretation of results from a gynaecology senior medical officer, by writing an electronic referral to a virtual or actual clinic.[6]

Funding regulation

The credentialed GP will potentially perform an endometrial pipelle biopsy and refer the patient for a transvaginal ultrasound through a local radiology provider for the convenience of the patient. The DHB pays for the ultrasound and the pipelle biopsy.

On receipt of the results, the GP will explain the diagnosis to the patient and, where appropriate, provide non-surgical treatment under protocol.

The preferred option for non-surgical treatment of AUB under this pathway is the insertion of a Mirena, a levonorgestrel-releasing intrauterine system. The Mirena is a subsidised item through the Pharmac Pharmaceutical Schedule if certain criteria are met. The initial criteria are:

- A clinical diagnosis of heavy menstrual bleeding
- A failed response to, or intolerance to, other appropriate pharmaceutical therapies as per the Heavy Menstrual Bleeding Guidelines
- Serum ferritin levels below 16µ/l (within the last 12 months) or haemoglobin levels below 120g/L.

If the woman would clinically benefit from a Mirena, but does not fulfil the above criteria, a Mirena can be sourced from the DHB on application by referral.[6,7]

Statistical outcomes

An audit of the program from January to November 2017 found that 78 patients had received care under this pathway. This care was administered by 21 different GPs. The women were completely managed in primary care in 52 per cent of cases. There has been an increase in Mirenas inserted in primary care, with seven inserted in the 11-month time period.

The audit showed that results of the pipelle biopsies and ultrasounds had been managed appropriately, with 100 per cent of patients who needed referral to secondary care having been referred. Although 48 per cent of patients still needed referral to secondary care, they were triaged more appropriately, as their initial investigations had been completed. Despite the numbers being relatively small, this project does have some impact on the work load in secondary care.[8]

The increased use of Ferinject within primary care to treat anaemia associated with AUB completes the package of care for women with menorrhagia.

Why should GPs do pipelle biopsies?

Endometrial sampling offers a number of advantages. Endometrial cancers can be diagnosed in a more timely manner. Patients can be triaged more appropriately if they do need a referral. The burden is reduced on hospitals by avoiding a referral to secondary care (in over 50 per cent of cases, women can be managed in primary care, avoiding a secondary care referral).

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ANZJOG

From the editor's desk

Prof Caroline de Costa
FRANZCOG
Editor-in-Chief
ANZJOG

ANZJOG issues for June and August 2018 should be in the hands of readers by the time of publication of this issue of *O&G Magazine*.

In the June issue, both an editorial by Saville, and an article by Paul et al entitled 'Outcomes for women without conventional treatment for stage 1A (microinvasive) cancer of the cervix', deal with contentious historical material from the 'unfortunate experiment' in Auckland in the mid-20th century.[1,2] Cong et al find that previous caesarean section at full dilatation increases the risk of subsequent preterm birth,[3] and Michelotti et al describe the impact of shoulder dystocia on neonatal and maternal morbidity.[4] There is also an interesting report from Hyland and associates on the first 1000 patients using an Australian direct-to-patient telemedicine service for the provision of early medical abortion.[5] In the Current Controversies series, Chan and Munro argue for and against the case for robotically assisted gynaecological surgery, including a piece entitled 'It's not a robot, and it doesn't make anything better'.[6,7]

The August issue contains several articles on the topic of non-invasive prenatal testing for fetal aneuploidy in the cell-free DNA era,[8] including an editorial from Maxwell and O'Leary,[9] and a Clinical Perspective Frequently Asked Questions from Rieder et al.[10] There are three further stimulating pieces on the topic of robotically assisted gynaecological surgery, including the Current Controversy replies from Chan and Munro.[11,12] Also of interest is an update to Australian and New Zealand guidelines on the care of women with decreased fetal movements.[13]

The 2017 Journal Citation Report was released by our publishers Wiley on 26 June 2018. I am happy to let you know that the 2017 Impact Factor for *ANZJOG* has risen to 1.766 (from 1.607 in 2016). This result places the journal 53/82 in the Obstetrics and Gynaecology category. The rise in the Impact Factor is probably due to publication of the SOMANZ Guidelines on hypertension and other guidelines, and to the increased volume of opinion and Letters to the Editor, including the Current Controversies.

We continued to receive a large number of submissions in the first half of 2018, around 230 to date. About 40 per cent are direct rejections by the Editor or, occasionally, by the Publications Coordinator, if the manuscript demonstrably lies outside the author guidelines. The remainder are sent for full peer review and around half of these are ultimately accepted for publication. The Opinion section continues to be well subscribed (high-quality evidence-based opinion), particularly in the Current Controversies series, and is well received by the readership.

The author guidelines are currently being reviewed by the Associate and Assistant Editors. I am expecting to add greater stringency in regard to word count and limitations on tables and figures adhered to. We will also have another category of Specialist Society Guidelines, as these are in high demand by the readership. We will be emphasising the use of UK spelling and the inclusion of details of ethics approval (or in the absence of, need for formal ethics approval in some cases of retrospective use of de-identified data collection) within the Materials and Methods section of all original research articles, including short communications. As always, I would welcome further suggestions for topics for the Current Controversies.

To coincide with the RANZCOG 2018 ASM in September in Adelaide, *ANZJOG* will be publishing a special free-access 'virtual' online edition of the journal, concerned with Indigenous women's reproductive health. This will be edited by Dr Marilyn Clarke, Chair of the Indigenous Women's Health Committee. I am grateful to Wiley for making this issue possible.

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WOMEN'S HEALTH

Journal Club

Had time to read the latest journals? Catch up on some recent research by reading these mini-reviews by Dr Brett Daniels.

Salpingectomy at hysterectomy

A significant proportion of ovarian cancer originates in the fallopian tubes. A 2016 meta-analysis concluded that removal of the fallopian tubes at hysterectomy or sterilisation in the general non-high-risk population had a significant reduction in the occurrence of ovarian cancer (OR=0.51, 95% CI 0.35-0.75).[1] A recent Australian study reported on the change in trends of route of hysterectomy and removal of adnexae from 2001–2015.[2] The overall rate of hysterectomy fell significantly across these years from 54.7 to 40.7 per 10,000 per year (p<0.005). There was a decrease in the number of hysterectomies performed by the abdominal and vaginal routes, while the rate of laparoscopic hysterectomy rose by 153 per cent over the study period. The rate of adnexal removal at hysterectomy for benign reasons increased in both the younger age group (35–54 years old) from 31 per cent to 65 per cent (p<0.005), and in the older age group (over 55 years old) from 44 per cent to 58 per cent (p<0.005). This increase has occurred almost entirely after 2011. There was no significant increase in the rate of adnexal removal from 2001–2011 in either the younger or older age groups.[2] One possible consequence of hysterectomy is decrease of ovarian reserve, despite preservation of the ovaries. A recent small study compared the decrease in anti-Müllerian hormone (AMH) levels pre and post-hysterectomy in women who were randomised to removal or preservation of their fallopian tubes. In both groups, there was a significant decrease in AMH three months after hysterectomy. However, there was no difference in the change, comparing women who had their tubes removed or preserved.[3]

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Pregnancy following treatment for cervical dysplasia

Cervical intraepithelial neoplasia (CIN) is a precancerous lesion common in reproductive-aged women. Many women will go on to pregnancies after treatment for CIN and there is concern about treatment methods and adverse obstetric outcomes, including preterm birth. A large register-based Scandinavian study examined the pregnancy outcomes of more than 4500 women who received loop electrosurgical excision procedure (LEEP, LLETZ) treatment for CIN1 between 1997 and 2009, and their 31,021 subsequent deliveries.[1] Within this group of women, there was increase in the rate of preterm birth (before 37 weeks gestation) when comparing pre- and post-LEEP treatment (odds ratios 1.47, 95% confidence interval 1.05–2.06). There was no significant increase if women received a diagnosis of CIN1, but did not have a LEEP procedure (odds ratios 0.90, 95% confidence interval 0.71–1.13). In comparison with other women delivering in the same catchment in the study period, those who received a diagnosis of CIN1, but did not have a LEEP procedure, did not have an increased risk of preterm labour (odds ratios 0.95, 95% confidence interval 0.76–1.21), while those who had a LEEP procedure did have an increased risk of preterm labour (odds ratios 1.45, 95% CI 1.02–1.92).[1]

A 2017 *Cochrane review* analysed treatment of any grade of CIN and early grade IA1 cervical cancer. Studies included treatment observation, excision or ablative treatments.[2] The analysis included data from over six million pregnancies, with 65,000 women having received treatment. Women who had treatment were at increased overall risk of preterm birth at less than 37 weeks, compared to women who had not received treatment (10.7% vs 5.4%, RR 1.75, 95% CI 1.57 to 1.96). They also had higher rates of delivery before 34 and 28 weeks. There was a higher rate of preterm delivery with excisional rather than ablative techniques, and increased rates with increased depth of excision for repeat treatment.[2] These studies reinforce the knowledge that excision treatment of cervical disease increases the risk of preterm labour in subsequent pregnancies. Appropriate observation or ablative procedures may be considered as an alternative in some women.

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College Statements update
July 2018

Revised College Statements

The following revised statements were approved by RANZCOG Council and Board in July 2018:

- **Timing of elective caesarean section at term (C-Obs 23)**
  1. Updated references

- **Progesterone support of the luteal phase and in the first trimester (C-Obs 29a)**
  1. Updated references

- **Maternal suitability for models of care and indications for referral within and between models of care (C-Obs 30)**
  1. Updated references
  2. Appendices consisting of consultation and referral guidelines changed to a link rather than full document

- **Subclinical hypothyroidism and hypothyroidism in pregnancy (C-Obs 46)**
  1. Change of title: formerly Testing for hypothyroidism during pregnancy
  2. Updated references
  3. Clear recommendations and definitions regarding the treatment of overt hypothyroidism and subclinical hypothyroidism

- **Perinatal anxiety and depression (C-Obs 48)**
  1. Updated references and recommendations
  2. Aligned with Australian National Guideline Mental Health in the Perinatal Period (2017)
  3. All of the recommendations relevant to maternity care were taken (with permission) from the National Guideline and placed in this statement

- **Substance use in pregnancy (C-Obs 55)**
  1. Updated references

- **Diethylstilboestrol (DES) exposure in utero (C-Obs 56)**
  1. Early review and update to align with the new National Cervical Screening Program
  2. Updated references

- **Prenatal screening and diagnostic testing for fetal chromosomal and genetic conditions (C-Obs 59)**
  Joint RANZCOG/HGSA statement rewritten by working group
  1. Change of title: formerly Prenatal screening and diagnosis of chromosomal and genetic conditions in the fetus in pregnancy

- **Prenatal assessment of fetal structural conditions (C-Obs 60)**
  1. Amalgamation of paragraph (4.3) from the College statement Fetal Morphology (C-Obs 57), so C-Obs 57 can be retired

- **Investigation of intermenstrual and postcoital bleeding (C-Gyn 6)**
  1. Updated references

- **Fibroids in Infertility (C-Gyn 27)**
  1. Updated references

- **Cultural Competence (WPI 20)**
  1. Updated references
  2. Link to CLIMATE elearning resources

Retired College Statement

- **Fetal Morphology (C-Obs 57)**
  Rationale: The Women's Health Committee has highlighted that the Australasian Society for Ultrasound in Medicine (ASUM) provides guidance on this topic that is accessible via their website. It was their recommendation that only one paragraph (4.3) in this statement should be retained and added to the College statement Prenatal assessment of fetal structural conditions (C-Obs 60) as a recommendation. Additional feedback was requested from COGU regarding this statement. The correspondence received was in line with the discussions and recommendations made by the committee.

A full list of College Statements can be viewed on the RANZCOG Guidance app or on the website at: www.ranzcog.edu.au/Statements-Guidelines.

RANZCOG Patient Information

There are 33 RANZCOG Patient Information Pamphlets, including the new Pregnancy and Childbirth pack of 18 pamphlets, now available. All of these products can be viewed and ordered at: www.ranzcog.edu.au/Womens-Health/Patient-Information-Guides/Patient-Information-Pamphlets.

The following new title was approved for publication and is now available:

- Endometrial Ablation

Prof Yee Leung
Chair
RANZCOG Women's Health Committee

Notice of Deceased Fellow

The College was saddened to learn of the death of the following RANZCOG Fellow:

Dr Ralph Hickling, 3 June 2018

Knowing me, knowing you

RANZCOG 2018 Provincial Fellows/WA/SA/NT Regional Scientific Meeting
Bunker Bay, Western Australia, 26–29 April 2018

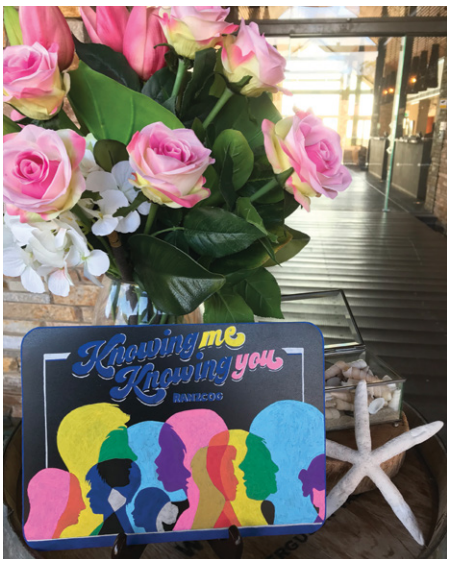
More than 170 Fellows, Diplomates, midwives, trainees and medical students took part in the two-day scientific program designed for both specialists and GPs. Attendees also participated in seven pre-conference workshops, including a dedicated Diplomates Day for GPs.

The theme, 'Knowing Me, Knowing You', focused on looking after ourselves and our colleagues, and creating healthy and supportive workplaces. The theme also served as inspiration for the sold-out ABBA-themed gala dinner. Thank you to everyone who helped make the meeting such a success.

The RANZCOG 2019 Provincial Fellows/QLD/NSW Regional Scientific Meeting will be held on the Gold Coast, Queensland, in June 2019, with further details to follow soon.

Radiologist/sonologist, Dr Emmeline Lee, and WA College Councillor, Dr Kristy Milward.

Deputy Chair Provincial Fellows Committee, Dr Jared Watts; FRANZCOG Trainee, Dr Stephanie Green; FRANZCOG Trainee, Dr Sarah Rylance with her husband Andrew; and Fellow, Dr Winston Almeida.



FRANZCOG Trainee, Dr Jenni Pontre, and Fellow, Dr Patty Edge, show off their pastry masterclass creations.

Board member, Prof Yee Leung, and President-elect, Dr Vijay Roach, get into the spirit of the ABBA-themed gala dinner.

FRANZCOG Advanced Training Modules

Michael Permezel
Chair, Education Strategy Committee

The College has developed the Advanced Training Modules (ATMs) to provide more structure to FRANZCOG Advanced Training. FRANZCOG training was last reviewed by the College's governing body, the Australian Medical Council, in 2013. One of the key recommendations of the accreditation report was to implement greater structure to Advanced Training. Complete flexibility is no longer tenable. All advanced trainees who commenced training on or after 1 December 2014 are required to complete a compulsory ATM prior to being awarded FRANZCOG. Information has been disseminated over the past three years through the Collegiate e-newsletter and the Training Bulletins.

Pathways to FRANZCOG

All trainees undertake the same basic (core) training. This can be viewed as progressing the trainee to senior registrar level across a broad scope of practice. On completion of basic training, the FRANZCOG trainee should be equipped to begin a position as an O&G senior registrar.

The College now recognises three distinct pathways to FRANZCOG. All pathways reach consultant level across the 'common scope of practice', but each has an additional scope of practice: academic, generalist or subspecialist. The new compulsory ATMs map to these scopes of practice.

Compulsory ATMs

For advanced trainees who elect to take the generalist pathway, satisfactory completion of both the Generalist Obstetric ATM and Generalist Gynaecology ATM is required. This means that these trainees will progress to consultant level across the generalist O&G scope of practice.

An advanced trainee pursuing the academic pathway will already have met the criteria for that pathway, which includes a PhD (or equivalent). They are required to complete the Essential O&G Skills ATM in order to reach consultant level across the common scope of practice.

Similarly, the subspecialty trainee electing to take the subspecialist pathway will need to complete the Essential O&G Skills ATM in order to formalise the attainment of consultant-level practice across the common scope of practice.

Why mandate the Essential O&G Skills ATM for subspecialty trainees?

This has perhaps been the most controversial aspect of the changes to advanced training. Why not let subspecialty trainees do only their subspecialty? The following is the rationale.

What is the scope of practice of a new Fellow on the day that FRANZCOG is awarded?

It is perfectly reasonable for credentialing committees to demand of the College that it define what it means to be awarded FRANZCOG. Currently, the College is unable to answer that question. In the

Table 1. Generalist pathway.

FRANZCOG Advanced Training (104 weeks)		
Level 5	**Level 6**	
Example 1		
Elective training 46 weeks FTE	Generalist Obstetrics ATM 26 weeks FTE	Generalist Gynaecology ATM 26 weeks FTE
Example 2		
Generalist Gynaecology ATM 46 weeks (ca 0.5 FTE) Elective training 46 weeks ca 0.5 FTE	Generalist Obstetrics ATM 46 weeks (ca 0.5 FTE) Elective training 46 weeks ca 0.5 FTE	
Example 3		
Generalist Obstetrics ATM and Generalist Gynaecology ATM 46 weeks	Elective training 46 weeks FTE	

Table 2. Subspecialist pathway.

FRANZCOG Advanced Training/Subspecialty Training (104 weeks)	
Level 5	**Level 6**
Example 4	
Subspecialty training Year 1 (incorporating Essential O&G Skills ATM, for example, a fortnightly shift on-call for O&G at the hospital)	Subspecialty training Year 2
Example 5	
Elective training 46 weeks (incorporating Essential O&G Skills ATM)	Subspecialty training Year 1

future, the College will be able to say that all new Fellows have reached consultant level across the common scope of practice.

A subspecialist may continue to practise across the common scope of practice

Although this varies significantly between the various subspecialties, many subspecialists will elect to practice non-complex obstetrics and gynaecology outside of their subspecialty. Having only reached senior registrar level at the end of basic training, the Essential O&G Skills ATM should ensure that all new FRANZCOGs are able to practise at consultant level across this relatively restricted common scope of practice.

A subspecialty trainee might not complete subspecialty training

It is an unfortunate reality that many subspecialty trainees (approximately 30 per cent) do not complete subspecialty training for a variety of reasons. These differ across the subspecialties, but rates of non-completion are relatively high in some areas. In the absence of performing the common scope of practice at senior registrar level, the trainee may be in a position where they lack a scope of practice as a new Fellow. The trainee is neither a subspecialist nor a generalist, never having performed non-complex O&G at senior registrar level.

Could FRANZCOG be delayed until completion of subspecialty training? This is not possible as many subspecialty training pathways are dependent on consultant practice for the latter year(s) of training.

A subspecialist may be required to participate in the O&G on-call roster

A subspecialist may also be expected to perform simple office O&G at consultant level in the course of practising their subspecialty. It is very easy to focus tertiary hospitals in large cities, where it is uncommon (outside of MFM) for a subspecialist to be 'on-call' for the hospital. However, there are myriad circumstances that apply through various locations in Australia and New Zealand. There are sites where subspecialists participate on the on-call roster.

Do all subspecialists now need to retrain across the common scope of practice?

The prospect of retraining established subspecialists has caused needless alarm among both the subspecialists and those that would have to train them. The ability to practise at consultant level across the common scope of practice applies only to new Fellows on the day they acquire FRANZCOG. It is the role of credentialing committees to assess currency and CPD beyond FRANZCOG. However, credentialing committees are entitled to know what scope of practice was present on the day that FRANZCOG was awarded.

When must the compulsory ATMs be undertaken?

The compulsory ATMs can be undertaken anytime during Advanced Training, either part-time or full-time. The procedural requirements of the Essential O&G Skills ATM may be achievable through weekends on-call for an O&G unit or in a three-month block. We believe that this is achievable in Years 5 and 6, including those trainees who have commenced subspeciality training or are undertaking a year that is more geared towards gynaecology.

Special Interest ATMs

Optional Special Interest ATMs are available for those wanting to further develop an area of particular interest. They can be done in conjunction with the compulsory ATMs and include:

- Pelvic Floor Disorders (PFD-ATM)
- Hysteroscopic and Laparoscopic Surgery (HL-ATM)
- Contraception, Abortion and Sexual Health (SRH-ATM)
- Colposcopy (C-ATM).

For more information go to: www.ranzcog.edu.au/Training/Specialist-Training/Training-Requirements/Advanced-Training-Modules.

Queen's Birthday Honours Awards

RANZCOG would like to congratulate our Fellows for being awarded honours on Australia Day 2018 for their crucial work in the field of obstetrics and gynaecology.

Officer (AO) in the General Division of the Order of Australia:

Prof Susan Walker
Prof Walker is a maternal-fetal medicine subspecialist and an academic clinical researcher. Her research interests focus on improving the detection and management of fetal growth disorders, treatments for pre-eclampsia and prevention of stillbirth.

Member (AM) in the General Division of the Order of Australia:

Prof Rodney Baber
Prof Baber is Professor of obstetrics and gynaecology at the University of Sydney, President of the International Menopause Society and Associate Editor of *ANZJOG*. He has been an invited speaker at over 100 scientific meetings and has published more than 70 papers in peer-reviewed journals.

Dr John Taylor
Dr Taylor is a urologist and urogynaecologist, who has been awarded for significant service to medical education and to the community.

Member (AM) in the General Division of the Order of Australia:

Adjunct A/Prof Leslie Reti
A/Prof Reti is Director of Gynaecology, Cancer Services and Clinical Governance at the Royal Women's Hospital and Adjunct A/Prof of Public Health at La Trobe University. He is also co-founder of the Centre Against Sexual Assault (CASA House).

Medal (CAM) of the Order of Australia:

A/Prof Michael Cooper
A/Prof Cooper initiated one of the early endoscopic training centres for gynaecologists in Australia. Specialising in the treatment of endometriosis requiring advanced surgical and/or assisted conception techniques, he encourages patients to be involved in their own care and strongly advocates for specialist endometriosis management teams.

Letters to the Editor

Dr Margaret Sparrow
DNZM, MBE
BSc, MBChB, Dip Ven, FAChSHM, HonDSc
FRANZCOG(Hon)
Director, Istar Ltd, Wellington, NZ

Dr Carol Shand
CNZM
MBChB, FRNZCGP, FAChSHM
Director, Istar Ltd, Wellington, NZ

Congratulations. *O&G Magazine Winter Vol. 20 No. 2* contributes significantly to the discussion on changes in abortion laws to reflect best medical practice in Australia and New Zealand. More detail could have been provided on the current laws in New Zealand, but hopefully changes will take place and this topic can be revisited. The article on the tyranny of distance focuses on a universal access problem. In New Zealand, even though the distances are smaller, women residing outside the main centres are significantly disadvantaged.

It would have been instructive to point out that statistics collection in New Zealand since 1980 has been creditable, providing useful information and confirming the safety of abortion procedures. From 1980–2017, there have been no deaths in a total of 436,043 abortions. This compares very favourably with the WHO figure quoted of one or fewer deaths per 100,000.

Clarification is provided on two relatively minor points. Firstly, in the article on early medical abortion, Dr Rasmussen argues for greater involvement by doctors outside dedicated facilities to become certified prescribers of mifepristone. Unfortunately, there is currently no pathway for this to happen in New Zealand. All abortions must be performed in a licensed facility until the law is changed. The advice that interested doctors should contact the Abortion Providers Group Aotearoa will only confirm this restriction. Secondly, in the article on post-abortion contraception under emergency contraception, the authors imply that the 30mg ulipristal acetate pill is available in New Zealand, but, regrettably, it is not.

Dr Lisa Rasmussen
General Practitioner
Austin Family Planning
Heidelberg, Victoria, Australia

Since publication of *O&G Magazine Winter Vol. 20 No. 2* on abortion, I was fortunate to have the opportunity to attend the 2018 Professional Development Forum at the Abortion Providers Group Aotearoa New Zealand (APGANZ). The forum, held over two days in Dunedin, presented a program of talks on all aspects of care for women having early and late abortions. A thought-provoking program was presented by local practitioners, including doctors, midwives, nurses, and two international guests, Dr Patricia Lohr, Medical Director of British Pregnancy Advisory Service, and Dr Ea Mulligan from the Department of O&G at Flinders University.

It was a privilege to meet such a group of committed and caring practitioners. I was struck, and not for the first time, by how important it is to listen and learn from each other; to reflect on our practices and the wide-ranging cultural, political and social forces that shape what we do. How we practise is not immutable. At the conclusion of the forum, all participants were invited to think about what we would like to change over the next 12 months. Supported by the warm collegiality I experienced, I would like to work with others at my place of work to review our current anti-D prophylaxis protocol and to consider not giving anti-D prophylaxis to women having abortions at less than seven weeks; to continue improving training and access to services; and to start the discussion about general anaesthetic, standard practice in Victoria, versus the standard practice of local anaesthetic and sedation in New Zealand, for women having first-trimester surgical abortions. Finally, I would like to acknowledge the excellent new Standards of Care document for women requesting an abortion in New Zealand that has been completed this year.

Thank you to APGANZ and to Dr Janet Downs and the organising committee.

Obituaries

Dr Richard Bowen Stanley
1938–2012

Richard was a person who cared deeply for his patients and had a great love of obstetrics. He was a founding member of the Fertility Society of Australia and introduced keyhole surgery to the Mackay region of Queensland.

Richard's commitment to the core value of medicine and his inspirational work ethic are legacies he has passed on to his son and grandchildren.

Richard was born in Harrogate in the UK. He studied medicine at St Bartholomew's Hospital in London, where his great-great-great-grandfather Edward Stanley (1793–1862) was demonstrator of anatomy, writing several books on the subject. He was also appointed Surgeon Extraordinary to Queen Victoria in 1858.

Qualifying in 1962, Richard returned to work in his hometown of Chelmsford as a junior doctor, where he met Dr Gresley Lukin (MRCOG) and Dr Russell Ferguson from Australia, who were instrumental in his later emigration. Richard then worked at St Helier Hospital in Surrey under Dr Doreen Daly (MRCOG), who encouraged him to specialise in obstetrics, before moving to St Anthony's Hospital in Cheam, where he met Jane Kerr, a nurse.

Richard married Jane in 1968. They were married for 43 years and had two children: Angus and Tania (deceased).

Richard worked as a registrar on the Isle of Wight for a year before moving to the Mulago Hospital in Uganda as a senior registrar. Unfortunately, due to political upheaval, he was forced to leave the country. He then worked for a year in family planning at the Kenyatta hospital in Nairobi, Kenya.

In 1969, Richard became a Member of the Royal College of Obstetricians and Gynaecologists.

On return to the UK, he worked at the Whittington and University College Hospital. In 1972, in response to an advertisement in the *British Medical Journal* by Dr Lukin, the family emigrated to Mackay in Queensland, Australia, where Richard worked in the Paul Hopkins Family Medical Centre as a GP obstetrician and gynaecologist.

In 1975, Dr Lukin and Richard started the first O&G practice in Mackay, working at Mackay Base Hospital and in private practice. In 1977, they were joined by Dr Vivienne O'Connor (MRCOG) who had been a registrar with Richard at the University College Hospital.

Richard was admitted as a Foundation Fellow of the Royal Australian College of Obstetricians and Gynaecologists in 1979, receiving his RCOG Fellowship in 1984. Following the amalgamation of the Australian and New Zealand Colleges, Richard was admitted as a Fellow of RANZCOG in 1998.

In 1998, aged 60, with some health issues and a very large workload, Richard decided to retire. I took over the practice and, as a tribute to Richard's work in Mackay, had new rooms built and named them Stanley House. This was officially opened by the then member of Mackay, Tim Mulherin MP, on 16 September 2004.

Richard had many interests, including photography, golf and travel and was a great family man. He and Jane retired to Brisbane to be closer to their son and four grandchildren. They bought a camper trailer and toured many parts of Australia.

In 2011, Richard was diagnosed with pancreatic cancer, an illness he bore with great dignity. Every good moment was cherished and spent with family visiting national parks. Richard died in Brisbane on 23 May 2012. He will be remembered by his many patients, faithful staff, colleagues and family for his wonderful personality, characterised by an easygoing manner, patient disposition, and an impish sense of fun. He had an ability to mix at all levels and is sadly missed.

Dr Lance Herron
FRANZCOG

Prof Alan Hewson AM
1927–2017

Alan was a homebirth. The local midwife delivered him in Lisarow, near Gosford, NSW. Alan started out working at BHP doing metallurgy before being awarded a Commonwealth scholarship to study medicine at Sydney University. This gave him free tuition and a small living allowance. He augmented this by working in the orange orchards in the university vacations.

Alan married Pia, who graduated in medicine with him, and they both came to Royal Newcastle Hospital as resident medical officers. He then decided to specialise in O&G in Hobart and spent two years there before going to the UK to do the specialty examination and work for two years at Oxford.

In 1958, Alan began private practice in Newcastle. He had a very productive partnership with Jack Elliott. Alan took a year's sabbatical in 1965 to go to Edinburgh and study for the surgical fellowship. He achieved this and returned to Newcastle.

Alan was a very skilful surgeon and obstetrician. His rapport with his patients meant he had a huge private practice. He had honorary appointments at Royal Newcastle Hospital, Mater Hospital Brisbane, the former Western Suburbs Hospital, Maitland Hospital, Singleton Hospital and Cessnock Hospital. He taught medical students, residents, registrars, family doctors, nurses and midwives. He set up a medical association study in 1960 to improve the care of pregnant women. There were more than a hundred family doctors doing obstetrics in this region and he obtained the cooperation of them all. He achieved a change in management, which improved the outlook for mother and baby.

Alan was involved in the Royal College of Obstetrics and Gynaecology (RCOG) from 1967 when he set

up a local branch of the RCOG called the Northern Obstetrical and Gynaecological Society (NOGS). Alan obtained Fellowship of the Royal Australian College of Obstetricians and Gynaecologists in December 1978 and, following the amalgamation of the Australian and New Zealand Colleges, was admitted as a Fellow of RANZCOG in 1998.

Alan served on the executive of the NSW committee for five years before he was elected to the Australian Council in 1981. He served on this council for 11 years, during which time he chaired the education committee and masterminded the obligatory continuing education and certification program of the College. The program has been a huge success and has formed the template for other medical colleges. Alan was awarded the President's Medal. He later became Secretary of the College and was involved in the evolution of College subspecialties and relationships with family doctors and midwives.

Locally, Alan was chairman of the medical board of Royal Newcastle Hospital and coordinated, with the Australian Medical Association, the submission to the Karmel Committee, which recommended a medical school for Newcastle. Alan was heavily involved in the integrated curriculum of the new medical school and became Conjoint Professor. In 1990, he was awarded a Doctor of Medicine by the University of Newcastle and was Assistant Dean of Continuing Medical Education from 1994 onwards.

Alan was a foundation member of the Hunter Postgraduate Medical Institute in 1979, serving in the executive. He was Director of Studies at the time of his death. The membership was almost 2000, the largest in Australia.

Alan held many positions in medical administration in the region. He was Chairman of the Planning Committee for the new John Hunter Hospital from 1983–1990 and served on the board for four years.

Alan was awarded the Member of the Order of Australia (AM) in 2002. He was recently awarded a PhD for his thesis, The History of Obstetrics and Gynaecology in Australia 1950–2010. In the last year of his life, he published a hardcover book based on this thesis.

Alan was married twice. With his first wife, Pia, he had three children. Pia died of a brain tumour and Alan subsequently married Patricia, who he was married to for 40 years. He has eight grandchildren and four great-grandchildren.

Alan died on 19 August 2017 at the age of 90.

Dr Julian Ward
FRANZCOG

Dr Glenn Lewis
1963–2017

Glenn was born in the UK and emigrated to Western Australia with his family as a child. He attended the University of Western Australia (UWA) as an undergraduate and received his Bachelor of Medicine, Bachelor of Surgery. Glenn met his wife, Julie Hammond, at UWA, who went on to become a GP in Perth. Julie and Glenn had two children. Glenn completed the majority of his training in O&G at King Edward Memorial Hospital in Perth, with time also spent in Hobart, Tasmania, and Frankston, Victoria. He obtained Fellowship of the Royal Australian College of Obstetricians and Gynaecologists in 1997 and, following the amalgamation of the Australian and New Zealand Colleges, was admitted as a Fellow of RANZCOG in 1998. Glenn returned to Perth and took up private practice in O&G in Subiaco, WA, as well as public appointments at Osborne Park Hospital and King Edward Memorial Hospital.

Glenn is remembered with great fondness by his peers as a kind and gentle man, generous in his support of all colleagues, but especially those junior to him. He nurtured and encouraged many of the current Western Australian O&G workforce, who miss him greatly. He was always willing to lend a hand.

Glenn was dedicated to his work and his patients, often describing his work as 'the best job in the world'. Patients described with fondness his sense of humour, gentleness, dedication and devotion to their care. Often described as a true gentleman, Glenn was a skilled and ethical practitioner and a wonderful role model.

Glenn's interests outside of medicine included kite boarding, gardening and any of the pursuits of his children. He was a devoted father and grandfather. He is greatly missed by the O&G community, his patients and the staff with whom he worked. Glenn is spoken of with much fondness after his early passing.

Dr Robyn Leake
FRANZCOG

Dr Colin Leake
FRANZCOG

Dr William Hugh Patterson
1928–2018

Hugh lived an industrious life and his contributions were felt in the practice of medicine, military service and medical politics.

He was born in Sydney and, in 1946, matriculated into medicine at the University of Sydney. Here he met Pamela Nisbet, another medical undergraduate. Pamela became a GP. They graduated in 1952 and married the following year.

Hugh gained early experience at the Royal Alexandra Hospital for Children, Launceston General Hospital in Tasmania and Lewisham Hospital in Sydney. In 1957, he travelled to the UK and sat the examinations for the Royal College of Obstetricians and Gynaecologists (RCOG), becoming a Member in 1958. On his return, and after several years in general practice, he was appointed to Royal North Shore Hospital and the Royal Hospital for Women in Paddington. He held the positions of Honorary or Visiting Medical Officer at both hospitals for three decades. Hugh was elected a Fellow of RCOG in 1974, a Fellow of the American College of Surgeons in 1976 and a Fellow of the Royal Australian College of Obstetricians and Gynaecologists in 1979. Following the amalgamation of the Australian and New Zealand Colleges, Hugh was admitted as a Fellow of RANZCOG in 1998. For most of his career, he was a clinical lecturer at the University of Sydney and the University of New South Wales.

Hugh's major clinical interest was the investigation and treatment of pre-invasive cancer of the cervix. He was one of the first gynaecologists to use a colposcope for this purpose in a Sydney private

practice. He was an early leader in the development of Papanicolou smear screening; and after further studies in America, his practice was one of the first in Sydney to offer carbon dioxide laser in the treatment of pre-cancerous disease of the lower genital tract. In later years, he was appointed Chair of the Department of Gynaecological Oncology at Paddington. He practised in both private and public sectors devoted much of his time to treatment of the needy and vulnerable.

In retirement, he would occasionally remark that some of his more satisfying work had been in the treatment of patients in the state psychiatric system of the 1960s. These patients had been neglected and many suffered chronic and gross pathologies. Hugh was one of the first appointed to a surgical unit in what was then North Ryde Psychiatric Hospital. He quickly established an outpatient service that extended from North Ryde to Gladesville Hospital, Callan Park, Broughton Hall and Rydalmere hospitals. He treated hundreds of disadvantaged patients.

Hugh was commissioned as a Captain in the Citizen Military Forces in 1953. In the mid 1960s, the number of women in the Royal Australian Air Force (RAAF) was rising and he saw greater scope to apply his skills in the RAAF. He transferred in 1965 and provided specialist services to female members of the RAAF. He assisted in the development and supervision of an obstetrics section at No. 4 RAAF Hospital at Butterworth in Penang, Malaysia. He was promoted several times and in 1976 achieved the rank of Group Captain and consultant gynaecologist to the Director-General of Air Force Health Services, a position he held until retirement in 1985. After three decades of service, he was awarded the Reserve Forces Decoration with two clasps and the National Medal.

Hugh also found time to serve his profession. He was a member of the Australian Medical Association for 40 years, during which time he served as a Councillor on the NSW committee from 1982–87, state President from 1985–86 and a Federal Councillor from 1987–88. In 1985, he was involved in difficult negotiations with both state and federal governments following the acrimonious 1984 Medicare dispute. Hugh's leadership as NSW President proved key to a highly successful arbitration of sessional rates for visiting practitioners and specialists.

Other valuable contributions Hugh made include: a stint with Specialist Aerial Medical Services, in which he treated the Aboriginal and Torres Strait Islander population in the far west of NSW; the education of midwives; attempts to further the careers of female specialists who were under-represented in his field; and various non-clinical responsibilities in disciplinary and standards bodies. After a lengthy illness, Hugh died on 3 May 2018.

Hugh's wife, Pamela, died in 2010. Hugh is survived by his sons David and Malcolm.

Malcolm Hugh Patterson

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