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The puerperium

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Women's Health

Letter to the editor

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From the President

Dr Rupert Sherwood
President

When I started writing this report and Microsoft Word did not recognise the word 'puerperium' it reaffirmed to me that this remains an under-resourced and too often largely ignored aspect of obstetrics. Lacking in glamour and fraught with a combination of medical, nursing, psychological and social issues, the time immediately after the birth of a baby represents one of the most major changes in a woman's life, as well as that of her partner.

As usual, the *O&G Magazine* editorial advisory group has commissioned articles that go a long way towards addressing this gap in our knowledge and updating the reader in regards to care in this vital area of postpartum medicine.

The quite reasonable expectation that all will be well and babies will behave themselves can often be dashed by a single (long) night of colicky refusal to feed and, thereafter, confidence can be eroded, leading the new parents to start to question both their sanity and fitness to be parents. No other arena exemplifies so well the benefits of a coordinated team approach to care as the puerperium. Midwife, doctor, neonatal nurse, lactation consultant, social worker, physiotherapist, psychologist and, best of all, good friends all have vital roles to play in steering a successful path through those first few weeks after the new addition to the family has arrived.

> 'Any contribution...from a financial commitment to organisations providing maternity and paediatric care in developing and under-developed regions through to actually working overseas...can and does make a difference.'

The list of articles is the usual broad scope achieved by *O&G Magazine* when addressing a theme, and includes contributions from obstetric and neonatal doctors, nurses, a lactation expert, physiotherapist and, most importantly, a mother who has actually experienced this transition from individual to parent and all its attendant challenges.

Collaborative care in maternity remains a topic of much discussion, and while the uptake of Eligible Midwife status has been slow (in no small part owing to the administrative requirements faced by those applying to the statuary authorities overseeing nursing and midwifery registration), examples are emerging of the successful application of patient-focused care involving medical and midwifery professionals working in a private practice environment. Proposals from some jurisdictions to utilise the Maternity Reform legislation to introduce models of care that reduce, rather than increase, the collaborative aspects of maternity care, which are the central tenet of the models supported by RANZCOG, have been opposed through submissions from the Board and we will continue to monitor activity in this arena.

College business continues apace, relying as always on the pro bono contributions of Fellows and Diplomates. The perennial problem facing the Council and College is always that of encouraging contributions of any size and scope from the membership, without which we cannot function at the high standard expected of those who look in from the outside at our productivity and results. I hope to address this issue with a forthcoming forum at the July Council at which we will explore new ways of engaging the membership in contributing to RANZCOG activities.

It was my pleasure at the recent Council meeting in March to acknowledge the outstanding contributions of two Fellows with the award of a Distinguished Service Medal. Dr David Simon and Dr Aldo Vacca were both recognised for their selfless and far-reaching contributions to teaching and mentorship; Dr Simon both locally, with Diplomates, and overseas, teaching in Papua New Guinea, and Dr Vacca for his practical demonstrations of the use of the vacuum extractor. It is not unusual to hear an experienced practitioner, who has delivered thousands of babies, emerge from one of Dr Vacca's sessions with the words: 'Now, that really makes sense…'

World news continues to remind us that whatever problems and annoyances we may face in our daily lives, they pale in comparison to the travails being endured by those affected by the devastating tsunami that has demolished large tracts of the east coast of Japan and left many citizens still threatened by unstable nuclear reactors and the huge job of rebuilding their lives and infrastructure. RANZCOG has sent, in addition to a donation to the AOFOG Japan Disaster Relief fund, a written expression of sympathy and support, with the Japanese characters and English translation adjacent. A copy will be kept in our library.

An article in this issue describing neonatal care in a less safe environment than ours (An Obstetrician Overseas by Rebecca Zachariah) is another reminder that, globally, much of the delivery of maternal and neonatal care occurs under circumstances that would tax most of us quite severely. Any contribution each of us can make in these arenas of health delivery, from a financial commitment to organisations providing maternity and paediatric care in developing and under-developed regions through to actually working overseas for one of the organisations such as LAMB or Médecins Sans Frontières, can and does make a difference and contributes to addressing some of the inequalities that exist.

Closer to home, the recent *Lancet* series on stillbirth – available at: http://www.thelancet.com/series/stillbirth – exemplifies two challenges in Australia. Firstly, further reduction in our stillbirth rate (2.9/1000 births) continues to elude us, despite our 'wealthy' classification in the report from Flenady and colleagues in Brisbane. All clinicians who deliver babies and care for mothers who have suffered the tragedy of perinatal loss should read the report. Secondly, within the figures for Australia is the stark reality of our failure to address the very significant gap between Indigenous and non-Indigenous health outcomes. These are the issues that received attention and debate at the Indigenous Women's Health meeting in Cairns.

RANZCOG has been involved in presenting both written and verbal

submissions to the current House of Representatives inquiry into the processes associated with international medical graduate (IMG) assessment, particularly focusing on how those myriad regulations and requirements can be made more transparent and streamlined for specialists recognised in other countries to obtain a clear pathway to gaining Fellowship of an Australian specialist college. I would like to acknowledge the contribution of the Chair of the Overseas Trained Specialist Committee, Dr Chris Hughes, for his presentation to the inquiry and ongoing work in this important area of College business.

> '... the Training Program Review Working Party continues its work under the guidance of...Dr Ted Weaver, and has received many valuable submissions from a wide variety of stakeholders.'

I am very pleased to announce the appointment of a Community Representative to the 7th RANZCOG Council, an initiative that is part of the Governance reforms that were put in place as we moved from the 6th to current Council. Ms Catherine Whitby was appointed from a strong field of applicants responding to national advertising for the position. The Board, Councillors, staff and the Fellowship welcome Catherine to the College and looks forward to her contribution. A short profile of Catherine can be found on page 78.

The RANZCOG Research Foundation has elected Professor Caroline de Costa as its new Chair. This follows the retirement of Professor David Healy, who chaired the Research Foundation over the last four years, leaving it in the very strong position it is in today, both in terms of its academic output through the various scholarships and endowments, and also with respect to its governance and financial security. On behalf of the Board, the CEO and all members of the College, I thank Professor Healy for his contribution and welcome Professor de Costa to the role.

Lastly, the Training Program Review Working Party continues its work under the guidance of the immediate past-president, Dr Ted Weaver, and has received many valuable submissions from a wide variety of stakeholders. Of particular interest to me were the results of a survey of senior trainees (years 5–6) and recent (less than five years) Fellowship graduates. Notable in the comments (and free text is often where the real information is gleaned in surveys) was the recurring pleas from senior trainees for a balance between mentorship and 'fine-tuning' of their clinical skills, combined with remote supervision to allow them to function at junior consultant level with backup appropriate to their pre-Fellowship status. Provision of this fine balance of training and 'hands-off' supervision does not come easily to all of us, and we should all continue to improve and develop our teaching skills if we are to maintain a confident and competent graduate output.

As usual, I wish to express my ongoing gratitude to the members of staff at College House, who are unstinting in their efforts to make our College the success it is and maintain our status as the leader in training and accrediting O and G specialists and general practitioners.

From the CEO

Dr Peter White
CEO

As the range of articles in this edition of *O&G Magazine* attests to, there is much to consider and much that occurs for all involved during the events of the first six weeks after birth. For parents, having experienced this twice myself, events in that period happen quickly, adjustments need to be made, and looking back on the time it can sometimes be somewhat tricky to accurately contextualise, albeit a time that is recalled generally as happy and satisfying if all has gone well.

Were I to attempt to describe all that the College does in any six-week period, it would take many pages to adequately cover, particularly if the sometimes time-consuming background of seemingly mundane events were chronicled. Looking back, as I write, to the immediate past timeframe in question, which began in the second week of March, the period includes the first meeting of the Council and associated major standing committees of the College of the year, accompanied by meetings of the RANZCOG Board and assessment interviews for overseas trained doctors (OTDs) seeking recognition of their specialist qualifications in Australia, as well as New Zealand.

> 'Time and time again...I have heard those who are involved in College activities, such as examining or IMG assessment, comment on the professional satisfaction associated with the experience.'

In the last edition of *O&G Magazine* the appointment of a community representative to Council was foreshadowed. As outlined in the President's column, the College is pleased to welcome Ms Catherine Whitby as the inaugural appointee to that position. Catherine has a professional background in law and her appointment will ensure a widening of the range of views is able to be considered by the Council during its decision-making processes.

Readers may recall that part of my most recent 'From the CEO' column addressed the issue of OTDs and international medical graduates (IMGs) and the conduct by the Australian Government of an inquiry by the House of Representatives Standing Committee on Health and Ageing into the registration processes and support available to OTDs in Australia. In addition to its written submission, the College gave oral evidence to the inquiry when Dr Chris Hughes, Chair of the College Committee responsible for the assessment of specialist IMGs, appeared before the Committee when it conducted hearings in Melbourne. Proceedings of the inquiry, along with submissions received can be found at: http://www.aph.gov.au/house/committee/haa/overseasdoctors/index.htm .

The challenges facing bodies, such as the specialist colleges, that undertake IMG assessment and the challenges that international medical graduates (IMGs) encounter when they choose to practise in countries such as Australia and New Zealand are many; it is a complex area with a variety of bodies involved, and it is high-stakes assessment, without the luxury of long timeframes and multiple sampling opportunities. The article in this issue of *O&G Magazine,* by Chris Hughes, Sarah Tout and Georgina Anderson, describes the College's role in the processes of specialist IMG assessment and outlines both its scope and its limitations.

In addition to the House of Representatives inquiry, the College is aware of two other matters that may be of significance in regard to the assessment and registration of IMGs in Australia. The first relates to a referral from the Australian Health Ministers Advisory Council (AHMAC) to Australian Health Workforce Advisory Committee (AHWAC) regarding the matter of recognition and management of overseas trained specialists; the second is a working group being established by the Medical Board of Australia (MBA) to work with the Australian Medical Council and the specialist colleges to agree on more consistent processes and procedures in the assessment of overseas trained specialists. The College has formally indicated a desire to be involved with the working group being assembled by the MBA.

Applications for entry into the Integrated Training Program (ITP) in New Zealand for 2012 have now closed and the process of assessing applications has begun. Applications for Australia will open shortly. The process in 2010 saw 251 ITP applications being received, with 92 places available and offered. The selection process has been refined this year to further ensure a rigorous and uniform process operates on both sides of the Tasman. Everyone involved is aware of the need for processes to both be – and be seen to be – fair, transparent and meet the requirements of all stakeholders.

Like other facets of College activity, ensuring fitness for purpose with appropriate governance and risk-mitigation mechanisms in place are the requirements of processes such as trainee selection and IMG assessment. It is incumbent on the College to ensure that this occurs, and it is incumbent on all associated with College processes to understand the need for both of these aspects to be addressed when designing and conducting processes. To this end, it is intended that the President and I will attend meetings of all the regional committees during this year to address the committees in relation to risk management from a College perspective. The first of these sessions was initiated through an invitation from the New South Wales Regional Committee as a result of a discussion on this matter at the annual Regional Committees' Forum held at College House in 2010. The session included a discussion of the processes undertaken to construct the College Risk Register, the need for such a process, and the importance of the College Appeals Process, as well as enabling an opportunity for questions relating to any areas of College business to be directed either to me or the President. On behalf of Dr Sherwood, I thank the New South Wales Committee for the invitation and for their welcome and participation on the night.

I recently had the pleasure of attending the Provincial Fellows' Annual Scientific Meeting, held in Launceston, Tasmania. The meeting consisted of practical, hands-on workshops, as well as plenary meeting presentations and, of course, the convivial social

occasions associated with such meetings. The meeting attracted approximately 150 attendees, representing both Fellows and Diplomates, with the meeting incorporating a Diplomates Day in the program. Meetings such as these are a prime example of College members and staff working together to present relevant, quality educational opportunities for College members and preliminary analysis of meeting evaluation forms indicates a highly relevant and satisfying meeting was conducted.

Meetings such as this enable networking opportunities, both professional and social; aspects that are particularly important for, and valued by, those working in provincial areas. They also supply valuable opportunities for College representatives, be they Board members, Council members, other Fellows, Diplomates or staff, to interact with Fellows and Diplomates from rural and regional areas to ascertain what the College can do that will genuinely assist those practising outside the major metropolitan areas.

There are currently 196 Fellows in Australia who are eligible to vote as a Provincial Fellow in Council elections (for indicative purposes the total number of practising Fellows in Australia at the end of 2010 was 1432; in New Zealand 239). The Provincial Fellows Committee is a highly active and productive group within the College and those who are eligible and choose to be recognised as Provincial Fellows elect two representatives to Council every two years. All who were involved with the Launceston meeting are to be commended for yet another successful and productive meeting and I look forward to Mackay next year.

The preceding paragraphs contained some data in relation to trainee selection and numbers of practising Fellows in Australia and New Zealand. For an organisation such as RANZCOG, having access to data such as this is a basic need, as well as an expectation. In order to communicate this information to the membership, the College has taken the decision to compile an 'Activities Report' on an annual basis. The document is an overview of core areas of College activity and covers: trainee selection and distribution of trainees; training site accreditation activities; examination results; IMG assessment; and workforce distribution. The Activities Report for 2010 is available in electronic form on the College website, and represents a valuable addition to the information available to College members about College activities.

The RANZCOG Practice Profiles are produced annually and contain a range of information about the O and G workforce at specialist (Fellow) and non-specialist (Diplomate) level. Data for the profiles will again be collected this year when College Annual Subscriptions are renewed and I ask all members to participate in providing the information that makes production of these documents possible.

The College budget for the 2011–12 financial year is close to being finalised for presentation to the College Board and Council. As with all comparable entities, constructing a budget that enables all necessary College activities to be run, as well as value adding, is an increasingly complex process. While there are calls from commentators in the contemporary finance literature to move away from traditional budgeting processes towards rolling forecasts across a period based on a range of targets and indicators, there is still a responsibility to ensure that an organisation can finance its intended activities across the period in which it has statutory reporting requirements and there is currently no intention of abandoning the annual budget process, albeit with a regular (monthly) review of position relative to budget, as is currently the case.

Two factors that have influenced the framing of the budget for the coming financial year have been the desire of the College Board to present a balanced operating budget that moves closer over time to a user pays principle, as well as recent natural disasters, particularly the floods in eastern Australia, and the possible flow-on effects to the consumer price index that govern increases in expenses such as staff salaries. The effects of these considerations has been the recommendation that subscriptions for College members rise by four per cent for the coming financial year, while some fees will rise by more than this amount to reflect the disparity between income and expenditure for different groups.

> 'Even in six week blocks, the College is a busy place and there is much to be gained from becoming involved in that activity.'

This snapshot of College activities in the six-week period leading up to the writing of this column concluded with the first oral examination of the year, the DRANZCOG Oral Examination. The examination required the involvement of 34 examiners who, between them, assessed 56 candidates. I again reiterate the importance of the involvement of the College membership to the work of the College and encourage those with an interest in being involved, in whatever capacity, to assist where they are able. Time and time again, in my experience at the College, I have heard those who are involved in College activities, such as examining or IMG assessment, comment on the professional satisfaction associated with the experience. The College exists to train and support members to make a difference to the quality of healthcare for women offered in Australia, New Zealand and any other countries in which members choose to practise. Part of that making a difference is to contribute to the activities of the College and I am confident that the experience will not disappoint those who choose to become involved.

What is written above is just an indication of the activities of the six-week period selected. It does, however, go some way towards demonstrating the type of activity in which the College is currently engaged. On the other side of the timeframe, approximately six weeks from writing this column will see the arrival of winter on the calendar for another year and this issue of *O&G Magazine* arriving in letterboxes, the MRANZCOG Oral Examination will have been conducted, as will another round of specialist IMG assessment interviews and another RANZCOG Board meeting will have taken place. The SA/NT Regional Scientific Meeting will have been conducted in Adelaide, the RANZCOG Indigenous Women's Health meeting will have just taken place in Cairns, and the combined NSW-Qld Regional Scientific Meeting to be held across the Queen's Birthday long weekend will be approaching fast, as will the biennial meeting of the Pacific Society for Reproductive Health (PSRH) meeting, to be held in Honiara, Solomon Islands from 5–8 July.

Even in six week blocks, the College is a busy place and there is much to be gained from becoming involved in that activity. As always, I wish all readers of *O&G Magazine* the very best and look forward to meeting any College member who wants to speak about the College's activities at a College event between now and the next edition of *O&G Magazine*.

The puerperium

Dr John Schibeci
DRANZCOG

'The puerperium [...] is rapidly losing medical interest and importance, perhaps dangerously so, because of our modern pre-occupation with antenatal care.'
Sir Ian Donald, Practical Obstetric Problems Fifth Edition 1979

The late and great Scottish obstetrician Sir Ian Donald's lament is probably not far off the mark even today. 'Come back and see me when the baby is six weeks old', is our usual predischarge request to postnatal mothers. A rather flippant approach compared to our more attentive late pregnancy antenatal care. Puerperium is the Latin word for childbirth, so we use it with licence to mean: the postpartum period from the birth of the baby through to complete involution of the uterus at six weeks.

Our cover image of the deflated balloon is great symbolism, but short-changes this remarkable time in the reproductive woman's life. Certainly the emptying of the uterus of the baby and, particularly, the placenta trigger physiological changes that should make us 'ooh and ah' in the same way we do when watching a Sir David Attenborough documentary, but the process is taken for granted. There is no other natural process, not even a pathological one, where the human body loses an endocrine organ in an instant. It is necessary to propel a woman on a pathway to lactation or a return to fertility. The pregnant state, which has developed over nine months, no longer exists and this new puerperal state affects every part of a woman's body. For example, the uterus weighs 1kg after birth, but less than 100g by six weeks. The total net water gain in pregnancy of 8.5 litres is steadily lost. The hypercoagulable state normalises slowly. FSH, LH, oestrogen and progesterone levels plummet by factors of between eight and 200 times. These are no mean feats.

All usually goes smoothly, but of course problems do occur frequently and it is the obstetrician's, and often the GP's, role to guide women through this time. Problems range from infection, thrombosis and psychiatric concerns to managing breastfeeding and looking after the newborn.

This edition of *Oe&G Magazine* ends the journey that started in late 2007, with tales from the first trimester, taking reader through each trimester of pregnancy and then childbirth. It hopes to address some of the issues of the puerperium, but of course is not totally comprehensive. We hope you find this edition interesting and helpful in making the puerperium a less neglected time for our patients.

New life begins with 40

Dr Kenneth J Nathan
MB ChB BAO MRCOG
Clinical Lecturer, UTAS and Royal Hobart Hospital

Historically and culturally, each society's practices during the puerperal period vary greatly, but one number keeps recurring.

The variation of puerperal practices across cultures and centuries is too broad to contemplate in a single article. While there are many models of care in New Zealand and Australia today, encompassing everything from traditional care of Indigenous and migrant women, through to private obstetric care, the majority of women in these countries give birth in a hospital setting. Older patients will often recount long hospital stays with bed rest following uncomplicated births, while today's new mothers may be offered early discharge to a luxury hotel, supported by their hospital.

For the majority of obstetricians in day-to-day practice, the management of the puerperium is left largely to our midwifery colleagues. It can be seen that current practice in the Western world is based, in some aspects, on biblical and historical attributes, with adaptations being made with the advancement of medical science and an understanding of the complications that can arise during this period. However, we live in a changing society, where the impact of cultural and religious beliefs from non-Western societies will have to be taken into account to cater for the diversity of modern society.

Beliefs and practices surrounding the postpartum period are culturally patterned and marked differences exist between Western and non-Western cultures. A lack of cultural knowledge on the part of caregivers can make appropriate treatment difficult to deliver. Although women from non-Western cultures may wish to preserve their own traditional postpartum practices, their cultural preferences or expectations might be neglected due to healthcare providers' lack of cultural competence. Although considerable diversity exists among non-Western cultures, there are also many common postpartum practices that midwives and obstetricians can learn to recognise in providing maternity healthcare.

Confinement

All cultures recognise a period of recovery and bonding with the baby for women after they have given birth. Although the length of the postpartum period varies cross-culturally, the notion of a 40-day postpartum is common in many non-Western cultures. In almost all non-Western societies, 40 days after birth is seen as necessary for recuperation. Among most non-Western cultures, family members (especially female relatives) provide strong social support and help new mothers at home during this period.

The importance of the 40 days following childbirth is also seen in the Christian tradition of 'churching'. The usual date of churching was the 40th day after giving birth, in accordance with the Biblical date and Jewish practice. For example, under Mosaic law, as found in the Old Testament, a mother who had given birth to a male-child was considered unclean for seven days; moreover she was to remain for 33 days 'in the blood of her purification'. This was reflected in the commemoration of the presentation of Jesus at the temple (also called Candlemas) 40 days after Christmas. Western belief up until quite recent times followed this 40-day rule.
The recurrence of '40 days' for the puerperium in so many diverse cultures from around the world raises the question of whether there is a common link across them. It is remarkable that each passing solar year can very effectively (even perfectly) be measured and metered out by keeping track of every 40th day. Ancient writings and artifacts (including certain monuments) make it clear that a cycle of 40 days was once carefully time tracked. Early astronomers appear to have once time tracked a cycle of 40 days for calendar purposes. The ancients appear to have also revered and celebrated this cycle in the practice of religion.

The early time track of 40 days can be recited from the book of Exodus where it is shown that Moses was in the mount for 40 days and 40 nights (refer to Chapter 24: 10-18). The calendar term '40 days and 40 nights' is again recorded in the book of Deuteronomy, where Moses wrote: 'And I stayed in the mount ... to the rishown yowm [or to the 1st day, or the beginning day], 40 days and 40 nights... '(refer to Chapter 10:10).

In the traditional non-Western view, birth is part of a holistic and personal system, involving moral values, social relations and relation to the environment, as well as the physical aspects. In contrast, Western postpartum practices are based on the biomedical model. In a Western framework, pregnancy might be 'managed' by a physician who performs a special medical or obstetrical role.

Changes to practices of recovery from childbirth in secular societies are often related to motivations that are not spiritual. The USA Centers for Disease Control and Prevention (CDC), in 1995, reported that between the years of 1970 and 1995 the average length of stay in hospital after a vaginal delivery decreased from 3.9 to 2.1 days, and for caesarean delivery from 7.8 to 4.0 days. They attribute this reduction not to improvements in medical care, but rather to the savings in the health budget resulting from fewer days in hospital.

While there is recognition that a period of recuperation, bonding and protection is essential following childbirth, there is also an economic imperative that most women return to other duties when appropriate. Spiritual, medical and economic factors have again played their part in this decision. On a prosaic note, Australian readers will probably see the effect of the introduction of paid parental leave in extending the time before women return to paid work following childbirth.

Although considerable diversity exists among non-Western cultures, there are also many common postpartum practices. One such belief is the necessity of maintaining a 'hot-cold balance' within the body and with the environment after the birth of a baby. Hot-cold concepts of healthcare (also called humoral theories) are centuries old in the traditional cultures of Latin America, Asia, and Africa.

In rural Guatemala, traditional midwives emphasise the application of heat in the postpartum period. New mothers are instructed to use heated water to preserve their warmth; they might take a sweat bath, a sitz bath or an herbal bath, according to region. Guatemalans believe that a hot bath increases the flow of milk, 'lowers' the milk into the breasts and prevents breast milk from becoming 'cold'.

According to the Chinese custom of zuo yue zi ('doing the month'), the new mother should not go out into the sunshine, walk about, read, cry, bathe, wash her hair, touch cold water or engage in sexual intercourse. After giving birth, the mother is expected to be kept warm and to be protected from 'the wind'.

In Mayan Indian culture in Yucatan, Mexico, in the first week following childbirth, the Mayan mother and infant are considered 'hot' and must remain secluded in the house to protect them from 'cold' evil wind. Among Mexican Americans, the postpartum preference for a warm environment may restrict full bathing or hair washing for up to 40 days after giving birth.

In India, postpartum confinement typically lasts up to 40 days. This seclusion is to protect the new mother and her infant not only from evil spirits, but also from exposure to illness, because both are considered to be in a vulnerable state after birth.

In the Middle East, resting 40 days after having a baby is customary in Jordan, Lebanon, Egypt and Palestine. During this 40-day period, someone comes to the house or stays with the new mother to take care of the baby, the house and the other children, so that all new mothers have to do is rest.

When assimilating the historical diversity of the cultural beliefs of our modern society, today's obstetrician, with the wealth of current research and advancements in health provision, can easily draw parallels to the associated causes of morbidity and mortality in the postpartum period to the practices of the past which have led to those beliefs, which have become ingrained in certain cultures without questioning the fundamental reasons behind them. Our recognition and understanding of it, however, may help us in bridging that chasm.

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Infection in the puerperium

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Among the Indigenous population of Australia, and on a worldwide basis, infection during the puerperium causes significant morbidity and mortality.

Historically, the earliest reference to puerperal sepsis is reported in the work of Hippocrates in the fifth century BC. Infection of the genitourinary tract used to be, and still is, a major cause of morbidity and mortality in the postnatal period. Other causes are urinary tract infections (UTI), wound infection, mastitis and breast abscess. The major cause of maternal mortality is group A beta haemolytic streptococci (GAS). After the discovery of antibiotics, infections owing to GAS were brought under control. The recent CMACE report has highlighted the re-emergence of GAS infection in the UK.

In the puerperium the mother has a wound in the uterus (placental surface of the uterus). This is exposed to the vagina, which contains aerobic and anaerobic bacteria. In addition, some pregnant populations have anaemia or are nutritionally deprived, while some have chronic diseases such as diabetes, tuberculosis or HIV. These mothers, together with those on immunosuppresives, are prone to infection in the puerperium. Some mothers harbour Group B streptococcus (GBS) or GAS as a commensal while others may have Chlamydia, gonococcus or Gardnerella vaginalis. Events in and around labour, such as prolonged rupture of membrane, chorioamnionitis, repeated vaginal examinations, poor personal hygiene, catherisation of bladder, invasive fetal monitoring, instrumental deliveries, caesarean sections, episiotomies and manual removal of placenta lead to introduction of pathogens into uterus thus contributing to puerperal infections. Traumatic deliveries with devitalised tissue and blood clots in the presence of anaerobic environment provide an excellent medium for the anaerobic organisms to proliferate and cause infections.

Causes of puerperal infections

Endometritis

We now more commonly refer to puerperal fever as endometritis. This is usually a polymicrobial infection with aerobics and anaerobics. The organisms involved are group A beta-haemolytic streptococci, aerobic Gram-negative rods and anaerobes. The patient usually presents with fever, lower abdominal pain, secondary postpartum haemorrhage and foul-smelling vaginal discharge. In severe infections, the patient may present with septicaemia. On examination, the patient will have a high temperature, rapid pulse and lower abdominal tenderness. On vaginal examination, there may be foul-smelling vaginal discharge and bleeding, subinvolution of uterus and cervical excitation. Vaginal swabs can be taken and sent for microbiology. Pelvic ultrasound may help differentiate products of conception from endometritis. White cell count will be elevated and blood culture may confirm the microbe responsible. The initial antibiotic regimen should be broad spectrum. One such regimen is IV cefuroxime 1.5g eight hourly plus IV metranidazole 500mg eight hourly until antibiotic sensitivity is known. Infection usually responds within 24–48 hours. If not, septic pelvic vein thrombosis needs to be considered. The complications of endometritis are parametritis, peritonitis, septic pelvic thrombophlebitis and pelvic abscess. Toxic shock syndrome, though not typically puerperal infection, has also been reported.

UTIs

UTIs are the commonest cause of puerperal infection. The predisposing factors are, apart from those mentioned above, history of previous UTIs, those with polycystic kidneys, congenital abnormalities of the renal tract, neuropathic bladder or urinary tract calculi, but most commonly they are idiopathic. It usually presents with dysuria, frequency, voiding disturbances, fever with chills and rigor and pain in the renal angle. On examination, patient will be febrile and tachycardic with renal angle tenderness and a urine analysis may show leucocytes, nitrates or protein. Urine for microscopy and culture should be done before starting IV cefuroxime 750 mg three times daily. Gentamicin should be considered in resistant organisms and those with an allergy to cephalosporins. Urinary microscopy and culture will help in the diagnosis. The commonest organism causing urosepsis is E coli, but others include enterococcus, klebsiella, proteus and staph epidermidis.

Mastitis and breast abscess

Mastitis usually presents with fever, breast pain and redness. Examination will confirm either mastitis or breast abscess. The commonest organisms involved are Staph aureus, Staph epidermidis Group A, B and F streptococci. In these cases, flucloxacillin needs to be started orally in the case of mild and intravenously in the case of severe infection with fever. In case of breast abscess, fluctuance will be elicited and an ultrasound scan needs to be done with a referral to surgeon for drainage.

Caesarean wound infections and perineal infections

Caesarean wound infection, where the uterine cavity is entered, differs from abdominal wound infection. Puerperal infection is more common in caesarean sections than in vaginal deliveries. Intra operative prophylactic antibiotics have helped to reduce the incidence of puerperal infections in caesarean sections. Caesarean wound infections have been reported with Staphylococcus aureus, MRSA, skin flora and with those organisms involved in endometritis.

Once infection is diagnosed, wound toilet and relevant antibiotics are the mainstay of treatment. Wound swab and blood culture help determine the microbe involved. In cases of simple wound infection, flucloxacillin is the drug of choice. Because caesarean wounds can be contaminated by vaginal flora, metronidazole can be added. If there is wound infection with cellulitis, benzylpenicillin IV and flucloxacillin IV should be started. In post-surgical septicaemia, IV cefuroxime and IV metronidazole are indicated. Wound dehiscence and necrotising fasciitis are complications. Infections of perineal wound are fortunately rare, but dehiscence and necrotising fasciitis are reported.

Other infections and incidental infections

If these more common sites of infection are excluded, one must be ever vigilant that there are no other sites of sepsis or serious viral infection, for example pneumonia (including Mendelssen's syndrome), meningitis or bacterial endocarditis, hence the need for detailed history taking and examination and appropriate invesatigation. With international travel, malaria, influenza and H1N1 infections need to be considered.

Genital tract sepsis

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A discussion of maternal death due to antenatal streptococcal toxic shock syndrome; a case of group A streptococcus causing fulminant sepsis, haemolysis and disseminated intravascular coagulation.

A maternal death is fortunately a rare event in the developed world. Group A streptococcus (GAS) has historically been a significant cause of obstetric morbidity and mortality. In the last 20 years, there has been a re-emergence of this organism as a significant obstetric pathogen. This article describes a clinical scenario that serves to remind us of the scientific principles, the pathogen and the pathogenesis of this infection.

The patient was at 26 weeks in her second pregnancy when she presented to hospital. Her previous pregnancy had been uncomplicated, ending in a full-term normal vaginal delivery. She had had, since childhood, nephritic syndrome secondary to focal glomerulo schlerosis diagnosed on biopsy. She had relapsed six months before presentation, but was well controlled on 30mg of Prednisone daily. In the index pregnancy, all antenatal investigations had been normal including renal function and urinalysis and ultrasonography.

In the 12 hours before her death, she saw her family doctor with mild flu-like symptoms. She was afebrile with a normal urine dipstick and was sent home with advice to take paracetamol. Over the next six hours she developed worsening abdominal pain with slight vaginal bleeding and presented to our hospital by ambulance. On arrival, her temperature was 36.9C, pulse rate 80bpm, BP 120/76, the fetal heart was heard; haemoglobin was 142g/L and platelets 204x109/L (neutrophils 1.9x109/L and lymphocytes 0.3x109). Biochemistry was unavailable due to gross haemolysis.

The initial clinical diagnosis was of placental abruption and threatened preterm labour. The patient was given analgesia, intravenous fluids, penicillin and steroids. One hour later, ultrasound was performed and an intrauterine death was diagnosed. Her condition rapidly deteriorated and she experienced progressive profuse blood-stained diarrhoea, fever, tachycardia, massive haemoptysis and subconjunctival haemorrhages and petechial haemorrhage and severe hypoxia. Treatment over this time included intravenous fluids, broad spectrum antibiotics and transfer to the intensive care unit.

Biochemistry and coagulation studies were again unavailable due to haemolysis, haemoglobin was 120, platelets 33, white cell counts 6.8, neutrophils 4.7, arterial pH 6.96, pO_2 10.4kPa, bicarbonate 9mmol/L and base excess -23. The patient was intubated and ventilated, and inotropic support initiated. Five hours and 40 minutes after admission irreversible respiratory and cardiac arrest occurred.

A postmortem was performed. There was pulmonary haemorrhage, no placental abruption was found. Due to neutrophilic infiltration in the liver and myocardium, the most likely cause of disseminated intravascular coagulopathy (DIC) was sepsis. A microscopic focus of pyelonephritis may have identified a potential source, however, blood, urine and faecal cultures were negative. Vaginal swabs grew Streptococcus pyogenes.

S. pyogenes, a Lancefield haemolytic GAS, was a major cause of sepsis and death in the pre-antibiotic era. Recent literature has touted invasive GAS as a re-emerging threat. The incidence in developed countries has been estimated at 2.45–20 cases per 100,000 person-years[1,2] and mortality estimated at 15–45 per cent.[4] Guidelines define the diagnosis of GAS toxic shock syndrome (TSS or STSS), requiring isolation of GAS from a normally sterile site, hypotension and at least two of renal impairment, coagulopathy, liver involvement, adult respiratory distress, erythematous macular rash and soft tissue necrosis.[5] If isolated from a non-sterile site the diagnosis is of 'probable' STSS.

> 'This case demonstrates [...] an often forgotten, but significant, cause of morbidity and mortality that has seen a resurrection over the last 20 years.'

A series of 30 cases of puerperal STSS have described a presentation similar to our case, with prodromal symptoms followed by severe abdominal pain. Coagulopathy was present in 77 per cent and haemolysis in 44 per cent of cases. The progression to sepsis, organ failure and coagulopathy is frequently rapid and often fatal, even with prompt, appropriate treatment. The majority died from DIC 'and occasionally massive haemoptysis'. Cases presenting before or during labour, or within 12 hours of delivery were more likely to be fatal and less likely to have significant soft tissue infection.[6]

There are two predominant factors that contribute to the virulence of GAS; the M-proteins (cell membrane proteins used to subtype GAS) and the presence of exotoxins. Together, these act as super-antigens to render GAS resistant to phagocytosis, suppress IgM synthesis, stimulate T-cell response through major histocompatability complex (MHC) class II and subsequently produce a cytokine and lymphokine response. In isolation, some of these exotoxins work as haemolysins, which are toxic to erythrocytes, polymorphs, leukocytes, platelets, tissues culture cells and lysosomes, others facilitate the liquefaction of pus and the cleavage of tissue planes to enable spread of invasive infection.[7]

Current literature reports several recent cases of severe GAS sepsis since 1990, many of which have been successfully treated with penicillin alone[8,9,10]; however, current recommendations are to treat with both penicillin and clindamycin. Clindamycin is more effective with delayed treatment, has better tissue penetration and suppresses exotoxin and M-protein production.[11,12] All strains of GAS are sensitive to penicillin and resistance to erythromycin is found in less than five per cent. There have been several small

studies using immunoglobulin to treat STTS with varying results and more studies are needed in this area.

This case demonstrates a rapid, fulminant septic illness, most likely due to GAS, in a woman immuno-compromised due to pregnancy and long-term use of steroids. It serves to demonstrate an often forgotten, but significant, cause of morbidity and mortality that has seen a resurrection over the last 20 years.[1] Early assessment and treatment are imperative, so increasing the awareness of the condition will be our best defence against the re-emerging cause of maternal morbidity and mortality.

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Third- and fourth-degree injuries

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Once adequately identified, obstetric anal sphincter injuries – a surprisingly frequent complication of vaginal birth – generally respond well to treatment.

Third- and fourth-degree perineal injuries, these days commonly abbreviated as OASIS (obstetric anal sphincter injuries), are a particularly unpleasant complication of vaginal birth, due to the risk of long-term morbidity such as anal incontinence (up to 25 per cent), perineal discomfort and dyspareunia (up to ten per cent) and, rarely, recto-vaginal fistula.[1,2] Third-degree perineal injury is partial or complete disruption of the muscles that make up the anal sphincter complex, the external anal sphincter (EAS) and the internal anal sphincter (IAS), and either or both of these may be involved. These tears are commonly subclassified as:

- 3a – no more than half of the EAS is disrupted
- 3b – more than half of the EAS is disrupted
- 3c – both the EAS and the IAS are completely disrupted

Fourth-degree injury is characterised by sphincter disruption and tearing of the anal epithelium.

Such injuries are now surprisingly common, particularly in first births. Benchmarking data from the Australian Council on Healthcare Standards (ACHS) reports a third-degree tear rate of 4.3 per cent in young women having their first baby (the 'selected primigravida'), though this reported rate is higher in public hospitals and lower in private hospitals, a difference that has been described elsewhere.[3] Fortunately, the rate of fourth-degree tear in primigravid deliveries is reported as considerably less than 0.5 per cent. The risk of OASIS is lower in multiparous women, contributing to an overall reported rate of about one per cent for all births in Australia. It is important to note that studies employing endoanal ultrasound in the postnatal period have suggested that as many as a third of women will sustain an unrecognised anal sphincter injury after their first vaginal birth.[4,5]

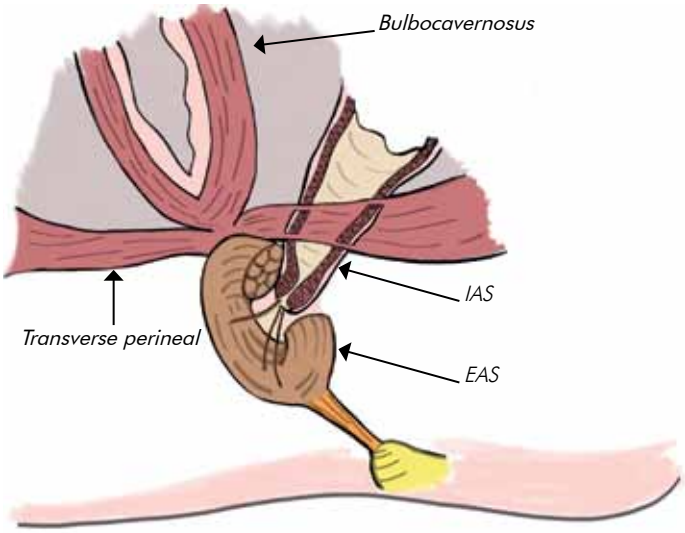

Figure 1. Perineal anatomy showing the superficial muscles of the pelvic floor. The sphincter complex is shown in section to highlight the relationship between the striated muscle of the external anal sphincter (EAS) and the smooth muscle of the internal anal sphincter (IAS). The IAS is a condensation of the smooth muscle of the rectal muscularis.

Anatomy of the perineum

The anatomy of the perineum is shown in Figure 1. Deep to the perineal skin is the perineal body, located between the fourchette and anus. It is composed primarily of the intersection of the transverse perineal muscles and the bulbocavernosus, with some deeper fibres from the puborectalis muscle and the IAS. The anal sphincter complex lies inferior to the perineal body. The EAS is composed of striated skeletal muscle, whereas the IAS is formed by smooth muscle, continuous with the muscle of the colonic wall. The IAS is largely responsible for the baseline tone of the sphincter and thus passive anal continence.

Risk factors

A number of risk factors are now well recognised, although their value in both prediction of injury, and indeed prevention of sphincter damage, is limited.[6] The list is as follows:

- Large baby (4kg or more birthweight)
- First vaginal delivery
- Instrumental delivery, particularly with forceps
- Occipito-posterior position
- Second stage duration more than one hour
- Induced labour
- Epidural anaesthesia
- Shoulder dystocia
- Midline episiotomy

It scarcely needs to be pointed out that little can be done about such factors as the size of the baby, the position of the fetal head or birth order. Prolonged second stage goes hand in hand with instrumental delivery and use of epidural anaesthesia is common. The technique of episiotomy, however, may be a factor that can be modified to reduce the risk of sphincter disruptions. ACHS data for young women having their first vaginal birth reveal that about 27 per cent will have an episiotomy with no associated tear, with an additional six per cent having an episiotomy complicated by a tear. A study has revealed that the greater the angle of the episiotomy away from the midline, the lower the rate of sphincter injury.[7] Thus, if episiotomy is required and sphincter disruption is a high risk (large baby, malposition, prolonged second stage), then the cut should be made as laterally as possible.

Identifying sphincter injuries

It is important not to miss a third- or fourth-degree perineal injury. All women should have a careful examination after vaginal birth as this can double the detection rate of OASIS and potentially reduce the risk of long-term morbidity.[8] It is important to explain to women the purpose of examination and the reasons it is being performed. Evaluation requires good exposure and lighting, and analgesia if required. Rectal examination should be performed whenever any perineal injury is apparent, as 'buttonhole' injury to the rectal mucosa has been reported even when the sphincter complex appears to be intact. Careful clinical examination has been shown to be as accurate as endoanal ultrasound in the diagnosis of sphincter injury.[9]

Repair of third- and fourth-degree tears

If a sphincter injury has been diagnosed, it is important that someone experienced in the management of such injuries becomes involved in the repair. This is usually an obstetrician or suitably experienced registrar who, if not performing the repair directly, at least supervises the repair carefully. Partial sphincter injuries (that is, those classified as 3a injuries) may be repaired in the delivery suite, provided there is good exposure and lighting, and analgesia is sufficient for a good result and for the woman's comfort. However, most institutions now recommend that repair of more severe injuries should be performed in an operating theatre setting for optimal results.

The repair procedure should be covered with antibiotics. Although there are no formal trials of antibiotic cover for such repairs, infection is a well-known risk for wound breakdown and fistula formation and strenuous efforts should be made to avoid this.[10,11] Recognised regimes include single intravenous doses of both cephazolin 1g and metronidazole 500g, or a single intravenous dose of ticarcillin-clavulanate 3.1g. Where penicillin allergy is known or suspected, then single intravenous doses of both lincomycin 600mg and gentamicin 240mg may be considered. The ends of the sphincter need to be identified, and this is not necessarily easy. Often an end will retract into the mass of perineal muscles and can be difficult to identify, hence the benefits of experience in repair. Adequate analgesia allows relaxation of the sphincter muscle and reduces tension at the time of repair. There is considerable debate about the use of either 'end-to-end' repair or 'overlapping' repair of the sphincter. To say that there is disagreement about the merits of each method of repair is an understatement. This debate is well summarised in the RCOG Green Top Guideline[8], and we précis this here:

> Review of trials involving a relatively small number of women (less than 300 in total) revealed no differences in perineal pain, dyspareunia, flatus incontinence or faecal incontinence between the two methods of repair at one year post-delivery. However, the 'overlap' repair was associated with a lower incidence of faecal urgency symptoms and a lower 'anal incontinence score' in the overlap group. There was no overall difference in quality of life (QoL) scores between women in the two groups. It was conceded that experience of the surgeon was not taken into account by the studies, and so the reviewers can make no recommendation of one method over another. A randomised controlled trial from Canada, published in July of 2010, compared 75 injuries repaired using the 'end-to-end' technique with 74 repairs of the 'overlapping' type.[12] The authors concluded that although end-to-end repair was associated with higher rates of faecal and flatus incontinence, the differences were not significant. It is thus difficult to make a firm recommendation on the method of repair of the sphincter. Perhaps the most important issue is training and experience of the surgeon performing the repair.

Choice of suture material includes such monofilaments as PDS or Maxon, usually in 2/0 size, although there are no studies directly comparing suture materials.[13] Correct identification and repair of injuries to the rectal mucosa is absolutely critical to a good result. With retraction and good lighting, the apex is identified and secured with a running 4/0 Monocryl suture or interrupted sutures with the knot tied in the anal canal. This suture continues to the anal verge. The sphincter ends are then identified and repaired. Sutures to the muscle should be interrupted and the knot buried under the transverse perineal muscle layer to minimise discomfort during the healing phase. The repair of the vaginal skin and muscles of the perineal body is then performed as usual. Repair of the perineal skin is the last task. At the completion of suturing, a careful repeat rectal examination is undertaken to confirm the adequacy of the repair.

It is important to document the extent of the tear, how it was repaired and the level of supervision. From a medico-legal view point, it is essential that these factors can be reported so that if the outcome is less than optimal; there is evidence that the best repair was performed at the time.

> 'Most maternity services now recognise that third- and fourth-degree perineal injuries are major events for women and careful follow up is important.'

Immediate postnatal management

Although the use of antibiotic prophylaxis at the time of the repair procedure is clearly indicated, there is less evidence to support the use of antibiotics during the healing phase. However, there is little adverse effect from this practice and infection is a major problem so oral antibiotics such as Augmentin®, or clindamycin where penicillin allergy is a factor, should be considered. As usual, local application of cold packs and oral anti-inflammatory medications may provide additional comfort. Suppositories should be avoided, if only because their use may be blamed by the patient if complications arise.

To reduce straining during defaecation and consequent damage to the repair, agents such as lactulose 20ml morning and night, or a sachet of something like Fybogel two or three times daily may be commenced and used for one to two weeks post-delivery.[14] The aim is avoid straining at stool, but not to have a loose stool, which may be cause difficulty with continence. It is important that women remain well-hydrated and shower at least twice a day to improve perineal comfort. Initial referral to a physiotherapist skilled in this area is very beneficial, so that women can be educated about pelvic floor care and specific techniques for defaecation.

Medium-term management

Most maternity services now recognise that third- and fourth-degree perineal injuries are major events for women and careful follow up is important. Fortunately, and provided the injury is correctly diagnosed and promptly managed, most women will make a full and complete recovery with no adverse symptoms or continence difficulties.[13,15,16]

At the six-week postnatal visit, women need to be carefully questioned about control of flatus and bowel motions, including urgency symptoms. Women are often reluctant to volunteer these symptoms, due to social taboo, and thus ensuring follow up within a clinic where they will specifically questioned is paramount. Heavy vaginal discharge can indicate the presence of a fistula, which can be small and difficult to spot. Urinary continence should be asked about and some assessment made of pelvic floor tone and comfort, including whether intercourse has occurred and any problems associated with it. Women who report ongoing pain or problems with continence need careful review and investigation, ideally with endoanal ultrasound and possibly anal manometry studies. As many

as one-third of women who have their sphincter injuries identified and correctly repaired will have persisting defects on endoanal ultrasound examination, but the significance of such a finding remains unclear.[17]

Sexual dysfunction is common in women with urinary and faecal incontinence, but even without these symptoms there is a high rate of dyspareunia following OASIS. This is often due to scarring and perineal revision may be required at a later date, sometimes with the help of a plastic surgeon to rebuild the perineum with flap grafts. The role of levator spasm and vaginismus is also an important factor especially following a difficult and painful delivery. The role of the pelvic floor physiotherapist for myofascial release of the trigger points cannot be underestimated and it is important to emphasise to the woman that this treatment will take time. Sexual counselling can also be important to help the couple through this difficult time.

> '...we recommend that all women who have a sphincter injury be made aware that the choice for elective caesarean section next time will not be argued over should they wish.'

Pregnancy after an injury

Women who have had a severe perineal injury will naturally be apprehensive about their next delivery. To date, there are no published prospective studies to offer guidance and this is an area ripe for a large, controlled trial. In general, women who have made an uncomplicated recovery and who have remained asymptomatic can consider vaginal birth subsequently. In terms of the conduct of such a birth, it is worth paying attention to the risk factors previously identified. Consideration should be given to the likely birthweight of the baby and to the potential effect of adverse positions of the head, in particular occipito-posterior positions. If episiotomy is used, to make sure it is a wide lateral one, bearing in mind there is no real evidence that 'prophylactic' episiotomy is of value and that routine episiotomy in fact increases the risk of OASIS.

Women who are symptomatic or who experienced transient symptoms after delivery should be offered elective caesarean delivery should they wish.[18] It is obviously a regrettable situation if a woman who suffered an extremely unpleasant sphincter tear in her first birth, and who has made a suboptimal recovery and remains symptomatic, is then encouraged to have another vaginal birth only to end up in the same situation or with exacerbation of her symptoms. The RCOG Green Top Guidelines recommend that elective caesarean section should be offered to all women who have sustained an OASIS if they remain symptomatic, experienced transient symptoms following delivery or in whom the endoanal ultrasound shows more than one quadrant affected or abnormal endoanal manometry on testing.[8] In the end, we recommend that all women who have a sphincter injury be made aware that the choice for elective caesarean section next time will not be argued over should they wish. Women should be aware that there is little or no high-quality prospective evidence to guide practice in subsequent delivery and patient wishes and satisfaction should be paramount, to try to salvage some dignity and enjoyment of the next birth.

Colorectal treatment of anal incontinence is improving and surgical treatment for faecal incontinence once a woman's family is complete is now more successful, especially with the use of sacral nerve stimulation even in the presence of anal sphincter defects. Early referral is recommended if conservative treatment with pelvic floor physiotherapy has not relieved her symptoms.

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Useful resource: http://www.aafp.org/afp/2003/1015/p1585.pdf .

The hardest decision

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When guiding parents through withdrawal of care in the neonatal period, the medical team should follow best-practice protocols, developed in response to parent experience studies.

Worldwide, approximately four million babies per year die in the neonatal period.[1] In Australia and New Zealand, most of those deaths occur in low birthweight and premature infants, often following withdrawal of intensive care support.

A number of studies have explored parent experience around the death of their baby. These studies consistently report that parents want the following:

- clear consistent and accurate information about their baby's condition, however bad the news;
- to be involved in decisions made about their child's care and have their decisions respected by medical staff;
- information regarding what will actually happen when intensive care support is withdrawn; and
- follow up after the event to identify concerns and revisit explanations.[1]

Providing parents with clear and consistent information

Inconsistency of information is extremely distressing to families as they struggle to determine who and what to believe. It is of paramount importance, therefore, that before any discussions with the family are commenced, the care team meets to ensure that agreement has been reached regarding the prognosis and appropriate management of the baby and that any disagreements are reconciled.

A meeting with the parents should be scheduled for a time when all relevant family members can be present and the care team can devote uninterrupted time to talk with them at some length. It is often appropriate that multiple meetings occur and parents should be given the opportunity to request to speak to the care team at any time.

Parents are often confused by the terminology that medical professionals use to communicate between themselves. It is important to explain the clinical condition of their child and the information available from test results in clear, non-medical language. They must be given the opportunity to ask questions and medical professionals must be prepared to explain things in different terms. All communication must be appropriate both culturally and to the level of education of the family. The value of a social worker skilled in 'seeing things from the parents' perspective' and who can ask questions when the parents might feel intimidated cannot be underestimated.

In his article in *Pediatric Clinics of North America*, Munson describes some components of good communication in this setting. He explains how clinicians can express empathy with phrases such as 'I wish the test results were different'. Moreover, focusing on the concept of preventing ongoing suffering as an act of parental love can help to establish a connection with the family. Such attitudes contribute to an understanding that family and child are valued and respected. If the baby has been given a name, then this should be used in all conversations and parents often feel better able to make decisions about their child if they can hold them at this time.

Not talking can be one of the most uncomfortable areas of communicating, but parents need time to process information. It is often only when they are allowed some space to do this that they will bring to the conversation their deepest fears.[2] Mothers, in particular, will often ask whether they could have done something to prevent the situation from arising and it is important to reassure them that they are not to blame.

Shared decision-making

While it may seem obvious, it needs to be clearly stated that shared decision-making requires a two-way conversation, allowing the parents to express their hopes and thoughts around their baby's care and management as well as the treating medical team.

Interviews with parents several months after their baby has died have shown that while most want to be involved in the decision to transition from active treatment to palliative care of their baby[3], many do not want to take the final decision alone. For some parents, however, the removal of perhaps one of the few decisions that they can make for their baby is devastating. It is in this context that shared decision-making must be addressed.

Planning a positive experience of death

For some parents it is important that other family members are present at the time of withdrawal or that they should have met the baby prior to them dying and, if the medical situation allows, timing of withdrawal should be planned around these requests. It may also be appropriate to discuss whether the family would value any spiritual or cultural support at this time and to help them to organise this.

The number of caregivers at the time of withdrawal of intensive care and ongoing support of the baby should be minimised and new caregivers should not be introduced at this time, if possible.

A survey carried out in three neonatal centres in Scotland regarding parents' perceptions of withdrawal of intensive care revealed that a key issue for parents was the length of time after withdrawal of respiratory support that the baby remained alive (between three and 36 hours). Many did not feel that they had been prepared for this.[4] This is doubly sad as not only do parents feel that they have perhaps made a wrong decision in agreeing to the withdrawal of intensive care support, but also they do not have the guidance and opportunity to make this a positive time with their baby.

Often, in order to attempt to maintain stability in the infant, contact between infant and parents has been minimal by the time a decision is made to withdraw intensive care support. This period is an important time for parents and family members to hold their baby and perhaps plan to bath and dress them.

After intensive care support is withdrawn (and usually this is ventilator support) the baby may gasp, breathe intermittently or with apparent difficulty for a variable period and may make movements. Parents need to be guided as to when these are reflex actions and when they may mean that the baby is uncomfortable or for another reason requires treatment. Withdrawal of intensive care support does not mean withdrawal of care entirely and appropriate discussion should be had with the parents as to what interventions will be continued.

However short the life of the baby, they should be recognised as a person and their memory respected. A memory box may be planned to include photographs, footprints and handprints as well as locks of hair, umbilical cord clamps, identity bracelets and cot cards.

Follow-up and after care

Families can feel abandoned once they return home after their baby has died. Many express that they consider the care-giving team to be part of their family and the people who knew their baby best and exclusion from them compounds their loss. Once home, they may revisit questions about their baby's illness and condition and wish to discuss issues further. It is important that follow-up is arranged and that parents are given means to contact the appropriate professionals. This may include the lead consultant to review medical facts, social workers to access appropriate bereavement supports and lactation support to suppress ongoing lactation if required. Some families may wish to visit the unit again to express thanks to the nursing staff and to talk about their baby as a real person who was cherished and cared for. Community care providers, such as general practitioners, must be informed as soon as possible of the death of a baby so that they can also assist in supporting the family.

Many hospitals hold periodic memorial services and parents should also be assisted to organise funeral services.

Training in palliative care of the neonate

Despite the importance of these experiences for parents, the majority of neonatal nurses and doctors do not undergo any formal training in this area. In a web-based survey of neonatal trainees in the United States, 93 per cent expressed that they would like further training in the form of both role-play scenarios and feedback from supervisors after taking the lead in family meetings.[5]

Conclusion

This article provides a framework to assist professionals guiding parents through the stressful period around the death of their baby. Those who can best teach us to do this well, however, are the families for whom we are privileged to care and we must not be afraid to listen.

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NICU: stressing the family

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A neonatal nurse's insight into the stresses that affect the families of babies in the neonatal intensive care unit.

For the parents and families of babies admitted to a neonatal intensive care unit (NICU), the experience can be very challenging. Families may be faced with prolonged periods of stress, anxiety and often depression during the course of their child's NICU stay. Indeed, the environment may affect parenting abilities, with adverse influences on the family unit, bonding and the infant's long-term developmental outcomes. Adding to the difficulties, at the time a premature baby is admitted to the NICU, there is often uncertainty regarding the baby's outlook. An important role of the neonatal nurse is to identify the parents' difficulties and to help them overcome them during this potentially very stressful period. Neonatal nurses must strive for professionalism, with the greatest amount of integrity and compassion, while facing ongoing fears and concerns regarding the health status of the baby.

Stress created in a NICU environment

At any time in the NICU, it is usually possible to find a neonatal nurse providing reassurance and attempting to alleviate the fear and overwhelming stress the NICU creates for most families.[1] Neonatal nurses work hard towards achieving these aims and an appropriate balance is achieved most of the time. However, discussions with parents of premature babies months after discharge reveal that the memories they have of the early days in the NICU are very unclear, and they cannot recall many details and conversations that had taken place.[1] Comments such as, 'They tried to explain what they were doing and everything, yeah……I mean it wasn't really going in because I think I was in shock,'[2] are representative.

Parents may also find it difficult to understand the roles of certain individuals in the unit, while at the same time dealing with perceptions of conflicting information. This leads many families to seek guidance and 'honest' communication. This is probably a common reaction for many families who are experiencing increased feelings of anxiety and fear, hopelessness and loss of control.[3] As the baby's stay in the NICU progresses, parents learn how to fit in, form relationships with the staff and make some sense of the situation. Mothers have been reported to 'play the game' to receive optimal care for their babies following a NICU admission.[4] Parents may sense that they are passive observers and demonstrate understandable shock and distress when seeing their child in a precarious environment to which few are privy.[5] The parents hold fears for the potential adverse outcomes facing their child, predominantly death, and this apprehension has been recognised in a recent study.[2] Neonatal staff are required to guide families through these daily dilemmas, while at the same time striving to achieve the best outcomes for the baby and their family in the course of their work.

The father's role

Many studies predominately focus on the mothers of the babies in NICU, although stress is significant for both parents. Fathers have been referred to as the 'forgotten parents' in the NICU, and may express feelings of being marginalised. They also demonstrate increased levels of stress and depression during this period, little of which has received serious study. Fathers often see themselves as the provider and protector; they take on the role of caring for other siblings, comforting the mother and communicating with concerned family and friends.[3] Published studies have reported that fathers experienced a greater level of emotional exhaustion before and during the acute phase of their baby's NICU treatment, and therefore are in need of support.[5]

A transitional time

The transition from the intensive care area to the special care nursery (SCN) can reignite feelings that parents experienced when their baby was first admitted. This is frequently related to meeting new staff and orienting themselves to new surroundings. This may be even more strongly felt if babies are transferred to another hospital for further convalescence. Common parental reactions are conveyed by quotes such as: 'The staff did not seem to know much about the baby'[6]; 'All of a sudden you seemed to have lost this cushion you always had: a nurse by your side'[6]; and 'We did think "are they all competent?"'[4]

Many parents also find it difficult to believe in the progress of their baby. Fortunately, with time, parental confidence grows, as does their ability to care for their child, allowing parents to assume the role of caregiver before discharge.[3] The success of this change is achieved with the help of the nurse caring for the baby and how they actively encourage and support parents in the care of their child to prepare them for their life ahead.

A neonatal nurse's insight

While no two days are the same, what follows is typical of the neonatal nurse's daily experience:

> *'The day usually starts with walking down the corridor to find a family looking bewildered and not sure where to go or even how to see their baby. Grandma is trying to deal with the two-year-old toddler, while she is extremely anxious and worried about her daughter's pain and not sure what the outcomes will be from this point.*
>
> *'Gently, I guide the parents to the hand-washing bay and the many concerned relatives to the family room. After describing the scene that they may encounter when they first see their baby attached to monitoring and respiratory support, I lead them into the NICU. We try to prepare the parents for that first moment they see their baby, though nothing you say helps with the shock and the fear that they will encounter.*
>
> *'The next weeks and in some cases months, a partnership begins to form between the staff and families. I cannot presume to know what these families are going through, as everyone's journey is different; I can, however, provide them with the necessary tools to help guide them forward.'*

Personal reflection

Parents of a baby were asked to contribute some words describing their time spent in the NICU, what follows is their personal reflection:

> *'Even now, two years after we left the hospital cradling a baby boy with an uncertain future, we can be transported back to our time in the intensive care unit in an instant. We must have washed our hands more than 100 times during our son's 12-day stay in the NICU, and all it takes is a similar smell to the hospital hand wash to bring the memories rushing back.*
>
> *'Our baby is now a healthy, happy, thriving boy, but when he was born, in March 2009, he was as near to death as is possible. The frantic scene of his resuscitation by the response team from the NICU will always be a blur, a surreal experience that still feels like it happened to someone else.*
>
> *It was probably only a full day later, when Aidan was settled in upstairs and attached to so many tubes and wires that it even began to sink in that this was our firstborn son fighting to stay with us. And what a team he had in his corner. The doctors and nurses were incredible, even when they told us things we couldn't bear to hear. We still remember the sense of amazement when it dawned on us that it didn't just seem that nurses were always by his side, they actually were. While that reminded us just how sick he was to need 24-hour-a-day monitoring, it was also an immense comfort. When we had to snatch a few hours sleep, we knew there was always an 'angel' of the nursing staff standing by him.*
>
> *'Our 12 days spent in intensive care took us to places of stress and despair we had never imagined we would be. It also made us discover an inner strength and embedded our faith in the people who care so much for those little children. We would not have dared think it possible the day we walked out of hospital and took our son home, but out of that incredibly stressful experience has unfolded a story of surprise and joy.'*

Conclusion

To ensure the best outcomes for babies and their families, a partnership using the principles of family-centred care including respect, support, flexibility, choice, collaboration, information and empowerment is essential.[7] It has been demonstrated that families experience stress and despair that is unimaginable, as expressed through the words of the family that spent time in our NICU. Staff and parents need to work together creating an environment that promotes the family unit. Understanding the family experience by reviewing practices and receiving parental feedback will help neonatal nurses and all members of the NICU treating team help guide families though this complex journey.

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NICU: a mother's perspective

Jessica Lucas

The level of care isn't the only thing that's intense in the NICU. For the parents, emotions, often unexpected ones, can prove to be almost as challenging to deal with as the medical situation.

Winston was born on 3 June 2010, at 3:43am and weighed 3045g. It was a relatively normal labour, with no significant issues reported. Although I must add that I didn't feel like that during the process. I found labour extremely hard, I assume like every mother does; however, when I looked at my baby's face all the soreness and exhaustion seemed to disappear. Winston seemed to be a happy healthy baby boy and Aaron and I were the proudest parents. In common with all parents, we focused on the ultimate question: how are we going to protect and look after this little bundle of joy?

I noticed the first problems to arise with Winston within the first few days, while we were in hospital. Winston just would not settle or feed properly; I would breastfeed him and he would doze off to sleep, but he would wake about 20 minutes later, whereupon we would do the same process again. During the second night of our hospital stay, Winston's temperature spiked at 38.8 degrees. I only noticed this because Winston was unsettled and when I felt his skin he felt hot to me. Being a first-time mother, I felt as though I knew nothing about babies, but as a precaution I asked the midwife to attend our room where she agreed with me that he felt hot and took his temperature. The midwife offered 10ml of formula to Winston, of which he only took about 3ml. Winston then settled off to sleep.

On the fifth day, Winston and I were discharged from hospital. Winston had lost 590g when he was weighed for discharge: an 18 per cent loss. At this stage I wanted to leave hospital. I knew that Winston still was not settling correctly; however, staying in the hospital did not seem to be helping us. My mind was put more at ease when a number of doctors had assessed Winston. One of these doctors, a paediatrician, stated that he seemed in perfect health apart from the weight loss, but they were cautious and wanted him re-weighed the next day.

On the sixth day, we took Winston back to be re-weighed after a terrible night of no sleep. Winston had been unsettled the entire time. By this stage I felt absolutely exhausted. I felt that I was doing a terrible job as a mother and I had no idea how other people did this. At about 6:30am Winston had finally fallen asleep and we attended the hospital at about 8:00am. When Winston was weighed he was still asleep, you could rouse him if you tried, but he just wanted to sleep.

Winston had lost a further 65 grams overnight. This seemed to intrigue the doctors and blood tests were ordered. We were told that we would be admitted to hospital again. At about 2:00pm we were once again admitted, with Winston on strict three-hourly feeds. Winston was admitted to the special care nursery and I was given a room. I took this time to go to sleep as I felt that I hadn't slept in five days and I knew that his next feed was at 5:00pm.

I was beyond exhausted; I was sore and sorry for myself from stitches received after labour and I felt like a dead person walking from the lack of sleep. After I had been laying down for about an hour, a paediatrician and the hospital social worker entered the room and my world came crashing down. I was asked to call Winston's father to the hospital, as there was something they needed to tell us about Winston. I was crying and extremely upset; I knew that it was not going to be good news. Winston's father, Aaron, arrived a short time later.

> 'All I wanted to do was help Winston to survive, but I had to stand by the sidelines. To say that I found this extremely difficult is an understatement.'

To tell the truth, I had no idea what the doctors were saying was wrong with Winston. At this time, the only words I heard were high sodium, extremely critical condition and that we should prepare ourselves for the worst. The doctors then informed us that Winston would be flown to hospital by helicopter as soon as they were able to arrange it. This really brought home how serious everything was, as I had only ever heard of incredibly sick people being flown by helicopter. I was so scared about what might happen that I thought I would just curl into a little ball and cry. This was definitely a different feeling for me as I had always thought of myself as a strong and in control and I realised, for the first time, that I was no longer in control of anything. I was putting my baby son's life in the hands of the doctors and nursing staff and I just had hope like hell that things would somehow work out, I have never felt so lost and out of control.

Winston deteriorated very quickly, within just a couple of hours, and after great attempts to stabilise him enough for the flight a priest was called to baptise Winston. I remember having a conversation with a doctor before entering the special care nursery again to see Winston. The doctor warned me about what to expect when we entered the room. Even though I had been told about the tubes, drips and other medical equipment attached to Winston, I walked in there to see my six-day-old baby with what looked to be every visible part of his tiny little body covered in tubes. As a first-time mother, the simple process of having a baby with no idea what to do with it is scary enough, but to see Winston covered in tubes, unable to breathe by himself and with his organs shutting down: the guilt was just overwhelming.

I felt as though it was my fault. Everybody standing on the outside told me time and time again that it wasn't, but that is what I felt. People tried to rationalise with me saying things like, 'you're not medically trained, how were you meant to know' or 'things like this just happen sometimes'. To me, to be perfectly frank, it

sounded like a load of crap: Winston is my baby, I am his mother; I should have done more, I should have pushed the doctors when I knew something was wrong. The guilt was unremitting – how could I have been so stupid, I kept asking myself.

When your baby is fighting for his life, every part of him covered in tubes – tubes that you have no idea what they do and look like they hurt him – you have no idea how to help them. I felt as though I was a waste of space. All I wanted to do was help Winston to survive, but I had to stand by the sidelines. To say that I found this extremely difficult is an understatement.

Winston and I were flown to a larger hospital in Sydney. I realised that the fight for Winston's life was only just beginning. Winton survived the 25 or so minute flight and was rushed into the neonatal intensive care unit (NICU). I can visibly remember walking into the unit – surrounded by the in-flight doctor, nurse and other staff with Winston in what I now know to be a humicrib – thinking how the hell am I going to deal with this. I wished that I wasn't the only one of my family there to support him. My family travelled by road and arrived a short time later.

When Aaron had arrived, we were once again given a rundown of Winston's condition. Once again, I hardly heard anything the doctors were saying; simply that Winston was most likely going to die. Nothing can prepare you for this news.

During the next few days we were informed of Winston's condition at all times, we stayed extremely close to the ward and I finally started to understand what was the matter with Winston. Winston was suffering from severe hypernatremic dehydration: Winston's body was producing excessive sodium. We were told a normal baby's sodium is around 140, with 150 being classified as extremely high; Winston's levels had reached a staggering 176. His body was starting to shut down, and all I could think was: I wish I had done more when I knew something wasn't right.

Amazingly, and against all the odds, Winston survived the fight for his life and didn't suffer seizures or brain haemorrhage. As this magazine goes to press, Winston is an extremely happy and cheeky boy who has just celebrated his first birthday. He has a bright future.

Being a first-time mother is hard enough at the best of times, but being a first-time mother of a critically ill baby was the hardest thing that I have ever had to do. I didn't know what to think, how to feel or what I could possibly do to help my baby. The guilt was crushing: I felt I was to blame for Winston's condition and that I should have dealt with things in a better manner. The 'what if' questions never go away. I still worry more about Winston than is 'normal', but I am getting better with time. However, it will surely be something that I will never forget.

Acknowledgement
I would like to take this opportunity to once again thank everybody that was involved in saving my beautiful Winston's life. And to my beautiful son, Winston, I thank God for you and your fighting spirit every day.

After the fact

Dr Marc Miller
FRANZCOG

Obstetricians learn to expect the unexpected, but the same cannot necessarily be said of the expectant women we care for, for whom any unexpected pregnancy outcomes can have a long-term negative impact.

Jane recently contacted our unit requesting postnatal counselling. She had been diagnosed with severe depression and post-traumatic stress disorder (PTSD) as a result of her first birth three years earlier and was too traumatised to have the further pregnancy that she desperately wanted. That previous birth was complicated by an abruption in labour, requiring an emergency caesarean section. Both she and her baby had a 'medically uncomplicated' course following this. During counselling, Jane explained that she felt that her concerns had not been listened to during labour and her requests for pain relief had been ignored, and that this feeling of lack of control had led to all her subsequent problems. In fact, on further discussion, she did not know why she had the caesarean and was unaware that there had been an abruption.

Jane's case illustrates some important issues about the psychological impact of birth:

- Events that may appear trivial to us from a medical perspective can have a severe effect on the woman.
- There can be severe emotional trauma following what we may regard as a satisfactory birth outcome.
- The woman's perception of the birth is often very different from our own.

Seek and you shall find

All women need to talk about their experience of having a baby and, for most, this will happen informally with friends, family, in mothers' groups and in other social settings. As doctors, we need to be part of this process, particularly if there has been an unexpected outcome; where 'unexpected' may be anything ranging from a serious morbidity to the sense of disappointment after operative delivery instead of a normal birth.

The starting point is talking to women after their birth and before they leave hospital. For many women this may be all they need, but it is also the opportunity to identify those women who would benefit from follow-up counselling following discharge. In our own unit, we offer formal follow-up counselling after unexpected outcomes. Over the last ten years, we have invited 1850 women to return, of whom 242 have attended. These figures suggest that the majority of women are happy with their initial postnatal ward discussion, but highlights that a small number of women feel that they would benefit from more in-depth counselling.

Counselling 101

Regardless of the severity of the unexpected outcome or the timing of the counselling, the principles are always the same:

- Start with an open question. For example, ask the woman how she felt about the birth from her point of view.
- Listen. Let her tell her story uninterrupted.
- Acknowledge her story. Relate back to her what you have heard.
- Ask the woman if she has any questions about what happened.
- Apologise for what has happened. Saying you that you are sorry for what she has been through is not an admission of wrongdoing.
- Openly discuss and provide accurate information about what happened.
- Outline a plan. This may include a plan for future pregnancies or in some instances a reassurance that changes to future practice will be made where a systemic problem has been identified.
- Offer further follow-up. This could be further formal counselling, a planned routine postnatal visit, details of community support groups or who to contact if she has further questions or concerns.
- Document everything that has been discussed.
- Communicate with other health professionals responsible for the woman's care. Failure of continuous communication can sometimes undo progress that has been made if there are misunderstandings between care providers.

> 'In a specialty where timely intervention can be crucial, obstetricians sometimes overlook the interventions that are necessary after the fact.'

Fine tuning

If you do all of the above, but are interrupted, called away, pressured for time or simply not the right person for the job then the woman will inevitably feel that she is not being taken seriously and the process will fail. To avoid this:

- Allocate enough time and ensure you have no other commitments at that time.
- Choose a quiet location such as a meeting room.
- Counselling should be led by the most senior member of the team to confirm to the woman that her concerns are being taken seriously. Other staff involved in the woman's care can also be present.
- Other family members should be accommodated if they wish to attend. It is not unusual to find during counselling that they have also been affected by the unexpected outcome.

While these arrangements may not be practical in an initial postnatal ward discussion, this is one of the reasons that it is important to identify women who would benefit from further extended counselling at a later stage.

Pitfalls

In a recent survey of women who had attended our counselling service, we received overwhelmingly positive feedback. There was, however, a consistent theme in the small number of negative comments where women felt that there had been a defensive

and justifying approach to counselling rather than listening and providing information.

The clear message here is to be open, honest and provide objective information that will help the woman understand what has occurred and why. Rationalising or being defensive is more likely to make the woman wonder what you are trying to cover up.

After the fact

In a specialty where timely intervention can be crucial, obstetricians sometimes overlook the interventions that are necessary after the fact. Factum, in Latin, refers to 'a thing done or performed' and in modern English 'something that has really occurred', hence the legal term 'accessory after the fact'. If we are to avoid being an accessory to suffering after an unexpected outcome of pregnancy we must proactively listen to women's stories after childbirth and provide appropriate information and support.

Acknowledgement

I would like to acknowledge our clinical nurse consultant, Cheryl Rutherford, for her work in establishing, coordinating and reviewing our Postnatal Counselling Service at Nambour Hospital.

Promoting partnership

Amanda Hinks
Clinical Midwife Specialist, Primary Care

A brief discussion of the role and responsibilities of the midwife during the puerperium in New Zealand.

The ideology of the maternity service in New Zealand encompasses the essence of midwifery practice; working in a continuous partnership with mothers and their families toward fulfilling a positive birth and parenting experience. Midwifery care in New Zealand is a woman-focused partnership model of care situated in the primary healthcare arena in recognition that birth is a normal life event for the majority of women and their families.[1]

The puerperium is described as the period of time between the birth of the placenta or completion of the third stage of labour until six weeks post delivery. The rationale for the six-week period is thought to relate to a range of cultural traditions and customs linked to the physiological changes that occur during this time.[2] The puerperium not only signifies a physiological return to pre-pregnancy function, but a period of transition and assimilation of new roles and responsibilities for both the mother and her family. Part of the midwife's role is to support a safe and positive transition.

New Zealand's legislative and regulatory framework

A regulatory framework can provide safety and consistency in care delivery among health professionals who come into contact with the mother and her family during the puerperium. Pregnant women in New Zealand have a choice about which health professional provides their maternity care: an obstetrician, midwife or general practitioner. New Zealand-based health professionals providing maternity care are guided and supported in their clinical practice by a framework of legislation and professional regulatory bodies that dictate the services a health professional is required to provide to a pregnant, birthing and postnatal mothers and babies.

For midwives, the professional regulatory body is the Midwifery Council of New Zealand, which was formed in 2003 by the passing of The Health Practitioners Competence Assurance Act (2003). The act requires each health profession to define its scope of practice. The midwifery scope of practice serves a number of purposes: it provides a legal definition of New Zealand midwifery practice; it reflects what the public can expect from a person holding the title 'midwife'; and sets out the boundaries of what a New Zealand midwife can do under his/her own professional responsibility. Although midwives are not expected to practise across the whole scope of midwifery practice on a daily basis, many do; they are expected to demonstrate an ability to fulfil the requirements of the scope on an annual basis.

Under the current midwifery scope of practice:

> *'The midwife works in partnership with women, on her own professional responsibility to give women the necessary support, care and advice during pregnancy, labour and the postpartum period up to six weeks, to facilitate births and to provide care for the newborn. Midwives have an important role in health and wellness promotion and education of the woman, her family and the community. This includes preparing the woman and her family for parenthood. The midwife may practise in any setting, including the home, the community, hospitals or in any other maternity service. In all settings the midwife remains responsible and accountable for the care she provides.'* (Midwifery Council of New Zealand, 2004)

Linked to the Midwifery Scope of Practice are the competencies for midwifery practice that detail the skills, knowledge and attitudes expected of a midwife practising in the scope of practice.

For those health professionals detailed above and radiologists, paediatricians and anaesthetists who provide or are allied to maternity care and services, adherence to the legislative framework of Section 88 of the New Zealand Public Health and Disability Act 2000[3] is mandatory. The Maternity notice, or 'Section 88' as it is known, provides health professionals a generic blueprint for service delivery.[1] Section 88 provides a nationally consistent set of service specifications covering issues such as arrangements for antenatal care, health promotion, personal and cultural safety, education screening and birth planning. The Ministry of Health monitors and audits adherence to the Maternity notice at regular intervals to ensure the quality and consistency of maternity care is maintained. During the puerperium, the midwife is responsible for undertaking physical and developmental assessments of the newborn and the physical and emotional well-being of the mother.

Regulatory frameworks and legislation in practice

Midwives are often the health professional who navigates a mother's antenatal journey alongside her and it is this continuum that enables the midwife to assess the existing social and emotional capacity for caring for a newborn baby, or babies in the case of a multiple birth, and to plan for supporting the changes a newborn addition brings to a mother's lifestyle.

Midwifery practice during the puerperium not only focuses on the physical and emotional assessments of the mother and baby's wellbeing; the midwife also has a unique role in observing the parents transition into new social roles and develop their skills of nurturing and caring for a newborn baby. This period of time is when the antenatal visits and discussion between midwife and parents comes to fruition and, for many midwives, is an extremely rewarding period of the care continuum. Transfer of midwifery care to primary care occurs when the baby is six weeks old and the family doctor and well child nurse become the healthcare professionals who continue to support and monitor the family's well-being.

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Postnatal care in Australia

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With many professionals in many settings involved in delivering postnatal care to women and their families, it is clear that everyone should 'mind the gap'.

In researching this article I canvassed the opinions of midwives in the local public hospital where I work regarding postnatal care and its delivery. Many expressed enthusiasm and reported high levels of satisfaction when able to manage women in a consistent manner and prepare them for their journey into parenthood. Many also expressed a view that this aspect of maternity care is undervalued, in particular in the hospital setting. They cited many concerns including poor staff to patient ratios, a lack of consistency of care, a lack of interest from medical staff and frustration with the encroachment of general patients on the ward during bed shortages. I suspect these concerns exist in many centres.

The postnatal period marks a significant point of transition in a woman's life. The period of postnatal care extends from the hospital stay to the community and home and is provided by multiple caregivers. The nature of how this care is delivered has changed significantly over the last 40 years. Women do not 'lie in' for long periods and the average length of stay is now three days.[1] Women are less likely to be able to transition from hospital to an extended family network that can provide support and education regarding parenting. An increasing proportion of women are now returning to work during the postnatal period, which produces altered dynamics and needs. The increase in the caesarean section rate has changed the landscape of the postnatal ward, with increased time and attention paid to epidurals, indwelling and intravenous catheters, analgesia and wounds.

During my early trainee years, I cannot recall giving much thought to the importance or objectives of care in the postnatal period. It is clear why this is the case. On busy birth suites, junior medical staff progress rapidly from one task to the next. 'Baby and placenta out' become the prime objectives. Maintaining a holistic perspective in regard to mother, baby and family is challenging in the face of the ever-growing demand to service antenatal clinics and birth suites.

The objectives of care of mother and baby in the postnatal period are multiple and include:

- provision of rest and recovery following birth;
- supporting maternal attachment and assisting in the development of maternal self-esteem;
- supporting the family unit and identification and management of risks in this setting;
- initiation and support of continuation of breastfeeding, where possible;
- prevention, identification and effective management of postnatal depression;
- identification and management of maternal and infant morbidity; and
- addressing family planning and contraceptive needs.

Women's responses to postnatal care

A brief review of international literature reveals a consistent picture regarding women's responses to postnatal care. Women and their partners value education that is consistent in content as well as time and attention paid to their concerns, regardless of the model of care. The benefits of a continuous caregiver have been demonstrated and include increased maternal satisfaction and measures of self-esteem.[2,3] It should be noted that most of the literature in relation to this issue focuses on antenatal and intrapartum care rather than the postnatal period.

Women's experiences of postnatal care have been studied extensively in Victoria.[4,5] In a State-wide survey undertaken in 1999, 50.8 per cent of women described their experience as very good and three per cent rated their health care as poor or very poor.[4] The strongest associations with dissatisfaction related to women's interactions with carers. Less-satisfied women reported feeling that their concerns were not taken seriously and that caregivers were insensitive. They also reported feeling that staff members were too busy or that they received confusing and contradictory advice regarding breastfeeding and care of their baby. Continuity of midwife caregiver was associated with higher levels of satisfaction. Women who stayed for shorter periods, who had lower family income, were younger, who were single, divorced or separated, or in standard public care also experienced greater dissatisfaction.[4]

An interesting observation is that women cared for in the private system demonstrated higher rates of satisfaction and breastfeeding continuation despite higher obstetric intervention rates, higher rates of care by non-midwives, less frequent rooming in and a two per cent rate of Baby Friendly Health Initiative (BFHI) accreditation.[5] Reasons for higher satisfaction rates have been proposed and include the importance of choice that women as consumers exercise in the private system. Having the partner stay overnight, more pleasing aesthetics and individual rooms also contributed to their satisfaction.[5] Demographic differences between women accessing public and private obstetric care are also important.

Postnatal care in Australia

Public and private

In 2006, 97 per cent of Australian women received pregnancy care in a hospital. Two per cent were in the care of birthing centres and 0.2 per cent of women were estimated to have delivered at home.[1] Approximately two-thirds of hospital-based care is provided in the public system.[1] It is difficult to summarise the nature of both sectors due to a lack of data and heterogeneity in the services offered.

A common postnatal experience for women in public hospital care is that of a short stay with an expectation of follow up with their general practitioner. Women in this setting may be cared for by a number of midwives and even non-midwives. Their contact with medical officers may be infrequent and limited to very junior staff. Access to community and home-based postnatal services is highly varied across Australia. The proportion of women cared for in caseload midwifery and midwifery team models is increasing, but remains small.

Postnatal care in the private setting is equally varied. Midwives provide the bulk of care with the obstetrician contributing brief daily

visits. Length of stay is usually longer and more likely to be in single rooms. Private hospitals may offer a range of 'packages', including the use of a well baby nursery overnight and extended care in a four- or five-star hotel after discharge.

Maternity care in smaller rural settings has a number of benefits in the postnatal period. Women will be more likely to know their midwife within the community. Midwives in this setting will usually be part of smaller teams providing care across the whole of pregnancy along with a GP-obstetrician or obstetrician. Rural and regional women who have to travel to larger centres for confinement are potentially more vulnerable in the postnatal care setting. This is due to the psychosocial implications of staying away from family and home for long periods as well as the difficulties in coordinating hospital to home services over long distances.

Alternative models

Alternative models of postnatal care have been developed in Australia in the past 20 years. These models emphasise a number of principles, including: continuity of caregiver in both the pre- and post-birth periods; integration of hospital and community services; and collaboration between health-care workers. Obtaining data regarding the number of women able to access such services is difficult. Unfortunately, very little formal evaluation of specific models has been undertaken. Most have evolved as a reflection of the initiative of staff within services as well as the specific needs of the community and resources available.

Early discharge

The trend toward early discharge in Australia has paralleled similar changes in postnatal care internationally. The objective of early discharge when first proposed sought to provide women with the ability to choose when to return home rather than abide by inflexible medicalised protocols. In hospitals where bed shortages are commonplace, the policy of early discharge has evolved and is no longer driven by notions of maternal choice, but by economic necessity. Early discharge does not appear to reduce breastfeeding continuation rates or contribute to postnatal depression; however, the literature in relation to this is poor in quality and more research is required.[6] The initial objectives of early discharge will only be achieved where there is an equivalent increase in community-based care for women leaving hospital early.

Other aspects of care

Family planning and contraception, cervical surveillance and management of medical disorders such as hypertension, diabetes and obesity should be addressed in the postnatal period. This aspect of care is often poorly delivered due to the separation of hospital and primary-care services. Many public hospitals use pro forma discharge letters to communicate with general practitioners regarding pregnancy outcomes and postnatal care needs. These letters are in many cases the only link between services and their quality and timing is highly varied. An ideal model of maternity care should seek to maximise the health of women across their reproductive life rather than focus on a single pregnancy. This is important from an economic as well as an ideological perspective.

In Far North Queensland, the consequences of the hospital to community health care 'gap' are evident. There is a high prevalence of type 2 diabetes in reproductive-aged women across the region. Compliance with postpartum glucose tolerance tests following treatment for gestational diabetes remains low. As a result, increasing numbers of pregnancies occur in women with untreated pre-existing diabetes. It is not uncommon to see women attending for antenatal care who have never had a pap smear. This occurs despite previous hospital pregnancy care, postnatal education and advice and referral to primary care providers for this. Unplanned pregnancy remains common in spite of a range of accessible family-planning services, including Family Planning Queensland, women's health GPs, mobile women's services, sexual health services and Indigenous primary care services. The challenge for the future is to better integrate these services with the hospital service. A greater challenge will be to find ways to improve the uptake of services by women who do not seek out healthcare between pregnancies.

Postnatal care models that cross the hospital to community healthcare 'gap' do exist in Australia. These models include outreach services with extended periods of domiciliary care and collaborative care teams including midwives, GPs and other health workers. Innovative models that support Indigenous and non-English speaking women have been developed in a number of areas.[7]

Examining postnatal care as a whole, it is easy to emphasise the negatives. That is the dissatisfaction, resource deficiencies and future challenges. Using the Victorian experience as an example, where half of all women rated their care as very good, it could be said that the glass is half full. The women who experienced poor or very poor care tended to reflect a more vulnerable demographic in terms of age and social situation. State and Federal Maternity Service reviews in Australia emphasise increasing maternal choice in the nature of their care as well as providing opportunities for continuity of caregiver. This area of policy development is complicated by a lack of high-quality evidence. As these new models continue to develop, services should seek to formally evaluate and publish outcomes in relation to satisfaction and maternal and neonatal measures of health. Where resources are limited, it would seem prudent to target collaborative models of care with continuity of providers from hospital to home to socially, geographically and economically disadvantaged women.

A midwife's perspective

Postnatal care is about assisting and working in partnership with women to aid the physical and emotional recovery from birth, and empowering women and their families with the information and skills necessary to transition to the parent role and to take their new baby home and re-enter the community as a family unit.

Effective postnatal care does make a difference and continuity of caregiver has been demonstrated repeatedly to improve outcomes for mother, baby and families. A trusting relationship develops based on a known history and consistency of advice and this, ultimately, leads to faster identification of deviations from normal and a fosters a supportive, non-biased relationship where women's confidence in their ability to mother can be strengthened and overall satisfaction for mother and midwife increased.

The Cairns Base Hospital has a holistic team approach to postnatal care and has a professional team of midwives, doctors, allied health workers, social workers and Indigenous liaison officers working together to provide a comprehensive service, which then extends into the home after discharge from hospital with the Extended Midwifery Service (EMS) and then referral to local community health organisations after discharge from EMS.

The postnatal ward is a busy, bustling unit with short average lengths of stay and large numbers of staff, which makes continuity of caregiver from shift to shift almost impossible. This is not ideal, but

an organisational reality. At times, the ward is so busy that staff to patient ratios are excessive and patient care becomes sub-optimal where essential patient needs such as medication and observations are met, but the reassurance, support and education that is essential to assist women to transition to the parent role is neglected. These organisational factors significantly affect midwife satisfaction.

Predominantly, women are cared for in twin share rooms with their babies, which is not ideal in promoting rest and recovery although the interaction with other new mothers for some women has many benefits as they share stories, debrief their birth experiences and swap parenting advice.

CBH is a BFHI-accredited facility, so mothers and babies are never separated unless there is a medical reason and even then all avenues are exhausted to keep the mother/baby unit together. The BFHI status aims to ensure that all midwives are providing consistent breastfeeding information, advice and support to those choosing to breastfeed. This is overseen by a wonderful team of lactation consultants who provide a seven day a week inpatient and outpatient service. The Special Care Baby Unit provides specialist baby treatment on the maternity ward where appropriate for those babies requiring medical care.

Many women birth at CBH away from their families owing to the lack of obstetric facilities in the Far North and, for those who have a baby requiring extended admission, we have four rooming-in rooms available on the maternity ward to promote breastfeeding and prevent separation. For those women who are unable to stay in rooming-in, the social work and patient travel team provide support to find accommodation close by that is more appropriate.

Upon discharge from hospital, which for some is as soon as six hours post birth, the EMS team provides in-home midwifery follow-up. Owing to the small number of midwives in the EMS team, continuity of caregiver is much more common and the team makes an effort to sort the daily workload of visits into geographical location groups to not only streamline the work day, but also provide women with daily visits for up to a week (longer if there are complex issues) with the same midwife.

Overall, postnatal care at CBH, as at most facilities, is not ideal and there are many areas that could be improved. However, even with current organisational constraints, there are many positive aspects to the service and the team strives to make changes to improve outcomes and satisfaction for all.

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Milk of humankind: best

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As has been long recognised by the farming industry, colostrum is nature's wonder food for newborn mammals, so why aren't we doing more to ensure our own babies get it?

The dictum 'breast is best' is well known, but has created a lot of controversy socially and medically. Those who encourage and promote breastfeeding are often regarded as fanatics and given derogatory names such as 'breastfeeding Nazis'. In this paper I discuss the history of colostrum use and promotion in medical science, and the value of colostrum for our babies' health today. The promotion of antenatal expression and storage of colostrum from 34–36 weeks gestation by maternity care providers and its value for primigravida and women with specific health issues is overviewed.

There is no question that when it comes to animals of the importance of the first milk the calf or other baby mammals receive should be its mother's colostrum. That animal is at risk of dying if it is not fed its mother's colostrum within the two to four hours after birth and then again 12 hours later. This colostrum is rich in immunoglobulins that will protect that calf against infections. According to Kung, 'calf mortality increases as the interval between birth and ingesting colostrum increases'.[1] This is an important economic imperative in the dairy farming industry. And yet this imperative is not applied to human babies with the same passion. Is this because human reproduction and the health of our babies is not as important to our nation's economic health as the animals that enable the growth of big industries? Or does our maternity industry believe it has done its job well if a live healthy baby is born to a live healthy mother and whatever happens thereafter is not of as much concern?

> 'One strategy to ensure that all babies receive colostrum as their first milk is to advise and support pregnant women to express and store colostrum antenatally.'

History of colostrum for human infants

In the early years of medical history, colostrum was not promoted as a substance to be given to human babies. Traditionally in parts of Africa and Europe, the thick yellow colostrum was regarded as unsuitable for human consumption and thus was expressed and thrown away. According to Kulski *et al*, most traditional societies did not commence breastfeeding until the milk came in at about two to three days postpartum, a practice that still continues today in some societies.[2] Consequently, these babies were given purgatives such as wine and honey to rid their bowels of meconium.[3]

What is colostrum?

Colostrum is the first milk and is present in the breast from 12–16 weeks of pregnancy. Colostrum (one to five days following birth) evolves through transitional milk (present for six to 13 days following birth) to mature milk (from 14 days and beyond). It is thick and yellow in colour, due to beta-carotene, and has a mean energy value of 67kcal/dl, compared with the energy value of mature milk (72kcal/dl).[4] The volume of colostrum per feed varies from 2–20ml in the first three days after the birth of the baby, and is aligned with the size of the newborn's stomach.

It is a wonder food, but is also regarded as a medicine as it is rich in antioxidants, antibodies and immunoglobulins, especially secretory immunoglobulin A. Colostrum has strong antiviral and phagocytic activity, with its primary function being anti-infective while its biochemical composition has a laxative effect. The frequent and early passing of meconium helps to get rid of excess bilirubin and prevent jaundice in the newborn.

Colostrum as the first food for newborns

Linked with the importance of the baby having the colostrum, as its first food, is the importance of the baby being skin-to-skin with its mother after birth. Being with mother skin-to-skin is the natural habitat for the newborn baby, which has benefits of it colonising its mother's bacteria, earlier latching and breastfeeding well thus obtaining the first colostrum. Colonising starts during the birth process for vaginally born infants, while those born by caesarean section are more likely to colonise microbes from the air, other infants and the health care staff. It is therefore imperative that those infants born by caesarean section are placed skin to skin with their mothers soon after birth to promote the development of healthy intestinal microbiota.[4]

Early breastfeeding also promotes tolerance to antigens, thus reducing the incidence of food-related allergies in breastfed babies.[4] The development of healthy intestinal flora also reduces the incidence of allergic disease, inflammatory gut disease and rotavirus diarrhea in infants.[4]

According to Walker, 'Once dietary supplementation begins, the bacterial profile of breastfed infants resembles that of formula-fed infants…'[4] In susceptible families, where there are dairy allergies or a history of insulin-dependent diabetes mellitus (IDDM), one bottle of a cow's milk formula as supplementation in the first three days of life can increase the risk of the infant developing allergies, IDDM and type 2 diabetes.[4] These children thus exposed become adults who have health issues that will affect their future childbearing abilities and health during pregnancy, labour and birth.

Antenatal expression and storage of colostrum

One strategy to ensure that all babies receive colostrum as their first milk is to advise and support pregnant women to express and store colostrum antenatally from 34–36 weeks.[5,6] The women who

need this the most are primigravidas who are more likely to have longer labours leaving them tired and thus unwilling to deal with the demands of a newborn who wants to suckle often after birth. These women often have sore nipples in the early days as they learn to latch their babies well and become intolerant of on-demand suckling at the breast. The expressed stored colostrum provides food for the baby when the mother might have supplemented the baby with formula, a practice with health risks for the infant. Babies of mothers with conditions such as diabetes and who may be at risk of hypoglycemia neonatally or those who may be separated from their mothers after birth would also benefit from their mothers having expressed and stored colostrum antenatally.

While there have been calls to cease this practice as no randomised controlled trials have been undertaken to demonstrate its efficacy[7], there is sufficient positive feedback from women who participated in a pilot study[7] and from midwives' and women's experiences to support the continuation of this practice. The colostrum expressed antenatally is comparable biochemically[2] with that produced after the birth of the baby and there are no increased risks of premature labour being induced by periods of nipple stimulation ranging from 30–110 minutes during pregnancy.[5]

Most babies have the opportunity to receive colostrum either directly from the maternal breast at birth and/or by the use of stored colostrum. Yet human colostrum does not seem to be valued as highly, despite its proven health benefits, or promoted to the same extent by the health professionals involved in maternity care as bovine colostrum is promoted by the alternative health care industry for strengthening adults' immune systems. If we are truly in the industry of promoting the health of our people, then we need to take another look at human colostrum for human babies.

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Various Dates
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Clinical Attachments

For further information on Women's Health activities follow this link to visit the RACGP website:
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To view the most recent lists, please go to: www.ranzcog.edu.au/meetingsconferences/index.shtml

New RANZCOG Website

Your chance to be involved

The College is calling for volunteers to attend photographic shoots and/or submit their own photographs to feature on the College website. This is a fantastic opportunity to showcase what you or your hospital, clinic or local RANZCOG community is doing within the field of obstetrics and gynaecology.

The College is currently creating a new website to improve the delivery of information and engage RANZCOG Members in the activities of the wider College community. Due for launch in this half of 2011, the front page will be a central space to communicate and engage visitors to the website. News items, upcoming events, College announcements, media releases and new and recent changes to College Statements and training documentation will be displayed there.

In addition to this information, a bold and engaging photographic banner will be a prominent part of the front page. The banner will display and promote a diverse range of RANZCOG activities and provide visitors to the site with a visual overview of the day-to-day functions of the College. The banner will highlight the activities of RANZCOG and its Members: Trainees and training supervisors engaged in obstetric and gynaecological training within a hospital or clinic setting; rural GPs in the workplace; RANZCOG Members working overseas; and RANZCOG events, such as annual scientific meetings.

The College will engage a local professional photographer to enter the desired environment, be it a hospital, clinic or event, and take a variety of photographs for the website banner. Permission from all subjects, including any workplace authority and patients, will be obtained before any photographs are taken and displayed on the website. This exercise will be ongoing to keep photographs current. As mentioned earlier, it is also possible for Members to submit their own photographs for possible inclusion in the banner. The copyright for all images used will reside with the College.

If you are interested in participating, please email Andrew Haxton, ICT Coordinator: ahaxton@ranzcog.edu.au .

Tissue extraction at laparoscopy

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Arguably, the common challenge in most operative obstetrical and gynaecological procedures is the extraction of large-volume tissues through small orifices.

The challenge of extracting large-volume tissues through small orifices is particularly common in the area of benign gynaecological laparoscopy, where it is possible to perform surgery on increasingly large structures, such as fibroids or ovarian cysts, using minimal-access techniques. At the Sydney Women's Endosurgery Centre, we perform almost exclusively benign minimal-access gynaecological operations and thus deal with a great deal of this sort of tissue extraction. In this article, we will deal with various methods of extraction of specimens that are too large to be passed through the standard laparoscopic ports and share the tips and tricks we have learned.

Which procedures to perform laparoscopically

While this article aims to show how certain techniques can enable large specimens to be removed laparoscopically, the question ought also to be posed: should we be doing this laparoscopically?

One has to consider the risk of malignancy and ask whether the case should be managed by laparotomy instead. A Cochrane Review with regard to ovarian masses[1] discusses the procedures that should be followed when managing these cases. They state the importance of examining the surface of the ovary and the peritoneum, placing specimens in a retrieval bag and avoiding tumour rupture within the peritoneal cavity. If in any doubt about the nature of the tumour during the procedure, then the conscientious laparoscopic surgeon will always be prepared to change plan and consider whether a laparotomy or biopsy and referral to an oncologist would be in the best interests of the patient.

Secondly, one has to consider the patient as a whole to see if the benefits of a minimally invasive procedure are outweighed by the risks to that particular patient. While laparoscopic procedures are associated with many benefits[1], it must be remembered that these procedures often take longer and require prolonged Trendelenburg positioning.

Types of tissue to be extracted

Broadly, the tissue remaining after benign gynaecological procedures can be divided into one of three categories:

1. Soft – includes peritoneum covered in endometriosis or a tubal ectopic pregnancy.
2. Fluid filled – includes ovarian cysts and hydrosalpinges.
3. Solid – includes the uterus after laparoscopic hysterectomy or myomectomy.

Soft tissue

In this section we will assume that there is a 10mm umbilical port and all accessory ports are 5mm diameter.

There are many times during laparoscopy when you wish to remove small quantities of tissue that are just too bulky to drag through a 5mm port and there is no concern about spillage of contents, for example, removing endometriotic nodules or large ovarian cyst walls. In cases such as this there are a number of methods that can be employed:

1. Pulling the port out and dragging the specimen through the skin. While this can be quick, there have been reports of port site contamination leading to port site metastases or deposits of endometriosis.[2] The port also needs to be replaced, which can be difficult and pneumoperitoneum will be lost. If the port is replaced through a different peritoneal defect than the original, then CO_2 can escape into the abdominal wall and lead to surgical emphysema.
2. 'Micro' morcellation. By holding the specimen between two graspers (one held by the surgeon and one by the assistant), scissors can be used to make cuts into the specimen. This has the effect of elongating and thinning the tissue so that it will pass through a 5mm port (Figures 1–3). Care must be taken that the entire specimen is removed and none remains in the port. This should be done by watching the tissue as it passes into the port and then watching to see if anything is pushed back inside when the instrument is returned to the abdomen. If in doubt as to whether any material has been left in the

Left to right, Figures 1–3. Micro-morcellation of endometriotic tissue to allow extraction through a 5mm port.

port, the laparoscope can be pointed up the port to check that it is clear.

3. Pushing backwards through the 10mm umbilical port. If tissue is too large to pull through a 5mm port then the tissue can be directed towards the laparoscope and, while the scope is withdrawn, the tissue can be pushed up into the 10mm port. Once the laparoscope is out, the grasper is pushed up enough that the jaws are clear of the port and the tissue is released. However, lining the ports up so that the grasper can push straight up it can be difficult and the tissue can leave residue, such as blood, along the port and on the valve that can coat the laparoscope lens when it is reintroduced.
4. Use a 5mm laparoscope to visualise removal through the 10mm umbilical port. To avoid enlarging a 5mm port to 10mm to allow bulky tissue to be pulled through, the laparoscope can be changed at the end of a procedure. A 5mm scope can then be used to observe the tissue being pulled through or into a retrieval bag that is then removed through the 10mm umbilical port. In our experience, the view with a 5mm laparoscope may not be as good as that with a 10mm one. In addition, the perspective of the abdomen looking from a lateral port rather than the umbilicus can be somewhat disorientating. To overcome these problems, it is prudent to grasp the tissue to be extracted while the 10mm scope is in use and hold it while the laparoscopes are exchanged. This avoids having to 'fish' around for the tissue when you are looking through the smaller scope via a different port. The tissue can then be passed to a toothed grasper that has been introduced through the 10mm umbilical port or placed into a retrieval bag that has entered that way.

Fluid filled

Depending on the nature of the cystic tissue to be removed, it may be reasonable to drain the fluid intraperitoneally (for instance, with hydrosalpinx) and pull the flaccid tissue out using one of the methods above. However, when spillage of the contents is undesirable (with dermoid cysts, for example) the tissue should first be placed in a retrieval bag. For specimens that will easily pass through the port site a plastic bag may be suitable, but if you foresee a lot of manipulation then a bag made of rip-stop nylon may be preferable.

Points to consider include the following:

- Make sure the bag you choose is big enough! You can spend a long time trying to get a 6cm cyst into a bag with an opening 5cm in diameter.
- Once the neck of the bag is outside of the abdomen you don't want it to fall inside; grasp the edges with some clamps to prevent this happening (see Figure 4).
- A controlled puncture of the cyst at this point can allow the fluid into the bag (see Figures 5 and 6). If you pull on the bag the fluid may overflow before you can suction it away. Just hold the bag in place without pulling.
- If you stretch the port site during extraction then this can increase the risk of later hernia formation; consider formal sheath closure.
- Consider changing your gloves and disposing of any contaminated swabs and suction apparatus after the cyst has been opened to prevent contamination of the wound or peritoneal cavity.

Solid tissue

Colpotomy

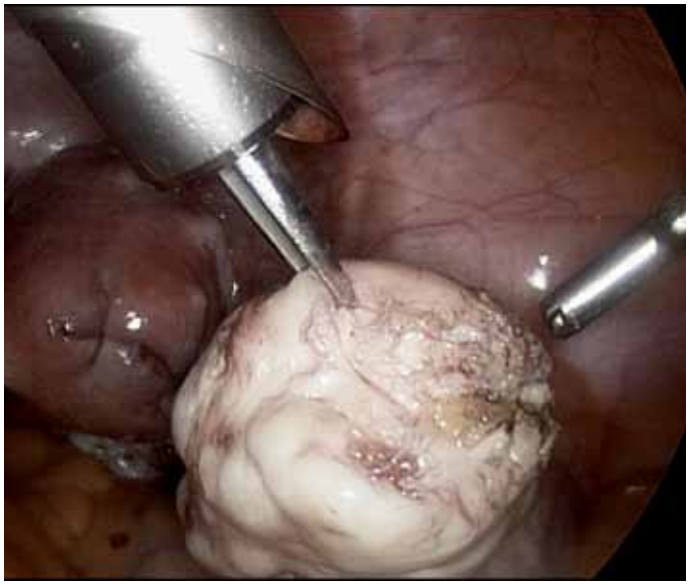
Removing uterine tissue after myomectomy or laparoscopic

Figure 4. Grasping the edges of the retrieval bag.

Figure 5. Controlled puncture of the cyst.

Figure 6. Tissue extraction of a dermoid cyst.

From the top, Figures 7–9. Cutting action of morcellating knife with lateral traction from two toothed graspers.



From the top, Figures 10–12. Mechanical morcellation; holding specimen high and peeling like an orange.

hysterectomy will often involve sharp morcellation, but any other orifices that have been opened should not be overlooked. For example, if a total laparoscopic hysterectomy has been performed then the open vaginal vault can be used to pass tissue to the outside. Smaller uteri will pass easily and a large retrieval bag can be passed to collect large ovaries intact. If the vagina has been opened, for example during excision of an endometriotic nodule, then the colpotomy should be used for tissue extraction rather than struggling through a small port site. A McCartney tube or just a wet swab in a glove can be used to prevent loss of pneumoperitoneum.

Some would advocate cutting a posterior colpotomy, even if one has not been formed incidentally, in order to avoid extending a skin incision. This is best performed laparoscopically using a probe or McCartney tube in the posterior fornix and can then be closed either using laparoscopic suturing or vaginally, depending on access and skills. These wounds tend to heal well; however, if the rectum has been damaged or resected during your procedure then a vaginal

Figure 13. The resulting uterine tissue after mechanical morcellation.

wound is best avoided as the two wounds near each other possibly increase the risk of colovaginal fistulae.

Sharp morcellation

These techniques should only be performed by those with sufficient experience and knowledge of the dangers to allow them to proceed safely. Morcellating will often come at the end of a long laparoscopic procedure and it is easy to relax and lose concentration. However, damaging a viscus or blood vessel can convert a successful minimally invasive procedure into a big laparotomy or even a tragedy. In 2006, a five-year-old girl died following the first UK use of a mechanical morcellator during a laparoscopic splenectomy.[3]

Sharp morcellation can be performed using a straight scalpel blade or a rotating circular blade.

'Straight' knife morcellation

Once a uterus or fibroid has been removed from its surrounding structures it is not possible to reduce its size further using monopolar diathermy as the circuit to the rest of the body has been broken. If the tissue is too big to pass through whatever colpotomy wound is present then either a harmonic scalpel or morcellator knife can convert a wide bulky specimen into a long narrow specimen to allow easier extraction through the vagina. The morcellating knife uses a number 10 blade in a housing into which the blade retracts when not in use.[4] The knife is usually introduced through a 10mm suprapubic port and the tissue is grasped by toothed instruments from either side (see Figure 7). The cutting action is always from posterior to anterior and is always under direct vision (see Figures 8 and 9). All manipulation other than tissue cutting should be done with the blade in its stowed position. The surgeon must make sure that the blade is firmly in place in the housing so that it can't fall into the abdomen and damage any structures. The harmonic scalpel can be used in a similar way although there will be more smoke/steam and the operator needs to be aware of the heat generated at the tip and not inadvertently touch surrounding bowel tissue.

The most efficient way to morcellate a fibroid or uterus is to convert it into one long strip that is slim enough to pass vaginally in one go. It is important to remember how many pieces you have and not to leave any sections in the abdomen as they are at risk of becoming necrotic or taking a parasitic blood supply.[5]

Mechanical morcellation

In the case of a subtotal hysterectomy or myomectomy where there is no vaginal incision, it may be preferable to morcellate the specimen into strips thin enough to pass through an abdominal port. This may also be necessary in the case of larger uteri (>350g) and in nulliparous women.[6]

First described in 1993[7], cylindrical morcellators are now available as disposable and reusable devices. They involve a rotating coring knife at the intra-abdominal portion of the device while a motor housed within the device or at a unit away from the device drives the blade. They require a relatively large port of 12–15mm. More recently, a morcellator that uses bipolar energy rather than a sharp blade has been introduced. With all these devices the danger of a sharp (or hot in the case of the bipolar device), tipped instrument being inserted into the abdominal cavity cannot be overemphasised. The following rules should always be adhered to during mechanical morcellation:

1. Always hold the morcellator steady and pull the tissue through it (see Figure 10). When first using these devices there is a tendency to push the cutting tip down on to the tissue to be extracted and thus towards bowel or retroperitoneal structures such as major blood vessels. Remember that morcellation is a pulling motion not a pushing one. All morcellation should be performed with the specimen held high up away from viscera and vessels. On the other hand, care must be taken not to inadvertently pull the tip of the device into the abdominal port wound as this could damage the anterior abdominal wall.
2. Always keep the tip of the instrument in view. This means that if bowel is accidentally pulled into the device it will be recognised and can be dealt with. This is also the reason why mechanical morcellation should not be performed within an extraction bag and should certainly not be performed from outside of the abdomen without laparoscopic control.
3. It is like peeling an orange not coring an apple. If the tip of the morcellator buries into the centre of the fibroid/uterus, then the blade will eventually stop rotating as friction becomes too great. The most efficient way to morcellate is to cut in a circumferential fashion with the assistant acting to help the rotation of tissue on to the blade (Figures 11–13). In this way long pieces of tissue are produced thus minimising time spent re-grasping the specimen.
4. Grab fragments as you go. The problems of retained fragments of myometrium or cervix following laparoscopic morcellation are well recognised.[8,9] Fragments can take on a parasitic blood supply and can present as pelvic masses and cause considerable distress and the need for further surgery. These fragments are best dealt with as they occur or they may become lost.
5. If the tissue starts spinning; stop morcellating. With the rotating tipped devices, if the tissue starts spinning it means that the tip is not cutting. The assistant should grab the tissue and pull it across the blade so that when the motor is restarted the tissue in the device will cut free and a better grab of the specimen can happen.
6. If in doubt; stop morcellating. If, at any point during morcellation, you are not happy, for instance you can't see the tip because some of the specimen is in the way or because your assistant has moved the camera, if the patient starts coughing or you lose gas pressure; then simply take your finger off the trigger or foot off the pedal. Then sort out whatever

the problem is and only continue once you are happy. These devices are too dangerous to simply plough on regardless.

Very bulky specimens (for example, multifibroid uteri) may be too big to rotate in the abdominal cavity and these may be unsuitable for mechanical morcellation. Alternative approaches such as straight knife or open morcellation (see below), or a combination of techniques may be required.

Open morcellation

The process of morcellation can be very time-consuming as a large amount of tissue has to be passed through a narrow space. Open morcellation in which a scalpel is used to thin the specimen externally has been described vaginally[10], but can be difficult and care must be taken not to traumatise the vaginal skin. Alternatively, a small 3–5cm transverse suprapubic incision can be made, the uterus grasped with clamps and a knife used to thin the tissue as it is extracted. This process is more rapid than mechanical morcellation as the tissue is coming through a larger hole.

Some people will argue: what is the point in spending a long time performing a laparoscopic procedure only to open at the last stage? However, if you take the example of a very large fibroid uterus then you are converting an operation requiring a large midline incision to one requiring a small transverse incision.

Conclusion

As gynaecologists become increasingly skilled at minimally invasive procedures, the tissue that requires extraction will become larger and more difficult to retrieve. If the surgeon performs an expert laparoscopic operation, but then uses an extraction method that takes a long time, leaves tissue behind or puts the patient in danger then they would have been better to have performed an open procedure. By following some of the techniques described in this article all of the benefits of minimal access surgery can be realised without compromising safety.

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Applicable College Statements

C-Trg 2 Guidelines for performing advanced operative laparoscopy available at: http://www.ranzcog.edu.au/publications/statements/C-trg2.pdf .
C-Gyn 7 Use of the Veress needle to obtain pneumoperitoneum prior to laparoscopy available at: http://www.ranzcog.edu.au/publications/statements/C-gyn7.pdf .

Pelvic floor management

Heather Gouldthorpe
Physiotherapist

At least one-third of women suffer from long-term pelvic floor dysfunction as a consequence of pregnancy and childbirth.

The pelvic floor muscles (PFM) help to support the pelvic organs and also, indirectly, the lumbar spine, through their relationship with the abdominal muscle corset. They are involved in the following: parturition; micturition; defaecation; continence of urine, flatus and faeces; and intercourse.

Each function needs to be assessed in the puerperium and this can be challenging with the hospital short-stay imperative. In the acute care setting, a co-ordinated multidisciplinary approach to pelvic floor issues may involve medical, nursing and women's health (WH) physiotherapy staff.

Parturition
During vaginal birth, the PFM and connective tissues are stretched by up to 2.5 times their normal resting length and may tear, be cut or directly damaged by instrumental birth. The levator muscle plate, including pubo-rectalis and pubo-coccygeus, can be partially or totally avulsed from the pelvic side wall in 20–36 per cent of vaginal births[1,2]; this rate increases with increasing maternal age. Stretch or compression damage to the pudendal nerve that innervates the urethral and anal sphincters is estimated to occur in 42–80 per cent of births and is related to length of second stage, size of baby and instrumental delivery.[1]

Immediately following birth-related soft-tissue injury (as with sporting injuries), WH physiotherapists institute first aid principles in line with the PRICE acronym and continue these for the first 24–72 hours:
- protection to prevent further trauma from unnecessary increases in intra-abdominal pressure;
- rest in recumbent positions;
- ice to assist with pain[3] is applied for 20–30 minutes and then re-applied every three hours;
- compression to reduce swelling, using thick padding and firm underwear; and
- elevation to facilitate reabsorption of perineal swelling by lying in supine, side or prone positions rather than sitting or standing, which make swelling dependent.

This process is to reduce oedema, inflammation, subsequent fibrosis and to protect new vascularisation.

The UK National Institute of Health and Clinical Excellence (NICE) guidelines[3] recommend that women are also:
- educated about the necessity of perineal hygiene and signs of infection; and
- questioned about perineal pain and discomfort and offered an assessment of the perineum at each contact.

Micturition
Following normal, instrumental or caesarean birth, bladder management is essential to prevent urinary retention, which can have a long-term deleterious effect on detrusor function. All major hospitals have guidelines for postpartum bladder management, which usually require that the woman's first void occurs within six hours of birth or an indwelling catheter being removed and women are encouraged to drink normally and to void when urge is present.

An inability to void (overt urinary retention) can be associated with pain and adequate analgesia (preferably without codeine because of the effect of constipation) may be required for women following both vaginal and caesarean birth. The WH physiotherapist teaches women voiding positions and techniques to assist, such as immersion of a hand in cold water or being in a warm bath or shower to void. If there is no sense of urinary urge, the woman is encouraged to perform timed-voiding every three hours.

In cases of covert urinary retention, women are able to void, but do not empty the bladder and experience voiding dysfunction such as a slow or hesitant flow, do not have feeling of an empty bladder or have overflow incontinence. Double and triple voiding techniques may help this problem.

An asymmetrical high fundus can be indicative of a full bladder. In some hospitals, real-time ultrasound examination is available and enables the bladder to be visualised to provide information about its size and volume. This may prevent unnecessary catheterisation, with the attendant risk of urinary tract infection (bladder scanners are considered to be inaccurate after birth, providing false positive information due to the size and vascularity of the uterus). It is generally agreed that catheterisation will be needed by women who have overt urinary retention and cannot void or by women with a residual urine volume of greater than 150ml.

A woman with unresolved urinary retention, which requires an indwelling catheter, will need referral to a continence nurse advisor for a trial of void at one week postpartum. Women who have any voiding dysfunction or no sense of urinary urge at the time of hospital discharge, are advised to seek follow-up if the condition does not resolve by one week postpartum.

Defaecation
Defaecation problems are often overlooked in the puerperium. Constipation is common and is not only uncomfortable for the patient, but creates further pressure on already stretched pelvic floor structures.

Problems with defaecation occur due to constipation (for example, from pain relief), fear of pain or further increasing perineal trauma, and are also common after lower uterine segment caesarean section (LUSCS). If a woman has a known history of constipation, stool softeners and/or laxatives that are safe with breastfeeding, should be prescribed soon after birth. Dietary fibre (including prunes and pear juice) and fluid intake need to be increased. If the woman is breastfeeding, an extra litre of fluid per day is required by the end of the puerperium.

If the woman bears down to defaecate, the rectus abdominus muscle works in conjunction with pubo-rectalis muscle to pull the

ano-rectal angle forwards, lengthening and narrowing the anus and causing a bulging of the posterior wall of the vagina. This not only makes defaecation more difficult, but also causes pain through pressure on the LUSCS and perineal wounds.

The WH physiotherapist can teach correct defaecation mechanics to women with a history of constipation, haemorrhoids, anal fissure; obstetric anal sphincter injury and LUSCS; and to those who are fearful. Correct mechanics enable the anus to shorten and open and keep the ano-rectal angle at 90 degrees, the pelvic floor in a supported position and also prevent pain.

> 'Rehabilitation of PFMs should begin three to five days after birth... Initial exercises must be gentle and pain free.'

Continence

Pregnancy is the greatest risk factor for urinary incontinence (UI) and during the last trimester, the incidence of UI has been reported as high as 67 per cent.[1] De novo UI following birth may be overflow incontinence from covert urinary retention and pudendal nerve and levator ani damage sustained during labour are associated with the presence of new or worse stress incontinence following birth. It is generally agreed that the rate of incontinence after birth is 33 per cent.[1,4] Birth by LUSCS is protective initially, with a UI rate of 15 per cent, but it does not protect ultimately for UI or faecal incontinence.

Flatal and faecal incontinence occur in approximately ten per cent of postpartum women.[4] These are psychologically distressing and can occur as a consequence of pregnancy, birth and in particular obstetric anal sphincter injury. Faecal incontinence may also occur as a result of overuse of aperients, leading to liquid stool and rectal urgency that are difficult to control when PFMs are weak.

Teaching PFM exercises to women in pregnancy may be the best way to prevent long-term UI.[1,4] Research confirms that women who received an intensive PFM exercise program before 20 weeks gestation are less likely to report UI at six months postpartum.[4,6] Physiotherapy muscle rehabilitation should be offered immediately after birth to all women:

- with a history of UI before pregnancy, during pregnancy and after birth;
- who had a forceps delivery;
- who delivered a baby weighing greater than 4000g;
- who sustained an obstetric anal sphincter injury;
- with pelvic organ prolapse; or
- with faecal incontinence.[4,5,6]

As with other types of muscle injuries, rehabilitation of PFMs should begin three to five days after birth (because the longer the period of immobilisation, the greater the atrophy of muscle fibres). Initial exercises must be gentle and pain free.

It has been found that giving written instructions is ineffective, as only 25 per cent of women will contract the muscle correctly and many will perform a valsalva (bearing down) manoeuvre[1], which is counterproductive. It has been found that PFM exercise programs are most effective when they are targeted, individual and specific, rather than general population based[4] and that the more intensive the PFM exercise program is, the greater the treatment effect.[1,4]

Physiotherapists teach women:

- how to contract the muscle using verbal or kinaesthetic cues to ensure the correct technique (which is checked with consent);
- functional bracing of the PFM for any sudden increase in intra-abdominal pressure, such as a cough or sneeze; and
- abdominal bracing via core stabilisers to protect the pelvic floor during functional activities (transversus abdominus will lift the PFM via the endopelvic fascia).

A physiotherapist can also provide advice on how to gradually improve PFM strength and endurance through exercising fast and slow twitch muscle fibres in the first six weeks postpartum, and on the safe return to gym and sport activities.

At three months postpartum, women still experiencing UI should be offered an intensive individual PFM exercise program[4,5] from a postgraduate-educated continence physiotherapist and those with faecal incontinence offered dietary and lifestyle interventions as well.

Intercourse

Dyspareunia is a common sequela of instrumental birth and perineal suturing, but can be multifactorial in its aetiology. If conservative measures, including water-based lubrication, do not help the problem after three months, women should be encouraged to seek a medical opinion.[3]

Conclusion

Pelvic floor dysfunction of any kind occurs at huge psychological, physical and social cost to the woman and places a financial burden on both the individual and society. There is some evidence that long-term incontinence can be prevented or ameliorated though intensive exercise programs before 20 weeks gestation. It is important to stress that attendance at these programs is necessary for long-term pelvic floor health.

Immediately post-birth, pelvic floor functions can be assessed and managed by WH physiotherapists, midwives and continence nurse advisors. Women with problems, especially incontinence and prolapse, that persist after three months will benefit from detailed assessment and conservative treatment from a specialist continence physiotherapist.

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Perinatal mental health

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At the risk of preaching to the choir, now is a good time to make sure that we're all singing from the same hymn sheet in regards to perinatal mental health.

Australian health practitioners working with pregnant women and new mothers now have a comprehensive, up-to-date and evidence-based set of guidelines to assist us to effectively identify and support women who are vulnerable to mental health problems. The guidelines are designed to inform a range of professions including obstetricians, midwives, GPs, maternal/child/family health care workers, psychologists, psychiatrists and mental health nurses. The most common perinatal mental health problem – depression – is highlighted, but the guidelines also cater for anxiety, bipolar disorder and puerperal psychosis.

The 'Clinical Practice Guidelines for Depression and Related Disorders in the Perinatal Period' can be downloaded for free at http://beyondblue.org.au/guidelines or ordered by calling the beyondblue info line: 1300 22 4636. By way of introducing the guidelines, I would like to highlight a few aspects that I think are especially important.

> 'There's nothing to be gained from waiting for a pregnant woman or new mother to be in crisis before intervening, but there is much to be gained in preventing symptoms becoming severe or debilitating.'

Universal screening

The Edinburgh Depression Scale (EDS) is recommended by the guidelines as a tool to use antenatally and postpartum to screen all perinatal women. As you may know, the EDS is a simple, ten-item self-report scale that rates symptoms within the previous week. Three questions explore anxiety symptoms, six questions explore common neurovegetative symptoms of depression and question ten asks about thoughts of self-harm. The EDS is a screening tool not a diagnostic tool, but it does give a common language to communicating symptom severity among health professionals and perinatal women. There are self-scoring versions of the Edinburgh Depression Scale available online at: http://justspeakup.com.au/info_and_support/checklist and http:www.blackdoginstitute.org.au/public/depression/inpregnancypostnatal/self-test.cfm .

It is important to note that the EDS alone does not effectively fulfill the goals of universal screening. The EDS measures psychopathology in the last week, whereas comprehensive screening will also investigate social vulnerabilities and a history of trauma or psychiatric problems. Suggested tools for this aspect of screening include our capacity for empathy and developing rapport, our communication and clinical skills, and using an aide mémoire to assist us to make appropriate enquiries. Example questions for psychosocial screening can be found in Chapter 3 of the guidelines and a sample psychosocial screening tool is included in Appendix 4.

Prevention, early detection and prompt intervention

A few years ago, Prof Ian Hickie contrasted the traditional response to mental health problems with the standard response to breast cancer. He articulated that no GP would send a woman with a lump in her breast away and ask her to not to come back unless it became critical. In contrast, when it comes to mental health problems, Prof Hickie identified that the response is often delayed until the symptoms become serious or overwhelming.

The guidelines support a proactive approach to preventing, detecting and treating perinatal mental health problems. There's nothing to be gained from waiting for a pregnant woman or new mother to be in crisis before intervening, but there is much to be gained in preventing symptoms becoming severe or debilitating. If we make the assumption that usually the primary care-giver of newborns is the mother, then there are even more convincing arguments for this proactive approach: if we help mum we will be helping the baby.

Treatment options

Perinatal women deserve to have the best advice on which to base treatment decisions, because the treatment decisions will be theirs to make. As health professionals, our role is to share the information we have access to and to steer our clients towards evidence-based decisions; we are competing for attention and credibility with the internet, glossy magazines, hearsay and Tom Cruise.

Chapter 1 of the guidelines discusses some of the known risks of not treating perinatal mental health problems. This needs to be taken into account when we are discussing the risks of continuing or commencing treatment: do the known risks of treatment outweigh the known risks of not treating? Chapters 6, 7 and 8 discuss treatment options, namely: supporting emotional wellbeing, psychological therapies and pharmacological treatment. It is important to emphasise that pharmacological treatment is an option, but that it is not the only option – supportive and psychological approaches also have a sound evidence base in terms of effectiveness and safety.

Available resources

- The Clinical Practice Guidelines for Depression and Related Disorders in the Perinatal Period can be downloaded for free from: http://www.beyondblue.org.au/guidelines or ordered by calling the beyondblue info line: 1300 22 4636.
- There are self-scoring versions of the Edinburgh Depression Scale available online at: http://justspeakup.com.au/info_and_support/checklist and http://www.blackdoginstitute.org.au/public/depression/inpregnancypostnatal/self-test.cfm .

With regards to pharmacological treatment in the perinatal period, the guidelines offer good practice points, based on the best available evidence up to April 2009. The guidelines emphasise supported and informed decision-making by the woman and her significant other(s) in collaboration with her health care providers.

It has been more than ten years since the Therapeutic Goods Administration (TGA) publication, Prescribing medicines in pregnancy, has been updated, so that's not a reliable source of up-to-date information. However – along with journal articles and your local clinical networks – there are regularly updated publications, such as Medications and Mothers' Milk, in addition, each State and Territory has an obstetric drug information service that can provide updates.

> 'Being proactive and respectful of maintaining good mental health in perinatal women is part of holistic obstetric care.'

Referral pathways

The Australian Federal Government has committed to $55 million over five years towards the National Perinatal Depression Initiative, $20 million of which supports the Access to Allied Psychological Services (ATAPS) program to build the capacity of Divisions of General Practice to support better treatment for women with perinatal depression. Given that interventions such as cognitive behavioural therapy (CBT) and interpersonal psychotherapy (IPT) are considered equivalent to pharmacological treatments in terms of their efficacy in many reviews, this support of ATAPS creates an obvious referral pathway for clinicians.

It would be fair to say that availability of specialist perinatal mental health service in Australia has been patchy. In some health districts, perinatal mental health services have evolved without specific funding, often emerging as a component of consultation liaison mental health. However, until recently there hasn't been a coordinated approach to perinatal mental health at a national level. This should be addressed, in part at least, by Federal, State and Territory Governments using National Perinatal Depression Initiative funding to seed specific services and models of service delivery at various urban and regional centres. In Queensland, for example, there will a dozen or so 'perinatal mental health clinical nurse consultants' seeded in a number of strategic locations around the state, with the hope/intent of developing sustainable referral pathways and contributing to workforce training and development in this area.

Now what?

Being proactive and respectful of maintaining good mental health in perinatal women is part of holistic obstetric care. To play your part, please consider these questions:

1. Does your practice/organisation undertake universal screening yet?
2. Do you know the ATAPS referral pathway in your area?
3. Does your local mental health service have a perinatal specialist/coordinator?
4. Have you a copy of Clinical Practice Guidelines for Depression and Related Disorders in the Perinatal Period saved on your computer and/or sitting in your bookcase?

Further reading

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Asia Pacific Committee

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The crying baby

Dr Kerry J Brown
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Many babies are unsettled in the first few months of life and it is often difficult to determine what is a normal, or abnormal, amount of crying.

In early infancy, crying is practically the only way an infant can communicate its need for physical and emotional caring, or the presence of discomfort, hunger or pain. There are many ideas on what is an excessive amount of crying[1], however, most authorities would define it as crying of greater than three hours per day, for three or more days per week in the preceding week, for at least three weeks.[2] The degree of parental distress is most important, as this is the main determinant for seeking professional help.[3]

The term colic has been extensively used in the past to describe an unsettled baby with excessive crying. I feel it is better to avoid this term as there is no generally accepted working definition for colic.[4] The use of the term implies a painful disturbance of the gastrointestinal tract[5] and this further intimates that simple treatment or relief should be available when usually it is not.

> 'Medication is rarely indicated and colic mixtures, gripe water, analgesics and sedatives are of no proven benefit.'

During the first three months of life, excessive crying is reported by parents in around 20 per cent of infants[6], with the highest prevalence being at one month of age.[1] In well-looking, thriving babies with excessive crying only around five per cent will be found to have an organic cause.[7] Most cases of persistent crying are thought to be multifactorial in origin. Douglas and Hiscock[8] state that, 'infant crying is commonly a normal state or a transient developmental problem that peaks at six weeks and resolves by three to four months of age'.[8] They correctly point out that there is currently an over-diagnosis of 'the big three' as the presumed cause of excessive crying, that is: gastro-oesophageal reflux, food allergies and lactose intolerance.[8]

Concurrent with an increase in unsettled behaviour there is an increase in risk of maternal depression[8,9], premature cessation of breastfeeding and child abuse.[8] In fact, there is some evidence that prenatal exposure to maternal stress, such as depression or anxiety (as suggested by elevated maternal serum cortisol at 30–32 weeks gestation) is associated with a higher rate of negative infant temperament.[10] In the general population, the prevalence of postnatal depression is estimated to be between ten and 15 per cent.[11] With an unsettled, irritable baby at home, interactions between each parent and the child, as well as between the two parents, can be negatively affected.[12] Frequent night waking usually leads to maternal sleep deprivation, resulting in adverse effects on mood, cognition and motor function.[13]

Any complete assessment of an excessively crying or a poorly sleeping baby therefore needs to take a wide-angled lens look at the infant, its family and environment. As well as a detailed conventional history of the infant's symptoms, one should ask how this impacts on each family member individually as well as the family as a whole. Enquiry should be made into how the parents are currently coping and what amount of family support might be available from relatives, friends and health professionals. Even though an otherwise well baby with excessive crying may not appear a major issue under the traditional medical model, it certainly can have devastating effects on the overall family functioning.

Although organic causes represent only five per cent of cases of excessively crying babies who are well and thriving, ruling out these causes is important. One should have a higher index of suspicion where the baby is persistently irritable on a daily basis. Just about any medical condition could cause excessive irritability, however, a useful mnemonic to remember some of the more common causes of excessive irritability and crying is IT CRIES.[14] This list is by no means exhaustive.

I	infections
T	trauma
C	cardiac
R	reflux, reactions to medications, reactions to foods, raised intracranial pressure
I	immunisations, insect bites
E	eye and ear
S	surgical and strangulation (hair or fibre tourniquet)

Most infections are associated with fever; however, in infancy, many infections (particularly urinary tract infections) may present as irritability alone. Osteomyelitis or septic arthritis may also present in this age group as irritability without fever. During examination it is therefore important to examine all the joints checking for any swelling or pain on movement, and any bony tenderness. It is worthwhile at least to collect urine for urinalysis and culture to rule out a urinary tract infection.

Traumatic injury may be accidental or non-accidental and one should examine the baby carefully for any bony tenderness or deformity (as may occur with bony fracture) and for bruising. Cardiac causes include periodic angina (for example, with anomalous coronary artery) and congestive heart failure. Irritability can be associated with certain medications (for instance, some anticonvulsants) and food sensitivities (such as cow's milk protein intolerance or lactose intolerance).

Gastro-oesophageal reflux is frequently overdiagnosed. Signs such as back arching, aversive feeding behaviour, sleep difficulties and tense abdomen and limbs are not correlated with acid-peptic

gastro-oesophageal reflux and are common behaviours.[15] The diagnosis of reflux may be considered more where the child has increasing distress over several weeks with symptoms usually on a daily basis, where conventional behavioural methods of settling have been ineffective. Similarly the diagnosis of cow's milk allergy may considered in the same setting, particularly if there is a family history of milk allergy. Cow's milk allergy is present in two to three per cent of children and 0.5 per cent of exclusively breastfed infants.[16] Where allergy to cow's milk is suspected, a trial of partially hydrolysed (Pepti-Junior) or fully hydrolysed formula (Neocate or Elecare) may be justified to aid in the diagnosis. Likewise, a trial of a dairy-free diet in the exclusively breastfeeding mother may help an infant if they are allergic to cow's milk.

Eye causes include corneal ulceration (think of brother or sister poking in the eye) and glaucoma. Ear infections can occasionally cause persistent pain over several weeks, especially when associated with middle ear effusion. Surgical causes include incarcerated inguinal hernia, volvulus and intussusception. These three causes are usually, but not always, accompanied by vomiting. Another cause that may easily be missed is strangulation by hair or fibre, which usually affects the digits. I have seen a three-month-old infant who had been crying excessively for over a week who had strangulation of his middle toe with circulation impairment from hairs. The offending hairs were not initially visible as they had cut through the skin. The message is to look very carefully at all the digits.

How should one deal with a baby that cries persistently? The most important thing is to listen actively to what the parents or caregivers are saying and to speak to them in a positive reassuring manner. When talking to the parents, it is worthwhile asking what they believe could be the cause of the problem and any particular concerns or fears they may have. After taking an extensive history of the problem, and evaluating the family and the family dynamics, a full examination of the infant should take place. If the baby is thriving and looks well then initially a urine culture should be sufficient initial investigation.

Asking the parents what works best for them to help settle their baby is useful. If their method is reasonable they should be encouraged to continue those methods so as to give them a sense of some control. It is worthwhile telling the parents that they may not be able to stop the baby crying every time, but even if they can't, they are still giving the baby comfort and teaching the baby to better cope with its distress.

A suggestion that works for many babies is the provision of a 'quiet time', where the baby is given a few minutes to self settle in a dark room if possible. Swaddling or wrapping firmly in a muslin cloth is helpful for a lot of babies.[17] Other babies respond to soothing sounds such as a soft voice, singing or music. White noise in the background has also proven to help some unsettled babies.[18] For some the pacifier or dummy can be helpful. Baby massage, bathing and distracting the baby with play may also help settle on occasions. Medication is rarely indicated and colic mixtures, gripe water, analgesics and sedatives[19] are of no proven benefit.

Parents and caregivers should be followed up regularly by their medical caregiver and should be given details on who or what service to get in contact with if the problem escalates and is getting unbearable. Encouragement should be given for the parents to take turns in settling their crying baby and they should also be encouraged to schedule quality time together away from the baby (in other words, arrange trusted relatives or trusted friends to babysit). The family should ideally have an early childhood nurse as a support person as well as a local general practitioner. Occasionally, referral to a general paediatrician may be warranted. In a crisis, admission to hospital may help diffuse a stressful situation, especially if there is parental exhaustion or a chance of harm to the baby.

Most of the major children's hospitals have helplines and websites where parents and health professionals can get further information and advice. As well as information sheets, sleep/crying diaries can be downloaded that are useful to keep an objective record of sleeping and crying patterns.

Parenting Units exist in some States that offer telephone support, day sessions or residential sessions for several days. In New South Wales, Tresillian and Karitane offer such a service. Their helpline numbers are 1800-637357 and 1800-677961, respectively.

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Postnatal contraception in a South Auckland setting

Lesley Powell
Former nurse specialist of sexual and reproductive health

Contraception education is perceived as the role of the primary healthcare provider or family planning, but should always be offered during pregnancy. All those who work in the secondary care setting should be familiar with the methods and modes of action and be able to discuss all options with patients.

Middlemore Hospital is the largest birthing unit in the Southern Hemisphere. Caesarean section intervention is low in comparison with our Manukau District Health Board partners, but birth is not without risk and postpartum haemorrhage and pre-term birth are both not uncommon. The ethnic mix of the population is diverse, with a large proportion of Maori and Pacific Island women; who often choose little or no contraceptive intervention, larger families, less planning or prevention and a preference to choose natural or traditional methods such as rhythm, withdrawal and calendar techniques over medical options.

Traditional contraceptive methods are often practiced because of strong cultural or religious beliefs or tradition handed down through the generations. Methods most commonly mentioned by women are withdrawal, calendar spacing and safe time during the menstrual cycle. Many women would confide in me that they knew little about other methods available and that they were very happy to consider anything that would prevent an unplanned pregnancy. In fact, they were secretly desperate to control their fertility. During my tenure at Middlemore Hospital I came to believe strongly that I could help some of these women and, in practice, tried to deliver comprehensive advice to as many as I could during pregnancy and the postnatal period.

> '...women can place themselves at risk, often without a choice, and resume sexual activity before protection is considered.'

When should the 'contraceptive chat' take place?
All women, I believe, should have a full and frank discussion about contraception during pregnancy. This can then be reinforced immediately postpartum, before leaving the hospital if possible, with further follow-up by the midwife or obstetrician before the puerperium is complete. Discussion should ideally cover all options: lactational amenorrhea, condoms, diaphragm, progestogen-only pills, progestogen implants or injection (Depo Provera®), an intrauterine contraceptive device (IUCD), copper or levenorgestrel-releasing (Mirena®), along with the indications and contra-indications and risks and benefits of each.

For this to occur, clinicians must take an interest in this area and regularly refresh their knowledge of suitable options. Breastfeeding should be encouraged and, therefore, condoms remain the main option of choice until six weeks postpartum. Choosing to start with a progestogen implant or injection before six weeks postpartum may result in persistent annoying vaginal bleeding.

Owing to the transfer of care around this time from midwife/obstetrician to primary healthcare, this very important advice can often be missed and result in women 'falling between the cracks'. With the conflicting priorities of other siblings, financial constraints and a belief that they will not conceive so soon after birth, women can place themselves at risk, often without a choice, and resume sexual activity before protection is considered.

Which option is best?
The clinician is responsible, under Section 88 in New Zealand, to provide postnatal contraceptive counselling and should follow-up with a prescription for condoms or the progestogen-only pill to start at six weeks. As a minimum, they should stress the importance of booking for a formal contraceptive decision-making visit with their family doctor or family planning clinic at the six week check.

Condoms are an excellent first option. They are low cost, unlikely to have side effects and, with partner compliance, can be at least 95 per cent effective in preventing pregnancy while also offering protection from sexual health infections.

The copper IUCD is an excellent choice for many women as it provides a 'fit and forget' method for five years. Pregnancy rate remains at two per cent and therefore it would be helpful if more clinicians in primary healthcare were competent at inserting them in their rooms. Sometimes, because of family beliefs and practices, a woman will request 'an invisible option'; the IUCD is an excellent choice if this is a consideration. The woman can visit the clinic discreetly and return home without partner/husband or parents knowing they have done so.

If women are properly screened for menstrual history, only those with heavy periods need to consider the Mirena IUS as an alternative and, for those women, it may well be publically funded (in New Zealand). Of course, its contraceptive efficacy is better than a copper IUCD, but remains unaffordable for many women.

Jadelle®, a levonorgestrel-releasing implant, has been recently publically funded in New Zealand and is proving to be a popular choice, but not without side effects in the initial few months. It is vital that women understand the potential for these bleeding side effects initially and clinicians need to know how to counsel and

manage them by adding in the contraceptive pill for a month to stop the bleeding.

The progesterone-only pill can be commenced at six weeks with the fully breastfeeding woman and maintained until at least six months postpartum before considering switching to the combined pill. There is a role for Cerazette® (non-funded progestogen) if the woman doesn't mind paying for it as it offers the added benefits of 12-hour window and two-day rule as well as the protection of the combined pill without the risks. Depo Provera can be safely given to the fully breastfeeding woman from six weeks postpartum and then every 95 days for continuation.

Pamphlets produced by the family planning association are easily available and very comprehensive for all methods of contraception and should be acquired, displayed and provided as an adjunct to the contraceptive chat.

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A Bronze Age oxytocic?

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FRANZCOG

Minoan frescoes appear to show the use of saffron to treat medical problems in women and, more specifically, to control life-threatening haemorrhage. Investigations have demonstrated that saffron has components with oxytocic and oestrogenic properties, which could possibly have been used to successfully treat severe uterine bleeding.

Life would have been hazardous for Minoan women during the Bronze Age, with the risk of significant obstetric and gynaecological conditions not the least of their problems. The excavation of Akrotiri, a Minoan village on Thera (now Santorini, in Greece), buried beneath volcanic ash 3500 years ago, has exposed frescoes that reveal traditional medical and religious practices that were potentially helpful in coping with some of these difficulties.

The frescoes in the excavated house known as Xeste 3 depict women in ritual scenes featuring crocus blooms, specifically crocus sativus, leading to many interpretations as to their meaning that have emphasised the economic, ritual and medical uses of the major by-product of this particular species of crocus: saffron. The focus on women in these scenes (there are no males or children present) and, particularly, their association with the production of saffron, suggests that these frescoes symbolised the control of disorders that particularly affected women and perhaps emphasise the unique role of saffron in their management.

> 'Saffron may also have proved useful in controlling uterine bleeding, not only for its oxytocic effects, but also because of its oestrogenic activity due to phytoestrogen components.'

Two levels of the complex are decorated with the frescoes. The upper level displays a heaven-like scene with a goddess, mounted on a platform, symbolically flanked by two exotic animals, a griffin and a blue monkey that is presenting crocus blooms to the goddess. The goddess has crocus blooms decorating her clothes and crocus stigmas displayed on her left cheek. A young girl empties crocus blooms into a basket in front of her while, behind her, a young woman approaches carrying a basket on her shoulder. The adjacent wall shows two girls, wearing saffron-coloured robes, collecting crocus flowers from a rocky landscape.

It is apparent that not only are the crocus flowers represented, but also the stigmas in particular are displayed, emphasising their significance and the importance of their main product, saffron. Crocus sativus, the specific variety from which saffron is derived, has deep purple petals with three bright red stigmas that protrude from the flower. There is evidence in some of the restored frescoes that the crocus blooms shown were coloured purple, confirming that this is the variety of crocus depicted. Crocus sativus has to be grown by dividing the corms as it is an infertile genetic variant of a species native to Crete. Its cultivation is labour intensive, with the corms having to be lifted and replanted frequently to maintain their vitality, which restricts supply. Saffron would have been an expensive commodity and probably only available to elite individuals in the Minoan society, such as the elegant women depicted in the frescoes.

Three women of different ages are portrayed in the lower level, with indications of their levels of maturity shown by their body shapes and adornments, their hairstyles, clothing, jewellery and breast development. The veiled figure on the right is shown to be a young girl by her pre-pubescent figure and shaven head, which was the convention in that society. She wears a filmy cloak and turns backwards to look towards an altar displayed on the adjacent wall. The figure on the left is an older woman with long hair tied in a kerchief wearing a sheer garment embroidered with crocus stigmas. She has a mature figure and swings her necklace, indicating her age and social status. The central figure, a young woman, sits on a rocky ridge sprouting crocus flowers. She holds her left hand to her head and has a pained expression on her face as she reaches with her right hand to her bleeding left foot, which has two crocus stigmas lying beside it. She is directly below the goddess and appears to be the crucial figure in the ritual. The altar on the adjacent wall draws the attention of the three females. It is decorated with crocus blooms and mounted with the horns of consecration, a Minoan religious symbol, which are depicted smeared with blood.

The presence of females only, including females of different ages, has suggested that the scenes illustrate an initiation ritual. The young woman with the bleeding foot was thought to represent a ritual involving the onset of menarche or her forthcoming marriage.[1] The association of the crocus stigmas with the bleeding foot has also been interpreted as depicting the celebration of the use of saffron as a healing remedy. The absence of any males or juveniles seems to indicate that this only involved women. However, these interpretations do not completely explain the significance of the young woman with the bleeding foot. The upper scenes showing the goddess and the exotic animals together with the altar on the lower level confirm the shrine-like nature of the complex and the ritual nature of the illustrations. This religious theme is continued in the mountainous landscape and also on the stairway leading to the complex, alluding to the peak sanctuaries, which were important religious ritual centres in rural Minoan societies. The frescoes obviously involve a religious celebration involving saffron, but the previous interpretations that have been given do not fully explain their meaning.

Obstetric and gynaecological haemorrhage was a dilemma facing ancient physicians and their patients as evidenced by the many and varied treatments that were employed, most of which now appear to be quite bizarre. Examples of these from Bronze Age Egypt are recorded in the Ebers and Kahun Papyri. Meanwhile, saffron has been used to treat numerous medical conditions over the past four millennia, including many gynaecological disorders, eye ailments, traumatic wounds and gastro-intestinal ailments. Its medicinal use in ancient Egypt was noted in the Ebers Papyrus and Dioscorides, in the first century AD, included it in a preparation for the treatment

of non-specific female complaints. It is still listed in the Martindale Pharmacopoeia to be prescribed for various eye, joint, gastro-intestinal and dental problems and in the Aegean it is evidently still currently used for menstrual disorders.[2]

In many cases, there is no obvious reason for saffron to have been used, but such was its reputation it would have had a powerful placebo effect, particularly as its administration would have been enhanced by an accompanying religious rite involving ritual incantation by an important religious healer in the name of the appropriate deity. However, it is evident that there is a pharmacological basis to the successful treatment of some of the medical conditions in which saffron was given and its reputation as a virtual panacea may have been based on empirical observations that demonstrated some of these beneficial effects. A physiological action of saffron demonstrated in laboratory studies is its ability to cause uterine muscle to contract in both pregnant and non-pregnant isolated and intact uteri of laboratory animals.[3] This oxytocic property is due to a component of saffron, crocin, which has a molecular structure very similar to prostaglandin and misoprostol. It would be feasible that saffron could have been effectively utilised to increase uterine tone and control uterine bleeding, particularly after childbirth as well as for inducing labour and as an abortifacient. It is known to have been prescribed for these purposes since antiquity.[2]

> 'It has been shown that uterine haemorrhage is the cause of maternal death in 25 per cent of cases in developing countries and a significant contributing factor in a further 25 per cent.'

Saffron may also have proved useful in controlling uterine bleeding, not only for its oxytocic effects, but also because of its oestrogenic activity due to phytoestrogen components. This has been confirmed by the ability to produce oestrogenic changes in susceptible tissues.[3] This would enable it to be potentially helpful in treating bleeding caused by hormonal dysfunction. Its use for this purpose is also ancient and has been noted in Assyrian, Greek, Roman, Tibetan and medieval medical literature and in recent publications dealing with herbal therapies.[4]

The dosage of saffron required for treatment was up to 10g, which required about 1000 crocus blooms to be gathered and processed, but the usual dosage was 0.5g. Deaths have occurred with the ingestion of higher doses when used as an abortifacient.

Clinical controlled trials have never been carried out to confirm the benefits of saffron in the treatment of these conditions, but there is empirical and pharmacological evidence asserting its effectiveness. The value of a remedy to treat abnormal haemorrhage in women in that society would have been immense. Studies of skeletal remains in many ancient societies, including those of Greece, have shown that women consistently had a life-span at least five years less than men, which has been attributed largely to problems associated with childbirth.[5] In Africa, in areas where women are without access to proper medical care and looked after by traditional birth attendants, the maternal death rate was found to be about one per 100 births, which is similar to that reported from isolated areas in New Guinea and Laos. The risks to Minoan women were probably of the same order. It has been estimated from studying markings on the pubic bones at burials that women at that time had, on average, four or five children. This would appear to be approximately correct as the population increased by about four times over 1000 years, in spite of an infant and childhood death rate of about 50 per cent, comparable to that in undeveloped countries today.

The overall risk of a woman dying in childbirth was therefore approximately five per cent. This level of maternal mortality would have had a dramatic effect on these communities. It has been shown that uterine haemorrhage is the cause of maternal death in 25 per cent of cases in developing countries and a significant contributing factor in a further 25 per cent.[7] It would be expected that these statistics would also apply to ancient societies. Abnormal uterine bleeding not related to pregnancy would have been an additional risk to the health of many women. When the frescoes are considered in light of the therapeutic effect of saffron, specifically for controlling life-threatening haemorrhage in women, the explanation behind the depictions appears to be clearer.

The bleeding foot being clutched by the distressed young woman appears to be more than an injury, perhaps it is a symbolic representation of major uterine haemorrhage. The extent of this problem is shown by the three female figures representing the three phases of a woman's life from her youth to maturity. The effectiveness of saffron in controlling uterine haemorrhage and the relief that this might therefore have given these women may explain the prominence of crocus sativus in the frescoes in Xeste 3. There have been no human remains recovered from Akrotiri to indicate any benefit to these women and, pending the decipherment of Linear A script, there is no written evidence as to its applications in Minoan society, but the inferences that can been drawn from the associations and symbolism in the frescoes appear to indicate its beneficial use.

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Postscript

Akrotiri has been closed to visitors since 2005, following a fatal accident due to a partial collapse of the protective roof. It is due to re-open this year.

Recognition and management of laparoscopic complications

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Do you perform laparoscopic surgery? Have you ever had a complication? If not, it may be that you are very good or, more likely, that you are very lucky not to have encountered one as yet. If so, be prepared for the inevitable.

With the estimated incidence ranging from 0.2 to ten per cent, almost every laparoscopic surgeon will encounter not one, but several major complications during his or her working life, often when least expected. Prevention is the best cure and early recognition and appropriate management is the key to reducing morbidity and mortality. Methodical attention to developing surgical skills, teamwork and good knowledge of equipment and anatomy are essential to help reduce the risk. This article will discuss recognition and management of major complications associated with laparoscopic surgery.

Pneumoperitoneum

Upon creation of a pneumoperitoneum, certain profound cardiopulmonary effects, ranging from bradyarrhythmias to asystole, may result from vasovagal reflex due to peritoneal stretching. This needs to be differentiated from hypovolumic hypotension from major vascular injury, intra-vascular gas insufflation or anaphylactic reactions. Release of pneumoperitoneum usually reverses these changes and may be followed by re-insufflation at a slower rate. Continuous pneumoperitoneum can result in decreased venous return from pressure on the inferior vena cava, leading to a fall in cardiac output. Pulmonary effects can lead to difficulty with maintenance of oxygenation. A reduced level of pneumoperitoneum or reduced Trendelenburg position may be required to improve ventilation. Frequent communication with the anaesthetist is important to achieve the best laparoscopic surgical environment for each individual case.

CO_2 embolism

This rather rare complication is most feared because of a high reported mortality rate. Clinical symptoms of bradycardia, hypotension, hypoxia or arrhythmia and decreased end-tidal carbon dioxide can be confused with other conditions such as anaphylaxis and haemorrhage. Release of pneumoperitoneum, immediate commencement of basic life-support measures and teamwork are essential to avoid catastrophic consequences while confirming the right diagnosis.

Vascular injury

Vascular injures are uncommon, ranging from 0.04 to 0.5 per cent, but are associated with a nine to 17 per cent mortality rate. Most laparoscopic vascular injures actually occur at the time of entry or port placement rather than during surgery.

The vessels most commonly affected during entry are the distal aorta, right common iliac vessels and the superficial and deep vessels of the anterior abdominal wall. Measures to reduce major vascular injury risk during laparoscopic entry include:

- An 'open' primary port entry technique, with patient in flat position and adequate abdominal wall elevation.
- Confirmation of primary port position prior to creation of pneumoperitoneum.
- Identification of superficial abdominal wall vessels by trans-illumination and direct visualisation of abdominal deep vessels.
- Angulation away from pelvic sidewalls during insertion of secondary ports.

Clues to the presence of vascular injury during primary entry include, bleeding on aspiration of Verres needle or through a trocar, bleeding seen within the abdominal cavity and unexplained hypotension. When dealing with vascular injury, remember the acronym SAAS:

- Stop bleeding immediately by occluding or applying pressure.
- Alert team so resuscitation measures can be put in place.
- Access bleeding site (usually by laparotomy).
- Secure the injured vessel by one of the following methods (see table II in Lam *et al*):
    1. Abdominal wall bleeding – bipolar diathermy, inflated foleys catheter balloon or ligation with port-closure device
    2. Large vessel bleeding – use of grafts (for example, omentum, synthetic, rectus sheath)
    3. Isolated arterial bleeding – bipolar diathermy, vascular clips, sutures
    4. Diffuse capillary or venous bleeding – haemostatic sponge.

Intestinal injury

Reported intestinal injury varies from 0.06 to 0.5 per cent for diagnostic laparoscopy to 0.3 to 0.5 per cent for operative laparoscopy, with mortality rate up to 3.6 per cent. The most common sites are the small bowel (58 per cent), colon (32 per cent) and stomach (eight per cent). About half are related to entry, the rest from surgical trauma (grasping forceps, traction, sharp dissection, insertion of instruments), thermal injury, herniation through port sites and anastomotic leaks.

The extent of adhesiolysis performed at the time of laparoscopy has been shown to be a significant risk factor for intestinal injury. Open entry does not reduce the rate of intestinal injury, but may allow immediate recognition and repair.

More than 50 per cent of intestinal injuries are not recognised at the time of surgery and may present from one to 30 days post-op. Small bowel injuries most commonly present 4.5 days (range two to 14) post-op, whereas colonic injury most commonly presents 5.4 days (range one to 29 days) post-op.

Helpful measures to help prevent intestinal injury involve:

- Routine inspection of bowels after entry.

- Use of atraumatic graspers for handling bowel.
- Limit adhesiolysis to where clinically necessary.
- Sharp rather than blunt dissection and avoid heat energy close to bowel wall.
- Careful inspection and repair of bowel injury after sharp dissection.

Management depends on the timing of diagnosis, the patient's clinical status and the availability of expert assistance. Early recognition and intervention is extremely important in minimising morbidity and mortality. Faecal contamination of Verres or trocar or the presence of bowel-wall haematoma should raise suspicion of injury. Rectal air or dye insufflation test may aid diagnosis of rectosigmoid injury, but this is not foolproof. Thermal injury may not present until some time after surgery.

The post-op presentation may vary from subtle symptoms – such as abdominal pain, low-grade fever, mild respiratory distress, hypoxia and peritonitis – to septic shock and multi-organ failure. Maintaining a low threshold for admitting and investigating patients who complain of even minor symptoms will lead to earlier recognition and decrease morbidity and mortality.

If immediately recognised, a bowel injury can be repaired with one- or two-layered closure using 4.0 Vicryl or PDS after excision of any non-viable tissue and ideally with assistance of a colo-rectal surgeon, followed by peritoneal lavage and intravenous antibiotic cover. Delayed recognition should be managed by admission, IV fluids, IV antibiotics, placement of a naso-gastric tube, baseline bloods and cultures, and appropriate imaging, such as abdominal x ray and CT scan. A low threshold for exploratory laparoscopy/laparotomy should be maintained and early involvement of a colorectal surgeon is essential. Exploratory surgery should include peritoneal lavage, thorough inspection, resection of non-viable tissue and closure of the defect with or without diversion. Post-operative care should include IV fluids, total parenteral nutrition and antibiotics.

Urinary tract injury

Urinary tract injury is one of the most common reasons for medico-legal litigation in gynaecology. Reported incidence varies from 0.05 to eight per cent, with bladder more common than ureteric injury. Prevention of bladder injury includes routine bladder drainage before trocar placement and sharp dissection of bladder from the cervix. Early recognition of bladder injury is vital to prevent the development of fistulas. Management of bladder injury requires diagnosis with methylene blue instilled into bladder via a catheter and cystoscopy to identify the relation of the defect to the trigone. Repair can be performed laparoscopically or via a mini laparotomy in one or two layers, with a fine absorbable suture such as 3.0 vicryl or PDS. A check cystoscopy should be performed for a watertight seal followed by seven to ten days with an indwelling catheter.

The most common sites of ureteric injury are at the pelvic brim, ovarian fossa, lateral to the cervix, uterosacral ligament and the anterior vaginal fornix. Injury may result from transection, ligation or necrosis from energy or ischaemia.

Ureteral injury is often recognised late, with 70 per cent of cases being diagnosed post-operatively. Prevention of ureteral injury includes identifying its course from the pelvic brim, identification and dissection away from the infudibulopelvic ligament and the uterine artery before ligation and meticulous use of electrodiathermy.

If a ureteric injury is suspected intra-operatively, diagnosis can be enhanced with the use of indigo-carmine dye IV, cystoscopy and passage of ureteric stents. If confirmed, a urologist should be consulted to perform intra-operative repair. Ligation or kinking should be rectified by removal of the offending suture with or without stenting. Repair of a transection injury depends on the site and type of injury and should be performed by, or in conjunction with, a urologist.

> '...complication is an inevitable reality of laparoscopic surgery. Learning to recognise and manage complications appropriately and in a timely manner is essential...'

Nerve injury

Nerve injury at the time of laparoscopy is rare and is related to the complexity and invasiveness of the procedure. Mechanisms of injury include stretching from improper positioning, excessive tissue retraction, nerve compression and direct injury from dissection. Brachial plexus, ulnar and perineal nerve injury can occur due to incorrect positioning. Injury during laparoscopic pelvic surgery usually involves a branch of the lumbosacral plexus.

Prevention with correct positioning involves a low lithotomy position, the use of boot stirrups, mild flexion of the hips to 170 degrees in relation to trunk, 90–120 degree flexion of the knees, abduction of thighs to no more than 90 degrees between the legs and minimal external rotation of the hips. The arms should be adjacent to the body. Prevention of injury during pelvic surgery requires an advanced knowledge of anatomy.

Management of nerve transection noted intra-operatively involves microsurgical repair by a neurosurgeon. Motor nerve injury requires immediate and intense physiotherapy. Sensory nerve injury is often managed pharmacologically with analgesics, vitamin B supplementation or with the use of neuroleptic medications. Corticosteroid injections, nerve blocks and neurolysis/resection may be needed for ongoing sensory nerve injuries. The long-term prognosis is better for sensory rather than motor nerve injury.

In summary, complication is an inevitable reality of laparoscopic surgery. Learning to recognise and manage complications appropriately and in a timely manner is essential for the safety and well-being of both patients undergoing surgery and gynaecologists wishing to offer laparoscopic surgery and advance their laparoscopic skills.

Further reading

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Letter to the editor

Collaborative care in South Australia

I refer to an article on 'Collaborative obstetric care in Crystal Brook, SA' *O&G Magazine* Vol 12 No 4 Summer 2010, p28–29 by Dr Richard Mackinnon, I would like to draw attention to the paragraph regarding the larger centre, which would have been Port Pirie Regional Health Service. The article stated: 'That town has a specialist obstetrician, no GP obstetricians and has a very high intervention rate in the form of caesarean sections. It would be fair to say that the doctor there is not as supportive of the midwife model.'

I believe the above assertions are not supported by the facts and would like them to be corrected.

When the 'midwife model' was proposed at Port Pirie Regional Health Service, it was made in order to make this a viable model for the team midwife across both campuses. Our resident obstetrician made a few requests as a condition of supporting this practice in order to ensure safe practice.

There were only two GP obstetricians with credentials in uncomplicated obstetrics. They considered the introduction of 'midwife model' would make their obstetric practice to be financially not viable. They stopped providing obstetric inpatient services, resulting in no GP obstetricians at Port Pirie. A New Zealand anaesthetist, having accepted our offer to provide anaesthetic services at Port Pirie, withdrew his acceptance partly due to the proposed introduction of a 'midwife model' owing to his experience in New Zealand.

Our specialist obstetrician requested the following to occur in order for him to work with the model:

- That the team midwives, who hadn't had contemporary experience in antenatal care, work with him at his antenatal clinic prior to seeing antenatal patients independently. Up till then, he had worked only with one regular midwife at his antenatal clinic.
- That he would also like to see all the patients before patients are asked to choose a 'midwife model' or medical model, making sure only low-risk women would be given that option.
- That he would be informed of any obstetric-related admissions, including the right to be involved at any stage during the confinement without being asked by the team midwife. This is to make sure that he is aware of any women admitted in labour under his bed card and be able to enquire if there had been no significant progress as well as planning his day.

I believe there is no evidence of an 'apparent high intervention rate in the form of caesarean sections' at Port Pirie Regional Health Service.

As the only obstetrician with more than 180 deliveries per year with no onsite paediatrician and trainee medical officer, our specialist obstetrician has to work in an environment similar to specialist obstetricians providing obstetric services at private hospitals.

The caesarean rate at Port Pirie varies from year to year, as one would expect with relatively small number of deliveries, with an average of 30 per cent over the last six years. This is lower than the published caesarean rates in the private hospitals with a similar workload per obstetrician.

Table 1. Pregnancy Outcome Unit data: 2005–09; hospital data: January to November 2010.

	2005	2006	2007	2008	2009	2010	Total
Caesar	43	53	56	54	65	40	311
Vaginal	135	121	123	130	122	97	728
% Caesar	24%	30%	31%	29%	35%	29%	30%

There is no evidence of our doctor 'not as supportive of the midwife model'. I believe the initial requests by our specialist are to ensure safe practice. In fact, the midwifery team at Port Pirie have a very high regard for our obstetrician and believe he provides excellent support to them, being very approachable, patient and an exceptional teacher.

In 2007/2008, 28 per cent of women delivered at Port Pirie were cared for by the 'midwife model' team, compared with 22 per cent at Crystal Brook. The number of women cared under the midwife model at Port Pirie have been consistently in the mid 40s. This does not support the statement made in the article.

Dr Nes Lian-Lloyd
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Port Pirie Regional Health Service
Port Pirie, SA

Q&a

Q&a attempts to provide balanced answers to those curly-yet-common questions in obstetrics and gynaecology for the broader *O&G Magazine* readership including Diplomates, Trainees, medical students and other health professionals.

Q *A 23-year-old woman is referred to you for treatment of recurrent genital herpes. How will you manage her?*

A/Prof Darren Russell
FRACGP, DipVen,
FAChSHM, FRCP
Cairns Sexual Health Service, University of Melbourne and James Cook University

a Genital herpes is a very common sexually transmitted infection (STI) and seems to cause more anxiety among patients than almost any other STI. Yet, generally, the physical suffering caused by recurring herpes is relatively minor, except for those who are immunosuppressed, in whom lesions may be severe, very painful and long-lasting. Genital herpes may cause significant psychosocial distress and interfere in a young person's sex life to the extent that some people will choose to avoid entering into a relationship for fear of transmitting their infection. When a patient raises the issue of herpes it is always wise, in my experience, to take a deep breath and prepare for the possibility of a lengthy consultation.

In the past it was generally said that herpes simplex virus (HSV) type 1 occurs above the waist and HSV-2 below the waist. In recent years, however, HSV-1 is increasingly being recognised as causing genital infections. A Melbourne laboratory study from some years ago showed that some 70 per cent of genital infections in young adults were caused by type 1 virus[1], transmitted to the genitals by the increasingly popular pastime of oral-genital sexual contact. With this in mind, it is very important when someone presents with a history of genital herpes to ascertain the type of virus involved. This has major implications for the natural history of the infection and for treatment options. HSV-1, although more common nowadays among young people, is less likely to recur frequently and is less likely to be transmitted to a sexual partner than is type 2 virus.

This young woman who has come to see you is certainly not alone in her herpes infection, although she may feel at times as though she is the only one afflicted! The seroprevalence of HSV-2 in the adult Australian population is 12 per cent[2], and this is borne out by several studies of antenatal attendees that put the seroprevalence at 12–14 per cent. Many people with genital herpes, however, have only very mild symptoms or no symptoms at all and, as such, are never diagnosed. HSV-2 can be transmitted sexually at any time – it is not necessary for lesions to be present for virus to be transmitted – and diagnosis is the first step to reduce transmission.

Diagnosis

Hopefully, your patient will have knowledge of the viral type and this can be confirmed with the doctor or laboratory that diagnosed her infection. Always beware the patient who says she has genital herpes that has never been confirmed – these 'herpes infections' sometimes turn out to be due to another condition altogether, such as vulval dermatitis, thrush or even lichen sclerosis. Genital herpes lesions can only be reliably diagnosed when they are present via the use of a swab for PCR testing. Viral culture is no longer performed (except in some research laboratories) and PCR for HSV has excellent sensitivity and specificity. If no lesion is present at the consultation and no other evidence as to the diagnosis is available, then asking the patient to swab her own lesions when they occur and drop the specimen into the local pathology collection centre is a good alternative.

The place of serological blood testing for herpes simplex is controversial and in general it is not recommended. Type-specific herpes serology is available via pathology laboratories but there can be problems with the accuracy of such tests, particularly with their sensitivity (they can give false-negative results). Therefore, serology is not recommended for general screening, though it may have its place in those patients with unusual symptoms, or if the patient is in between episodes or in first episode genital herpes to try to determine whether or not the episode is a true primary or a recurrence (antibodies to HSV may take several weeks to develop). In addition, serological testing may be helpful in the pregnant woman who has no history of genital herpes, but whose partner has genital herpes.

Treatment options

Once the diagnosis is confirmed, the issue of treatment arises. The options are:

1. No drug treatment – may suit those women who are not in a relationship (or whose partner also has HSV-2), and whose recurrences are uncommon and/or not troublesome.
2. Suppressive antiviral therapy – daily medication will reduce the frequency, severity and length of outbreaks considerably and also reduces the risk of transmission. Valaciclovir ('Valtrex') was shown in a study to halve the risk of transmission in heterosexual monogamous couples where the infected partner took daily suppressive treatment.[3] It is likely that famciclovir ('Famvir') would produce the same benefit.
3. Intermittent antiviral therapy – this option may suit women who have mild, occasional herpes episodes and for whom transmission to sexual partners is not an issue.
4. Intermittent suppressive therapy – a combination of numbers 2 and 3 above, whereby the woman goes on suppressive therapy when in a relationship and then proceeds to intermittent

treatment of episodes when she is no longer in a sexual relationship.

There are three antiviral medications available in Australia for the treatment of genital herpes. Aciclovir was first discovered in 1974, and was used extensively in the 1980s and 1990s before being superseded by famciclovir and valaciclovir, both of which have much better absorption and are the drugs of choice nowadays. Topical antiviral treatment does not work for genital herpes and should be avoided.

Transmission

The principal fear of people with genital herpes is transmission to a sexual partner. The risk of transmission can be reduced in the following three ways:

1. Avoiding sexual contact while lesions are present – although transmission occurs even when lesions are not present, when lesions are present there will be virus present on the skin/mucosal surface.
2. Using condoms – condoms reduce the risk of transmission if used faithfully, but are much less than 100 per cent effective.[4]
3. Taking suppressive antiviral therapy – valaciclovir has been shown in a large, randomised, controlled trial to halve the risk of transmission in heterosexual couples.

Pregnancy

Guidelines exist for the management of genital herpes during pregnancy and delivery, but the discussion of this topic is beyond the scope of this article.

Support

People with genital herpes may have significant psychosexual and relationship problems related to their diagnosis and the fear of transmission. Referral for counselling to a psychologist or counsellor who is knowledgeable about herpes can be very helpful for the patient (and the gynaecologist). In addition, self-help groups exist in some areas and websites have some very useful information and resources. Examples (which are operated by pharmaceutical companies) include: http://www.herpes.com.au and http://www.thefacts.com.au .

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3 Corey L, Wald A, Patel R, et al. Once daily valaciclovir to reduce the risk of transmission of genital herpes. N Engl J Med 2004;350:11–20.

4 Wald A, Langenberg AGM, Link KMS, et al. Effect of condoms on reducing the transmission of herpes simplex virus type 2 from men to women. *JAMA* 2001;285:3100–6.

RANZCOG members are invited to submit questions, tips or interesting cases to *Q&a*.
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An obstetrician overseas

Dr Rebecca Zachariah
FRANZCOG

All travel broadens the mind, but working overseas can bring the opportunity to teach as well as learn.

A staff obstetrician at Southern Health, I spent six months working in North West Bangladesh. During my journey, I became part of a mission/community hospital project that functions as a beacon to the local community.

Bangladesh is one of the most densely populated countries in the world and a place of frequent natural disaster. Quality health and education services are difficult to sustain in this environment and economy. While life in rural Bangladesh is peaceful, it is also difficult due to poverty, this can be especially hard for women and children. Despite the government hospitals and many NGO hospitals, many women still give birth at home. The maternal mortality rate in the rural regions of the country is high, as many women are malnourished, anaemic and have no access to medical assistance when required. Literacy is low as the social culture in the villages prevents many girls from completing their schooling. Many do not know exactly how old they are.

The LAMB project, arising from a model of community participation, provides healthcare, education and community services. The LAMB hospital is located in rural Bangladesh, approximately 60km from the northern Indian border. LAMB's hospital has 150 beds and a large outpatient facility, providing obstetric, paediatric, medical and surgical care to thousands of people in the surrounding community. Despite the 3000 hospital births performed each year, most deliveries still occur at home. Perinatal morbidity and mortality is a confronting fact of life. I helped to provide valuable antenatal and perinatal care during my six-month visit within this challenging environment.

Despite 18 being the legal minimum age for marriage, as soon as girls reach puberty, marriage is arranged for them. Many become pregnant before they are completely grown. Complications such as preeclampsia and eclampsia are frequently seen as is postpartum haemorrhage. Vesicovaginal fistula is also frequent, owing to poor obstetric care and prolonged obstructed labour. Many women are dependent on their husband, in laws or family to decide when, how or if they need to go to the hospital.

> 'The learning path is not one-way: I learned to use my clinical skills more, as reliable tests are often not available.'

In addition to providing medical care, LAMB hospital has promoted community health education. Pictures are used to explain to women, when exactly they have to come to the hospital (see Figure 1). Health workers are trained to be safe birth attendants. They become the primary carers in the more remote areas who can deliver at Safe Delivery Units (SDU). There are strict criteria to follow and women are referred to LAMB Hospital when these criteria are no longer met. Partographs are used at LAMB Hospital and at the safe delivery units (see Figure 2). While partographs are routinely used in Australia, they are not standard practice in Bangladesh.

LAMB Hospital actively tries to reduce caesarean section rate as it is often difficult for women to return to the hospital for

Dr Rebecca Zachariah spent six months in Bangladesh, working with the LAMB project to improve health-care services provided to mothers and their babies.

Figure 1. Effective community outreach and education is as important a part of the LAMB project as the in-hospital medical services it provides.

antenatal care for subsequent pregnancies. Many women still labour at home after previous caesarean section, despite previous instruction to have their vaginal birth after caesarian (VBAC) in the hospital. There were four uterine ruptures after caesarean section during my six months there. All were because of a delay in presentation to hospital after prolonged labour at home; usually owing to their social issues.

Only half of the patients attend regular antenatal clinics. Many come to hospital after prolonged labour at home or after receiving treatment (sometimes inappropriate) in their village or the local hospital. The remainder have no antenatal care all together, with their due date unknown and are frequently severely anaemic. There is no blood bank service and relatives are often requested to donate blood. However, there is cultural reluctance to donate blood in the rural community. As a result, almost every month, the hospital staff were requested to urgently donate for a bleeding patient because her family had refused or were nowhere to be found.

The staffing model of LAMB is a vital part of its success. Local health workers are trained by visiting overseas medical specialists on short- and long-term contracts. At LAMB, the expatriate doctors (from the UK, USA, Australia, Germany, Switzerland, Japan and Korea) work with the Bangladeshi doctors. Regular didactic and bedside teaching is encouraged. Obstetricians are an essential component of this system, providing teaching and research activity that ensures ongoing improvement and evolution of this remarkable service. The learning path is not one-way: I learned to use my clinical skills more, as reliable tests are often not available. I also learned to appreciate the resources we have in Australia. Our Bangladeshi colleagues are as capable and, given the opportunity and resources, can provide excellent care for their people. We, doctors from richly resourced countries, are an ideal bridge to bring learning opportunities to the dedicated doctors in rural Bangladesh.

Basic obstetric and gynaecology ultrasound training at LAMB was a key focus of my visit. Ultrasound provides basic information that

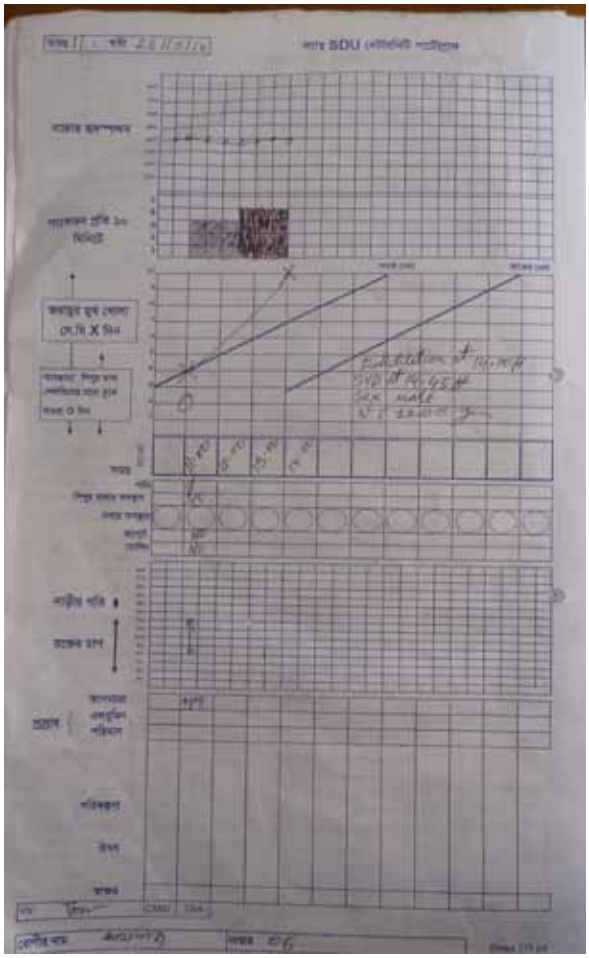

Figure 2. A typical example partogram from the LAMB hospital. Partograms are not standard practice in Bangladesh, but as well as using them in the hospital, LAMB has also introduced use of the partogram to the safe delivery units in the surrounding area.

is a given in Australian obstetric care. It can provide dating of a pregnancy, but this is often unavailable and made difficult by late presentation in Bangladesh. Good clinical assessment, assisted by early ultrasound dating and appropriate monitoring of high-risk pregnancy, improves care and unnecessary caesarean section is avoided. This can improve subsequent pregnancy outcomes.

Since my return, I have worked with Phillips, with the help of Peter Coombs (head of sonography at Southern Health), to provide an ultrasound system to replace LAMB's old and damaged portable system. In the long run, I hope to see a scholarship available for the capable young people from around LAMB to pursue higher education, so they can return and build their community.

Further information about the LAMB project can be found at http://www.lambproject.org/ .

Journal Club

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

Timing of ECV

External cephalic version (ECV) of breech pregnancies is an obstetric skill that, if performed successfully, may prevent a caesarean section. This multicentre trial, conducted by authors including Mary Hannah who also published the Term Breech Trial in 2000, which contributed to the decrease in vaginal breech delivery in current practice, considers the timing of ECV. Common opinion appears to favour the idea that ECV is more likely to be successful before 37 weeks gestation, but that early ECV increases the risk of preterm labour. Consequently, most obstetricians perform ECV at 37–38 weeks gestation. This randomised trial included 1543 women from 68 centres in 21 countries. They were randomised to receive ECV either between 34^{+0} and 35^{+6} weeks gestation (early ECV) or after 37^{+0} weeks gestation (delayed ECV). The primary outcome measure was the rate of caesarean section, while the secondary outcome measure was the rate of preterm (before 37 weeks) birth. The results showed that there were significantly fewer fetuses in a non-cephalic presentation at delivery if the early ECV group compared with the delayed ECV group (41 versus 49 per cent). There was a higher rate of preterm birth in the early ECV group (6.5 versus 4.4 per cent), but this was not statistically significant. Caesarean rates did not differ significantly between the two groups with a rate of 52 per cent in the early ECV group and 56 per cent in the delayed ECV group. It is interesting to note that, of the common elements described when obtaining consent for ECV, the following conclusions can be drawn from the data; the chance of a baby being cephalic at delivery with an ECV at more than 37 weeks gestation is about 50 per cent, with many clinicians possibly quoting their personal success rate as higher; conversely, the risk of preterm rupture of membranes, preterm labour, abruptio placenta or CTG abnormalities requiring delivery is less than five per cent. Obstetricians performing this procedure may be surprised at the relative frequencies of these results and how they compare to their own experiences.

Hutton EK, Hannah ME, Ross, SJ et al. 2011. The Early External Cephalic Version (ECV) 2 Trial: an international multicentre randomised controlled trial of timing of ECV for breech pregnancies. *BJOG,* 118(5):564–77.

Misoprostol and IUD insertion

The insertion of intrauterine devices (IUDs), including devices containing either copper (Multiload) or levonorgestrel (Mirena) is a common office gynaecological procedure. While IUD insertion is often uncomplicated and relatively pain free, a significant proportion of women find the procedure painful. This leads to distress and may result in abandonment of the insertion attempt. The current multicentre double-blinded randomised controlled study randomised 270 women to receive either 400mcg misoprostol or placebo intravaginally three hours before IUD insertion.[1] Medications were inserted by the participants before arrival at the hospital and both nulliparous and parous women were included in the study. There were no significant differences in pain ratings by the women, vasoavagal and syncopal episodes, ease and success of insertion, device expulsion or uterine perforation between the misoprostol and placebo groups. Side effects such as cramping, nausea and headache were more common in the misoprostol group than in the placebo group. The authors conclude that misoprostol is not recommended as a pain reduction technique prior to IUD insertion, in either nulliparous or parous women. Unfortunately, this is in agreement with a meta-analysis published in 2009, which concluded that neither NSAIDs nor misoprostol were an effective prophylactic for IUD insertion pain.[2] They do, however, cite a small, methodologically flawed study that suggested that topical lidocaine gel prior to IUD insertion did significantly reduce pain. It appears that a more rigorous version of this trial has yet to published.

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Influenza vaccine for pregnant women

Pregnant women are eligible for free seasonal influenza vaccine in Australia[1] and New Zealand.[2] In both countries, the 2011 vaccine covers three influenza strains, including H1N1. The 2009 H1N1 influenza pandemic highlighted the susceptibility of pregnant women to severe illness and death from influenza infection. A national study from the US, in early 2010, reported 788 H1N1 infections in pregnant women with 65 per cent being hospitalised, 23 per cent being admitted to ICU and four per cent dying of the illness.[3] A Victorian study reported 43 cases, with 19 per cent being admitted to ICU, one maternal death, two fetal deaths and one neonatal death.[4] Vaccination rates in pregnant women however remained relatively low. A Western Australian study reporting on vaccination rates in a public antenatal clinic in January 2010 found only seven per cent of the women had been vaccinated, 65 per cent had not been offered the vaccine and 19 per cent had been advised against the vaccine by their GP.[5] Interestingly, an urban US study reported an uptake of influenza vaccination in pregnant women of 81 per cent from January to March 2010, suggesting that acceptance rates need not remain low.[6] A recent study further shows that as well as protecting pregnant women against influenza, influenza vaccine in pregnancy reduces the rate of influenza in neonates, through the transmission of maternal antibodies that have been previously reported in cord blood.[7] These studies serve to remind practising obstetricians of the importance of ensuring that women are encouraged to receive the seasonal influenza vaccine and not to assume that such knowledge is common, or that women presenting to them have already received the vaccine elsewhere.

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RANZCOG assessment of IMGs

Dr Chris Hughes
Chair, OTS/AoN Committee
Dr Sarah Tout
Chair, New Zealand IMG Assessment Panel; OTS/AoN Committee
Georgina Anderson
RANZCOG

The College is responsible for the assessment of the training and experience of international medical graduates who have trained and worked in the specialty overseas and who now wish to work in Australia or New Zealand.

As all involved in the delivery of healthcare in Australia or New Zealand are aware, neither country is currently 'self-sufficient' in regard to its health workforce. Both countries have, for some time, relied upon international medical graduates (IMGs) to fill positions of workforce shortage; estimates putting the proportion of IMGs in the overall Australian medical workforce at around 25 per cent, with the corresponding figure higher in New Zealand. Both Australia and New Zealand have seen the recent establishment of Health Workforce Agencies – Health Workforce Australia (HWA) and Health Workforce New Zealand (HWNZ), respectively – in an effort to enable planning for a workforce that will effectively address future needs. Indeed, part of the ambitious work plan of HWA is a project to see Australia self-sufficient for health workforce by 2025.

Concerns about sustainable medical workforces in both Australia and New Zealand are not new. The reliance on an overseas trained workforce has required systems that ensure those IMGs wishing to practise in Australia or New Zealand have the requisite training and skills to enable them to deliver safe and effective healthcare in the environments in which they intend to practise. It is here that the College has, for some time, played a role in processes that involve a range of stakeholders.

Specialist IMG assessment in Australia

In Australia, the College is appointed by the Medical Board of Australia (MBA) to conduct assessments of IMGs with specialist qualifications in obstetrics and gynaecology. The assessment process compares the training and experience of an overseas trained specialist to the competencies expected of a specialist trained through the MRANZCOG/FRANZCOG training program, as prescribed by the RANZCOG curriculum, and determines whether the applicant is considered 'substantially comparable', 'partially comparable' or 'not comparable' to an Australian-trained specialist. The assessment involves both paper-based and interview components, with the outcome of this assessment determining the pathway that an individual specialist IMG must follow if they are to gain Fellowship of the College and, thus, recognition by the MBA as a specialist and inclusion on the specialist medical register.

The requirements of the assessment process in Australia are broadly defined as part of the 'Specialist Pathway' for overseas trained doctors wishing to practise in Australia. The requirements are broadly consistent across the medical specialities and have developed in recent years, in recognition of matters described in the 2005 ACCC-AHWOC Review of Australian Specialist Medical Colleges, the 2006 Council of Australian Governments (COAG) reforms, and initiatives brought about by bodies such as the Joint Standing Committee on Overseas Trained Specialists (JSCOTS). The Specialist Pathway is one of four assessment pathways associated with IMGs in Australia and the only one in which the College has any formal involvement. The remaining three pathways relate to doctors seeking to obtain their AMC certificate. This is a recognition of standards of initial – as distinct from specialist – medical training, which leads to inclusion on the general medical register. Completion of the requirements of the AMC certificate is a necessary prerequisite for any overseas trained doctor seeking to apply for a place on the MRANZCOG/FRANZCOG training program.

Processes relating to Area of Need are contained within the Specialist Pathway and will not be addressed in this article, save to note that the College determines the suitability of an individual IMG for an individual position in the context of a specific position description. In addition, the applicant applying for assessment of suitability to fill an Area of Need position is assessed concurrently at interview for comparability to an Australian-trained specialist.

For those IMGs assessed by the College as substantially comparable, a period of oversight and/or supervision of up to 12 months may be required before proceeding to Fellowship. Those assessed as partially comparable are generally considered able to perform at the level of a senior (Year 5 or 6) RANZCOG trainee and must complete various assessments (including the MRANZCOG written and oral examinations) and a minimum of 12 months of satisfactory supervised training before being eligible for elevation to Fellowship.

IMGs assessed as not comparable to an Australian-trained specialist are required to apply for a place on the MRANZCOG/FRANZCOG training program if they wish to obtain Fellowship of the College and recognition as a specialist in Australia. The College Recognition of Prior Learning (RPL) policy may enable such individuals who do obtain a place on the training program to shorten their training time, through recognition of their overseas training and experience.

Specialist IMG assessment in New Zealand

In New Zealand, the College acts as a Branch Advisory body (BAB) to the Medical Council of New Zealand (MCNZ). As in Australia, the College undertakes a paper-based and interview assessment process to determine the pathway that an IMG will need to follow in order to attain registration within the vocational scope of obstetrics and gynaecology and, hence, recognition as a specialist in the discipline. Also akin to the Australian situation is the existence of three possible outcomes from the assessment process – that the IMG's training, qualifications and experience are either: 'equivalent to' an obstetrician and gynaecologist vocationally trained in New Zealand;'as satisfactory as' an obstetrician and gynaecologist vocationally trained in New Zealand; or 'neither equivalent to, nor as satisfactory as' an obstetrician and gynaecologist vocationally trained in New Zealand.

Unlike the situation in Australia, however, recognition as a specialist in New Zealand by the MCNZ is not inextricably linked to attainment of College Fellowship and the MCNZ may grant full registration within the vocational scope without the need for the IMG to hold College Fellowship.

Thus, the assessment process conducted by the College on behalf of the MCNZ serves two purposes: the provision of advice to the MCNZ in regard to the pathway that an individual *should* be required

to follow in order to attain specialist recognition; and identification of the pathway that an individual *must* follow if they are to obtain Fellowship of the College. Since the MCNZ is not obliged to follow the advice offered by the College in its role as a BAB to the Council, there is the possibility of a disconnect between the requirements set by the MCNZ for attainment of recognition as a specialist in New Zealand and the requirements set by the College for attainment of College Fellowship. Thus, while not identical to the process for IMGs in Australia from the perspective of system requirements, the New Zealand IMG assessment process involves a similar interview and has also evolved over a period of time in response to stakeholder expectations. The College works closely and cooperatively with the Medical Council in relation to this activity.

Internal and external considerations

Along with all involved in the assessment of IMGs for recognition to practise in a specialist discipline in Australia and New Zealand, the College is acutely aware of the responsibilities that it has to all concerned. The College must ensure that its assessment processes are as open and transparent as possible, representing a benchmark that is fair to all concerned and comparable to the standards expected of locally trained specialists. Nevertheless, the activity of assessing IMGs in both countries represents a relatively complex area of activity that is high stakes for the individuals involved, with a range of interests and sensitivities to be considered.

The overarching goal of ensuring the provision of safe and effective levels of healthcare to the women of both countries must always remain the primary consideration of any IMG assessment process that the College undertakes. As already outlined, the College works within a framework set by others and recent activity in Australia has highlighted the range of issues associated with this area of College business as well as the difficulties that can be faced by IMGs as they attempt to navigate what can be a complex process involving a variety of agencies. It is of paramount importance that any advice given to individuals is accurate and the College website contains information that can be of assistance to individuals looking to become familiar with the requirements of this area.

Like many College pursuits, the function of conducting assessments of IMGs is overseen by a committee, whose role is defined by Terms of Reference approved by the RANZCOG Board and Council. The Overseas Trained Specialist / Area of Need (OTS/AoN) Committee oversees the work of the assessment panels that conduct the interview assessments regularly throughout the year, as well as recommending general policy to the College Board in regard to this area of activity.

Also consistent with other College functions, RANZCOG must be aware of, and responsive to, external influences and developments that may have implications for the assessment process. Indeed, a Parliamentary inquiry into the support and processes associated with overseas trained doctors has recently been conducted in Australia (see: www.aph.gov.au/house/committee/haa/overseasdoctors/index.htm), with the College providing both a written submission and oral evidence to the inquiry. Transcripts of the proceedings show that a range of issues were canvassed throughout the enquiry, providing not only an opportunity to examine ways in which IMGs may be assisted in their chosen pathway to practise in Australia, but also an opportunity to clarify for those concerned what role the specialist colleges play in these matters and what can, and cannot, be influenced by them. For example, RANZCOG plays no part in determining the number of specialist IMGs to be assessed. There are a range of issues that will affect the number of overseas trained doctors seeking specialist assessment in Australia at any time and numbers seeking assessment do fluctuate. During the inquiry, the College emphasised the realisation of the difficulties faced by IMGs wishing to practise at specialist level, including accessing employment suitable for additional training and opportunities for attendance at necessary professional development activities.

Assessment numbers and outcomes

Table 1 shows the numbers of specialist IMGs assessed in Australia by the RANZCOG OTS process in the period 2009–10, and the outcomes of these assessments. In New Zealand the numbers are considerably smaller (see Table 2); however, in neither country are the numbers static. This potentially provides logistical issues in regards to ensuring sufficient numbers of experienced people for interview panels, both in terms of College Fellows and non-College members (for example, community and lay representatives), among others.

Table 1. RANZCOG assessments undertaken in Australia and relevant outcomes for the period 2009–10.

	OTS AS	NEFI	EFI	SC	SC (OS)	PC	NC
2009 Applications	66*	8	58	7	20	21	10
2010 Applications	51*	5	46**	6	22	10	7

* Includes applications assessed concurrently with AoN
** One applicant deemed eligible for interview did not proceed with the interview component.

OTS AS Number of OTS Applications Assessed (including those assessed concurrently with AoN applications)
NEFI Not eligible for Interview (akin to 'Not Comparable')
EFI Eligible for Interview
SC Substantially Comparable – No Period of Oversight
SC (OS) Substantially Comparable – With a Period of Oversight
PC Partially Comparable
NC Not Comparable

Table 2: RANZCOG assessments undertaken in New Zealand and relevant outcomes for the period 2009–10.

	OTS AS	EQ	ASA	N
2009 Applications	7	7	0	0
2010 Applications	9	6	1	2

OTS AS Number of OTS Applications Assessed
EQ Equivalent to
ASA As satisfactory as
N Neither equivalent to nor as satisfactory as

Also of interest is that, during the period 2006–10, a total of 257 trainees across Australia and New Zealand were elevated to Fellowship of the College through completion of the MRANZCOG/FRANZCOG training program; meanwhile, the number of IMGs elevated to Fellowship through the specialist pathway was 152, or more than half the number who completed their training in Australia and New Zealand. This information alone should be sufficient to allay any concerns that access to recognition as a specialist obstetrician and gynaecologist is being blocked by the College.

The data in Tables 1 and 2 show that there were in excess of 30 countries from which the IMGs assessed during the 2009–10 period obtained their specialist qualification. Figure 1 shows data relating to the ten most frequent countries of specialist qualification over

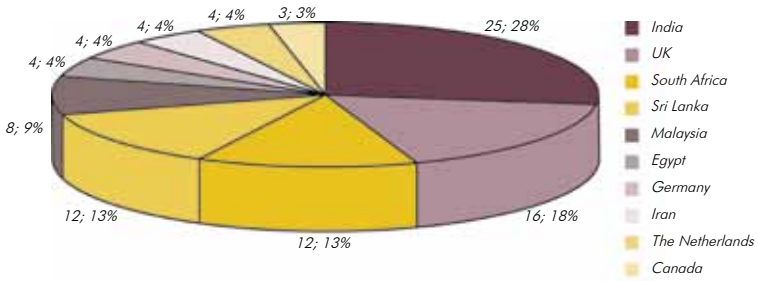


Figure 1. OTS applicants assessed in Australia – top-ten frequency by country of qualification: 2009–10.

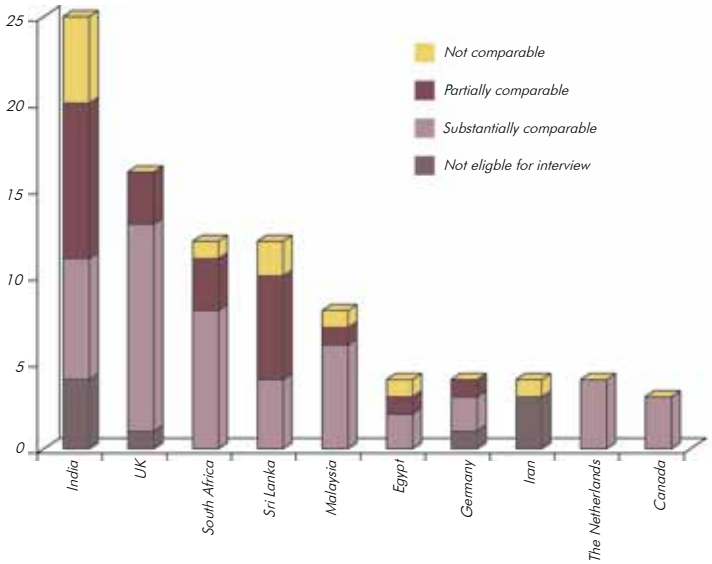


Figure 2. OTS assessment in Australia – outcomes by country of qualification: 2009–10.

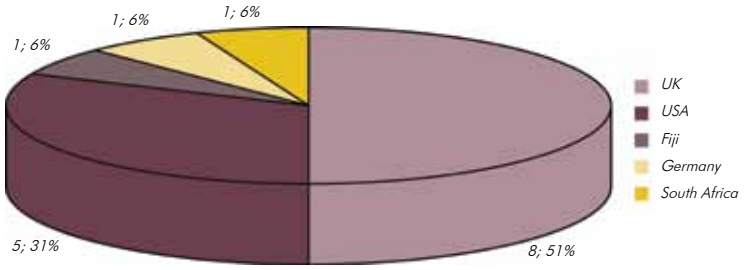


Figure 3. OTS applicants assessed in New Zealand by country of qualification: 2009–10.

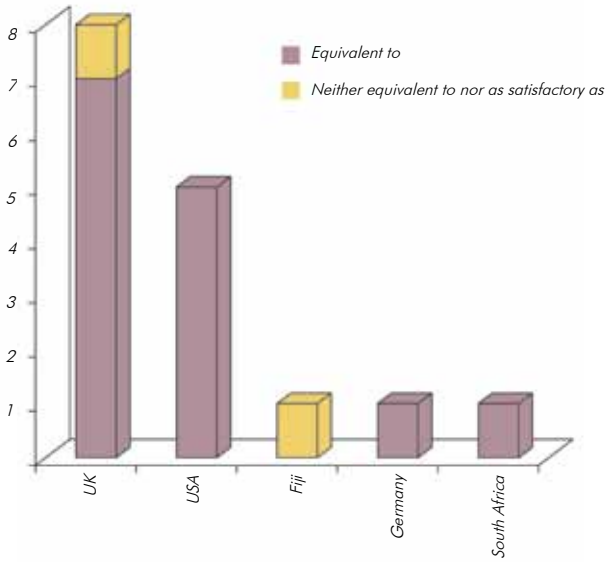


Figure 4. OTS assessment in New Zealand – outcomes by country of qualification: 2009–10.

the last two years, for assessments conducted in Australia, while Figure 2 illustrates the assessment outcomes for those countries. In New Zealand, where fewer numbers of applications are received, there are fewer countries of origin in which IMGs completed their specialist training (see Figures 3 and 4).

Figures 2 and 4 illustrate the need for individual applications to be considered on their merits; predicting an assessment based on country of specialist qualification is not a certain science. While there have been signs of calls being made for the automatic recognition of holders of some overseas specialist qualifications to be given automatic recognition as substantially comparable in Australia (the specialist equivalent to the AMC Competent Authority pathway for general registrants) or as equivalent in New Zealand, the College has urged caution in regard to this matter, preferring instead to offer a 'fast track' approach to such applicants in relation to the early stages of the process.

The primary purpose of this article is to explain the processes associated with the assessment of IMGs in Australia and New Zealand. Readers interested in attaining a deeper understanding can consult the following websites: http://www.ranzcog.edu.au/overseas/index.shtml; http://www.amc.org.au/index.php/img; or http://www.mcnz.org.nz/registration/selfassessmentforregistration/results/tabid/237/default.aspx . The submission of the AMC to the Australian House of Representatives inquiry into overseas trained doctors gives a highly detailed summary of the processes currently employed in Australia, along with much background information, see: http://www.aph.gov.au/house/committee/haa/overseasdoctors/subs/sub42.pdf .

There are, of course, issues associated with IMG assessment that have not been covered in this article, ranging from the support provided at various stages of the process to the effect of training positions for IMGs on local trainees. A secondary purpose of the article, however, to assure all who read it that, like every other aspect of College activity, there is a committed core of Fellows and non-College members who are aware of such issues, and who put considerable time and effort into ensuring that the process of assessing IMGs who wish to practise obstetrics and gynaecology in Australia or New Zealand is conducted as well as it can be, given the complexity of the task and the range of considerations involved.

As with all areas of College endeavour that rely on the willingness of College members to contribute their time, there is always a desire to involve more people in the process. Any Fellow interested in becoming involved in the assessment of specialist IMGs should contact the College (email: ots@ranzcog.edu.au). All involved in the RANZCOG assessment of specialist IMGs are aware that different stakeholders, for different reasons, express from time to time episodes of anxiety in regard to different aspects of the process. This is understandable, given the nature of the purpose for which the process exists. Regardless of any such anxieties that may arise, those involved in IMG assessment at RANZCOG are working hard to ensure that the processes employed meet contemporary expectations and can determine the suitability of IMGs with overseas qualifications in the specialty to deliver safe, effective healthcare to the women of Australia and New Zealand.

College welcomes new community representative

Catherine Whitby was recently appointed community representative on the RANZCOG Council for the 2010–12 period. Catherine has a longstanding interest in women's health issues that developed through her work as a commercial lawyer, specialising in healthcare matters, and as the mother of a nine-month-old baby girl and recent consumer of maternity services.

Catherine sees this position as critical point of contact between RANZCOG and the broader community, not only in terms of ensuring that RANZCOG is aware of, and gives consideration to, community concerns, but in increasing public awareness of RANZCOG's role in supporting clinically appropriate, high-quality obstetric and gynaecological care for Australian and New Zealand women.

For the College, the Community Respresentative's role is to:

- Provide a consumer perspective on matters considered by the College Council.
- Ensure that Council is aware of, and recognises, the implications of consumer perspectives to matters addressed by the forum.
- Act as a source of information on issues affecting consumers that may be considered by Council.
- Contribute agenda items for discussion by Council that may have implications for consumers of women's healthcare services that fall under the auspices of the College.
- Participate in the work of other College committees and working groups whose membership may contain community / consumer representation.
- Contribute to College advocacy and educational activities in specific aspects of women's health as agreed with Council and/or the Board as appropriate.

Catherine holds a holds a BA LLB (First Class Honours) from Bond University and a MSc (Law and Accounting) from the London School of Economics and Political Science. Her interests include running, reading, cooking and travel.

Catherine Whitby and her daughter Sophie.

RANZCOG Women's Health Award 2010

The Royal Australian and New Zealand College of Obstetricians and Gynaecologists has been proud to present the RANZCOG Women's Health Award, for the past six years to outstanding university students in obstetrics and gynaecology from medical schools across Australia, New Zealand, Papua New Guinea and Fiji.

The College is committed to promoting the specialty of obstetrics and gynaecology as an exciting and valuable career option and anticipates that this award will help raise awareness of the specialty among medical students.

Since the last publication of *O&G Magazine*, The RANZCOG Women's Health Award 2010, valued at $AUD 500, was received by the following successful awardees:

Phoebe Moore
University of Newcastle

Verinder Sidhu
University of Sydney

In *O&G Magazine* Vol 13 No Lauren Kalinowski was wrongly described as studying at the University of Newcastle; Lauren is studying at the University of Queensland. We apologise for any confusion or embarrassment this caused.

Medical pamphlets

RANZCOG members who require medical pamphlets for patients can order them through:
Mi-tec Medical Publishing
PO Box 24
Camberwell Vic 3124
ph: +61 3 9888 6262
fax: +61 3 9888 6465
Or email your order to: orders@mitec.com.au

You can also download the order form from the RANZCOG website: www.ranzcog.edu.au .

College Statements Update

March 2011

Dr Louise Farrell
FRANZCOG
Chair, Women's Health Committee

The Women's Health Committee (WHC) re-issued the following statements in March 2011, which were subsequently endorsed by Council. College statements can be viewed on the College website at: www.ranzcog.edu.au/womenshealth/statementsupdate.shtml .

New College Statements

The following new statements were endorsed at March Council 2011:

- RANZCOG Standards in Maternity Care in Australia and New Zealand (C-Obs 41)
- Management of Monochorionic Twin Pregnancy (C-Obs 42)
- Management of Postpartum Haemorrhage (C-Obs 43)
- Pre Pregnancy and Pregnancy Related Vaccinations (C-Obs 44)
- Fibroids in Infertility (C-Gyn 27) – this is consensus statement between RANZCOG and The Australasian CREI Consensus Expert Panel on Trial evidence (ACCEPT) group.

Revised College Statements

The following statements were re-endorsed at March Council 2011 with minor or no amendments:

- Patient records management on the discontinuation of practice (WPI 8)
- Ovarian stimulation in assisted reproduction (C-Gyn 2) – please note that this statement was previously named 'Ovarian stimulation in infertility'.
- Guidelines for the interview and selection of Obstetricians and Gynaecologists for visiting medical officers, salaried medical officers and academic staff in Australia (WPI 4)

The following statements were re-endorsed at November Council 2010 with minor or no amendments:

- The Use of Misoprostol in Obstetrics and Gynaecology (C-Obs12)
- Guidelines for Performing Advanced Operative Pneumoperitoneum prior to Laparoscopy (C-Trg 2)
- Standing Orders for Prescribing Narcotic Drugs to Obstetric Patients during Labour (C-Obs 8)
- Cytological follow up after Hysterectomy (C-Gyn 8) – please note that this statement was previously named 'Pap Smears after Hysterectomy'.
- Antenatal Care in Australian Public Hospitals (WPI 10)
- Performance of Sexual Assault Forensic Examinations by RANZCOG Trainees (C-Gen 12)

Resources of other bodies endorsed by RANZCOG

National Centre for Gynaecological Cancers' Endometrial Cancer Resource, Vaginal Bleeding Flowcharts – this is a resource document created by Cancer Australia's National Centre for Gynaecological Cancers, for medical professionals and the general public.

New College Statements under development

- Vasa Praevia

Prescriber Status for Mifepristone

RANZCOG has developed an aide package to assist Fellows with their application to TGA to become an authorised prescriber for Mifepristone. If you would like a copy of the aide to be emailed to you, please contact the College on +61 3 9412 2920.

News update

RANZCOG Women's Health Services Department

Please note that the RANZCOG Women's Health Services (WHS) Department has recently moved. Should you have any queries for the Women's Health Committee or WHS, please use the following contact details:
Ms Nola Jackson
(t) +61 3 9412 2920
(e) njackson@ranzcog.edu.au.

Posted correspondence can be still sent to the College House address.

Nuchal Translucency – Ultrasound, Education and Monitoring Program (NT Program)

Please note that the NT Program office has also moved. See the website for contact details: www.nuchaltrans.edu.au
(t) +61 3 9412 2938 or +61 3 9412 2939
(e) nuchaltrans@ranzcog.edu.au

College website

College statements

Can be viewed at: www.ranzcog.edu.au . Should you have any difficulties with any documents from the webpage, please contact Nola Jackson at the College (t) +61 3 9412 2920 (e) njackson@ranzcog.edu.au .

Resources for Fellows

This section includes local and international guidelines and articles of interest such as links to new titles on ACOG Committee Opinions and Practice Bulletins, SOGC Clinical Guidelines, National Institute of Clinical Excellence (NICE) guidelines and Department of Health and Ageing reports. Access at: www.ranzcog.edu.au/locked/members/fellowsresources.shtml then type username and password and scroll down to 'Information from Women's Health Services'.

Council Meeting Reports

11 November 2010

New Councillors welcomed

Dr Ngan Kee, Vice President New Zealand, introduced the following new Councillors to the President, Dr Rupert Sherwood. The President welcomed the new Councillors to the Seventh RANZCOG Council:

- Dr Kristine Barnden, Councillor resident in Tasmania
- Dr Benjamin Bopp, Councillor resident in Queensland
- Dr Anusch Yazdani, Councillor resident in Queensland
- Dr James Harvey, Councillor resident in South Australia/ Northern Territory
- Dr John Hehir, Councillor resident in the Australian Capital Territory
- Dr Graeme Jenkins, Councillor resident in New South Wales
- Dr Vijay Roach, Councillor resident in New South Wales
- Dr Amber Moore, Councillor resident in Victoria
- Associate Professor Amar Trivedi, Councillor resident in Victoria
- Associate Professor Krishnan Karthigasu, Councillor resident in Western Australia
- Dr Yee Leung, Councillor resident in Western Australia
- Dr John Tait, Councillor resident in New Zealand
- Dr Anthony Geraghty, Councillor representing Provincial Fellows
- Dr Lucinda Pallis, Councillor representing Provincial Fellows

The President introduced the new National Association of Specialist Obstetricians and Gynaecologists (NASOG) representative on Council, Dr Christine Thevathasan, immediate Past President, Dr Ted Weaver, and Subspecialties representative, Professor Jonathan Morris.

Honours awarded to College Fellows

The President reported on the following recent honours awarded to College Fellows:
Rural Doctor of the Year 2010
Dr Pieter Mourik

Report from the President

The President, Dr Rupert Sherwood, presented his report and reflected that the new governance structure, rather than diminishing the role of Council and its elected representatives, will allow more time in the Council meetings for addressing key issues of policy and strategy, as well as time for debate of contemporary issues facing the profession. Under the Maternity Reform Agenda, legislation and supporting documents took effect from 1 November 2010, with eligible midwives now able to apply for MBS provider number and prescribing rights. The Board will be monitoring the implementation of the Maternity Reform Agenda and shall maintain regular liaison with NASOG and the Australian Medical Association (AMA). Feedback is also welcomed from Councillors and Fellows.

Report from the CEO

The CEO, Dr Peter White, presented his report, covering:

- Current College House organisational arrangements.
- External funding opportunities associated with the Specialist Training Program and the Rural Health Continuing Education Program.
- The importance of Councillors familiarising themselves with the Accreditation standards of the Australian Medical Council (AMC) for the specialist medical colleges.
- The National Registration and Accreditation Scheme (NRAS)

Reports from Standing Committees of RANZCOG

In accordance with the new governance structure, the Council considered a range of policy matters from Standing Committees concerning training, assessment, certification and recertification, as well as statements of College policy from the Women's Health Committee, prior to them being submitted to the Board of Directors for final approval. Other routine matters from various committees were reported to Council for noting and the opportunity for further clarification or comment.

College Statements and Guidelines

The President advised that under the new governance structure the recommendations about College Statements and Guidelines will continue to be reviewed in detail and voted on by the Council, since development and promulgation of College Statements/Guidelines is an area of College business directly concerned with the College's impact and interaction with the wider community. As a result, it is seen as vital that all Councillors are directly involved with the review and adoption of College Statements.

11 March 2011

Honours awarded to College Fellows

New Zealand New Years Honours List 2011

- Professor Lesley McCowan – Officer of the New Zealand Order of Merit – for services to health.

Australia Day Honours List 2011

- Professor Alastair Maclennan – AO – for distinguished service to medicine as a leading researcher and practitioner in the areas of obstetrics and gynaecology and the causes of cerebral palsy, medical education and professional development.
- Mr Arthur Day – AM – for service to medicine as a gynaecologist and administrator, through contributions to ovarian cancer research and to medical education.
- Professor Andrew Korda – AM – for service to medicine in the fields of obstetrics and gynaecology through clinical, teaching and administrative roles and to a range of professional organisations.

Report from the President

The President presented his report summarising the current work and projects of the Board and the major committees, including:

- RANZCOG Training Review Working Party (TRWP). The President summarised the progress made thus far, the range of consultations taking place and the assessment of reform options with regard to implementation, capacity and resource issues. The final report of the TRWP is scheduled for late 2011.
- The Health Workforce Principal Committee is reviewing the matter of hospital accreditation and payment of fees for accreditation of hospital training posts.
- The Board has agreed to support a College bid to host a FIGO Congress in Melbourne, with the next opportunity to host the Congress currently 2021.
- Subspecialty assessment: A Subspecialties Forum was held in January 2011 and the assessment issue has been discussed by the relevant committees.
- The selection process for a Community Representative has taken place and a recommendation to appoint Ms Catherine Whitby was subsequently approved by the Board.

- Terms of Reference for the Jean Murray Jones Bequest Oversight Committee were endorsed, providing for the bequest for the Estate of the late Dr Jean Murray Jones to be used in accordance with the intentions of the bequest.
- Maternity Reform Agenda, including State Maternity Services Plans, Eligible Midwives and public hospital access in NSW and other States.
- The alignment of the RANZCOG CPD Program with the RANZCOG Curriculum is proceeding following Council's endorsement of the revised CPD program.
- A new Committee Appointment Tenure Policy was endorsed. The policy will overlay the Terms of Reference of all RANZCOG committees when it comes into effect.

Report from the CEO

The CEO presented his report including the following major items for information of Council:

- College submission to the House of Representatives Standing Committee on Health and Ageing inquiry into and report on the registration processes and support available for overseas trained doctors (OTDs) in Australia.
- Two other matters of possible significance in regard to the assessment and registration of OTDs in Australia: a referral from the Australian Health Ministers Council (AHMC) to the Australian Health Workforce Advisory Council (AHWOC) regarding the matter of recognition and management of overseas trained specialists; a working group being established by the MBA to work with the AMC and the specialist colleges to agree on more consistent processes and procedures in the assessment of OTDs.
- The development work for the revised curricula for the DRANZCOG and DRANZCOG Advanced is nearing completion, with a three-tier system of qualifications involving a new initial Certificate of Women's Health being developed and approved for implementation.
- The revised CPD program will be supplemented by an effective 'on-line' capacity, to enable Fellows to conduct their activity in the CPD program electronically, representing a step forward for the College CPD program in acknowledging the wide range of both clinical and non-clinical activities in which Fellows participate that can be meaningful from a CPD perspective, as well as the various stages through which a Fellow's career in practice may evolve.
- The CEO and President continue their efforts to regularly inform the College membership of progress in relation to the objectives described in the College Strategic Plan, as well as College risk management activities. This includes presentations to regional committees, with the first of those held recently in Sydney.
- Arrangements have been finalised with the Commonwealth Department of Health and Ageing for funding, under the auspices of the Specialist Training Program, for sites for trainee salaries, administration of the funding process, educational projects and up-skilling activities for individual overseas-trained specialists assessed as partially comparable to an Australian-trained specialist in obstetrics and gynaecology and working towards Fellowship of the College.

NASOG / RANZCOG MoU

A successful Joint NASOG Executive and RANZCOG Board meeting was held on 9 March 2011 and progress is underway to putting the RANZCOG/NASOG Memorandum of Understanding (MoU) into effect.

Health Workforce New Zealand

The Health Workforce New Zealand initiatives and their possible implications for the College were discussed. The CEO and President are actively monitoring developments and taking proactive steps to advocate the College's trans-Tasman arrangements in New Zealand.

Guidelines released by State maternity networks

The situation where Fellows in the public sector are required to follow two conflicting sets of guidelines was discussed and is being followed up by the College.

Reports from Standing Committees of RANZCOG

The Council considered a range of policy matters from Standing Committees concerning training, assessment, certification and recertification, as well as statements of College policy from the Women's Health Committee, prior to them being submitted to the Board for final approval. Other routine matters from various committees were reported to Council for noting and the opportunity for further clarification or comment.

Outstanding Fellows

Two RANZCOG Distinguished Service Medals were recently presented at College House in Melbourne.

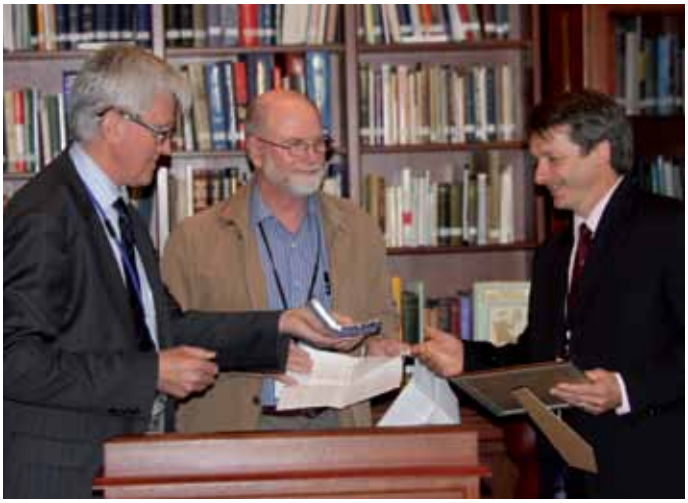
At an event held at College House, Melbourne, on 10 March 2011, Dr Aldo Vacca from Brisbane, Queensland, and Dr David Simon from Warragul, Victoria, were presented with RANZCOG Distinguished Service Medals in recognition of their substantial contribution to the specialty.

Dr Tony Geraghty, Chair of the RANZCOG Provincial Fellows Committee, read Dr Simon's citation to a number of Fellows, members, College staff and family and friends who had gathered for the presentation. RANZCOG President, Dr Rupert Sherwood, awarded the medal to Dr Simon in acknowledgement of his outstanding work in the practice of rural obstetrics and the support and training of General Practice obstetricians for rural obstetrics.

Dr Simon is a well-respected consultant in O and G in rural Victoria, where he has been extensively involved in training for the Diploma of Obstetrics and Gynaecology for many years. He is well known for his mentoring and support of GP obstetricians in the West and South Gippsland regions of Victoria and regarded as a ready source of advice, support and encouragement for local doctors, as well as providing a consultant O and G service for them.

Dr Simon is currently a specialist obstetrician and gynaecologist and a training supervisor at Latrobe Regional Hospital in Traralgon. Here he provides onsite teaching, support and mentoring to outlying GP obstetric units as well as specialist and GP training supervision. He is an examiner for the DRANZCOG and a probationary examiner for the MRANZCOG. Dr Simon also holds a position of facilitator at the Victorian Department of Health Maternity Emergency Workshop and is a MOET trainee course instructor.

In addition, Dr Simon has also had a commendable commitment and involvement in the teaching program at University of Papua New Guinea in recent years, providing valuable teaching and locum coverage at the Port Moresby General Hospital. In recognition of this involvement, Dr Simon was appointed to the RANZCOG Asia Pacific Committee in 2008.



After Dr Tony Geraghty had read the citation, Dr Rupert Sherwood presented Dr David Simon with his medal.

Dr Aldo Vacca with his medal and framed citation in the library at College House, Melbourne.

Dr Gino Pecoraro, RANZCOG Board member and fellow Queenslander, read Dr Aldo Vacca's citation and Dr Sherwood presented the medal to Dr Vacca in recognition of his outstanding work in obstetrics and gynaecology and his significant contribution and commitment to the promotion of excellence and innovation in women's health.

Dr Vacca was involved in the development, evaluation and production of a new vacuum extractor. He is active nationally and internationally in promoting and training others in the safe use of the vacuum extractor as a device for assisting vaginal birth. Dr Vacca has published, researched and taught widely on the technique of vacuum delivery and this dedication has provided a significant contribution in the management of women experiencing difficulties in second-stage labour.

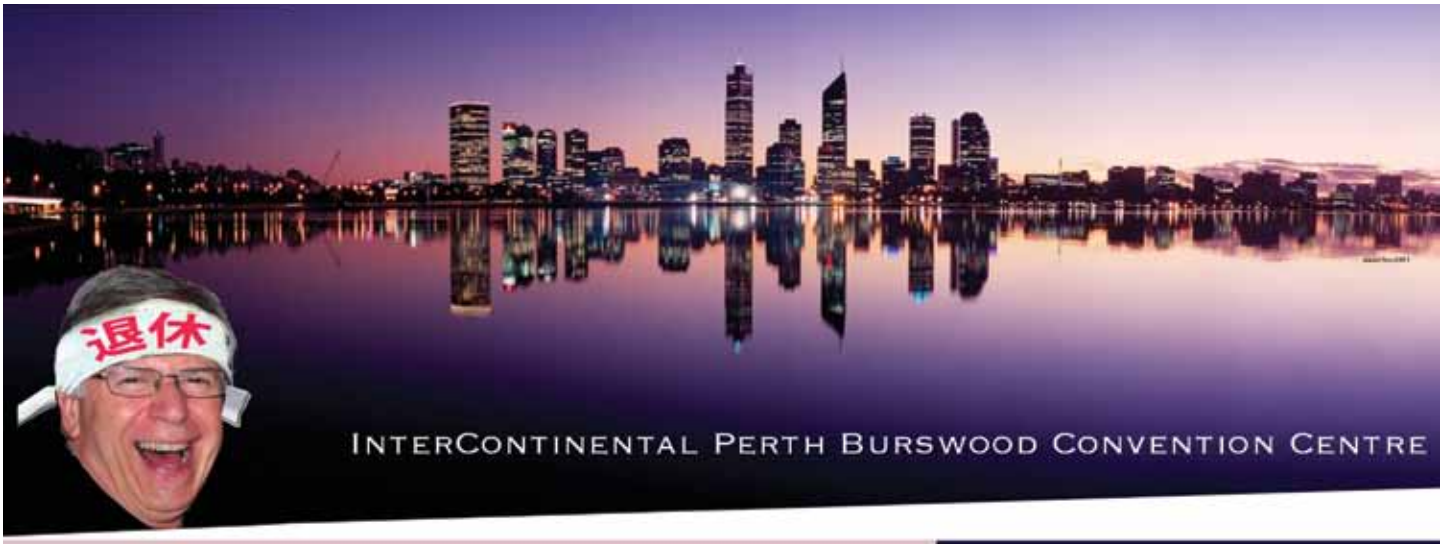
He is currently a consultant obstetrician at the Royal Brisbane and Women's Hospital; a visiting obstetrician at Mater Mothers Hospital in South Brisbane; and a senior lecturer at the department of obstetrics and gynaecology at the University of Queensland. Additionally, Dr Vacca has a significant and ongoing commitment to delivering master classes in the technique of vacuum-assisted delivery, nationally and internationally.

Following the awards presentation, family, friends, College members and staff enjoyed celebrating with Dr Simon and Dr Aldo. L-R: Sarah, Dr David and Susan Simon; Dr Aldo and Jan Vacca and Dr Gino Pecoraro, who had earlier read Dr Aldo's citation.

In 2007, Dr Vacca was recognised by an Award in the Queen's Birthday Honours of the Medal of the Order of Australia (OAM): 'For service to medicine in the field of obstetrics and gynaecology, particularly through the research and promotion of the technique of vacuum extraction delivery in obstetric practice.'

Dr Vacca served on the Queensland Regional Committee of RANZCOG and represented Queensland on Federal Council from 1996–2000. During these years he was a member of the Joint Consultative Committee RACOG/RACGP/ACRRM, Asia Oceania Affairs Committee, Continuing Education Committee, IT Resource Network, Training and Accreditation Committee and the Nominee Company Pty Ltd, and was also a RANZCOG Training Supervisor.

For further information on the nomination process
The RANZCOG Distinguished Service Medal is awarded to Fellows who have made a significant contribution to the promotion of women's health, the specialty of obstetrics and gynaecology and/or the work of the College. Information on the nomination process was sent to the Regional and New Zealand Committees and can be obtained from Penelope Griffiths, Director of Corporate Services, via email at: pgriffiths@ranzcog.edu.au .



The Complicated Pelvis

Hammond Tui Yau (退休) Meeting

November 18 & 19, 2011

The Complicated Pelvis Hammond Tui Yau Scientific Meeting aims to capture elements of Clinical Professor Hammond's area of interest and significant contribution. Sessions will be devoted to Oncology, Complicated Pelvic Surgery, Policy and Network, and the "best of the best" Anatomy of Complication Workshop case discussions.
Don't miss the RANZCOG WA Annual Gala Dinner to honour Clinical Professor Hammond.

For further information please contact:

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YRD Conference Secretariat
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W. www.ranzcog.edu.au

Obituaries

Dr Clifton John Ryan
1926 – 2010

Clifton (Clif) Ryan was born on 5 December 1926, in Sydney. He was educated at Waverley College, where he excelled academically, at sport and as a cadet officer, finishing in 1944. As soon as he left school he joined the Royal Australian Navy, in 1945. As the war ended he was demobilised and began studying medicine at the University of Sydney, where he graduated with the MBBS in 1953. He was associated with St Vincent's Hospital, as a student while at the University and also as a Resident. While there, he met and married his wife Gay Donnan, who was training as a nurse, in 1956.

From Sydney, Clif went to the UK and obtained his MRCOG in 1959. He returned to Sydney in 1960, with his wife and three children. He was appointed to the staff at St Margaret's Hospital and remained there until the 1980s. During this time, he became Chairman of the Medical Staff Council and helped to train a number of GPs and Registrars. In that time, St Margaret's Hospital had become a very busy teaching hospital. He was elevated to the Fellowship of the RCOG in 1975 and became a Foundation Fellow of the RACOG in 1979.

When Clif joined the Department of Health, leaving obstetrics and gynaecology behind after 22 years, it was quite a shock to the staff of St Margaret's. He was a successful specialist, having rooms in Macquarie Street, Bondi Junction and at Hurstville.

From a sporting point of view, Clif continued as a jogger almost until the end. His special interest was the Bondi Surf Club, where he was a very successful President from 1984–92. He was eventually appointed to Honorary Life Membership. He was also responsible for inaugurating the 'Masters' Competition nationally for the surfing organisation.

On 27 November 2010, Clif passed away at St Vincent's Hospital in Sydney. He will be greatly missed by his wife, Gay, his children and grandchildren.

Dr William B Molloy
RFD, ED, CLJ, FRANZCOG
St Ives, NSW

Dr Malcolm Francis Catt
1945 – 2011

Malcolm Francis Catt was born in Bowral, NSW, on 15 April 1945. He was educated at Homebush Boys Selective High School and from there he won a Commonwealth Scholarship to study medicine at Sydney University in 1962.

One of Malcolm's enduring passions was music. In his second year of medicine, he was awarded the Licentiate of Music (L.Mus.A Performance) in piano from the Conservatorium of Sydney.

His initial years of general postgraduate training were at the Royal Prince Alfred Hospital, Sydney, and he subsequently entered the specialty training program in O and G at King George V, Sydney. He was seconded to Goroka in Papua New Guinea, and this experience was formative as it exposed him to uncommon situations in both obstetrics and gynaecology for which he had sole responsibility.

On securing his MRCOG in 1973, Malcolm moved with his then young family to Gosford, NSW. There, he remained in busy practice for 35 years, working as a visiting medical officer at Gosford Hospital and North Gosford Private Hospital. He was a Foundation Fellow of RACOG, in 1979, and was elevated to FRCOG in 1989.

Malcolm was one of the first to recognise the impending revolution in high-quality ultrasound in O and G. He began training in this at the Royal Hospital for Women, Paddington, in 1978. This led to further postgraduate study at the Queen Mother's Hospital in Glasgow, Scotland. He established Coast Ultrasound in Gosford and, subsequently, it became a local referral and teaching centre of excellence.

Malcolm enjoyed the art of obstetrics and was also a gifted gynaecological surgeon and teacher. He was at the forefront in mastering the new techniques of hysteroscopy, ablation and laparoscopic surgery, and willingly shared his skills with colleagues and registrars.

Malcolm was regarded as a real gentleman. He was recognised for his sartorial elegance and known for his insatiable appetite for hard work and unimpeachable integrity.

He died on 26 January 2011. He is survived by his wife Diane, daughters Susan, Alison, Louise and Caroline, six granddaughters and one grandson.

Dr Malcolm Tucker
FRANZCOG
Gosford, New South Wales

Dr Kenneth Hugh Atkinson
1939 – 2010

Kenneth Hugh Atkinson's death late last year ended the career of one of Sydney's most accomplished gynaecologists.

Ken was born on 1 August 1939, in Moss Vale, New South Wales. He grew up in Armidale, where he attended The Armidale School and finished as dux of his year.

He studied medicine at the University of Sydney, living at St Paul's College, and graduated with honours in 1963. He then worked at Royal Prince Alfred Hospital (RPAH) and, two years later, became a registrar at the associated King George V Memorial Hospital for Mothers and Babies (KGV). In his second year there, he sat the membership examination for the Royal College of Obstetricians and Gynaecologists (RCOG) and received the top mark in Australia, gaining his MRCOG in 1967.

In 1968, he was appointed clinical superintendent at KGV. He single-handedly altered the whole ethos of the hospital – introducing formal resident training and running regular seminars incorporating interaction with other clinical specialities.

In 1970, Ken was awarded a Joseph Foreman Fellowship. This took him to Massachusetts General Hospital in Boston, where he was surgical resident to Howard Ulfelder, one of the greatest gynaecological surgeons of the time.

In 1971, he returned to Sydney and was appointed visiting medical officer in obstetrics and gynaecology at KGV and then, from 1974, at Ryde Hospital, Poplars Private Hospital and Sydney Adventist Hospital.

After he gave up obstetrics in the mid 1990s, Ken concentrated on gynaecological cancer surgery. He handled most of the gynaecological cancer surgery on Sydney's upper north shore, and was on call at RPAH for surgical emergencies. He never complained about being called in at any time of the day or night; he did it all with good humour and no one equalled him 'when the chips were down'.

In 1974, Ken became a member of the NSW State Committee of the RCOG. In 1984, he served on the executive committee of the Australian Society for Colposcopy and Cervical Pathology and became chairman of the committee in 1994. In the same year, he was elected to the council of the NSW Medical Defence Union and, in 1995, he served on its executive committee. In 1996, he became a director of United Medical Protection and later deputy chairman. Ken's interests outside of medicine included art, oriental snuff bottles and rugs, sport, good food and fine wine.

He died on 25 November 2010, from complications after a myocardial infarction. He is survived by his wife Susan, and children Tracey, Josephine and Bill.

Professor Andrew Korda
FRANZCOG
Sydney, New South Wales

Korda AR. Obituary – Kenneth Hugh Atkinson. MJA 2011; 194: 353-.