Senate Community Affairs References Committee

Question on notice - 4

Article from QNMU submission that referred to nurse practitioner (NP) model of care that incorporated the use of ultrasound.

Article

Webster-Bain D. (2011). The successful implementation of nurse practitioner model of care for threatened or inevitable miscarriage. *Australian Nursing Journal*, 18(8), 30-33.

Referenced in:

Edwards, S., Birks, M., Chapman, Y. & Yates, K. (2016). Miscarriage in Australia: the geographical inequity of healthcare services. *Australasian Emergency Nursing Journal*, 19, 106-111.

In 2009 at Sunshine Hospital, Victoria, a decline in ultrasound availability occurred due to staffing issues. This caused long waits to occur for pregnant women waiting for pelvic ultrasound. In response, the NP completed a short course in pelvic ultrasound (the course details are not included in this article). An obstetrics and gynaecology consultant supervised the NP with all pelvic ultrasounds until the NP was deemed competent.

This NP model of care incorporated the assessment of women including pelvic ultrasound, the provision of Anti D, counselling and referral to specialist services and admission (if needed). Feedback received through patient surveys showed that patients appreciated and responded well to the NP model of care. It saw a reduction in waiting and treatment times for these women. Due to the success of the NP model of care, this service is now a permanent part of Sunshine Hospital.

Question on notice - 5

Impact of recent changes to COAG section 19(2) exemptions, which allow small rural hospitals to improve services by billing Medicare

The QNMU's submission contains further details of the Modified Monash Model (MMM) and the reason for its implementation. Here we highlight points arising from its implantation and the impact on nurses in particular midwives and some solutions we ask the Committee to consider.

Key points:

- MMM has been implemented across Australia to better identify areas of remote and rural needs.
- Since October 2017 Roma and Mareeba have lost their 19(2) exemption as they are now classified as MMM4.

- Both sites had Midwifery Group Practice models of care and midwives who were able to prescribe and hold their own Medicare provider number.
- Complex insurance arrangements for midwives to be able to utilise Medical Benefits Schedule (MBS) and Pharmaceutical Benefits Scheme (PBS) means that these midwives have lost their functionality in public health services without 19(2) exemption.
- The result is loss of autonomy and return to "old" ways of working.
- Increased barriers to providing safe and timely quality care.
- Burdensome return to doctor dependency for writing scripts and ordering pathology and diagnostic imaging.
- The set back is significant and impacts on quality of care, workforce satisfaction, timeliness of care, point of care, review and follow up points of care.

It impacts on:

- Continuity of care for women which is the very reason that the midwives are achieving such high quality maternal and neonatal outcomes for the women and babies in their communities,
- Diminishes the midwives' autonomous role,
- Increases workload unnecessarily on all staff,
- Risks safe care management and review of women's results, when the primary care provider is not ordering the tests therefore automatically receiving the results,
- Wastes valuable time,
- Places limitations of the midwives' ability to work to full scope of practice,
- Ceases any Medicare revenue generated by the midwives' outpatient work.

Solutions:

- Memorandum of understanding (MOU) between Queensland Health (QH) and insurers to enable midwives who are employed to provide private services.
- Examine options for midwives to have rights to private practice similar to Doctors.
- Expand primary health services to include midwives as a fundamental component of primary maternity heath.
- MOU between Commonwealth and QH to expand the 19(2) exemption to all sites that are for midwifery primary maternity services regardless of rurality.

Kind regards,
Jamie Shepherd, QNMU Professional Officer Team Leader

With assistance from content experts:
Denise Breadsell, QNMU Professional Officer;
Dr Belinda Maier, QNMU Professional Officer (Midwifery Project);
Deborah Twigg, QNMU Policy and Research Assistant.

143 CLINICAL UPDATE

MARCH 2011

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The successful implementation of nurse practitioner model of care for threatened or inevitable miscarriage

INTRODUCTION

Miscarriage is the most common adverse event in pregnancy (Winicoff et al 2005). Women who present to ED with symptoms suggestive of threatened or inevitable miscarriage receive an initial assessment from a triage nurse. Most women who present with vaginal bleeding are haemodynamically stable and therefore triaged using the Australian national triage scale (2000) and mostly given a Category 4. This aims to have a patient seen by a treating practitioner within one hour of presentation.

However, due to the stability of most of these patients and heavy workloads in ED, diagnostic waiting times can often be much longer leading to diminished patient satisfaction, abuse of staff and high levels of complaints to patient advocates (Reid 2004).

BACKGROUND

Nurse practitioners in Australia are finally receiving the recognition they deserve. This role has been chiefly driven by the needs of the health system. The increased attendances to ED for primary and after hours care needs with non urgent problems, has been hypothesised to be due to lack of available general practitioners who offer weekend or after hours consultations and the increased cost of co-payments by patients (The Herald Sun 2004).

The key drivers to the introduction of the NP role include: the fragmentation in continuum of care for patients and diminishing funding sources along with medical workforce shortages. International evidence over the past 55 years, Tye et al (2000) Barr et al (2000), confirms that NPs deliver safe and effective primary health care to patients, families and communities. Research by Shuler et al (1995) found that the role has been successful because the founding philosophy is deeply rooted in the enduring values of nursing. The Australian Nursing and Midwifery Council define a NP as: "a registered nurse, educated and authorised to function autonomously and collaboratively in an advanced and extended clinical role.

In October 2004, Sunshine Hospital ED received funding for a 12-month Demonstration NP Project from the Department of Human Service (DHS) to introduce one adult and one pediatric NP model of care. The presentations to the Sunshine Emergency Department in inner Western Melbourne in 2003 had increased annually to around 55,000 patients. Of all the adult presentations 16% were primary health in nature, which include minor/injuries/complaints/ infections/, symptoms suggestive of miscarriage, which generally require only brief medical and nursing care (Edwards 2004). It was deemed that a NP could be trained to manage the medical and nursing care of these patients. The author became the adult NP candidate in October 2005 and was endorsed as an emergency NP in 2007. Although the role encompassed the management of minor injuries and minor complaints, the current focus of the Sunshine Hospital NP, is the management of threatened or inevitable miscarriage patients who are less than 20 weeks pregnant. Women greater than 20 weeks pregnant who present with similar symptoms are assessed and managed in maternity wards by midwives.

During the initial phase of the project Clinical Practice Guidelines based on the National Health and Research Council (1999) were formulated by the NP to increase the NP scope of practice. Between 2005-2007, supportive emergency physicians' trained the NP candidate in the interpretation of pelvic ultrasound, pathology results and referral processes. With specially designed case study competencies, the NP candidate progressed from assisted to independent practice. Issues of trust, collaboration and consultation were paramount in the development of this part of the role. Shuler (2005) noted the challenge for the novice NP candidate is to continue to strive to blend the medical care of the patient with the traditional role of nursing.

Miscarriage explained

One in every four pregnancies end in miscarriage. Pregnancy (conception) is calculated from the first day of the last normal period (Petrozza 2006). The statistics regarding miscarriage vary widely depending on the source. Around 50% of all women have bleeding some time in their early pregnancy and around 20% will go on to miscarriage with the majority occurring in the first 12 weeks. There is a 75% chance of miscarriage in weeks three to six and this number drops to around 5% during weeks six to 12 Gracia (2005). During the second trimester the chance ofmiscarriage drops to 3% and after 20 weeks it is no longer considered a miscarriage. Everett (1997). The clinical presentation of a threatened miscarriage is described as any bleeding seen during pregnancy prior to knowing the viability. Miscarriages occur for many reasons, including genetic, uterine or hormonal abnormalities, and reproductive tract infections. Tissue rejection and chromosomal abnormalities occur in more than half of the embryos. Most chromosomal problems happen by chance, have nothing to do with the parents, and are unlikely to

recur Gracia et al (2005)

Montvale (1997) noted "that chromosomal problems due to a parent's genes are a possibility and this is more likely the cause in the case of repeated miscarriages, or if one of the parents has a child or other relatives with birth defects. Genetic problems are more likely to occur with older parents; this may account for the higher miscarriage rates observed in older women." In recent years there has been discussion in the medical community about avoiding the use of the term abortion in favour of the less ambiguous term "miscarriage" as the term "abortion" is generally associated with induced abortions (Hutchon et al 1998).

Many pregnant women experience minor cramping and minimal vaginal blood loss or no symptoms at all with their miscarriage. Gracia et al (2005) suggest the possible causes of vaginal bleeding in pregnancy be explained to patients. These are implantation bleed in very early pregnancy; placental changes, post coital bleeding, inevitable miscarriage, ectopic pregnancy and rare causes need to be excluded such as cervical cancer, cervical infection, molar pregnancy, and cervical dysplasia. Often there is no cause found for the bleeding on pelvic ultrasound and all is well with the pregnancy. This often makes for high levels of stress and anxiety for women and their families. Medline lists several types of miscarriages:

- *Blighted ovum/anembryonic pregnancy:* A gestational sac develops, while the embryonic part of the pregnancy is either absent or stops growing very early.
- *Complete miscarriage:* All products of conception have been expelled.
- *Inevitable miscarriage:* The cervix has dilated open, but the fetus has yet to be expelled, usually progressing to a complete miscarriage. Symptoms can include heavy vaginal bleeding with clots, or occasionally very excessive bleeding. Excessive vaginal bleeding is considered around a soaked peri pad change every two hours, which can rapidly cause haemodynamic instability and cervical shock if products of conception become trapped in the cervix. Early warnings signs are heavy bleeding with clots, complaining of feeling light headed or dizzy, slight increase in heart rate and then sudden drop in blood pressure. As this can occur suddenly, nursing staff closely observe any women with heavy vaginal bleeding and insert intravenous access and organise immediate assessment by medical staff or the NP. An immediate vaginal inspection will be required to remove any products of conception that may have become lodged in the cervical opening, to prevent a vagal response and cervical shock. Ergometrine 250 units intramuscular is then given to encourage cervical/uterine contractions to assist in slowing the vaginal bleeding. Urgent surgical dilation and curette is often preformed (The Royal Women's Hospital 2008).
- *Incomplete miscarriage:* Not all of the pregnancy tissue has been passed from the uterus.
- *Missed miscarriage:* The embryo or fetus has died, often without any symptoms occurring. Also referred to as delayed or silent/missed miscarriage.
- *Ectopic pregnancy:* The gestational sac develops in any area other than the uterus, such as ovary/cervix/abdomen. Not always obvious in very early pregnancy. May present with empty uterus but rising BHCG. All patients with empty uterus found on pelvic ultrasound should be followed up closely with serial BHCG level to exclude a developing ectopic pregnancy.

The following two terms consider wider complications or implications of a miscarriage:

- *Septic abortion:* Tissue from a missed or incomplete miscarriage becomes infected. The infection of the womb carries risk of spreading infection and requires prompt removal and treatment with antibiotics.
- *Recurrent miscarriage:* The Royal College of Obstetricians and Gynecologists state that recurrent miscarriage is considered when three consecutive miscarriages occur in a row and if the proportion of pregnancies ending in miscarriage is 15%, then the probability of two consecutive miscarriages is 2.25% and the probability of three consecutive miscarriages is 0.34%. The occurrence of recurrent pregnancy loss is 1%. A large majority (85%) of women who have had two miscarriages will conceive and carry normally. Older maternal/paternal age can play a role in increasing the chances of miscarriage (Heffner 2004; Nybo Andersen et al 2000).

UNDERSTANDING THE PYSCHOLOGICAL IMPACT OF MISCARRIAGE

Lok et al (2010) found "that though physical recovery from a miscarriage occurs quickly, psychological recovery for parents generally can take a long time." A pregnancy loss at five to six weeks pregnancy may be just as hard to deal with as a loss at 40 weeks, a point which is often forgotten by staff while they focus on the physical aspect of miscarriage. Peng et al (2006) suggests giving the common reasons for miscarriage such as genetic problems or problems with the placenta or umbilical cord often helps to ease a woman's feeling of guilt for the pregnancy

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loss. Lok et al (2010) report "People differ greatly in this regard: some are able to move on after a few months, but others take more than a year, others may feel relief or other less negative emotions. Studies on this issues revealed half (55%) of the miscarrying women presented with significant psychological distress immediately, 25% at three months; 18% at six months, and 11% at one year after miscarriage."
Miscarriage is an unusual form of death as there is no dying process and often no body to mourn.

Offering Emotional Support

The NP role now not only counsels families on miscarriage, but also extends to educating medical and nursing staff on the emotional impact. The need to be sensitive in the choice of language, and supplement counselling with both written and verbal information is emphasised. Inappropriate or insensitive responses from the medical profession can add to the distress and trauma experienced. Griebal et al (2005) note that practitioners need to be aware that even very early pregnancy loss may cause a grief response as severe and intense as the grief response in families to an adult death. Cooke et al (2006) reported "that women and families often feel distressed, overwhelmed and confused and have many unanswered questions". Health care professionals should therefore allow patients a voice, and need to follow the patient's lead and engage in communication that acknowledges the person's feelings. Strategies on how to deal with these feelings of guilt, the grief process and how to cope with family and friends are provided. Studies have shown that providing this counseling may help to facilitate the grief response that can occur after this event.

Griebal et al (2005) summarise what to say:

- Acknowledge and attempt to dispel guilt.
- Always say "I am sorry for your loss".
- Acknowledge and legitimise grief.
- Counsel on how to tell family and friends and other children of the miscarriage.
- Discuss normal and abnormal grief responses with both partners.
- Give written information on early pregnancy loss.
- Reassure the women that she has not caused the event by heavy lifting, working, not resting.
- Reassure about the future.
- Advise on the 24 hour telephone counselling service through the SANDS organisation, as well as the availability of grief counselling through family GP referral to a registered psychologist.
- Offer strategies to increase chances of future pregnancy ie. Folic acid supplements, lifestyle choice (smoking), weight loss.
- Assess the level of grief and adjust counselling accordingly.

Swanson (1999) notes that patients who are offered treatment choices in the management of their miscarriage have better psychological outcomes. The Royal Women's Hospital (2008) cite these choices as:

- Expectant management for incomplete miscarriage: Nanda et al (2006) state that 65–80% of the products of conception will pass naturally within two to six weeks. This path avoids the side effects and complications possible from medications and surgery.
- *Complete miscarriage:* No treatment except serial BHCG levels to rule out a rare concurrent ectopic pregnancy.
- *Medical:* usually consists of using prostaglandin-based medication called Misoprostol to encourage completion of the miscarriage. About 95% of cases treated with Misoprostol will complete within a few days. Side effects of this treatment are pain, nausea and vomiting.
- *Surgical:* using vacuum aspiration (D&C) – the fastest way to complete the miscarriage. It shortens the duration and heaviness of bleeding, and avoids the physical pain associated with the miscarriage. D&C, however, has a slightly higher risk of complications, including risk of injury to the cervix (eg. cervical incompetence) perforation of the uterus, and potential scarring of the intrauterine lining known as Asherman's syndrome. It is often the treatment of choice in silent miscarriage and blighted ovum (Demetroulis 2001).

This protocol allows the NP to assess the need for admission, discharge, organise an operation date, time, or admit to hospital as required in collaboration with the O&G team. Prior to this process, patients waited many hours for assessment by a gynecological registrar. In late 2009, a decline in ultrasound availability occurred at Sunshine Hospital due to staffing issues. This caused long waits to occur again for women waiting for pelvic ultrasound. In response to this, the NP completed a short course in pelvic ultrasound. An O&G consultant supervised the NP with all pelvic ultrasounds until the NP was deemed competent. This now allows the NP to not only take a medical history and examination and organise diagnostic or prescribe Anti D for Rhesus negative women, but also to perform pelvic ultrasounds to assess the location and, viability of the pregnancy. Counselling is offered to the patient and her family on the outcome and health referrals made as required (Webster-Bain et al 2005).

In 2010, in collaboration with

Western Health Medical Education unit and the Victorian Department of Human Services, a DVD was developed based on the NPs Masters degree research of miscarriage titled "Precious Ten". The title reflects that it can take as little as 10 minutes to counsel and can make a difference to patients emotional outcomes. This DVD teaches medical and nursing staff clinical management, with particular emphasis on psychosocial aspects.

Summary

The NP project has been successful in a variety of ways. Feedback through a patient satisfaction survey was very positive and showed that patients appreciated and responded well to the NP model of care (Scully 2006). According to the hospital patient advocate, Ruth Reid (March 2006), this has led to not only a reduction in waiting and treatment times for this cohort of patients, but also to complete elimination in complaints when the NP service is running. Medical staff support the service and find it a sensible use of nursing and medical resources. This mirrors the overseas experience of NPs who offer primary health care in EDs. Finally, through successful collaboration between the nurse practitioner, supportive emergency physicians and the O&G team, this service is now a permanent part of Sunshine Hospital.

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DISCUSSION PAPER

Miscarriage in Australia: The geographical inequity of healthcare services

Susan Edwards, MNSc(NP), PhD Candidate [a,*]
Melanie Birks, PhD [b]
Ysanne Chapman, PhD [a]
Karen Yates, PhD, MN, RN, RM [b]

[a] *College of Healthcare Sciences, James Cook University, Australia*
[b] *Centre for Nursing and Midwifery Research, College of Healthcare Sciences, James Cook University, Australia*

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Vaginal bleeding

Summary Complications in early pregnancy can lead to pregnancy loss (miscarriage) and ultimately the presentation of a woman to their local emergency department (ED). Miscarriage is a common occurrence, with one in six pregnancies resulting in pregnancy loss.[1] Unfortunately medical and nursing care does not change the likelihood of a threatened miscarriage progressing to pregnancy loss; this is a highly emotional and stressful time for the woman and her family. Research has shown that women have often felt dissatisfied with the care provided in the emergency department and have reported lower levels of satisfaction (Geller et al., 2010[2], Indig et al., 2011[3]). This paper explores the challenges in the provision of emergency department healthcare for women presenting to metropolitan EDs and compares these to those faced by women who present to non-metropolitan EDs with early pregnancy complications.

Introduction

Pregnancy for most women is a time of excitement and joy. There is great anticipation about what the future may hold and for the new life that is growing inside them. Many women who experience early pregnancy complications often experience such symptoms as pain and bleeding and attend their local emergency department. It is reasonable to assume that this cohort would include women

* Corresponding author at: Central Queensland University, Boundary Road, Mackay 4740, Australia. Tel.: +61 49 407 829.
E-mail addresses: sue.edwards@my.jcu.edu.au, s.l.edwards@cqu.edu.au (S. Edwards), melanie.birks@jcu.edu.au (M. Birks), ysannechapman@hotmail.com (Y. Chapman), karen.yates@jcu.edu.au (K. Yates).

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who live in rural, regional and remote areas of Australia. Women who seek emergency care often consider or anticipate the possible loss of their pregnancy when presenting for urgent medical care. Vaginal bleeding occurs in about 25% of all pregnancies with roughly one in six (15—20%) ending in miscarriage.[1] It is anticipated that 147,000 Australian women will lose a pregnancy each year and many of these women will present to their local emergency department for medical and nursing care.[1,4,5] Unfortunately, research has shown that women have often felt dissatisfied with the care provided in the emergency department and have reported lower levels of satisfaction.[4,6—10] Drawing on contemporary literature, this paper presents a discussion of the specific challenges that relate to the provision of healthcare services for women who present to non-metropolitan EDs with possible early miscarriage.

Presentation of bleeding in early pregnancy

Women who are pregnant and experiencing early pregnancy complications often present for care to the emergency department in order to receive prompt assessment, treatment and support. The possibility of miscarrying is an overwhelming event for a woman and her family; even though miscarriage can be a common early pregnancy complication, it is often described as a normal occurrence for women who are of reproductive age.[11] Despite this frequency of miscarriage, it is an experience that is often minimised not only by health professionals but also the community itself.[12] Women often experience both physical and psychological effects such as depression, anxiety, grief, self-blame and anger.[6,12] Also, between 25% and 50% of women whose presentation ends in a miscarriage often experienced posttraumatic stress symptoms.[6] Medical and nursing care is known not to change the likelihood of the outcome of miscarriage; however the experience for the woman is nonetheless highly emotive and stressful.[3,11] Despite the frequency of miscarriage, there is no universal response to pregnancy loss; the emotional response may be brief for some and prolonged for others.[6] Research by Warner, Saxton, Indig[13] found that women who presented to the emergency department with concerns regarding their pregnancy often become distressed when the care they sought was not provided. The possibility of pregnancy loss is not a trivial experience for women.[7] Sejourne, Callahan and Chabrol[7] found that being treated sensitively and compassionately when being seen made a difference to women's perception of the care they received.

A woman's loss or possible loss of a pregnancy is particularly difficult to endure especially when the woman has envisioned an entire lifetime of their baby from the time of confirmation of the pregnancy. Van Aerde[14] explains that the loss experienced by women is usually multifactorial and represents multiples losses for each of the women it touches which includes the loss of a significant person, the loss of some aspect of self, the loss of an external object, the loss of a stage of life, the loss of a dream and the loss of creation. Unfortunately, in many emergency departments, nurses often view the care and needs of women experiencing a miscarriage as less of a priority in comparison to the many other patients in the emergency department who may be acutely ill.[6,8—10] Gergett and Gillen[6] found there is an increasing recognition of the distress that is experienced by women which is associated and exacerbated by the unsatisfactory aspects of professional care. Adolfsson and Larrson[15] reported that women often described a sense of abandonment and loneliness when speaking of the care they were provided by staff in the ED. The Australian media has reported on a number of events that highlight the inadequate emergency department care of women who presented with bleeding in early pregnancy and the limited support they were given.[5,6,16] One highly reported incident occurred at a metropolitan tertiary referral emergency department in 2009 when a woman miscarried in the waiting room toilet.[5] The incident opened the door to further complaints being made across Australia for example in Queensland in 2007[16] and again in New South Wales in 2009.[5] The incident led to an inquiry that was a key case in highlighting a number of deficiencies in the provision of care of women who present with bleeding in early pregnancy.

The deficiencies that were highlighted in 2007 are unfortunately still considered challenges that affect contemporary ED practice in both metropolitan and non-metropolitan areas of Australia; including medical and nursing staff shortages, bed block related to bed shortages and limitations in professional practice regarding communication skills.[6,13,17—19] It is important to note that non-metropolitan EDs face further disparities related to being located in regional, rural and remote areas of Australia. It is these disparities that that can further lower the levels of satisfaction for women who present with possible miscarriage.

Research has found that women in general still report lower levels of satisfaction in regards to perceived negative attitudes from healthcare workers, insufficient information and education, limited follow up care and minimal or no focus on their emotional well-being.[2,20] Leon (1998 as cited in Ref. 14) suggests that women never forget the understanding, respect, and genuine warmth they received from caregivers when experiencing a miscarriage. Higher levels of patient satisfaction were reported among women who were provided support, education and were included in the decision making process regarding treatment options.[2,13,21] Women require not only clinical treatment but also information and education on the possible loss of their pregnancy in a manner that is sensitive and provided in an environment that is private and supportive.[22] In order to be able to provide care that increases the satisfaction of each woman that presents to the ED with signs and symptoms of possible miscarriage, there needs to be an appropriately experienced and skilled workforce that is able to provide professional care that is safe and have policies that are community specific.[23] The delivery of quality ED healthcare has become increasingly complex and challenging throughout Australia especially in non-metropolitan areas of Australia in which complexities are magnified by the additional unique characteristics of being regional, rural and remote. One of the main challenges in providing equity in Australian healthcare is access to services in these locations.

The inequity of geography

Australia has a land mass of 7,686,850 km and has approximately 23 million people who mostly live in concentrated

metropolitan areas along the coastal fringe of eastern Australian.[24–26] According to the Australian Bureau of Statistics[25] 31.5% of the Australian population live in rural, regional and remote areas of Australia. Of these, approximately 45% live in regional cities with surrounding agricultural areas and about 10% live in remote and very remote areas.[27] Many people who are living in rural, regional and remote areas of Australia experience challenges in accessing healthcare and they include geographic isolation, availability of local health resources and, the recruitment and retention of health staff.[28] These factors contribute to a maldistribution of staffing in these communities and lower accessibility to healthcare services for people living in rural, regional and remote areas relative to metropolitan areas.[23,29] Moreover, the further that people live away from metropolitan areas, the poorer their health tends to be and the less access they have to healthcare services.[23,30] In non-metropolitan areas, services tend to be smaller, have a broader range, less infrastructure and less locally available services to provide medical, nursing, midwifery and allied healthcare to a more dispersed population.[31]

Midwives and nurses form 50% of the health workforce nationally, although research by Health Workforce Australia[32] shows that there is evidence that the nursing workforce in remote areas is dropping significantly. As a result, rural and remote communities throughout Australia face significant disadvantages in attaining and receiving the healthcare they require, thus precipitating poorer health outcomes. This inequality is evident when exploring the management of women who present with bleeding in early pregnancy.[33,34] People living in rural, regional and remote areas often recognise there is a need to travel to access specialist services such as Obstetrics and Gynaecology services; they may therefore prefer to present to their local emergency department for care rather than being first seen by their local GP.[23] Yet despite the many rural and remote health service initiatives over recent years, the healthcare needs of people living in rural, regional and remote communities are still not equal to that of their metropolitan counterparts.[35,36]

The experience of women in rural, regional and remote areas

The availability of healthcare services in rural, regional and remotes centres impacts greatly on women who experience bleeding in early pregnancy with the possibility of miscarriage. The Australian Institute for Health and Welfare's report, 'Australia's Health 2014', has identified that there are several areas of concern in respect of healthcare in rural, regional and remotes areas of Australia, in particular a higher incidence of poor antenatal and postnatal healthcare.[37] Women who present to rural, regional and remote emergency departments for vaginal bleeding and possible miscarriage are attending the emergency department as they have an actual or perceived concern regarding their pregnancy.[4,18] Women who also live in rural and remote areas often felt they had to travel to the closest metropolitan hospital to gain access to healthcare after hours or over the weekend.[27,38–40] In general, 28% of women who present to their emergency department for care attend over the weekend and 37% present after hours.[13]

Additionally, rural, regional and remote services are unable to provide extended services such as Early Pregnancy Assessment Services (EPAS) due to the lack of availability of specialist staff.[18,42] Women who require these services are usually referred to the closet metropolitan hospital so that access can be obtained. EPAS are emergency department based early pregnancy assessment clinics or services aimed at co-ordinating assessment, scanning, diagnosis and management planning for women who experience pain and or bleeding in early pregnancy.[43] The basic premise of the service is to improve the timeliness of care delivery, decreasing the length of stay in the emergency department and providing access to psychosocial support for women and their partners when presenting to the emergency department with pain and/or bleeding under 20 weeks gestation.[44] This model of care utilises a multidisciplinary approach which includes care provided by emergency doctors, nurses, social workers, obstetrics and gynaecology doctors and radiology.[44] This approach has been established around the world including the United Kingdom, Canada and New Zealand where it has been reported to result in positive patient and health service outcomes.[42] In general, for this model of care to be effective the specialist staff of the multidisciplinary team need to be available to provide such a service. Unfortunately, the availability of specialist staff is known to be three to four times lower in rural, regional and remote centres than in metropolitan centres.[38,39] This maldistribution applies not only to specialist medical staff but also to nursing and allied health professionals.[38] Nevertheless, modified early pregnancy services can still be beneficial with appropriately skilled nursing staff who have support provided by specialist staff via services such as telehealth.[22]

Telehealth services have been shown to be one way of improving access to healthcare for patients living in non-metropolitan areas of Australia.[45,46] The adoption of telehealth has increased more recently as a result of challenges related to funding rural and remote services, shortages of health workforce and the decreasing cost of and advances in technology.[45,47] A review by Moffat and Eley[45] has found that the benefits for Australians working and living in rural and remote locations include improved access, quality of care and professional development although telehealth has been identified as being under-utilised in Australia. This underuse may be related to the challenges associated with the provision of telehealth although it is predicted that this may change with the roll-out of broadband internet services across Australia.[45,47] Increased availability of telehealth will allow women living in rural and remote areas of Australia to receive services such as counselling and other specialist services that can be delivered by this mechanism.[45,47]

To compound these issues, specialist services, including diagnostic imaging services, are limited in regional, rural and remote Australia.[48,49] Access and the availability of diagnostic services is a key issue for women who are possibly experiencing the loss of a pregnancy. Ultrasound according to Knez, Day and Jurkovic[50] is used to determine the location of the pregnancy, its viability and can also offer reassurance for the woman and the healthcare provider. This reassurance can mean that the woman can remain in her

community and that she does not need to travel to a larger hospital for further assessment and treatment.[48] Women living in non-metropolitans areas of Australia who need access to diagnostic imaging face unique challenges such as time, distance and associated financial burden that is not faced by women living in metropolitan areas of Australia.[48] Accessibility is limited due to many factors including availability of qualified staff, the need to travel to receive services (distance being a major issue with some women having to travel at least six hours via unsealed roads), and the financial burden associated with travel (loss of income and no access to public transport).[48,50,51]

To reduce limitations in accessibility, the use of additional advanced practice nursing staff has been suggested by Crilly, Wendt and Beatson.[52] In such an approach, the nurse or nurse practitioner is able to develop or enhance their skills to care for women with possible miscarriage. These authors suggest that such advanced skills would include the ability to perform vaginal and speculum examinations, administer Anti-D and to perform ultrasound.[52] Nurse practitioners are in a prime position when working in non-metropolitan EDs within Australia to incorporate advanced skills such as sonography into their everyday practice.[53] Knowledge and skills in sonography can serve to enhance the success of ED care for women in regional, rural and remote settings by expediting investigations that could rule out ectopic pregnancy, thus decreasing the woman's anxiety and the need to travel.[53] A Nurse Practitioner model of care that incorporated the use of sonography was successfully implemented in Australia in 2011.[54] This model of care was introduced to address reduction in sonographers and showed that with additional training, the nurse practitioner was able improve the care being provided to women who presented with possible miscarriage.[54] The model of care incorporated the assessment of women including pelvic ultrasound, the provision of Anti D, counselling and referral to specialist services and admission (if needed).[54] While this model was introduced in a metropolitan ED, with the current availability of sonography courses for Nurse Practitioners, the possibility for such a service to be provided in regional, rural and remote areas of Australia is highly achievable.

Unfortunately, the cost related to rural and remote healthcare for essential services is two to ten times higher than the cost of healthcare services for Australians living in metropolitan areas.[48] Creative and innovative practice is required to enable healthcare staff to provide individualised care that is culturally specific for all those living in non-metropolitan areas of Australia.[51,55] The inequity of healthcare between metropolitan and non-metropolitan areas of Australia has been acknowledged for many years and it is these differences that affect the provision of services resulting in higher costs, limited infrastructure and limitations in the number of healthcare staff.[28,35,39]

It is important to highlight that not all regional, rural and remote contexts are the same and acknowledgement of this needs to be included in the planning of healthcare services for these communities.[51] There is no one-single approach for the provision of healthcare in regional, rural and remote Australian communities. The provision of healthcare needs to be community-specific and built on services that are locally available.[23,51] Importantly, policies and procedures will not on their own make the changes that are required to improve the care of women with first trimester bleeding in pregnancy (threatened miscarriage).[23,51] Local nursing staff need to ensure that they are sensitive to the needs of the woman and her family while in the ED; including the consideration of their emotional wellbeing.[56] In addition, these women and their families need to be provided with education and literature that is community specific and that informs them of what they may or may not experience upon discharge and who to contact if they need further support.[57,58]

Recommendations

Drawn from the preceding discussion, the following recommendations are made to address the challenge of providing quality healthcare for women presenting to rural, regional and remote emergency departments with bleeding in early pregnancy:

- The expansion of current healthcare roles for nurses, e.g. increasing the number of Nurse Practitioner positions with sonography skills.
- The provision of funding and relief staff to allow rural and remote nurses to gain advanced skills.
- Innovative adaption of the EPAS that can be provided with locally available resources, e.g. Nurse Practitioners and midwives.
- Increasing the utilisation of technologies such as telehealth.
- The provision of follow-up care for women to review their physical and emotional health post miscarriage.
- Establishment of an assigned space in the ED to meet the privacy, religious and cultural needs of women presenting with early pregnancy loss.
- Acknowledgement and acceptance of creative ideas that are being proposed by staff working in these locations.
- Provision of various modes of education including pamphlets, videos, and booklets for women and their family that contains culturally and community specific information in regards to miscarriage.

Finally, there is minimal literature exploring the attitudes of midwives and nurses towards miscarriage. Research is therefore required to explore how staff can best meet the emotional needs of women in non-metropolitan EDs. Research has been undertaken that investigates services provided to women who present to metropolitan health services.[6,10,41,59] There is now a need, however, to address the dearth of studies exploring these services and the staff that provide them in regional, rural and remote areas of Australia.

Conclusion

There are many aspects that contribute to the provision of optimal patient care for women experiencing first trimester bleeding when presenting to local rural, regional and remote emergency departments. Factors including access, geographic isolation, quality and shortage of healthcare providers and the availability of healthcare services are all key issues. This paper has identified the major

challenges facing rural, regional and remote health services. Research is needed to assess the impact of these challenges and to develop strategies to address them that are innovative and locally supported. Women in non-metropolitan locations have the right to access services equitable to their metropolitan counterparts, particularly when experiencing the trauma and grief associated with loss in the first trimester of pregnancy.

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