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The forgotten fathers in obstetric care

This editorial is about cisgender heterosexual men who are biologically fathering their offspring. The needs of gender-diverse childbearing individuals, non-birthing parents and adoptive fathers are equally essential and acknowledged; however, they are beyond the focus of this article.

Men play a crucial health role before conception, during pregnancy, and postpartum; therefore, integrating men's health into obstetric services is critical.¹ Preconception care should focus on women and include male partners to identify and modify biochemical, behavioural, and social risk factors. Improved overall health enhances men's biological and genetic contributions to conception with improved sperm quality. Screening of men for nutritional, medical, mental health and sexual health concerns, including risk factors for domestic violence, are essential preventive health steps before fathering a child.¹

Men's preconception health is critical for the programming of fetal development and can influence the health of future generations through polygenic inheritance. The Paternal Origins of Health and Disease is a novel concept highlighting the paternal influence on offspring's health through DNA damage, mutations and environmentally induced functional changes in the genome that pass through epigenetic windows during sperm development.² Advanced paternal age (>45 years) is associated with decreased fertility, congenital anomalies, increased rates of spontaneous miscarriage and adverse pregnancy outcomes such as low birth weight, preterm birth, and late stillbirth.²⁻⁴ Paternal exposure to environmental and occupational factors in the preconception period, such as heat, radiation, and endocrine disruptors, is associated with congenital anomalies (anencephaly, heart defects), malignancies (astrocytoma, astroglial brain tumours) and developmental concerns.⁵⁻⁸ Although male exposure is more consistently associated with diminished couple fecundity, assessing both partners is vital to quantify the exposure to toxins such as heavy metals, organic pollutants, environmental phenols, and phthalates.⁹ Prescription drugs negatively influence semen quality by affecting sperm morphology and motility.¹ Smoking results in a dose-dependent increase in sperm mutations, causing infertility, aneuploidy, and structural defects.¹⁰ Paternal obesity increases the risk of impaired spermatogenesis, causing subfertility, preterm birth, and decreased pregnancy success.¹¹ Lifestyle stressors induce germ cell epigenetic reprogramming, impacting the offspring's hypothalamic-pituitary axis stress regulation. The risk of offspring behavioural dysfunction and neuropsychiatric disease is increased by paternal stress in pregnancy and the postnatal period.¹²

Fathers also have a critical contributory role in pregnancy-related medical complications such as preeclampsia. The male partner has been classified as the dangerous partner due to passing on genes contributing to adverse pregnancy outcomes.¹³ Men who fathered a previous pregnancy complicated by preeclampsia are twice as likely to contribute to preeclampsia in a pregnancy with another woman.¹³ Increased inter-pregnancy interval is a higher risk factor for preeclampsia than a pregnancy fathered by a new partner.¹⁴ Epidemiological data suggest that advanced paternal age doubles the risk of preeclampsia.¹⁵ Paternal family history of genetic thrombophilia, hypertension, and cardiovascular disease suggests that passing genes through the fetoplacental unit via the father is associated with adverse pregnancy outcomes.¹⁶ Viruses such as cytomegalovirus and herpes, bacterial, fungal, and parasitic infections increase the risk of pre-eclampsia.¹³ Despite this evidence, there is a significant gap in the level of counselling provided to both male and female partners on current and future pregnancy risks. There is also a lack of a systematic approach to identifying pregnancies fathered by a higher-risk partner.

Historically, childbirth was primarily a female-only matter.¹⁷ However, the presence of fathers in the childbirth suite or operating theatre has now become mainstream Western obstetric practice.¹⁸ Mothers perceive paternal involvement during birth contributes to positive outcomes, including reduced pain and anxiety, decreased emotional distress and greater satisfaction with their birth experience.¹⁹ Despite this, there is limited information about fathers' views, intentions and needs leading up to childbirth in the Australian psychosocial context. In a study conducted at an outer metropolitan hospital in Queensland, 99% of fathers indicated they intended to attend the birth.²⁰ Most fathers felt well supported, although potential improvements include planning for future visits, providing information about childbirth, mental health support, better clinician communication, increased involvement in their partner's care, the opportunity to ask questions about childbirth and more frequent clinic visits.²⁰

Fathers who participate in antenatal classes benefit from a positive and satisfying experience.²¹ However, a mixed-methods Australian study highlighted that 83% of expectant fathers report a lack of engagement with antenatal care due to time pressures, lack of knowledge, anxiety and barriers to attendance.²² First-time fathers are much more likely to feel actively involved and attend antenatal classes than experienced fathers.²⁰ Some perceived barriers to attendance include a lack of knowledge of the service, work or other commitments, time constraints with other children, language or cultural factors, gendered notions, lack of interest,

embarrassment, feeling uninvited and ignored and perceiving the information as insufficient or unhelpful.²¹⁻²³ Recent Australian literature has highlighted the positive effect of male peer supporters facilitating fathers-only, information-based antenatal groups.²⁴ Increasing awareness and refining the content of antenatal classes to ensure they are father-inclusive would contribute to better preparedness in fathers.

Even a normal birth may be perceived as traumatic, and the stress of a complicated pregnancy and childbirth may be extreme, with long-term consequences.²⁵⁻²⁷ Traumatic events during pregnancy and childbirth are everyday events.²⁸ Unexpected complications during pregnancy and childbirth contribute to significant psychological trauma in fathers, resulting in grief, guilt, shame, and substantial ongoing distress with a potentially increased risk of post-traumatic stress disorder.^{27,29} Fathers' experiences and coping strategies are influenced by their background history, vulnerabilities such as pre-existing mental health conditions, traumatic life events and unpreparedness for the birth.²⁷ Healthcare providers must be conscious of providing counselling that considers men's needs.³⁰ Evidence-based guidelines on caring for families after a stillbirth recommend developing and implementing meaningful, non-pharmacological care strategies, including appropriate training for healthcare practitioners.³¹ Consumer codesigned and tailored strategies must be instituted to assist fathers' psychological well-being, especially after exposure to traumatic circumstances.

The transition to fatherhood can be confusing and stressful for new fathers due to the demands of reconfiguring roles and identities.^{32,33} Several studies have identified that fathers wish to be included in perinatal healthcare and be engaged by health professionals about their health and well-being.^{20,27,34,35} Although there is ample literature on paternal interventions that positively impact maternal-child outcomes, the postpartum role of the father is often ignored as an essential contributory factor in maternal decision-making.¹ Routine paternal screening and interventions can encourage positive perinatal care choices, health-seeking behaviours, and supportive maternal health decisions (eg reduced smoking and improved breastfeeding). Postpartum educational programs are effective when they involve both partners.

Optimal paternal mental health is crucial for buffering the effect of maternal stress on child development and paternal-infant attachment, contributing to a positive childbirth experience and an easier transition to fatherhood.^{36,37} All these factors strongly advocate for routine paternal mental health screening. The literature examining the prevalence of paternal perinatal depression (PPD) is confounded by varying diagnostic criteria, cut-offs, assessment time points, populations, and inherent clinical heterogeneity. A 2010 meta-analysis reported the overall prevalence of PPD to be 10% (95% CI = 8.5-12.7%), with a more recent meta-analysis evaluating a PPD prevalence of 8.4% (95% CI = 7.2-9.6%).^{38,39} A report published in 2019 highlights that PPD affects approximately

30 000 fathers and partners in Australia and is a significant public health challenge with enormous intergenerational and economic ramifications.⁴⁰ All these factors strongly advocate for routine paternal mental health screening.

Obstetric care providers must also be cognisant of the sensitive and culturally appropriate care and support needs of Aboriginal and Torres Strait Islander Peoples and those from culturally and linguistically diverse backgrounds. These communities form more than a quarter of the Australian population and suffer from disparities in health care due to cultural differences, racism and a lack of a culturally competent healthcare system.⁴¹ The sparse literature on Australian First Nations men in the childbearing context indicates that maternal and child health services have low cultural sensitivity paralleled with low health literacy in First Nations fathers.⁴² The lack of involvement of male Indigenous Health Workers in maternity services may be due to cultural factors such as perceptions of childbirth being 'women's business'. Future planning of obstetric healthcare systems needs to consider the importance of gender diversity, male peer supporters and cultural competence in healthcare services.

As a nation, it is imperative to actively promote innovative multidisciplinary alliances, collaborations, and focused research developing national mandates and policies impacting health equity at institutional, state, and federal levels. Sustainable healthcare systems and policy frameworks are essential to identify and pre-emptively support all maternity care users. A paradigm shift is urgently needed to broaden the scope of obstetric services to be inclusive of fathers and partners. Men's preconception care needs must be actively identified and promoted. Based on health equity and social justice principles, competent inbuilt support systems in healthcare services must respond to fathers' and partners' care and support needs during pregnancy, childbirth, and postpartum. Obstetric services must consider a shift toward a community-academic partnership consumer-codesigned model of care. These partnerships are essential to listen, acknowledge, and learn from consumers' lived experiences to ensure their needs are appropriately identified and addressed. Furthermore, health services must develop, test, implement, and evaluate solutions to address health inequities in partnership with consumers. This is essential to ensure the best health outcomes for future generations.

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