Midwifery ∎ (∎∎∎∎) ∎∎∎–∎∎∎

Contents lists available at ScienceDirect

Midwifery

journal homepage: www.elsevier.com/midw

Reconceptualising risk: Perceptions of risk in rural and remote maternity service planning

Lesley Barclay, BA, MEd, PhD (Professor)[a,*], Jude Kornelsen, PhD (Associate Professor)[b], Jo Longman, BSc (Hons), MPH, PhD (Research Fellow)[a], Sarah Robin, BA (Hons), MAAPD (Research Officer)[a], Sue Kruske, BHlthSc (Hons), PhD (Professor)[c,d], Sue Kildea, BHlthSc (Hons), PhD (Professor)[c,e], Jennifer Pilcher, RN, RM, BN, MPH (A/Manager)[a], Tanya Martin, RN, RM, MPhil (Associate Lecturer)[f], Stefan Grzybowski, MD, CCFP, FCFP, MCISc (Professor)[b], Deborah Donoghue, PhD (Research Fellow)[a], Margaret Rolfe, MStat, PhD (Biostatistician)[a], Geoff Morgan, BSc, PhD (Associate Professor)[a]

[a] University Centre for Rural Health, University of Sydney, PO Box 3074, Lismore, NSW 2480, Australia
[b] Centre for Rural Health Research, Department of Family Practice, 3rd Floor David Strangway Building, 5950 University Boulevard, Vancouver, British Columbia, Canada V6T 1Z3
[c] School of Nursing, Midwifery and Social Work, The University of Queensland, Level 3, Chamberlain Building, St Lucia, QLD 4072, Australia
[d] Institute for Urban Indigenous Health, PO Box 5638, West End, QLD 4006, Australia
[e] Mater Research Institute, The University of Queensland and Women's Health and Newborn Services (Maternity), Mater Health Service, Level 1, Aubigny Place, Raymond Terrace, South Brisbane, QLD 4101, Australia
[f] Sydney Nursing School, University of Sydney, NSW 2006, Australia

ARTICLE INFO

Article history:
Received 15 March 2016
Received in revised form
12 April 2016
Accepted 15 April 2016

Keywords:
Risk
Risk assessment
Rural health
Health
Health planning
Birthing centres

ABSTRACT

Objective: to explore perceptions and examples of risk related to pregnancy and childbirth in rural and remote Australia and how these influence the planning of maternity services.
Design: data collection in this qualitative component of a mixed methods study included 88 semi-structured individual and group interviews ($n=102$), three focus groups ($n=22$) and one group information session ($n=17$). Researchers identified two categories of risk for exploration: health services risk (including clinical and corporate risks) and social risk (including cultural, emotional and financial risks). Data were aggregated and thematically analysed to identify perceptions and examples of risk related to each category.
Setting: fieldwork was conducted in four jurisdictions at nine sites in rural ($n=3$) and remote ($n=6$) Australia.
Participants: 117 health service employees and 24 consumers.
Measurements and findings: examples and perceptions relating to each category of risk were identified from the data. Most medical practitioners and health service managers perceived clinical risks related to rural birthing services without access to caesarean section. Consumer participants were more likely to emphasise social risks arising from a lack of local birthing services.
Key conclusions: our analysis demonstrated that the closure of services adds social risk, which exacerbates clinical risk. Analysis also highlighted that perceptions of clinical risk are privileged over social risk in decisions about rural and remote maternity service planning.
Implications for practice: a comprehensive analysis of risk that identifies how social and other forms of risk contribute to adverse clinical outcomes would benefit rural and remote people and their health

Abbreviations: PMUs, primary maternity units; GPs, general practitioners; CS, caesarean section

* Corresponding author.
E-mail addresses: lesley.barclay@sydney.edu.au (L. Barclay), jude.kornelsen@familymed.ubc.ca (J. Kornelsen), jo.longman@ucrh.edu.au (J. Longman), sarah.robin@ucrh.edu.au (S. Robin), sue.kruske@iuih.org.au (S. Kruske), sue.kildea@mater.uq.edu.au (S. Kildea), jpil2286@uni.sydney.edu.au (J. Pilcher), tanya.martin@sydney.edu.au (T. Martin), sgrzybow@mail.ubc.ca (S. Grzybowski), deborah.donoghue@ucrh.edu.au (D. Donoghue), margaret.rolfe@ucrh.edu.au (M. Rolfe), geoffrey.morgan@ucrh.edu.au (G. Morgan).

http://dx.doi.org/10.1016/j.midw.2016.04.007

services. Formal risk analyses should consider the risks associated with failure to provide birthing services in rural and remote communities as well as the risks of maintaining services.

Introduction

Australia has seen the closure of 41% ($n=368$) of maternity units over the past 20 years, of which a large number were in rural and remote areas (Kildea et al., 2015). Rural and remote healthcare delivery in Australia involves many challenges including the distribution of services across large distances, low population density, staff recruitment and retention difficulties, lack of transport and high cost of service delivery (AHMAC, 2012). Approximately 86% of the Australian continent is classified as remote and only 2.3% of the population lives in these areas (Australian Bureau of Statistics, 2008). A further 29% of the Australian population live outside major cities referred to here as rural (Australian Bureau of Statistics, 2008). Closure of rural services reflects a global trend towards regionalisation in healthcare that is evident in numerous developed nations including Canada, France and the United States (Zhao, 2007; Pilkington et al., 2008; Grzybowski et al., 2011).

A growing body of evidence demonstrates negative health outcomes and social consequences resulting from the loss of rural and remote birthing services. Lack of maternity care close to home is associated with increased feelings of stress, distress and isolation (Chamberlain and Barclay, 2000; Kornelsen et al., 2001; Kornelsen and Grzybowski, 2005; Kornelsen and Grzybowski, 2006; Zelek et al., 2007; Arnold et al., 2009; Hoang et al., 2011); less favourable clinical outcomes for mothers and infants (Nesbitt et al., 1990, Allen and Kamradt, 1991; Klein et al., 2002; Dietsch et al., 2008; Grzybowski et al., 2011; Brown and Dietsch, 2013); and increased financial costs to families (Monk et al., 2013). These impacts are exacerbated for Aboriginal Australians for whom'birthing on country' has important cultural and spiritual significance (Kruske et al., 2006; Ireland et al., 2011; Kildea et al., 2013). Closure of services has been significantly associated with an increase in infants being born before arrival to hospital (Kildea et al., 2015).

The Australian five year National Maternity Services Plan, endorsed in 2010, aims to increase quality maternity care for Australian women 'as close as possible to where they live' (Australian Health Ministers Advisory Council, 2011) and commitments have been made in the jurisdiction of Queensland to re-open at least three rural and remote maternity services (Fraser, 2012). However, despite a strong body of evidence and a supportive policy framework, the number of rural and remote birthing services across most Australian jurisdictions has continued to decline (Australian College of Midwives, 2015; Kildea et al., 2015).

The Australian Rural Birthing Index (ARBI) project has developed an evidence-based tool to assist in planning an appropriate level of maternity services for rural communities (Longman et al., 2015). The study involved mapping Australian maternity services delivering care to populations of 1000–25,000 (Longman et al., 2014); spatial analyses and mathematical modelling of these services. We also undertook collaborative group consultation involving expert advisors and key stakeholders ($n=23$) who validated and critiqued our findings across the project and at its completion; and qualitative fieldwork to investigate maternity services that had been closed, that appeared vulnerable or that seemed to be sustainable. It became clear that concepts of risk and their application are crucial to understanding the sustainability or closure of rural maternity services. The aim of this paper, therefore, is to describe fieldwork participants' perceptions of risk and how these influence the planning of rural and remote maternity services.

Methods

Design

This paper reports the analysis of exploratory qualitative data from fieldwork undertaken as part of the Australian Rural Birthing Index project.

Participants

A purposive sample of clinicians (doctors, midwives, nurses, Aboriginal health workers) and managers were selected with the aim to maximise variability in role, seniority, location and experience ($n=117$). Participants were identified through professional networks or nominated by people in leadership positions at jurisdictional or national level. Consumers were identified through consumer organisations, clinicians and managers and with the guidance of local Aboriginal elders where appropriate ($n=24$).

Setting

Fieldwork was conducted in four jurisdictions at nine sites in rural ($n=3$) and remote ($n=6$) Australia (see Table 1). We selected fieldwork sites that were identified in our quantitative work as having an inappropriate level of service for their population or identified by our nationally derived, multidisciplinary Expert Advisory Panel ($n=11$) as vulnerable, sustainable or recently closed. A matrix was developed to identify a sample of sites across a range of jurisdictions, sizes and service levels and sites were then selected in consultation with our Expert Advisory Panel and managers in the jurisdictions. In 4 fieldwork sites, data were also collected at the associated regional centre.

Ethics

Multisite ethics approval was obtained from Hunter New England Human Research Ethics Committee (12/06/20/4.08). Ethics and governance approval was also obtained for each jurisdiction. All research participants received a participant information sheet and signed a consent form.

Data collection

Data collection methods included 88 semi-structured individual and group interviews ($n=102$), 3 focus groups ($n=21$) and one group information session ($n=17$) over a twelve-month period in 2014. Two researchers conducted fieldwork at each site, collected informed consent for all interviews and prepared joint reports from each setting. The researchers included 3 midwifery researchers with experience in rural and remote settings (authors 1, 5 and 6), a rural GP researcher (author 10) and two social scientists (authors 2 and 3). An interview schedule guided data collection. Data included field notes, interview transcripts, meeting notes and reports. This constituted the'corpus of texts' (Lincoln

Please cite this article as: Barclay, L., et al., Reconceptualising risk: Perceptions of risk in rural and remote maternity service planning. Midwifery (2016), http://dx.doi.org/10.1016/j.midw.2016.04.007