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'Living the rural experience- preparation for practice'

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Title: 'Living the rural experience- preparation for practice': The future proofing of sustainable rural midwifery practice through midwifery education.

Abstract

Rural practice presents unique challenges and skill requirements for midwives. New Zealand and Scotland face similar challenges in sustaining a rural midwifery workforce.

This paper draws from an international multi-centre study exploring rural midwifery to focus on the education needs of student midwives within pre-registration midwifery programmes in order to determine appropriate preparation for rural practice.

The mixed-methods study was conducted with 222 midwives working in rural areas in New Zealand (n= 145) and Scotland (n=77). Midwives' views were gathered through an anonymous online survey and online discussion forums. Descriptive analysis was used for quantitative data and thematic analysis was conducted with qualitative data.

'Future proofing rural midwifery practice' using education was identified as the overarching central theme in ensuring the sustainability of rural midwives, with two associated principle themes emerging (i) 'preparation for rural practice' and (ii) 'living the experience and seeing the reality'.

The majority of participants agreed that pre-registration midwifery programmes should include a rural placement for students and rural-specific education with educational input from rural midwives. This study provides insight into how best to prepare midwives for rural practice within pre-registration midwifery education, in order to meet the needs of midwives and families in the rural context.

Key Words:

Midwifery education, pre-registration, rural placements, sustainability, rural practice.

Introduction

The provision of maternity care in rural areas needs to ensure that women and babies, irrespective of remoteness, have equitable access to health care and receive safe care.

This is now vital as research evidence suggests that pregnant women travelling long distances to access maternity care services are at a greater risk of experiencing adverse pregnancy outcomes (Gryzbowski et al., 2011). Providing and maintaining health services in rural areas can be challenging for all health professionals and the difficulties faced impact on attracting and retaining qualified maternity care staff (Kornelsen, 2009; Tucker et al., 2005). This is particularly pertinent in relation to the recruitment and retention of rural midwives as the primary care providers in the integrated maternity care systems in both New Zealand (NZ) and Scotland.

This paper draws from a larger, multi-centred study exploring 'rural midwifery' in NZ and Scotland. The study aimed to contribute to the knowledge base informing equitable and sustainable maternity care for rural communities. Whilst there is no internationally recognised definition of a 'rural' area (Statistics NZ, nd), the overarching term 'rural' within the context of this study encompasses the classification of rurality in both countries (Table 1). The purpose of this paper is to focus on the educational needs of pre-registration student midwives regarding preparation for rural practice to inform and support sustainable and equitable rural maternity care.

Classification	New Zealand (www.stats.govt.nz)	Scotland [settlements] (Scottish Government 2014)
Urban	<ol style="list-style-type: none"> 1. Main urban areas. 2. Smaller urban communities. 3. Independent urban communities. 	<ol style="list-style-type: none"> 1. Large Urban Areas ($\geq 125,000$ people). 2. Other Urban Areas (10,000 to 124,999 people). 3. Accessible Small Towns (3,000 to 9,999 people, and within a 30 min drive time of a Settlement of $\geq 10,000$).
Rural	<ol style="list-style-type: none"> 4. Rural areas with a high urban influence. 5. Rural areas with moderate urban influences. 6. Rural areas with low urban influence. 7. Highly rural/remote areas. 	<ol style="list-style-type: none"> 4. Remote Small Towns (3,000 to 9,999 people, and with a drive time of over 30 minutes to a Settlement of $\geq 10,000$). 5. Accessible Rural Areas ($< 3,000$ people, and within a 30 minute drive time of a Settlement of $\geq 10,000$). 6. Remote Rural Areas ($< 3,000$ people, and with a drive time of over 30 minutes of a Settlement of $\geq 10,000$).

Table 1. Classification of urban/rural areas in New Zealand and Scotland

Literature Review

It is critical for a midwife to be ready for each moment of practice regardless of geographic or practice setting (Calvert, 2015). However, the need to be ready to expect the unexpected and the expectancy of challenge form the lived reality of rural midwifery practice. These challenges include: providing a service to a small but widely dispersed population (National Health Committee (NHC), 2010); issues related to remuneration (Crowther, 2016); engaging in continuing education (Tucker et al., 2005); and the distance of interface services impacting on transfer decisions such as GP and tertiary facilities (Munro et al., 2013; Tucker et al., 2005). Furthermore, travel demands have a significant impact on time availability, which has a bearing on realistic caseload size (Redshaw et al., 2012). There is emergent evidence that rural midwives are more

relationally connected to their community, making their work more meaningful (Crowther and Smythe, 2016; Patterson, 2007) but this may encroach on the personal lives of the midwives (Crowther et al., 2017; Kyle and Aileone, 2013; Patterson, 2007). Further professional challenges facing rural midwives include: living and practising in relative isolation, often with lack of collegial support (Kyle and Aileone, 2013); limited access to information technology (Crowther, 2016; Ireland et al., 2007); access to funding for education; being released and replaced for professional development (Crowther, 2016; Kornelsen, 2009; Ireland et al., 2007; Hundley et al., 2007) and fewer opportunities to engage in essential inter-professional education (Ireland et al., 2007).

Specific skills identified for rural practice include: sound decision-making skills, especially in relation to transfer (Cheyne et al., 2012; Patterson et al., 2011); knowing when to call for back up (Kyle and Aileone, 2013; Tucker et al., 2005); and fostering an ability to work in collaboration with other midwives and health professionals (Miller et al., 2012; Harris et al., 2011; Hundley et al., 2007; Ireland et al., 2007). Our wider study found that rural midwives in NZ and Scotland develop what is described as an “attitude of courage and fortitude” (XXXX et al., 2017) as a unique skill set which underpins their practice. This description also refers to the fostering of skills such as preparedness and resourcefulness. In another publication, we further describe the significance of developing meaningful relationships to safeguard rural birth (XXXX et al., In press).

Literature indicates that recruitment, retention and preparation of professionals to work in rural areas can be enhanced through: improved financial incentives; stable rural group practices with appropriate facilities; healthcare teams; community support; increasing student numbers; and increasing rural specific training (Kyle and Aileone,

2013; Adair et al., 2012; Robertson, 2008; Steed, 2008; Hendry, 2003). Research in medicine also indicates that rural undergraduate placements have a lasting positive impact on students' attitudes towards rural practice (Williamson et al., 2012; Orpin and Gabriel, 2005), although it remains unclear whether this translates into increased numbers of graduates wanting to work and live in rural areas.

Midwifery in NZ and Scotland

As educational approaches tend to be embedded in the midwifery and maternity care system of each country, Table 2 provides an overview of midwifery in NZ and Scotland. Similarities between the countries include the population size, landscape and birth numbers (National Records of Scotland, 2016; Statistics New Zealand, 2016) and an approach to midwifery practice, education and regulation. This approach is based on midwives working in collaboration and partnership with women to provide individualised woman centred care (Scottish Government 2017, 2010; McAra-Couper et al., 2014).

	New Zealand	Scotland
Midwifery Workforce	Hospital-based or community-based caseloading (Lead Maternity Carers (LMC).	Hospital-based or community-based.
Principal Challenges	Rural midwifery workforce is declining (Kyle and Aileone, 2013).	Maintaining midwifery workforce (Royal College of Midwives, 2017).
Pre-registration Education	<p>Four institutions offer a bachelor degree programme (delivered over three years, 45 weeks/year).</p> <p>Practice experience: Working with community caseloading midwives and hospital-based midwives in primary, secondary and tertiary settings.</p> <p>Registered nurses can undertake the midwifery programme with recognition of prior learning in NZ.</p>	<p>Three institutions offer bachelor and masters degree programmes for NMC pre-registration direct entry students (delivered over three years, 45 weeks/year).</p> <p>Practice experience: Working with community areas, maternity hospitals, and other services e.g. midwife-led units and birth centres.</p> <p>Some institutions offer an 18-month midwifery programme for registered nurses.</p>
	<ul style="list-style-type: none"> • Programmes: 50% theory and 50% practical experience across the midwifery scope of practice. • XXXX (NZ) and XXXX (Scotland) provide all students with practice placement in a rural setting. • XXX (NZ) and XXXXX (Scotland) offer optional practice placements in a rural setting. XXXXX offers placements in midwife led or birthing units (outside the acute maternity sector). 	

Table 2. Midwifery workforce and education in New Zealand and Scotland

The challenges and requisite skills needed to sustain rural and remote midwifery practice, as identified in the literature review, would suggest that it is imperative that midwifery students in both Scotland and New Zealand are adequately prepared and have a clear understanding of the uniqueness of the rural practice setting. This paper reports on the realities of practice from both countries that inform educational needs. The data are additionally used to consider future educational strategies to both

prepare students for the realities of rural practice and to encourage recruitment and retention in rural and remote regions.

Methods

A mixed methods study design incorporating both quantitative and qualitative approaches was adopted to address the research aims and objectives. The study was conducted in two consecutive parts.

The New Zealand College of Midwives (NZCOM) and Lead Midwives in Scotland provided access and supported recruitment of participants. Inclusion criteria in NZ included midwives who self-designated as rural midwives. Lead Midwives in Scotland, recommended that community midwives working in rural areas in each of the 14 Health Boards would self-select for the study. In Scotland, the census 'Urban rural classification and definition of rural areas in Scotland' was used (Scottish Government 2014).

Ethical approval was obtained from the ethics committees in Higher Education Institutions (XXX and XXX in Scotland and in NZ at XXX Research Ethics committee (XXXX) and endorsed at XXX Human Research Ethics committee). Access was approved through the National Research and Development Centre in Scotland and by the professional body in NZ (NZ College of Midwives).

Part One: An online survey was designed to include key issues on rural midwifery practice identified from the literature. In relation to education, participants were asked if they had a rural placement during their programme and if the placement prepared them for rural practice. Open textboxes offered participants an opportunity to provide further information and viewpoints on their educational preparation for rural practice

and any improvements (See Table 3). Following a pilot and update, the online survey was circulated via SurveyMonkey® to approximately 2500 midwives in NZ (representing all midwife members of NZCOM) and to approximately 270 community midwives (involved in providing rural practice) in Scotland. Two rounds of email reminders were circulated by NZCOM and Lead Midwives (Scotland) to prompt midwives to complete the online survey.

In NZ, 145 midwives responded to the survey, of whom 103 (71%) had a caseload that was comprised of 50% or more of women residing in a rural area. In Scotland, 77 community midwives participated from 13 of 14 Health Boards. It was not possible to determine the response rate as both countries did not maintain a specific database for rural midwives.

- Did you have a rural placement during your midwifery educational programme?
 - Yes/No
- Did your midwifery educational programme prepare you for rural midwifery practice?
 - Yes/No
- In what way/ways did your education prepare you for rural practice?
 - Comment box
- What would you have liked to see included in your education to prepare you for rural midwifery practice?
 - Comment box

Table 3. Questions related to midwifery education within the Online Survey

Part Two: Online discussion forums were chosen to provide participating midwives with the opportunity to share their views on specific skills, qualities and challenges and to express their views on sustaining rural midwifery. This approach was taken to mitigate the impracticality of bringing practising rural midwives together. Following initial analysis of the online survey in part one, five open ended online forum questions

were generated informed by the issues raised (See Table 4). There was a specific focus on eliciting further information about the preparation that midwives had received in their pre-registration education that allowed them to deal with the situations that they faced in rural practice. Quantitative data were analysed using SPSS statistics software. The online discussion forum was asynchronous and was set up so that only those midwives who had given consent were formally admitted to the group. The intention of the online discussion forums was to have access to a broad range of midwives. Despite two reminders, recruitment was slow especially in Scotland. Twelve midwives were recruited to two discussion forums in NZ and three midwives recruited to one discussion forum in Scotland. Overall discussion forums generated informative and relevant discussion points proportionate to the number of midwives participating.

- Can you describe the shape (e.g. demographics, geography and economics) of the rural community that you work in?
- Respondents in the survey talked about the importance of relationships with other health professionals, community groups, Police and/or Child/Social services. What are some of your experiences?
- Many respondents in the online survey outlined the challenge of the rural/urban interface. Please tell us about some of your experiences.
- What particular skills stand out as being essential to rural midwifery practice? What is the point of difference to an urban midwife?
- How were you prepared in your pre-registration education and post-registration education to cope with situations you face working rurally?

Table 4. Five Questions posed to participants in online forum discussion groups based on survey results

Participants used pseudonyms when engaging online to preserve anonymity and were requested not to reveal the identity of their workplace. This encouraged participants to share experiences without breaching confidentiality and privacy. Participants could log

onto the forum at any time and add their comments. They could also read the posts of the other participants within their forum group and make comment. Two members of the research team from each country, had responsibility for engaging with the forum participants for their own specific country. The five proposed questions elicited comments and a rich and pertinent dialogue was generated from the midwives within the group. The facilitators also provided occasional comments and prompts when appropriate.

Qualitative data generated from the survey and online forum groups were individually categorised, coded and interpreted by all the researchers using a qualitative descriptive approach (Braun and Clarke, 2006). Collectively, the research team used the King's (2012) template analysis to organise the qualitative data into a hierarchical structure of themes and sub themes. Themes were then compared, and analysed more deeply by the research team to ensure the rigour of data analysis. The research team reached a consensus on the final template of themes following three face-to-face meetings and regular virtual meetings.

Quantitative Findings

In NZ, 49% of participants (n=60 of 125) and 29% (n=19 of 66) of those in Scotland reported that their pre-registration programme prepared them for rural practice. As illustrated in Table 5 a rural placement was provided for 57% of participants in NZ and 35% in Scotland. In both countries having a rural placement was associated with a significant increase in the likelihood of feeling prepared for rural practice ($p < 0.001$). About 28% of rural midwives in both countries reported that they grew up in rural areas. These midwives reported a preparedness for practice that was not significantly different from those midwives who were not raised in a rural area.

		Scotland (n=66)	New Zealand (n=125)
	Did your midwifery education programme prepare you for rural midwifery practice? Yes	19 (29%)	60 (49%)
	Did you have a rural placement within your Midwifery education programme? Yes	23 (35%)	71 (57%)
	Rural placement and felt prepared for rural midwifery practice.	14/23 (61%)	55/71 (77%)

Table 5. Preparation for Rural Midwifery Practice within Midwifery Education

Qualitative findings

An overarching central theme related to the *future proofing of rural midwifery practice* became evident. Within the context of this paper, this ‘future proofing’ is cultivated in education by ensuring that students have an understanding and appreciation of the role of the rural midwife. Exposure to the reality of rural midwifery by students is viewed as a key way of fostering positive attitudes towards rural practice.

Two secondary themes (‘Preparation for rural practice’ and ‘Living the experience and seeing the reality’) emerged from ‘future proofing’ and these were then divided into further sub-themes (refer to Figure 1). The participants in both the survey and the online fora highlighted the importance of preparation or/and education for rural midwifery practice.

Figure 1. Principle themes and related sub-themes for future proofing rural midwifery practice

PREPARATION FOR RURAL PRACTICE

The first principle theme 'preparation for rural practice' was underpinned by five sub themes: confidence in normal physiological birth; prepared, anticipate and respond; 'rural specific education'; 'learning stories from rural midwives' and having a 'rural placement alongside a midwife'. Most midwives wrote about the value of a rural placement in preparing student midwives and providing them with insight into the context of rural practice and the different considerations for midwives and families in these areas.

Confidence in normal physiological birth

A rural placement was a significant way for students to gain confidence in practising in a rural setting. In particular, midwives agreed that a rural placement ensured students had the opportunity to gain confidence and belief in 'normality' and that physiological birth does happen for women living at a distance.

Belief in the normal! Physiological birth does happen. (Survey 3334, NZ)

It gave me the knowledge on which to build upon and the opportunity to develop the skills I would need as a midwife. It taught me normality and how to recognise and react to deviations to this. (Survey 5979, Scotland)

Both these midwives, who had experienced working in a rural setting as students, noted that this had enabled them to gain confidence in physiological birth.

Recognising when the normality of the situation may or had changed was also

important, especially in the light of the time and distance to a secondary facility. Furthermore, with this growing confidence around physiology and normality came more understanding of the midwife's scope of practice:

I gained confidence when caring for women in their homes recognising a more women centred approach. I clearly recognised my scope of practice and when to transfer women and keep them safe. (Survey 9107, NZ)

The above quotes highlight a positive educational rationale for rural placement experience for midwifery students.

Prepared, anticipate and respond

Promoting learning about how to anticipate and respond to the changing clinical picture in a rural practice setting was an important consequence to be gained by students in a rural placement. This learning provided a significant adjunct to gaining confidence in physiological birth and understanding their scope of practice. The following quote illustrates the importance of rural placements in teaching students how to recognise deviations from the normal and the resulting conversations when considering the factors and implications of travel, time and place of birth.

When to send a woman to the secondary unit for a possible breast abscess: consulting, presenting the woman with the need to travel 100 km with her baby and partner for possible admission, mode of transport and costs involved around accommodation for the partner etc. (Molly, forum NZ)

The insights that this midwife gained as a student in the rural setting, took her beyond knowing how to make assessments with competence by providing her with a broader perspective. For example a recognition of how the woman and her partner might travel to a facility to receive care for her breast abscess and of the additional costs to the family that this would incur. The following Scottish midwife highlights the importance of a comprehensive midwifery education that goes beyond types of birth and prepares student midwives to think ahead and make sound clinical decisions in advance.

Oh I agree [in response to a midwife participant] scope of practice needs to be much broader than normal birth not least for ability to recognize abnormal early so decisions can be made 'up stream'. (Mary, forum Scotland)

Such experiences and considerations offer midwifery students insight into decision making in a rural setting as well as increasing their understanding of the relationships that midwives have with each woman. From such experiences, the students learnt to be prepared and to understand how to respond.

Rural specific education

The following Scottish midwife highlights how rural practice is distinctly different to urban practice.

I have more experience of rural than of urban however I am aware of urban practice through mentoring student, attending meetings with city and various forums. They are quite different jobs in terms of the autonomy and decision making and more than that for seeing and living amongst the communities where

you make the decisions. In terms of reflective practice you see the results of the advice and decisions ... including an ambulance journey [relating to transfer of a woman]. (Morag, forum Scotland)

It would follow that the education and training of rural midwives would need bespoke activities and content. Indeed, midwives (including those who wrote of their own student experiences and those who took students on rural placements) were very clear in their views that the pre-registration midwifery programme needs to have a rural-specific education component. This includes having a discrete course with rural-based scenarios and skills. Midwives who had experienced a rural component within their pre-registration programme in New Zealand reflected on this positively: -

...the rural paper made me think about the extra considerations in rural practice. (Survey 4547, NZ)

We had to write an essay on our rural placementIt included how and why a midwife may transfer a woman, road and weather conditions, collegial support, etc. (Survey 4260, NZ)

Midwives in Scotland stated they would have liked a “*Module on rural midwifery*”. One Scottish midwife said, “*We got international modules so it would be beneficial to also get rural midwifery*” (Survey 2138). Participants in both countries noted similar practical skills a midwifery student needed to learn to be ‘uniquely skilled’ for rural practice.

All of the emergency skills are so important to be confident in as when you are remote - you are it! (Survey 6763, NZ)

It [related to rural component in training] gave me the knowledge on which to build upon and the opportunity to develop the skills I would need as a midwife. (Survey 5979, Scotland)

Practical skills are a competency requirement for all midwives whatever their practice setting. However, participants re-emphasised the importance of the skills in relation to the remoteness of rural practice settings.

Scenarios both in the classroom and on placement reinforced learning about rural practice situations. This was especially related to rural midwives dealing with obstetric emergencies when there is minimal support structures and only local equipment to work with.

Dealing with emergency situations with no back up, assessing with little or no equipment. (Survey 6311, Scotland)

Participants frequently commented that working together is essential. The vicarious learning from listening to other students' accounts of their experiences also added to their knowledge and experience of rural practice in both countries.

We also used community scenarios within obstetric emergencies training, learning from other student midwives' experiences from placement and discussing rural community midwifery generally. (Survey 0810, Scotland)

Conversely, midwives also outlined what specific knowledge, skills and experience they would have liked included in their pre-registration midwifery education.

More around good communication skills - interaction with obstetric team, phone call referrals, both emergency and non... much more around building healthy relationships with women and not being at their beck and call. (Survey 3101, NZ)

Midwives also offered suggestions for contemporary virtual training methods to assist midwives and students to gain experience of rural related scenarios.

Need to develop virtual learning tools for this I think, for practitioners working in remote locations ... Virtual settings i.e CMU or home scenarios where things start to go wrong but decisions need to be made much earlier in a remote setting. Learner could go through whole process. Maybe using Avatars. (Mary, forum Scotland)

It is evident that learning needs to be flexible and employ techniques that look beyond traditional modes of delivering education.

Learning from the stories of rural midwives

Both Scottish and New Zealand midwives emphasised that rural midwives should have input into pre-registration midwifery education programmes.

It would have been useful to have had a few different rural MW's come & speak about their practice - especially about unexpected events they'd experienced & how they'd managed them. (Survey 9732, NZ)

A midwife FROM a rural practice would have been good. We had a manager from a rural practice who came to talk to us but the management perspective is very different from those at the coal face. The impact of relentless on call. It was mentioned in passing but not really explored. (Survey 9050, Scotland)

They stated that, as student midwives, they would have liked to have heard the stories and experiences of rural midwives.

Rural placement alongside a midwife

Midwives in both countries stated that a rural placement should be an essential component of the midwifery programme, envisaging that this would promote an increased understanding of the responsibility and commitment to the profession.

Rural placements should be mandatory. Even if the students never intend to work there, they can at least get a feel for what is involved. (Survey 9050, Scotland)

The experience opens the eyes of the learning midwife to the responsibility and commitment needed in this profession ... knowing no one is coming to take over, the care is what and how you give it. (Survey 2091, NZ)

There is a sense that a rural midwifery placement provides the student with the opportunity to develop more fully as an autonomous practitioner by understanding more clearly what autonomy means. The reality of a rural midwife who is working alone, means that the student learns to appreciate the need to be self-sufficient and to know “how a situation might be handled, with no buzzer, no Dr [doctor], No

hospital ... back to basics" (Survey 0186, Scotland) and gain "preparation for decision making skills when on your own miles from consultant unit" (Survey 8198, Scotland).

The mutual sharing of information and knowledge between midwife and student was highly valued. Whilst this aspect is implicit within all midwife/student relationships, it was proposed by participants as a way of increasing understanding of the differences inherent within rural practice.

I have found that students are a really valuable source of companionship but also an opportunity to improve the reciprocity of the knowledge of rurality. (Molly, forum NZ)

Not all programmes in Scotland and NZ offer rural placements. One rural midwife in Scotland highlighted the struggle she had as a student to get allocated a practice placement where she could rural experience.

I was very clear as a midwifery student what experience I wanted to access other than standard (placements), but had to at that time push to get it as direct entry was just new and not popular. I requested to be allowed to go to home births. I rostered myself on nights as that was where midwives appeared to be more autonomous in labour ward... (Morag, forum Scotland)

Pertinent questions and viewpoints were raised in both countries about the purpose and validity of having mandatory rural placements. Although these were in the minority, they are still relevant and topical for further consideration.

One participant questioned whether a short rural placement prepared student midwives in any way for rural practice.

... students who have a mainly urban/tertiary education are [not] in any way well prepared for rural practice (especially as new graduates) especially if they have only done 6-weeks placement in a rural setting. (Survey 7019, NZ)

Another remarked on the validity of some rural experiences where the rural experience is in fact a semi-rural area. Another perspective presented was that *“you have to be interested and motivated to work in rural practice” (Survey 4624, Scotland)* so rural placements should not be required if students were not intending to work in rural practice.

LIVING THE EXPERIENCE AND SEEING THE REALITY

The reality of accessing a rural placement opportunity provided students with an introduction to rural midwifery, and an opportunity to gain a sense of what it might be like to be a rural midwife. This entailed the students staying within the rural community and in some cases in the midwife’s home for the period of their placement (normally 4-6 weeks).

We had the opportunity to “live the experience”. (Survey 1098, NZ)

Some participants believed that if all students completed a rural placement then they would have more insight into what it really entailed such as the midwife below states.

I believe it is essential that all students be exposed to the realities of Rural practice. This is so the core midwives have an understanding of the pressures that come to bear on LMC's working in rural practice and they can offer appropriate assistance when transfers occur (reality of not having had any sleep, any food!). (Sarah, forum NZ)

Sarah advocates that all students have a rural placement even if they never intend to work rurally. As is explored in more depth in other publications from the research (XXXX et al., 2017; XXXX et al., In press), rural midwives often feel a lack of support from urban hospital based health practitioners when they need to consult or to transfer in with a woman. Sarah suggests that rural placements for students could facilitate more collegial relationships between rural midwives and hospital based staff.

The second principle theme of 'living the experience and seeing reality' was underpinned by four sub themes which represent the many faces of 'reality' of rural practice including 'relative isolation'; 'the enormity of the responsibility'; 'rural women are different' and 'being adaptable and making do'.

Relative isolation

The opportunity to live the rural experience was reported to provide the students with an appreciation of the reality of isolation, an identified key component of rural practice.

The hours of travel, the isolation, the foresight/preparedness needed was highlighted throughout this placement. (Sarah, forum NZ)

A period of education in an isolated location would be good preparation. (Survey 5362, Scotland)

... isolation featured in students' evaluations especially when they have to get accommodation and possibly, most times, stay here by themselves. (Molly, forum NZ)

There was recognition that isolation was an integral part of students understanding the rural experience. This was not just about working in isolation but was related to the student midwife having to manage living and working in a different setting without their usual support systems.

The enormity of the responsibility

The responses supported the view that student midwives would benefit from a rural placement. However, a few midwives (primarily in NZ), felt that experiencing a rural placement cannot fully prepare one for rural practice and the enormity of the responsibility and implications for the woman.

... nothing really prepares you for the enormity and importance of time in making crucial decisions until you do it yourself. It also doesn't prepare you for the loneliness that can be associated with the job. (Survey 2753, NZ)

We have a huge responsibility compared to a midwife in an urban setting who would have access to immediate support and for a Dr (doctor) to be making the decisions we have to consider alone and act of all sorts of emergency situations. All this is compounded by the fact that we have usually worked a full day and have been called from our beds to deal with these situations. (Sheelagh, forum Scotland)

These perspectives are not uncommon and imply that a student midwife can perhaps never fully appreciate or be totally prepared for rural midwifery practice. The reality is that student midwives are always supervised and cannot claim autonomy, therefore they can never fully walk in the shoes of the rural midwives whilst on placements. However, despite this, participants acknowledged the value of

preparation in skills for rural practice and the implications surrounding the need for transfer from the rural area due to obstetric or neonatal complications.

Rural women are different

Living the rural experience provided students with an appreciation that working with rural women was perhaps different to working with urban counterparts as the following quote indicates:

...working with the women and traveling to these areas during placements gave me the insight to the difference in working with women from suburbs vs women from remote areas. (Survey 6725, NZ).

Being adaptable and 'making do'

Another advantage highlighted by midwives, related to how important it was for the student to understand the need to be adaptable and able to make the best of a situation.

The Midwife taught me to not expect anything - but to accept the situation and conditions I found myself in at the time, to make the best of the situation and adapt them to the best of my ability with the facility's available to me at the time (Survey 3275, NZ)

The reality of working on your own can be very different to working with a community midwife on placement. On placement students need to be encouraged to be thinking midwives and try to decide what to do in situations on their placements and discuss with their mentor. (Survey 3012, Scotland)

The rural midwife has to work with uncertainty and unpredictability. As a result, student midwives learnt the importance of watchful readiness and the need to be adaptable and flexible.

The need to be adaptable was referred to by one midwife as having a 'rural mindset'.

The rural mindset is one of being able to anticipate problems and get transfers going early (often on your own), managing long transfers on your own, helping women change birthplace plans if labours are going faster than the distance to a unit allows, being creative in helping women access secondary care, and sometimes providing secondary care on behalf of the O&G team in the city until we can get the woman/baby to the right place. (Virginia, forum NZ)

As this midwife reveals, in addition to adaptability there is a need to draw on a range of approaches and solutions when so far from secondary services.

Discussion

Findings from this study have confirmed the important role that pre-registration midwifery education has in ensuring the future proofing and the sustainability of rural midwifery practice. The inclusion of rural practice in a pre-registration midwifery education programme offers the opportunity to raise awareness and provide students with valuable insight. Such education needs to emphasise the fundamental differences between rural and urban practice in terms of skills requirements and challenges. For rural areas this includes the issues associated with working with sparse populations spread over large geographical areas, professional isolation as well as a specific skillset. These findings concur with those of previous studies that also identified these

differences and challenges (Kyle and Aileone, 2013; Cheyne et al., 2012; Miller et al., 2012; Harris et al., 2011; Patterson et al., 2011; Hundley et al., 2007; Tucker et al., 2005).

The midwives made recommendations about how pre-registration education could prepare midwives for rural practice. These included: rural placements for students; learning and teaching strategies specifically focused on rural midwifery practice skills; and the sharing of the experiences of rural midwives with students. Rural placements provided meaningful insight into areas such as transfer to urban facilities.

Engaging in the lived experience of the world of rural midwifery teaches the student not only about the skills of midwifery practice, but attitudes of perseverance, preparedness and resourcefulness that are inherent in rural practice (XXXX, et al., 2017). Students also need to be prepared to work with and build relationships with many different professionals (near and far from the moments of practice) and community members (XXXX et al., In press). Rural placements also provide excellent opportunities for students to learn about the realities and challenges presented by rural practice such as isolation, travel times and challenges for women and their families who wish to birth at or close to home or need to transfer. Skills developed through robust educational strategies will promote working in rural practice thus benefitting rural communities and helping with the recruitment and retention concerns highlighted previously (Kyle & Aileone, 2013; Adair et al., 2012; Robertson, 2008; Steed, 2008; Hendry, 2003).

The findings would suggest that students on pre-registration midwifery education programmes where rural and remote rural communities are served would benefit from the recommendations that have emerged from this study.

Strengths and limitations

A key strength was that rural midwives in both countries had opportunity to express their viewpoints on their educational preparation for rural practice by using safe and secure data collection methods. Limitations included the nature of the online questionnaire and lack of familiarity in using an online forum for discussion. Whilst midwives in NZ were keen to participate in the online forums, the recruitment of midwives from Scotland was disappointingly low despite reminders encouraging participation. As the study only surveyed rural midwives, we do not know what midwives thought about their rural placements if they had chosen to practice in an urban setting once qualified.

Conclusion

The future proofing of rural midwifery is a central theme overall in this study and the exploration of this aspect of the larger study has demonstrated that the education of student midwives is a key component of this future proofing. Pre-registration education has a key role in preparing student midwives for practice and this needs to focus on sustainability of midwifery services across all regions including rural midwifery practice. This study will specifically inform pre-registration education in the realistic preparation of students for rural midwifery practice having potential to ultimately benefit rural communities through the recruitment, retention and sustainability of rural midwives in New Zealand and Scotland.

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