A comparative exploration of midwifery education in the United Kingdom, Australia and New Zealand

Dr Cathryn Britton

Churchill Fellowship Report

Contents

1.0 Acknowledgements

I am grateful to the Winston Churchill Memorial Trust for awarding me this Fellowship which gave me the opportunity to travel to Australia and New Zealand to investigate differences and similarities within midwifery education.

I would like to thank the Department of Health Sciences at the University of York for supporting my application for this award. I would like to thank the Healthcare Safety Investigation Branch for enabling me to take a break in my secondment to the organisation for me to complete my award.

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- University of South Australia, Adelaide, South Australia
- University of Western Sydney, Sydney, New South Wales
- University of Newcastle, Newcastle, New South Wales
- University of Queensland, Brisbane, Queensland
- Griffith University, Gold Coast, Queensland

New Zealand

- Auckland University of Technology (AUT), Auckland, North Island
- Waikato Institute of Technology, Hamilton (Wintec), North Island
- University of Otago, Wellington, North Island
- Ara Institute of Canterbury, Christchurch, South Island

I am also grateful for the following opportunities:

- Discussion with Tracy Martin, Principal Midwifery Advisor, Department of Health, Western Australia
- Invited speaker for keynote address on the role of a maternity investigator to midwifery students and staff at University of South Australia, Adelaide, Australia

- Discussion with third year midwifery students at University of South Australia, Adelaide, Australia
- Visit to River Ridge East Birth Centre, Hamilton, New Zealand
- Discussion with newly qualified midwives at Hamilton, New Zealand
- Meeting with Sharron Cole, CEO/Registrar, Midwifery Council of New Zealand, Wellington, New Zealand
- Discussion with midwives at a New Zealand College of Midwives local meeting in Wellington, New Zealand

2.0 Biography

I have been a midwife lecturer for over 30 years. For the last 23 years I have worked as a midwifery lecturer at the University of York and currently hold the title Senior Lecturer in Midwifery.

As an external examiner for midwifery programmes in England and Scotland I have had the opportunity to scrutinise different midwifery curricula from several universities.

For the last 20 months I have been seconded to the Healthcare Safety Investigation Branch (HSIB) as a Maternity Investigator. Before taking this secondment I was the Lead Midwife of Education (LME) at the University of York. In the UK each university offering midwifery education must appoint an LME. The role of the LME is to maintain high quality of midwifery education and ensure that students have good health and character when entered onto the midwifery register at the end of their education programme.

I have an academic background in anthropology. I have contributed to international midwifery education. In 2014 I was seconded to a placement at the Cambodian Midwives Council where I worked with members of the Council to develop an assessment tool for a competency-based curriculum. Between 2014-2016 I was involved in a twinning project with midwifery teachers in Northern Nigeria.

Prior to embarking on my Fellowship I had visited universities in Melbourne and Canberra in Australia to discuss midwifery education which helped me develop a methodology for this more extensive study.

3.0 Executive summary

I visited Australia and New Zealand in 2019 over a six-week period to explore midwifery education in those countries. This award occurred timely as the Nursing and Midwifery Council (NMC) in the UK published the Future Midwife Standards (NMC 2019a and NMC 2019b). The publication of these standards requires universities in the UK to redesign their curricula to meet these new standards.

I undertook the Fellowship to consider the following:

- What aspects of the curriculum design of midwifery programmes in Australia and New Zealand could be considered in the design of new midwifery curricula within the UK?
- How are innovative learning strategies used where the education programme is accessed by students who live within large geographical areas?
- What could we learn about different approaches to simulation in practice?
- How does the support of newly qualified midwives in Australia and New Zealand help retain midwives in the profession?

3.1 Findings

- The educational content of midwifery programmes in the UK, Australia and New Zealand are similar.
- There are differences in the number of clinical hours required to complete between Australia, the UK and New Zealand. There is no evidence that a set number of hours ensures professional competence.
- Cultural competence is integrated into the midwifery curricula in Australia and New Zealand.
- There are mandatory requirements for continuity of care experience in Australia and New Zealand, but not in the UK.
- In Australia and New Zealand technology has been used effectively to aid remote learning.
- Some aspects of simulation in practice are similar across the UK, Australia and New Zealand.

- The development of the fictional virtual city supported by the simulation unit of Horizon Hospital and Health Service at University of South Australia was impressive.
- The use of virtual reality at the University of Newcastle to aid learning was innovative.
- In the UK there is a significant number of newly qualified midwives who leave the profession within the first year of practice.
- There is a structured programme of support in Australia and New Zealand for newly qualified midwives.

3.2 Recommendations

- In the UK consideration should be given to the number of hours a midwifery student is required to complete on the degree programme.
- In the UK midwifery programmes should be developed further to embed cultural competence.
- The continuity of care model of care has been associated with significant benefits for mothers and babies such as improved clinical outcomes. In the UK there should be a more structured approach to supporting midwifery students to achieve this experience.
- There is an opportunity to learn from the use of technology to deliver teaching and support students in Australia and New Zealand and extend its use in the UK.
- In the UK there is good provision for simulated learning in clinical simulation units. This could be developed further by the use of virtual communities online and the use of virtual reality.
- Development of a standard preceptorship programme for all newly qualified midwives in the UK is a key strategy.

4.0 Introduction to project

4.1 Background

During a vacation in the summer of 2017 I spent some time in Australia and visited five universities in Melbourne and one in Canberra to discuss their approaches to midwifery education. During these visits it became apparent to me that there were

differences in the design of midwifery programmes to those in the United Kingdom (UK). Although there were differences they produced competent, confident newly qualified midwifery graduates. I thought that further exploration of the educational programmes could shine a light on how programmes could be delivered differently in the UK without impacting on quality.

For the purpose of this report the focus will be on undergraduate midwifery programmes where midwifery is the first qualification. There are programmes where a registered nurse can do a shortened midwifery programme to gain a midwifery qualification. These programmes are not discussed or compared within this report.

There are several reasons for choosing to visit Australia and New Zealand. Firstly, both countries are English speaking so this meant there would be good understanding within our communication. Secondly, Australia and New Zealand have similar elements within the midwifery programmes which makes aspects of the midwifery programmes comparable to those in the UK. Thirdly, midwifery students in Australia and New Zealand often travel long distances to access the university and /or clinical placements. This is similar to my own university where students often have long journeys to the university or their clinical placements.

In the UK and New Zealand it is usual for a student to gain a first degree in midwifery. This used to be called direct entry midwifery education as it is not a requirement to be a qualified nurse before gaining this qualification. In Australia different states offer different routes into midwifery. Some offer undergraduate degrees in midwifery while others offer a dual award where the student becomes a registered nurse and registered midwife after embarking on a four-year degree pathway.

In the UK it is well known that there is significant attrition from some midwifery programmes with financial concerns being a key influence for some students (Health Education England 2018). The examination of the midwifery education programmes in Australia and New Zealand provided some insight into how the midwifery programme in the UK, and particularly the allocation of theoretical and clinical hours, may benefit.

Remote learning and simulation in practice are learning strategies that are currently used in midwifery education however there is scope to expand this provision.

Remote learning can help reduce time spent travelling and afford more time for studying. Activities that involve simulation in practice can help build confidence in clinical skills within a safe learning environment.

This study came at an opportune time as it coincided with changes to midwifery education standards in the UK by the regulator, the Nursing and Midwifery Council, which would require an overhaul of curriculum design and the inclusion of effective learning techniques to provide education programmes that equip the future midwife.

4.2 Structure of midwifery education programmes in the UK

In the UK midwifery education has recently undergone a major reform. The consequence of the publication of new midwifery education standards (NMC 2019a) means that all midwifery education providers must work towards aligning their midwifery curriculum to these new standards.

The structure of the midwifery programme in the UK is bound by European Union (EU) regulations (while we remain a member of the EU). This means that a midwifery student must complete:

- at least three years of study
- 4600 hours of theoretical and practical experience
- Mandatory practice requirements that comply with Article 40 (1) and satisfy Article 41(1) of Directive 2005/36/EC (NMC 2019a) (Appendix One)

In the UK midwifery education programmes consists of study both in universities and in clinical practice; often this is split into 50% theory and 50% clinical practice. Clinical practice is typically gained in maternity units within hospitals, birth centres and alongside community midwives.

4.3 Structure of midwifery education programmes in Australia

In Australia the midwifery programme is accredited by the Australian Nursing and Midwifery Accreditation Council (ANMAC). This stipulates that the following must be included:

- The programme is split 50% theory and 50% clinical practice (ANMAC 2014)
- The student must provide continuity of care to at least 10 women (including four antenatal visits, two postnatal visits and attendance at the labour and birth where possible)

- There is no minimum number of clinical hours. The midwifery practice experience should be sufficient to enable students to achieve the clinical requirements (typically this is about 900 hours)
- Achieve mandatory practice requirements (Appendix One)

The ANMAC Standards (2014) are currently being reviewed.

4.4 Structure of midwifery education programmes in New Zealand

The Midwifery Council of New Zealand (2015) approves midwifery education programmes in New Zealand. These programmes must include:

- Programme completion within four academic years (often completed within three calendar years)
- Completion of at least 4800 total hours on the programme of which at least 2400 hours must be spent in clinical practice
- A total of 240 hours of simulated practice be counted towards midwifery practice hours
- Complete 25 follow through experiences[1]
- Pass a national examination
- Achieve minimum practice requirements (Appendix One)

4.5 Newly qualified midwives

In the UK there is a concern that a number of newly qualified midwifery graduates leave the profession prematurely each year. Attention is being directed to look at ways of supporting the newly qualified graduates to remain in the profession. Currently there is no formal requirement in the UK to offer a supportive programme to newly qualified midwives when they enter the profession.

Australia has a robust programme for the education of student midwives and supports newly qualified staff with a graduate year. New Zealand is known for providing a 'gold standard' of midwifery care to women and their families. Their midwifery curriculum prepares the student to be autonomous practitioners on qualification and is worthy of further exploration to see areas of good practice that could be adopted.

[1] Follow-through experiences include providing hands on maternity care during pregnancy, labour, birth and the postnatal period.

4.6 Aims and objectives of the project

The aims of the project were:

- To investigate the curriculum design of midwifery programmes in Australia and New Zealand that can be considered in the design of midwifery education within the UK.
- To explore innovative learning strategies
- To consider how different approaches to simulation in practice could be adopted in the UK
- To explore the format of the 'graduate year' in Australia and the mandatory first year in practice in New Zealand and consider whether these could improve the retention of midwives

4.7 Purpose of the report

By exploring alternative approaches to midwifery education it might be possible to consider how these could be adapted to midwifery education in the UK. Australia and New Zealand have robust programmes for the education of student midwives and support newly qualified staff during their first year of practice.

4.8 Approach

Universities who provided midwifery education in Australia and New Zealand were contacted in advance with suggested dates for a visit. Meetings were scheduled with individuals and a semi structured interview took place. During the interactions with the contacts before my visit extra meetings were suggested and planned to enable me to meet relevant people and visit hospitals/university facilities.

5.0 Findings

There are four main findings in this report: curriculum design, remote learning, simulation in practice and support for newly qualified midwives.

5.1 Curriculum design

Within this section three aspects will be considered: the difference in clinical practice hours, development of cultural competence and the inclusion of the continuity of care model.

5.1.1 Clinical practice hours

As has already been highlighted all countries have requirements for length of programme and a 50% spilt between theory and practice. Generally, the educational content of the midwifery programme is similar in the UK, Australia and New Zealand with the aim to prepare the midwifery student to care for women and their families during the pregnancy continuum.

One noticeable difference is the number of hours that a midwifery student must complete during the programme of study. In the UK and New Zealand, the midwifery student must complete 4600 and 4800 hours respectively, it is required that half these hours be achieved in clinical practice (minimum of 2300 for the UK and minimum of 2400 hours for New Zealand.) Whereas in Australia there is no minimum number of practice hours. ANMAC Accreditation Standards (2014) state the programme must be 50% theory and practice but there are no minimum practice hours. Within this document it is explained that minimum practice hours were removed because of the lack of evidence guiding the specification of minimum practice hours. Indeed, Ebert, Tierney and Jones (2016) found no evidence that a set number of hours ensures professional competence. During the visits to the Australian universities it became apparent that there is great variance in the number of hours required to complete the programme of study. The number of practice hours ranged from 840 to 2000 for the whole programme.

In the UK it is well known that there is significant attrition from some midwifery programmes with financial concerns being a key influence for some students (Health Education England 2018). Midwifery students are not similar to other degree students who might embark on a 30-week degree programme. Currently in the UK midwifery students are required to engage in their studies over 45 weeks of the year to achieve the required hours, leaving little time to do work outside of their studies to boost their income. Students are often working 37.5 hours a week which might be made up of weekend shifts and night shifts which impact on their ability to work outside of their programme.

In the UK there has been a historical stipulation of hours required to qualify as a midwife and once the UK joined the EU it became mandatory to align the midwifery programmes to the EU requirements. There has been no evaluation that 2300

practice hours is required to gain competence. There is an argument that the EU legislation reflects back to an era of apprenticeship rather than modern day educational approaches (Mallaber and Turner 2006).

During the visits to the different universities it became apparent that there are variances between the number of hours students study on midwifery programmes. What is common is that the midwifery students on all programmes are equipped to exit the programme as competent practitioners. As the UK prepares to leave the EU an opportunity to reconsider the practice hour requirements for student midwives is timely.

5.1.2 Cultural competence

Cultural competence is the ability to interact respectfully and effectively with people from backgrounds different to one's own culture. In midwifery practice it is a recognition of the impact of the midwife's culture and beliefs on their midwifery practice and being able to acknowledge and incorporate each woman's cultures into individualised midwifery care. During the visits to universities in both Australia and New Zealand it was impressive to see how the inclusion of cultural competence was woven into the curriculum.

In the Australian universities it was common to have a discrete module related to the historical, socio-political and cultural influences that might affect midwifery care for Aboriginal and Torres Strait mothers and babies. A significant publication which affects the teaching is the National Aboriginal and Torres Strait Islander Health plan 2013-2023 (Commonwealth of Australia 2013). This publication articultates a vision where Aboriginal and Torres Strait Islander peoples have appropriate access to health services. In order to improve outcomes for Aboriginal and Torres strait Islander people student midwives are exposed to developing culturally competent care and considering the development of dedicated programmes for Birthing on Country[2]. Aboriginal and Torres Strait islander women often wish to Birth on Country because of the integral connection between birthing, land and place of belonging.

By improving knowledge of, and development of, services that could improve Birthing on Country, short- and long-term health gains are likely to be achieved

[2] Birthing on Country is when Australia's first peoples embrace traditional practices to connect pregnant women, birthing, and newborns with their ancestors' land, known as Country.

(Kildea et al 2019). Currently the percentage of Aboriginal and Torres Strait Island midwifery students is low but each university is considering how the number of indigenous workforce can be increased.

In New Zealand the approach to cultural competence (Midwifery Council of New Zealand 2012) was embedded well within the midwifery curriculum of all the universities. Within New Zealand there is a strong sense that this is a bicultural society representing the indigenous Maori peoples and the Pakeha (non-Maori).

When visiting AUT I was fortunate to be involved in an 'Indigenising the Curriculum' workshop. This was attended by staff who facilitated learning in the curriculum. The setting for the workshop was the Marae, a sacred meeting place comprising a carved house. During the day we experienced Maori traditions such as a waiata (song) and hongi (the pressing of the nose and forehead together and the mingling of breath between two people). This gave me an insight into how Maori beliefs and traditions can be incorporated into the curriculum and strengthen students' understanding of the Maori culture.

Staff at Wintec demonstrated how cultural responsiveness is central to the midwifery curriculum and rather than being a standalone module, it is incorporated into each module within the curriculum.

On reflection the development of cultural responsiveness in the UK is not as visible within the midwifery curriculum. As the UK is a multicultural society the focus is probably on principles rather than a deep understanding of individual cultures. When planning a new curriculum, I would be mindful to incorporate knowledge and understanding relevant to those cultures accessing midwifery care within the clinical setting where midwifery students are providing care.

5.1.3 Continuity of care model

For decades women have received maternity care from a variety of care providers often not seeing the same person on more than one occasion. It has long been known that continuity of care provides more satisfaction for women and the midwife and can contribute to better outcomes. Continuity of care means that a woman receives midwifery care during pregnancy, birth and the postnatal period from people known to the woman. This type of care can be provided by a team midwifery

approach or by caseload midwifery[3]. The continuity of care model of care has been researched and this approach has been associated with significant benefits for mothers and babies such as improved clinical outcomes, higher rate of maternal satisfaction, and economic benefits for care provision (Sandall et al 2016).

This approach to maternity care has been formally recognised as being best practice and is being rolled out in England and Scotland through a programme of governmental strategies (NHS England 2017, Scottish Government 2020).

In order for future midwives to be conversant with this delivery model and be confident in working in small teams and provide holistic care it is important that student midwives are educated appropriately in the UK. In the new UK midwifery education standards (NMC 2019a and b) there is an increased focus on continuity of care but no requirement to demonstrate the provision of continuity of care to a certain number of women. This is different to Australia and New Zealand who both have an emphasis of continuity of care throughout their curricula and have a requirement to demonstrate the provision of continuity of care to a number of women.

In Australia a student midwife must demonstrate providing continuity of care to at least 10 women (including four antenatal visits, two postnatal visits and attendance at the labour and birth where possible). Midwifery students in Australia discussed with me the value of this aspect of their programme. Some students said ‘it made me a midwife’ as they were able to strengthen their relationship with women and their families due to the continuity of care provision.

In New Zealand a student midwife must undertake 25 follow-through experiences. The newly qualified midwives I spoke to felt these experiences prepared them well for their role as an autonomous practitioner and mirrored the work they would do as self-employed midwives. The maternity care model in New Zealand is continuity of care and the curriculum is designed around this care model. All student midwives have the opportunity to work with case-loading midwives during their education

[3] Team midwifery consists of a number of midwives in a team providing care who are normally introduced to the woman during pregnancy so she knows the team members. Caseload midwifery tends to be care given by one midwife, or a practice partner.

programme and the students are prepared to be self-employed case loading midwives at the point to registration.

In the UK the older midwifery education standards (NMC 2009) explicitly stated that students had to care for a small group of women throughout their childbirth experience which could be in the form of case loading. Although the number of women who should be cared for in this way was not stipulated. Universities in the UK set their own number which was variable. At my university is was at least five women. While continuity of care is part of the curriculum in the newer standards (NMC 2019b) there is no number suggested to demonstrate achievement of this aspect. This is disappointing as participating in continuity of care is seen as rewarding to both students and women and including this aspect in the standards would have ensured educational opportunities were made available to all students.

As there are national drivers in the UK to increase and strengthen models of maternity care that focus on continuity it seems an error that this is not being measured as an outcome for student midwife education especially as these will be the midwives of the future who will need to implement and maintain these models of care. Midwifery students in Australia and New Zealand that I came across valued providing continuity of care to women and their families. There is a body of evidence that confirms that students and women find this a positive experience for them both (Rawnson et al 2009, Carter et al 2015, Dawson et 2015).

5.2 Remote learning

For this section different aspects of education delivery are considered. Teaching can be facilitated within a university campus or in other settings. In the UK the general approach is for midwifery students to attend a university for theoretical teaching. Distance learning is used to supplement the learning but the focus is usually to attend the university campus. There are requirements to attend the university for face to face teaching which often requires students to spend a lot of time travelling.

Remote learning in this section means that the lecturer and students are separated from the university campus. In Australia and New Zealand remote learning is commonly used on midwifery programmes. This might take the form of distance learning opportunities, attending satellite centres or online tutorials.

In Australia and New Zealand students will often live at a considerable distance from the university campus so remote learning is used to deliver teaching in satellite centres or by a dependence on technology.

Distance learning offers flexibility of studying at a geographical distance from the provider institution. It provides autonomy for the students to engage with the learning materials at their own pace and time providing they have completed the learning activities before the tutorial sessions. Studying alone can be daunting so the tutorials offer peer support and if students are given particular topics to present to their peers this can increase motivation and a sense of belonging to the group.

New Zealand universities gave some good examples of how distance learning is incorporated into the curriculum. AUT discussed how students had the option to attend lectures in person or to use remote technology to attend the lectures online. The student population for Otago University is diverse geographically with students residing on both the islands of New Zealand. This poses financial and logistical difficulties to attend university when their homes and clinical placements are many miles from the university premises. Otago university has six satellite university centres across both islands. Small groups of students access weekly face to face tutorials with a midwifery lecturer at the local satellites. There are also online resources that provided theoretical content. The tutorial groups provide opportunities to debrief from clinical placements, discuss the application of theory to practice, simulate clinical midwifery skills and to provide pastoral care. In addition to the distance learning opportunities there are mandatory intensive blocks of theory at the university campus for the larger group. This enables shared learning experiences and meeting the wider student group. In a paper by Patterson et al (2015) students are generally satisfied with the face to face tutorial sessions which enhanced their learning. The face to face component reduced isolation and enabled students to maintain peers support.

In the UK we have become familiar with the model of students being required to attend the university campus for teaching. The attendance is often monitored and if a student does not attend there can be repercussions as the emphasis has been that teaching is required face to face. During my travels to Australia and New Zealand it was clear that effective learning can happen more remotely and it challenged for me

the predominant view in the UK that students have to attend a university campus for teaching activities. To reduce the travel for students in the UK I would like to see more innovative delivery being considered online and increased use of technology to facilitate teaching and meetings.

Since returning from my travels there has been the COVID-19 pandemic. This has forced universities in the UK to look at how technology can be used to provide education online. While there has been great disruption in the midwifery students learning in clinical practice, the lecturers have put modules online that previously they might have said could only be delivered face to face. Conducting teaching sessions and student tutorials online has highlighted the ability to provide teaching support in more innovative ways.

5.3 Simulation in practice

Simulation in practice is a valuable strategy for teaching and learning clinical midwifery skills. A principle aim of simulation is to improve quality of care and ensure safety in clinical care.

A large proportion of midwifery education is the development of clinical skills. These range from more simple clinical skills such as taking a blood pressure measurement, taking a temperature, or testing a urine sample to more complex skills such as assessment of the pregnant abdomen and managing emergency situations.

During university education students have the opportunity to practice these clinical skills in dedicated areas that are set up to simulate a clinical environment. This is usually a purposefully designed unit which might contain areas that look like a hospital ward or a community setting. These settings mean that students can repeatedly practice skills and develop competence in the skill before they need to do it in the practice setting. The students or simulated actors may be used to enable students to practice the skills.

For more complex and invasive situations high fidelity models[4] might be used. These models are life-like and can be used to more accurately simulate a real-life situation.

[4] High fidelity models are life-like mannikins that are used in health care simulation settings. These mannikins are computerised and can show various physiological functions such as heart rate and breathing. An operator is usually in another space controlling the settings to enable students to apply clinical decision making when there are changes in the clinical picture.

The benefits of simulated practice are consolidating knowledge, ensuring safe practice of technical skills, improve decision making skills, increase student satisfaction and motivation for learning (Martins et al 2018)

In all the universities visited in Australia and New Zealand the provision of simulated learning was common to that offered in the UK. The usual set up was a dedicated clinical simulation unit (CSU) which included mock-up wards and sometimes community areas. Every institution was well stocked with plastic models and hospital equipment such as intravenous infusions and urinary catheters. Most institutions had high fidelity models to practice complex decision-making scenarios.

There were two institutions which had other innovative approaches to simulated clinical practice.

5.3.1 Horizon Hospital and Health Service

At the University of South Australia they have created an impressive fully equipped, clinical learning environment which replicates an authentic hospital and health service – the Horizon Hospital and Health Service. Alongside this facility is the City of Horizon, a fictional virtual city community that students can access online. It replicates a typical Australian regional centre with a population of about 30,000 residents. It includes residents with diverse health and social needs.

Midwifery and nursing students can access the residents online who share their life histories and health issues. As this is an online provision, students do not need to be at university to access the learning resources. Students are guided through on-line activities to plan their learning and can participate in online discussion groups with peers and a lecturer to explore the course material.

Students work through health scenarios and plan the care of the residents identifying skills they need to learn which can be practiced in the Horizon Hospital and Health Service facility. The benefit of this learning facility is that students engage in real-life experiences that they might encounter in clinical practice and simulate clinical practice before meeting the scenarios in real-life.

5.3.2 Virtual reality

Virtual reality is a simulated experience which, when used in health care, replicates a scenario from the real world. Students wear headsets that generate realistic images,

sounds and sensations to simulate the student's presence in a virtual environment. The students can use the virtual reality equipment to look around the virtual world, move in it and interact with features.

Before my visit to the University of Newcastle I attended an online meeting with staff who had been instrumental to the development of virtual reality in midwifery practice. This was a useful meeting to research further what opportunities there are for virtual reality learning in the UK and to set some goals for the meeting at the University of Newcastle.

There are very few universities in the UK using virtual reality to enhance the simulation experience of student midwives. The benefits of virtual reality are the total immersion in a clinical situation, it is three dimensional and can be practiced away from the university. The challenges of virtual reality are the high outlay costs including development time, piloting the simulation, buying the equipment and training lecturers for its use (Williams, Jones and Walker 2018).

I spent a very interesting day at the University of Newcastle where I was able to experience two virtual reality learning opportunities.

1. Road to Birth

The Road to Birth provides midwifery students the chance to explore life size simulations of a mother and baby through all stages of pregnancy. With virtual reality the students are able to see and understand the physical changes to the mother's internal organs as the baby grows. This enhances the students' understanding of anatomy at different times in the pregnancy.

There is the possibility of placing the baby and placenta in different positions within the mother's uterus to enable students to consider the management of more complex births.

The Road to Birth is an immersive experience which aids a students' understanding of the pregnant body. Incorporating this simulation more widespread in midwifery education can only be a bonus to students learning.

2. Neonatal resuscitation

The university has also invested in a neonatal resuscitation virtual reality programme. A common neonatal emergency that student midwives will encounter is

neonatal resuscitation, with about 15% of babies requiring some resuscitation at birth (William, Ebert and Duff 2019).

Simulation is an important feature of skill acquisition especially for clinical emergencies. The use of this virtual reality technology assists students to become more confident in resuscitation skills before encountering them in the clinical placement.

Within the virtual reality scenario, the student has to make choices about their actions and appropriate decision making. The students are required to undertake a series of steps to pass the time critical scenario. Informal feedback from students reported by staff at the University of Newcastle was that students find the use of virtual reality increases their confidence in an emergency situation. The students also find it helpful that they can borrow the headsets and study the clinical skills anywhere, anytime.

The use of simulation and virtual reality are important educational strategies that can address different learning styles that students have. Often the incorporation of visual or physical learning activities can complement the theoretical component of a task.

5.4 Support for newly qualified midwives

5.4.1 UK

The Royal College of Midwives (2010) estimated that 5-10% of newly qualified midwives leave the profession in the UK within the first year of practice. The lack of support in the workplace on qualification is often cited as a key factor (Fenwick et al 2012).

A report in 2018 (HEE 2018) demonstrated a concern about the retention of newly qualified midwives. It was a concern to find that a significant number of students left the midwifery profession during the first year of qualification. The report identified two key issues that affected newly qualified students.

- The ‘flaky bridge’ – the level of confidence the student has when progressing from student to newly qualified practitioner
- The preceptorship programme – the design of the programme and support offered for the first post

‘Preceptorship’ is a term used in the UK to demote a period of time when structured support and professional development is offered to newly qualified midwives to enable them to become integrated into their place of work (NMC n.d.)

The most common employee contact for a midwife in the UK is within the national health service. There is no standardised approach to preceptorship of newly qualified midwives in the UK. The usual length of preceptorship is six to eighteen months and will be determined by the health care employer. The more usual length of time for a preceptorship programme is twelve months. The content is variable with variances between whether newly qualified midwives are supernumerary, whether they rotate around all the clinical areas and whether they received training support and educational opportunities.

Being given the opportunity to discuss the support available to newly qualified midwives in Australia and New Zealand, I hoped to identify some areas of good practice that could be incorporated into UK programmes to strengthen the provision.

5.4.2 Australia

In Australia newly qualified midwives can apply for posts that offer support in their first year of employment from the Graduate Midwifery Programme (also known as Transition to Practice programmes). Most newly qualified midwives are employed by within a health service (public or private) however some newly qualified midwives are being employed in midwifery group practices[5].

The Transition to Practice programmes are competitive. Applicants apply for a place on the programme. Those applicants not successful in gaining a place on a Transition to Practice programme can gain employment in private or state hospitals but will not be afforded the structured programme that the Transition to Practice programme provides.

On the Transition to Practice programme newly qualified midwives are offered support, self-directed learning and educational opportunities to enhance their practice. The newly qualified midwife spends time in clinical practice together with professional development days to promote best practice in midwifery. The newly qualified midwife is given structured support from a clinical educator.

[5] Midwifery group practice is a caseload model of midwifery providing continuity of care to women.

Common features of the Transition to Practice programme are:

- some periods of supernumerary status
- rotation to different midwifery clinical areas
- professional development study days
- allocated a support team

5.4.3 New Zealand

In New Zealand midwives can work as an employed core practice midwife (within a hospital) or as Lead Maternity Carer (LMC). The latter is the most common form of employment.

The New Zealand model of midwifery is very different to both Australia and the UK. The Lead Maternity Carers midwives are in private practice and work as self-employed case-loading midwives. The New Zealand College of Midwives recommends midwives aim to have a caseload of between 40-50 women. They provide community-based care using a continuity of care model. Payment of the care they provide is met through reimbursement from the government. The woman and her family do not pay for care. The fees that are paid for care are fixed by the government so although self-employed the midwives are unable to determine their own fees.

A Lead Maternity Carer midwife would typically receive separate payments for antenatal care given in the first, second and third trimester. The payment in the first two trimesters was 390 NZD (GST excluded (excl)) and 376 NZD (GST excl) in the third trimester. To attend the birth of a first time mother then midwife receives 1414 NZD (GST excl) and for subsequent births 1109 NZD (GST excl). For postnatal care the payments is approximately 700 NZD (GST excl) depending on whether this is in a hospital facility or at home. These fees are set by the government (Clark 2019) and paid to the Lead Maternity Carer midwife by the government.

On qualification newly qualified midwives in New Zealand must do a mandatory programme called the Midwifery First Year of Practice programme (MFYP) which is funded by the Government. This programme of study is determined by the New Zealand College of Midwives (Pairman et al 2016).

The structure of the MFYP programme includes professional mentoring. The newly qualified midwife choses an experienced midwife to be their mentor. The mentor is required to attend formal education to prepare them for the role. The mentor and newly qualified midwife are required to meet for structured reflective sessions face to face, by telephone or online.

The newly qualified midwife must attend professional development throughout the year as part of the MFYP programme. The midwife is given financial assistance to enable the sessions to be attended. At the beginning of the year the newly qualified midwife completes a professional development plan with the aid of their mentor. This is regularly reviewed with the mentor at mentoring meetings.

At the end of the MFYP programme the newly qualified midwife has a Midwifery Standards Review. This is a quality assurance activity whereby the midwife is reviewed by a panel of midwives and consumers (women) and a further professional development plan is formulated for the next review.

Dixon et al (2015) demonstrated that the MYFP programme is successful in maintaining high retention rates of midwives in practice.

I was fortunate to meet midwives on the MFYP programme. These midwives found the MFYP a flexible programme which enabled them to choose their mentor, access appropriate support and access professional development opportunities to strengthen their midwifery practice. The midwives stated they were remunerated for education opportunities and paid travel expenses. If attending their educational activities caused them to miss a birth then they were paid for the birth.

6.0 Conclusion and Recommendations

The opportunity to travel to Australia and New Zealand gave me an insight into the similarities and differences of the midwifery education programmes between those countries and the UK. During my travels I met some inspirational people and was always welcomed to all the institutions and meetings I attended.

As midwifery education has recently undergone a major reform in the UK there are opportunities now to consider curriculum planning and incorporating changes by learning from others. I intend to share my the knowledge I have gained during my

travels as I believe I can provide some insightful ideas to how things can be done differently.

In this report consideration has been given to clinical practice hours, development of cultural competence, the continuity of care model, remote learning, simulation of practice and support for newly qualified midwives. I have demonstrated how we might learn from others when considering changing the UK midwifery curriculum.

6.1 Recommendations

- In the UK consideration should be given to the number of hours a midwifery student is required to complete on the degree programme. There is no evidence to support the current number of hours required and these have largely been influenced by tradition and EU requirements. With the withdrawal from the EU this opens up the possibility to reconsider the educational requirements of the midwifery programme. This action would need to be considered by the midwifery regulator, the NMC, as they set the midwifery education standards.
- The UK is a multicultural society and to my knowledge there is more work to be done in the midwifery curriculum regarding cultural competence. In the UK midwifery curricula I have seen, there tends to be a dependence on principles of cultural responsiveness rather than the embedding of cultural competence. The responsibility for increasing cultural competence would sit with curriculum development teams within individual universities.
- The continuity of care model of care has been associated with significant benefits for mothers and babies such as improved clinical outcomes. In the UK there are national drivers to increase and strengthen models of maternity care that focus on continuity of care. Policy makers in the UK are committed to increasing the number of women who receive continuity of care and to support local maternity systems to achieve their ambitions. With further development of this model of care, midwifery education programmes will be able to incorporate a more structured approach to supporting students to receive this experience within their placement experience.
- There is an opportunity to learn from the use of technology to deliver teaching and support students in Australia and New Zealand and extend its use in the UK. The COVID-19 pandemic has brought this more acutely to the attention of

universities and encouraged its use in the UK. This will give midwifery lecturers further opportunities to reflect on how the technology can be used to assist students learning when they live a distance from the university.

- In the UK there is good provision for simulated learning in clinical simulation units. This could be developed further by the use of virtual communities online and the use of virtual reality. Developing this learning is costly, as this has been done by other universities buying these resources should be considered by UK universities to avoid unnecessary development costs.
- The use of simulation and virtual reality are important educational strategies that can address different learning styles that students have. Often the incorporation of visual or physical learning activities can complement the theoretical component of a task. Raising the awareness of midwifery lecturers in the UK to innovative uses of simulation and virtual reality can open discussions about the value of these learning opportunities.
- Development of a standard preceptorship programme for all newly qualified midwives in the UK is a key national strategy. Policy makers and the NMC are in central positions to consider mandatory changes to preceptorship programmes. There is much to learn from Australia and New Zealand who have well planned programmes that support the newly qualified midwife.

6.2 The next steps?

I have already submitted an abstract to a midwifery education conference in the UK

My intention is to

- share my findings by engaging in curriculum planning at the university where I work
- offer to present at national conferences and meetings to share my experiences
- formulate an article of my findings to be published in an academic journal

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8.0 Appendices

8.1 Appendix One

UK: Minimum training requirements - as stated in Article 40 (1) and satisfy Article 41(1) of Directive 2005/36/EC (NMC 2019a).

- At least 100 antenatal examinations
- Conduct at least 40 births
- Supervision and care for 40 women at risk in pregnancy, or labour or the postnatal period
- Supervision and care (including examination) of at least 100 postnatal women
- and healthy newborn infants
- Supervision and care (including examination) of at least 100 healthy newborn infants

Australia: Minimum practice requirements – as stated in ANMAC (2014)

- 100 antenatal episodes of care
- Act as primary accoucheur for 30 women who experience spontaneous vaginal birth (provide care during labour and birth)
- Provide care to an addition al 10 women during labour (and where possible the birth)
- Care for 40 women with complex needs (pregnancy, labour or postnatal)
- Attend 100 postnatal episodes of care with women, and where possible their babies.
- Experience of assessing mother and baby at four to six weeks postpartum.
- Undertake 20 full examinations of the newborn infant
- Engage with at least 10 women to provide continuity of care (including four antenatal visits, two postnatal visits and for the majority of women the labour and birth.

New Zealand: Minimum practice requirements – as stated in Professional Standards (Midwifery Council of New Zealand 2015)

- Undertake at least 100 antenatal assessments

- Facilitate at least 40 births
- Care for no less than 40 women with complications in pregnancy, labour, birth or the postnatal period.
- Perform at least 100 postnatal assessments of women
- Perform at least 100 neonatal assessments
- Participate in a minimum of 25 follow-through experiences
- Demonstrate competence in prescribing and administration medications relevant to the scope of midwifery practice.

8.2 Appendix Two: Itinerary

Organisation	Dates visited
Edith Cowan University, Perth, Western Australia	7 and 8 November 2019
Discussion with Tracy Martin, Principal Midwifery Advisor, Department of Health, Western Australia.	8 November 2019
University of South Australia, Adelaide, South Australia	14 and 15 November 2019
University of Western Sydney, Sydney, New South Wales, Australia	18 and 19 November 2019
University of Newcastle, Newcastle, New South Wales, Australia	22 November 2019
University of Queensland, Brisbane, Queensland, Australia	26 November 2019
Griffith University, Gold Coast, Queensland, Australia	27 November 2019
Auckland University of Technology, Auckland, North Island, New Zealand	2 and 3 December 2019
Visit to River Ridge East Birth Centre, Hamilton, New Zealand	5 December 2019
Waikato Institute of Technology, Hamilton, New Zealand	6 December 2019
Discussion with newly qualified midwives at Hamilton, New Zealand	6 December 2019

Meeting with Sharron Cole, CEO/Registrar, Midwifery Council of New Zealand, Wellington, New Zealand	9 December 2019
Discussion with midwives at a New Zealand College of Midwives local meeting in Wellington, New Zealand	10 December 2019
University of Otago, Wellington, New Zealand	12 December 2019
Ara Institute of Canterbury, Christchurch, New Zealand	19 December 2019