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Any action? Reflections on the Australian Midwifery Action Project

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ABSTRACT

Background: In 1997 a group of midwifery academics, researchers and practitioners met to discuss issues of concern related to the midwifery profession in Australia. It became clear from this discussion that midwifery in Australia was lagging behind similarly developed countries and that urgent action was required. From this meeting, a plan was developed to seek funding for a major national study into midwifery education and practice standards and as such, the Australian Midwifery Action Project (AMAP) was born.

Discussion: This discussion paper presents an overview of a number of midwifery education and regulation changes within the framework of the recommendations from the Australian Midwifery Action Project. A key question arising from this discussion is whether our current midwifery education and regulation standards provide a fit-for-purpose workforce that ensures all women and their families receive best practice midwifery care. Over the past 20 years the Midwifery profession in Australia has undergone significant changes and developments and these changes have had, and continue to have, significant impact on midwifery education and therefore on the quality of midwifery practice in Australia.

Conclusion: Many changes have been implemented in the nearly 20 years since AMAP was first conceived. However, many of the issues that provided the impetus for a project such as AMAP remain and are still to be resolved. The midwifery profession continues to be subsumed with nursing, it is not possible to gain accurate midwifery workforce data and, despite the development of national standards for midwifery education, wide variations in courses still exist across Australia.

Statement of significance

Problem or issue

Has midwifery education and regulation in Australia changed over the last 20 years since the release of the Australian Midwifery Action Project report?

What is already known

Significant changes have occurred in midwifery education and regulation since the release of the AMAP report including national standards for education, nationalisation of regulation law and the introduction of the Bachelor of Midwifery.

What this paper adds

This paper reviews and discusses recommendations from the AMAP report. In conclusion, while many changes have been implemented, many of the issues are yet to be resolved and urgent action is required to ensure a fit-for-purpose midwifery workforce in Australia.

1. Introduction

The International Confederation of Midwives state that a strong midwifery profession is linked to three essential pillars of education, regulation and association.[1] ICM argue that a strong midwifery association provides professional support and drives national policy development. A strong midwifery association also

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supports a system of midwifery education that provides a safe, competent, fit-for-purpose and highly qualified workforce. In addition to a sound education system, a system of regulation that defines scope of practice and supports the adoption of education and practice standards ensures protection of women and families.[1]

Over the past 20 years the Midwifery profession in Australia has undergone significant changes and developments that are in-line with the ICM pillars for a strong profession. Major changes include the nationalisation of regulation law and introduction of associated national registration standards; the introduction of national accreditation for education programs leading to registration as a Midwife; the development of national competency standards for Midwives; the development and introduction of pre-registration education pathways including the three-year Bachelor of Midwifery; significant growth in pre-registration education pathways and higher research degrees for midwives; and, significant growth in the provision of models of midwifery continuity of care(r). These changes have had, and continue to have, significant impact on midwifery education and therefore on the quality of midwifery practice in Australia.

Prior to the introduction of national regulation law and nationally accredited education standards, a strong midwifery association, the Australian College of Midwives (ACM), argued and lobbied for the development of national competency and education standards.[2,3] The ACM lead the development of the initial midwifery education standards and lobbied for these standards to be recognised by, at the time, all State and Territory regulatory authorities with varying degrees of success.[3]

In 1997, a group of midwifery academics, educators, researchers and practitioners met to discuss current issues facing midwives and the midwifery profession in Australia. This group raised concerns about midwifery education and practice standards, and in particular, that midwifery in Australia was lagging behind similarly developed countries and that urgent action was required.[4] From this meeting, a plan was developed to seek funding for a major national study into midwifery education and practice standards and as such, the Australian Midwifery Action Project (AMAP) was born. With Professor Lesley Barclay as lead, funding was received from the Commonwealth Government through the Australian Research Council and over the next five years a range of research strategies were implemented to produce 22 recommendations in regard to improving the standard of midwifery education and practice.

This discussion paper presents an overview of a number of midwifery education and regulation changes within the framework of the recommendations arising from the Australian Midwifery Action Project.[4] A key question arising from this discussion is whether our current midwifery education and regulation standards provide a fit-for-purpose workforce that ensures all women and their families receive best practice midwifery care.

2. Background

Around of the time of the AMAP recommendations (see Box 1) a number of other significant reports and enquiries into maternity services, maternity workforce and midwifery practice and tertiary education standards were released.[5–9] Given that many of these reports produced comparable recommendations it could be argued that limited progress has been made since the need for a project such as AMAP was first identified in 1997. Indeed this argument is clearly supported through evidence as recently as 2013 with the release of the Australian Health Workforce Programs Report.[9] The Mason[9] report again provided recommendations related to areas such as funding of undergraduate places in light of workforce shortages (*AMAP Recommendations 10 and 15*); support for rural practitioners both in accessing training and ongoing professional development (*AMAP Recommendation 14*); support for Aboriginal and Torres Strait Islander peoples to enter and remain in the health professions (*AMAP Recommendation 14*); and funding and support to encourage transition from pre-registration education to graduate employment through better support for clinical practice placements and relationships (*AMAP Recommendations 12 and 13*). It is of significant concern therefore that such limited progress has been made in areas that have such an impact on the midwifery workforce, and ultimately on the care provided to women and their families.

What is also evident in multiple education-focussed and workforce reports is the lack of specific midwifery related data due to the lack of identification of midwifery as a profession distinct from the profession of nursing. This has led to Midwifery being included with Nursing across many issues. Unfortunately, it can therefore be argued that midwifery in Australia is still an emerging profession[10] as historically and continuing to this day, midwifery has been subsumed into nursing. The blending of nursing and midwifery is widespread across professional, regulatory and educational domains.[11] Historically, midwifery has been viewed as a specialisation of nursing and prior to 2002 the education pathway to initial registration as a midwife was referred to as 'post basic [nursing]'.[11] This Registered Nurse to Registered Midwife pathway continues to be offered across Australia.

However, there are now a number of additional recognised pathways to registration as a midwife in Australia. These include a post-nursing (Bachelor, Post-Graduate Diploma or Masters level) route, an undergraduate double degree (Bachelor of Nursing/Bachelor of Midwifery), and an undergraduate midwifery degree (Bachelor of Midwifery). All programs leading to registration are accredited by the Australian Nursing and Midwifery Accreditation Council (ANMAC) and are referred to as entry-to-practice programs.[12] All programs, regardless of length and nomenclature must meet the ANMAC Midwife Accreditation Standards,[12] and all graduates are required to demonstrate competence against the National Competency Standards for the Midwife.[13] The development and subsequent adoption of both national midwifery competency standards and a national midwifery education accreditation process are two of the AMAP recommendations that have been fully addressed (*Recommendations 17 and 20*). These are significant achievements and provide confidence that all midwives in Australia are being prepared for registration to the same standard.

The introduction of the Health Practitioner Regulation National Law in July 2010 provided for the first time, nationally consistent legislation under the National Registration and Accreditation Scheme[6] thus addressing AMAP *Recommendations 17, 18 and 20*. Prior to 2010, each jurisdiction applied different legislation and registration requirements in regard to the midwifery profession. However although this legislation has provided a nationally consistent approach to midwifery registration, there continues to be blending of the nursing and midwifery professions with the Nursing and Midwifery Board of Australia as the Board responsible for regulating the profession of midwifery. This combination of the two distinct professions of Nursing and Midwifery is at odds with every other nationally recognised health profession who have an exclusive regulatory board, for example, Physiotherapy and Podiatry.[6]

This ongoing failure to provide distinct recognition impacts across the maternity sector through the lack of midwifery specific education and workforce data. It is only as recently as 2012 that midwifery specific registration and workforce data has become available.[14] Limited data focus on a narrow spectrum of workforce issues because the data collected by the regulatory authority rely

solely on initial and continuing annual registration requirements. For example, the calculation of the number of Registered Midwives in Australia does not equate with those who work primarily in midwifery as many midwives maintain registration whilst spending the vast majority of employed hours working as Registered Nurses. The limited data impede both educational and workforce planning and development of the midwifery profession.[9]

3. Discussion

For the purpose of this discussion the AMAP recommendations (see Box 1) have been grouped into general topic areas as many are interrelated. The following recommendations and discussion focus on issues related to the provision of pre-registration midwifery education.

Recommendation 10

That the Commonwealth DEST increases its allocation of funded positions for students (EFTSU) in midwifery education programs (note EFTSU Equivalent Fulltime Student Unit is now referred to as EFTSL Equivalent Fulltime Student Load)

Recommendation 13

The amount and nature of supernumerary content of progams be reviewed to ensure:

- *students 'belong' to a clinical workforce and benefit from becoming part of the clinical team*
- *An appropriate system of funding by jurisdictional health authorities support and resources from industry enable this to happen*

Recommendation 15

That the costs for students undertaking midwifery education be subsidised in the light of workforce shortages

In 2001, Barclay and colleagues in their survey on midwifery education, calculated that there were approximately 656 full time equivalent (FTE) enrolments in midwifery programs nationally across 27 universities.[4] The FTE calculations made it difficult to predict annual graduate numbers at the time as the 656 FTE enrolments equated to approximately 938 students as some students were enrolled fulltime but almost two-thirds were enrolled on a part time basis.[4] In addition to the difficulty in

Box 1. AMAP education and regulation recommendations and progress to date.

Recommendation 10	That the Commonwealth DEST increases its allocation of funded positions for students (EFTSU) in midwifery education programs	Discussed in paper
Recommendation 11	That dedicated funding be identified to promote collaboration between industry and universities to guarantee adequate clinical placements in hospitals, birth centers, midwifery models and community midwifery settings in order to achieve minimum clinical practice standards in midwifery education	Discussed in paper
Recommendation 12	That the interface between universities and the health system be strengthened in midwifery education, emphasising the importance of clinical placements and the engagement and investment of clinicians and health services in the teaching and assessment of students	Discussed in paper
Recommendation 13	The amount and nature of supernumerary content be reviewed to ensure: students belong to a clinical workforce and benefit from becoming part of the clinical teamAn appropriate system of funding by jurisdictional health authorities support and resources from industry enable this to happen	Discussed in paper
Recommendation 14	That active support and incentives are funded and implemented for rural students and Aboriginal and Torres Strait Islander students to enter programs that meet their learning and cultural requirements	Not discussed in paper
Recommendation 15	That the costs for students undertaking midwifery education be subsidised in the light of workforce shortages	Discussed in paper
Recommendation 16	That the Commonwealth Government funds the evaluation of the introduction of the three-year Bachelor of Midwifery and the double degree in Nursing and Midwifery	Discussed in paper
Recommendation 17	That the ACMI standards for midwifery education and practice be adopted by all regulatory authorities as the national standards for midwifery education and practice, and that the ACMI and service providers become key participants in the accreditation of all courses leading to authorisation to practise midwifery	National Midwife Accreditation Standards adopted nationally
Recommendation 18	That renewal of registration for midwifery practice be tied to continuing education and recency of practice	National Registration and Accreditation Scheme in place
Recommendation 19	That all industrial, legislative and regulatory frameworks give recognition to the safety and cost effectiveness of midwifery care recognising and licensing the midwife as a practitioner in her or his own right	Not discussed in paper
Recommendation 20	That current State and Territory nurses regulations be strengthened to improve standards in the accreditation of midwifery education programs and national comparability through a national organisation such as a National Nursing and Midwifery Council of Australia	Australian Nursing and Midwifery Accreditation Council in place

accurately predicting graduates, some universities also identified under-enrolment and decreasing enrolment issues in their midwifery programs indicating an under-utilisation of available midwifery University places. Furthermore, program attrition rates were reported to be anywhere from 0–30% and graduate employment was also identified as problematic.[15]

Estimations of numbers of midwifery graduates are historically unreliable due to the non-separation of nursing and midwifery student and graduate data and the lack of a national approach to reporting graduates. Just prior to the publication of the AMAP Report, recommendations from the National Review of Nursing Education report *Our Duty of Care* were also released and included a call for increased funding for Equivalent Full-Time Student Unit (EFTSU) in undergraduate nursing. Whilst acknowledging the increasing professional debate in regard to midwifery as a distinct profession, the terms of reference for the *Our Duty of Care* Review made the following assumption:

> " . . . (*the Review*) *assumed that midwifery would be covered under nursing specialisations. Consequently,midwives are discussed throughout this report as an integral part of the nursing workforce* (*p47*)"[8]

The assumption that midwifery was adequately covered by a nursing education review was an indication of the challenges of having midwifery identified and accepted as a profession distinct from nursing. Of particular concern was that the timing of the data collection and publication of the *Our Duty of Care* National Review of Nursing Education Report coincided with the publication of the AMAP Report that provided midwifery specific data on the state of midwifery education across Australia.[8,16] The AMAP team provided midwifery specific education and regulation information for the *Our Duty of Care* report but this was not evident in the report.[17]

More recently, the now disbanded Health Workforce Australia (HWA), in their Review of Australian Government Health Workforce Programs also identified that data limitations had a significant effect on the ability to model and project workforce supply.[9] Best estimates of midwifery workforce supply for the year 2025 predict either an excess of 721 or a shortage of up to 2030 midwives.[9] Unreliable, inconsistent and difficult to access data continues to impact on midwifery education and practice in Australia. The inability to predict workforce makes predicting required graduates and therefore student numbers somewhat challenging.

This issue of a lack of reliable data is slowly improving however as the Australian Institute of Health and Welfare (AIHW) is now reporting annually on the data gathered by the National Registration Accreditation Scheme (NRAS).[14] In their reporting on Nursing and Midwifery workforce data, the AIHW provide numbers of first time registrations and whilst not entirely accurate a reasonable assumption would be that the vast majority of these initial midwifery registrations would be new graduates. The AIHW report the annual first time registrations in midwifery in 2012 as 1006; 2013 as 1459; 2014 as 1278; and, in 2015 as 1251.[14] Whilst the number of initial registrations does not accurately provide the number of new graduates it is the best available estimate at this point in time.

This lack of accurate data then contributes to the problem estimating and confirming the current government funded EFTSL. Although the vast majority of pre-registration midwifery placements are Commonwealth Supported Places (CSP) it is difficult to determine nationally how many places are offered, accepted and then completed. Reports accessed through the authors workplace Planning and Quality Unit identify that in 2014, a government funded student head count for midwifery programs across all institutions in Australia reported a total of 3484 midwifery students.[18] Given that in 2015 the AIHW reported 1251 first time registrations, most of whom are likely to be graduates, this would be approximately one-third of the Commonwealth supported midwifery student head count number. When compared with the AMAP estimated head count numbers in 2001 of 938 this then indicates a 3.7 fold increase in midwifery student absolute numbers over the last 15 years.

In regard to *Recommendation 15*, government subsidy through the provision of Commonwealth Supported Places (CSP) continues but has not increased substantially since the publication of the AMAP Report. Although the number of students has increased, thus increasing the number of CSP available, the rate of subsidy has remained stable. Whilst additional funding has been allocated to support and potentially grow clinical placements,[5,19] this has had no direct impact on the cost to the student. Current student contributions for CSP is between $6,000–$7,000 per year, therefore completion of the three year midwifery degree costs approximately $20,000.[20] Although difficult to accurately determine, trend data from the Department of Education would suggest that the annual cost of an undergraduate degree, including both government and student contributions, has increased from approximately $4500 in the year 2000 to $10,500 in 2013.[21] Although there has been strong growth in the cost of a degree, the percentage of government contribution (60%) to student contribution (40%) has remained stable over the same period of time. The Commission of Audit also note that around 87% of students defer paying the program fees through the provision of HECS/HELP support loans and will therefore exit the degree with significant debt.[21] From review of available data it would appear that education costs for undergraduate degrees have grown strongly over the period of time from 1997–2016. It is noted that a large proportion of students exit a degree with significant debt; and, over the same period of time trends in wages growth have slowed.[21,22] In regard to the cost to the student, the introduction of a three year Bachelor of Midwifery has potentially reduced the cost to the student as compared to the post nursing option with many students engaged in university study for three years (Bachelor of Midwifery) compared to four (Bachelor of Nursing/Bachelor of Midwifery or Bachelor of Nursing/Post Graduate Diploma in Midwifery). Although in saying this, many of the post-nursing programs are employed/renumerated models as opposed to the supernumerary unpaid nature of the placements in the three year degree programs.

Recommendation 13 supports the reduction of the amount of supernumerary content in midwifery education programs and recommends students are supported to feel as though they belong to the clinical area and have the opportunity to become a member of the team.`

In 2001, the AMAP education survey identified extensive variation in both clinical and theoretical hours in programs offered. Clinical hours varied from 392 to 2400 h and variation included paid hours and unpaid supernumerary hours. Theory hours ranged from a reported 174–2160.[15] The AMAP survey was undertaken prior to the introduction of the Bachelor of Midwifery and since 2002, there are increased pathway options to registration as a midwife. Pathways now include the undergraduate Bachelor of Midwifery; the 'post-nursing' or previously referred to as 'post basic' Graduate Diploma in Midwifery for Registered Nurses; the undergraduate Bachelor of Nursing/Bachelor of Midwifery double degree; pre-registration Master in Midwifery (no longer offered); and, various combined routes for health graduates into accelerated Bachelor of Midwifery programs. Although each pathway must demonstrate compliance with the Midwife Accreditation Standards,[12] there continues to be much variation in both clinical and theoretical hours between programs offered.

In addition to the variation in clinical placement hours, the structure of clinical placements also differs between pathways and

programs. Some pathways continue to offer an employed model, where student midwives are employed throughout their pre-registration education program. This is most common in the post-nursing Graduate Diploma model and may include both paid and unpaid supernumerary hours. Other models are entirely unpaid supernumerary at either a 'home' hospital or, similar to many of the pre-registration nursing programs, block placement at different institutions. There are some innovative clinical practice models being offered that support placement with privately practising midwives[23] and midwifery group practices[24] for the majority of the clinical practice hours though these opportunities are necessarily limited due to the small number of these midwifery models. Unlike in undergraduate nursing programs, midwifery education and accreditation standards have never stipulated minimum practice hours, instead the focus has been on minimum practice experiences.[12,25]

The National Midwife Education Standards[12] were most recently reviewed in 2013 with an extensive consultation process across jurisdictions. A number of contentious issues arose including the number of mandatory clinical hours and/or midwifery experiences with the number of continuity of care experiences being the most contested. Continuity of care experiences were first implemented as mandatory professional experiences in 2002 with the introduction of the Bachelor of Midwifery and the requirement is currently for ten experiences during a pre-registration midwifery program regardless of program length or nomenclature.[3,12] The requirement for these experiences is linked to *Recommendation 11* as the strategy for these was placements with women, not institutions. At the time, these experiences were seen as one way to ensure that all midwifery students were exposed to working with women in a continuity model despite the paucity of midwifery continuity models in Australia.[3,26]

Wide variations in pre-registration program length, content and qualification level was identified in the AMAP Education Survey as a barrier to providing quality midwifery education, particularly in relation to the length of the program, access to clinical experiences and the continued perception of midwifery as an add-on or specialty of nursing.[15] Whilst the introduction of national standards for accreditation of pre-registration midwifery programs of study and national competency standards have gone some way to address variations, the barriers mentioned above continue to be of concern for those involved in midwifery education, regulation and practice with sustained and continued debate in this area over the past two decades.[4,9,11,19,27–29]

Recommendation 11

That dedicated funding be identified to promote collaboration between industry and universities to guarantee adequate clinical placements in hospitals, birth centres, midwifery models and community midwifery settings in order to achieve minimum clinical practice standards in midwifery education

Recommendation 12

That the interface between universities and the health system be strengthened in midwifery education, emphasising the importance of clinical placements and the engagement and investment of clinicians and health services in the teaching and assessment of students

Currently, limited workforce or educational monitoring systems are in place to predict demand or supply for midwifery students and graduates. Universities decide the student intake primarily based on government funding for available places and program demand, although many universities are limited by the availability (or non-availability) of clinical placements and universities are at the mercy of health services to provide placements.[9,30] In most jurisdictions across Australia availability of clinical placements is calculated on an ad-hoc basis. Various local calculations or discussions occur in relation to how many students can be supported in the clinical area and a wide variation of student to birth ratios exists. For example some small clinical services take a large number of students and other much larger facilities take a lesser number students. Again, a national approach to a reasonable and safe calculation in regard to student numbers would be beneficial. This calculation could be linked to staff numbers, skill mix, acuity and number of births at each facility. Demand for the Bachelor of Midwifery and in places for the Graduate Diploma in Midwifery far outstrips number of available program places. For example demand for the Bachelor of Midwifery, at a number of universities is in excess of 400 applications for approximately 50 places and this is not unusual across Australia.[31] Where offered, the demand for the 'post-nursing' midwifery programs continues to be strong.

Access to appropriate clinical experiences through clinical placement opportunities is considered vital in ensuring work ready graduates are produced.[9] Unfortunately, well supported clinical placements are finite in number. It is essential therefore for a balance in University admissions to match available clinical placements though this can be difficult to evaluate as there is currently no readily available usable data on commencements and completions for midwifery programs.[9] Support for the costs of 'clinical' education' is a contentious and ongoing issue. Over the past 20 years, numerous reports have identified support and funding for clinical training as an escalating issue and have made repeated recommendations for increased funding support to ensure undergraduate nursing and midwifery students are able to develop the necessary knowledge and skills to function in contemporary practice.[4,5,8,9,19,30] Unfortunately, as is the case repeatedly, many of the major reports primarily focus on nursing and add midwifery to the discussions. In 2006, the National Nursing and Nursing Education Taskforce (NSET) published a report on Commonwealth funding of clinical placements in undergraduate nursing and midwifery.[19] The report identified six universities offering the Bachelor of Midwifery and stated the survey inquired as to whether the clinical practicum funding was used to support these programs but recognised that the DEST data did not distinguish between professions. The report identified a number of issues including the substantial costs associated with providing the clinical component of nursing and midwifery programs; current levels of funding had not kept pace with escalating costs; and worryingly, that the viability of programs requiring clinical practicums is under threat.[19]

There is a lack of recognition of the uniqueness of midwifery practice requirements and in particular the funding of the Continuity of Care Experiences (CCE). Whilst it is widely recognised that the CCE provides unique and valuable learning,[32] it is known that students find it difficult to manage against the competing demands of academic life, institutional pressures and work-life balance.[10,27,32–34] Almost every pre-registration program and clinical placement has a different way of managing the CCE. Some will facilitate the CCE by setting up student-led clinics while others provide guidelines but expect students to organise and manage the experience themselves. Given that the CCE are mandatory midwifery practice requirements for all midwifery programs[12] appropriate funding to support these experiences is required.[26]

Recommendation 16

That the Commonwealth Government funds the evaluation of the introduction of the three-year Bachelor of Midwifery and the double degree in Nursing and Midwifery

Whilst some of the Bachelor of Midwifery programs have now been producing graduates for more than 10 years, there has not been a national approach to evaluating programs and graduates. It could be argued that the introduction of a national standard for midwifery education and accreditation of all programs leading to

registration as a midwife have reduced the need to separately evaluate Bachelor of Midwifery programs and graduates. A better approach may be an evaluation of all programs leading to registration as a midwife as this would include evaluation of all pathways.

4. Future-proofing midwifery

The persistence of issues related to midwifery education and registration is perplexing as, despite best efforts, midwifery continues to fight to gain recognition as a separate profession to nursing. It is important to note that many midwives are also nurses and there is no intent to devalue either profession in any way. What is required however is the separate distinction of midwifery in order for the education, registration and regulation of midwives to have a specific focus rather than the blended and therefore confused approach that currently exists. There is an acute need to be able to predict the workforce needs of both nursing and midwifery and the current data are not fit for purpose and do not enable accurate workforce predictions.

Given the first iteration of Midwifery Competency Standards (NMBA 2006) were published in 2006 it is timely that new practice standards are currently being developed. For midwifery to continue to grow and develop it is essential that these practice standards reflect the future of midwifery. It is this future thinking that will ultimately bring about the change required for midwifery. With the change in pathways to registration and the growing evidence to support midwifery continuity of care as providing the best outcomes for women[35] there is need for accelerated development of a range of midwifery models of care.

Within a global context there are a range of concerns related to providing appropriate woman-centred health care. The authors of Midwifery 2030[36] identified ten foundations to support a pathway for women with one of these being the need for a midwifery workforce that is supported through a strong education and regulation system and another with a focus on professional associations. It is clear therefore that the challenges that we face in Australia are also reflected to a certain extent in a global context. Australian midwifery is well placed to ensure that we develop and protect midwifery-centric regulation, registration and education standards so that we can ensure a midwifery workforce that is fit for the purpose of providing woman-centred midwifery care.

5. Conclusion

Many changes have been implemented in the nearly 20 years since AMAP was first conceived. However, many of the issues that provided the impetus for a project such as AMAP remain and are still to be resolved. The midwifery profession continues to be subsumed with nursing, it is not possible to gain accurate midwifery workforce data and therefore not possible to predict and ultimately plan for a midwifery workforce. Whilst national standards for midwifery education have been developed and are mandated, there still exists wide variation in programs with particular concern related to the opportunity to complete the professional experience requirements. The introduction of mandatory continuity of care experiences in all pre-registration programs has enabled all students to experience working with women in this way, however a lack of continuity of midwifery models continues to limit opportunities for students, and women.

Any action? Yes, there has been action and to not celebrate this action would be to diminish the hard work of our midwifery leaders, and, in particular, the Australian College of Midwives. However, more action is required and this action needs to be hastened in order to ensure that we have a midwifery workforce that provides the best possible care for women and their families.

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References

1. International Confederation of Midwives (ICM). *Education, regulation and association*. http://www.internationalmidwives.org/what-we-do/education-regulation-association/ [accessed 31 October 2016].
2. Glover P. ACMI competency standards for midwives — What they mean for your practice. *Aust Coll Midwives Inc J* 1999;**12**(3):12–7.
3. Pincombe J, Thorogood C, Kitschke J. The development of national ACMI standards for the accreditation of three-year bachelor of midwifery programs. *Aust J Midwifery* 2003;**16**(4):25–30.
4. Barclay L, Brodie P, Lane K, Leap N, Reiger K, Tracy S. *The Australian midwifery action project report*. Sydney: Centre for Family Health and Midwifery, University of Technology Sydney; 2003.
5. Australian Government Productivity Commission. *Australia's health workforce: productivity commission research report*. Canberra: Productivity Commission; 2005.
6. Australian Health Practitioner Regulation Agency. *The national registration and accreditation scheme*. https://www.ahpra.gov.au/ [accessed 8 Sept 2016].
7. Bradley D, Noonan P, Nugent H, Scales B. *Review of Australian higher education: final report*. Australian Government; 2008.
8. Heath P. *National review of nursing education 2002: our duty of care*. Canberra: Department of Education Science and Training DEST; 2002.
9. Mason J. *Review of Australian government health workforce programs*. Canberra: Australian Government; 2013.
10. Gray J. *Learning and the follow-through experience in three year Bachelor of Midwifery programs in Australia*. Sydney: University of Technology Sydney; 2010.
11. Brodie P, Barclay L. Contemporary issues in Australian midwifery regulation. *Aust Health Rev* 2001;**24**(4):103–18.
12. Australian Nursing and Midwifery Accreditation Council (ANMAC). *Midwife accreditation standards 2014*. Canberra: Australian Nursing and Midwifery Accreditation Council; 2014.
13. Nursing and Midwifery Board of Australia (NMBA). *National competency standards of the midwife*. Melbourne: Nursing and Midwifery Board of Australia; 2006.
14. Australian Government Australian Institute of Health and Welfare. *Nursing and midwifery workforce 2015 data and additional material*. http://www.aihw.gov.au/workforce/nursing-and-midwifery/additional/ [accessed 20 September 2016].
15. Leap N, Sheehan A, Barclay L, Tracy S, Brodie P. *Mapping midwifery education in Australia: full findings of the AMAP education survey*. Sydney: Australian Midwifery Action Project; 2002.
16. Tracy S, Barclay L, Brodie P. Contemporary issues in the workforce and education of Australian midwives. *Aust Health Rev* 2000;**23**(4):78–88.
17. N. Leap, P. Brodie, Personal Communication, AMAP, Sydney, 2016.
18. University of Technology Sydney. *Government head count report (midwifery) 2014*. Sydney: Planning and Quality Unit—Management Information Reporting System; 2016.
19. National Nursing & Nursing Education Taskforce. *Commonwealth funding for clinical practicum: a report on Commonwealth funding to support the costs of clinical practicum for undergraduate nurses and midwives in Australia*. Melbourne: National Nursing & Nursing Education Taskforce; 2006.
20. Universities Admissions Centre. *UAC undergraduate dates and fees*. http://www.uac.edu.au/undergraduate/fees/course-costs.shtml [accessed 24 October 2016].
21. Australian Government National Commission of Audit. *Section 9.13 higher education*. http://www.ncoa.gov.au/report/appendix-vol-1/9-13-higher-education.html [accessed 24 October 2016].
22. Trading Economics. *Australia annual change in hourly rates of pay*. http://www.tradingeconomics.com/australia/wage-growth [accessed 24 October 2016].
23. Carter AG, Wilkes E, Gamble J, Sidebotham M, Creedy DK. Midwifery students' experiences of an innovative clinical placement model embedded within midwifery continuity of care in Australia. *Midwifery* 2015;**31**(8):765–71.
24. Gilroy G. *A case study of SWIM with ME: Matching a model of student education to a continuity of care model in midwifery*. Sydney: University of Technology Sydney; 2014.

25. Australian Nursing and Midwifery Council. *Midwives: standards and criteria for the accreditation of nursing and midwifery courses leading to registration, enrolment, endorsement and authorisation in australia—with evidence guide*. Canberra: Australian Nursing and Midwifery Council; 2009.
26. Gray J, Taylor J, Newton M. Embedding continuity of care experiences: an innovation in midwifery education. *Midwifery* 2016;**33**:40–2.
27. Ebert L, Tierney O, Jones D. Learning to be a midwife in the clinical environment; tasks: clinical practicum hours or midwifery relationships. *Nurs Educ Pract* 2016;**16**(1):294–7.
28. Gray M, Rowe J, Barnes M. Midwifery professionalisation and practice: influences of the changed registration standards in Australia. *Women Birth* 2016;**29**(1):54–61.
29. Pincombe J, McKellar L, Grech C, Grinter E, Beresford G. Registration requirements for midwives in Australia: a delphi study. *Br J Midwifery* 2007;**15**(6):372–83.
30. Council of Deans of Nursing and Midwifery Australia and New Zealand (CDNM). *Submission to productivity commission health workforce study*. Melbourne: Council of Deans of Nursing and Midwifery Australia and New Zealand; 2005.
31. Keast K. *Midwifery courses give birth to a new career*. Health Times; 2016.
32. Sweet LP, Glover P. An exploration of the midwifery continuity of care program at one Australian University as a symbiotic clinical education model. *Nurs Educ Today* 2013;**33**(3):262–7.
33. Carter AG, Wilkes E, Gamble J, Sidebotham M, Creedy DK. 'Response to midwifery students' experiences of an innovative clinical placement model embedded within midwifery continuity of care in Australia'. *Midwifery* 2015;**31**(10):e97–8.
34. Dawson K, Newton M, Forster D, McLachlan H. Exploring midwifery students' views and experiences of caseload midwifery: a cross-sectional survey conducted in Victoria, Australia. *Midwifery* 2015;**31**(2):e7–e15.
35. Sandall J, Soltani H, Gates S, Shennan A, Devane D. Midwife-led continuity models versus other models of care for childbearing women. *Cochrane Database Syst Rev* 2016(4). doi:http://dx.doi.org/10.1002/14651858.CD004667.pub5 Art. No.: CD004667.
36. ten Hoope-Bender P, Lopes ST, Nove A, Michel-Schuldt M, Moyo NT, Bokosi M. Midwifery 2030: a woman's pathway to health. What does this mean? *Midwifery* 2016;**32**:1–6.