

ten Hoop-Bender P, Lopes S, Nove A, Michel-Schuldt M, Moyo NT, Bokosi M, Codjia L, Sharma S, Homer CSE. (2016). Midwifery2030, a woman's Pathway to health: what does it mean? *Midwifery* 32: 1-6.

Midwifery2030, a woman's Pathway to health: what does it mean?

Petra ten Hoop-Bender^a, Sofia Lopes^b, Andrea Nove^c, Michaela Michel-Schuldt^d, Nester T Moyo^e, Martha Bokosi^f, Laurence Codjia^g, Sheetal Sharma^h, Caroline SE Homerⁱ

^a Independent Consultant, Women's Health and Development, Geneva, Switzerland
(petra@petratenhoop.org)

^b ICS Integrare, calle Balmes 30,3-1a, 08007 Barcelona, Spain (sofia.lopes@icsintegrare.org)

^c ICS Integrare, calle Balmes 30,3-1a, 08007 Barcelona, Spain (andrea.nove@icsintegrare.org)

^d UNFPA, 11-13 Chemin des Anémones, 1219 Chatelaine, Switzerland (michel-schuldt@unfpa.org)

^e ICM, Laan van Meerdervoort 70, 2517 AN The Hague, The Netherlands
(n.moyo@internationalmidwives.org)

^f ICM, Laan van Meerdervoort 70, 2517 AN The Hague, The Netherlands
(m.bokosi@internationalmidwives.org)

^g WHO, Avenue Appia 20, 1211 Geneva 27, Switzerland (codjial@who.int)

^h ICS Integrare, calle Balmes 30,3-1a, 08007 Barcelona, Spain (sheetale@gmail.com)

ⁱ University of Technology Sydney, 15 Broadway, Ultimo NSW 2007, Australia
(caroline.homer@uts.edu.au)

Corresponding author: Andrea Nove

Abstract

The 2014 *State of the World's Midwifery* report included a new framework for the provision of woman-centred sexual, reproductive, maternal, newborn and adolescent health care, known as the *Midwifery2030* Pathway. The Pathway was designed to apply in all settings (high-, middle- and low-income countries, and in any type of health system). In this paper, we describe the process of developing the *Midwifery2030* Pathway and explain the meaning of its different components, with a view to assisting countries with its implementation.

The Pathway was developed by a process of consultation with an international group of midwifery experts. It considers four stages of a woman's reproductive life: (1) pre-pregnancy, (2) pregnancy, (3) labour and birth, and (4) postnatal, and describes the care that women and adolescents need at each stage. Underpinning these four stages are ten foundations, which describe the systems, services, workforce and information that need to be in place in order to turn the Pathway from a vision into a reality. These foundations include: the policy and working environment in which the midwifery workforce operates, the effective coverage of sexual, reproductive, maternal, newborn and adolescent services (i.e. going beyond availability and ensuring accessibility, acceptability and high quality), financing mechanisms, collaboration between different sectors and different levels of the health system, a focus on primary care nested within a functional referral system when needed, pre- and in-service education for the workforce, effective regulation of midwifery and strengthened leadership from professional associations. Strengthening of all of these foundations will enable countries to turn the Pathway from a vision into reality.

Keywords: SRMNAH; health systems; education; regulation; association; midwifery

Background

The 2014 *State of the World's Midwifery* report (SoWMy2014) (UNFPA et al., 2014) was published in June 2014 and, for 73 low- and middle-income countries, analysed the sexual, reproductive, maternal, newborn and adolescent health (SRMNAH) workforce from the perspectives of its availability, accessibility, acceptability and the quality of care it provides. The report measured the met need for SRMNAH services and projected workforce requirements in 5-year intervals to 2030, based on demographic changes, epidemiological conditions, possible scenarios for increasing workforce availability and retention and increasing productivity. The aim of the report was to support SRMNAH workforce dialogue between governments and partners, accelerate progress on the health Millennium Development Goals (MDGs), record workforce developments since the 2011 SoWMy report and inform the negotiations and preparations of the post-2015 development agenda.

To provide the SoWMy audience with an understanding of what person-centred, woman-focused SRMNAH services could achieve and what is required to make them a reality, a consultation was held to collect a global perspective and realities from countries with different levels of available resources (low, middle and high) about potential ideal models of midwifery care. The aim of this activity was to address the question: 'What could midwifery models ideally look like in 2030 in low, medium and high resource settings'? The goal was to produce a working document on a vision that may be drawn upon in future work, and that ultimately will serve as a framework to assist with policy formation and service planning.

An initial teleconference was held in October 2013, led by two members of the SoWMy 2014 research team and involved a group of eight experts, representing the International Confederation of Midwives (ICM), regional midwifery representatives (Africa, Asia and Latin America), the World Health Organisation (WHO) and the United Nations Population Fund (UNFPA). From that discussion, a draft vision for midwifery models of care in different contexts was developed and sent for consultation with the ICM and other midwifery experts.

The initial discussion identified a set of main themes for inclusion in the vision, which were the need for:

- woman-centred care with continuity of care and continuity of care giver,
- community-based services – the need for services outside hospitals as well as in them – care needs to be decentralised, and
- culturally appropriate care.

Participants in the discussion felt that the vision could be brought about by:

- Continuity – of care and of carer (there were different options including antenatal and postnatal group care)
- Community – develop models of care that are culturally acceptable, and tailored to urban/urban-poor and rural populations
- Collaboration – with women, the community and with other care providers
- Information and Communication Technologies (ICT) – use the new platforms and technologies to bring midwifery closer to women (e.g. mHealth)
- Interdisciplinary collaboration and education – develop competent midwives from the start
- Increased scope of practice - to allow for the special needs of younger and older women and their families.

There is strong evidence that midwifery models of care, particularly those that provide continuity of care, should be established for all women and adolescent girls (Sandall et al., 2015). However, despite the evidence and the subsequent policy developments in a number of industrialised countries, organisational change to enable continuity of midwifery care has been slow and, in many countries, is non-existent (Renfrew et al., 2014). There are a number of reasons for this, including a lack of understanding about how midwifery models work and how they can be implemented in a variety of situations, the low status of midwives in relation to medical doctors, and midwifery often not being considered as an autonomous profession (Sandall et al., 2001).

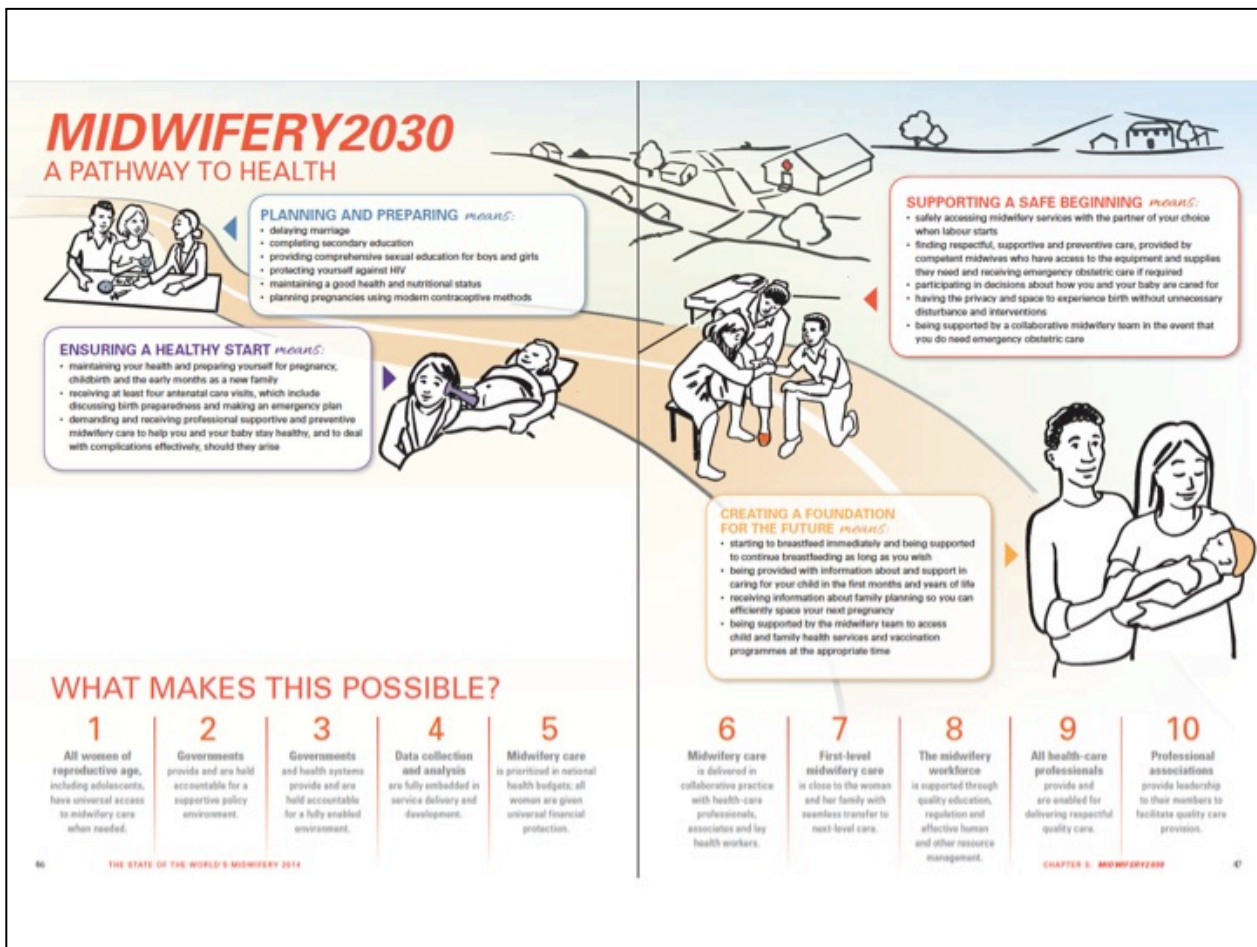
The Partnership for Maternal Health, Newborn and Child Health's Essential Interventions (The Partnership for Maternal Newborn and Child Health (PMNCH), 2011) were used to ensure that all the essential elements of care would be included in the Pathway. Best midwifery practice evidence was drawn from research and guidelines on a) woman-centred care and b) midwife led-care (low-risk pregnancies attended by midwives) (Sandall et al., 2013) (Department of Health, 2007) (National Collaborating Centre for Women's and Children's Health, 2014) (Renfrew et al., 2014).

The first draft of the Pathway was shared with those who had participated in the original teleconference, and their comments incorporated. The *Midwifery2030* Pathway was developed into an infographic in the SoWMy2014 report and as part of the report development process it was reviewed and approved by experts from the SoWMy lead agencies (including UNFPA, WHO and ICM, the International Council of Nurses (ICN) and the International Confederation of Gynaecology and Obstetrics (FIGO)). In this paper, we explain the *Midwifery2030* Pathway and suggest the systems, mechanisms and policy environments that need to be in place in order for it to become a reality in all countries.

What is the woman's Pathway to health?

The Pathway describes the four stages in the reproductive life of a woman or girl, where support and quality midwifery care are vital to ensuring health and wellbeing for herself and her (current and future) family (Figure 1). It is a vision and we recognise that many wider societal issues, especially focusing on the empowerment of women and girls, will need to be concurrently addressed for the Pathway to become a reality.

Figure 1: The Midwifery2030 Pathway to health



The first stage of the Pathway is of *planning and preparation*. It starts when a girl enters reproductive age and continues to the point at which she becomes pregnant. In this stage of life, girls and women need to complete secondary education (including comprehensive sexuality education), maintain good health and nutrition and be able to access planning for or protecting against pregnancies. This will allow girls to mature physically, intellectually and emotionally (UNESCO, 2014), before dealing with the pressures and responsibilities that pregnancy, childbirth and the transition into a family bring. It may also reduce the risk of poor health conditions or death (Nove et al., 2014b). Higher maturity can lead to better protection against HIV and sexually transmitted diseases, delaying marriage and planning pregnancies (Jamison et al., 2007).

The second stage of the Pathway is about *ensuring a healthy start*: it starts when a woman becomes pregnant and ends at the commencement of labour. This stage considers the importance of supportive, professional care during pregnancy to optimize outcomes. Antenatal care that recognizes and respects the individual needs of women and is supportive and preventive (of complications) is a core element of care during this stage. Similarly important is care that involves women and their families in decisions and is tailored to their cultural and religious context and circumstances. Enabling and supporting women and girls and their families is one of the most important ways to keep them in charge of their pregnancy, childbirth and the early months of life of their newborns. During antenatal care there is often more time to discuss the wide range of physical, emotional and mental changes that happen during pregnancy and to get to know women and their families so as to better tailor care to their needs. Preparing for birth together has benefits before labour starts as women are prepared and enabled (White Ribbon Alliance, 2011).

The third stage of the Pathway is about supporting the *beginning of life*. Its focus is on labour and birth, a time when the strength of the relationship built between the woman, her family and the health care provider is tested and should prove to be consistent and sustained. This is also a moment that tests the strength of the health system to be able effectively and efficiently to accommodate the needs of the woman for basic things like social support from a family member, comfort and privacy, but also for medical interventions when needed. It is the time when a collaborative team should be at peak performance to ensure continuity across all settings and for all women and girls, regardless of their background or ability to pay for SRMNAH services.

The fourth and final stage of the Pathway is one of the most important as it creates *the foundation for the future* for the mother and the baby. It includes adaptation to and dealing with a new life and changes in the family composition. Parental mental health needs to be strong and strengthened during this time (Fisher et al., 2010). Breastfeeding, vaccination and maternal nutrition are essential for the baby, as is timely access to contemporary contraceptives to assist families to space births appropriately. Postnatal care is easily skipped, and thus becomes a missed opportunity to provide integrated care to both women and babies, yet it is a crucial time of adjustment to get the best possible start in life (World Health Organization, 2010a). General parenting support and strengthening women's autonomy and capability to take care of themselves and their families are also vital to the healthy start of the child and the family (Renfrew et al., 2012) (Victora et al., 2015).

What is needed to make this Pathway a reality?

The realization of the women's Pathway to health requires change in the vision of what health is and where it comes from. The *Midwifery2030* Pathway proposes a human rights-based approach that goes beyond health care, combining areas such as education and economic empowerment that intersect with health through midwifery professionals along the four stages of a woman's reproductive life. This integrated vision that puts women and their families at the centre is expected to have positive effects beyond the strict health outcomes, such as higher levels of education, better general health and greater economic capacity.

The realization of the Pathway will require comprehensive, collaborative and well-articulated approaches between different stakeholders from different sectors and areas, namely human rights, governance, policy, accountability, models of care, professional associations and researchers, among others. From a SRMNAH perspective we identify 10 main foundations that can support and make the Pathway a reality. These are shown at the bottom of Figure 1 and can be classified into four main groups of action: (1) Governance and health systems, (2) Health services, (3) Health workers, and (4) Information.

1. Governance and health systems (rights, policies, health systems – structures/infrastructures)

Foundation 1: All women of reproductive age, including adolescents, have access to midwifery care when needed. This will require making efforts towards universal access to health, based on the concepts of human rights and social protection (Office of the High Commissioner for Human Rights and World Health Organization, 2008) (International Labour Organisation, 2012), and towards effective coverage (International Labour Office, 2014) (Tanahashi, 1978). Effective coverage is defined as the proportion of the population who need an intervention, receive that intervention and benefit from it (Colston, 2011), and can be measured by four core dimensions which are availability, accessibility, acceptability and quality (UNFPA et al., 2014). In the context of SRMNAH care, this means that midwives and other providers of SRMNAH care will be available along the entire continuum of care, will be accessible geographically and financially, acceptable to the communities and context they serve and provide high quality care to all women, adolescents and babies in need.

Foundation 2: Governments provide and are held accountable for a supportive policy environment.

Governments and policy-makers are responsible for setting policies that include SRMNAH and translate these into national health plans and/or strategies that define how health care will be delivered (Scheil-Adlung, 2013). Entitlement to these services that is enshrined in legislation increases public awareness of them and helps ensure accountability (International Labour Office, 2014). The essential package of midwifery care which contains evidence-based interventions adjusted for the needs of a specific population and for the best 'value for money', should be defined and included in these policies as well as efforts made to integrate policies from different areas such as HRH and transport where common lines of action can be anticipated.

Foundation 3: Governments and health systems provide and are held accountable for a fully enabled (work) environment, where midwifery professionals are able to provide the best quality care in accordance with their full scope of practice and competencies. This involves the availability of adequately-equipped health facilities, with functional referral mechanisms and multi-disciplinary teams working in a collaborative environment (ten Hoop-Bender et al., 2014), with supportive supervision and peer-mentoring available to all health workers, even those in remote areas (Moran et al., 2014). Policies for adequate recruitment (efficient deployment mechanisms immediately after training), adequate and timely remuneration (adjusted to the competencies of midwifery professionals), and retention strategies including opportunities for continuous development and a career path (Araujo and Maeda, 2013) help make midwifery an attractive profession, especially when working environments for midwifery personnel are respectful and safe (Renfrew et al., 2014).

Health system strengthening and accountability will be particularly challenging in countries such as fragile states and those coping with other health system challenges (e.g. as seen during the Ebola epidemic). The Pathway requires a focus on wider health system reform and societal change in order to be a reality.

Foundation 5: Midwifery care is prioritized in national health budgets; all women are given universal financial protection, in accordance with the universal access to health vision (World Health Organization, 2013). This is best achieved when governments incorporate sustainable financing in national health plans, considering not only the training of sufficient midwifery professionals, but also the fact that all women should have access to essential health care without suffering financial hardship (World Health Organization, 2014a). The essential package of care, earlier defined in SRMNAH policies should be financially described as well as its progressive expansion anticipated and fully costed.

The education, regulation and effective management of the midwifery workforce are important dimensions of health policies, requiring special consideration in national health budgets (World Health Organization, 2009). The development of a *fit to practice* midwifery workforce (i.e. one with the competencies and quality standards required to meet current and anticipated future population needs and achieve intended policy outcomes (Campbell et al., 2013)) necessitates an enabled environment (UNFPA et al., 2014) where quality training, adequate supervision, regulation through legislation, licensing and continuing professional development (CPD), and effective management are available (International Confederation of Midwives, 2015a).

2. Health services (organization, models of care)

Foundation 6: Midwifery care is delivered in collaborative practice involving health care professionals (HCPs), associates and lay health workers, which increases the quality of care and the health gains for women and their families. Models of care that are woman-centred can build bridges between the community and health service providers, promote collaborative practices and can optimize the skill mix

of professionals providing effective and quality care (World Health Organization, 2010b). Incentives for collaborative practice can be put in place through policies and by HCP associations, which proactively support their members to overcome professional rivalries. This can be facilitated by participation in national and regional conferences on SRMNAH that allow access to and presentations from all levels of care providers (professional and lay) – it is a moment for exchange, recognition and identifying opportunities for collaboration. Actively seeking service users' perspectives helps to inform the development and strengthening of user-centred/woman-focused care. At present, in many countries, it is rare for user feedback to be sought (Nove et al., 2014a).

Foundation 7: First-level midwifery care close to the woman and her family, with seamless transfer to next-level care if needed, is fully in line with the vision of universal health care that is centred at primary level. In this regard, midwifery services can offer great value when placed at different levels of the health care system and when supported and surrounded by a functioning system that provides transport and communication mechanisms between health services so that referral can be provided without delay. As midwifery care serves both healthy and sick women and newborns, services need to be accessible as close to women and people in need as possible, including both urban and rural communities. Evidence shows the potential effect of placing midwifery professionals at all levels of care, because they possess the competencies to provide care across the whole continuum of SRMNAH care and can therefore connect the different levels of care and be a driving force behind the achievement of continuity of care (ten Hoope-Bender et al., 2014).

Foundation 9: All health care professionals provide and are enabled for delivering respectful quality care. Delivering care respectfully is a responsibility that touches the entire health system. It is often seen as solely the responsibility of the health workforce, but without an enabling policy and working environment (see Foundations 2 and 3), the provision of respectful quality care will remain a challenge. The basis for respectful care lies in the recognition of human rights across the health system, and their translation into services that understand and honour the concepts of information, self-determination, dignity and privacy. The Quality Maternal and Newborn Care (QMNC) framework can be used to inform, and regularly review, not only the content of SRMNAH care, but also how it is provided and by whom (Renfrew et al., 2014). Maternal Death Surveillance and Response (MDSR) or near-miss audits can be implemented as a non-punitive method to review and improve care provision and to guide and measure progress (World Health Organization, 2012). Accountability can be strengthened using quality improvement mechanisms that are applied at all levels of the SRMNAH care system, including managers, planners and providers (Hulton et al., 2015).

3. Health workers (support and practice)

Foundation 8: The midwifery workforce is supported through quality education, regulation and effective human and other resource management. Education, regulation and association are considered the three pillars for an enabled and competent midwifery workforce (International Confederation of Midwives, 2015a). Education is the key to high quality care and therefore midwife education programmes should be regularly reviewed and updated to include the latest knowledge and evidence. Programmes are most effective when include both theoretical and practical courses with the adequate faculty and facilities. Use of ICM standards for midwifery education (International Confederation of Midwives, 2011) and tools such as the template sample curriculum (International Confederation of Midwives, 2012) can help ensure that student midwives develop the right competencies to deliver quality care, allowing them to develop further into midwifery practitioners as well as educators or researchers. Education facilities require sufficient teaching rooms and materials and practical settings to ensure proficiency upon completion of the education programme, and effective management practices (Bailey et al., 2015). Quality education is also dependent on midwifery educators meeting minimum standards (World Health Organization, 2014b), perhaps through the use of faculty development plans.

Recruitment policies and practices must ensure that all students fulfil the appropriate criteria to enrol in pre-service training (UNFPA et al., 2014) (Fullerton et al., 2011). Both pre- and in-service education programmes should be accessible to anyone with the appropriate experience and/or qualifications, and should be provided throughout the health worker professional career. Decentralization of education facilities and recruitment of rural students (e.g. by offering special conditions of enrolment) can help to increase access to midwifery education [34] [35]. Peer mentoring and supportive supervision are essential to help qualified midwives grow and further develop their competencies (Moran et al., 2014).

Regulation needs also to be in place as it frames the scope of practice, protects the public and the workforce, and gives legal recognition of the profession. The regulatory mechanisms of governments and other bodies should be able to cope with high levels of mobility and the fast population changes, so in some countries the system needs to be modernised, e.g. by introducing re-registration processes and electronic registries. The voice of service users can be used as part of the regulatory process, e.g. via the introduction of feedback or complaint mechanisms. Datasets and data analysis are needed as well as collaboration between stakeholders and in particular between governments and regulatory bodies (UNFPA et al., 2014).

Foundation 10: Professional associations provide leadership to their members to facilitate quality care provision. Associations do this by providing continuing professional development on quality care and ensuring it is a regular topic of discussion at professional association meetings and conferences. It can also help midwives deal with the daily stresses and keep them motivated and committed to their work (Gupta and Alfano, 2011). Associations can support their members by encouraging inter- and intra-professional dialogue to minimise barriers to integrated, collaborative care along the full SRMNAH continuum.

4. Information (data routinely collected and used to inform decisions)

Foundation 4: Data collection and analysis are fully embedded in service delivery and development, by routine data collection and registers that are integrated into regional and national health information systems (Health Metrics Network (HMN), 2015). For the attainment of UHC and assuring universal access to care by all women, there must be adequate planning of a *fit for purpose, fit to practice* SRMNAH workforce based on effective coverage of services and health workers. The *SoWMy2014* report identified a minimum of 10 pieces of information that can help policy makers to plan and manage the midwifery workforce, namely: headcounts, percentage of time spent on SRMNAH, roles, age distribution, retirement age, length of education, enrolments into, attrition and graduation from education and voluntary attrition. At health facility level, useful data items include facility type, location and services provided. Data that is collected and used both nationally and sub-nationally can effectively underpin monitoring and evaluation processes and inform policies and decisions. This requires the development or strengthening of health information systems and the use of standardized terminology and definitions to allow interoperability. Moreover, when health workers and other staff are enabled to collect and use data at local levels, results can immediately be used to optimize and improve service delivery and performance. Widely available technology, such as mobile phones, hand-held devices and internet, are important facilitators of data collection and sharing (Conway et al., 2015).

The process of implementing the Pathway

The previous section explains what needs to be in place in order to make the *Midwifery2030* Pathway a reality, but practical guidance may also be needed to provide logic and structure to putting the ten

foundations in place. A useful tool to guide the necessary discussions and collaborations is the Midwifery Services Framework (International Confederation of Midwives, 2015b). This document guides partners through the process of discussing and (re)focusing the package of care provided and the roles and tasks of the midwife and other SRMNAH professionals, to the development of the required workforce and the enabling environment that it needs to provide effective SRMNAH services.

Additionally, in some settings there will be a need for a strong advocacy and information campaign to inform women and communities and thereby create a groundswell of demand for quality SRMNAH care, including midwifery care. The SoWMy advocacy toolkit (Family Care International, 2014) provides guidance on how to address the issues of creating and maintaining midwife cadres and there are various other toolkits that work from a human rights basis to underpin access and availability of acceptable quality care.

Conclusion

From a health systems perspective, making the *Midwifery2030* Pathway a reality for women, families, health care systems and providers requires regular discussions on national policies and funding for SRMNAH care, as well as collaboration between government, providers and users of health services to create, maintain and improve services to meet population needs with regard to service availability, accessibility, acceptability and quality. The ten foundations which underpin the Pathway can provide a framework for the implementation of the Pathway, and tools have recently been developed to assist with the practical implementation of the process.

Acknowledgements

The authors gratefully acknowledge the experts who contributed to the development of the *Midwifery2030* Pathway. This paper was funded through a financial grant provided by the Bill & Melinda Gates Foundation.

References

- Araujo, E., Maeda, A., 2013. How to recruit and retain health workers in rural and remote areas in developing countries: A guidance note (No. 78506), HNP Discussion Paper. Washington D.C.
- Bailey, R., Seifman, R., Ross, H., Tulenko, K., 2015. Strengthening school management: A guide for optimizing the use of health workforce education resources. Washington D.C.
- Campbell, J., Dussault, G., Buchan, J., Pozo-Martin, F., Guerra Arias, M., Leone, C., Siyam, A., Cometto, G., 2013. A universal truth: no health without a workforce. Forum Report, Third Global Forum on Human Resources for Health, Recife, Brazil. Global Health Workforce Alliance and World Health Organization, Geneva.
- Colston, J., 2011. The Use of Effective Coverage in the Evaluation of Maternal and Child Health Programs: A Technical Note for the IDB's Social Protection and Health Division (No. IDB-TN-280), Technical Notes. Washington D.C.
- Conway, S., Surka, S., Campbell, J., 2015. A connected health workforce: an innovation brief. ICS Integrare, Barcelona.
- Department of Health, 2007. Maternity matters: Choice, access and continuity of care in a safe service. London.

- Family Care International, 2014. Making the case for midwifery: a toolkit for using evidence from the State of the World's Midwifery 2014 Report to create policy change at the country level [WWW Document]. URL <http://www.familycareintl.org/en/resources/publications/110>
- Fisher, J., Rahman, A., Cabral de Mello, M., Chandra, P.S., Herrman, H., 2010. Mental Health of Parents and Infant Health and Development in Resource-Constrained Settings: Evidence Gaps and Implications for Facilitating "Good-Enough Parenting" in the Twenty-First-Century World, in: Tyano, S., Keren, M., Herrmann, H., Cox, J. (Eds.), *Parenthood and Mental Health: A Bridge between Infant and Adult Psychiatry*. John Wiley and Sons Ltd, Chichester.
- Fullerton, J.T., Johnson, P.G., Thompson, J.B., Vivio, D., 2011. Quality considerations in midwifery pre-service education: Exemplars from Africa. *Midwifery* 27, 308–15. doi:10.1016/j.midw.2010.10.011
- Gupta, N., Alfano, M., 2011. Access to non-pecuniary benefits: does gender matter? Evidence from six low- and middle-income countries. *Hum. Resour. Heal.* [Electronic Resour. 9, 25. doi:<http://dx.doi.org/10.1186/1478-4491-9-25>
- Health Metrics Network (HMN), 2015. The Health Metrics Network Framework [WWW Document]. URL <http://www.who.int/healthmetrics/documents/framework/en/> (accessed 9.18.15).
- Hulton, L., Matthews, Z., Martin-Hilber, A., Adanu, R., Ferla, C., Getachew, A., Makwenda, C., Segun, B., Yilla, M., 2015. Using evidence to drive action: A "revolution in accountability" to implement quality care for better maternal and newborn health in Africa. *Int. J. Gynecol. Obstet.* 127, 96–101. doi:10.1016/j.ijgo.2014.07.002
- International Confederation of Midwives, 2015a. Education, regulation and association [WWW Document]. URL <http://www.internationalmidwives.org/what-we-do/education-regulation-association/> (accessed 6.26.15).
- International Confederation of Midwives, 2015b. Midwifery Services Framework: Guidelines for developing SRMNAH services by midwives. The Hague, Netherlands.
- International Confederation of Midwives, 2012. International Confederation of Midwives' model curriculum outlines for professional midwifery education [WWW Document]. URL <http://www.internationalmidwives.org/assets/uploads/documents/Model Curriculum Outlines for Professional Midwifery Education/ICM Resource Packet 2 Model Curriculum Outline NEW.pdf> (accessed 7.30.15).
- International Confederation of Midwives, 2011. Global Standards for Midwifery Education (2010), Education. International Confederation of Midwives.
- International Labour Office, 2014. World Social Protection Report 2014/15: Building economic recovery, inclusive development and social justice. Geneva.
- International Labour Organisation, 2012. Social Protection Floors Recommendation, 2012 (No. 202) [WWW Document]. URL http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100_INSTRUMENT_ID:3065524
- Jamison, E.A., Jamison, D.T., Hanushek, E.A., 2007. The effects of education quality on income growth and mortality decline. *Econ. Educ. Rev.* 26, 772–789. doi:10.1016/j.econedurev.2007.07.001
- Moran, A.M., Coyle, J., Pope, R., Boxall, D., Nancarrow, S.A., Young, J., 2014. Supervision, support and mentoring interventions for health practitioners in rural and remote contexts: an integrative review and thematic synthesis of the literature to identify mechanisms for successful outcomes. *Hum. Resour. Health* 12, doi:10.1186/1478-4491-12-10.
- Mugisha, J.F., 2009. Interaction of continuing professional development, organisational culture and performance in health service organisations: a concept paper 7, 51–59.
- National Collaborating Centre for Women's and Children's Health, 2014. Intrapartum care: Care of healthy women and their babies during childbirth: Clinical Guideline 190. London.
- Nove, A., Hulton, L., Martin Hilber, A., Matthews, Z., 2014a. Establishing a baseline to measure change in political will and the use of data for decision-making in maternal and newborn health in six African countries. *Int. J. Gynaecol. Obstet.* 127, 102–107.
- Nove, A., Matthews, Z., Neal, S., Camacho, A.V., 2014b. Maternal mortality in adolescents compared with women of other ages: Evidence from 144 countries. *Lancet Glob. Heal.*

- Office of the High Commissioner for Human Rights, World Health Organization, 2008. Human Rights, Health and Poverty Reduction Strategies. Geneva.
- Renfrew, M.J., McCormick, F.M., Wade, A., Quinn, B., Dowswell, T., 2012. Support for healthy breastfeeding mothers with healthy term babies. *Cochrane database Syst. Rev.* 5, CD001141–CD001141. doi:10.1002/14651858.CD001141.pub4
- Renfrew, M.J., McFadden, A., Bastos, M.H., Campbell, J., Channon, A.A., Cheung, N.F., Silva, D.R.A.D., Downe, S., Kennedy, H.P., Malata, A., McCormick, F., Wick, L., Declercq, E., 2014. Midwifery and quality care: findings from a new evidence-informed framework for maternal and newborn care. *Lancet* 384, 1129–1145. doi:10.1016/S0140-6736(14)60789-3
- Sandall, J., Bourgeault, I.L., Meijer, W.J., Schüecking, B.A., 2001. Deciding who cares: Winners and losers in the late twentieth century, in: De Vries, R., Benoit, C., van Teijlingen, E.R., Wrede, S. (Eds.), *Birth by Design: Pregnancy, Maternity Care and Midwifery in North America and Europe*. Routledge, London, pp. 117–138.
- Sandall, J., Soltani, H., Gates, S., Shennan, A., Devane, D., 2015. Midwife-led continuity models versus other models of care for childbearing women (Review). Oxford.
- Sandall, J., Soltani, H., Gates, S., Shennan, A., Devane, D., 2013. Midwife-led continuity models versus other models of care for childbearing women., *Cochrane Database of Systematic Reviews*. doi:10.1002/14651858
- Scheil-Adlung, X., 2013. Revisiting policies to achieve progress towards universal health coverage in low-income countries: Realizing the pay-offs of national social protection floors. *Int. Soc. Secur. Rev.* 66, 145–170.
- Tanahashi, T., 1978. Health service coverage and its evaluation. *Bull. World Health Organ.* 56, 295–303.
- Ten Hoop-Bender, P., de Bernis, L., Campbell, J., Downe, S., Fauveau, V., Fogstad, H., Homer, C.S.E., Kennedy, H.P., Matthews, Z., McFadden, A., Renfrew, M.J., Van Lerberghe, W., 2014. Improvement of maternal and newborn health through midwifery. *Lancet* 384, 1226–1235.
- The Partnership for Maternal Newborn and Child Health (PMNCH), 2011. A global review of the key interventions related to reproductive, maternal, newborn and child health (RMNCH). Partnership for Maternal, Newborn and Child Health, Geneva.
- UNESCO, 2014. Teaching and learning: Achieving quality for All.
- UNFPA, ICM, WHO, 2014. The state of the world's midwifery 2014: A universal pathway. A woman's right to health. United Nations Population Fund, New York.
- Victora, C.G., Horta, B.L., de Mola, C.L., Quevedo, L., Pinheiro, R.T., Gigante, D.P., Gonçalves, H., Barros, F.C., 2015. Association between breastfeeding and intelligence, educational attainment, and income at 30 years of age: a prospective birth cohort study from Brazil. *Lancet Glob. Heal.* 3, e199–e205. doi:10.1016/S2214-109X(15)70002-1
- White Ribbon Alliance, 2011. Respectful maternity care: The universal rights of childbearing women [WWW Document]. URL http://whiteribbonalliance.org.s112547.gridserver.com/wp-content/uploads/2013/05/Final_RMC_Charter.pdf (accessed 6.12.15).
- World Health Organization, 2014a. Health financing for universal coverage: Tools and guidance [WWW Document]. URL http://www.who.int/health_financing/tools/en/
- World Health Organization, 2014b. Midwifery educator core competencies. Geneva.
- World Health Organization, 2013. Universal health coverage: supporting country needs. WHO, Geneva.
- World Health Organization, 2012. Implementing Maternal Death Surveillance & Response (MDSR). Asia-Pacific Leadersh. Policy Dialogue Women's Child. Heal.
- World Health Organization, 2010a. WHO Technical Consultation on Postpartum and Postnatal Care, World Health Organization.
- World Health Organization, 2010b. Framework for Action on Interprofessional Education & Collaborative Practice.
- World Health Organization, 2010c. Increasing access to health workers in remote and rural areas through improved retention. World Health Organization, Geneva.
- World Health Organization, 2009. Global standards for the initial education of professional nurses and midwives. Geneva, Switzerland.

