



Developing a work/study programme for midwifery education in East Africa



Grace Edwards, RM, PhD Professor of Midwifery Education and Practice^{a,*},
 Kyakuwaire Hellen, RM, MSc Midwifery and Reproductive Health Instructor^a, Sharon Brownie,
 RM, DBA Dean of School^{b,2,3}

^a Aga Khan University School of Nursing and Midwifery, Plot 9/11 Colonel Muammar Gaddafi Road, PO Box 8842, Kampala, Uganda

^b Aga Khan University School of Nursing and Midwifery, Sunny Plaza, Wangapala Road, Nairobi, Kenya

ARTICLE INFO

Keywords:

Midwifery
 East Africa
 Nurse and Midwife education
 Maternal and child health

ABSTRACT

Background: there is extensive evidence to show that skilled midwifery care is crucial in reducing maternal deaths; however, in East Africa, the midwifery profession has been subsumed within the nursing role. This paper highlights issues in the preparation of skilled midwives in three East African countries, specifically, Uganda, Kenya and Tanzania and provides a case study description of a flexible work/study programme designed to develop skilled midwives to meet internationally regarded ICM competency standards in midwifery education and practice.

The model: a flexible, competency-based Bachelor's of Science in Midwifery programme (BScM) has been developed based on fifteen years' experience of running a Bachelor of Science in nursing programme. The new BSCM programme allows licensed diploma midwives the opportunity to study for two days a week towards a bachelor's degree in midwifery, whilst continuing to work and support their families. The model also provides education at degree level thus providing a sound platform for ongoing development of a cadre of midwifery leaders.

Conclusion: the BScM education model for working midwives builds on the success of the BScN work/study model in developing strong leadership, clinical and critical thinking competencies. The newly developed midwifery programme provides a pathway by which to increase the availability of skilled East African midwives educated to the Global Standards for Midwifery Education.

Background

Extensive evidence exists to show that skilled midwifery care is crucial in reducing maternal deaths (Campbell and Graham, 2006; Family Care International, 2014; Renfrew et al., 2014; The Partnership for Maternal, Newborn and Child Health, 2011; UNFPA, 2014). In East Africa, however, the Midwifery profession has been subsumed within the nursing role. Frequently midwives are prepared for midwifery practice in combined nursing and midwifery programmes with insufficient time allocation to develop the full range of competencies needed for skilled and safe midwifery practice. This paper describes current issues in the preparation of skilled midwives in three East African countries, specifically, Uganda, Kenya and Tanzania and provides a case study description of a flexible work/study programme designed to develop skilled midwives to meet the internationally regarded

International Confederation of Midwives Global Standards for Midwifery Education (ICM, 2010a, 2010b). Over half of all globally reported maternal deaths occur in sub-Saharan Africa. Estimates suggest that in 2015, approximately 303,000 women died during and following pregnancy and childbirth. Almost all of these deaths occurred in low-resource settings, and most of these deaths could have been prevented by access to improved quality of MCH care (Alkema et al., 2016; WHO, 2016a). One of the main challenges in providing quality midwifery care in East Africa is a lack of clearly defined midwifery standards and clear educational pathways to develop competent, educated midwives who can practice safely, lead the profession and influence the outcomes of midwifery care. The State of the World's Midwifery (UNFPA, 2014) has demonstrated that Midwives, who are educated and regulated to international standards, are competent to deliver 87% of the maternity needs of women in their care. ten Hoop-

* Corresponding author.

E-mail addresses: grace.edwards@aku.edu (G. Edwards), hellen.kyakuwaire@aku.edu (K. Hellen), Sharon.brownie@aku.edu (S. Brownie).

¹ Adjunct Professor School of Health and Society, University of Salford, Manchester UK.

² Adjunct Professor School of Medicine, Griffith University, Australia.

³ Research Associate & Member Oxford PRAXIS Forum, Green Templeton College, Oxford University, UK.

Table 1
Cadres of Nursing and Midwifery in Kenya, Tanzania and Uganda.

Programme	International Nomenclature	Programme duration (in Years)	Meet ICM standards?	Licence to practice
Enrolled Nurse	Certificate nurse	2 ½	No	Licensed Nurse conducts emergency deliveries
Enrolled Midwife	Certificate midwife	2 ½	No	Licensed Midwife
Enrolled Comprehensive Nurse	Certificate comprehensive nurse	2 ½	No	Licensed Nurse conducts emergency deliveries
Registered Nurse (direct)	Diploma Nurse	3	No	Licensed Nurse conducts emergency deliveries
Registered Nurse (Upgrading)	Diploma nurse	1 ½	No	Licensed Nurse conducts emergency deliveries
Registered Midwife (direct)	Diploma midwife	3	No	Licensed Midwife
Registered Midwife (extension/upgrading)	Diploma midwife	1 ½	No	Licensed Midwife
Registered Comprehensive Nurse (direct)	Diploma comprehensive nurse	3	No	Licensed Nurse conducts deliveries
Registered Comprehensive Nurse extension/upgrading)	Diploma comprehensive nurse	1 ½	No	Licensed Nurse conducts deliveries
Bachelors Midwife (upgrading)	Bachelors midwife	2 ½	Yes	Licensed Midwife
Bachelors Nurse (upgrading)	Bachelors midwife	2 ½	No	Licensed Nurse conducts emergency deliveries

Bender et al., (2014) assert that well educated and supported midwives who possess the necessary maternal and neonatal competencies are best placed to be the driving force behind improving the quality of care for women and their babies echo this.

Despite extensive efforts and recommendations to harmonise nursing and midwifery education across East Africa there is little evidence of harmonisation in practice (Nabirye et al., 2015). For example, Uganda currently has fifteen different cadres of nurses and midwives eligible for licencing and over 80 private and public institutions offering programmes with midwifery related content. Of these, five cadres are eligible to provide midwifery care. In Kenya, there are seven different cadres of licensed midwives; in Tanzania, there are four. Many of these cadres allow licencing as a nurse and a midwife, with varying degrees of in-house training midwifery theory and practice. Most education programmes involve a two and a half year certificate course leading to qualification as either an enrolled nurse, an enrolled midwife or an enrolled comprehensive nurse, all of which licence the practitioner as a nurse and midwife. (Uganda Nursing and Midwifery Council; Tanzania Nursing and Midwifery Council; Nursing Council of Kenya). Table 1 provides insight to the range of programmes currently offered. A review of the curricula for each course indicated that none of the programmes meet the minimum Global Standards for Midwifery Education recommended by the recommended by the International Confederation of Midwives (ICM), whose standards for education leading to midwifery licensure include a minimum of three years' full time study with no less than 40% theory and 50% practice (ICM 2010a, 2010b). Currently there are no midwifery educational standards or professional development requirements in place across East Africa. Following initial licensure, nurses and midwives can immediately establish private practice, with little or no regulatory oversight. This newly developed flexible two-day study programme is benchmarked against the recommendations laid down by Global Standards for Midwifery Education and aims to develop evidenced based midwifery leaders and clinical experts who are educated to bachelor's level,

The model and curriculum

The High-Level Commission on Health Employment and Economic Growth report (WHO 2016b) includes a key recommendation to ensure that all health worker education is of the highest quality that matches the health needs of populations and ensures that health workers can work to their full potential. Aga Khan University School of Nursing and Midwifery in East Africa is a not for profit university committed to supporting Uganda, Kenya, Tanzania and the East Africa region in its effort to ensure the provision of quality maternal child health services that are responsive to the needs of women and the community. Part of this commitment gives registered midwives the opportunity to work towards a bachelor's degree in midwifery, whilst continuing to work and support their families. The first flexible work/study programme was a Bachelor of Science in Nursing (BScN) offered for Ugandan nurses in 2000 and rolled out to Kenya and Tanzania in 2001. The programme has successfully graduated 2186 students and of these, a formal impact evaluation has found that the majority of graduates achieve promotion within two years of graduation and to date over 100 are currently employed in senior leadership positions within the East African nursing and health professional workforce. (Brownie et al., 2016).

The BScM work-study programme spans two and a half years, comprising of five 18-week semesters. The benefit of a degree level qualification is that it provides a platform for later career progression including a strong pathway for emerging midwifery leaders to progress to clinical, education, policy and/or research leadership roles. Content includes midwifery related and supporting courses - both theoretical and practical delivered via a unique blend of face-to-face and blended learning approaches for theory and practice. Students attend face-to-face classes two days per week. The Global Standards for Midwifery

Table 2
Bachelors of Midwifery Curriculum.

Post-RM BScM Curriculum Outline. X East Africa			
Course title	Theory component credits	Clinical /lab component credits	Total credits
Year I-Semester I- Fundamentals of Midwifery and Academic Progression			
Introduction to Midwifery and Women's Health	3.0	2.0	5.0
Life sciences	2.5	0.5	3.0
Computer Skills	1.0		1.0
Anatomy and Physiology	1.5		1.5
Academic Writing and Communication	1.5		1.5
Total Hours /credits	9.5	2.5	12.0
Year I-Semester II			
Normal Child-Bearing: Part I	1.0	4.5	5.5
Normal Child-Bearing: Part II	2.5	4.0	6.5
Normal Child-Bearing: Part III	2.5	4.0	6.5
Total Hours /credits	6.0	12.5	18.5
Year II-Semester III- Continuance of Normal Birth and Reproductive Care			
Normal Child-Bearing: Part IV	0.0	1.5	1.5
New Born Complications	2.0	3.0	5.0
Family Planning	2.0	2.0	4.0
Total Hours /credits	4.0	6.5	10.5
Year II-Semester IV – Advanced Practice and Emergency care			
Complications of Child-bearing: Part I	2.0	2.5	4.5
Complications of Child-bearing: Part II	2.0	2.5	4.5
Evidence Based Practice and Reproductive Epidemiology	3.0		3.0
Total Hours /credits	7.0	5.0	12.0
Year III-Semester V- Transition to Practice			
Integrated Professional Midwifery Practicum: Part I		4.0	4.0
Integrated Professional Midwifery Practicum: Part II		4.0	4.0
Total Hours /credits	0.0	8.0	8.0
Grand Total Hrs/credits	26.5	34.5	61.0

NB credit values match the credit framework utilised in the Higher Education Sector in Uganda and may require conversion in other contexts

ICM Benchmarked Specific Practice Requirements

- 100 antenatal examinations
- Conduct at least 40 deliveries
- Participation with breech deliveries (practice may be in a simulated situation)
- Performance of episiotomy and demonstrate competence in suturing
- Care for 40 women with high risk pregnancies
- 100 post-natal women and healthy newborn infant examinations
- Observation and care of the new-born requiring special care
- Care of women with pathological conditions in reproductive health

<http://internationalmidwives.org>

Education and the Essential Competencies for Basic Midwifery Practice form the foundation of the programme (ICM, 2010a, 2010b). The course outline and credit-based values are laid out in Table 2.

Programme sequencing is designed so that key elements of theory

and clinical practice are integrated to maximise learning within the same semester. Students demonstrate progression as each course builds on the knowledge and skills of the previous course. The students receive direct support and supervision from midwifery faculty and experienced clinical midwives while on clinical practice that is incorporated into the two days study. Evidence-based strategies and practices to reduce current levels of maternal and infant mortality in LMIC settings are embedded within the curriculum. Traditional midwifery education in East Africa involves large class sizes, (often greater than a hundred students to one lecturer), didactically taught with assessment of rote learning. Individual support and evaluation is virtually impossible. This newly designed flexible two day study programme is built on the principles of adult education. Class sizes are between fifteen and twenty-three students and evaluations include class discussions and presentations, reflective journals, critical incident and literature reviews and a final research proposal based on a clinical problem they have identified within their practice. In addition, clinical case reviews and objective structured clinical examinations are utilised to evaluate learning and clinical competence. Teaching methodology uses a problem solving, facilitative approach, encouraging critical thinking and reflection. This helps to support each student's individual learning and monitors progression against the learning outcomes. The first completed midwifery programme is currently being evaluated to explore the views of the students and faculty.

Conclusion

This BScM work-study midwifery education model builds on the success and 15-year experience of offering a BScN programme for working nurses. Making midwifery related higher education accessible to working midwives in East Africa midwifery provides a pathway by which to increase availability of skilled midwives trained to ICM standards. The University is currently responsive to requests from other education facilities in Africa to provide advice, faculty and curriculum development to build midwifery educational capacity in East Africa. This is especially important for working towards the Sustainable Development goals, particularly SDG 3.1 which highlights the goal for reducing maternal mortality to a worldwide rate of 70/100,000 livebirths. (United Nations, 2016). Improving Maternal and child health underpins the health of the population, and good quality midwifery education and practice is key. Creating an internationally benchmarked standard of midwifery education will help to raise the standards of practice with positive impact on current MCH-related outcomes. Improved education and practice will also strengthen a pathway for women to leadership roles raising voices in reproductive and maternal, neonatal, child and adolescent health while providing an increased scope of care and advocacy for women and families.

The first successful cohort of BScM qualified midwives will graduate in February 2018 and two more cohorts are in training. A third intake commenced August 2017 and midwifery student numbers are growing. The university is committed to contributing to human resource development to achieve international, regional and national MCH targets and will continue to support excellence in Midwifery Education in East Africa.

References

- Alkema, L., Chou, D., Hogan, D., Zhang, S., Moller, A.B., Gemmill, A., 2016. Global, regional, and national levels and trends in maternal mortality between 1990 and 2015, with scenario-based projections to 2030: a systematic analysis by the UN Maternal Mortality Estimation Inter-Agency Group. *Lancet* 387, 462–474, (2016).
- Brownie, S., Robb, W., Hunter, L., et al., 2016. Supporting Healthy Futures for East Africa: Celebrating 15 years of partnership in nursing education. School of Nursing and Midwifery in East Africa, X, Nairobi, Kenya. ISBN 978-9966-098-75-7 (http://www.akdn.org/sites/akdn/files/media/publications/2016_12_-_aku_ea_-_supporting_healthy_futures_for_east_africa.pdf).
- Campbell, O., Graham, J., 2006. Strategies for reducing maternal mortality: getting on with what works. *Lancet* 2006 (368), 1284–1299.

- 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. (<http://www.familycareintl.org/en/resources/publications/110>).
- ICM (2010a Amended 2013a) Global Standards for Midwifery Education (<http://internationalmidwives.org/what-we-do/education-core-documents/global-standards-education/>).
- ICM (2010b Amended 2013b) Essential competencies for basic midwifery practice 2010. Revised 2013. (<http://internationalmidwives.org/what-we-do/global-standards-competencies-and-tools.html>).
- Nursing Council of Kenya. (<http://nckkenya.com/edu/programmes/>) (Accessed 30 October 2017).
- Nabirye R., Lessabari S., Katungi B., Karani A., Katende G., 2015. Developing Regional Guidelines for the Harmonization of Nursing and Midwifery Education for Recognition in the EAC Partner States. (<https://www.researchgate.net/publication/281903765>).
- Renfrew, M.J., McFadden, A., Bastos, M.H., et al., 2014. Midwifery and quality care: findings from a new evidence-informed framework for maternal and newborn care. *The Lancet* 384, 1129–1145. [http://dx.doi.org/10.1016/S0140-6736\(14\)60789-3](http://dx.doi.org/10.1016/S0140-6736(14)60789-3).
- Tanzania Nursing and Midwifery Council. (<http://www.tnmc.go.tz/>) (Accessed 31 October 2017).
- ten Hoope-Bender, P., de Bernis, L., Campbell, J., et al., 2014. Improvement of maternal and newborn health through Midwifery. *The Lancet Series on Midwifery*. *The Lancet* 384, 1226–1235.
- The Partnership for Maternal, Newborn and Child Health, 2011. PMNCH Knowledge Summaries: #14 - Save lives: invest in midwives. (http://www.who.int/pmnch/topics/maternal/knowledge_summaries_14_midwives/en/).
- Uganda Nursing and Midwifery Council. (<http://unmc.ug/>) (Accessed 31 October 2017).
- UNFPA, 2014. *The State of the World's Midwifery (SoWMy): a Universal Pathway. A Woman's Right to Health* United Nations Publication, USA.
- World Health Organisation (2016a) Maternal mortality Fact sheet Updated November 2016 (<http://www.who.int/mediacentre/factsheets/fs348/en/>).
- World Health Organisation (2016b) Working for health and growth: investing in the health workforce. Report of the High-Level Commission on Health Employment and Economic Growth. (<http://www.who.int/hrh/com-heeg/reports/en/>).
- United Nations, 2016. Sustainable Development Goal 3. Ensure healthy lives and promote well-being for all at all ages. (<https://sustainabledevelopment.un.org/sdg3>).