Midwifery 29 (2013) e64–e72

Contents lists available at SciVerse ScienceDirect

Midwifery

journal homepage: www.elsevier.com/midw

Capacity building of skilled birth attendants: A review of pre-service education curricula

Adetoro A. Adegoke, RN, RM, RNE, BSc, MSc, PhD (Lecturer in Sexual and Reproductive Health)[a,*], Safiyanu Mani, RN, RNE, CHO, ADEM (Provost)[b], Aisha Abubakar, RN, RM, RNE, DPH (Midwifery Advisor)[c], Nynke van den Broek, MBBS, PhD (Reader)[d]

[a] *Maternal and Newborn Health Unit, Liverpool School of Tropical Medicine, Pembroke Place, Liverpool L3 5QA, UK*
[b] *Katsina State College of Health Sciences (COHESKAT), 49, Hassan Usman (WTC) Road, Katsina State, Nigeria*
[c] *Partnership for Reviving Routine Immunization in Northern Nigeria and Northern States Maternal, Newborn and Child Health Initiative (PRRINN-MNCH), 2 Mallam Bakatsine Street (off Dawaki Road) Nassarawa GRA, Kano, Nigeria*
[d] *Maternal and Newborn Health Unit, Child and Reproductive Health Group, Liverpool School of Tropical Medicine, Pembroke Place, Liverpool L3 5QA, UK*

ARTICLE INFO

Article history:
Received 22 November 2011
Received in revised form
19 June 2012
Accepted 20 August 2012

Keywords:
Midwifery education
Maternal mortality
Nigeria, skilled birth attendants
Skilled birth attendance

ABSTRACT

Objective: to assess the level, type and content of pre-service education curricula of health workers providing maternity services against the ICM global standards for Midwifery Education and Essential competencies for midwifery practice. We reviewed the quality and relevance of pre-service education curricula of four cadres of health-care providers of maternity care in Northern Nigeria.

Design and setting: we adapted and used the ICM global standards for Midwifery Education and Essential competencies for midwifery practice to design a framework of criteria against which we assessed curricula for pre-service training. We reviewed the pre-service curricula for Nurses, Midwives, Community Health Extension Workers (CHEW) and Junior Community Health Extension Workers (JCHEW) in three states. Criteria against which the curricula were evaluated include: minimum entry requirement, the length of the programme, theory: practice ratio, curriculum model, minimum number of births conducted during training, clinical experience, competencies, maximum number of students allowable and proportion of Maternal, Newborn and Child Health components (MNCH) as part of the total curriculum.

Findings: four pre-service education programmes were reviewed; the 3 year basic midwifery, 3 year basic nursing, 3 year Community Health Extension Worker (CHEW) and 2 year Junior Community Health Extension Worker (JCHEW) programme. Findings showed that, none of these four training curricula met all the standards. The basic midwifery curriculum most closely met the standards and competencies set out. The nursing curriculum showed a strong focus on foundations of nursing practice, theories of nursing, public health and maternal newborn and child health. This includes well-defined modules on family health which are undertaken from the first year to the third year of the programme. The CHEW and JCHEW curricula are currently inadequate with regard to training health-care workers to be skilled birth attendants.

Key conclusions: although the midwifery curriculum most closely reflects the ICM global standards for Midwifery Education and Essential competencies for midwifery practice, a revision of the competencies and content is required especially as it relates to the first year of training. There is an urgent need to modify the JCHEW and CHEW curricula by increasing the content and clinical hands-on experience of MNCH components of the curricula. Without effecting these changes, it is doubtful that graduates of the CHEW and JCHEW programmes have the requisite competencies needed to function adequately as skilled birth attendants in Health Centres, PHCs and MCHs, without direct supervision of a midwife or medical doctor with midwifery skills.

Background

Complications resulting from pregnancy and childbirth remain the leading cause of disability and death among women of reproductive age. Each year, 358,000 women die during pregnancy, childbirth and the puerperium. The majority of these deaths (99%; $n=355{,}000$) occur in developing countries (Hogan et al., 2010; WHO, 2010). About 80% of maternal deaths are due to direct obstetric conditions which are preventable if skilled care is available (Khan et al., 2006). It has been internationally agreed that provision of skilled birth attendance and ensuring availability of Essential (or Emergency) Obstetric Care (EOC) coupled with Newborn Care (NC) are the key strategies that if implemented

* Corresponding author.
E-mail addresses: a.a.adegoke@liverpool.ac.uk (A.A. Adegoke), abusufyanmani@yahoo.com (S. Mani), oakaisha@yahoo.com (A. Abubakar), vdbroek@liverpool.ac.uk (N. van den Broek).

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http://dx.doi.org/10.1016/j.midw.2012.08.009

will reduce maternal and neonatal mortality and morbidity (Safe Motherhood Interagency Group, 1997).

A skilled birth attendant (SBA) is defined as 'an accredited health professional (midwife, doctor, nurse) who has been educated and trained to proficiency in the skills needed to manage normal (uncomplicated) pregnancy, childbirth and the immediate postnatal period, and in the identification, management and referral of complications in women and newborn babies' (WHO, 2004). The proportion of births assisted by a SBA is one of the indicators to measure the achievement of Millennium Development Goal 5 (MDG 5), which aims to reduce maternal mortality by 75% by 2015 (Safe Motherhood Interagency Group, 1997; WHO, 1999).

Evidence has shown that in countries with a high percentage of births attended by SBA, maternal mortality is low (Campbell et al., 2005; Danel and Rivera, 2003; Ganatra et al., 1998; Graham et al., 2001; Pathmanathan et al., 2003; Seneviratne and Rajapaksa, 2000). However, many low and middle income countries are suffering from an acute shortage of the cadres of staff expected to provide skilled birth attendance including midwives, doctors and nurses. Although sub-Saharan Africa accounts for about a quarter of the global disease burden, it has only 3% of the health workforce, and, more than 4 million more health professionals are urgently needed (WHO, 2006). This includes an estimated 700,000 midwives and about 47,000 doctors with obstetric skills (WHO, 2005, 2006). Although the WHO in its definition gave examples of SBA to include Midwives, Doctors and Nurses with midwifery skills, there are currently a large number of different categories of staff providing maternity services in various countries (Adegoke and van den Broek, 2009; Adegoke et al., 2011, in press). While maternity care is provided by midwives, nurses and doctors in secondary and tertiary health facilities, at primary health-care level, maternity services are often mainly provided by other cadres of health workers including; Community Health Officers (CHOs) and Community Health Extension Workers (CHEW) in Nigeria; Clinical Officers in Kenya and Enrolled Nurse Midwives in Malawi.

As a result of the global shortage of health workers, it is important that all existing human resources are effectively employed, where possible 'upskilled', and new health workers with the required midwifery skills are trained, recruited, deployed and retained (WHO, 1999, 2004). Many countries have initiated efforts to increase both new and existing cadres of health-care providers to ensure improved coverage for maternal and newborn health. However, for most countries the extent of how 'skilled' existing health workers has not been rigorously evaluated and most of the training curricula in use have not been reviewed against standards set out to guide the education of such health-care providers (Cragin et al., 2007; Sherratt et al., 2006).

The International Confederation of Midwives (ICM) is a global association representing approximately 250,000 midwives in 108 member associations in 98 countries (ICM, 2012) The ICM is responsible for ensuring standards of midwifery especially as it relates to midwifery education, practice and regulation. In 2002, ICM developed the Essential competencies for basic midwifery practice (ICM, 2002). This guideline consists of 214 competencies considered essential to midwifery practice; SIX 'core' competencies which are further subdivided into 168 'basic' competencies and 46 'additional' competencies. Competencies refer to behaviour, knowledge, skills, and abilities that directly and positively impact the success of a professional. According to the ICM, 'basic competencies' are the basic knowledge, skills and behaviour required of a midwife for safe practice (ICM, 2002). The 'additional competencies' allow for flexibility in the training and practice of midwives in such a way as to ensure relevance to the local setting.

Although the competencies compiled in the guidelines developed by the ICM were primarily developed to guide the training and practice of midwives; in 2004, the ICM, WHO and the International Federation of Gynaecology and Obstetrics (FIGO) in a joint statement agreed that all skilled attendants should have 'core midwifery skills'. (WHO, 2004) These were at that time defined as the 'Essential competencies for basic midwifery practice' as developed by the ICM (ICM, 2002; WHO, 2004). The essential competencies for basic midwifery practice were updated in 2010 (ICM, 2010a) and currently consist of seven core competencies, 255 basic and 13 additional competencies which gives a total of 268 competencies (Fullerton et al., 2011a) (Box 1).

The education of the cadres of staff who are in principle expected to provide skilled birth attendance varies widely from country to country as well as within individual countries. Ensuring standardisation of training and practice of SBA has been seen as a top priority and led to the development of 'Global standards for pre-service education for nurses and midwives' by the WHO (WHO, 2009). Using these WHO Global Standards as a working document, ICM in 2010 published Global Standards for Midwifery Education (ICM, 2010b; Thompson et al., 2011).

The ICM Global Standards for Midwifery Education was developed to help set a benchmark for the training of midwives using globally agreed standards and norms. These standards are based on founding values and principles. The ten founding values and principles are: trust, quality improvement, integrity, life-long learning and autonomy; and focusing on essential principles to ensure standards in important strategic areas: minimum entry requirement, minimum length of training, minimum length of post-training programmes, self-evaluation and ensuring a curriculum that is fit-for-purpose. The ICM Global Standards for Midwifery Education consist of 37 main standards and 27 subareas (ICM, 2010b; Thompson et al., 2011) (Box 2).

Ensuring ICM recommendations are met and enabling the delivery of health services for mothers and their babies in a manner that takes into consideration the local setting and context is of critical importance. A global assessment of all midwifery curriculum by ICM with support from the United Nations Population Funds (UNFPA) is ongoing. Previous publications have reported the outcome of review of curricula in few countries, e.g. Ethiopia, Ghana, Malawi, Cambodia and Mexico (Cragin et al., 2007; Fullerton et al., 2011b; Sherratt, et al., 2006).

The focus of this study was to assess pre-service education in northern Nigeria where the estimated maternal mortality ratio is high; the proportion of births attended by skilled providers is low; and the need for an increase in skilled birth attendants is urgent.

Methods

Study setting

This study was conducted in three states in Northern Nigeria; Katsina and Zamfara states are located in the North-western region while Yobe state is located in the North-eastern region. The total population of Katsina is 5,801,584, for Zamfara 3,278,873 and Yobe 2,321,339 (National Population Commission, 2006).

Maternal and Child Health outcomes in Nigeria are among the worst in the world. The situation in northern Nigeria is a particular concern with maternal mortality estimated to be much higher than the national average. The main direct causes of maternal deaths in Nigeria relate to the absence of skilled delivery care and include haemorrhage, infection, unsafe abortion, obstructed labour and eclampsia. According to the 2008 National Demographic and Health Survey (NDHS), overall, 35% of deliveries are attended by a SBA in Nigeria. The proportion of women who