Establishing midwifery in low-resource settings: Guidance from a mixed-methods evaluation of the Afghanistan midwifery education program

Partamin Zainullah, MD, MSc (Technical Director Jhpiego Afganistan)[a,*],
Nasratullah Ansari, MD, MPH (Country Director Jhpiego Afghanistan)[a], Khalid Yari, BBA
(Planning, Monitoring and Evaluation Officer UNICEF)[b], Mahmood Azimi, BA (PMIS
Technical Officer MSH)[c], Sabera Turkmani, BSc, MPH (Reproductive Health Advisor Jhpiego
Afghanistan)[a], Pashtoon Azfar, BA, Diploma Nurse-Midwife (Regional Midwife Advisor
ICM)[d], Amnesty LeFevre, PhD, MHSc (Assitant Scientist JHSPH)[e], Jaime Mungia, MPH
(Senior Program Officer Jhpiego)[f], Rehana Gubin, JD, MPH (Technical Advisor for Global
Health Practice and Policy Research Jhpiego)[f], Young-Mi Kim, EdD, MS (Senior Monitoring
and Evaluation Advisor Jhpiego)[f], Linda Bartlett, MD, MHSc (Associate Scientist JHSPH)[e]

[a] Jhpiego, House #107, Street 3, Ansari Watt, Shar-e-Naw, District 4, Kabul, Afghanistan
[b] UNICEF, Jalalabad Road, Paktiakot, UN Compound, Kabul, Afghanistan
[c] MSH, House @ 24, Ayubkhan Mena, Darulaman Road, Kabul, Afghanistan
[d] International Confederation of Midwives, GK2 E Block 62, New Delhi, India
[e] Department of International Health, Johns Hopkins Bloomberg School of Public Health, Johns Hopkins University, 615 N. Wolfe Street,
Baltimore, MD 21205, USA
[f] Jhpiego, 1615 Thames Street, Baltimore, MD 21231, USA

ARTICLE INFO

ABSTRACT

Background: the shortage of skilled birth attendants has been a key factor in the high maternal and newborn mortality in Afghanistan. Efforts to strengthen pre-service midwifery education in Afghanistan have increased the number of midwives from 467 in 2002 to 2954 in 2010.
Objective: we analyzed the costs and graduate performance outcomes of the two types of pre-service midwifery education programs in Afghanistan that were either established or strengthened between 2002 and 2010 to guide future program implementation and share lessons learned.
Design: we performed a mixed-methods evaluation of selected midwifery schools between June 2008 and November 2010. This paper focuses on the evaluation's quantitative methods, which included (a) an assessment of a sample of midwifery school graduates ($n=138$) to measure their competencies in six clinical skills; (b) prospective documentation of the actual clinical practices of a subsample of these graduates ($n=26$); and (c) a costing analysis to estimate the resources required to educate students enrolled in these programs.
Setting: for the clinical competency assessment and clinical practices components, two Institutes for Health Sciences (IHS) schools and six Community Midwifery Education (CME) schools; for the costing analysis, a different set of nine schools (two IHS, seven CME), all of which were funded by the US Agency for International Development.
Participants: midwives who had graduated from either IHS or CME schools.
Findings: CME graduates ($n=101$) achieved an overall mean competency score of 63.2% (59.9–66.6%) on the clinical competency assessment compared to 57.3% (49.9–64.7%) for IHS graduates ($n=37$).

* Corresponding author.
E-mail addresses: partamin@jhpiego.org, partaminm@gmail.com (P. Zainullah), Nasrat.Ansari@jhpiego.org (N. Ansari), kyari@unicef.org (K. Yari),
mazimi@msh.org (M. Azimi), sabera_t@hotmail.com (S. Turkmani), icmazfarp@gmail.com (P. Azfar), alefevre@jhsph.edu (A. LeFevre), Jaime.Mungia@jhpiego.org (J. Mungia),
Rehana.Gubin@jhpiego.org (R. Gubin), Young-Mi.Kim@jhpiego.org (Y.-M. Kim), lbartlet@jhsph.edu (L. Bartlett).

Reproductive health activities accounted for 76% of midwives' time over an average of three months. Approximately 1% of childbirths required referral or resulted in maternal death. On the basis of known costs for the programs, the estimated cost of graduating a class with 25 students averaged US$298,939, or US$10,784 per graduate.

Key conclusions: the pre-service midwifery education experience of Afghanistan can serve as a model to rapidly increase the number of skilled birth attendants. In such settings, it is important to ensure the provision of continued practice opportunities and refresher trainings after graduation to aid skill retention, a co-operative and supportive work environment that will use midwives for the reproductive health skills for which they were trained, and selection mechanisms that can identify the most promising students and post-graduation deployment options to maximise the return on the substantial educational investment.

Introduction

In 2002, the maternal mortality ratio in Afghanistan was estimated as high as 1600–2200 per 100,000 live births (Bartlett et al., 2005). In 2003, reported national antenatal care (ANC) and skilled birth attendance (SBA) rates were 16% and 14%, respectively, and 8% for ANC and 7% for SBA in rural areas (United Nations Children's Fund, 2003). The national infant mortality rate was 115 per 1000 live births (United Nations Children's Fund, 2003). According to the Human Resource Policy of Afghanistan's Ministry of Public Health (MoPH), only 467 midwives were employed by the end of 2002 (Transitional Islamic Government of Afghanistan, Ministry of Public Health, 2002) to serve an estimated population of 24.5 million (United Nations Children's Fund, 2003).

As a result, major donors – the United States Agency for International Development (USAID), the World Bank, and the European Commission – supported the MoPH to strengthen two types of pre-service midwifery education programs: Institutes of Health Sciences (IHS) schools to place graduates in hospitals, and Community Midwifery Education (CME) schools to place graduates in rural clinics. IHS schools recruited 12th grade graduates who had passed the National Concours Examination, whereas CME schools admitted 9th to 12th grade graduates who were nominated by community leaders and selected by a committee comprised of local MoPH staff and representatives from implementing organisations following the successful completion of entrance tests. The CME selection committee guaranteed that graduates would be deployed in the local health facility; IHS schools did not offer pre-arranged deployment opportunities. IHS schools typically enrolled more students in each program than was recommended, whereas the CME schools typically enrolled one batch per year.

The curriculum for both programs adhered to international standards by requiring that graduates must achieve the core competencies recommended by the International Confederation of Midwives (ICM). Originally, schools under both programs completed the educational programs at an intensified pace of six days per week for six hours per day for 18 months, with the IHS schools taking a three-month winter break each year to result in a 24-month program, whereas CME schools took no breaks and completed the course in 18 months. In 2010, partly due to the preliminary results from this evaluation, the curriculum for the CME program was extended to 24 months. Graduates from both programs were licensed by the General Directorate of Human Resources of Ministry of Public Health. In the absence of a regulatory framework most of the graduates are also members of the Afghan Midwifery Association (AMA) – the national professional organisation.

By 2010, there were 34 schools serving all 34 provinces and a total of 2954 midwives, approximately 1600 of whom were deployed, as shown in Fig. 1 (Afghanistan Midwifery and Nursing Education Accreditation Board, 2012). At the request of the MoPH, we designed a mixed-methods evaluation from June 2008 to November 2010 to identify the strengths and weaknesses of eight of the schools. We describe here the results of two of the evaluation's research questions: whether graduates retained 100% competency in key clinical skills after graduation, as measured by a clinical competency assessment, and whether the clinical practices of graduates after deployment, as recorded in their clinical registers, focused on the skills for which they were trained. We also report the results of a costing analysis that assessed the resources invested in the original 18-month course of study and extrapolated them to the new 24-month course of
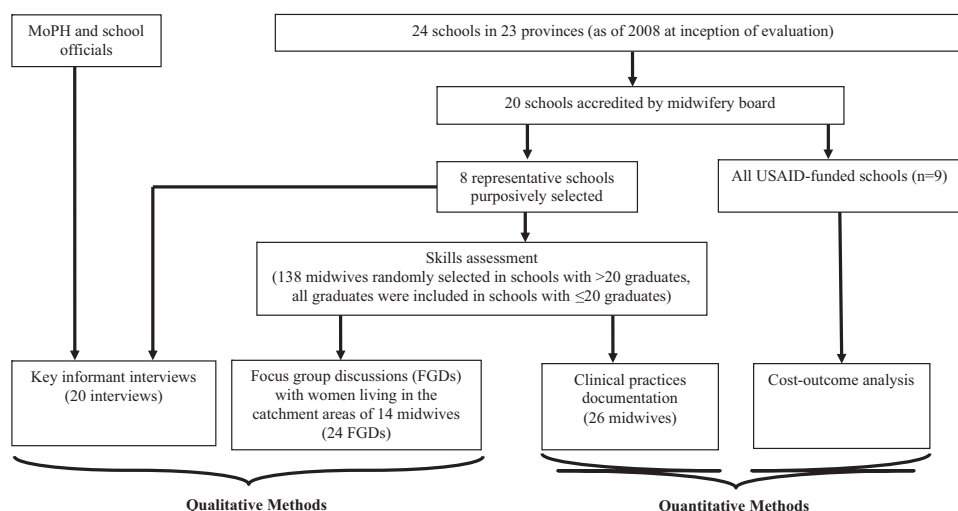

Fig. 1. Study design: sampling strategy and data collection.