

## **221: ARE SKILLED BIRTH ATTENDANTS REALLY SKILLED? A MULTI-COUNTRY STUDY OF SBA COMPETENCE**

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### **Objective:**

Develop and test a valid and practical method for measuring the competency of skilled birth attendants in developing countries; evaluate competence of SBAs in 4 study countries.

### **Method:**

Increasing the number of pregnant women delivered by a skilled birth attendant (SBA) is a major objective of the Safe Motherhood movement worldwide. Percentage of women delivered by an SBA is now widely accepted as a proxy indicator for reducing maternal mortality. However, there is little data on the competency of SBAs at managing labor and delivery, immediate postpartum care or common life-threatening obstetric complications. Further, there is little literature about methods for evaluating SBA competence in general, outside the context of a specific training program.

We defined competence as the possession of the knowledge and skills necessary to comply with predefined clinical standards. As key competencies, we used skills identified by the Safe Motherhood Interagency Working Group.<sup>1</sup> For clinical standards, we used the WHO guidelines on Integrated Management of Pregnancy and Childbirth (IMPAC).<sup>2</sup> To measure knowledge, we applied a 54-question test covering labor and delivery, immediate postpartum care, hemorrhage, eclampsia and sepsis. This test incorporated IMPAC and country-level standards plus material developed by MotherCare and the Maternal and Neonatal Health program.<sup>3-5</sup> We adapted two case studies to test competency at using a partograph for clinical decision making. Finally, we used anatomical models to test skills related to neonatal resuscitation, manual removal of placenta, bimanual uterine compression, and IV insertion.

We pilot-tested these instruments in Quito, Ecuador in November 2001. After extensive revision, we used the instruments to measure SBA competence in Benin, Ecuador, Jamaica and Rwanda between February and June 2002.

### **Results:**

We tested 164 doctors, midwives and nurses from 17 hospitals and 4 clinics. Mean overall knowledge scores ranged from 46.6% in Rwanda to 59.6% in Ecuador. Mean overall skills scores ranged from 41.8% in Ecuador to 54.4% in Benin. Both the knowledge and the skills tests took longer than expected to administer. There were few differences between different types of provider (doctor, nurse, midwife) or by location (facility- vs. community-based). Specific areas of knowledge and skill showed greater variation.

### **Conclusions:**

Results indicate that SBA competence levels are generally low. Two key life-saving skills, active management of 3<sup>rd</sup> stage labor and bimanual uterine compression, are rarely taught and rarely performed.

While our competency measurement instruments worked well in general, they need some refinement before they could be applied on a large scale. Both knowledge and skills tests should be shortened. A group of expert clinicians should be employed to help fine-tune measurement methods. Senior clinicians and health program managers in developing countries could apply these methods without assistance from international consultants, but donor support would be needed to make anatomical models available at the district or health facility level.

Appropriately refined, our methods for measuring SBA competence could help improve targeting of scarce training and supervisory resources. They could also serve as one key component of a more comprehensive effort to improve quality of maternal and obstetric care in developing country settings.

1. Graham WJ, Bell JS, Bullough CH. Can skilled attendance at delivery reduce maternal mortality in developing countries? In: De Brouwere V, Van Lerberghe W, eds. *Safe Motherhood Strategies: a Review of the Evidence*; Studies in Health Services Organisation and Policy, 17. Antwerp: ITGPress, 2001:97-130.

2. WHO, UNFPA, UNICEF, World Bank. IMPAC - Managing Complications in Pregnancy and Childbirth: A guide for midwives and doctors. Vol. WHO/RHR/00.7. Geneva: World Health Organization, Department of Reproductive Health & Research, 2000.
3. Maternal and Neonatal Health Program. MNH Program: Evaluation of MNH Clinical Training for Service Providers (DRAFT). Baltimore, MD: JHPIEGO, 2001:81.
4. McDermott J, Beck D, Buffington ST, et al. Two models of in-service training to improve midwifery skills: how well do they work? *J Midwifery Women's Health* 2001; 46:217-25.
5. McDermott J, Beck D, Dwi Yani F I, Soraya I, Muslim PA, et. al. Training Evaluation Report: MotherCare/Indonesia. Arlington, VA: MotherCare, John Snow, Inc., 1999:126.