



TECHNICAL BRIEF

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WHICH CHILDBIRTH ATTENDANTS ARE “SKILLED”?: ISSUES AND STRATEGIES IN ASSESSING PROVIDER SKILLS

One of the most critical interventions identified for safe motherhood is ensuring that a health worker with midwifery skills is present at every birth and has the essential obstetric equipment, supplies, and drugs needed to provide skilled care. Ensuring that all women have access to skilled care is particularly critical because most obstetric complications are difficult to predict, and any woman can suddenly, without warning, develop a life-threatening emergency.

With funding from the Bill and Melinda Gates Foundation, Family Care International (FCI) launched the Skilled Care Initiative, a multi-faceted, five-year project designed to increase the number of women who receive skilled care before, during, and after childbirth. The project (see box, right) is implemented in four rural, underserved districts in Burkina Faso, Kenya, and Tanzania.

To provide good-quality skilled care during pregnancy and childbirth, skilled attendants must have a range of skills and perform them competently. This technical brief reviews the international definition of skilled birth attendants and describes the challenges of matching internationally defined criteria with the job description and de facto competencies of specific cadres of maternal health providers at the country level. The brief also provides an overview of approaches for gauging provider competencies and describes FCI's experience in the three SCI countries.

SAVING WOMEN'S LIVES: THE SKILLED CARE INITIATIVE (SCI)

The Skilled Care Initiative aims to ensure that all women have access to high-quality, skilled care so that pregnancy-related problems can be detected and treated before they become fatal. The Initiative is working in selected districts in Burkina Faso, Kenya, and Tanzania to:

- **strengthen** government commitment and policies to increase skilled care during childbirth,
- **improve** provider performance through training and supervisory support for midwives and other skilled health professionals,
- **provide** essential equipment and supplies along with inputs to strengthen routine maintenance and resupply,
- **reinforce** linkages for referral, and
- **increase** utilisation of services by supporting behaviour change interventions in the community.

WHO IS THE SKILLED ATTENDANT?

A skilled attendant is a health professional—such as a midwife, doctor, or nurse—who has been educated and trained to proficiency in the skills needed to manage normal (uncomplicated) pregnancies, childbirth, and the immediate postnatal period, and to identify, manage, or refer women and newborns with complications. Recognising that the qualifications attributed to health providers not only vary between countries but can change over time within a single country, the World Health Organization (WHO), the International Confederation of Midwives (ICM), and the International Federation of Gynaecology and Obstetrics (FIGO) have developed a competency-based definition of a skilled attendant.¹ A skilled attendant should be able to do the following:

- **Manage** normal labour and delivery;
- **Recognise** the early signs of major obstetric complications;
- **Perform** essential life-saving interventions and refer as appropriate (see box, next page); and
- **Provide** high-quality, culturally appropriate, and considerate care, including follow-up and linkages with other services.

Traditional birth attendants (TBAs) are not defined as skilled attendants because they lack the capacity to perform life-saving interventions.

Traditionally, in many settings, mid-level providers such as midwives were not trained or authorised to

¹ *Making pregnancy safer: the critical role of the skilled attendant.* A joint statement by WHO, ICM, & FIGO. Geneva: WHO, 2004.

perform some of the procedures required of a skilled attendant, such as management of complications of incomplete abortion, vacuum extraction, and manual removal of the placenta. However, experience and evidence from a variety of contexts has helped forge a global consensus that with appropriate training, equipment, supplies, and support, mid-level providers can safely and competently perform these life-saving procedures. In view of the shortage of physicians in most developing country settings—as well as their concentration in urban areas far from the communities where the majority of women live—there is a clear rationale for promoting the role of non-physician providers and strengthening health systems to ensure that skilled care is available and accessible for all women.

APPLYING INTERNATIONAL DEFINITIONS TO LOCAL CONTEXTS: ASSESSMENT OF PROVIDER KNOWLEDGE AND SKILLS

At the country level, it often proves challenging to categorise cadres of maternity care providers as “skilled” or not: many pre-service training programmes for midwives and related cadres (e.g., nurses, auxiliary midwives) cover some—but not all—of the core competencies of a skilled attendant. The content and standards of pre-service training programmes vary greatly from one country to another, and can vary within a country over time. Moreover, in many countries, mid-level providers such as nurses and midwives learn a variety of skills after completing their basic training, either through on-the-job experience or through continuing education opportunities (in-service training). As a result, basic training alone may not be a sufficient guide for determining which cadres can be considered

skilled attendants; programme planners may also need to appraise the actual knowledge and competencies of maternity care providers to determine which cadres are fully qualified skilled attendants and which have the potential to be upgraded to this status.

The ability to identify those providers who meet the criteria for “skilled”—or whose skills can be upgraded to do so—is a critical step in any strategy to remedy pressing shortfalls in obstetric care coverage. Assessing provider knowledge and competencies related to obstetric care presents some unique challenges, however, because of the unpredictable nature of most obstetrical events. Various approaches and methods have been tried to gauge provider knowledge and skills related to obstetric care, including:

Observation of maternity care providers during actual care provision yields the most reliable assessment of clinical and interpersonal skills. However, in many rural settings, low facility caseloads make it difficult to ensure that observation visits coincide with normal deliveries, let alone obstetric complications. A lengthy stay may be required to allow for observation of an adequate range of skills. Moreover, observation of providers’ routine caregiving may give a “best-case” picture, particularly in the area of interpersonal communication. Training and deploying obstetric mystery clients could offer an effective means to evaluate providers’ adoption of certain elements of quality maternity care—compassionate treatment of clients, for example—and even, given appropriate selection and training, to assess some technical aspects of care provision, such as adherence to protocols. However, a mystery client approach is expensive to implement on a large scale,

ESSENTIAL LIFE-SAVING SKILLS FOR SKILLED ATTENDANTS AT PRIMARY LEVELS INCLUDE:

- Diagnose and manage causes of antepartum and postpartum haemorrhage, including stabilisation and referral, as well as the performance of manual procedures (manual removal of placenta, bimanual compression of the uterus);
- Prevent infection by ensuring safe, clean delivery, and administer antibiotics in case of sepsis;
- Identify elevated blood pressure and proteinuria as signs of eclampsia, provide emergency care, and refer. In case of eclampsia during labour, administer anti-convulsants, stabilise, and refer;
- Use a partograph, identify prolonged or obstructed labour, and take appropriate, timely action;
- Manage unsafe abortion and provide postabortion counselling, including on family planning;
- Avert neonatal deaths through tetanus toxoid immunisation during pregnancy, newborn resuscitation, prevention of neonatal hypothermia, prevention of nosocomial infections, and support for early and exclusive breastfeeding; and
- Diagnose and treat conditions that can complicate pregnancy and childbirth (e.g. anaemia, malaria, HIV/AIDS).

(Based on Safe Motherhood Inter-Agency Group. *Skilled care during childbirth information booklet*. New York: Family Care International, 2002.)

and might prove ineffective in evaluating clinical practices. Certain manual procedures and skills can also be observed using pelvic models or childbirth simulators. While the inanimate models have obvious limitations, they do allow for standardised assessments and for comparisons over time.

Written knowledge tests can help evaluators gauge providers’ theoretical knowledge about obstetric condi-

SKILLED ATTENDANTS IN THE SCI PROJECT COUNTRIES

CADRE	CAPACITY BY TRAINING	CAPACITY BY HANDS-ON EXPERIENCE	POTENTIAL TO QUALIFY AS SKILLED ATTENDANT?	NUMBER AVAILABLE IN PROJECT DISTRICT(S) ¹
TANZANIA				
Assistant Medical Officer	YES	YES	YES	4
Clinical Officer	YES	YES	YES	20
Public Health Nurse A	YES	YES	YES	3
Registered Nurse	YES♦	YES	YES	2
Enrolled Nurse-Midwife	YES♦	YES	YES	12
Public Health Nurse B	YES♦	YES♦	YES	5
Maternal and Child Health Aide	YES♦	YES♦	YES♦	24
			(all being upgraded to PHN-B)	
BURKINA FASO				
Midwife	YES	YES	YES	2
Registered Nurse	YES♦	YES♦	YES	11
Licensed Nurse	YES♦	YES♦	YES♦	9
Auxiliary Midwife	YES♦	YES♦	YES♦	9
Itinerant Health Worker	NO	SOME	NO	13
Matronne	NO	SOME	NO	3
KENYA				
Registered Clinical Officer	NO	SOME	NO	38
Registered Nurse-Midwife	YES	YES	YES	0
Registered Community Health Nurse	YES	YES	YES	23
Enrolled Nurse-Midwife	YES	YES♦	YES	0
Enrolled Community Health Nurse	YES	YES▲	YES	250
Enrolled Nurse ²	NO	SOME	NO	6

♦ all essential obstetric care (EOC) functions except vacuum extraction and MVA.

▲ all EOC functions except vacuum extraction.

¹ Kenya figures reflect staffing in two project districts, whereas Burkina Faso and Tanzania figures are for one district only.

² The cadre of Enrolled Nurse has been phased out in Kenya, and most have retired or been upgraded.

tions and procedures. However, they provide less insight into their practical skills and problem-solving abilities. In addition, among staff who have been working in clinical settings for many years and who are no longer accustomed to test-taking, written tests may be challenging to administer and may underestimate providers' actual knowledge and capabilities.

Self-reports of recent practice are used to assess the extent to which providers have recent experience performing various skills and procedures. This information is useful but must be interpreted with caution because there are a variety of reasons why maternity care providers may not have used certain skills, even if they have been trained to competency. For example, they may not have the requisite equipment or drugs to perform a procedure, or they may not have the support of their supervisors. In addition, as noted above, many obstetric complications are relatively rare events, and providers may lack recent practice if no such cases have presented at their facility.

Spontaneous recall exercises can be used to assess providers' ability to cite, unprompted, specific content of routine maternal health services, as well as appropriate steps for diagnosing and managing obstetric complications. The limitation of this method is that a respondent's failure to report on a particular practice may not necessarily mean that s/he is unfamiliar with it, or that s/he does not use it. A provider may neglect to mention certain steps that are so basic that they are taken for granted—or may not mention steps that are omitted because of equipment shortages.

Given the challenges associated with each of the methodologies, it is generally advantageous to rely on several such approaches, weighing the type of information that can be gathered against other practical factors such as the time, funds, and human resources available for data collection.



Observation of provider—client interaction.

IDENTIFYING SKILLED ATTENDANTS AND GAUGING THEIR SKILLS: FCI'S EXPERIENCE

In order to develop intervention strategies for the Skilled Care Initiative in Burkina Faso, Kenya, and Tanzania, FCI determined which cadres in each country could be considered skilled attendants according to the international definition. To do so, a review of the competencies covered during basic training was supplemented by structured interviews with all available maternity care providers in each project district to gather information on their basic and in-service training and recent (within the past three months) practice of various obstetric care procedures, as well as their ability to spontaneously recall essential elements of routine maternal health services and steps for diagnosing and managing obstetric complications.

As shown in the table in the insert, there are several cadres in each country who have many or most of the competencies of a skilled attendant, and thus who can potentially be upgraded to fully-qualified skilled attendants if given appropriate training and support.² Some cadres do not meet the international criteria because their basic training omitted certain skills such as manual vacuum aspiration (MVA) or vacuum extraction—procedures that have been traditionally viewed as the domain of physicians. However, most of these cadres could potentially be trained and promoted to fully qualified skilled attendants. In the specific case of Auxiliary Midwives and Maternal and Child Health Aides (MCH Aides), who respectively handle the majority of deliveries in Burkina Faso and a substantial proportion in Tanzania, FCI decided to invest in strengthening their ability to conduct normal deliveries and perform all essential competencies of a skilled attendant, with the exception of manual vacuum aspiration and vacuum extraction. (For an overview of the interventions to strengthen provider skills, see the SCI paper *Strengthening Provider Competencies and Performance in Skilled Care*). Thus, by the letter of the definition these cadres are not skilled attendants, but in practice their only skill gap is in vacuum extraction and MVA. In Burkina Faso, in part as a result of FCI's inputs, the government authorises maternal health providers to perform all procedures for which they are trained to proficiency and have an adequately equipped

² Ibid.

environment.³ At the same time, FCI has been working with national governments to strengthen commitment and develop long-term strategies towards increasing the number of fully-skilled attendants.

Key findings from FCI's baseline assessment of provider training and competencies include:

- **Recent trainings and updates:** The World Health Organization recommends that maternity care providers receive refresher training or updates in midwifery every three to five years. However, in the three project countries, provider interviews revealed that on average, maternity care providers had been in service for 11 years since completing their basic training, and 36% had never received any refresher training in midwifery since they completed their basic training.
- **Antenatal care provision:** Although most pregnancy- and delivery-related complications cannot be reliably predicted, high-quality antenatal care during pregnancy is recognised as an important opportunity for promoting health and education, instituting prophylactic measures for disease prevention, managing existing diseases and other health conditions, and detecting and managing maternal health complications. Generally, in all three countries, the primary gaps in the content of antenatal care were in areas such as diagnostic testing, prophylactic treatment, and client counselling. For example, while the majority of providers routinely performed abdominal examinations, took client history, and counselled clients about diet and nutrition during pregnancy, much lower proportions mentioned checking blood pressure, screening for proteinuria, testing for anaemia, or providing preventive measures such as malaria prophylaxis⁴ and iron/folate supplements—elements of antenatal care that require certain equipment and commodities to be available. In addition, relatively few providers reported counselling clients on birth preparedness or the benefits of delivering in a health facility.
- **Routine delivery care practices:** Extensive evidence from around the world shows that use of the partograph to monitor labour progress and active management of the third stage of labour can ensure that life-saving action is taken in a timely manner and help prevent complications. In all three countries, service delivery guidelines and protocols stipulate that the partograph should be used to monitor labour. However, only 17% to 38% of maternity care providers reported any recent experience (within three months) using the partograph. Where such forms were available for review, they revealed lapses in patient monitoring and care. In Kenya and Tanzania, the majority of providers routinely performed active management of the third stage of labour (81% and 73%). In Burkina Faso, however, only 13% of providers had recent experience actively managing labour.
- **Management of obstetric complications:** As noted above, skilled attendants should be able to diagnose a range of obstetric complications and perform procedures to manage or stabilise (and refer) emergency complications. Overall, the assessment showed that few maternity care providers could spontaneously recall all appropriate steps involved in diagnosing and managing obstetric emergencies such as obstructed or prolonged labour, pre-eclampsia/eclampsia, postpartum haemorrhage, postpartum sepsis, and abortion complications. Generally, providers based at hospitals were more knowledgeable about diagnosing and managing complications than staff at mid- and lower-level facilities—a finding that undoubtedly reflects more frequent exposure to such cases, as well as the fact that hospitals are better equipped than lower-level facilities with the equipment, drugs, and supplies needed to carry out recommended procedures.
- **Maternal postpartum care experience:** The period immediately following delivery is a time of vulnerability to several life-threatening obstetric complications; postpartum care should therefore include, in addition to newborn immunisations, the identification and management of maternal health problems. In all three countries, maternity care providers were generally not aware of the importance of screening new mothers for potential complications. Postpartum care emerged as one of the most neglected areas of maternal health care.

The findings from the baseline survey helped FCI tailor a number of key strategies in the SCI project, including training programmes to update provider obstetric care knowledge and skills, as well as reference materials and job aids to reinforce the training content. In addition, the findings have helped fuel national-level discussions about the definitions, training, and skills of various cadres of providers, and encouraged policy changes regarding what providers are authorised to do.

³ For all three countries, medical doctors and obstetricians/gynaecologists also have the capacity to be a skilled attendant by basic training but are not included in this table.

⁴ In Tanzania, Maternal and Child Health Aides are not legally authorised at present to perform manual vacuum aspiration, manual removal of the placenta, and vacuum extraction, regardless of competency.

⁵ Notably, in Burkina Faso, the majority of maternity providers reported giving malaria prophylaxis to antenatal clients, unlike in Kenya and Tanzania, where the drugs are frequently out of stock.

