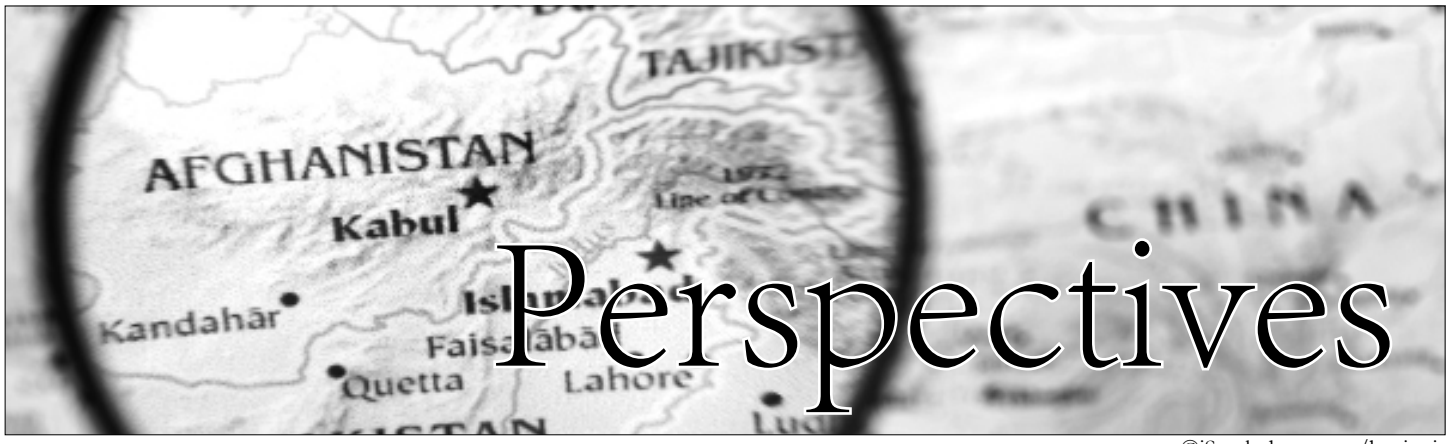

Challenging the Quantity vs. Quality Mentality

A Critique of Skilled Birth Attendant Management in Afghanistan

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Abstract

The health infrastructure of Afghanistan has been severely damaged by years of war and political instability, leading to inadequate provision of basic maternal health services to Afghan women. Skilled birth attendance has risen from an estimated 13% in 2003 to 14% in 2011, but this rate remains low from a global perspective (Sundarem, 2009; UNFPA, 2011). In developed countries, skilled birth attendants (SBAs) assist 99% of births, and only five countries, including Afghanistan, have rates that fall below 20% (World Health Organization, 2008). Currently, Afghanistan's Ministry of Public Health and other international actors have various policy recommendations for improving skilled birth attendance for Afghan women. In past literature, policy recommendations have focused primarily or even entirely on increasing the accessibility of these attendants. Less attention has been given to improving the quality of skilled maternal care delivery. If addressed at all, issues of quality of care have been in large part viewed as secondary in urgency to issues of access in Afghanistan (Koblinsky, 2006). In this paper, I analyze SBA management in Afghanistan using a framework outlined in Kim and Porter's "Redefining Global Health Care Delivery" (2010) to challenge the prevailing rhetoric that increasing patient care value necessarily compromises coverage of pregnant Afghan women. This framework leads to policy suggestions that are in line with an innovative "diagonal approach" that works to increase value of care in conjunction with access, even in resource-poor settings (Kim & Porter, 2010).

A new framework for SBA management

Despite years of health system reconstruction following the fall of the Taliban in 2001, maternal health in Afghanistan remains one of the poorest in the world. While recent actions have been taken by the Afghan Ministry of Public Health in coordination with the United Nations Population Fund (UNFPA) and United Nations Children's Fund (UNICEF) to improve health care services, maternal mortality rates remain problematic. UNFPA reports a maternal mortality ratio of 1,400 deaths per 100,000 live births in 2011—a statistic that falls short of the 2015 Millennium Development Goal 5 to make substantial improvements in maternal health (UNFPA, 2011).

A wide range of actors involved in the reconstruction of Afghanistan's health care system, including global health advocate Lynn Freedman, UNICEF, partnered universities and the Afghan Ministry of Public Health, tend to support an approach to decreasing maternal mortality rates that places great emphasis on volume expansion of skilled birth attendants (SBAs). This familiar strategy for decreasing maternal mortality in Afghanistan follows Koblinsky's vision for increasing skilled attendance rates in her article "Going to Scale with Skilled Birth

Attendance" (2006). Koblinsky makes a distinction between countries characterized by "massive deprivation," where access to skilled care is largely limited to the rich, and those characterized by "marginal exclusion," where access to skilled care is essentially widespread. Koblinsky reserves a focus on quality improvement to those of "marginal exclusion": "The poor quality and underuse of existing services, where they are available, is of secondary importance to the absence of supply and management capability in these contexts" (Koblinsky, 2006). Afghanistan fits the "massive deprivation" label and therefore would be exempt from focusing on immediate quality improvement under this policy framework.

Koblinsky's argument implies that delivering value of care to pregnant Afghan women in conjunction with increasing coverage of skilled care is overly ambitious. An issue with this assumption is that it views SBAs as a technological fix. A technical solution to maternal mortality in Afghanistan overlooks the external contexts that affect care delivery. This interventionist mindset can be seen through UNICEF's calculated numbers of midwives needed to increase skilled attendance in Afghanistan: "Afghanistan currently requires 4,546 midwives to cover 90 per cent of pregnancies. In contrast, it only had 467 trained midwives in 2002 [....]" (UNICEF, 2008).

The formulaic nature of this approach undermines the significance of midwives' interaction with the health infrastructure and assumes that a certain number of SBAs will result in almost universal skilled birth attendance. Since technologies are interventions that exist independent of their local context, they cannot be improved as they are distributed. Thus, in contrast to Koblinsky's "intervention centered" perspective, an "overall care cycle" perspective that integrates SBAs into the delivery system could possibly improve the value of maternal health care without compromising volume (Kim & Porter, 2010). The remainder of this paper will adapt Kim and Porter's theoretical framework to analyze the role of SBAs within the "overall care cycle" of maternal mortality reduction. This analysis aims to open up possible future policies for delivering high value without necessarily compromising volume through the efficient management of SBAs.

Kim and Porter's theory suggests that improving the value of care, defined as "the patient health outcomes actually achieved per dollar spent," without necessarily compromising volume is possible through several integrated levels rather than through self-contained interventions. These levels include: 1) care over the full disease cycle; 2) coordinated care across these disease cycles; 3) incorporation of the external context in the care delivery system; and 4) maximization of local economic development through care delivery (Kim & Porter, 2010). I will address each of these levels in the following analysis of SBA management in Afghanistan.

Delivering care over the full maternal health cycle

Optimizing skilled attendance at birth first requires attendants to have a clear understanding of their role before, during and after the pregnancy of a woman. Kim and Porter's "care delivery value chain" (CDVC) delineates the full care cycle for medical conditions or diseases and has the potential to make SBAs' roles in decreasing maternal mortality more explicit. Standardizing the activities to be performed in the maternal care cycle would prove extremely valuable in Afghanistan, given that the delivery of health services since the fall of the Taliban in 2002 has been mainly conducted by various NGOs rather than the public health sector, which is severely underfunded (Sabri, 2007). A CDVC would reduce maternal mortality rates by setting quality standards and creating greater uniformity and coordination among skilled workers employed by the various NGOs.

Thus, a CDVC tailored specifically to addressing high maternal mortality in Afghanistan would be the first step to gaining insight into SBAs' roles in the care cycle. Kim and Porter designed a basic CDVC to serve as a template for other diseases, and this template would need to be adapted. The Basic Package of Health Services (BPHS), a plan designed by the Afghan Ministry of Public Health in 2003 that outlines the health services that are free for all Afghans (Ministry of Health, 2003), could provide the foundation for the maternal mortality CDVC. This program breaks down maternal services into the following categories: antenatal care, delivery care, postpartum care, family planning and care of the newborn. While services and essential drugs have been identified by the Ministry of Public Health for each category, the value of treating these activities as interrelated medical conditions for the progression of a single disease has been overlooked (Kim & Porter, 2010). The terminology used to describe the current BPHS delivery system is a "Ladder of Care" in which individual rungs represent different health facilities, services and workers that are available to a certain geographic area based on population density. However, referral systems are poorly developed (Ahmad, 2004), and many health facilities, especially those in rural areas, are not provided with sufficiently skilled staff or proper equipment to deliver services for the entire cycle of maternal care (Ministry of Health, 2003). The integration of these activities would allow for improvements in certain categories of activities and would benefit the value of the care cycle as a whole (Kim & Porter, 2010). For example, services such as providing contraception and educating women on family planning would increase overall value for the patient in the maternal care cycle by reducing unsafe abortions and the spread of sexually transmitted infections (STIs) such as HIV/AIDS. STIs and unsafe abortions are major contributors to maternal mortality (UNFPA, 2010).

Access to skilled care is largely limited to the rich.

The bottom "rung" of Afghanistan's health services operates at the community or village level out of the homes of the least skilled health staff, community health workers (CHWs). These health posts serve rural populations under the BPHS delivery system and provide only the most basic health services, such as treating common conditions, delivering normal pregnancies and distributing contraceptives. Compared to the health facilities that serve more populated regions, health posts lag far behind in terms of patient care quality—they lack skilled health workers and offer limited services. For example, health posts do not provide initial injections of Depo-Provera®, a contraceptive that the Reproductive Health Taskforce of the Ministry of Public Health deems to be most effective, given the cultural barriers to utilizing other means of contraception

(Ministry of Health, 2003). Staffing health posts with a small number of skilled midwives with the proper training to administer the injections is just one example of how the CDVC can help identify neglected activities that can improve overall care value. This kind of change in health systems delivery, though not as direct as simply scaling up on skilled birth attendance, may prove more effective in decreasing maternal mortality, as it targets certain root causes of complications during pregnancy (e.g. hemorrhages, obstructed labor, sepsis and induced hypertension) and might minimize the need for expensive treatments later in the care cycle (Kim & Porter, 2010; Mayhew, 2008).

Coordinated care across disease cycles

Just as important as identifying the roles of SBAs in each maternal health care activity is identifying which tasks can be passed on to other maternal health workers until greater numbers of midwives become available. Kim and Porter's framework emphasizes the efficiency of making use of overlapping investments by creating a shared infrastructure that links related aspects of various CDVCs (Kim & Porter, 2010). An integrated infrastructure would 1) incorporate the wide range of health workers and facilities in the maternal care delivery system and 2) jointly address aspects of maternal health and other medical conditions that are interrelated, such as maternal health and HIV/AIDS.

Currently in Afghanistan, three main categories of health workers are dealing with maternal services—SBAs, traditional birth assistants (TBAs) and community health workers (CHWs). These health workers work in four types of health facilities, namely health posts, basic health centers, comprehensive health centers and district hospitals. These health facilities are distinguished by the population level at which they operate. The facilities also vary in terms of the availability of services, staffing, equipment and essential drugs (Ministry of Health, 2003). Attendants are classified based on skill level; SBAs meet the WHO definition of "an accredited 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 in the identification, management and referral of complications in women and newborns" (World Health Organization, 2011). In contrast, TBAs and CHWs represent a heterogeneous group with a range of skill levels and no formal, standardized training (UNFPA 2011). They possess at most a limited set of obstetrical skills for normal pregnancies (Ministry of Health, 2003).

Cooperation between these workers has proven less than ideal especially given the poorly developed referral system in Afghanistan. Several studies have shown that transportation barriers, such as poor roads in rural areas, as well as gender-based restrictions that prohibit women from traveling without the permission or accompaniment of a man (Tunbridge, 2009), make emergency obstetric referrals futile, especially for those women living more than an hour away from an urban health facility staffed with midwives (Mayhew, 2008).

Therefore, TBAs and CHWs must be better incorporated into a delivery system focused on skilled attendants. Despite the BPHS system's support of TBA training, the Afghan Ministry of Public Health declared in a 2003 Safe Motherhood policy statement that TBA training is unsustainable as a long term goal due to their limited capabilities in dealing with obstetric complications (Ministry of Health, 2003). Terminating TBA training and instead gradually recruiting TBAs to the recently established midwifery schools would make better use of already knowledgeable health workers. Cross-training other skilled health workers such as HIV personnel or vaccinators in the technical skills of birth care is another possibility for utilizing scarce staff more efficiently (Kim & Porter, 2010). This cross-training would capture "synergies across diseases," thereby integrating CDVCs for multiple conditions (Kim & Porter, 2010).

For example, an SBA with previous training in HIV/AIDS care may be able to more easily diagnose and treat an HIV-related cerebral complication, a condition that is often times confused with puerperal psychosis or cerebral malaria, in the postnatal stage (World Health Organization, 1998). Cerebral malaria obstructs microcirculation of blood in the brain and can result in unusual behavior that resembles signs of puerperal psychosis, including irritability and extreme aggression (White, 2004). Cognitive complications associated with HIV/AIDS can have similar clinical manifestations; these include irritability, loss of inhibition, depression and impaired concentration (Pryse-Phillips, 2003). An SBA trained in recognizing less obvious symptoms and conducting proper blood tests would be crucial for distinguishing between clinically similar conditions. Educational responsibilities requiring no training in technical skills could be delegated solely to CHWs, who would serve as advocates for SBAs.

Gender-based formalities that prohibit women from traveling without the permission or accompaniment of a man make emergency obstetric referrals futile.

Instead of allocating SBAs only to health facilities that serve 15,000 or more, as recommended in the current BPHS plan, mixed teams of CHWs, TBAs undergoing in-service training and SBAs could be established at every health facility, including the rurally located health posts. Temporarily "task shifting," or decentralizing care delivery responsibilities, until TBAs are entirely incorporated into an SBA-based system would maximize care value while making full use of scarce staff (Kim & Porter, 2010). These policy suggestions demonstrate that quality of care can be addressed even in areas that Koblinsky would call "massively deprived" by identifying potential overlaps in health infrastructures and disease cycles, thereby increasing overall efficiency in care delivery.

Incorporating local realities into maternal care delivery

In creating CDVCs and determining SBAs' roles in each care cycle activity, the local realities of Afghanistan must be taken into account. Treating SBAs as an intervention that can be merely scaled up rather than an integral part of the maternal

health cycle runs the risk of advocating a magic bullet approach that fails to incorporate external factors that inevitably affect care delivery. While Koblinsky prioritizes volume expansion over cultural considerations in areas of "massive deprivation" such as Afghanistan (Koblinsky, 2006), Kim and Porter's framework advocates incorporating local realities into SBA management without exception (Kim & Porter, 2010). Several studies conducted in Afghanistan (Mayhew, 2008) have found a variety of external influences that constrain access to and effectiveness of care (Kim & Porter, 2010). Afghanistan's turbulent history of war and conflict, as well as the country's cultural aspects that can prove incompatible with current Western medical practices, point to some local realities affecting accessibility and effectiveness of care. A detailed review of specific gender-based, religious, geographical, financial, educational and war-ridden barriers requires more space than this analysis allows (Mayhew et al, 2008); the goal of this part of my analysis is to demonstrate that incorporating local realities into SBA management could contribute to higher value patient care under the Kim and Porter framework. Although a multitude of initiatives could be taken to incorporate external influences into CDVCs, I expand on a few examples below.

One example involves using religious rhetoric to promote family planning and break down gender-based barriers to effective care. Within the past few years the Ministry of Haj and Religious Affairs has worked with the Ministry of Public Health to promote public awareness on maternal health, particularly in encouraging imams to demonstrate that Islamic teaching permits safe contraception and that preventing women from consulting with male health workers is morally wrong (Tunbridge, 2009). Especially in rural areas governed by deeply ingrained conservative Islamic traditions, this integration of Islamic teaching into public health awareness campaigns proves highly effective in changing behaviors that restrict fundamental activities within the maternal care cycle.

Distance from health facilities presents another barrier to receiving effective maternal care. 77% of Afghans live in rural areas characterized by mountainous terrain and poorly developed infrastructure, making transportation to health facilities staffed with SBAs especially challenging. Reaching these facilities requires two weeks of travel time for some women living in these remote communities, and weather conditions during the winter season can block access to care entirely (Tunbridge, 2009). Until health posts are more adequately staffed, SBAs can be incorporated into mobile teams of health workers that can travel to rural areas (Mayhew et al, 2008).

Literacy is another crucial barrier to skilled birth attendance, as suggested by Mayhew et al's 2008 study on determinants of SBA use in Afghanistan. Only 6% of the country's women are literate, which severely limits knowledge of maternal care and reproductive services (Mayhew et al, 2008). This lack of knowledge may in part explain why 90% of health facilities are supplied with free contraceptives, but only 14-15% of women in the remote areas make use of them (Tunbridge, 2009). Until literacy rates and overall education levels of women in Afghanistan improve, task shifting (as noted earlier) could alleviate the situation. CHWs, who are more easily recruited and require no formal training, could focus entirely on these community outreach responsibilities. Passing on educational and advocacy duties of SBAs to CHWs could more efficiently promote healthy habits among Afghan women, particularly concerning issues like family planning, nutrition and infant immunization (Ministry of Health, 2003).

Policies geared towards increasing skilled birth attendance must address issues existing beyond the attendants themselves if they are to deliver effective outcomes. By addressing these barriers within the actual care delivery system, SBAs may cover greater numbers of pregnancies (Kim & Porter, 2010). Again, high value maternal care appears possible even in the face of "massive deprivation"; reducing external influences such as geographical, financial and cultural barriers can increase skilled care coverage and effectiveness even without volume expansion of SBAs. Because most of these external influences contribute to an unstable environment, policy implementation could prove challenging in Afghanistan. Such difficulties imply that the collaboration of government officials with a variety of domestic and international actors—from religious leaders to outside donors to community outreach educators—might be necessary in order to effectively restructure SBA management.

Maximizing economic development in maternal care delivery

Kim and Porter's final level of high quality care delivery integrates economic development with quality assurance of maternal health care. Assuring long term SBA sustainability requires that SBAs themselves contribute to this mutually beneficial relationship. Community development initiatives are linked with health system development through a positive feedback loop in which each component benefits from value improvement and subsequently contributes to the other. Yet, there are concerns that improving care delivery systems detracts resources from potentially more economically beneficial investments, especially in the case of SBA utilization in Afghanistan. These concerns stem from the observed brain drain effect resulting from years of war and conflict under Taliban control that left the public health sector unable to sustain the country's skilled health workers.

Donor agencies contracted NGOs to provide the most basic health services to Afghans until 2002, when the Ministry of Health initiated a new policy of health care delivery. This current system involves a partnership between national and international NGOs and the Ministry of Health in delivering BPHS services. The collaboration between the public and non-governmental sectors has allowed for optimal coverage of BPHS services across Afghanistan, but it has drawn attention away from quality of care. Long lines, disrespectful treatment of patients and drug shortages have led many Afghans to seek health services in the private sector. However, these private health facilities require fees that are too costly for many Afghans and tend to be concentrated in urban areas. (Sabri, 2007).

Thus, under the current system, SBA training may simply lead to further inequalities in maternal health care, restricting birth attendance to only those who can afford to pay for it. However, recent developments indicate that this does not necessarily have to be the case and that the future of SBA training can lead to community development; the World Bank has begun to finance public sector recruitment of skilled health workers by providing competitive pay (Sabri, 2007). Additionally, alternative community-based midwifery training programs, which recruit students from rural areas with the stipulation that they seek work in their rural communities upon graduation, have be-

come available (Farooqi, 2009). The *State of the World's Midwifery 2011 Report* mentions several incentives used globally for midwives to decentralize, including housing and transportation (used in Liberia, Malawi, Mozambique, Uganda), midwifery kits (used in Sudan), midwifery tutors (used in Zambia) and performance-based monetary incentives (used in Rwanda and Tanzania) (UNFPA, 2011). Focus on providing greater monetary or non-monetary incentives for SBAs to geographically decentralize and balance the role of the public sector in delivering care could help to establish greater equity in quality maternal health services and contribute to community development in Afghanistan as a whole.

Literacy is one other crucial barrier to skilled birth attendance, as suggested in a 2008 study conducted by Mayhew et al.

The financial costs of SBA training and new policy implementation also require consideration. Three main donors in Afghanistan – the World Bank, the European Commission, and USAID – finance the NGOs to maintain the vast majority of the SBA training schools. The financing of these schools comes at a high price for the donors, and so its sustainability for the future is of particular concern. In Afghanistan, the cost of training each student per year is $8,000-$9,000 for a two year program (UNFPA, 2011). To ensure sustainability, the Afghan Ministry of Health would need to continue to gradually assume financial responsibility for these training schools. Although financing these training schools along with developing an efficient maternal health care system would require a sizeable investment on the part of the Afghan government, the UNFPA 2011 report confirms that the overall returns far exceed the economic input. Priority should be given to these investments since they secure officially trained cohorts of health workers that can be incorporated into the country's work force (UNFPA, 2011). These investments are also important since evidence has shown that the maternal health of a country tends to reflect the status of the health system as a whole (Bartlett, 2011). The role of SBAs in maintaining maternal health in Afghanistan is costly but critical (UNFPA, 2011). Thus, an efficient system of management that integrates SBA tasks across and within CDVCs would simultaneously reduce expenses and improve the health system as a whole in the long run.

The future of SBA management and monitoring its progress

While much of the Kim and Porter theory for care delivery remains "ill-defined" (Kim & Porter, 2010), a direct application of their terminology and concepts to the situation in Afghanistan contributes to a growing body of knowledge on the best practices drawn from case studies. Real progress in ensuring high quality maternal care and, more specifically, optimal management of SBAs in Afghanistan's health infrastructure can only be reached through continued evaluation of care delivery systems. Should Kim and Porter's value-centered perspective shape future policies in SBA management, new methods for assessing effective care will need to supplement Afghanistan's current "balance scorecard" system (Sabri, 2007). This current system monitored primarily by the Bloomberg School of Public Health at Johns Hopkins University focuses on assessment of availability (Sabri, 2007) and accessibility (Sundaram, 2009) over quality of care provided by health facilities. However, assessment of patient health outcomes and the cost of achieving these outcomes will be necessary to accurately evaluate patient value in maternal health services and the role of SBAs in delivering high-quality care.

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References

Ahmad, K. (2004). Health and Money in Afghanistan. *The Lancet, 364*, 1301-1302.

Bartlett, L. (2011). The National Midwifery Education Program in Afghanistan: Training Women and Saving Lives [Interview by Isobel Coleman]. Retrieved from http://www.cfr.org/afghanistan/national-midwifery-education-program-afghanistan-training-women-saving-lives/p25260

Farooqi, S.S. (2009). *Models of Skilled Attendance in Rural and Resource-Poor Settings: A Review of the Literature*. Mujeres Enlazadas/Aliadas internship.

Freedman, L.P. (2007). Health System Strengthening: New Potential for Public Health and Human Rights Collaboration. *Reproductive Health Matters, 15*, 219-220.

Kim, J.Y., & Porter, M.E. (2010). *Redefining Global Health Care Delivery*. Harvard Business School, Boston, MA.

Koblinsky, M., Matthews, Z., Hussein, J., Mavalankar D., Mridha M.K., Anwar, I., Achadi, E.,. . . van Lerberghe, W. (2006). Going to scale with professional skilled care. *The Lancet, 368*, 1377-86.

Mayhew, M., Hansen, P., Peters, D., Edward, A., Singh, L., Dwivedi, V., & Burnham, G. (2008). Determinants of Skilled Birth Attendant Utilization in Afghanistan: A Cross-Sectional Study. *American Journal of Public Health, 98*, 1849-1856.

Ministry of Health. (2003). *Maternal Health Services at the Community Level in Afghanistan: Who Should Provide These Services?* Retrieved from http://pdf.usaid.gov/pdf_docs/PNADF233.pdf

Ministry of Health. (2003). *A Basic Package of Health Services for Afghanistan*. Retrieved from http://www.msh.org/afghanistan/pdf/Afghanistan_BPHS_2005_1384.pdf

Pryse-Phillips, W. (2003). *Companion to clinical neurology*. New York, NY: Oxford University Press, Inc.

Sabri, B., Siddiqi, S., Ahmed, A.M., Kakar, F.K., & Perrot. J. (2007). *Towards sustainable delivery of health services in Afghanistan: options for the future. Bulletin of the World Health Organization, 85,* 649-732.

Sundaram, S., Steinhardt, L., Peters, D., & Rahman, M.H. (2009, July). *Obstacles to maternity service use in Afghanistan: what do we know about cost, quality and access?* Retrieved from http://www.slideshare.net/katecommsids/obstacles-to-maternity-service-use-in-afghanistan-what-do-we-know-about-cost-quality-and-access

Tunbridge, L. (2009). *Veil of Tears: Afghans' stories of loss in childbirth*. Nairobi: Publishing Services Section.

UNICEF. (2008. December). *Afghanistan's community midwives*. Retrieved from http://www.unicef.org/devpro/46000_46782.html

UNFPA. (2010, December). *Fact Sheet: responding to emergencies*. Retrieved from http://www.unfpa.org/public/site/global/lang/en/responding_emergencies

UNFPA. (2011). The State of the World's Midwifery 2011. Retrieved from http://www.unfpa.org/sowmy/resources/en/country_info.htm

World Health Organization. (1998). *Postpartum Care of the Mother and Newborn: A Practical Guide*. Retrieved from http://helid.digicollection.org/en/d/Js2890e/

World Health Organization. (2008). *Proportion of births attended by a skilled health worker 2008 updates*. Retrieved from http://www.who.int/reproductivehealth/publications/maternal_perinatal_health/2008_skilled_attendant.pdf

World Health Organization. (2011). Competencies for midwifery practice. Retrieved from http://whqlibdoc.who.int/publications/2011/9789241501965_module4_eng.pdf

White, NJ. (2004). Review: Cerebral Malaria. *Practical Neurology, 4*, 20-29.