

## ADVANCED LIFE SUPPORT IN OBSTETRICS (ALSO®) IN DEVELOPING COUNTRIES

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The Advanced Life Support in Obstetrics (ALSO®) course is a two-day, evidence-based course designed to provide maternity care professionals with skills to manage obstetrical emergencies. From its inception in 1991 until January 2005, the ALSO® course has been taken by over 54,000 participants in over 25 countries, including over 3,300 from over 10 developing countries.<sup>1</sup> The course was first introduced to Pakistan in 2003.

The need for management of obstetrical emergencies is great in developing countries, including Pakistan. With 99 percent of maternal deaths occurring in developing countries, maternal mortality is the health statistic with the largest disparity between more developed and developing countries.<sup>2</sup> The maternal mortality rate in Pakistan is 530 per 100,000 live births, compared with 8 per 100,000 live births in the United States.<sup>3</sup> The lifetime risk of maternal death in Pakistan is 1 in 31 compared with 1 in 2500 in the United States.<sup>3</sup>

The content of ALSO® addresses the major causes of maternal mortality. Worldwide, the leading causes of maternal mortality are: hemorrhage (24%), infection (15%), unsafe abortion (13%), eclampsia (12%) and obstructed labor (8%).<sup>4</sup> The ALSO® course includes eight required lectures -- First Trimester Complications, Vaginal Bleeding in Late Pregnancy, Preterm Labor/Premature Rupture of Membranes, Labor Dystocia, Safety in Maternity Care, Medical Complications, Maternal Resuscitation, and Postpartum Hemorrhage -- and five required workshops -- Intrapartum Fetal Surveillance, Shoulder Dystocia, Assisted Delivery, Malpresentations and OB cases. Optional workshops include Perineal Repair, Cesarean Delivery, Diagnostic Ultrasound, Neonatal Resuscitation and Birth Crisis.<sup>5</sup> More information on the ALSO® course can be found at <http://www.aafp.org/also.xml>.

The workshop-based nature of the ALSO® course allows participants to focus on the skills and materials relevant to their needs and interests. For example, with the assisted delivery workshop, participants may ask their instructor to focus on forceps or vacuum, depending on the availability of each where the course is being taught. Participants with extensive forceps experience can refine their skills and offer advice to other participants, while new learners can practice basic skills using mannequins before

needing to apply forceps on a live patient with decreased fetal heart tones.

The intended course audience is skilled birth attendants (SBAs) – care takers with midwifery skills (for example doctors, midwives, nurses) who have been trained to proficiency in the skills necessary to manage normal deliveries and diagnose, manage or refer complications.<sup>6</sup> While the course is managed and owned by the American Academy of Family Physicians (AAFP), the course is intended to be multidisciplinary with maternity care professionals from different disciplines and different settings learning from each other.

Currently, a group of international authors, with expertise and experience with maternal health in developing countries, is writing a supplemental manual to make the ALSO® course more appropriate in for contexts where there are more limited economic and technological resources. The manual will help address the medical, technological, cultural, linguistic and skill-building factors which affect the teaching of ALSO® and the management of obstetrical emergencies in developing countries. While ALSO® supports the efforts of the World Health Organization and others to have an SBA at each delivery, a substantial portion of the supplemental manual suggests networking with and training traditional birth attendants (TBAs) in countries such as Pakistan where having an SBA at every delivery is not a realistic short term goal. A recent study in Pakistan documented a decrease in perinatal mortality utilizing this approach.<sup>7</sup> In Pakistan, only 23 percent of births are currently attended by SBAs.<sup>3</sup> The supplemental manual should be available early in 2007.

Studies of ALSO® have demonstrated that participants gain and maintain confidence in managing obstetrical emergencies through the course.<sup>8,9</sup> Additional studies are being conducted in Honduras and Tajikistan to evaluate the impact ALSO® has on outcomes such as maternal and perinatal death, cesarean delivery, blood transfusion, and episiotomy rates.

While Pakistan has high maternal and perinatal mortality rates, characteristic of most developing countries, it has highly educated and motivated SBAs and numerous, experienced TBAs. Hence, it is hoped that ALSO® will serve as a useful tool for maternity care-givers in Pakistan and other developing

countries to work towards improved health outcomes. Regions such as Pakistan, where ALSO® is relatively new, offer an opportunity to measure the impact of and improve upon the current curriculum.

## REFERENCES

1. Beasley J, Dresang L, Winslow D, Damos J. The Advanced Life Support in Obstetrics (ALSO) Program: Fourteen Years of Progress. *Prehospital and Disaster Medicine* 2005; 20(4): 271-5. (Level 3)
2. Safe Motherhood. <http://www.safemotherhood.org/>. Site last visited June 22, 2005. (Level 3)
3. UNICEF. Information by country. <http://www.unicef.org/infobycountry/index.html>. Site last visited October 22, 2005. (Level 2)
4. Safe Motherhood fact sheet: maternal mortality. [http://www.safemotherhood.org/facts\\_and\\_figures/maternal\\_mortality.htm](http://www.safemotherhood.org/facts_and_figures/maternal_mortality.htm).
5. Cline M, Taylor H, Baxley E. Advanced life support in obstetrics instructor manual. Shawnee Mission (KS): American Academy of Family Physicians 2002: 1-175. (Level 2)
6. 1999 Joint WHO/UNFPA/UNICEF/World Bank statement. Safe motherhood strategies: a review of evidence. *Studies in Health Services Organization and Policy*, 2001. (Level 3)
7. Jokhio A, Winter H, Cheng K. An intervention involving traditional birth attendants and perinatal and maternal mortality in Pakistan. *N Engl J Med* 2005; 352(20): 2091-9. (Level 1)
8. Taylor H, Kiser W. Reported comfort with obstetrical emergencies before and after participation in the Advanced Life Support in Obstetrics (ALSO) course. *Family Medicine* 1998; 30(2): 103-7. (Level 2)
9. Bower D, Wolkomir M, Schubot D. The Site last visited June 22, 2005. (Level 3)



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