

**Worldwide Report**

---

## Advanced Life Support in Obstetrics (ALSO®) International Development

Mark Deutchman, MD; Lee Dresang, MD; Diana Winslow, RN

**Background:** *The Advanced Life Support in Obstetrics (ALSO®) program helps pregnancy care providers learn the information and skills necessary to deal with urgent and emergent conditions that arise during pregnancy and delivery by using mannequins, mnemonics, and evidence-based approaches. Since its origin, the program has been disseminated internationally. Outside of North America, more than 18,000 clinicians have taken the ALSO® course, and more than 1,200 ALSO® individuals have been approved as ALSO® instructors. Some of the international programs have become self-sustaining, others have not.* **Methods:** *Features of ALSO® programs were analyzed in all countries in which ALSO® has been introduced to identify characteristics associated with the program becoming self-sustaining.* **Results:** *Characteristics of self-sustaining ALSO® programs include a strong organizational structure, use of a train-the-trainer model to introduce the course, and encouragement of competing groups to work together. Overall, the program has been sustained by drawing on the expertise of international collaborators for medical content and by balancing customization of content against preservation of core information and skills.* **Conclusions:** *When the ALSO® program is introduced to a new country or region, methods that have resulted in programs becoming self-sustaining should be used.*

(Fam Med 2007;39(9):618-22.)

The Advanced Life Support in Obstetrics (ALSO®) program was initiated in the United States in 1991 through the efforts of a group of family physicians in Wisconsin. These physicians were interested in preserving, and passing on, the knowledge and skills necessary to deal with urgent and emergent conditions that arise during the course of labor and delivery care by using mannequins, mnemonics, and evidence-based approaches.<sup>1</sup>

The course grew rapidly in the United States, reaching the point that it required more management than could be provided by the Wisconsin group, and in 1993 the course was taken over by the American Academy of Family Physicians (AAFP). Figure 1 shows the growth of the ALSO® course in the United States.

When the AAFP assumed responsibility for ALSO®, a structure designed to maintain its stability and timeliness was initiated. This structure includes an administrative and fiscal home at the AAFP, a five-member Advisory Board responsible for course medical content,

and a system for training ALSO® instructors who in turn teach ALSO® provider courses. This structure proved to be effective and is an important feature for what came later. Several authors have documented the educational effectiveness of the ALSO® program in the United States by demonstrating increased confidence in performing skills and managing urgent and emergent peripartum conditions.<sup>2-6</sup>

### Self-sustaining International ALSO® Programs

Shortly after its introduction into the United States, the potential international appeal and value of ALSO® as a hands-on skills course became apparent for use in both medically developed and developing countries. The College of Family Physicians of Canada adopted the ALSO® program in 1997, requiring minor changes in the course content to match Canadian practice and terminology and, eventually, a French translation.<sup>7</sup> In the United Kingdom, a collaborative group of general practitioners, obstetricians, and midwives adopted ALSO® in 1996. The United Kingdom introduction required a more-extensive adaptation of the instructional materials to European practice and terminology.

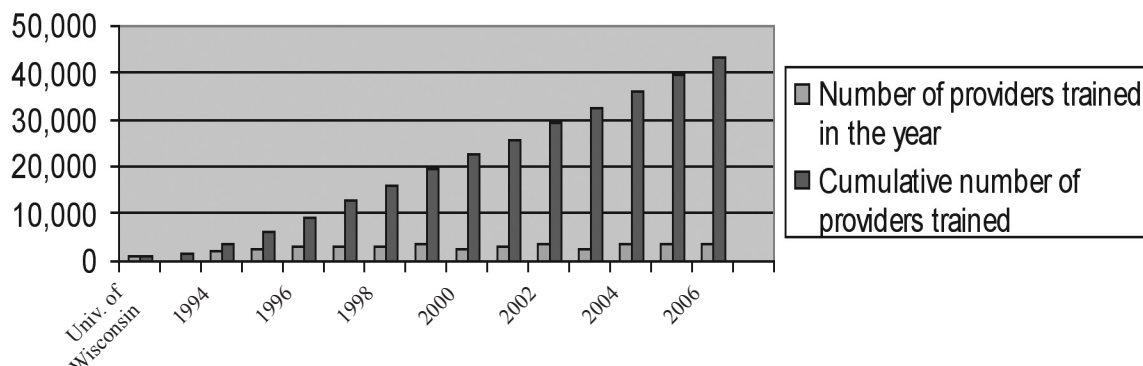
Although the introduction of ALSO® into Canada and the United Kingdom created the need for adapta-

---

From the Department of Family Medicine, University of Colorado (Dr Deutchman); Department of Family Medicine, University of Wisconsin (Dr Dresang); and the American Academy of Family Physicians, Leawood, Kan (Ms Winslow).

Figure 1

## Advanced Life Support in Obstetrics (ALSO®) in the United States



tion, the process brought along a resource in the form of dedicated and constructively critical professionals who collaborated and considerably strengthened the course content. Therefore, instead of developing different courses for each country, the core content was revised through collaboration and remained nearly identical in the United States, Canada, and the United Kingdom. The other feature that has proved to transfer well was the structure for each country, which includes an administrative and fiscal home, a national governing board, and a system for training instructors who in turn train providers.

#### *Policies and Licensing*

From 1996 to the present, physicians in 27 countries outside the United States have discovered and successfully implemented ALSO® (Table 1). As the range of countries expanded, significant issues of responsibility, language, medical practices, and politics arose. This necessitated formulation of a set of policies required prior to implementation in other countries, with the policies aimed at maintaining the identity of the course and its medical content, benefitting from the new ideas of the international collaborators, and assessing outcomes of the program.<sup>8</sup> The policies include requirements for documentation of (1) the individuals and affiliated organizations requesting to implement ALSO®, (2) the reason for implementing ALSO®, (3) a statement of objectives for the program, (4) training and implementation plans, (5) detailed information about plans for translation into the local language, aimed at maintaining the quality of the medical content, and (6) plans for conducting an assessment of the course outcomes.

The AAFP administration and the ALSO® Advisory Board are empowered to grant license agreements for implementation of ALSO® in any given country. In doing so, administrative and educational issues have emerged. The main administrative issue that the Board

has had to deal with is competing individuals and organizations wanting to control ALSO® in a given country. The approach taken by the Board has been to insist that these competing individuals and organizations collaborate. In some cases, this has worked out well. In others, one or more of the competitors have chosen to drop out. The main educational issue has been assisting the new franchisee with establishing a supply of properly trained instructors.

#### *Models for Introducing the Program*

A number of models have been used when introducing ALSO® to a country for the first time. The most common and successful method has been a week-long series of courses using a train-the-trainer model. In this model, a group of international ALSO® instructors teach a 2-day ALSO® provider course followed by a 1-day ALSO® instructor course to a group of host-country clinicians. These newly trained instructors are then evaluated and assisted as they teach a new group of host-country clinicians. Mannequins are donated. In just a week's time, a core group of instructors is then empowered to promulgate ALSO® throughout their institution, country, and region.<sup>9</sup>

An alternative to the above model is for a host country to send a core of clinicians to a country where ALSO® is already established to take a provider and instructor course. To become official instructors, these ALSO® instructor candidates must be evaluated by a seasoned ALSO® instructor (advisory faculty) as they teach a provider course in the United States or their host country. The core team is then empowered to administer their own ALSO® courses.

#### *Sustainability*

It has been noted that a key to the success and sustainability of ALSO® in a new country is the presence of a champion—individuals who make the teaching

Table 1

## Countries With Self-sustaining Advanced Life Support in Obstetrics (ALSO®) Programs

<i>Year Introduced</i>	<i>Countries</i>	<i>Providers Trained</i>	<i>Instructors Trained</i>
1996	United Kingdom	10,937	300
1997	Canada	4,842	115
2000	Brazil	1,998	129
2001	Asia/Pacific, Hong Kong, and New Zealand	2,177	159
2002	Greece, Scandinavia and Greenland, People's Republic of China, and Qatar	2,415	138
2003	Ecuador, Kenya, Palestine, and Pakistan	671	98
2004	Guatemala, Nigeria, Norway, Sudan, and United Arab Emirates	777	61
2005	Honduras	73	41
2006	Mexico and Moldova	187	31
2006–2007	Saudi Arabia, Bahrain, Columbia, Peru, and Argentina	New program	New program

\* More complete data available at [www.aafp.org/also](http://www.aafp.org/also)

of ALSO® a personal priority. While encouraging the work of “champions,” ALSO® promotes long-term sustainability by encouraging host countries to develop their own administrative structures and boards so that new energy and ideas will be brought to the course when the original champion is no longer present.

In some countries, such as some of the former Soviet bloc countries, ministries of health are approached to take on the teaching of ALSO® in their countries. The AAFP's Physicians With Heart program has helped introduce ALSO® to The Republic of Georgia, Kyrgyzstan, Moldova, Tajikistan, and Uzbekistan.

Table 1 lists statistics of the more than 25 countries now teaching ALSO®, including not only medically developed countries but also a number of developing countries. These efforts have yielded a number of publications.<sup>9-15</sup>

### International ALSO® Programs That Are Not Self-sustaining

ALSO® has been introduced to nine countries around the world in which a self-sustaining model has not been established (Table 2). In these countries, ALSO® has usually been brought in by physicians who have taught ALSO® elsewhere, but the program has failed to perpetuate itself due to one or more of the following reasons.

One reason is the absence of local individual physicians to champion ALSO®. Another is the absence of a local professional organization to administer ALSO®. In some cases, financial issues are the cause—lack of money for translation, for instructional materials, and for travel to courses. Finally, in some cases, the course

materials do not fit the stage of medical development of the country. This usually means the course is too dependent on US practices, technology, and resources and/or the materials require a higher degree of literacy than possessed by the target audience.

It is likely that in the countries in which ALSO® programs are not self-sustaining, the program will continue but will be dependent on instructional, financial, and administrative help from ALSO® instructors who visit from other countries, until such time as a critical mass of local physicians and organizational resources are reached. The ALSO® program has developed an international education fund for this and other purposes.<sup>16</sup>

### ALSO® Modified for Developing Countries: Global ALSO® and Basic Life Support in Obstetrics (BLSO®)

Although there are many educational programs that target pregnancy care in developing countries, none utilize ALSO®'s standardized, 2-day format, and many do not include the evidence-based, hands-on skill building components of ALSO®. As ALSO® expanded to developing countries, an international work group was formed in 2005 to make ALSO® more relevant to the needs and resources of these countries. The recognized needs are to address maternity care issues unique to developing countries through a modification of the course materials to include the Global ALSO® supplemental manual and the Basic Life Support in Obstetrics (BLSO®) programs.

Table 2  
Countries With ALSO Programs That Are Not Self-sustaining\*

<i>Year Introduced</i>	<i>Country</i>	<i>Providers Trained</i>	<i>Instructors Trained</i>
1998	Haiti	600	14
1998	Paraguay	50	0
2001	Nepal	56	0
2002	Uzbekistan	51	30
2003	Iraq	111	7
2003	Kyrgyzstan	60	30
2004	Republic of Georgia	55	25
2005	Malawi	75	0
2005	Tajikistan	60	13

\* More complete data available at [www.aafp.org/also](http://www.aafp.org/also)

### *Global ALSO®*

The Global ALSO® supplemental manual includes (1) instructions on how to introduce ALSO® courses to new regions using a train-the-trainer model, (2) addenda to each of the chapters in the main syllabus providing an international context and addressing issues relevant to developing countries that are not covered in the standard ALSO® manual, (3) new chapters and workshops addressing important clinical issues not covered in the main syllabus such as unsafe abortion, infections (including malaria, tuberculosis, and HIV), female circumcision, malnutrition, obstetrical fistula, and procedures not used in developed countries, such as symphysiotomy, and (4) recommendations for how midwives, doctors, and other skilled birth attendants can best interact with traditional birth attendants to develop clinical protocols and teamwork within the nation's health care system, including teacher training and resources for working with traditional birth attendants who may have limited literacy.

### *BLSO®*

The BLSO® course adapts instructional materials to health care providers in developing countries who only infrequently encounter childbirth. BLSO® is a 1-day course targeted to providers for whom maternity care is not their primary focus. It uses the same mannequins and mnemonics as the ALSO® course, case-based discussions, and workshops to teach emergency management skills to front-line staff in rural dispensaries and health centers.

### **Challenges Remaining**

Since its beginning in 1991, the ALSO® program has disseminated throughout the world. A strong organiza-

tional structure and use of the train-the-trainer model have enabled the program to expand geographically while preserving the core mission of helping pregnancy care providers learn how to deal with urgent and emergent conditions. However, several challenges still remain. Content must be kept up to date. Outcomes must be assessed. The course content must remain relevant to a diverse group of international users.

### *Keeping Content Up to Date*

One key challenge is keeping the medical information fresh and updated. In the early years of the course, this was done by issuing new editions of the manual every few years. In 2002, the decision was made to move to a continuous revision schedule whereby each chapter is reviewed on an annual basis for currency, and one-page updates are written as necessary. Full chapter revisions are then issued on a cyclic basis.

All updates are available on the ALSO® Web site for a period of time.<sup>17</sup> To accomplish this, an editorial group was added to supplement the Advisory Board in recognition of the large amount of work that is required to track and update the medical information.

### *Assessing Outcomes*

Assessing the effect of ALSO® in improving outcomes for women and infants and in improving the skills and confidence of health care providers is a priority for the program. While it has been demonstrated that ALSO® course participants develop increased confidence in their skills and knowledge,<sup>3,5</sup> it has been difficult in developed countries with low maternal and infant morbidity and mortality rates to demonstrate that ALSO® has enhanced maternal and infant outcomes. One report from the United Kingdom, however, found

an inverse relationship between the proliferation of ALSO®-trained clinicians and the number of lawsuits for brachial plexus injury due to shoulder dystocia over a 6-year period.<sup>18</sup>

The outcome survey that is now part of ALSO® implementation in new countries, particularly developing countries, is designed to look for changes in pregnancy care practices and outcomes as well as changes in provider confidence. The survey process involves documentation of care practices, outcomes, and medical provider confidence prior to and again following introduction of ALSO®. Survey tools are provided to the new country that can be adapted to their unique situations.

One of the first surveys, performed in Honduras, has shown a marked decrease in the use of episiotomy from more than 60% before implementation of the course to approximately 20% within 2 months of the first ALSO® courses.<sup>19</sup>

### *Providing Relevant Information*

Providing information relevant to diverse international users is a continued challenge for the ALSO® program. Hopefully, the introduction of BLSO® and Global ALSO® will meet this challenge, with the ALSO® International Education Fund helping with implementation in countries where poverty is a major barrier to establishing the course.

*Corresponding Author:* Address correspondence to Dr Deutchman, UCDSHC Department of Family Medicine, A01, L15, Mail Stop F496, PO Box 6511, Aurora, CO 80045. 303-724-9725. Fax: 303-724-9746. Mark.Deutchman@uchsc.edu.

### REFERENCES

1. Beasley J, Damos J, Roberts R, Nesbitt T. The Advanced Life Support in Obstetrics course. A national program to enhance obstetric emergency skills and to support maternity care practice. *Arch Fam Med* 1994;3:1037-41.
2. Beasley J, Dresang L, Winslow D, Damos J. The Advanced Life Support in Obstetrics (ALSO) program: 14 years of progress. *Prehospital Disaster Med* 2005;20:271-5.
3. Bower D, Wolkomir M, Schubot D. The effects of the ALSO® course as an educational intervention for residents. *Fam Med* 1997;29(3):187-93.
4. Deutchman M, Carter C, Apgar B. The ALSO® article series. *Am Fam Physician* 2004;69:1612-3.
5. Taylor H, Kiser W. Reported comfort with obstetrical emergencies before and after participation in the Advanced Life Support in Obstetrics (ALSO) course. *Fam Med* 1998;30(2):103-7.
6. Taylor H. Providing the Advanced Life Support in Obstetrics course within the military family practice training system. *Mil Med* 1996;161:696-700.
7. Etches D, Klein M, Handfield-Jones R. Advanced Life Support in Obstetrics. Practical approaches to obstetrics emergencies. *Can Fam Physician* 1998;44:2480-1.
8. [www.aafp.org/online/en/home/cme/aafpcourses/clinicalcourses/also/international/intlguidelines.html](http://www.aafp.org/online/en/home/cme/aafpcourses/clinicalcourses/also/international/intlguidelines.html). Accessed February 23, 2007.
9. Dresang L, Rodney W, Leeman L, Dees J, Koch P, Palencia M. Advanced Life Support in Obstetrics in Ecuador: teaching the teachers. *J Am Board Fam Pract* 2004;17:276-82.
10. Dresang L, Beasley J, Paul R. The Advanced Life Support in Obstetrics (ALSO) course in developing countries. *Journal of Liaquat University of Medicine and Health Sciences* 2005;4.
11. Black R, Brocklehurst P. A systematic review of training in acute obstetric emergencies. *BJOG* 2003;110:837-41.
12. Johanson R, Hinshaw K. Better life-saving skills are needed for safer childbirth. *British Journal of Midwifery* 2001;9:199-202.
13. Lewis P. The Advanced Life Support in Obstetrics course. *Mod Midwife* 1996;6:17-9.
14. Lomax A. ALSO®: the Advanced Life Support in Obstetrics course. *Midwives* 1997;110:176-7.
15. McGeown P. Practice recommendations for managing shoulder dystocia. *British Journal of Midwifery* 2001;9:204-7.
16. [www.aafpfoundation.org/x714.xml](http://www.aafpfoundation.org/x714.xml). Accessed February 23, 2007.
17. [www.aafp.org/online/en/home/cme/aafpcourses/clinicalcourses/also/educationalmaterials/syllabusupdates.html](http://www.aafp.org/online/en/home/cme/aafpcourses/clinicalcourses/also/educationalmaterials/syllabusupdates.html). Accessed February 24, 2007.
18. Hinshaw K. ALSO (UK)—Are we making a difference? *National Health Service Litigation Authority Journal* 2003;2(Suppl iii).
19. Bustillo C. Preliminary impact report of ALSO in Honduras: decreased use of episiotomy. Presented at the 2007 ALSO International Advisory Board Meeting, Cabo San Lucas, Mexico.