The Shoulder to Shoulder Model—Channeling Medical Volunteerism Toward Sustainable Health Change

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Background: *Rapid growth in medical volunteerism in resource-poor countries presents an opportunity for improving global health. The challenge is to ensure that the good intentions of volunteers are channeled effectively into endeavors that generate locally acceptable, sustainable changes in health.* Methods: *Started in Honduras in 1990, Shoulder to Shoulder is a network of partnerships between family medicine training programs and communities in Honduras and other resource-poor countries. The program involves short-term volunteering by US health professionals collaborating with community health boards in the host countries. The program has been implemented in seven US family medicine training programs and is supported by a small international staff.* Results: *During the 16 years of program operation, more than 1,400 volunteers have made visits to host countries, which include Honduras, Ecuador, and Tanzania. Clinics have been established, school-based food programs and community-based water filtration programs developed, and cancer screening and pregnancy-care programs put in place. These and other programs have been implemented on a budget of less than $400,000, raised through donations and small grants.* Conclusions: *The Shoulder to Shoulder model allows health care professionals to channel short-term medical volunteerism into sustainable health partnerships with resource-poor communities. The resulting network of partnerships offers a powerful resource available to governments and foundations, poised to provide innovative interventions and cost-effective services directly to poor communities.*

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Resource-poor countries enjoy a steady stream of energetic and talented health volunteers, expending time, talent, and finances in hopes of improving the health of poor communities.[1] However, the insufficiency of a primary care infrastructure in these countries often impairs the effectiveness of the health care aid that is offered.[2] For example, aid programs offering free medicines, vaccines, or disease-specific interventions frequently fail for lack of health facilities or a shortage of equipment, trained providers, and staffing. In addition, the failure to view health as a consequence of a broad range of social determinants overestimates the potential value of a narrowly focused health care intervention. The trend of volunteerism in some ways runs counter to a growing body of literature suggesting that (1) health systems rooted in primary care as opposed to specialty care tend to show improvement across a wide array of health outcomes and in a wide variety of settings throughout the world[3,4] and (2) that poor communities value self determination more than outright external and unilateral support.[5]

The traditional model of aid to resource-poor countries and medical volunteerism can be restructured to promote sustainable community development that improves health outcomes by building a primary care infrastructure that is also equipped to address a comprehensive range of social and biological determinants of health.[6] This mandate is embodied in the Shoulder to Shoulder model, which is described in this report.

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Methods

The Shoulder to Shoulder Model

The Shoulder to Shoulder model operates via multiple, longitudinal, short-term volunteer efforts in a single community. Volunteers are encouraged to initiate community assessments of the important determinants of health and work together to improve health using an existing informal community network as infrastructure. Such an approach views the determinants of health from a broadly defined set of influences on health (Figure 1). This new model of short-term volunteerism, which involves a long-term commitment from the organization providing volunteers, is a collaboration with the community and broadly views the social determinants of health results in a model that contrasts sharply with the traditional model (Table 1).

The Shoulder to Shoulder model, which combines an educational mission (training health professionals) with long-term community development, is a form of volunteerism for both medical educators and community practitioners. By developing strong community boards in poor areas and a consistent local paid staff, Shoulder to Shoulder offers volunteer health professionals the infrastructure on which to build lasting programs that can influence the health of a community. They work in tandem to achieve a clear mission: to develop educational, nutritional, and health programs that help poor communities in resource-poor countries achieve sustainable development and improve the overall health and well-being of their residents. There are five key components of the Shoulder to Shoulder model.

(1) Empower Communities Through Partnership. Partners (local health board and volunteer clinicians) work with rural communities to form active health committees. These committees are nurtured to become capable of collaborating with their academic partners and the US communities they represent, so they can set the vision for the project and define the governance of the organization.

(2) Address Determinants of Health Broadly. The community-oriented primary care (COPC) model is embraced by the Shoulder to Shoulder model. COPC focuses on multiple determinants of health, including but not limited to health care, oral health, nutrition, water, sanitation, empowerment, and education. Efforts at each site are rooted in the principles of COPC, as developed and demonstrated by Sydney Kark and his team in South Africa more than 60 years ago.[7,8] Participants learn firsthand how to operationalize the COPC principles of (1) defining and characterizing the community, (2) involving the community as partners, (3) identifying or diagnosing community health problems, (4) designing and implementing an intervention to "treat" the community health problems, (5) monitoring the outcomes of the intervention to determine if specific measurable outcomes have been achieved, and (6) modifying the intervention as needed to achieve the intended goals.

(3) Pursue Sustainability. US partners enhance the effectiveness of volunteers by returning to the same place year after year. They engage in projects that are the priority of their community, have the approval and commitment of their community boards, and are realistically sustainable with limited funding and community participation.

(4) Leverage Resource Partner Money and Skills. Resources and personnel from US health centers are augmented by donated funds to establish sustainable community development in poor rural communities. The national organization of Shoulder to Shoulder supports the development and startup of new programs. The US health center and its supporting community provides the financial support and volunteer efforts needed to sustain the partnerships. Additionally, departments of family medicine working at Shoulder to Shoulder sites have proven adept at galvanizing the efforts of many medical and nonmedical departments. The original program at the University of

Figure 1

Theoretical Model: The Shoulder to Shoulder Approach to Impacting Health in a Community

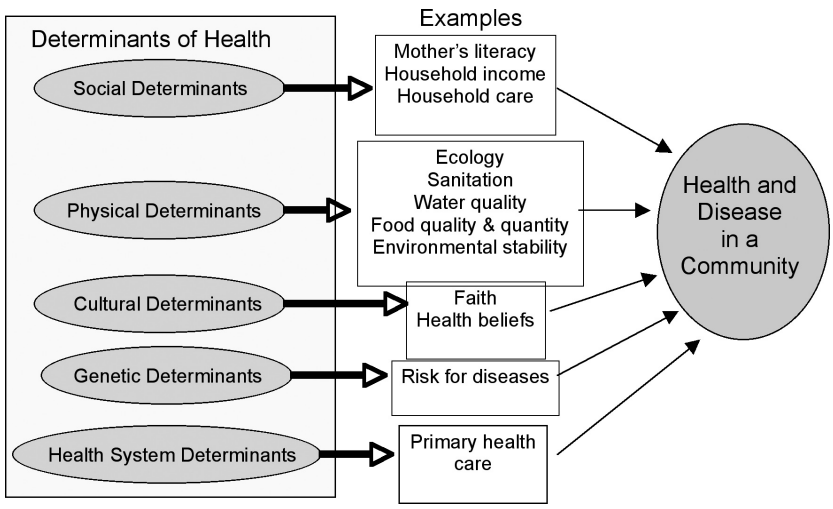


Table 1

Types of Short-term Volunteer Efforts

	Traditional Short-term Volunteer Effort	*New Model: (Shoulder to Shoulder Model)*
Number of visits to the community	One-time visit	Multiple visits over time
Collaboration with the host community	Minimal—limited to caring for the needs of the visitors during a "brigade"	Extensive involvement in planning, prioritizing projects, and monitoring effectiveness
Types of medical conditions treated	Acute care, surgical procedures, and sometimes initiation of treatment for chronic conditions	Acute and chronic care, prevention and health education
Type of volunteers utilized	Primarily doctors, dentists, nurses, and general helpers	Medical and dental personnel, including allied health, engineers, medical anthropologists and geographers, administrators, teachers, etc
Public health	Brief health education	Water, sanitation, and hygiene Health education
Determinants of health that are addressed	Biomedical	Biomedical, nutritional, educational, cultural, environmental, etc
Continuity	None	Available through local services and on follow-up visits

Cincinnati has leveraged the skills and efforts of most disciplines with its medical center, as well as those of students and faculty from schools of nursing, pharmacy, anthropology, geography, romance languages, education, and others.

(5) Realize Economies of Scale Through Intra-Institutional Coalitions. The US communities also form an organization to support the common principles and share common staff and supplies and, most importantly, ideas. This model thus combines an educational mission (training health professions learners) with long-term community development, and this is seen as an appealing form of volunteerism for medical educators and community practitioners. By developing strong community boards in poor areas and a consistent local paid staff, Shoulder to Shoulder offers visionary volunteer health professionals the infrastructure on which to build lasting programs that influence the health of communities. They work in tandem to achieve a clear mission: to develop educational, nutritional, and health programs to help poor communities in resource-poor countries achieve sustainable development and improve the overall health and well-being of their residents.

Organization, History, and Honduran Roots

Shoulder to Shoulder is a private, nonprofit, nongovernmental (NGO) organization formed in 1990 as a network of family medicine-led coalitions at academic centers across the United States. These academic medical centers partnered with nongovernmental community health boards in poor communities in Honduras to improve health through self-determined but collaborative interventions. By tapping into the wealth of skills and resources at their academic institution, the US partner is able to leverage resources and multidisciplinary teams to assist these local community boards in building a permanent primary care infrastructure that also addresses multiple other determinants of health such as nutrition, education, oral health, sanitation, and water. Shoulder to Shoulder, by being attentive to the needs of the community and by collaborating with local *Hombro a Hombro* (Shoulder to Shoulder) health boards, is able to make changes in the health of the communities served.

The nonprofit entity Shoulder to Shoulder was initially created as an initiative to provide supervised international experiences for University of Cincinnati College of Medicine medical students, nursing students, and residents, but the organization evolved in tandem with the interest of faculty and trainees for improving the health of the communities through development in partnership with their Honduran collaborators. These learners and their faculty began providing health care services in the Honduran state of Intibuca and collaborating with NGOs to provide a broader range of services such as nutritional support, educational programs, water projects, and other public health interventions. With the goal of local empowerment, Shoulder to Shoulder next worked with local community leaders in the mountainous town of Santa Lucia to form *Hombro a Hombro,* a grassroots community-based, nonprofit NGO registered in Honduras since 1996. The history of the Santa Lucia Project is shown in Table 2.

Honduras is the home of the majority of Shoulder to Shoulder activities. Honduras is the third poorest country in the Western Hemisphere, with a per capita gross national income equivalent to $1,120 US per year. The poverty rate, defined as households living on less than

$2 per day, is 40%, while the childhood malnutrition rate is 17%.[9] However, poverty and malnutrition rates are thought to be as high as twice the national average in the rural remote areas of western Honduras.

As the University of Cincinnati partnership with Santa Lucia grew, other academic health centers under the guidance of the more-established partnership established comparable relationships in other communities. Shoulder to Shoulder now works in six geographic regions not only in Honduras but also Ecuador and Tanzania (Figure 2).

Missions and Partners

Missions. Shoulder to Shoulder has three missions. The first is to provide medical and dental care, nutrition services, and community development in resource-poor communities. The second is to provide faculty-supervised experiences for health care providers in an international setting that enhances skills in community health, tropical medicine, cross-cultural medicine, and working in resource-poor environments. The third is to provide a setting for reflection and personal growth through service.

Partners. Seven partners (affiliates), connected through a national nonprofit hub, form Shoulder to Shoulder (Figure 3). Bound together by a common vision for sustainable development and a comprehensive view of health, these partners also share resources, personnel, infrastructure, ideas, and experience. The key partners and the details of each partnership can be found at www.shouldertoshoulder.org.

Table 2

History of the Shoulder to Shoulder Santa Lucia Project: 1990–Present

Year First Addressed	*Stage*	*Event*
1990–1992	Establishing the Partnership Model with two communities	First Brigade
		Local Community Board developed Developing a broader base of partners (business, academic, individuals) in the United States to support the work
1992	Creating the medical home to improve access to care and creating a physical connection to the community	**Addressing the Health System Determinant** 1. Year-round primary care Honduran clinician hired (1992) 2. Second Honduran physician hired in 1996.
1993		*Hombro a Hombro* Clinic constructed (1993)
1994	Implementing COPC activities	1. Defining the community service area 2. Baseline assessment with community surveys, malnutrition assessments, water quality 3. Documenting types of health and social problems
1996	Creating necessary legal relationships within the country and community	Establishing NGO status within Honduras
1998–2004	Addressing broader determinants of health	**Addressing the Physical Determinants** 1. Introducing a comprehensive water improvement and conservation program 2. School-based feeding program offers more complete diet including protein and calorie sources **Addressing the Health System Determinants** 1. Midwifery training 2. Expands scope of services to dental care 3. Expands services to include preventive services: fluoridation of water, cervical cancer screening **Addressing the Cultural Determinants** 1. Transition from a sense of hopelessness and lack of belief in potential to change to a sense of possibility, activation, and accomplishment
2002–2006	Empowerment at the local level	**Addressing the Social Determinants** 1. Empowers local community to apply for and build secondary school 2. School feeding program that creates new social network for parents of school-aged children. 3. *Yo Puedo* Program for self-esteem of female school children 4. Scholarship program to assist students in going on for additional educational training

COPC—community-oriented primary care
NGO—nongovernmental organization

Figure 2

Map of Western Intibuca and Population Covered by Shoulder to Shoulder Projects

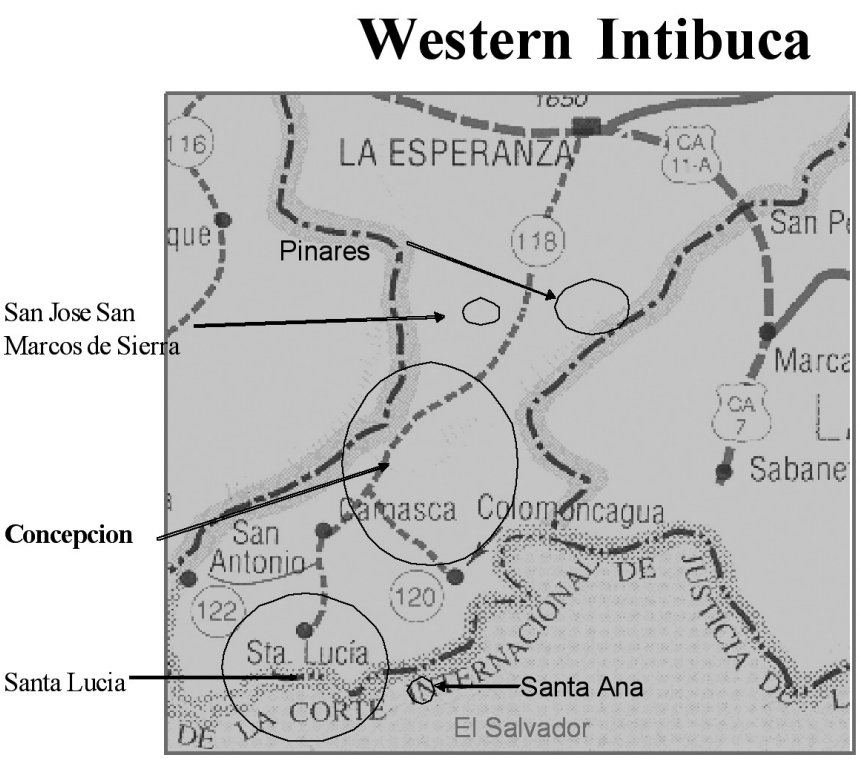


Figure 3

The Shoulder to Shoulder (STS) Network of Partnerships

STS International:

Technical expertise

Development of project objectives

Project oversight in country

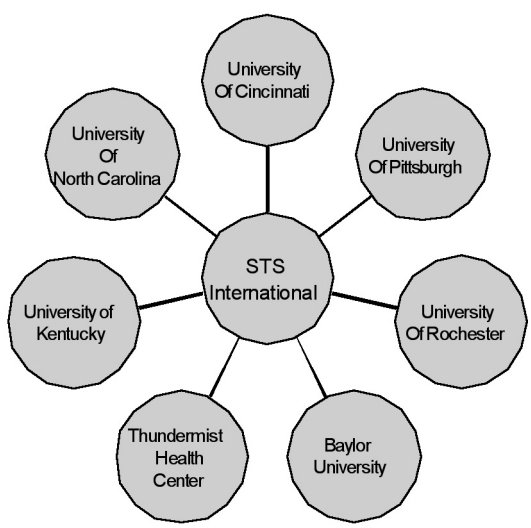
Legal services

Customs clearance

Sharing of resources

Grants

Collaboration with other nongovernmental organizations



Results

Over the past 16 years, Shoulder to Shoulder has given more than 1,400 US citizens the opportunity to work side by side ("shoulder to shoulder") with local community members in rural areas. Approximately half of the volunteers have been medical trainees, including medical students, residents, nursing students, and undergraduates with interests in pursuing medical careers. Approximately one fourth of the volunteers have been health care faculty, practicing physicians, nurses, and dentists. The rest have been other professional volunteers such as geographers, engineers, teachers, and a wide array of other professions and students. Volunteers not only have paid their travel and expenses ($1,200–$1,400 per 2-week trip) but have become the core financial benefactors of the organization and its ongoing efforts. They also organize US efforts to raise support and contribute in-kind goods such as medical and dental equipment, medicines, and other durable supplies.

The Shoulder to Shoulder health clinic in Santa Lucia (the founding partnership) is at the center of a comprehensive COPC effort, providing primary medical care, health education, and community resources to the most needy. The clinic has five modern exam rooms, an emergency room, laboratory and radiology services, and ultrasound and provides care to approximately 6,000 patients each year. In addition, the dental clinic provides acute, restorative, and preventive dentistry to the community. A comprehensive school-based fluoridation project provides fluoride to rural school children as part of the school-based feeding program. The clinic has a large attached dormitory for visiting brigade groups, allowing for up to 50 individuals at a time.

In Honduras, Shoulder to Shoulder operates year round with a staff of dedicated Honduran and

US family physicians and nurses. It operates a feeding center and a school-based feeding program that feeds 1,600 school children per day. In partnership with local US Rotary clubs, Rotary International, and Potters for Peace, a major effort is underway to widely distribute home-based water filtration units that enable rural homes to enjoy safe filtered water using a system that can be made locally and costs less than $20 to make.

In 2006–2007 alone, Shoulder to Shoulder has successfully screened more than 400 Honduran women for cervical cancer using aceto-white staining and direct visual cervical inspection. There are also programs to help distribute folate to women of child-bearing age through a partnership with Honduras-based Project Healthy Children. There are maternal and child health programs that include birth education and lay-midwifery training. In Santa Lucia, women are offered free pregnancy education and ultrasound screening. A program to improve the self-esteem of primary school-age girls through mentor-guided entrepreneurial clubs (*Yo Puedo*—"I can" or "I am able") has been established in 23 rural primary schools. These *Yo Puedo* clubs identify poor children who aspire toward further education, and now there are 80 children receiving need-based scholarships to attend secondary school.

Shoulder to Shoulder interventions are facilitated by in-kind contributions and volunteer services at an efficient cost. The operational budget for these services at all Honduran sites remains under $400,000 per year, which is raised through volunteer contributions, individual donations, and several small family foundations.

The seven current partnerships have each developed a relationship based on standard principles as described above. Specific programs of the partnership vary depending on the community, the availability of resources, and the duration of the partnership. The commonalities of the model are seen in Table 3 and are beginning to support the notion that this is a replicable model. All together, the network provides services for reaching almost 50,000 poor people in several hundred small villages and leverages thousands of dollars of goods and services.

Conclusions

The Shoulder to Shoulder model has proven to be a scaleable approach to channeling international volunteerism into longitudinal health improvements. Over the next 3 years, with funding from the Benjamin Josephson Foundation and the Roy and Melanie

Table 3

Programs of Shoulder to Shoulder

Shoulder to Shoulder Program	*Brief Description*	*Partnerships Participating*
Independent Community Health Board development	A nongovernmental, independent board interacts with the US partner to assess the community needs, initiate programs and govern them.	All
Educational opportunities for US health care learners	Medical students, nursing students, residents, and undergraduate learners have opportunities to participate in the development of all programs and health care delivery. Learners always have faculty supervision.	All
Community-governed health center	Larger communities like the Santa Lucia Partnership have multiple services; others have clinics that primarily provide basic primary care services.	Santa Lucia San Jose, El Negrito Santa Ana Pinares (under construction) San Marcos de Sierra (under construction) Ecuador
Nutrition programs	Nutrition programs are tailored to the needs of the community and may target primary school children, under age five children, or pregnant and lactating women. Others also include provision of micro nutrients.	Santa Lucia Santa Ana San Jose El Negrito
Water improvement programs	Programs include improving the quantity of water, water filtration systems, community education, and water conservation strategies, tailored for the needs of the community.	Santa Lucia San Jose El Negrito Pinares (under construction) Tanzania
Girls' empowerment (*Yo Puedo*)	*Yo Puedo* aims to improve the self-esteem of girls through entrepreneurship. School-based programs help girls to develop leadership skills and organizational skills. In addition, community leaders and teachers develop new cultural attitudes that help girls to succeed.	Santa Lucia Concepcion Plans in all other Honduran communities
Dental programs	Ideal program consists of educational, restorative, and preventative care	Santa Lucia—all Concepcion—all planned Santa Ana—educational Pinares—educational, preventive in planning stages

Sanders Foundation, Shoulder to Shoulder plans to start new partnerships, expand the scope of existing ones, and develop a stronger national infrastructure to support more partnerships. With more partners and funding, academic health centers can influence the health outcomes of people living in poor communities in a multitude of settings while providing more-meaningful experiences for volunteer health care providers and learners.

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