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Appendix

Follow-up Program Infrastructure

The responsibility for direct patient follow-up after teams depart is transferred to the mission's Peruvian medical director, a licensed general surgeon from the country's capital city of Lima, who travels to the location of the surgical mission campaign to perform follow-up assessments and also travels as a lead member of each mission team. Other responsibilities for this individual's employment role include in-country organizational and administrative duties and all coordination with local facilities and providers, as well as organizing, maintaining, and communicating all patient details to the U.S.-based staff and surgeons. The medical director has no other outside employment.

The training of the Peruvian medical director occurred as a continuous process through experiences and interactions with the senior author and U.S. surgical teams. During each trip, this individual was intimately involved in the clinical evaluation, case selection, and coordination of the surgical procedure for each patient. This on-site, in-person training focused on physical examination techniques, identification of warning signs, and documentation requirements. In addition, our protocol included a final follow-up appointment with the patients to coincide with a mission trip, thus allowing a final review by the visiting orthopaedic surgeons and additional training with the medical director. These final closing visits coinciding with teams were not formally tracked as part of the follow-up program, but instead were considered part of the educational component of the work and provided an excellent opportunity for the visiting orthopaedic surgeons to further validate and confirm the outcome findings of the Peruvian medical director, especially during the early training period.

Regarding the patient outcome model, there was successful retention of all members of the surgical outcome team over the five-year period, including the Peruvian medical director and the coordinating U.S.-based staff positions. In addition, a U.S. board-certified orthopaedic surgeon who was also a board member of the organization was specifically responsible for oversight of the follow-up program.

A further unique aspect of our follow-up model is the ability of the Peruvian medical director to provide general medical care for non-orthopaedic-related medical issues. In a country where access to physicians is extremely limited, the ability for a patient and his or her family to be seen by a physician at each follow-up visit represents a benefit to the patient for going to follow-up appointments and, from a larger perspective, represents an innovative way to deliver basic primary care for free in the developing world.

The financial burden of delivering orthopaedic care is indeed shared by the mission surgical teams and by the Peruvian health-care system. For example, the hospital infrastructure, in terms of bricks-and-mortar and system operations, is available to use; however, we donate time and expertise of medical personnel and implants. This fact is true even for our outcomes program. For example, our ministry pays for a doctor to make assessments and for radiographs when they cannot be afforded, but most radiographs are covered under the government-funded social service program. Every short-term surgical organization has to make assessments of the resources and circumstances in which they work and then implement a plan for rendering care that augments these. Our model displays a formula whose elements ought to be closely relevant to many austere settings with limited resources and challenging political and social circumstances.

Although we do not wish to mimic an elite modern-day clinical outcomes program in this austere environment, we do want to refine our data collection tool, heighten the sophistication of data retrieval and access with an electronic medical record, and supply more in-city personnel to aid in follow-up. These plans have yet to unfold, although work is under way toward these ends.