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EDITORIAL COMMENTARY

Humanitarian congenital heart surgery: Template for success

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See related article on pages 2480-9.

In this issue of the *Journal*, Young and coauthors¹ have summarized for us a 25-year project that has resulted in the establishment of six new congenital heart surgery programs in Russia. All these were sites that had active adult cardiac surgical programs but lacked congenital cardiac surgery. The article is truly a template for success for groups that would like to provide a similar service in other countries. In fact, this is the primary mission of the World Society for Pediatric and Congenital Heart Surgery. Its vision statement affirms, "Every child born anywhere in the world with a congenital heart defect should have access to appropriate medical and surgical care. The mission of the World

Society is to promote the highest quality comprehensive care to all patients with congenital heart disease, from the fetus to the adult regardless of the patient's economic means with an emphasis on excellence in teaching, research, and community service."²

The authors of this article and the members of the Heart to Heart International Children's Medical Alliance should be congratulated on moving toward this goal in the vast country of Russia. The numbers alone are a dramatic measure of their success. In 1990, they started with only 99 patients undergoing surgical or transcatheter interventions. This has grown to more than 16,000 cumulative procedures through 2013, with ever decreasing mortality! The article is filled with "pearls" that, when followed, result in self-sustaining centers that perpetuate a climate of team work and continue to perform cases successfully after the visits from the Heart to Heart Alliance end. Young and coauthors also provide us with a timeline for success, a 5- to 7-year period that, in many respects, is not unlike the 5 to 7 years that it takes to train a cardiac surgeon after medical school.

I would encourage anyone who wants to embark on such a humanitarian mission to read this article as a template for success. Young and coauthors provide eight separate steps that they believe will lead to success in attaining

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an independent congenital heart surgery program. The first step is to select a site and collaborative partner that will have adequate hospital equipment and personnel and the potential for self-sustainability. Young and coauthors emphasize that this will require a team-building strategy from the onset. Some measure of the success of this endeavor was contributed by the Russian government, which provided partial funding for the establishment of designated pediatric centers throughout the country. The next major step is the construction of surgical education teams that travel to the site for a 2-week educational mission. Consisting of 12 to 15 persons, the team includes pediatric cardiac anesthesia, perfusion, operating room technicians, cardiologists, intensive care unit physicians, intensive care unit nurses, and a surgeon. The efforts of these individuals working together are truly the key to the ultimate success of the mission. These multiple individuals are the unsung heroes of this remarkable endeavor. The Heart to Heart personnel demonstrate and perpetuate a climate of teamwork in the local center, which continues to work cohesively for the good of patients after the educational group has left.

A sad but important note is the reality that the team cannot save every child who is examined. It is important that volunteers be suited for this psychologically challenging and recurring aspect of onsite involvement. It is critically important that the majority of cases chosen for surgery provide the opportunity for the Heart to Heart Alliance to teach effectively whatever skills and knowledge have been agreed on for that year's educational objectives. Already known to our subspecialty but critically important with the language barrier is the need for accurate and precise communication. Young and coauthors emphasize the difficulties that may be encountered at this level. Great care must be taken to have clear and efficient transfer of information.

Another item that is important, even in our established centers, is of course choosing the right operation for the right patient at the right time. With the current capability of cross-continent communication and live video conferencing, it is my belief that this will become easier with the possibility of real-time communication with the "mother ship" when

required for more complex cases. Finally, it behooves the medical staff at local centers to educate themselves and adopt the principles of cardiac programs of excellence by visiting established heart surgery institutions so that they can return to their own centers with newly acquired knowledge and strategies that will better serve their patients.

In summary, I congratulate the Heart to Heart International group, which has accomplished an amazing goal in a 25-year period. Young and colleagues are to be commended not only for their humanitarian work with the Heart to Heart International Children's Medical Alliance but also for sharing their program model of effectively delivering high-quality pediatric cardiac care to underserved regions with the readers of the *Journal of Thoracic and Cardiovascular Surgery*. By outlining the steps it takes to achieve a program that can assess, educate, and train local pediatric cardiac specialists in current diagnostic modalities and new surgical and interventional techniques to the point where they are able to treat patients without the assistance of the physicians from the Heart to Heart Alliance, Young and coauthors have provided a road map for others to replicate in both developed and undeveloped nations. The true success of this program was summed up by Dr Gary Raff, a pediatric cardiac surgeon from University of California Davis Children's Hospital, when he stated, "Heart to Heart's success should not be measured by the number of successful operations on any given mission, but by the successful operations that our colleagues perform after we leave." For many, this article will serve as a reminder of the core values that led us to practice medicine in the first place. The use of this template will in no small measure help to eventually achieve the vision and mission articulated by the World Society for Pediatric and Congenital Heart Surgery.

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