Nationally-recognized pediatric cardiac surgeon Dr. Evgeny Krivoshchekov (Dr. K) provided medical leadership on this year’s mission in Rostov-on-Don. He and two colleagues from the Tomsk Cardiology Institute in Siberia travelled 1,870 miles to join up with the Heart to Heart team.

Dr. K worked closely with team co-leader Josie Everett, Heart to Heart’s executive director, who was on her sixth trip to this site. Together they ensured that all teaching and training supported this year’s focus: mastering the complete repair of Tetralogy of Fallot (TOF), as recommended at the conclusion of our 2011 mission. In Russia today, thousands of older “Tet children” are still waiting for the medical attention that is essential for their survival.

Three factors contributed to Dr. K’s exemplary leadership on this surgical-educational mission: his strong surgical track record in TOF repair; his long, close working relationship with Heart to Heart; and his infectious enthusiasm for sharing the expertise he and his team in Tomsk have acquired through Heart to Heart over the last eight years.

This year, two members of Heart to Heart’s Medical Advisory Council travelled to Rostov-on-Don to help conduct our mid-point evaluation – Dr. Nilas Young, Heart to Heart’s Founder and Medical Director; and Dr. David Teitel, Medical Director of the Pediatric Heart Center at UC San Francisco.
Tetralogy of Fallot is the most common of the cyanotic (blue baby) heart defects. Because of its broad spectrum of presentations, its frequency and complexities, successful management of TOF marks an important maturation level for a pediatric cardiac program. For successful outcomes to occur, the entire care team must understand the multiple treatment options available and their appropriate timing, and be capable of the disciplined implementation of each patient’s course of treatment.

NILAS YOUNG, MD, CARDIOTHORACIC SURGEON
HEART TO HEART FOUNDER & MEDICAL DIRECTOR

Program mid-point evaluation

Each year, in Rostov-on-Don and its suburbs, about 350 babies are born with life-threatening heart defects. In 2008, when Heart to Heart first visited the Rostov-on-Don Regional Cardiac Center, local cardiac specialists desperately wanted to provide open heart surgery for children in their region and beyond. The Center had been treating adult patients for 30 years, and routinely had to turn away the children brought to the Center by anguished parents.

Since we began our collaboration in 2009, hundreds of children have been saved by the local pediatric cardiac team. During this year’s evaluation, we noted three major accomplishments on the path to self-sustainability.

1. As we reported in 2011, the Center has outfitted their first dedicated pediatric cardiac operating theater.
2. This year, executive management demonstrated continued commitment by creating a pediatric cardiac department within the Rostov-on-Don Regional Cardiac Center.
3. The most significant indicator of progress is surgical. During the last 12 months, the local team has performed 15 complete TOF repairs with no deaths.

2012 program development focus

The first step in successfully diagnosing and treating a child with a heart defect is to collect a myriad of anatomic and physiologic data about his heart. Then, these data must be systematically shared with all specialists in a conference setting for team-wide discussion, analysis, and decision-making. Routine patient conferences facilitate what Heart to Heart refers to as “team-think,” a collaborative approach that brings together respective areas of expertise in order to reach a fully-informed collective decision regarding each child’s best course of treatment. As a program progresses, this best practice is essential for successful patient outcomes.

Heart to Heart’s experience tells us that communication, teamwork, and leadership development are key to program progress and to achieving self-sustainability. This year in Rostov-on-Don, we emphasized leadership development, pushing department heads to lead their colleagues to the higher level of teamwork necessary for managing more complex surgical cases.

An important part of the pediatric cardiac team leader’s job is ensuring that team-wide communication is automatic and consistent – making team-think the norm.

**Palliation vs. complete repair in Tetralogy of Fallot**

*Left:* The modified Blalock-Taussig shunt (a palliative procedure) uses the aorta to re-route increased blood flow to the lungs. *Right:* The complete repair of TOF shown here creates a new pathway for non-oxygenated blood to travel to the lungs; it also separates the heart’s two pumping chambers. Although both procedures increase the patient’s blood oxygen saturation level, the shunt is palliative, whereas the complete repair “fixes” the heart.
Communication and continuity

This year’s team members from the U.S. were all Heart to Heart veterans. This was Nurse Lisa Poppell’s tenth trip with us, the eleventh for Dr. Janet Simsic and the twelfth for Senior PCICU Nurse Brenda Jarvis, Lisa’s intensive care colleagues.

Five Heart to Heart team members from the U.S. are bilingual. Our statistician Natasha Lusin, PhD; OR technician Olesya Dushkova; and interpreter/interviewer Albina Popov are all Americans of Russian descent, who learned Russian at home as children. Pediatric cardiologist Nathan Taggart learned Russian as a young man, and executive director Josie Everett studied Russian language and history at university, in the U.S. and in the former Soviet Union.

Heart to Heart’s OR team included three colleagues from Tomsk: Doctors Krivoshchekov, Nikolishin, and Ginko, all of whom understand and speak English at varying levels of fluency.

Communication was extraordinarily enhanced by the interpreting prowess of two young bilingual pediatric cardiac surgeons from other children’s heart centers in Russia. Dr. Anton Avramenko from Samara is a bona fide Heart to Heartnik, having served as a medical interpreter on six previous missions throughout Russia. Dr. Sergei Marchenko travelled from St. Petersburg to benefit from Heart to Heart’s teaching and training. He was quickly recruited to interpret for case conferences and for the PCICU night shift.

Teamwork is only possible where great communication exists. This year’s Heart to Heart team – largely made up of bilingual pediatric cardiac specialists – worked seamlessly to role model effective team-wide communication. Moreover, the troika from Tomsk took extraordinary initiative in sharing their knowledge and skills, opening the door for an innovative Tomsk/Heart to Heart/Rostov collaboration.

Looking ahead: next steps

Heart to Heart’s milestone – our first surgical-educational team led by one of our Russian colleagues – became a turning point for the Rostov-on-Don program. During the next program year, Heart to Heart anticipates sponsoring Rostov’s lead pediatric cardiac surgeon to travel to Tomsk for leadership coaching and surgical mentoring.

We also look forward to sponsoring a core group (at least one dozen specialists) from the Rostov team to travel to the Tomsk Cardiology Institute for an “immersion trip.” As a team, they will have the opportunity to experience a Russian pediatric cardiac center of excellence in action. Heart to Heart is so gratified to see our former “trainees” become the trainers.
ROSTOV-ON-DON PROGRAM YEAR 4 (includes Sep/Oct 2012 surgical-educational mission)

FINANCIAL OVERVIEW

Financial support
Medtronic Foundation 52,461
Alcoa Foundation 50,000
The Edwards Lifesciences Fund 32,825
St. Jude Medical Foundation 6,298
Total Financial Support $141,584

In-kind support
In-kind medical services 458,673
Non-medical in-kind (see Expenses below) 28,180
Total In-kind Support $486,853

Total program value*
Donated medical services 458,673
Expenses (excl. non-medical in-kind) 141,584
Non-medical in-kind donations 28,180
Total Program Value $628,437

Expenses
Ground transportation, in-kind 2,600
Interpreters, in-kind 1,800
Lodging, in-kind 19,360
Meals, in-kind 2,420
Program supplies 1,445
Pre- and post-trip coordination + logistics 71,157
Travel 30,666
Travel insurance, in-kind 600
Visas, in-kind 1,400
Year-round program development 38,315
Total Expenses $169,764

* the financial value of Heart to Heart’s investment in Rostov-on-Don in a given program year

Data compilation as of October 31, 2012

ROSTOV-ON-DON PROGRAM YEAR 4
Total Program Value: $628,437

• Heart to Heart in-kind medical services $458,673
• Expenses (excl. non-medical in-kind) $141,584
• Non-medical in-kind donations (Russian) $28,180

PROCEDURES PERFORMED SEP/OCT 2012

Patient exams (40) 23,800
Echo studies + readings (40) 49,160
Cath lab - diagnostic (8) 64,512
Cath lab - interventional (1) 18,560
Pediatric open heart surgeries (5) 178,690
Anesthesia (5) 46,376
Perfusion (5) 13,130
Intraoperative TEE (5) 6,000
Post-op exams /readings (5) 1,920
ICU post-op care, MD (5) 10,740
RN/Tech support (ICU + OR) 10,460
Professional consulting + lectures 35,325
Total In-kind Medical Services $458,673

THANK YOU to our major contributors, whose support continues to fuel our progress.