

INTO the HEARTLAND CAMPAIGN

SITE: ROSTOV-ON-DON
DISTRICT: SOUTHERN
COLLABORATION LAUNCHED: 2009

SEPT 29-OCT 16, 2010
SURGICAL-EDUCATIONAL
MISSION 2



Commitment to teaching: On an average day in San Francisco, pediatric cardiologist Dr. Mark Cocalis (at center) examines and diagnoses between twelve and twenty patients, using echocardiography as his main tool. In Rostov-on-Don this year, he and colleague Dr. Laura Robertson see only about ten patients per day, slowing their usual pace to allow ample time for discussing pediatric cardiac anatomy and physiology during every young patient's examination.

CONFRONTING ROSTOV-ON-DON'S BACKLOG OF PEDIATRIC PATIENTS

Heart to Heart's second annual surgical-educational mission to the Rostov-on-Don Cardiac Center was a very productive continuation of our 2009 launch. This year's Heart to Heart team consisted of eleven veteran medical volunteers, two staff, two colleagues from other Heart to Heart programs in Russia, and a volunteer photographer.

This year, two pediatric cardiologists, Dr. Mark Cocalis and Dr. Laura Robertson, arrived six working days before the rest of our team—specifically to conduct echocardiograms in an educational atmosphere that encourages our Russian colleagues to ask any and all questions regarding the anatomy and physiology of a wide variety of congenital heart defects.

HEART TO HEART 2010 ROSTOV-ON-DON TEAM: **Children's Hospital of Wisconsin:** Leslie Thomas, surgical technologist **Emory University Hospital/Children's Healthcare of Atlanta:** Brenda Jarvis, senior PICU nurse; Lisa Poppell, PICU nurse; Dr. Janet Simsic, pediatric cardiac intensivist; Dr. Beth Wilson, pediatric cardiac anesthesiologist **Mayo Clinic:** Dr. Nathan Taggart, cardiology fellow **Samara Regional Cardiac Center:** Dr. Anton Avramenko, operating room and conference interpreter **Tomsk Cardiology Institute:** Irma Ozashvili, medical interpreter and team coordinator **UC Davis Medical Center:** Dr. Gary Raff, pediatric cardiac surgeon; Rick Yoshikawa, perfusionist **UCSF Pediatric Heart Center:** Dr. Mark Cocalis, pediatric cardiologist; Dr. Laura Robertson, pediatric cardiologist **Heart to Heart:** Josie Everett, executive director; Natasha Lusin, PhD, interpreter and medical statistician; John Martin, photographer; Albina Popov, interpreter and interviewer

Every day for ten hours, Drs. Cocalis and Robertson fielded questions from some dozen cardiac specialists from the Rostov-on-Don Cardiac Center, plus several visiting specialists from across Russia. Every day, Drs. Cocalis and Robertson faced a seemingly endless succession of hopeful mothers with critically ill children. By the time our full team arrived, our Advance Team had thoroughly examined and diagnosed over 60 babies and children, and developed a working list of candidates for open heart surgery and catheterization procedures. The visible backlog of children waiting for surgery provides very strong motivation to develop this program.

Rostov-on-Don's 30-year-old cardiac center is nationally recognized for its high-volume, regional adult cardiac program. To capitalize on the expertise of the Rostovian cath lab specialists, Dr. Cocalis and Dr. Nathan Taggart, our third pediatric cardiologist on this mission, arrived ready to teach nuances of pediatric diagnostic and interventional catheterization techniques.

Real-time teaching in the cath lab demonstrates three immediately useable best practices: 1) how to calculate specific data to determine heart pressures; 2) how every specialist can contribute different data or a different perspective on each patient's condition, thereby improving their team's overall ability to determine the best course of treatment for each child; and 3) how the process of communicating these data in conferences allows specialists to teach and learn from one another. Nineteen catheterizations were performed on babies and children ranging in age from a few days to 17 years old.

Sense of urgency fuels long working days

For some children we examine, the "window of opportunity" for life-saving open heart surgery has already closed; for others, the opening is precariously small. For the Heart to Heart team, this realization brings with it an almost overwhelming sense of urgency and intensity – not only to teach as much as possible, but also to begin surgery as soon as possible. We begin operating one day ahead of schedule, less than 48 hours after the OR team hits the ground. The cases of two children in particular illustrate the urgency.

"Backlog patients" Kseniya and Natalia

Four-year-old Kseniya's congenital heart defect went completely undetected until several months ago, when she began complaining of pain in her chest. Since birth, Kseniya's heart muscle has never received sufficient blood flow to provide normal levels of oxygen. Her parents were distraught to learn that children with her condition rarely live to their first birthdays – and that, if they do, they are at high risk for sudden death. They agonized over their decision to wait nearly half a year for Heart to Heart's team of experts to lead their daughter's life-saving operation and manage her post-operative care. Shortly before she was due to be examined by Heart to Heart, Kseniya developed a minor respiratory illness, raising the terrible possibility that she might not recuperate in time for us to perform her surgery. Fortunately, she got better quickly, and we were able to completely repair her unusual heart defect.



TEAM ROSTOV-ON-DON 2010: All eleven medical volunteers pictured here are Heart to Heart veterans. Collectively, these Heart to Heartniks have donated their time and expertise on 58 Heart to Heart missions! Back row (l. to r.): Albina Popov; Dr. Laura Robertson; Dr. Gary Raff; Dr. Nathan Taggart; Dr. Mark Cocalis; Josie Everett; Lisa Poppell, RN. Front row (l. to r.): Rick Yoshikawa; Dr. Janet Simsic; Dr. Beth Wilson; Brenda Jarvis, RN; Natasha Lusin, PhD; Leslie Thomas.

PROFILE OF A HEART TO HEARTNIK

"The great thing about the medical volunteers Heart to Heart finds – and why we Heart to Heartniks volunteer again and again – is that we all have a real desire to teach, to help someone go from being the student to becoming the master in a relatively short period of time. Each year we spend a couple of incredibly intense weeks providing on-the-ground medical and surgical teaching. This teaching then supplies a foundation for the Russian team to build upon throughout the year. Having the opportunity to work with Heart to Heart and get to teach in such a positive way gives me a real sense of accomplishment."

-DR. BETH WILSON, PEDIATRIC CARDIAC ANESTHESIOLOGIST
EMORY UNIVERSITY/CHILDREN'S HEALTHCARE OF ATLANTA



Four-year-old Kseniya can look forward to a normal life — and her parents no longer need to fear her sudden death.

Seventeen-year-old Natalia's congenital heart defect was detected when she was six months old. But in 1993 post-Soviet Russia, performing open heart surgery on babies was almost unheard of. On this mission, the joint Heart to Heart-Rostov team performed the open heart surgery that has eluded Natalia her entire childhood — a complete correction of Tetralogy of Fallot. We were all touched to hear this courageous adolescent patient describe her life experience, including her family's long quest for the surgery needed to repair her heart.

By the end of the OR week, the overall mood was noticeably lighter. The entire team was pleased that all our cases had gone smoothly, but everyone also felt a special sense of satisfaction — and relief — that by bringing these two teams together at this particular moment, we were able to provide both Kseniya and Natalia with life-saving open heart surgery just in time, before their windows of opportunity closed.

All our patients were discharged from the PCICU within one week of their respective procedures. Long-time Heart to Heart veteran Dr. Janet Simsic guided the local PCICU team in managing each child's post-operative course. Backing her up were her highly-experienced colleagues, pediatric intensive care nurses Brenda Jarvis and Lisa Poppell, who provided 24/7 coverage to Rostov-on-Don's full-capacity unit. A total of seven open heart surgeries and three interventional procedures were performed.



For seventeen-year-old Natalia and her parents, her heart condition will no longer preoccupy them every day.

Looking ahead to 2011

Doctors at the Rostov-on-Don Cardiac Center have long wanted to save children born with heart defects. For years, lead pediatric cardiologist Dr. Larisa Zhivova and her colleagues have been examining children and understanding their heart conditions. Sadly, in many cases, Rostov-on-Don's team of surgeons was not yet advanced enough — as is true in most of Russia's heartland — to perform the life-saving operations their young patients needed.

Dr. Zhivova is on the "front lines." As a cardiologist, it has been her job to deliver heartbreaking messages to the parents of her critically ill patients. Over the years, she has become a passionate and resourceful advocate for children and their parents. Her dedication to her patients was a driving force behind Heart to Heart's decision to select the Rostov-on-Don Cardiac Center for our fourth pediatric site.

The Center's surgical progress between our first two missions has brought the members of the Rostov-on-Don pediatric cardiac team closer together and has given them real hope that in the future, no patient of theirs born with a congenital heart defect will miss his or her medical window of opportunity.

"Heart to Heart is not teaching in a vacuum, but within a hospital system originally established to treat adult heart patients. We continually re-evaluate what we can reasonably impact at any given time. We're in a privileged position to help these specialists utilize their limited resources in ways that they could never have imagined. I think our on-going strategic guidance is the most valuable thing we bring to the table to help them save children's lives."

—DR. GARY RAFF, PEDIATRIC CARDIAC SURGEON
UC DAVIS MEDICAL CENTER

ROSTOV-ON-DON 2 SURGICAL-EDUCATIONAL MISSION, OCTOBER 2010: FINANCIAL REPORT

FINANCIAL OVERVIEW

FINANCIAL SUPPORT

Alcoa Foundation	50,000
Medtronic Foundation	29,179
Edwards Lifesciences Fund	25,000
Total Financial Support	\$104,179

IN-KIND SUPPORT

Donated Medical Services	654,487
Non-medical In-kind (See Expenses below)	37,883
Total In-kind Support	\$692,370

TOTAL PROGRAM VALUE

In-kind Medical Services	654,487
Non-medical In-kind Donations (Russian)	37,883
Expenses (excluding Non-med. In-kind)	104,179
Total Program Value	\$796,549

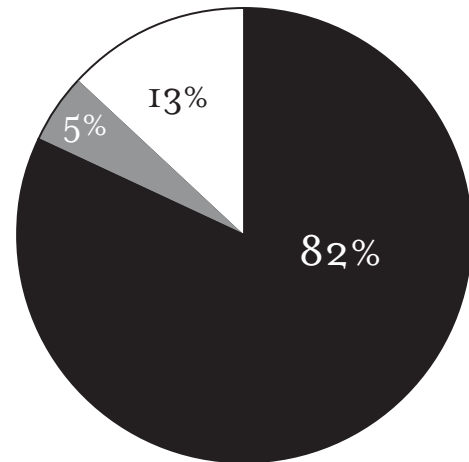
EXPENSES

Ground Transportation, In-kind	3,500
Interpreters, In-kind	8,600
Lodging, In-kind	19,200
Meals, In-kind	3,200
Program Admin + Coordination	64,624
Program Supplies	7,740
Travel	31,815
Travel Insurance, In-kind	1,680
Visa Support, In-kind	1,703
Total Expenses	\$142,062

PROCEDURES PERFORMED

Cath Lab - Diagnostic (16)	129,024
Cath Lab - Interventional (3)	17,519
Patient Exams (100)	59,500
Echo Studies + Readings (100)	122,900
Pediatric Open Heart Surgeries (7)	206,096
Anesthesia (6)	52,682
Perfusion (7)	18,382
Intraoperative Epicardial Echos (8)	9,600
Post-Op Exams / Readings (7)	2,688
ICU Post-Op Care, MD (7)	15,036
RN/Tech Support (ICU + OR)	10,460
Professional Consulting / Didactic	10,600
Total In-kind Medical Services	\$654,487

ROSTOV-ON-DON 2, OCTOBER 2010 TOTAL PROGRAM VALUE: \$796,549



- Heart to Heart In-kind Medical Services \$654,487
- Non-medical In-kind Donations (Russian) \$37,883
- Expenses (excluding Non-med. In-kind) \$104,179

ROSTOV-ON-DON 2 VALUE PROPOSITION:

Every donated dollar was leveraged **7** times.

ROSTOV-ON-DON 2 TOTAL PROGRAM VALUE:

87% of Rostov-on-Don 2 total program value consisted of services and products donated to Heart to Heart.

FINANCIAL SUPPORTERS

Our heartfelt gratitude to the Alcoa Foundation, Edwards Lifesciences Fund, Medtronic Foundation, The Estate of Nika Thayer, and Joey's Corner for their generous support of our journey *Into the Heartland*. We are honored to have them as partners.



The Estate of
NIKA PLESHKOVA THAYER



Data compilation as of December 20, 2010.