

Teaching to Provide Transformative Change

Everyone has heard the old Chinese proverb “Give a man a fish and you feed him for a day; teach a man to fish and you feed him for a lifetime.” Rotary Districts 5000 and 2241 with the support of The Rotary Foundation, are taking that phrase to a whole new level by working to change the way complex cranio-facial pediatric medical procedures are being handled in Romania.

The change began when Dr. Daniel Murariu, now a plastic surgeon in Pittsburgh, PA, was doing his general surgery residency at the University of Hawai’i in Honolulu. He approached his local Club, RC Honolulu Sunset, with the idea that together they could make a transformative and sustaining difference in the lives of children in need throughout Eastern Europe.

Dr. Murariu had been performing medical missions in Romania for years. He was inspired to help children who were suffering from the worst congenital cranio-facial deformities.

“We would go to villages and have a team from the U.S. and one from Romania.

Together we would work to provide specialty consultations to patients who couldn’t afford to go to the city,” said Dr. Murariu. “Over the years I met local plastic surgeons like Dr. Dragos Pieptu. We had several discussions about what the needs were in plastic surgery with the main one being pediatric cranio-facial malformations. These cases were not being treated to the same high standards as they would in the U.S.”



Romanian residents learning how to take dental impressions during the ASMS course.

Craniofacial anomalies are among the world’s most common birth defects. These defects are in the growth of the skull, facial bones and soft tissue and can include cleft lips and palates, craniosynostosis where the skull bones fuse prematurely and other

pathologies. Beyond the obvious social issues that can occur to children with these issues, lack of treatment can lead to medical issues such as mental retardation.

“The human head is an extremely complex structure with very important functional and esthetic units which are working together in a delicate balance,” said Dr. Pieptu. “No specialty can manage all the complexity. Having a facial malformation means having problems in many areas: respiratory, digestive, psychological, speech, hearing.”



Skull with multiple plates placed for fixation during the ASMS course.

Currently in Romania, families go to each specialist individually. A child with a cranial issue will go to a plastic surgeon who will have one plan, then go to a neurosurgeon who may have another plan. These individual appointments need to also address the dental, respiratory, speech therapy and other issues caused by the deformity.

“In Romania they have all the specialists, but they don’t have a team approach because they have providers acting as individual silos rather than collaborative, meaning the plastic surgeon does his own thing and the neurosurgeon does his own thing,” said Dr. Murariu. “They don’t communicate as well as they could. There is a lot of running around and patients get lost along the way and treatments get delayed. It is not up to date. It is delayed communication and not enough communication, so treatment is not optimal.”

In these complex medical cases, there should be a standard optimized care that is provided to patients. This system is lacking in Romania which makes an immense difference because if patients are not offered a multidisciplinary care center experience, which is the standard in the United States, then the medical care is substandard.



The US and Romanian teams working side by side

“These surgeries are a big deal for the patient because someone who is born with a cleft lip is more likely to be a social outcast, more likely to be unemployed, more likely to be depressed and more likely to be an unproductive member of society,” said Dr. Murariu. “The stigma associated with it is very severe, but the deformities are easily treatable. Once you do surgeries, you take a severe deformity that makes someone look very different and you make them look almost normal. These surgeries help integrate people into society and you are giving them a life, otherwise they are going to be hiding away in the periphery of society.”

Dr. Murariu had spent years doing clinic based medical missions in partnership with local providers to avoid what he described as parachute missions that are commonly undertaken by US physicians wanting to help. Doctors would fly into a poor or developing country and do a week of surgeries then leave. There was no one left behind to deal with complications, patients didn't have follow ups, and if a patient needs a secondary surgery, they would not get it. While the driving force behind these missions is a noble one, he does not endorse them because of the lack of follow up care.

He felt that there was a better way to be involved in the long term which sparked the idea of developing a sustaining program that would teach a better method of handling these most complex medical cases. As a Rotarian, he felt reaching out to his local Rotary family was a good way to help garner the support for this much-needed project.



Preparing the materials for dental impressions during the ASMS course.

Dr. Murariu began by speaking to Rotary Club of Honolulu Sunset in 2014. This began the process of developing a grant from Rotary International and additional support from Rotary clubs across the state of Hawaii. This grant was originally conceived as a Rotaplast Mission, but expanded into a Vocational Training Team in the early planning stages. Dr Dan, as he is affectionately called by all Rotarians who know him, worked with his counterparts in the medical profession in Romania, as well as the U.S., to build a team of volunteer surgeons. He then invited Richard Zegar, Foundation Chair of RC Honolulu Sunset, D5000 and Alex Ciocina of the Rotary Club of Iasi 2000, Romania, D2241 to raise the necessary financial support for a global grant.

Zegar was the D5000 Annual Foundation Giving Chair at that time, he is also a private pilot and flew to the “out Islands” giving Foundation Briefings and drumming up excitement for the grant. Twenty-Five Clubs from D5000 and seven from D2241 eventually joined the effort, about 50% of the Clubs in each District. The total budget was about \$160,000 USD. GG1419846 was approved by TRF in 2014 and the first of six planned medical mission trips was held in November of 2014.

This was a very different sort of mission project though. The plan was not to go and perform as many surgeries as possible. The plan was to develop a partnership between an institution in the U.S. and a Romanian medical school. Ideally the project would include bringing over consistent people from the U.S. to Romania and bringing surgeons from Romania to the U.S. to train here, making it sustainable and long term.



Lectures by the US faculty to Romanian physicians, residents and medical students.

The process took years to develop and by this point Dr. Murariu was working at the University of Virginia (UVA) doing his plastic surgery training. He spoke with his program director and (now) chair of his department, Dr. Thomas Gampper, who was very open to becoming the medical center in the United States and help build the relationship. This began the partnership between the University of Virginia and the University of Medicine and Pharmacy Lasi to collaborate long term and beyond the scope of this project.

“Our main contact in Romania, Dr. Pieptu, is not only a Rotarian, but at the time he was in the administration of the school,” said Dr. Murariu. “He is a former rector of the medical school and he is trained as a plastic surgeon. So together with him, we came up with the plan that we wanted to implement.”



The US and Romanian teams during a Rotary meeting

During the first medical mission trip, the team; which included Dr. Murariu, the Chair of the Department of Plastic Surgery at UVA, Dr. Gampper, and the Head of Pediatric Anesthesiology at UVA, Dr. Terry Yemen, went to Romania and held conferences, saw patients in clinic, and prepared the ground for the surgeries that were to be performed in the spring of 2015.

“During that second trip, we spent two weeks doing dozens of surgeries working side by side with the Romanians,” said Dr. Murariu. “They were getting to see the techniques that the surgeons from UVA were performing and at the same time we were building the relationship between the two teams. We wanted the constant contact between the teams so they could call upon each other if they had questions.”



Performing microsurgery by US and Romanian surgeons.

The team did not just include surgeons. Since a team mentality revolves around the patient it also included speech pathologists, social workers, physicians and dentists. It was not just one person who oversaw the process but really a collaborative effort.

Dr. Jonathan Black, plastic surgeon and a faculty member specializing in craniofacial surgery at the University of Virginia had an interest in international work and was invited to join this project. He feels that the multidisciplinary method has proven results as the best approach and represents the standard of care for the treatment of cleft lip, palate and craniofacial patients.



Microsurgery lab training overseen by Dr Campbell (UVA) and Dr Ghetu (UMF Iasi).

“It is hard to choose any one specific case since they have all benefited,” shared Dr. Black. “I think each patient who has undergone surgical treatment with the

collaboration of either speech therapy or orthodontics has been a role model for demonstrating the power of this approach.”

Since the beginning of this project there have been five trips to Romania. Through the first four trips, 67 patients were seen at clinic and 41 patients had 79 surgical procedures. There have been over 60 hours of conferences and training courses held with 125 participants in the training. The U.S. team has included around a dozen doctors over the five mission trips and about the same number of

doctors in Romania. A secondary benefit in Romania is the training of residents and medical students who get to participate and study the practices of the traveling doctors.

“Our focus was not going for numbers,” said Dr. Murariu. “Our main goal is to teach the Romanians to do the surgeries, so they can perform them in the future. We are doing cases that are complex, that they would not be able to do. Because they didn’t have the experience in these types of cases, they would not undertake the surgery. Although we could, our focus is not to just crank out 100 surgeries. Our focus is more on teaching the Romanian team members.”

This project would not have been possible without the support of Rotarians across the world. Over 50% of the clubs in Hawaii provided financial support for the project, as well as all four clubs in Lasi and others from Vaslui and Botosani. Rotarians in Romania hosted doctors, provided transportation and food. Some of the unsung heroes of the project were Rotarians, like Alex Ciochina of Rotary Club Lasi 2000, who dedicated large chunks



Lectures by Drs Yemen, Gampper and Pieptu.



Taking a break during surgery for a quick photo.

of their time to help during these trips so the ran smoothly for the visiting health professionals. Rotary International provided funding through a grant and matching funds.

“There are 53 rotary clubs in District 5000 (the state of Hawaii),” said Zegar. “Just about 50% of the clubs provided support from \$100 up to around \$7,000. It is through the magic of the Rotary foundation where you have matching funds from the district and the Rotary foundation where we are able to match funds to bring everyone together and make this project happen. District 2241 (Romania and Moldova) were involved as well through the contribution of six individual clubs and the district as a whole as well.”

It is through the support of Rotary that transformative change has begun in Romania and the lives of children of Romania.

“The Rotary club has been the perfect way to achieve such a major change and to perform a really immense project like this,” said Dr.

Murariu, who is still a member of RC Honolulu Sunset. “This is something I would not have been able to do without the Rotary and that is what the Rotary is all about. People coming together to support projects like this. Rotary is a really big support system.”

When asked what would you like to share with people who have supported this project, Dr. Black said, “What you are doing is making a real difference for a country. It is hard to understand that when you don’t have the chance to see the results like I do. The impact is real and the talent is there in Romania to keep this going. This will have a much longer lasting effect compared to the majority of other cleft missions.”

No one is more grateful for the support of Rotary than the Romanians.

“Rotary is doing great things all over the world for millions of people since decades,” said Dr. Pieptu. “Changing the lives for 20 – 40 – 60 people might look as not being a great achievement. However, all the Rotarians of this project have a special reason to be proud for: instead of giving a man a fish they helped the American team to teach the



Welcome party for the Romanian team when visiting Charlottesville in 2016.

Romanian team how to fish. Hopefully due to the Rotarian aid we will have here the skill to feed ourselves at least for a lifetime.”



US and Romanian participants photo at the end of two weeks of surgeries in 2015.