

At the Heart of the Matter

Medicine's healing powers sometimes go beyond the physical. Two Dartmouth medical students found that was the case when, in successive summers, they volunteered for a nonprofit organization in Israel. There, they saw Israelis and Palestinians overcoming decades of conflict to work side by side caring for children with serious heart defects.



Lior Sasson (right), SACH's chief of pediatric cardiothoracic surgery, is intent, with assistance from a resident, on repairing a congenital heart defect.

A Wonderful World

By JONATHAN ZIPURSKY

Every morning, in operating room eight at Wolfson Medical Center in Holon, Israel, Dr. Lior Sasson wielded his scalpel while soul singer Sam Cooke crooned in the background:

*Don't know much about history
Don't know much biology
Don't know much about a science book
Don't know much about the French I took
But I do know that I love you
And I know that if you love me too
What a wonderful world this would be.*

The song "Wonderful World" was sandwiched in the middle of an hour-long operating room playlist that was otherwise composed of Israeli folk songs and French opera music. It seemed out of place given the other selections, but quite appropriate given the setting. The words resonated with me every day as I watched Sasson, a surgeon with Save a Child's Heart (SACH), give yet another sick child a chance at a new life.

In the summer of 2009, after finishing my first year as a medical student at DMS, I spent five weeks as a medical volunteer with SACH. This nonprofit humanitarian organization provides life-saving cardiothoracic surgery to children born with congenital heart defects who do not have access to sufficiently advanced medical care in their home countries. More than half of the patients served by SACH are from the Palestinian Territories of the West Bank and the Gaza Strip or from the nearby countries of Syria, Lebanon, Jordan, and Iran. The remaining patients come from Africa, Asia, and Eastern Europe.

The children helped by SACH travel hundreds or even thousands of miles to receive free, state-of-the-art care at Wolfson Medical Center. Their treatment is part of SACH's mission, which is to provide excellent care to children with congenital heart disease, regardless of their nationality, race, religion, or gender; to train pediatric cardiologists and cardiothoracic surgeons from underserved countries to improve such care around the world; and to bridge the gap between Israel and other countries in the Middle East.

While they are in Israel, the children being treated by SACH physicians live near the hospital in a house in a suburb of Tel Aviv. During my time working at SACH, there were children and families

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from Angola, China, Tanzania, Uganda, and Zanzibar living there. Many Palestinian children were also treated by SACH during my time there, but because of the proximity of their homes to Israel, the Palestinian families would stay at the hospital and usually traveled back and forth from the Palestinian Territories several times during the course of their child's care.

Lunchtime was always a spectacle. Depending on what time between noon and 2:00 p.m. I happened to walk into the kitchen, I'd be eating anything from pilau—a traditional rice dish from Zanzibar and my personal favorite—to noodles and corn soup, staples for the Chinese families at the house. Fatima, a young Arab-Israeli translator for SACH, told me, "Sometimes, I feel as though the world meets here, under one roof."

The time I spent at SACH brought pediatric cardiology to life. With very little teaching time devoted to this specialty in the first two years of medical school, we medical students begin to consider congenital heart diseases—such as tetralogy of Fallot or transposition of the great arteries—to be medical fascinomas: rare diseases seen in the pages of our textbooks but never firsthand. Little did I know that the worldwide incidence of congenital heart disease is as common as one in 100 live births. It has become a much smaller problem in the Western world, as the identification and treatment of birth defects have improved. But in the developing world, congenital heart disease remains a major cause of illness and death.

Houzanoul, a three-year-old boy from Tanzania, helped change my perception of pediatric cardiology. Houzanoul suffered from tetralogy of Fallot, a condition characterized by four simultaneous problems: a hole between the heart's left and right ventricles; a narrowed opening from the right ventricle to the pulmonary artery, which brings blood to the lungs; an aorta that accepts both oxygenated blood from the left ventricle and deoxygenated blood from the right ventricle; and an abnormally large right ventricle. This combination of factors leads to very low blood-oxygen levels.

I vividly recall watching Houzanoul run around the yard behind the SACH house, stopping every few minutes in tears to catch his breath while squatting low to the ground. Prior to this, I had only heard about these so-called "tet spells," in which toddlers with tetralogy of Fallot become lightheaded and short of breath. They reflexively squat, which increases the flow of blood to their lungs. I had the privilege of following Houzanoul for nearly four weeks, through his preoperative care, his surgery, and his postoperative care in the pediatric



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intensive care unit. By the time I left, he was fully recovered—free of tet spells and running around the yard like any other toddler.

Then there was Harvey, a six-month-old boy from Uganda who came to Israel to be treated for transposition of the great arteries, a condition in which the two major vessels that carry blood away from the heart (the pulmonary artery and the aorta) are anatomically switched. As a result, blood that has received oxygen in the lungs is pumped back into the lungs, rather than out to the body. Infants rarely survive this condition unless there are other connections that allow for the mixing of oxygenated and deoxygenated blood.

Harvey was brought to Israel by his mother, Brenda, a social worker in Uganda. Brenda was in the intensive care unit every day. She sat with Harvey, held him, talked to him, and fed him, attending to him every minute he was awake. She went weeks without leaving the hospital. She slept wherever she could—on a chair, on a small cot in the ICU—but only when Harvey slept. And she did this without any support; she and Harvey had come to Israel by themselves.

Brenda and I spent a long time talking when we first met. Traveling to Israel was not easy for her. The country was completely foreign, and she was terrified for her son. The only two things she knew about Israel prior to this trip were what she had learned from international newscasts: Israel was in constant conflict with other countries in the Middle East, and the Israeli prime minister was gravely ill. But she kept stressing the necessity of Harvey's surgery. "This is a chance at life," she said. She was comfortable with the thought of spending many more months essentially living in the ICU if it meant that Harvey would recover. During my five weeks in Israel, I spent time with Brenda every day, and we became friends. When I left Israel in July, Har-

Above, Brenda tends to her son, Harvey, in the ICU; they traveled from Uganda so he could get care from SACH. Below is one of the ORs there.



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vey was still in the ICU, making slow progress toward a full recovery, with Brenda loyally at his side.

I also spent time talking to the SACH physicians about their work. Given that Israelis and Palestinians have long been locked in bitter conflict, I was curious how Israeli physicians felt, in their heart of hearts, about treating Palestinian children.

"As Jewish people, we lead our lives by trying to carry out the 613 mitzvot," said Dr. Akiva Tamir, SACH's chief of cardiology, referring to the commandments or good deeds described in the Hebrew scripture. "There is no reward, only the fulfillment you receive from per-

forming good." But it became clear to me that for some physicians, working for SACH does come with emotional challenges and internal conflicts. "I remember a day, a Tuesday, when Israeli children in the Gaza Strip were injured by a suicide bomb on their way to school," Tamir recalled. "Tuesday is the day we run a free cardiology clinic for Palestinian children. It is on these kinds of days when it crosses my mind if SACH can continue to exist. . . . But I know that it must."

Equally remarkable are the Palestinian families who bravely travel across the Israeli border for the sake of their children. I wondered how they felt as they left their homes to spend weeks or even months living in Israel. In talking to Palestinian families, I found that they entered Israel with a fear of the unknown—after all, most Palestinians have never ventured across the border. They also run the risk of condemnation from their communities for seeking help in Israel.

I asked some Palestinians whether their feelings toward Israel had been changed at all by their experiences with SACH. One man, the father of a 12-year-old Palestinian girl who was recovering from a recent operation, was particularly memorable. Until the Six Day War of 1967, he had worked as a laborer in Tel Aviv. His daughter had been terrified to come to Israel before her surgery, he told me. But now she was no longer afraid of approaching an Israeli soldier—not an insignificant act—and she was eager for an opportunity to swim off the sandy beaches of Tel Aviv.

With this story, however, comes a caveat. The Palestinian families that I interviewed unanimously reported being treated with the utmost care and respect at the hospital, but they did not feel this was the day-to-day reality for those living in the West Bank or the Gaza Strip. In their minds, their treatment was not typical of the treatment of Palestinians by Israel. Yet while SACH is not necessarily changing the general attitudes of Palestinians toward Israelis, I think it is very successful at providing to all participants in the program—physicians, family members, and, most importantly, children—moments of peace.

My experience with SACH was inspiring to me both as a medical student and as a young Jewish adult who has a deep attachment to Israel. The organization evokes fascinating social and cultural questions about the practice of medicine. How is it that medicine can bridge the gap between adversarial nations and two very different cultures? How is it that in the face of a chance to save a life, people are able to put aside their cultural differences? SACH illustrates to the world on a daily basis that



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From the top are Tel Aviv's skyline; Wolfson Medical Center; and Zipursky with three SACH patients, including Houzanoul (left) after his surgery for tetralogy of Fallot.

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through medicine, cooperation between the people of Israel and the people of Palestine can work, albeit under the right circumstances.

"There is a divide, a wall, between Israel and the other countries in the Middle East," Dr. Tamir told me. But, he added, "if you look people in the eyes and help them personally, there are more and more holes in this wall." To me, SACH offers a flicker of hope in a region riddled with conflict—a glimpse of what a wonderful world it could be.



Avesar volunteered with Save a Child's Heart in Israel in 2010.

For the entire time the boy was at the medical center, his grandfather stayed by his side. He talked in English to the physicians about the boy's treatment and worked closely with the overloaded SACH staff members. When the pair left, the boy was full of energy and had the potential for a long and healthy life.

A Common Goal

By MICHAEL AVESAR

I was born into a family that knows the importance—and elusiveness—of peace between Israel and the Palestinian Territories. My parents met when they were in the Israeli military. Many of their army friends died during the 1973 war with Syria, and our family has friends and relatives who have been affected by terror attacks and military operations in the region during my lifetime. As a first-generation American born in California, I grew up hearing regular conversations about Israeli-Palestinian politics, and I have traveled to Israel many times to visit family members. So although most of my life has been lived far from the conflict, it is often in my thoughts.

I learned about Save a Child's Heart (SACH) when Jonathan Zipursky (the author of the preceding account) gave a talk about his experience there at a meeting of the Dartmouth International Health Group. I was immediately attracted to the opportunity and made plans to spend several weeks volunteering at SACH the next summer, 2010, after I finished my first year of medical school.

As I prepared for the experience, I was eager to find out about the logistics of the organization—how exactly did SACH care for Palestinian children from the West Bank and the Gaza Strip? What I found in interviews with a number of families, SACH staff members, and others was that a common goal—caring for children who need advanced medical treatment—brought together parties who would not otherwise be working with each other, given the politics of the region.

While I was in Israel, I routinely saw Israeli and Palestinian physicians cooperating closely. Clinics in Gaza and the West Bank often refer cardiac or other severe cases to Wolfson Medical Center, and the Palestinian physicians brief their Israeli counterparts over the phone as the patients are transported across the border. Palestinian doctors sometimes do cardiology fellowships at the medical center, and both Palestinian and Israeli physicians rotate between the medical center and sister clinics in the Palestinian territories. These partnerships are essential to SACH's success, and they are an inspiration to witness in person.

One morning while I was at the hospital, a minibus full of Palestinian patients arrived from

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Above and below, SACH staff are attentive to all their patients, without regard for their country of origin.



Gaza. One of the passengers, a young boy, was accompanied by his grandfather. The grandfather spoke perfect English and, as a retired nurse, knew all about his grandson's ventricular septal defect—a hole in the wall between the left and right ventricles of the heart. The grandfather had worked for a time in southern Israel, but his career had been cut short a few years before when the border crossing that was part of his daily commute became too difficult following a series of rocket attacks from Gaza into Israel.

As I talked to the grandfather, he explained his grandson's story and gave me a detailed briefing on ventricular septal defects. When I asked him where he would most want his grandson to receive care, he said, "Israel or Europe." His primary concern was getting his grandson the best possible care. Over the next few weeks, the boy had a catheter-based procedure to help plan the surgery, followed by open-heart surgery and a recovery period.

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ment and worked closely with the overloaded SACH staff members. When the pair left, the boy was full of energy and had the potential for a long and healthy life.

Another afternoon, while walking to the ICU to listen in on the physicians doing their rounds, I heard two women crying excitedly. I turned a corner and saw them hugging each other, clearly overjoyed. They repeatedly pulled apart slightly to look at each other and then embraced again. I had seen one of the women before, but I almost didn't recognize her because I had never seen her smile. She had always looked serious and worried, and with good reason. She was the mother of a five-year-old Palestinian boy who was being treated by SACH for patent ductus arteriosus, a congenital condition in which a fetal blood vessel does not close completely; this can lead to problems oxygenating the blood, as well as other complications. The mother and her son had arrived a few days before at the echocardiography lab, where physicians had verified the condition. Earlier this same day, I had watched SACH cardiologists use catheters to place a metallic coil, successfully closing the vessel.

Later, I learned that the women were sisters. The mother and her son lived in Gaza, but the mother's sister and her husband had moved 10 years earlier to the West Bank. Because of the difficulty of traveling between the Territories, the two women hadn't seen each other that entire time. But thanks to a request from a SACH physician for the sister to be present during the care of her nephew, she was granted papers to enter Israel and reunite with her family.

Talking with SACH physicians and staff and with physicians and government officials in the West Bank, I learned a bit about the process by which patients are able to travel from the Palestinian Territories to Wolfson Medical Center for care. The politics of the conflict do create barriers in the referral system, but I was impressed to find that medical teams on both sides of the borders work with the Palestinian and Israeli governments to make cooperation possible.

As I witnessed it, the process of traveling from the Territories to Israel to receive care was difficult both for SACH patients and others who needed care, but it was also predictable and transparent. First, a doctor in the Territories made a referral to an Israeli hospital. Then, an Israeli physician made an official medical invitation to the Israel Defense Force, requesting permission to have the patient travel across the border. The approval process took 10 to 14 days. Once the patient and family arrived at the border, they were searched before getting final approval to cross. Some families used two cars to speed the crossing—they would drive one car to the border, walk across by foot, and then take a car provided by SACH or another organization from the border to the hospital. This method avoided the need for a vehicle search, which would slow the process further.

In emergency cases, Palestinian doctors made urgent referrals, and the Israeli Defense Force examined the request at the border. Often, only the sick child crossed the border, along with a SACH staff member, to speed the security check. The parents would follow as soon as possible. During my time at SACH, I saw one child arrive alone, followed by his father 12 hours later. In another case, a child with severe combined immunodeficiency remained alone for three days until the mother was finally able to get to the medical center.

One day I traveled to the West Bank to learn more about how patients made the trip from the Territories to Israeli hospitals. In Beth-



Avesar's father (left) visited him during his time at SACH, and together they met with an official in the Palestinian Ministry of the Interior (right).

lehem, I spoke with Suleiman Al-Hamri, a government official in the Ministry of the Interior, who welcomed me with a warm smile. Al-Hamri was 50 years old but could easily have passed for 35. In his office were two posters, one with "Human Rights for Palestine" in big letters and the other bearing a photo of Yasser Arafat—the longtime leader of the PLO, the Palestinian Liberation Organization, who died in 2004. With me was my father, who was visiting me in Israel at the time. Although he often returns to Israel, he had not been to the West Bank since he was a 19-year-old paratrooper with the Israeli army.

I learned a lot from Al-Hamri about the medical referral system for children, but we spent even more time talking about broader topics. Al-Hamri asked my father if he had ever been to the West Bank before. When my father started talking about his military experience, I wondered if it was wise to bring up such a topic while in the office of a Palestinian Authority official. But it seemed I was the only one with such a reaction. Al-Hamri's demeanor did not change a bit. He explained that he had been an activist in the PLO. Before he was 30, he said, he had on three occasions been arrested and spent time in Israeli prisons.

My father and Al-Hamri talked casually, learning more about each other. Both were married and had four children, and both had professional backgrounds in law and business. They talked respectfully about the possibility of peace between Israel and Palestine, and about what it might take for peace to be achieved. Then Al-Hamri took us to lunch. As we walked, we were interrupted by many people saying hello to Al-Hamri and to us, his guests.

My time in Israel was relatively brief, and my experiences limited. Yet what I found strongly suggests that in pursuit of a common goal—providing life-saving care to sick children—tremendous cultural, political, and logistical barriers can indeed be overcome. ■