

Humanitarian Surgery

A Call to Action for Anesthesiologists

IN February, I was the only anesthesiologist at one of Doctors Without Borders/Médecins Sans Frontières (MSF)'s two clandestine hospitals offering surgery inside Syria. Located near the Turkish border and surrounded by olive orchards, the town of 1,000, previously mostly vacationers, had swollen to 30,000 as people fleeing violence searched for safety. Security at the hospital is so tight that cameras are forbidden. With no sign outside the two-story house to indicate this is a hospital, the only clue to its purpose lies in the universal MSF picture on the front gate: a rifle with a big X over it, indicating that guns are forbidden.

Inside, the impact of guns and explosions is all too evident. In my first week, we treated 42 patients; at any one time we had approximately 5 children and 10 adults in the wards, and many others arriving as outpatients. Each had a painful story to tell. In my previous MSF field work—in Ivory Coast, the Democratic Republic of Congo, and Haiti—my role was to support local anesthesia providers. But in Syria, I was the only anesthesiologist responsible for the operating room, postanesthesia care unit, and pain service. I did obstetrics, pediatrics, and regional blocks and managed a burn unit.

In many ways, the heightened insecurity and the clandestine nature of our work makes this an atypical project for MSF. We usually work alongside local ministries of health, and although we operate in many other conflict settings, few places are as dangerous as Syria. It is also rare for MSF to open programs without first gaining official permission, but given the overwhelming needs inside opposition-controlled areas of the country, MSF has dispatched medical teams—like the one I was a part of—to cross from neighboring countries into Syria. But what this experience shared with my other assignments was MSF's commitment to providing quality medical



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care to the most vulnerable, despite the political and social realities of their environment.

MSF is founded on the humanitarian principle that people caught in crises deserve access to quality medical care. We are driven by needs on the ground rather than any political strategy, and do not consider religion, race, sex, cultural, or even military background when providing care—whether that means treating a combatant who has blown off his hand trying to launch a grenade, a child burned when his house was hit by a bomb, or a woman in a remote rural setting who needs a cesarean delivery.

In Syria's ongoing civil war, healthcare facilities and providers are routinely targeted for bombing or arrested in order to deny the putative rebels access to health care. During my time in Syria, I once asked a doctor for information

about the scope of service, including details about patients and procedures at his distant Syrian-run facility we were helping to supply. He declined, explaining that if he were stopped by authorities while carrying this information, he would be seen as helping the rebels and would face arrest or worse. The result of this deliberate targeting of healthcare providers has been a mass exodus of doctors and a public health emergency for the Syrian population.

Although Syria's problem arose from the violent destruction of a previously advanced health care system, access to surgical care has been a long-standing problem in many parts of the world. The poorest third of the world's population—residing in countries in which per-head expenditure on health is \$100 or less—receive just 3.5% of the operations that are undertaken worldwide.¹ In some sub-Saharan African countries, there is less than 1 anesthesiologist for every 100,000 people. Many countries have no certification and no agreement about what constitutes an anesthesia provider. Although young doctors may be eager to perform surgical procedures for which they can bill patients, they typically have little interest in learning how to give anesthesia, which is poorly compensated and has little social prestige. Often the provider is an operating room nurse who is designated to monitor vital signs but has minimal airway training and little understanding of human physiology or how to manage anesthesia-related complications. I have

Photo: D. Marchbein.

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seen more than one nurse who did not know how to intubate, use Ketamine without muscle relaxation for abdominal surgery. Others place a spinal for cesareans but do not respond to the apneic newborn.

Of course the resources needed to safely perform surgery extend beyond anesthesiologists, surgeons, and skilled support staff. An entire logistic system must be in place, including clean water, electricity and reliable supplies of safe and effective medicines, anesthesia delivery devices, and monitors without aging computers likely to fail or need servicing.

In Aweil, South Sudan, where I worked just after the end of a 25-yr civil war, there was no town electricity, water or sewage, and few educated people among whom to find nurses and doctors. Setting up a hospital meant drilling a bore hole for water, digging latrines, and rigging multiple generators to power and back up the hospital if the first generator failed.

In the absence of soda lime and centrally supplied oxygen, the anesthesia machine was a simple vaporizer. Oxygen extracted from an electrically powered extractor flowed through the vaporizer and entrained the volatile agent, which was delivered to the patient *via* a mask and ambu bag. Should the generator fail, so did the oxygen extractor—so for an anesthesiology provider the preference was always for spontaneously breathing patients.

Although ensuring broad access to clean water and reliable sources of electricity seem beyond the scope of the international medical community, there is little organized effort to address what should be an easier problem: unequal access to modern medication and equipment.

Consider the cost of laryngeal mask airways, Diprivan, Remifentanyl, and Dantrolene. Unlike medications for treatment of HIV, where the price of a first-line drug regimen has

dropped 99% since 2000 (from more than \$10,000/year to just under \$100), there are no large buyers and few advocates for patients needing surgery. Why is it that even when these machines and medications are no longer covered by patents, their prices remain out of reach for resource-poor settings? Why does the international community barely discuss that the world's poorest billion people have little access to safe surgery and effective anesthesia?

I think anesthesiologists have an important role to play in changing these unacceptable inequities, especially in filling the unmet needs for doctors with our expertise. Anesthesiologists are particularly underrepresented in global health, yet are key to expanding access to essential surgery. It is my hope in writing this editorial that others will be encouraged to join me in doing this work.

Whether you go on missions for a week or two, support programs to train anesthesiologists in developing countries, go to areas of conflict or consider making a longer commitment, as individuals there is much we can do to help. And as a group, we must play a more significant role in demanding access to anesthesia and surgical care for the millions suffering and dying from surgically treatable diseases.

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Reference

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