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RISKING LIVES TO SAVE LIVES:

THE ORDEAL OF MEDICAL PERSONNEL IN SYRIA

ABOUT SAMS

The Syrian American Medical Society (SAMS) works in one of the world's worst emergencies to provide life-saving humanitarian and medical assistance. Since its founding in 1998 by a group of American physicians of Syrian descent, SAMS has grown to 10 chapters nationwide and has offices in Turkey, Jordan, Washington, DC and Ohio. In 2012 alone, SAMS provided more than \$5 million in assistance to Syrians affected by the ongoing crisis. SAMS plays a leading role in humanitarian advocacy, shedding light on the Syrian crisis from Washington to Geneva.

Undeterred by conflict, SAMS volunteer physicians and professional staff provide emergency medical relief and humanitarian assistance to refugees, internally displaced persons, and vulnerable populations in several countries affected by the complex emergency in Syria. SAMS works to save lives, alleviate human suffering, and ensure a safer, healthier future for all those in need.

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S Y R I A



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EXECUT IVE SUMMARY

To be a doctor in Syria since the beginning of the current crisis means to risk one's life in order to save lives. Syria today is the most dangerous place in the world to be a doctor.

Now in its third year, the conflict in Syria has taken over 93,000 lives. It has destroyed Syria's healthcare system, ravaged its population, and seen an unprecedented level of targeting of medical facilities and personnel. Medical personnel are first in the response and disproportionately bear the effects of the conflict. Widespread fear of treating patients forced doctors to establish a parallel underground healthcare system, comprised of makeshift hospitals hidden in clandestine locations throughout Syria. Medical staff throughout Syria risk their lives to treat the wounded, while being threatened of detention, torture, harassment and even death just because they are treating "the other side."

Never before in the history of conflicts have doctors, medical personnel, and wounded patients borne the brunt of conflict as they have in Syria. Never in the history of conflicts, have doctors, administrators and hospitals struggled to obtain basic medical supplies and medications from IV fluid to hemodialysis kits to diesel fuel, just because the international community does not have the will and the mandate to provide comprehensive humanitarian aid across national borders.

Never in the history of conflicts have doctors built an unprecedented underground parallel healthcare system just to avoid harassment, detention and torture for providing basic lifesaving services, and to have the ability to treat patients under safer conditions.

Rarely in the history of urban conflicts have patients bled to death due to lack of blood products, died during long transportation across the border in a trip that may take days or weeks, lost limbs due to absence of capable surgeons or died of hypothermia due to lack of diesel fuel and electricity in hospitals.

Never in the history of conflicts have patients been pulled out from the Intensive Care Units and from the operating tables, their life support machines disconnected, and tortured in the very public hospitals that are supposed to heal them, or were doctors forced to refuse them treatment.

SAMS has been providing medical relief to Syrian doctors and hospitals throughout Syria while tracking and documenting the ordeal of Syrian doctors in their daily struggle to access to life-saving medications for their patients, critical medical supplies to treat the wounded, and needed medical equipment that will help them save more lives of their patients.

In addition to providing medical relief, training and support to Syrian doctors, SAMS has sent more than 120 Syrian-American and American physicians and medical personnel to medical missions inside areas of Syria undergoing hostilities to treat patients, perform life-saving surgeries, train personnel and conduct assessments over the past two years. Amidst acute shortages of medical personnel, critically needed medical equipment, medications, and even electricity, these physicians left their families in order to volunteer in the most dangerous place in the world to be a doctor. This study is a snapshot of what these physicians said about the danger they and their heroic colleagues inside Syria faced.

KEY RECOMMENDATIONS

SAMS calls on the World Health Organization to issue a special report on the plight of Syrian doctors, medical personnel and healthcare in general and refer the report to the related agencies within the UN system.

SAMS calls on the ICRC and all UN and international humanitarian and relief organizations to reach all populations in need inside Syria through increased cross-line and cross-border aid deliveries, and to conduct their operations based on needs assessments on the ground.

SAMS calls for an immediate cease to indiscriminate attacks on civilians, medical personnel and medical facilities, respect for the principle of medical neutrality, and conduct with full respect for international law.

SAMS calls upon the UN Security Council to immediately authorize cross-border assistance so that all aid agencies can reach populations in need inside Syria, and to refer the situation in Syria to the International Criminal Court so that the most serious perpetrators can be held accountable for their crimes.

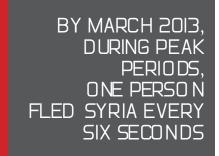
SAMS calls upon all influential governments including the United States to take the necessary steps to stop the bloodshed in Syria, provide safe passage for humanitarian aid, protect medical facilities and medical personnel, and immediately implement measures that will ensure the protection of civilians and hasten the end of the conflict.

HUMANITARIAN CATASTROPHE

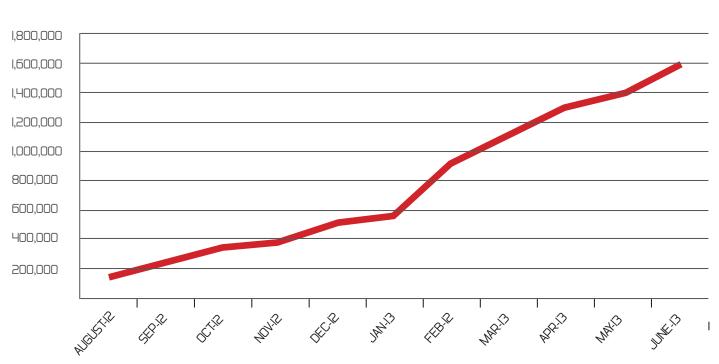
"Why do I volunteer for a medical mission inside Syria? For the sake of innocent civilians, children, elderly and women who feel helpless... to raise the spirit of the local physicians... to bring awareness to the world of suffering inside [Syria]." 51-year old pulmonary and critical care specialist

Syria is the world's most pressing humanitarian catastrophe. It continues to escalate, and has long surpassed the international community's ability to respond. The UN's largest appeal in history was the \$1.5 billion it requested in Jan 2013 to provide assistance to Syrians. Just a few months later, the UN nearly tripled this number, revising this appeal to a staggering \$5.2 billion needed to help nearly 40% of Syrians in dire need of assistance.

From a population of only 23 million, Syria now has 1.6 million refugees hosted in five countries and 4.25 million internally displaced people: fully 29% of Syrians have been displaced from their homes. This is nearly one in three Syrians who have left behind everything but what they could carry, and fled to whatever sanctuary they could find, whether it be a tent, a school, a cave, a church or mosque, or outside in the elements - in many cases, the displaced were forced to flee multiple times.



The human displacement caused by the conflict in Syria has been one of the largest, and most rapid, in modern history. By comparison, the exodus caused by the 11-year Iraq war spurred 2.2 million Iraqis to flee, at a rate of around 100,000 per month between 2003-2006.¹ Syrian refugees are currently fleeing at a rate of around 200,000 per month – and this number is rapidly increasing.



DEPICTING REFUGEE ESCALATION

By the end of 2013, UNHCR predicts that the number of Syrian refugees will reach 3.5 million.

Even if they could return home today, Syrian refugees and displaced persons face the destruction of their country's infrastructure, their homes and villages in rubble, their hospitals and bakeries bombed.



Besides the sheer scale of the needs, many Syrians in need cannot be reached by aid agencies. Large swaths of Syria remain unreachable by UN agencies, and Syrian expatriate groups and NGOs have had to make the difficult decision to choose between government consent over their activities, or reaching people in need by operating outside government consent. Because of the sensitivities around this issue of providing what is called cross-border assistance, aid is typically unmarked and unpublicized, leaving many Syrians –even the few receiving assistance-feeling that the world has abandoned them.

UN agencies have grown increasingly desperate in their attempts to respond to the crisis. In April 2013, for the first time in history, five heads of UN agencies called publicly for a political end to the crisis. UN Refugee Chief Antonio Guiterres described the numbers of Syrian refugees "terrifying," and UN Under-Secretary General for Humanitarian Affairs and Emergency Response Coordinator Valerie Amos said, "The needs are growing while our capacity to do more is diminishing..."



"I DO NOT HAVE AN ANSWER FOR THOSE SYRIANS I HAVE SPOKEN TO WHO ASKED ME WHY THE WORLD HAS ABANDONED THEM." VALERIE AMOS, UN UNDER-SECRETARY-GENERAL FOR HUMANITARIAN AFFAIRS, APRIL 18, 2013

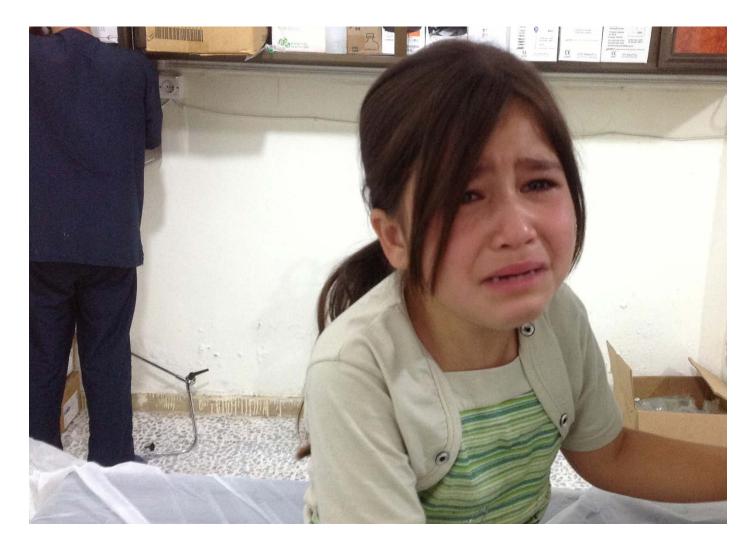
RISKING LIVES TO SAVE LIVES

What does it mean to be a doctor inside Syria? To be willing to die for your patients." –American pediatric intensive care nurse, SAMS medical mission volunteer, January to February 2013 and April to June 2013

All humanitarian aid workers are faced with the same tragic dilemma: how much personal risk are they willing to incur in order to save lives? Yet in Syria, an aid worker's calculation is not balanced by the usual protection that international law has afforded for hundreds of years to civilians, medical personnel, and medical facilities. The risk is much greater, so much so that Syrian civilians and aid workers both face unconscionable choices, having to decide between options that are equally deadly.

SAMS' doctors, by choice, are on the front lines of the emergency medical response to the Syrian crisis, risking their own lives every day in order to save the lives of those who remain trapped inside Syria.

We asked them why, and what it was like to be a doctor inside Syria. This is what they said.



ETHICS & MISUSE OF MEDICAL FACILITIES



"Why do I volunteer for a medical mission inside Syria? It is my duty." Abo Yousef, SAMS physician, medical mission volunteer

Doctors are bound by duty and medical ethics to do no harm, and ensure that all patients in need receive treatment. They have an ethical responsibility, dating back at least 2,300 years, to prevent illness and care for the wounded and sick without regard to politics, race or religion. Related is the principle of medical neutrality, which has a strong foundation in international law.

MEDICAL NEUTRALITY REQUIRES:

- 1. The protection of medical personnel, patients, facilities, and transport from attack or interference
- 2. Unhindered access to medical care and treatment
- 3. The humane treatment of all civilians;
- 4. Nondiscriminatory treatment of the sick and injured

In situations of war, doctors play an integral role in treating the injured, no matter to which side of the conflict wounded belong. SAMS physicians abide by the principle of medical neutrality as well as the humanitarian principles of humanity, impartiality, and independence.

In Syria, these principles have been flagrantly disregarded. International human rights groups, UN agencies, and journalists have documented attacks against medical personnel and facilities. An independent UN Commission of Inquiry on Syria (COI) investigated attacks in February 2013, finding that hospitals and medical units were attacked, often repeatedly, and that snipers were positioned outside of hospitals, impeding access to treatment. In Al-Houlah for example, the destruction of medical facilities and lack of appropriate medical supplies have driven doctors to resort to desperate measures such as amputations.

Every Syrian doctor has had his or her life touched by this reality. Each of SAMS' doctors has a story, and often multiple stories, of a colleague, friend, or family member who has disappeared, or been tortured or killed for delivering humanitarian or medical assistance. All of SAMS' doctors who attended medical missions and contributed to this report have personally witnessed at tacks on hospitals, ambulances, health workers or rescue volunteers, but their commitment to saving lives goes deeper than the danger they face.

In such a highly-charged conflict, adhering to these principles even outside Syria is not without a cost, leaving expatriate physicians at times alienated from their communities in a conflict in which providing any assistance to one side is seen as betrayal to one's own. Still they adhere to the fundamental tenet of medical ethics to help where help is needed.

"IF YOU CAN NOT HELP WHEN PEOPLE NEED YOU, IT IS BETTER NOT TO BE A DOCTOR." 57-YEAR OLD PEDIATRIC HEMATOLOGIST-ONCOLOGIST

There has been widespread misuse of hospitals inside Syria. SAMS' physicians reported that at least two large public hospitals in Aleppo have both been looted and are now being used for military purposes. The government even more frequently has been found to misuse facilities. The UN Independent Commission of Inquiry on Syria, found that "state hospitals have been used as military base by Government forces and snipers positioned at Al-Houlah's hospital, with tanks and artillery at its entrance." Human rights groups have documented instances of government forces torturing, interrogating, humiliating and executing patients inside hospitals, and using hospitals to find and punish people with conflict-linked injuries, such as bullet or shrapnel wounds.

This leaves civilians to make difficult choices between approaching a hospital in which he or she might be threatened, or traveling sometimes hours away to visit a facility that would accept certain types of injuries such as a conflict-related injury.

"Medical facilities, equipment and personnel must not be targeted or used for military purposes," UN Secretary General Ban Ki-moon's spokesman Martin Nesirky said in a statement. "All parties involved in the conflict must respect international humanitarian law and ensure that civilians are not targeted." If proven, targeting of medical personnel during conflict would constitute a war crime, since medical personnel are protected persons under the Geneva Conventions.

SHORTAGE OF BASIC MEDICAL SUPPLIES, MEDICATIONS AND EQUIPMENT

"How do you save your bleeding patient, if you have no blood, no IV fluid, no surgeons, no electricity and no transportation?" -Syrian physician

"I had to amputate the patient's foot without anesthesia. I never imagined that I would do that in my life". -Syrian surgeon

One of the major consequences of the medical disaster in Syria is the shortage of medical supplies, medications for chronic diseases and medical equipment that help doctors in their diagnostic testing and treatment plans.

Doctors and administrators feel helpless when they can't provide life-saving medical care to their patients.

There are large swaths of Syria that are unreachable to UNOCHA and international aid agencies simply because those regions have fallen out of the control of the Syrian government. Millions of Syrians have lost their healthcare security due to the conflict, are unable to pay for their medical care, and unable to travel to safe hospitals in order to have urgent or elective surgeries.

There is shortage of IV fluid, blood products, basic laboratory tests, hemodialysis kits, oral and IV antibiotics, pain medications, anesthesia, orthopedic supplies, surgical supplies, electricity, diesel fuel, phone lines, internet service, ambulances, nurses, medics, doctors, personal proective equipment, and much more. Most of the facets of Syria's previous fully-functioning and modern, specialized healthcare system have disintegrated.

SAMS and other NGOs have been struggling to provide such life saving medical aid to different areas in Syria that are unreachable to UN agencies and the ICRC, which is at least 50% of the geographic area of Syria. Such relief operations have been a logistical nightmare, in addition of carrying grave risk to the doctors and activist volunteers who are carrying or transporting medical supplies, often on their backs.

MEDICAL PERSONNEL KILLED

"What is it like to be a doctor inside Syria? [It is] suicidal." 30-year old Obstetrician/Gynecologist

"THEY BELIEVE IN THE PROVERB: KILLING A DOCTOR IS BETTER THAN KILLING IOO SOLDIERS." -PEDIATRIC HEMATOLOGIST-ONCOLOGIST The Damascus-based Violation Documentation Center has counted at least 130 doctors killed and 477 imprisoned. According to them, 12 physicians were tortured to death in prison, three were arrested, tortured and then executed in prison, 12 were executed in the field, and fifty nurses were killed. They also reported that 87 field medics were executed while carrying out their duties.

Many SAMS physicians reported that they heard of medical personnel killed while volunteering in the field. SAMS has compiled a list of 107 medical personnel killed in Syria as of May 2013.

Aid workers were also in danger. According to the International Committee of the Red Cross (ICRC), twenty aid workers from Syrian Arab Red Crescent (SARC) have been killed in Syria since the beginning of hostilities.



THREATS AND CHALLENGES FACED BY MEDICAL PERSONNEL

"What is it like to be a doctor inside Syria? [To work] under limited resources. [To live] in constant fear." 40-year old infectious disease specialist -

Doctors have been detained by Syrian government forces for treating wounded victims – this includes doctors who had visited the homes of patients who were too afraid to visit the hospital.

A SAMS physician working in Syria from 2011 – 2012 described how he was arrested along with three other doctors, stating, "We were beaten, humiliated and taken away from our families for 16 days."

Another physician confessed: "Everything I had in the office was stolen by the security, and the reason for that is that I rescue wounded demonstrators."

A medical tests and blood bank specialist recounted to SAMS that: "We work in very difficult circumstances. We were bombed several times and were exposed to assassination, kidnapping, sequestration. Our families were threatened. They took everything we had inside Syria. I worked for 25 years but the government took everything I earned in Syria. They evicted my family from their home and took our house."

SAMS physicians have reported severe abuse, torture and abduction of wounded patients, both by medical personnel and by government security agents during raids on hospitals. A SAMS physician working in Syria from 2011-2012, witnessed "a hospital raided and medical staff beaten and arrested and even shot, and a patient kidnapped by security forces even from ICU or OR." In addition, large numbers of medical and nursing personnel have been threatened with torture and death as punishment for treating the casualties from the protests.

"When I admitted that I save the lives of wounded demonstrators and that was my job and duty as a doctor, a brigadier once told me that if they wanted me to save those terrorists, they wouldn't have killed them in the first place. He said they were parasites in society." Medical tests and blood bank physician -

"These [attacks] are not simply part of a strategy of attacking civilans, but about the idea that they are providing care to terrorists or opposition groups and anybody that receives care and is an enemy is a target. Anybody who provides a care to an enemy is a target." Len Rubenstein, Center for Strategic and International Studies interview, May 2013

In addition to the physical trauma faced by physicians, uncounted are the emotional scars that physicians and medical personnel receive while dealing with a conflict of such a gruesome nature and horrific scale. Physicians, first responders, and medical staff are the first to see, hear, feel and smell the effects of the conflict. They are the ones responsible for telling a patient that his or her life will never be the same when he says he must amputate a limb to save his life. They are witnesses to suffering on an enormous scale.

"Despite the fact that I had been following the Syrian crisis daily over the past 2 years, watching countless horrific videos, see ing innumerous gruesome pictures, and reading too many terrible stories about the suffering, it was a jarring feeling to see my first patient. It was a young man, in his early 20's who had lost his right leg above the knee and whose left leg was irreparably damaged. He had lost most of the posterior soft tissues of his left thigh and his broken femur with screws jutting through was visible in the massive wound. He screamed in pain as the doctors and staff turned him to show me the wound and like a bolt of lightning, it hit me how real and devastating this war is. With no motor or sensory input to and from the leg, I somberly told the patient that his leg would have to be amputated as well, and we performed the surgery the next day.

That first screening day was definitely the hardest of the trip... There were countless patients, young and old, men, women, and children all with horrible wounds of war. I had never seen so many external fixators before, so many young paraplegics before, and so many gruesome injuries in one place at one time. I thought to myself that I am witnessing all this suffering and these are just four small places taking care of Syrians affected by this conflict. I may have screened and visited with around 50 patients that day, and I shuddered at the thought of the magnitude of the health care crisis that this small sample of people represented." – Physician on medical mission to Jordan

"THERE WERE COUNTLESS PATIENTS, YOUNG AND OLD, MEN, WOMEN, AND CHILDREN ALL WITH HORRIBLE WOUNDS OF WAR. I HAD NEVER SEEN ...SO MANY YOUNG PARAPLEGICS BEFORE, AND SO MANY GRUE-SOME INJURIES IN ONE PLACE AT ONE TIME... I SHUDDERED AT THE THOUGHT OF THE MAGNITUDE OF THE HEALTH CARE CRISIS THAT THIS SMALL SAMPLE OF PEOPLE REPRESENTED." – PHYSICIAN ON MEDI-CAL MISSION TO JORDAN



Doctors who volunteered to help inside Syria also frequently felt that they were not doing enough.

"I felt guilty for leaving my people when they desperately asked me to stay and help. Am I a selfish person? Yes I am. I met a few doctors in Aleppo who left very successful careers and high salaries, as well as their families to help. They gave up everything to help their Syrian brothers and sisters.

One of those doctors argued with me and continued to say, "Doctor, you keep mentioning that we outside doctors with our successful practices can support local doctors financially if they stay and help. But have you found anyone to hire? Your money will not treat the patients until we have enough physicians. We are guilty in front of every dead and sick and injured person. And we will be asked about leaving those people in need in front of God the Mighty." – SAMS Pediatrician, Aleppo Medical Mission, February 2013

"There are very few, if any, resources to support the psychosocial well being of physicians working in facilities in Syria. While physicians attending volunteer medical missions are able to have a reprieve from patient care while living in the United States, the physicians inside Syria have no rest and relaxation, no breaks, and often operate for months, living and sleeping in field hospitals. SAMS read about an instance where a physician slept in the hospital morgue for months at a time."

And physicians are often not equipped to deal with the psychosocial problems of trauma patients. One physician recounted how a patient arrived at a facility after slitting his wrists. All of his four children and his wife had perished in the shelling of their building in aerial strikes. The physician stated that the only treatment he was given was a prescription and some verbal reassurance. This was not his first attempt at his life. The physician ended his testimony by saying, "There is no psychiatric care available. Next time he will succeed."

THREATS TO WOMEN AND CHILDREN

"The suffering and death of children is inexcusable. While world powers wait, lives are lost, and I knew my medical skills could help in this crisis." American pediatric intensive care nurse, - SAMS medical mission volunteer



SAMS' volunteers have seen the effects of the conflict on women and children. One physician described an incident he experienced while on a medical mission in May 2013.

"One young couple particularly affected us that day. An attractive young bride, 18 years old, 8 months pregnant, was with her mother when a shell struck her home. Her mother and fetus were killed in the trauma and she lost her eyesight in the blast in addition to severe trauma to the soft tissues of her limbs and internal organs. I was asked to evaluate her wounds and as I was examining her I was introduced to her husband just 19 years of age. The staff explained that since her injury her husband has not left her bedside. He diligently stays by her, bathing her, feeding her, dressing her wounds, and doing whatever she needs from him in her long recovery." -Physician on medical mission to Jordan

Yet not all women or children have family or social support to help them through their recovery.

"I remember a young mother from the city of Homs, who lost her arm after her home was shelled in the old city. She rushed to save her four children, then discovered that her left arm was hanging from her shoulder bleeding profusely. Her left arm was amputated in a primitive field hospital and she stayed between life and death for 18 days until she was smuggled with her children in the underground sewer system out of the area under siege. She sustained severe wound infection that required multiple surgeries in Turkey. She was 24 years old but looked as if she in her fifties due to her ordeal." - Critical care specialist in Chicago, IL



Women and children have paid a horrific price in the Syrian conflict, enduring physical violence including torture, sexual abuse, at times in front of family members, and humiliation. Rape has been used as a weapon of war, and access to medical treatment – including specialized health services for women and children – has been impeded.

"There was this video that was so disturbing I couldn't handle it. I watched it in December 2012 – it was of a young man, his sister, and their mother who were caught by security forces. They started beating up the guy and his sister tried to defend him, so the shabiha started beating her. Then they started threatening that they were going to rape her. They ripped off her hijab and tore off a lot of her clothes. At that point in time, I walked out. I cannot tell you if they continued to gang rape her in front of the brother or not. But you could hear the guy saying, "Just beat me and leave her alone. Just kill me and leave her alone." He was begging them, please do not do this to my sister, and the mom was in hysterics, screaming." - Trauma surgeon in Michigan

SAMS' physicians have recounted stories in which family members of physicians have been arrested and held in detention facilities by government forces in order to pressure physicians to stop treating patients. One SAMS trauma surgeon stated that three physicians he knew as of June 2013 had family members – their wives and children, one as young as 13 years old – who were being held in prison in lieu of them as a form of intimidation to get them to stop practicing medicine. He said that if the physicians turned themselves in, they would be tortured.

A SAMS pediatrician visited Aleppo in February 2013 and recounted harrowing tales of treating children in freezing temperatures, and of the struggles of women undergoing C-sections without anesthesia or electricity.

"After my arrival to Aleppo, I was greeted by the medical team that was a small group of new doctors, two pharmacists, two midwives, and individuals who never attended college. I was given the responsibility of covering the pediatric and internal medicine cases. There was a shortage of medical supplies, x-rays and CT scan machines. As a physician, you must depend on your own skills to diagnose and treat a patient. When the generators were off, which was the majority of the time due to a diesel shortage, we had to examine patients through candlelight. To make matters worse, inside was no warmer than outside: 15 degrees Fahrenheit. Most windows were broken. There was no glass to shield us from the freezing temperatures. Before I touched a child to exam him or her, I would rub my hands to warm them; yet, the child still jerked at the shock of my freezing hands. I constantly debated whether I should use the stethoscope, otoscope, or thermometer, which were always as cold as ice.

The most depressing events in the hospital were the C-sections. The room was often dark, and the pregnant woman would lie down on a freezing metallic, surgical table, waiting for the knife to cut open her abdomen, which of course was not numb with epidural anesthesia. As a pediatrician, I would stand waiting for the new life to emerge without a warmer to lay the infant under, oxygen in case of an emergency, or suction tools. Many newborns died while transferring them from the dark and cold basement to the first floor. Did they die because of hypothermia or hypoxia? I don't know. The new mothers, who could not even stand up straight, were discharged home within a few hours - after the C-section. Many of them walked away home carrying their newborn babies, dead or alive." - SAMS Pediatrician, Aleppo, February 2013

"THE NEW MOTHERS, WHO COULD NOT EVEN STAND UP STRAIGHT, WERE DISCHARGED HOME WITHIN A FEW HOURS AFTER THE C-SEC-TION. MANY OF THEM WALKED AWAY HOME CARRYING THEIR NEWBORN BABIES, DEAD OR ALIVE." - SAMS PEDIATRICIAN, ALEPPO, FEBRUARY 2013 The innocence of children caught up in conflict can be heartbreaking to witness.

"I remember one of the younger patients I've seen. And she's 4 years old. Her name is Maram. Her house was shelled in the city of Idlib, and she sustained a spinal cord injury. So when I saw her, she was laying in the bed of the hospital. And she was very depressed. You know usually children smile when you try to have a joke with them, and she was not smiling. So I brought her some toys and tried to have a smile on her face, but she could not. This is one of the patients that is imprinted in my mind. And every time I think about Syria and what's happening in their life, I think about her." - Critical care specialist in Chicago, IL

One SAMS physician recounted a story of a 2 year old girl, the same age as his youngest daughter, who had a life-threatening injury to her head. A medical student was attending to her by attempting to stitch her wound together, and the physician could only give her a few lollipops and twizzlers he carried in his pockets. She squeezed her hand and held them as she looked up at him. When he returned a few minutes later, she had passed away, still holding the candies.

"ONE DOCTOR WAS KILLED FOR BEING THE FOUNDER OF THE ALEPPO MEDICAL COUNCIL. I SAW HIS IO-YEAR OLD DAUGHTER, FATIMA, DURING MY VISIT.... I COULD TELL JUST BY HER EYES HOW MUCH SHE MISSED SPENDING TIME... WITH HER FATHER, WHO IS GONE FOREVER. HE COULD BE ANY OF US AND FATIMA COULD BE ANY OF OUR CHILDREN." - SAMS PEDIATRIC HEMATOLOGIST-ONCOLOGIST

"I have been taking care of the recovery of a boy who is now two years old. When he was one, his father was holding him in his arms. The son had his hand on his dad's chest when a sniper shot through the child's hand and into the father's heart. The father died, but the child survived and we reconstructed his hand.... The child is young enough that he will never remember that he was in his dad's arms when he was killed. All he will know is that his hand was shot. He was so lucky that there was a hand surgeon present in the field hospital he was taken to inside Syria. This is extremely rare." - Trauma surgeon in Michigan



DAMAGE AND DESTRUCTION OF MEDICAL FACILITIES AND VEHICLES

"One hour before we arrived... a fighter jet broke the sound barrier over the hospital and launched two rockets which destroyed completely two buildings behind the hospital, killing about 40 people... The hospital staff were afraid of similar attacks over the next few days..."- Pulmonary and critical care specialist

57.1% of SAMS' physicians who contributed to this report personally witnessed an attack on hospitals while volunteering in the field.

They have supplied harrowing firsthand accounts of medical facilities being hit while they, their colleagues and patients were inside. An American volunteer nurse recounted the following incident at a field hospital on May 25, 2013:

"I was showing a referred patient's brother the in-patient facilities at the hospital when a mortar rocket hit the hospital. Above where we were standing, black smoke filled the room as well as clouds of mortar dust. The blast was upstairs one flight of stairs from where I was in the hospital. The same location has been hit once before such that further collapse of the structure caused increased damage to the hospital in-patient area and associated emergency/triage room."

"As for the emergency room, the window was completely shattered, and was always filled with patients. I had to manage many adult patients who came in with heart attacks, strokes, and seizures, even though that is not my specialty. Even though the emergency room was very poor and lacked major necessities, unexplained miracles continued to happen.

The worst part of my trip was the nonstop bombing, day and night. The real nightmare was hearing thunderous explosions dropped by military jets, tanks, and rocket launchers. It did not take long for me to learn when to run with everyone else to the basement of the hospital every time we heard an explosion. Everyone ran for his life. There was no extra second to think about the person next to you, not even the patients you were operating on. After each explosion, which was almost a daily and sometimes an hourly event, a wave of people flooded through the hospital door. People were unloading both dead and wounded civilians from small trucks.

Screaming and wailing was heard from all corners. When the explosions happened at night, the air was filled with sounds of wailing men, women, children, car alarms going off, and cell phones ringing. After unloading the civilians, we had to comb through the bodies to see which ones were dead and which ones were alive."- SAMS Pediatrician, Aleppo, February 2013

By May 2013, the statistics have painted a shocking picture of the health care disruption in Syria. According to the World Health Organization, 36% of all public hospitals in Syria are totally disabled or destroyed, and another 21% are only partly operational. 78% of ambulances have been damaged, causing a breakdown of the referral system for emergency medical care.

According to 48-year-old SAMS neurologist when asked, what is your biggest challenge on the ground, he specified many. The "lack of enough staff...lack of specialties...lack of power/electricity...severe loss of equipment, medications, and tools...many private hospitals have been bombarded and completely destroyed by the government forces."

The destruction of facilities also impacts the quality of medical staff available. Doctors interviewed by SAMS also shared their concern that many medical personnel in hospitals and clinics were not properly trained to perform procedures and surgeries. One critical care specialist specifically mentioned:

"Most of the nursing staff in Aleppo's hospitals were not trained and instead were made up of volunteers. The main nurse in the internal medicine ward was a high school senior, and the head nurse in the trauma center was a second-year English literature college student."

There are frequent reports of hospitals being damaged in fighting, although many go unnamed due to fear of reprisals. On August 12 and August 14, 2012, Syrian government fighter planes attacked an emergency hospital in eastern Aleppo, Al-Shifaa Hospital, killing several people and damaging the hospital. Dar Al Shifaa was attacked multiple times and eventually destroyed completely. SAMS independently verified at least 10 hospitals that were targets of violence.

SAMS' physicians reported that they witnessed, saw physical evidence of, or heard about an attack on an ambulance. Further more, a report by the Human Rights Watch also revealed that a hospital or ambulance with a clearly marked red crescent in Syria does not provide immunity from attacks. Medical personnel, patients, and civilians often suffer the repercussions of these violent actions by being injured or killed.

According to this same investigation, the head of Dar Al-Shifaa Hospital stated that the government was also targeting ambulances. He cited one account in which a government helicopter shot rockets at an ambulance, killing the driver, a nurse, and a wounded person who had been in the ambulance. The Syrian Arab Red Crescent in Homs recently saw their entire fleet of ambulances damaged. In addition to attacks, ambulances have been stolen: 5 SARC ambulances have been stolen so far, as well as 17 service vehicles.

"I HEARD FROM VARIOUS PEOPLE ABOUT ATTACKS ON HOSPITALS IN -SYRIA: FROM A DOCTOR WORKING AS VOLUNTEER IN THE RED CRES -CENT, FROM A SURGEON WHO WAS TREATING A PATIENT AND THE SE CURITY FORCES TOOK THE PATIENT FROM HIM ON THE TABLE, FROM THE ARMY DOCTOR WHO WITNESSED HOW THEY MISTREATED THE WOUNDED." -63-YEAR OLD SURGEON AND ¬-TIME MEDICAL MISSION VOLUNTEER

"I heard from various people about attacks on hospitals in Syria: from a doctor working as volunteer in Red Crescent, from a sur geon who was treating a patient and the security forces took the patient from him or table from the army doctor who witnessed how they mistreated the wounded."

According to a 53-year-old SAMS cardiac anesthesiologist in Syria, the workers from Aldana Hospital informed him that, "3 days after we left, Syrian jets bombed the hospital, and destroyed five ambulances donated by Libya." This is just one more example of what to many Syrians, is a common feature of the horrific ordeal they face.

ESTABLISHING AN UNDERGROUND HEALTHCARE NETWORK

"What is it like to be a doctor inside Syria? [You] can be killed any second." SAMS gastroenterologist -

Due to the targeting of medical facilities, early on in the conflict, SAMS and other groups worked with physicians inside Syria to set up a parallel underground healthcare system of makeshift medical facilities in clandestine locations to allow all patients access to treatment.

Many patients had been too fearful to visit public hospitals. A SAMS radiologist in Aleppo described that "many injured civilian patients refused to go to public hospitals, because of fear for their life!!! Many doctors in private offices and private hospitals were afraid to treat patients with gunshot wounds."

However these makeshift facilities have not been nearly enough to meet the needs, and were understaffed, undersupplied, and under constant bombardment. Despite being located in hidden locations, many facilities had to be moved multiple times after being found, and attacked.

"ONE OF THE WORST THINGS THAT CAN HAPPEN TO YOU IN SYRIA IS TO HAVE AN EMERGENCY MEDICAL PROBLEM IN THE MIDDLE OF THE NIGHT." – CRITICAL CARE SPECIALIST, CHICAGO, IL

The toll that finding medical care has taken on patients has been enormous. Patients frequently had to travel hours away to find a facility, crossing through hostilities in order to reach a facility they were confident would treat them.

According to one SAMS trauma surgeon, killing or targeting a doctor – particularly a well-connected doctor, or a trauma surgeon active in underground relief networks – has symbolic value and a direct effect on relief operations.

"Just this evening I heard about an attack on a preeminent physician, a surgeon, in Syria. From what I understand right now, he was shot and has a nerve injury and partial paralysis on his right side. There is no question that when you injure a guy like him, you've basically not only attacked him, but you've attacked the hundreds of other people he can help... you've also attacked the relief network that he is engaged in. The people he knows are people who have vetted one another, so if he is out of commission, it will take a while for the person replacing him to get into the circle of trust."

CONCLUSIONS

War crimes and gross violations of medical neutrality and international law have been perpetrated over the course of the more than two-year conflict in Syria.

Syrian doctors and SAMS' medical volunteers have witnessed abuses and endured more than two years of horrific stories of patients dying unnecessarily, doctors forced to leave their home country and medical facilities, family members harassed, colleagues disappeared, tortured and killed and millions of civilians caught in the middle of a conflict that has no end in sight.

The most urgent need is to provide doctors, administrators and hospitals with the basic medical supplies, equipment and medications in order to empower them to help their patients. But the greatest service to doctors, medical personnel, and civilians would be to end the crisis by all means and stop the bloodshed.

A humanitarian response, no matter how well managed and funded, will only treat the symptoms of the ongoing disaster in Syria and will not address the root causes of the conflict. Furthermore, the scale of the disaster is and will continue to outpace the international effort to address it. What is needed in Syria is to stop the crisis, not to apply a band-aid.

SAMS calls on the World Health Organization to issue a special report on the plight of Syrian doctors, medical personnel and healthcare in general and refer the report to the related agencies within the UN system.

SAMS calls on the ICRC and all UN and international humanitarian and relief organizations to reach all populations in need inside Syria through increased cross-line and cross-border aid deliveries, and to conduct their operations based on needs assessments on the ground.

SAMS calls for an immediate cease to indiscriminate attacks on civilians, medical personnel and medical facilities, respect the principle of medical neutrality, and conduct with full respect for international law.

SAMS calls upon the UN Security Council to immediately authorize cross-border assistance so that all aid agencies can reach populations in need inside Syria, and to refer the situation in Syria to the International Criminal Court so that the most serious perpetrators can be held accountable for their crimes.

SAMS calls upon all influential governments including the United States to take the necessary steps to stop the bloodshed in Syria, provide safe passage for humanitarian aid, protect medical facilities and medical personnel, and immediately implement measures that will ensure the protection of civilians and hasten the end of the conflict.

EPILOGUE: A HOPEFUL FUTURE

The story of Syria's civil war does not just reveal suffering, but also resilience, courage, and hope. In the words of Syrian American doctors:

"DESPITE THE DIFFICULTY IN SEEING SUCH WIDESPREAD HUMAN SUFFERING FIRSTHAND, PEOPLE SHOULD KNOW THAT TRAVELING TO SYRIA... DOESN'T JUST REVEAL TO YOU THE WORST IN HUMANITY, IT ALSO SHOWS YOU THE BEST. THE PEOPLE WE WORKED WITH... THE PATIENTS, THE STAFF...THE LOYALTY OF A HUSBAND WHO WON'T ABANDON HIS CRITICALLY INJURED WIFE... THE PRIDE OF A MOTHER WHO WON'T ACCEPT A HANDOUT FOR HER SEVERELY INJURED DAUGHTER ALL SHOWED ME THE BEST IN HUMANITY, AND MADE ME LEAVE... WITH A SENSE OF HOPE FOR THE FUTURE." - SAMS' MEDICAL MISSION VOLUNTEER TO JORDAN

"Despite the tragic situation in Syria, I'm optimistic about the future, because Syria is a very unique country. It can be a model in the Middle East... the most precious resource that Syria has is its human capital. Syria has an extremely diverse and talented population. Syrians, including many of our members in SAMS, are known to be natural entrepreneurs, successful, adaptive, resilient and creative. They love their homeland and they are eager to rebuild it. Syria has an educated middle class, a large young population, educated women and diversified economy... I believe that at the end of the crisis, we will have a model in the Middle East that countries can follow." – Critical care specialist in Chicago, IL

A generation of Syrians and Syrian children will have the rest of their lives marked by the conflict. But their resilience will define the Syria of tomorrow.

One boy, twelve years of age, whose father – a physician who had passed away in a torture cell 6 months prior – told a SAMS physician what he wanted to be when he grew up: "He wanted to be a doctor."

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