Helping hands across a war-torn border: the Israeli medical effort treating casualties of the Syrian Civil War

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The story, in brief

The provision of medical care to anyone in need is one of the ethical obligations of all medical professionals, and is also one of the foundations underlying humanitarian undertakings. In this context we describe the efforts made to help refugees from a civil war in one of Israel's neighbouring countries.

The Syrian Civil War has now raged on for 6 years, has claimed the lives of more than 470 000 people (mostly civilians), and the death toll rises by the day.[1,2] Indeed, as a result of this conflict, the average life expectancy (at birth) in Syria has dropped from 70 years to 55 years.[3] Millions of people have become refugees, both within and outside their own country, in what has been described as one of the greatest humanitarian crises of our times.[4] The medical system of care in Syria has been destroyed and aid is not reaching those civilians most in need.[5,6]

The war's knock-on effects include inadequate health care, the spread of disease, and absence of access to food or clean water, not to speak of the genesis of a stream of refugees seeking a safe haven in neighbouring countries and further afield, especially in Europe. Indeed, Lebanon, Jordan, and Turkey deserve immense credit for having shouldered the main burden—taking in millions of refugees to within their borders. Two-thirds of Syria's hospitals have been damaged or destroyed and nearly half of its doctors have fled the country.[7] Clearly, in view of its political relation with Syria, Israel has not, and is not in a position to take on the largest share of support for these refugees during this humanitarian debacle.[8]

Despite the above, amidst the chaos and tragedies surrounding the situation in Syria, and out of despair, some of those individuals in need have turned to their historical enemy—Israel—for help. Syria and Israel have been in a state of war for decades, after first clashing during the War of Independence that led to the establishment of Israel in 1948 followed by several wars since. Fear, mistrust, and demonisation hover over the heavily fortified and internationally supervised border in the Golan Heights.

An unusual admissions process

On Feb 16, 2013, without any other medical care available within their own country, seven wounded Syrian civilians opted to do what at the time was unthinkable and approached the heavily guarded border to seek help. Wounded by their fellow Syrians and having been denied access to the local hospitals, in their view, they were left with no choice.

The Israeli Defense Force patrols identified the casualties at the border and alerted the army's medical teams. These teams provided immediate life-saving interventions to the injured civilians, subsequently evacuating them to the nearest civilian medical centre. At the time, there was no real Israeli Government policy involving such an act; the army medical personnel simply did what they felt was right.

Initially, in response to the needs of these sick and wounded Syrians, the Israeli Defense Force quickly set up a field hospital on the border. In this small hospital, life-saving interventions and surgical procedures were performed. Technical capabilities included surgical, intensive care, imaging, and laboratory services. The location of this field hospital, right on the Syrian–Israel border, facilitated immediate medical care, but the treatment capabilities were obviously restricted. Additionally, its location, so close to the hostilities of the Syrian Civil War, endangered both patients and staff, because it was exposed to both mortar and anti-tank missiles fired from within Syria. As a result of these considerations, shortly thereafter a decision was made by the government to transfer these patients (after initial stabilisation and security checks) directly to civilian hospitals in northern Israel—just as is the case for Israeli civilians, soldiers, or tourists. For this reason the field hospital was closed.

Much been written about the ethical dilemmas of offering medical help far away from the country of origin of the aid-giving staff. Very little has been published about providing care for citizens of a country with which there are no clear-cut relations or obligations towards, and almost none on scenarios involving medical aid based on the assisting country's national health system. Furthermore, there has been very little comment (and none negative) in the Israeli press about these humanitarian efforts, suggesting that these efforts are accepted implicitly by the Israeli public as the right thing to do.[9–11] From the moment the casualties are within the reach of the Israeli military medical teams, medical considerations (as well as a brief security check) serve as the only criteria relating to admission, followed by evacuation to the trauma centres.

4 years on, thousands have now followed in their tracks—men, women, and children of all ages, arriving at the Israeli border after suffering combat-related injuries, as well as neglected medical conditions. A strategy of treating everybody unreservedly and free of any and all political considerations has been used by the Israeli authorities. In a combined effort, this involves the Israeli Defense Force medical teams who provide prehospital care and life-saving interventions,[12] followed by evacuation to the national civilian medical system,

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Figure: **Northern Israel and the locations of the civilian hospitals**

	Casualties
Men	1000 (91%)
Age (years)	25·2 (12·0; 0–80)
Minors (younger than 18 years)	194 (18%)
Admission to intensive-care unit	310 (28%)
Stay in intensive-care unit (days)	9·9 (11·3; 1–80)
Hospital length of stay (days)	19·4 (24·0; 0–193)
Mortality	56 (5%)
War-induced trauma	828 (75%)
Civilian trauma	82 (8%)
Disease	115 (11%)
Follow-up	71 (7%)
Unknown	2 (<1%)

Data are n (%) and mean (SD; range).

Table: **Data for the initial 1100 casualties**

which offers free advanced in-hospital medical care to these patients (funded by the Ministry of Health).

This clinical work is of course not without risk, such as the potential threats to the safety of the medical teams approaching this fraught border being exposed to possible terror attacks, as well as accidental crossfire. Indeed, we have witnessed a case of a battalion surgeon wounded in the chest by a stray bullet during one such rescue operation. Less dramatic, but still of medical significance, is the risk of exposing patients in Israeli civilian hospitals to the multiply resistant bacteria brought in by the wounded patients as a result of the widespread and uncontrolled use of antibiotics across the Syrian border.[13,14]

A few statistics

Since the first so-called ad hoc admissions across this war-torn border, more than 2000 Syrian patients have now been treated—mostly spread across the four Israeli civilian hospitals in northern Israel. These are the Galilee Medical Center in the coastal city of Nahariya, located a few kilometres from the border with Lebanon, the Ziv Medical Center in Safed, the Rambam Health Care Campus in Haifa, and the Poriya Medical Center in Tiberius, overlooking the Sea of Galilee (figure).

Not surprisingly, in view of the combat across the border, most of the Syrian patients admitted to hospital were male (91%) and young, with an average age of 25 years (SD 12; table). Almost a fifth (18%) were younger than 18 years.

With mainly war-related trauma due to gunshot wounds and shrapnel injuries (n=825 [75%]), the severity of these traumas is reflected by the fact that an intensive-care unit admission was required for more than a quarter of those admitted (n=310 [28%]) with a mean length of stay in an intensive-care unit of 9·7 days (SD 11·3). The mean hospital length of stay was 18·9 days (SD 23·8).

The mean Injury Severity Score[15] for the war casualties was 16·1 (SD 12·2) and the mean Injury Severity Score was 14·1 (12·1) for the non-combat trauma cases. An Injury Severity Score higher than 25 (indicative of very severe injuries) was found in a fifth (n=195 [22%]) of the adult patients and at an even higher rate of 27% (n=53) for the paediatric patients. Despite the severity of the injuries suffered, we noted an overall in-hospital mortality of only 5% for these patients (table).

At least one surgical operation was required for almost four-fifths (858 [78%]) of the patients during hospital stay. The most common invasive procedures were fracture fixation (396 [36%]; external or internal), wound debridement (380 [35%]), airway management and ventilation (255 [23%]), plastic reconstruction (186 [17%]), laparotomy (121 [11%]), eye surgery (114 [10%], including enucleation), chest decompression (102 [9%]), vascular surgery (97 [9%]), craniotomy (80 [7%]), and amputation (86 [8%]; mainly completion of near-complete traumatic amputations).

An additional 115 (10%) of the patients had medical conditions, such as paediatric diseases (infectious and haematological diseases and congenital malformations), tumours, ischaemic heart disease, cerebrovascular accidents, and gynaecological conditions (including five cases of obstetric labour). A few patients (n=71 [7%]) were admitted due to complications following previous medical treatment provided to them in Syria. Not surprisingly, in view of the chaotic conditions on the other side of the border, these interventions were often improvised or incomplete. 82 (8%) of the patients were

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admitted due to non-combat trauma, such as road accidents, accidents at home, etc.

A singular response with unique challenges: clinical and ethical

This humanitarian effort, wherein a developed country provides care to victims of a war in a neighbouring so-called enemy state, but in which it has no direct part in the conflict, is remarkable for several reasons. First, the Syrian Government has consistently declared itself to be in a state of war with the State of Israel, and, despite multiple contacts over the decades, peace has not yet been attained. Not only are these patients victims of an internal struggle between dozens of organisations and forces within Syria, but many patients also still see Israel as an enemy and some even swear to turn their weapons against it and continue the "Jihad" once the fight within Syria is over.

Indeed, they have not requested to come to Israel per se, but have approached the fence in a desperate effort to receive medical care. All who have completed their treatment chose to return to Syria and did so.

From the staff's point of view, the psychological burden and challenge of caring for those who, despite the caregiver–patient relationship, continue to threaten to try to kill you and your family should the opportunity present itself, cannot be underestimated. Still, history has taught us that we could not look away from what is going on on the other side of the border, as hostile, complicated, and fraught as the situation might be.

Relying on the Israeli national civilian health-care system to provide the platform for this humanitarian effort carries additional challenges beyond the unexpected burden to the local hospitals and staff. By contrast with that which pertains within Israel, when working in a remote, devastated disaster area, medical care is always greatly limited by factors such as the availability of teams, resources, specialists, and technology. The Israeli Defense Force has a long tradition of quickly deploying field hospitals to worldwide disaster zones to provide care to the injured and the sick—eg, among others, in Haiti and Turkey following earthquakes. The choice of whom to help and who is beyond salvage under these conditions is heartbreaking but unavoidable.[16–18]

In the case of the situation described here, although resources are always finite, relative to what pertains in the usual humanitarian catastrophe, these Syrian patients are immediately inserted into a health-care system with a large and sophisticated pool of resources. Furthermore, casualties from a disaster zone only a few score kilometres away coming to state-of-the-art hospitals in northern Israel present an additional dilemma—with both clinical and ethical dimensions.

For example, is there a limit to what can be considered as so-called humanitarian aid? How does one judge the case of a mother bringing her daughter to the border hoping for a plastic reconstruction of the girl's congenitally deformed eye in an attempt to improve her chances of future marriage? Or should one limit one's assistance only to acute conditions resulting from the current military situation? Such an acute ethical dilemma was faced when we encountered the case of an incidental finding of an osteosarcoma in the femur of a 26-year-old man who was in our care due to a shrapnel injury. Following urgent fracture stabilisation, the decision was made to perform a life-saving oncological intervention and offer isolated limb perfusion (a technique whereby chemotherapy is instilled directly into an arm or leg to treat clusters of the malignancy).

Further, in this specific situation we also had to consider whether to provide sperm preservation before the chemotherapy—an expensive and complex arrangement, but one which is nevertheless the standard of care in Israel. Would this not constitute a futile effort in view that the patient would inevitably, and according to his wishes, recross a hostile border back to a war-torn country once his cancer treatment was completed?

Confronted with cases requiring sophisticated and at times high-risk interventions including, for example, organ transplant or open heart surgery for congenital heart defects, we faced these challenging dilemmas on a regular basis. As has been pointed out above, this specific ethical tension is not normally confronted during a typical humanitarian mission, where perforce capacity is limited by the finite resources available on site. We have not been able to find any formal guidance, guidelines, or consensus documents to help direct us in this domain, because humanitarian efforts are usually short term and involve few medical capabilities. Generally, in view of the above dilemmas we have chosen to adopt as liberal and inclusive an approach as the situation would bear.

By definition, even in the wealthiest nations, advanced medical capabilities are restricted. With increasing medical care costs and growing reliance on subspecialties, intensive care and technologies, sophisticated surgical procedures, and transplantations are managed and budgeted at the national level. In the usual situation, the population served funds its own care via taxes and provides both implicit and explicit permission for their government to decide on the division of national resources. With regard to the humanitarian effort described here, in this domain our unique situation presents distinctive challenges and dilemmas, insofar as limited resources at the hospitals in northern Israel are used to treat the Syrian patients. As pointed out in *The Lancet* Series on Health in Israel, Israel's north (and south) is considered part of the country's so-called periphery and is known to suffer from a relatively reduced allocation of national resources compared with the more prosperous centre of the country.

For example, in one of the relevant hospitals, a situation in which four of the five paediatric intensive-care beds were occupied by Syrian children for a prolonged period

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of time, compromised this institution's ability to provide much needed care to the local population. Trying to strike a balance between charity that is usually meant to begin at home and the care for seriously sick and wounded citizens from an enemy country such as Syria constitutes real medical, ethical and political challenges.

As is the case in any acute humanitarian scenario, continuity of care is also a concern. The situation described here exposed our teams to a whole additional layer of difficulties. For example, despite the medical groups' repeated efforts to establish professional communication with relevant health providers across the border within Syria, casualties—even those who had received care in local clinics before coming to the border—almost always arrived without any clinical documentation. This lacuna adds to the complexity of providing care to those seriously wounded individuals, because there is no way to know what lies beneath the fresh abdominal postoperative scar.

We have observed and treated a whole spectrum of surgical complications following improvised operations performed in extreme conditions in Syria. Unfortunately, acting on one side of a hostile border without the ability to communicate with relevant medical colleagues on the other jeopardises our attempts to share clinical lessons. For example, our repeated advice against the closing of traumatic wounds, or the blind insertion of a brain drain for traumatic head injuries have been mostly futile.

Security, above all else

For so many Syrians today, personal security involves a terrible daily struggle for survival. At times we were told by patients that bombing, executions, and tank fire had become almost routine where they had come from. Choosing to receive medical care across the border within Israel adds an additional threat to our patients—that of being perceived as traitors by their own countrymen. If someone later discovers that a Syrian has been treated in Israel this could well result in that patient subsequently being labelled "a collaborator with the Jewish enemy". The consequences can be dire, for both the patient and their loved ones.

As such, from our side, every attempt is made to protect our patients' identities, including issuing discharge letters in Arabic (as opposed to Hebrew, the language of Israeli health institutions) and without any mention of the facility in which the care was provided. Staff even remove labels from the clothes, toys, and belongings received while these patients are cared for in Israel.[19] Additional security measures are also taken, including providing follow-up medication in un-identified containers (thus necessitating pharmacological safety measures to avoid dosing mistakes) and deidentifying bandaging materials and CDs for imaging studies without the name of the radiological facility where they were taken, to name just a few.

Needless to say, as far as we know, none of these steps are applicable to other humanitarian scenarios. The physical safety and wellbeing of the Syrians while in Israel is another source for concern, as well as the need to protect their identity and pictures from being exposed (whether intentionally or not) on social media or through media reports. These efforts are coordinated and conducted in collaboration with representatives of the International Red Cross, who visit the Syrians who are in hospital in Israel, deliver news from their families, and contribute to the care by providing rehabilitation equipment.

An ongoing story...

To the best of our knowledge this difficult endeavour is unique. History provides many examples of enemy states providing help to wounded prisoners of war or to civilians while occupying forces remain on enemy soil, but not for a scenario such as described here. In this humanitarian effort, Israeli military and civilian medical professionals have joined forces in an attempt to overcome the risks of and challenges to doing the right thing—offering a helping hand to those Syrian patients who continue to choose to come to us for help.

Contributors
EG and HB designed the study. AS extracted and collected the data. AS and AY did the statistical analysis. EG and AY wrote the report. All authors reviewed the final report.

Declaration of interests
We declare no competing interests.

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