Maintaining Baseline, Corrective Surgical Care during Asymmetrical Warfare: A Case Study of a Humanitarian Mission in the Safe Zone of a Neighboring Country

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Abbreviations:
DoD = (US) Department of Defense
MEDCAP = Military Medical Civilian Assistance Program
NGO = non-governmental organization
OS = Operation Smile
OSI = Operation Smile International
OSJ = Operation Smile Jordan
UN = United Nations

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Abstract

The current insurgency warfare in Iraq is of an unconventional or asymmetrical nature. The deteriorating security has resulted in problems recovering and maintaining essential health services. Before the 2003 war, Iraq was considered a developed country with the capacity to routinely perform baseline medical and surgical care. These procedures now are performed irregularly, if at all. Due to the unconventional warfare, traditional Military Medical Civilian Assistance Programs (MEDCAPs) and civilian humanitarian missions, which routinely are mobilized post-conflict, are unable to function. In December 2005, an international medical mission conducted by the Operation Smile International Chapter in neighboring Jordan employed civilian physicians and nurses to provide surgery and post-operative care for Iraqi children with newly diagnosed cleft lip and palates and the complications that had occurred from previous surgical repair. Seventy-one children, their families, and a team of Iraqi physicians were safely transported to Jordan and returned to Iraq across the Iraqi western province war zone. Although complications may occur during transport, treatment within a safe zone is a solution for providing services in an insecure environment.

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Introduction

During conventional warfare, competing military forces generally are well defined; each army's strategy and tactics are aligned against an opposing military force with distinctive rank and uniform. This method of warfare results in distinct battle lines and the development of strategies to protect civilian populations. Efforts are made to minimize the disruption of civilian infrastructure and limit civilian casualties. In addition, occupying forces are required, under the 4th Geneva Convention, to return, recover, and rehabilitate the baseline, essential medical care and critical public health infrastructure.[1]

The challenges imposed by war, conflict, and humanitarian assistance in Somalia, Bosnia, Afghanistan, and Iraq have resulted in the development of new, non-traditional strategies to deal with insurgent-directed operations against military and civilian populations. Unconventional conflicts, now referred to as *asymmetrical warfare*, occur when a weaker combatant uses non-traditional weapons and strategies in order to obtain a fighting advantage over a stronger opponent. This includes attacks on civilian populations, terrorism, suicide bombings, and the use of the media as a "political tool".[2] These asymmetrical events have challenged conventional thinking and strategies since the early 1990s, and have impeded the ability of military forces to provide civilian protection, security, recovery of essential services, and humanitarian aid interventions.

Traditionally, military forces, such as those of the US, plan for and design local programs and projects to benefit the civilian population affected by the

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war. The US Army and Marine Civil Affairs Units usually have been given these roles and responsibilities. In addition, Military Medical Civilian Assistance Programs (MEDCAPs) have provided thousands of civilian medical interventions across the globe since the Vietnam War.[3] These programs are funded by the US Department of Defense (DoD) and are operated by US Military Medical Officers on the ground who assess local civilian needs, and have the ability and desire to provide assistance.

Due to the prolonged asymmetrical warfare that now characterizes Iraq, limited, military-assisted, civilian humanitarian programs regularly have been in operation. In this asymmetrical warfare environment, civilians comprise the brunt of the casualties.[4] Without essential public health infrastructures for potable water, sewer facilities, and electricity, preventable diseases such as diarrhea, malnutrition, and infectious diseases such as dysentery increase.[5] The increasing need for security to protect humanitarian aid workers and civilians has emerged as one of the great challenges for the provision of relief to the population, and has created a dilemma for aid organizations whose mission statements profess neutrality, independence, and impartiality.

Prior to the war, Iraq was known for its elective surgery success, as well as for its well-trained and educated consultants. Recently, these same healthcare providers have become victims of intimidation, threats, hostage-taking, and even assassination.[5] The Iraq Ministry of Health has indicated that >3,000 physicians have fled the country.[6] The availability and access to basic health care is tenuous, at best, and elective surgeries no longer are performed.

This major shift in conflict strategy challenges the military on the battlefield and in their response to the ongoing threats to civilian populations and humanitarian workers. From the perspective of the DoD, security interventions (or stability operations as they often are called), are vital to military and civilian populations.[7–9] The US military medical planners, along with their Iraqi military and civilian counterparts, have tried to maintain some semblance of basic health care, especially for the most vulnerable populations. To this end, they developed a means to provide care, where applicable, in safe zones of neighboring countries. The following case study describes a program organized to provide essential corrective surgery and associated medical care to infants and children with cleft lip and palate deformities and/or the complications of each.

Case Study

During the course of the war in Iraq, many children with congenital abnormalities were noted by military medical officers in the field, and later by national employees of Operation Smile International (OSI), a US-based organization committed to repairing cleft lips and palates worldwide.[10] Prior to the war, the Iraqi medical system provided medical resources and personnel to surgically and medically treat these children. However, during the war, few Iraqi physicians were available to perform elective surgery, due to conflict-related medical priorities, challenges in providing security, an overly stressed health system, and a dwindling number of Iraqi physicians. Concerned members of the Ministry of Health, US Military medical physicians, and several international medical mission organizations, including OSI, tracked these children with the plan to schedule them for reconstruction during a MEDCAP mission when breaks in the ongoing conflict operations allowed. However, that window of opportunity never materialized.[11]

Despite ongoing security issues, several medical mission organizations known for their commitment to treating pediatric congenital abnormalities in underserved areas, (including OSI) already had established regional services. The mission of OSI is to "repair childhood facial deformities while building public and private partnerships that advocate for sustainable healthcare for children and families".[12] The organization has worked worldwide for >20 years, providing surgery to >95,000 children with congenital facial abnormalities. In recent years, OSI has received US State Department funding to conduct surgical programs for Iraqi children, often coordinating with US military surgeons to transfer patients needing extensive surgery to outside military hospitals. This history of civil-military cooperation has helped to facilitate discussions with a regional coordinator and in the planning for a mission to serve these children and their families.

Initially, planning for these missions occurred in northern Iraq, where security could be provided successfully by the military. When advertisements for the OSI mission began, local Iraqi doctors were solicited for participation, but due to worsening security issues, negotiations to carry out the mission were moved to neighboring Jordan. Operation Smile Jordan (OSJ), a registered chapter of OSI, previously hosted surgical missions that used the services of Al Bashir Hospital in Amman.[13] In early 2005, OSJ facilitated a trial mission for Iraqi children, with surgery performed at the Dr. Jameel Tatonji Hospital in Amman. Operation Smile International provided funding for international volunteers and Iraqi family expenses. They also provided funding for the medical equipment, supplies, and pharmaceutical expenses. In addition, OSI completed the hospital arrangements and supported the mission with transportation and regional staff, including numerous translators. The success of the final mission prompted planning of a larger mission for the latter part of 2005.

An initial team, primarily comprised of North African physicians, dentists, and nurses, provided surgical repair for as many children with cleft palate defects as possible. However, after the 10 November 2005 bombings in Jordan, which only was two weeks prior to the scheduled arrival of the Iraqi children in Amman, half of the team withdrew their participation. This last-minute cancellation required that the organization rely on many of its American "regular" volunteers to fill the gaps, and ultimately, the team was comprised mostly of US citizens. The remainder of the team consisted of Canadians, Italians, and a dentist from Morocco.

More than 200 children were screened by the Ministry of Health in Iraq and a local physician working for the International Organization of Migration, who agreed to assist with the in-country logistics for the mission. Seventy-one children from Governorates throughout Iraq were selected for cleft lip and/or palate surgery. They were transported

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by bus convoy from Baghdad to Amman on 29 November 2005 with at least one family member accompanying each child. Amman consultants emphasized that fathers or male relatives were the preferred companions for safety and security reasons. A team of Iraqi physicians also traveled with the families for educational purposes, including observation of anesthesia and the surgical procedures.

The 890 kilometer (553 mile) journey, usually accomplished easily in one day, was delayed by frequent check points and stops to allow military convoys to pass; each stop required a review of official travel authorization papers. Since the border was closed after dark, the delays forced an unscheduled, overnight stay in the buses. Few families had adequate food or water. Although several of the families considered giving up and returning home, all 70 arrived safely in Amman the next day (one family arrived by taxi two days after the mission began). Upon arrival, the children were assessed for dehydration, and several required intravenous fluid therapy. Several children suffered from symptoms of upper respiratory tract infections, which required time-consuming re-evaluations and management, delaying surgical screening.

Of the 71 children who received cleft lip or palate surgical repair or revision, there were 37 males and 34 females—ranging from three months to 15 years of age. A total of 33 children underwent primary cleft palate repair, one underwent a cleft palate revision, 28 received primary cleft lip repairs, and 18 had secondary cleft lip revisions.

Two children suffered complications from retained throat packs, and two required return visits to the operating room for surgical re-exploration of bleeding palates. One of these children suffered blood aspiration prior to re-intubation. Several children experienced uncomplicated post-operative wheezing and stridor, a common post-operative reaction following cleft palate repair. Two days following the last surgical repair, all of the children, families, and accompanying physicians returned to Baghdad without further incident.[14] In the spring of 2006, a similar mission was attempted, but the convoy was delayed and threatened by insurgents for several hours before being allowed to proceed to Jordan. Consequently, OSI requested US Military airlift be utilized for safe-zone transport, including the return trip to Baghdad.

Discussion

Provision of Humanitarian Aid in War and Conflict

Over the last three decades, humanitarian crises have resulted from the consequences of conventional war and modern day complex emergencies. These crises traditionally were mitigated by the activities of multinational, international, and non-governmental organizations (NGOs) that were sanctioned, supported, and protected by United Nations (UN) Security Council peace-keeping or peace-enforcement mandates. Frequently, humanitarian activities were enforced and performed within a "humanitarian space" created specifically by international organizations to ensure a safe haven for vulnerable populations and for the protection of those providing aid.

The 2003 war with Iraq has been different. Failing to secure UN Security Council support for an invasion, the US and a small number of Coalition forces chose a unilateral approach to the invasion and to the humanitarian assistance and reconstruction that followed. Initially, the Coalition determined that there would be little need for a robust humanitarian effort, thus, extensive planning for such a crisis was lacking. Within a few weeks of the invasion and rapid capitulation of the Iraqi army, the US Administration declared the war to be over. Although a conventional warfare approach was used to invade Iraq, what has followed in the prolonged insurgency has not been conventional.[15] In the early 1990s, military planners predicted future conflicts might be led by unconventional forces such as terrorists who would foment prolonged states of insecurity and unrest upon military and civilian populations. Indeed, insurgency forces have been successful in escalating the aftermath of the conventional warfare into a chronic, humanitarian crisis, and in preventing or delaying much of the critical infrastructure repair and reconstruction required under the 4th Geneva Convention.

From the outset, there has been little or no UN or NGO presence in Iraq. Since the 1940s, traditional humanitarian principles have allowed for the negotiation of humanitarian space as neutral territory and the use of emblems such as the Red Cross or Red Crescent to protect civilians and relief workers in conflict zones.[16] However, asymmetrical warfare and the combatants who engage in these unconventional strategies have not complied with these international humanitarian laws protecting the civilian population.[15,17]

During conventional warfare or in more peaceful settings, military and civic organizations provide assistance to humanitarian missions while the local healthcare system is being restored.[8] The US military has an interest in providing these programs to benefit civilians. Training is offered to military physicians whose patient population pool is primarily healthy and young, and provide opportunities to treat diseases of military importance that are not endemic in the US. These programs also may promote a positive public image and improve public relations among civilians in regions in which US has a damaged image.[7,18] The US DoD supports these efforts, and in 2001, >200 such projects were conducted at a direct cost of approximately (US)$27 million dollars.[8] Although these programs have been successful in rebuilding the healthcare infrastructure in Afghanistan, the security challenges in Iraq have not allowed for a similar degree of success.[18]

During the early days of the war in Iraq, many hospitals and health clinics were looted and destroyed. Although many were rebuilt, few returned to full function due to chronic insecurity and inadequate essential infrastructures, such as clean water and electricity. Reports indicate that the functioning hospitals were in dismal conditions. The hospitals were lacking potable water, electricity, and basic medical supplies and equipment. In fact, simple surgical tools and medications were in critically short supply.[19,20] The health system remains crippled because many Iraqi physicians have fled the country, and others are reportedly targeted, along with other academics, for hostage ransom or assassination.[6,22,23] Medical professionals report that their lives are in constant jeopardy and that they often remain in the

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hospital seven days/week, to limit their exposure to the violence encountered when returning home.[20]

Treating cleft lips and palates in Iraqi children is not the highest priority for a country whose healthcare system is stressed by daily civilian and military casualties sustained from roadside bombings and insurgent snipers.[19,21] These surgeries primarily are elective, and in many parts of the world, cleft lips and palates are not repaired, however, there are important and timely reasons for performing this surgery. The physical sequelae of cleft palate include feeding and nutritional difficulties, recurrent ear infections, hearing loss, abnormal speech development, and facial growth distortion. Stigmatizing sequelae also may occur, including social isolation of the child and the family. Surgical intervention for these deformities clearly is indicated and delaying repair has lasting consequences for these children.

Civilian Medical Missions

Civilian medical mission organizations are known for providing limited and often specialized medical care worldwide, but rarely in conflict situations.[24] They have been referred to as "Surgical Brigades" for their specialized and short-term forays into developing countries.[25] Depending on their mission statement, these organizations participate in a wide variety of medical- and health-related activities. The provision of medicines, equipment, clinics, and short-term surgical missions provided by these groups is consistent with the standards of medical practice in the US.[25] These organizations generally are privately funded, and while many are independent, few include impartiality and neutrality in their mission statements. However, they are not free from criticism.[26,27]

Operation Smile is a medical mission organization with a long-term presence and commitment to providing cleft lip and palate repair for children in the Middle East without cultural bias. The first missions were conducted in the Palestinian regions of Israel in 1991, in Jordan in 2000, and in Morocco in 2001. Operation Smile's interest in treating Iraqi children is a natural extension of their commitment to children in the region with the assistance of the military and the US government. Although there is a long history of medical mission work documented by organizations providing this care, there has been little follow-up of the treatments provided. To date, outcome measures have not been studied objectively, nor have metrics been applied to ascertain the impact of the medical care provided. This lack of evaluation does not imply the absence of good outcomes. The actual impact of these programs remains speculative. Few humanitarian organizations objectively evaluate their programs, and assessments of military medical interventions for civilians rarely go beyond achievement indicators.[29] Few statistical analyses on caseloads and indicators of effectiveness, including baseline morbidity and mortality, have been published.[7,29] Critical and constructive monitoring and evaluation of these programs, especially those provided in a neighboring safe zone, is necessary to determine whether the benefits outweigh the risks encountered and if the impact on the medical system is positive or negative. This paper supports the need for utilizing measures of effectiveness within humanitarian aid organizations in order to monitor the programs and services provided.

Conclusion

Until security is restored within Iraq, one solution for providing care while the war and reconstruction efforts continue, is transporting individual Iraqi patients to the US for short-term care.[28] Another option is transporting patients to a neighboring country safe zone, where security can allow the medical mission to proceed safely. Although this process provides an option for care, it also requires consideration of unique medical complications and security risks to both the children and their families during each phase of transport. The risks encountered during transport to Amman, Jordan, included dehydration, hunger, and exposure to upper respiratory infections with an unplanned overnight stay at the border. Therefore, outcome measures and indicators of transport effectiveness must be assessed through a risk/benefit analysis before safe-zone treatment becomes standard practice.

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EDITORIAL REVIEW

Editorial Comments: Maintaining Baseline, Corrective Surgical Care during Asymmetrical Warfare: A Case Study of a Humanitarian Mission in the Safe Zone of a Neighboring Country

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I congratulate the authors of this article for their beneficial and much-needed work. I consider this work to be a bright shining light in a dark tunnel and a brave move in the right direction. The true value of this work is far beyond the treatment of 71 patients; it implants hope where there is confusion, promotes love where there is hate, and initiates trust and confidence where mistrust is common. Today, humanitarian aid groups and relief organizations face unique, difficult conditions, and sometimes must answer obscure questions and respond to new problems. History tells us that the war ends when the cease fire starts, that humanitarian organizations are well-received and protected, and that victims and patients respect and trust those providing medical treatment, regardless of their nationality. However, current reality reveals that a cease fire sometimes marks the start of a different war with a different strategy. The number of victims after the cease fire may exceed the number of conventional war victims. Some politicians generalize, classify, and reclassify people, creating mistrust, a lack of confidence, and confusion. It is sad to see victims who need treatment, while nearby there are well-meaning people willing to treat them but who are unable to do so without great risk.

As the strategies of war have changed, humanitarian groups must change their strategies in order to overcome these obstacles. The following suggestions should be considered in the development of any new strategy:

1. Humanitarian groups must prove and maintain their neutrality, independence, and impartiality;
2. All victims must be treated with respect, compassion, and dignity;
3. Traditional methods used to assess hazards must be reconsidered;[1,2]
4. Efforts must be made to gain the trust and confidence of the victims;
5. Each operation must be planned carefully, taking into consideration the hazards, geography, culture, and beliefs of the victims;[2] and
6. Medical services must be prioritized according to the needs of the affected population, not according to what is available. If the services available are not the ones most needed, efforts should be made to obtain the necessary resources.

As victims benefit from the help of humanitarian groups, this might encourage them to close these gaps. This important consideration may hold the key for success. This can be obtained if the victims are treated with dignity, their culture and beliefs are respected, and their fears are understood.

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