

# Experience in Afghanistan highlights plastic surgeons' role in combat trauma surgery

March 31 2016

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Especially with improved chances of survival from severe combat trauma, plastic surgeons play a critical role in managing injuries sustained in modern warfare, suggests an experience at a combat hospital in Afghanistan described in the April issue of *Plastic and Reconstructive Surgery*, the official medical journal of the American Society of Plastic Surgeons (ASPS).

"This study shows that if plastic surgeons are deployed as part of a military surgical team, they contribute to a large proportion of the surgical activity," according to the report by Dr. Shehan Hettiaratchy and colleagues of the Royal Centre for Defence Medicine, Birmingham.

## Plastic Surgeons Involved in 40 Percent of Combat Trauma Cases

The researchers analyzed the activity of British plastic surgeons deployed to a military hospital in Afghanistan (the Role 3 Medical Treatment Facility at Camp Bastion) from 2009 to 2012. The study included information on more than 1,650 surgical cases, representing different surgeons and changes in combat activity, wound patterns, and hospital mission.

Overall, plastic surgeons were involved in 40 percent of cases—a figure that remained about the same throughout the experience. International coalition forces accounted for about 40 percent of plastic surgery cases,

Afghan National Security Forces for 20 percent, and civilians for the remaining 40 percent. One-third of civilian cases were children.

Most plastic surgery cases involved the limbs, reflecting the high rate of injuries caused by blasts from improvised explosive devices (IEDs)—the "signature wounding mechanism" of the war in Afghanistan, according to the authors.

However, plastic surgeons were also involved in cases involving injuries to other body areas, including the head and neck, the face and eyes, and the trunk. "This demonstrates the breadth of surgical expertise required of a military plastic surgeon," Dr. Hettiaratchy and colleagues write.

In about two-thirds of cases, plastic surgeons worked on teams alongside orthopedic and [general surgeons](#). Plastic surgery involvement was similar for patients who were and were not wearing combat body armor when injured.

Most plastic surgery cases were classified as debridement—removal of damaged or contaminated tissue. Relatively few procedures involved surgery to save a limb or surgical reconstruction. This reflected the emphasis on transferring injured soldiers for staged surgery and definitive reconstruction away from the combat zone. Reconstruction was more likely to be done in Afghan soldiers or civilians.

The need for plastic surgeons reflects the injury patterns sustained in modern warfare—particularly the multiple limb injuries caused by IEDs. "In previous conflicts, this severity of injury was not as survivable," according to Dr. Hettiaratchy and colleagues.

Advances in prehospital and acute care have increased the chances of survival for individuals with multiple severe injuries. For these injured fighters, the researchers write, "Survival is not enough....It is essential

that the maximum functional outcome is achieved for each injured limb."

While the experience can't prove that [plastic surgery](#) expertise improves patient outcomes, it strongly support the value of the diverse skills of [plastic surgeons](#) in treating the severe and extensive injury patterns characteristic of modern combat. "This study shows that a team consisting of plastic, orthopedic and general surgeons can manage almost all injuries sustained in modern conflict using their normally-practiced and therefore maintained skill sets," Dr. Hettiaratchy and colleagues conclude.

**More information:** Laura Maitland et al. The Role of Military Plastic Surgeons in the Management of Modern Combat Trauma, *Plastic and Reconstructive Surgery* (2016). [DOI: 10.1097/PRS.0000000000002020](https://doi.org/10.1097/PRS.0000000000002020)

Provided by Wolters Kluwer Health

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