

Editorial Comments—Pakistan Earthquake: Experiences of a Multidisciplinary Surgical Team

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Outside of conflict zones, the role of surgery in disaster relief often is overlooked, and the utilization of expatriate surgical teams usually is thought of as unnecessary in the early days and weeks post-event. Earthquakes and the injuries they invoke offer an exception to this thinking. Recent events in Haiti, while an aberrancy, speak to this point. The need for surgery and anesthesia in the early days following 12 January 2010 was unparalleled. Of the half million victims, 250,000 were dead and 250,000 were injured, most of them severely. As is typical in large-scale disasters, accurate accounting of the injuries or procedures performed is not available. However, the anecdotal reports and a number of recent publications indicate that many surgeries were performed to salvage limbs or prevent loss of life due to severe crush injuries and/or infection.¹⁻³ Frustratingly, the response in Haiti also offered another lesson in the value of planning and organization.⁴ The report from the Pakistan/Indian Earthquake reveals the important role of well-organized, short-term surgical teams in treating trauma, highlights the possibility of appropriate delivery where little would have otherwise existed, and provides an example of successful follow up—a frequently missing feature in international surgical delivery.

Dr. Rajpura and colleagues describe the events of the October 2005 earthquake that rocked northern Pakistan and India, and provide a compelling case for the safe and appropriate delivery of surgical interventions in the weeks following the event. Through careful planning and consideration of the difficult logistics and limited infrastructure, they provided >293 interventions with no severe surgical or anesthesia complications. Furthermore, by continuing to send follow-up teams to the initial four-week mission, this British-led effort also interfaced with national health assets to provide long-term follow-up for some vulnerable patients and initiated a limb reconstruction unit that had the potential to be sustainable.

Critics of short-term medical missions often chide international teams that “drop in” to provide a short-term solution to what, in many cases, is a long-term problem. But skilled teams of surgeons and anesthesiologists offering interventions for specific trauma, with a clear objective and definitive end point, must be considered an exception for even the most steadfast critics. Especially in the face of the destruction of infrastructure and resources, which often occurs during disasters due to natural hazards, these teams have the potential to avert long-term disability and impact preventable death rates.

Surgery often has been considered a “luxury” in global health circles and may even be eschewed by the disaster medicine community. New and growing data indicate the important role of surgery in averting premature disability and death,⁵ and the proven cost-effectiveness for essential surgery⁶ demands that surgical intervention for specific conditions routinely be available. Traumatic injuries certainly top the list of conditions in need of appropriate and timely surgical intervention. The application of short-term surgical aid in this report speaks to the need and importance of surgical solutions following disasters, including conflict and disasters due to natural hazards in which internal infrastructure often is devastated. Even with case studies such

as this, the surgical community has a long road ahead in convincing the public and global health communities that their interventions can be applied in low income settings, without excessive complication rates, including anesthesia-related complications, and with the follow-up needed to treat longer-term issues such as wound infections and dehiscence. Too often, pre-disaster status of healthcare worker numbers and specialty are unknown or not included in the pre-deployment assessment. Whatever surgery is performed, the post-operative recovery must be compatible within the existing primary care network by nurses and non-physician para-medical workers.

Dr. Rajpura and colleagues are to be commended not only for understanding the local context and organizing appropriate and safe delivery of surgical care, but also for

thoughtful and interactive follow-up and for reporting their results to the international literature. However, given their ability to engage the local medical community from where many of their patients resided, it is unfortunate that their follow up did not include a report of the complications experienced by the patients followed. Such longer-term reports from disaster settings and from medical mission groups alike are rare. They are essential to evaluating the impact of such efforts, and are recognized by initiatives whose purpose is to establish best practices and evaluation of outcomes.⁷

Appropriately applied surgical intervention averts disability and prevents death both during and after disasters. Further follow-up and reporting on the results of these efforts is needed to thoroughly assess the effectiveness of the short-term delivery model by international teams.⁸

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