

**Expedition Medicine**


Henry M. Stanley, in his second trans-Africa expedition of 1874–1877, lost 68% of his 356 men. Among the casualties, 58 died in battle or were murdered (several were cannibalized), 45 died of smallpox, 21 from dysentery, 14 drowned, and 1 was killed by a crocodile; several others died of starvation (all of this from the preface to this book). Modern-day expeditions—defined as organized and usually challenging journeys with a specific purpose of exploration, research, education, or discovery—are generally less dangerous than that experienced by Stanley. But they require extensive planning and preparation, by both leaders and expedition members, to reduce the frequencies of injury, illness, and death potentially associated with such adventures. This book is a compendium of information that will be useful to those who plan and participate in such journeys.

The editors have divided their book into three sections: expedition planning, field medicine, and specific environmental settings; each section comprises 7–14 chapters written by a total of 24 contributors. The section on planning includes advice on expedition risk assessment, assembling of medical kits, and first aid training. The second section addresses base camp hygiene, water purification, and care of various minor and serious conditions that may be encountered in the field; and the third addresses problems specific to high-altitude, polar, jungle, desert, and aquatic environments.

A major strength of this book is that, while targeted primarily to those (e.g., medical officers) who will be responsible for the health of expedition members, the writing is not highly technical. Hence, it is also suitable for paramedical personnel and other expedition members who may be interested (as they should be) in health issues specific to their expedition. In fact, this book is useful reading for those who may not have the background, time, or resources to join an expedition, but who simply enjoy wilderness experiences or ecotours for recreational purposes. As the editors point out, with the increasing availability of vacations in remote places offered by specialty tour companies, the boundary between such journeys and expeditions has become blurred. The book contains numerous tables and figures, which add to its readability. Inclusion of exotic subjects, such as treatment of bites by sea snakes and scorpions and attacks by large animals, makes for interesting reading.

The chapters vary somewhat in value to the reader. The chapter on commonly encountered ailments, such as gastrointestinal and respiratory illnesses, is very useful. The one on assessment of the injured patient is rather long; it is difficult to imagine wading through this chapter and recording various findings while managing the critically injured person in the field. The chapter on heat-related injuries fails to distinguish between heat exhaustion, heat stroke, and hyponatremia, conditions with different clinical presentations, management requirements, and prognosis. The chapter on medical aspects of survival is brief and not very useful.

Notwithstanding these minor shortcomings, this is a useful volume not only for those who plan and participate in expeditions but also for those of us who may aspire to join an expedition or who just dream of visiting exotic places. I recommend a copy for your bookshelf; better yet, for your backpack.

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**The Global Threat of New and Reemerging Infectious Diseases: Reconciling U.S. National Security and Public Health Policy**

Jennifer Brower and Peter Chalk
Rand Science and Technology
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Brower and Chalk, authors of The Global Threat of New and Reemerging Infectious Diseases: Reconciling U.S. National Security and Public Health Policy, describe their book’s purpose as examining “the changing nature of security” and focusing on “the threat of infectious diseases.” There are many examples in today’s world where the intersection of threats to public health and national security should direct the attention of policymakers, security and public health strategists, and the systems that support each toward an organized response.

The authors use two case studies: HIV/AIDS in South Africa and the U.S. public health response system. The first case, in South Africa, illustrates how a single microbial agent can undermine the economic, social,
and medical underpinnings of a developed country. The second study shows the negative effect of newly emerging diseases such as HIV/AIDS, Hantavirus infection, West Nile virus infection, Creutzfeldt-Jakob disease, and intentionally released agents (*Bacillus anthracis*). This study demonstrates how events can overload the public health response system and weaken public confidence in its government. The reader can easily conclude that the intersection of disease and national security can be dangerously destabilizing and seriously undermine a nation’s social, economic, and political order. The recent outbreak of severe acute respiratory syndrome reiterates the global nature and warp speed of emerging infections.

In their summary and conclusions, the authors provide recommendations for policymakers addressing both public health and security issues. The thrust of the authors’ conclusions is to push policymakers and strategists to actions that strengthen the infrastructure of a public health response system and broaden the traditional definition of national security to include the impact of naturally occurring and intentionally released microbial agents.

The authors present a compelling case study for HIV/AIDS in South Africa, where an emerging disease has gone unchecked and is having a devastating effect on a developed country. The case study of the U.S. public health response system is interesting and thoughtfully presented but lacks sufficient and carefully documented detail to aid the reader in drawing conclusions and formulating solutions. Unsubstantiated or incorrect examples also detract from the overall presentation of this case study. For instance, the contention that lack of good communications with area physicians and hospitals resulted in the deaths of postal workers in the fall 2001 anthrax crisis is not supported by the author’s reference or by any other authoritative materials known to this reviewer.

In the public health response case study, the authors provide broad recommendations aimed at strengthening the public health infrastructure. Also included is an excellent summary of the current status of efforts begun in the mid-1990s in the United States to address the infrastructure of public health. The recommendations are presented in such a way that the shortcomings of the system can be addressed in critical areas, including a well-trained public health workforce; interagency coordination; private sector, hospital, and emergency response integration in public health; technical and educational interventions; and domestic and global investment in public health.

Brower and Chalk’s book is a powerful and useful argument for the urgent need to integrate and streamline public health and national security strategies.

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