Improvised Medicine: Providing Care in Extreme Environments
Kenneth V. Iserson

Dr Iserson has given us a most remarkable book. Many readers may be familiar with David Werner’s lay health-worker book, Where There Is No Doctor; this new volume could be titled Where There Is a Doctor–But No Stuff. Drawing from his experience providing care in international, wilderness, and disaster settings, he has compiled an impressive collection of bare-bones equipment and work-around strategies to provide the best possible care in resource-poor settings. While presenting many creative examples, the purpose of the book is not to offer an exhaustive list of solutions to missing resource challenges but to inspire creativity in readers who may find themselves needing to improvise. The approach to medical resource problem solving is applicable to providing care in isolated, remote (ie, wilderness and rural) locations, global health activities in developing nations, and in post-disaster settings.

The book starts with addressing essential infrastructure: communications, water, sanitation, and refrigeration. Without these basics, medical care beyond the simplest first aid is futile. Next, basic equipment, supplies, and sterilization are discussed. Creative means of overcoming shortages are offered, including reuse, repair, adaptation, and even manufacture of rudimentary equipment. Similarly, creative sources of consumable supplies are presented. Throughout this section (as well as the rest of the book), important details are presented in tabular form, providing information that physicians may not often encounter. Examples of this include sterilization methods, constitution of important solutions, and anesthesia/sedation drugs and strategies.

Moving on from the basics, the remainder of the book is a pragmatic guide to patient assessment, stabilization, and treatment (both surgical and nonsurgical). Ranging from height and weight estimation strategies to estimating laboratory values from physical exam to improvised analytical techniques (eg, urinalysis without strips), a wealth of assessment tricks are presented. Among the hints are historical techniques for assessment, stabilization, and treatment that have been long forgotten in our technologically dependent era.

Among the more interesting sections to this reviewer were the Critical Care sections. Although modern ICUs blur the line between reality and science fiction, quality critical care can often be provided with less technology and still save lives. Some of the improvisations presented in this section are not merely relevant for chronically resource-limited settings; for example, the technique for using a single ventilator for several patients simultaneously has clear relevance to the most modern facility in the event of a respiratory pandemic. Another valuable section is Dental Care. As physicians, we have limited experience in this area, yet in many settings, the ability to treat basic dental problems alleviates a tremendous amount of human suffering. Very practical, step-by-step procedural descriptions are included and are well illustrated.

The volume closes with an appendix presenting a model Hospital Disaster Plan. This template is focused on well-resourced facilities that may suddenly become resource-poor environments. It offers an excellent guide to disaster preparedness.

While concise, the work uses an almost “folksy” style, making for an easy read. Concepts are presented via engaging anecdotes, and the ideas are amply illustrated. While easy to use to find specific topics of interest, it is no mere dry reference book; I found myself reading it cover to cover.

Reasonably priced, this book is also available for Kindle™. Given the harsh environments in which it is most likely to be of value, the paper-and-ink version is recommended. Too bad the publisher didn’t follow the example of
some, such as *The Washington Manual*, and include an electronic version with purchase of the bound one.

The appeal for this book is broad. Obviously, it should be required reading for those involved in disaster response or global health activities (including medical students doing electives abroad). It would be a valuable read for any physicians who leave the confines of their medical center and may encounter the words “Is there a doctor in the house?” Also, it should be in every hospital library, in case a disaster reduces them to an “extreme environment.”

*Improvised Medicine* is a remarkable compilation of concepts and contraptions, both innovative and historical, that can improve medical care in the most difficult situations. MacGyver would be proud!

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**Living and Dying in Brick City**
Sampson Davis, MD
*New York, Random House, 2013, 241 pp., $25, hardcover*

Ten years ago, Drs Sampson Davis, George Jenkins, and Rameck Hunt wrote *The Pact*. The three adolescents met in a Newark juvenile detention facility and made a pact to become physicians. Three African American males from the projects of Newark beat the odds and were successful. Two became physicians, and one became a dentist. They now provide care in the community where they grew up. This year, Dr Sampson Davis wrote *Living and Dying in Brick City* as a way to raise awareness of the health care crisis in the inner city. Dr Davis is an emergency physician in a busy Newark hospital. He combines personal narratives, patient anecdotes, and first-hand accounts of the many problems plaguing his hometown.

The book has 14 chapters. Each chapter addresses a different medical or social problem that contributes to the health care crisis. These include social and domestic violence, substance use/abuse, drug trafficking, cardiovascular disease, sexually transmitted infections, sickle cell anemia, hypertension, asthma, obesity, diabetes, and psychiatric disorders. Dr Davis begins each chapter with the story of a patient with a specific condition. The vivid personal narrative of patients suffering from obesity, domestic violence, and prescription drug abuse serves as a source of public health education. Each chapter ends with a resource guide of websites, phone numbers, and basic medical information. The information provided sometimes distracts from the narrative, but the information is important as it guides readers to helpful public health resources. There is also a reference list at the end of the book.

The purpose of the book is to educate the general public about these common conditions so that a dialogue can occur within families and communities. This book was not written as a medical text, and medical professionals may find it elementary. Dr Davis’s writing style is geared toward a wide audience. The narrative humanizes the medical condition, making it memorable as events unfold in the emergency department of an inner-city hospital. The struggles of Dr Davis’s early life parallel many of those he treats in the ER. These struggles are relevant on a global scale whether you are a physician or a brick layer. Those with poor health literacy may find some of the medical terms confusing. It would be nice if there was a glossary of terms for those unfamiliar.

*Living and Dying in Brick City* was a pleasure to read. Medical students, residents, and others in health care could benefit from reading the stories. Residents often see a skewed population with poor outcomes. It is important to understand that there is much strength and resilience in those living in less than desirable conditions. The book is inspirational, as Dr Davis has mentored others who have become successful in other careers. Every young black man from the inner-city ghetto does not end up in prison. We all need to respect the resilience and try to understand what makes someone take one road versus another.

The reviewers read this book and had a resident-faculty book discussion. Dr Davis called in and participated in the discussion, which enriched the readers’ experience. Residents commented, “After reading the book, I felt motivated and empowered to help Dr Davis in his cause to tackle difficult issues.” Another stated,