

Book Reviews

Spillover: Animal Infections and the Next Human Pandemic, by David Quammen, paperback, 587 pp, \$16.95, ISBN 978-0-393-34661-9, New York, N.Y., WW Norton, 2012.

This *New York Times* bestseller concerns zoonotic diseases and the dedicated, courageous scientists who pursue them.

Zoonotics are diseases that affect animals in the wild and that, unlike smallpox, could never be completely eradicated. They exist for long periods in ecological balance in the wild, but then occasionally “spill over” into the human population. This could result from mutations, which are extremely common in RNA viruses, that enable a virus to infect a different species. Or it could happen when humans clear land and disrupt the habitat of wild species.

The book is especially timely because of its extensive treatment of Ebola and other hemorrhagic fever viruses. It also covers a wide variety of other infectious diseases, including Lyme, SARS (severe acute respiratory syndrome), influenza, yellow fever, hantavirus, malaria, psittacosis, and AIDS.

Quammen followed intrepid researchers as they tracked gorillas through the jungle and “darted” them with tranquilizers to obtain blood specimens, or collected fecal samples, or followed bats into African caves and tall trees. The search for the reservoir where a virus hid out between outbreaks had blind alleys and false starts. In pursuit of Ebola, scientists caught, killed, dissected, or took samples of blood and internal organs from more than 1,000 animals, including 222 birds of various species, 129 small terrestrial mammals, and 679 bats.

Quammen also follows researchers into their laboratories. He describes the ordeal of one researcher who accidentally stuck herself with a needle used for injecting deadly virus into mice. After a lengthy and arduous period of quarantine, she was found to be

uninfected. Others were not so fortunate.

AIDS has probably existed in Africa for a very long time, Quammen writes, but did not noticeably break out into the human population because the basic reproduction number (R_0) did not exceed 1.0 for a long time. He does a good job of explaining basic epidemiological concepts such as the R_0 (pronounced “R-naught”).

One theory of how HIV got from primates into the human population was by infecting a hunter who cut himself while butchering bush meat. One very controversial theory was that it had accidentally contaminated polio vaccine, which had been used to vaccinate 75,000 children in Leopoldville, Democratic Republic of the Congo, alone. While very popular for a time, this theory was eventually rejected as the cause of the worldwide pandemic. Yet the spillover may well have been iatrogenic, as described in a paper, “Noble Goals, Unforeseen Consequences.”

A series of well-intended campaigns by colonial health authorities between 1921 and 1959 aimed at treating tropical diseases with injectable medications. This included a massive campaign against trypanosomiasis (sleeping sickness) using arsenical drugs, as well as the use of injectables against syphilis, yaws, malaria, and leprosy. Many thousands of people were jabbed in the days before disposable needles and syringes. There was no time to properly sterilize the equipment between injections. This dramatically boosted the incidence of HIV infection beyond the critical threshold so that the epidemic would not burn out, and sexual transmission could do the rest.

Quammen's book is fast-paced and reads like a detective story. It should be easily comprehensible by the layperson, although containing a wealth of information for the physician as well. I grew a bit tired of his breezy style, which emphasized details like the shape of researchers' eyeglasses and their hair or lack thereof.

A pervasive theme is his personal

view that there are too many human beings, who are constantly upsetting the otherwise benign course of nature. He thinks humanity could follow a course resembling the explosive outbreak of tent caterpillars in his town, which destroyed most of the trees, after which the caterpillars seemed to vanish.

Quammen notes that no more than two percent of the world's species ever experience outbreaks. He quotes entomologist Alan Berryman, who wrote that “the most serious outbreak on the planet earth is that of the species *Homo sapiens*.” The human population was about a billion in the year 1804. It doubled between 1804 and 1927, reached three billion in 1960, and adding each additional billion has taken only about 13 years. We passed the 7 billion mark in October 2011.

Quammen writes: “We're unique in the history of mammals. We're unique in the history of vertebrates. The fossil record shows that no other species of large-bodied beasts—above the size of an ant, say, or of an Antarctic krill—has ever achieved anything like such abundance as the abundance of humans on the earth right now.”

He also quotes Edward O. Wilson: “When *Homo sapiens* passed the six-billion mark, we had already exceeded by perhaps as much as 100 times the biomass of any large animal species that ever existed on the land.” This refers to wild animals, omitting consideration of domesticated livestock.

“We are prodigious,” Quammen writes. “We are unprecedented. We are phenomenal. No other primate has ever weighed upon the planet to anything like this degree. In ecological terms, we are almost paradoxical: Large-bodied and long-lived but grotesquely abundant. We are an outbreak.”

Outbreaks end, Quammen states. As to the fate of humanity, his conclusion seems to be: “It depends.”

The book has more than 500 endnotes, an extensive bibliography, and a good index. It deserves to be widely

read by everyone who seeks a better understanding of the zoonotic diseases, which are spilling over from remote, exotic places into the developed world.

Jane M. Orient, M.D.
Tucson, Ariz.

Schein's Common Sense Prevention and Management of Surgical Complications, by Moshe Schein, M.D., Paul N. Rogers, M.D., Ari Leppäniemi, M.D., and Danny Rosin, M.D., 558 pp, paperback, \$94.05, ISBN 978-1-903378-93-9, Tfm Publishing Ltd., 2013.

The front cover of this book indicates that it is for surgeons, residents, lawyers, and even those who never have any complications. It is not entirely clear why such a book might be intended for non-medical readers. This book distills the experience of surgeons from across the globe, including the UK, Australia, South Africa, Israel, the United States, Finland, Nigeria, Kenya, Sudan, Thailand, Pakistan, and Tuvalu. Contributing surgeons represent teaching hospitals, district hospitals, and even rural areas.

This book will be helpful to those surgeons practicing in advanced, fully equipped medical centers, as well as those who might find themselves operating under primitive conditions in the developing world.

This volume lives up to its billing, and is full of common-sense approaches to complications and, more importantly, how to avoid them. It is devoid of literature references, and that is perhaps a good thing. After all, scientific literature isn't always synonymous with "common sense." The authors seem unfazed at making recommendations in spite of literature recommendations. Bravo!

The authors seem devoted to the concept of doing only what is in the patient's best interest, regardless of financial considerations. While performing unnecessary operations might be financially rewarding along with the potential for low complication risks, the authors emphasize the tragedy of a serious complication following unwarranted surgery.

The authors boldly state: "The truth is that, in many places, the subject of unwarranted, pointless, redundant surgery is still hushed—it is a taboo among surgeons and their 'managers.'" Well, of course surgeons should not have any

managers, but in today's environment, all doctors seem to be managed by non-physicians in one way or another.

Another example of the authors' integrity is the admonition to avoid *funktionslust*, which is defined by Roger S. Forster as "the desire to perform a technical procedure because we perform it well." It "refers to the joy and pride of performing a skill well." According to Forster, it can also be a curse, such as yielding to the temptation to perform a larger procedure than necessary, refusing to learn a new procedure because it might be less satisfying, failure to refer to another specialist, or even opting for a poorly advised surgical procedure instead of nonsurgical treatment.

As surgeons, we sometimes find ourselves in denial and/or hope. It is easy to deny a complication, and perhaps even easier to "hope" it will simply go away. However, the authors remind us that such wishful thinking can be dangerous to the patient, especially with "leaks" from a variety of anastomoses.

As a plastic surgeon, I especially appreciated the condemnation of using staples on the breast. As a matter of fact, I would urge avoiding skin staples on virtually all skin surfaces. Yes, I know it is faster and cheaper, but is it worth the increased scar formation?

This book covers basic surgical principles relevant to virtually all surgeons, yet focuses primarily on surgery all along the alimentary tract. There are chapters on the breast, endocrine surgery, pediatric surgery, urology, and vascular surgery. While the candor and intellectual honesty is refreshing, the earthy language is distracting. Yes, we all know that the final product of the alimentary canal is sh**, but medical literature generally opts for more refined terminology. Even worse, however, the book actually uses the "F-word," and there seems to be no value in printing such vulgarity. It is unclear whether this is for the benefit of the non-medical readership. Even so, this is clearly inappropriate.

On balance, however, this is a book that should be highly recommended for practically all surgeons, and especially surgical residents. Non-surgeons would also find it helpful. It is always advantageous to be able to understand complications in foreign territory.

Finally, as the authors indicate, the central objective really should be to avoid complications in the first place.

Kenneth D. Christman, M.D.
Dayton, Ohio

Takeover, by Richard A. Viguerie, hardback, 335 pp, \$27.95, ISBN 9781936488554, Washington D.C., WND Books, 2014.

The subtitle of the book really tells it all: "The 100-Year War for the Soul of the GOP and How Conservatives Can Finally Win It."

In Viguerie's view, there have been only two conservative candidates for president: Barry Goldwater and Ronald Reagan. To win a nomination, the true conservative first has to defeat the Republican establishment. After that, the Republican establishment will not help him beat the Democrat and may actually appear to aid the Democrat side. That means to aid the Progressive side since that has taken over the Democrat Party. Conservatives win by getting to the grassroots through alternative methods of communication. Viguerie's direct-mail campaigns have been essential. Social media is now playing an increased role.

In the Reagan campaign, the economy and national defense were extremely important, but success probably depended ultimately on engaging a "third leg," that is what are generally called "social issues." In my view, these ought to be called cultural or moral issues. Contrary to the orthodoxy espoused by high-priced establishment consultants, these issues are consistently winners, not losers.

This book was published before the startling loss of House Majority Leader Rep. Eric Cantor of Virginia. Immediately after the election results were in, Republican congressional "leadership" seemed to be hastening to reassure its crony capitalist backers that all would be well and nothing would change.

That remains to be seen. The war for the soul of the Republican Party, which is really the battle for the soul of America, rages on. Will Republicans emerge as what Angelo Codevilla calls the "country party"—the party of ordinary Americans? Or will it remain the more business-friendly side of the Progressive movement?

Viguerie's book is a tactical manual that political activists must study. Its incisive comments on Republican politicians, candidates, consultants, and party functionaries will earn him a position as the most hated man in America among these groups.

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