that expected outcome. Thus, in studying risk we study statistics. We then impose our statistical methodology upon life events (risks and opportunities, or "stories") to better understand them and make informed decisions.

The author blends contemporary scientific analysis with amusing anecdotes to demonstrate the need for critical thinking when applying our venerated techniques. His book provides us with a mental check and balance on our exuberance for imposing patterns or causation where none may exist. For example, the author reports several cases of Equidistant Letter Sequencing (ELS). In this cryptic analysis, one can discover a myriad of patterns, infer hidden meanings, and make decisions based on random statistics. The author reveals that an ELS encoded within the U.S. Constitution is a prophecy of the Lewinsky sex scandal. The ten letters of *Bill* and *Monica* are repeated every 76 letters. *B* is followed 76 letters later by an *I*, which is followed 76 letters later by an *L*, and so on. Some might consider this a premonition; others consider it a coincidence.

What the above example shows us is that in analyzing numbers and narratives it is not an uncommon practice to confuse *chance* and *lady luck,* to confuse *coincidence* with *miracle.* As academics we are frequently exposed to research situations where if we crunch random data hard enough, we'll be able to "discover" patterns. So the author's anecdotes of stories and numbers are familiar to us all. What is new, and refreshing, is his brilliant technique of revealing the limitations and strengths of our science.

One of the author's writing goals is to bridge the gap between literature and science. He demonstrates that the drama and humanity of storytelling is enhanced by statistics, while the rigor of science keeps stories from being trivial puffery. In this 201-page treasure, he has constructed a solid foundation to help readers (about 63.2 percent of us) span that gulf. *Once Upon a Number* is an entertaining book that demonstrates the application of statistics in our lives. Students of risk management and insurance who read this book will be well rewarded.

Competitive Business Strategy for Teaching Hospitals, James R. Langabeer and John Napiewocki, 2000, Westport, Conn.: Quorum Books

Reviewer: Jason Hecht, Ramapo College of New Jersey

This text is "intended to be used as a reference guide for formulating and executing effective competitive strategies unique to major teaching hospitals." To that extent, the authors draw upon the strategic and management literature as well as industrial organization theory to support their contention that teaching hospitals must become financially viable institutions in an increasingly market-dominated competitive environment. In this new and evolving milieu, senior managers, planners, and academic leaders at teaching hospitals will have to emphasize and demonstrate financial and strategic acumen over their traditional strengths in human relations and facilitation skills. In general, the authors find that teaching hospitals should pursue strategies that increase market share, differentiate themselves from the competition, and, where feasible, substitute capital for labor inputs (p. 181).

The book is organized into five sections: Introduction, Competition and Turbulence, Competitive Business Strategy, Strategy Analysis and Formulation, and Implement-

ation and Conclusions. Several appendixes include a planning and self-assessment questionnaire ("Toolkit") and sources for competitive health care intelligence.

I found this text to be marked by great contrast: The first few chapters provide outstanding background on the organizational dynamics at, and operational and financial measures used by, teaching hospitals. Unfortunately, the authors come up short in presenting convincing and consistent data on the successful application of their proffered strategies and tactics to improve both the financial and qualitative performance of teaching hospitals. The analysis is also undermined by the tendency to pose formulaic procedures and solutions, often expressed in jargon and cliché-laden prose that tend to read like a management consulting proposal or proposal manual.

The beginning chapters are the strongest sections of the text. Chapter 2, "A Primer on Teaching Hospitals," provides an outstanding overview of the multiple objectives and organizational dynamics of teaching hospitals. The authors contrast standard business goals—growth and profitability—with the multiple objectives of teaching hospitals: to (1) provide health care, (2) train physicians, (3) advance the state of medical knowledge, and (4) achieve "satisfactory" economics. The authors also identify critical organizational issues, as teaching hospitals try to "straddle the line between higher education and commercial enterprise." For example, goals and decision making at teaching hospitals can be obstructed or impaired because physicians have outside allegiances, including the affiliated medical school, their own medical practice, or even another hospital. Thus, teaching hospitals may suffer because it is not the primary focus of their contracted physicians.

In particular, the authors astutely note how these unique organizational features impact teaching hospital efficiency: Because doctors split their time between several organizations, "clinical productivity gains are not always rewarded or even measured in many cases." Moreover, the governance of a teaching hospital often involves negotiating complex relationships between doctors, administrators, and clinical chairs (not to mention patients and their families). Being a good academic leader of a teaching hospital does not ensure operational and financial success. Rather, chief medical and operating officers must have a solid understanding of a range of business issues such as third-party capitation pricing and reimbursement arrangements. This chapter concludes with an excellent section on financing academic medicine that includes a very useful and succinct discussion of the Medicare and Medicaid programs and a nice definition and description of the Medicare reimbursement formula.

The next chapter, "Empirical Research Methodology," details the authors' efforts to estimate an econometric model of teaching hospital return on capital. The strength of this chapter lies in the precise and lucid definition of the variables used in the model. Anyone interested in health care and hospital finance/economics will benefit from the authors' rich assembly of measures of revenue, costs, and other variables related to the market for hospital care. The authors have brought together definitions of standard measures of financial performance in one place. I was especially impressed with the clarity of the definitions for average adjusted costs per discharge, employee productivity, case mix index, and managed care penetration.

Unfortunately, I was much less impressed with the data analysis and modeling procedures (Chapter 3) that could benefit from a more thoughtful and sophisticated approach. For example, while the authors place substantial weight on the need

for teaching hospitals to increase market share to increase their return on capital, they do not allow for the simultaneous determination of both variables. State-of-the-art competitive strategy and industrial organization specifications typically allow for the endogenous interaction between growth and profitability. This shortcoming is rather surprising, given that the authors continually underscore how their approach is uniquely able to capture the "structural dynamics" and "turbulence" of the teaching hospital's competitive environment. Moreover, although the authors assemble a rich assortment of independent variables, I was surprised by the parsimony of their model specification. It appears that the authors ignore principal component techniques to address the likelihood of multicollinearity between regressors. The model would also benefit from other specification tests such as a restricted least-squares test.

The next two broad sections of the text, "Competitive Business Strategy" and "Strategy Analysis and Formulation," are much too generic and lack empirical support. For example, the authors suggest that in "mature" markets, hospitals pursue a "focus" strategy whereby they concentrate in particular on health procedures or services. This is not possible for reputable teaching hospitals: All doctors are *required* to have a general training rotation *prior to* specialization. Moreover, this fact largely precludes a teaching hospital from pursuing a "brand equity" strategy. Thus, while the authors attach great importance to image building and "branding," it is largely irrelevant for the majority of urban teaching hospitals whose broad "product portfolio" is necessary to fulfill the generalist orientation of early-year residency programs.

In addition, the authors tend to make claims about the health care and hospital industry that either lack adequate supporting evidence and/or are based on erroneous projections. At other times, the authors either contradict themselves or are so ambivalent about a strategy that it leaves the reader confused. For example, in the "Market Evolution" section of Chapter 5—in contrast to what the authors claim—insurers have *not* aligned with health care providers, nor have insurers, physicians, and hospitals "formally" integrated into an "environment where managed care dominates" (especially in urban areas). At another point in the text, the authors find significant econometric support for a low-cost strategy to improve financial viability (p. 107). The authors then argue on page 133 that teaching hospitals should eschew a low-cost "positioning strategy" because it is "synonymous with low-quality" (another unsupported claim). Furthermore, in the "Strategic Implications" and "Summary" sections of Chapter 7, the authors put forward additional undocumented, facile, and banal characterizations about "diversification" and "synergy" and how hospitals need to look beyond "cost concerns" to effect transformations that will buffer them from "external forces." I found these and many other passages to be frankly tedious and repetitive.

My final disappointment with this book concerns the authors' failure to recognize that the vast majority of teaching hospitals are located in largely urban communities where health pathologies occur with above-average frequency. These localities also tend to have below-average economic opportunities, often accompanied by inadequate income and health insurance. Nevertheless, an adversely selected population for health conditions is the patient base for new physicians who are learning how to practice medicine. It is both obvious and unfortunate that physicians have to learn by treating significant numbers of ill people. Teaching hospitals are largely located precisely where a significant threshold of sick and ill individuals exists. Thus, the authors' contrived example of a successful "target marketing" strategy to get

white-collar professionals and their families to identify with a teaching hospital is rather simplistic and somewhat naïve. The authors could have taken a more nuanced approach or described an actual case study of a successful marketing strategy used by an urban teaching hospital.

In sum, I would strongly recommend the initial chapters of this text for those wanting a solid understanding of the organizational issues and operational and financial measures specific to teaching hospitals. Teaching hospitals need to take seriously the questions and issues delineated in this text. However, I was not persuaded that the authors have produced a compelling reference guide for competitive strategies and tactics unique to teaching hospitals.