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To our families, for their inspiration, understanding, patience, faith in us, and love.

Molly and Harry, Richard, Andrea, and Daniel
—L.B.

Hazel and Rob, Mike, Buffy and Jon, Joanne and Melissa, and Sarah and Emma
—B.W.
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Preface

Each chapter of the fourth edition of *Information Technology for the Health Professions* has been updated with new information. Chapter 1 is a very brief introduction to computers and computer literacy with new sections on smartphones and tablet computers. Classes with any computer background should omit this chapter. Chapters 2 and 3 have been expanded with current information on the American Recovery and Reinvestment Act, HITECH, and the Patient Protection and Affordable Care Act and their impact on the expansion of the use of the electronic health record. Chapter 2 has an expanded section on the meaningful use criteria for certified electronic health records, which should become universal by 2014. Chapter 3 is expanded to include practice management software, scheduling, and accounting. Chapter 4 deals with the continuing expansion of telemedicine.

Chapter 5 has been updated to include more information on the effects of poverty and inequality on health outcomes and to include information on new problems in public health, such as the emergence of antibiotic resistance. Computers are intimately involved in public health because even to know whether an epidemic exists, counting and statistics are necessary. New disasters such as Hurricane Katrina and the unfolding tragedy in Japan are included, as well as the public health responses. We continue to deal with the problems caused by climate change and the inadequate public response.

Chapter 6 deals with radiology, stressing the expansion of interventional radiology with a new section on the dangers posed by medical radiation. Chapter 7 discusses computers in surgery with a new section on the developing field of nanotechnology. Chapter 8 on pharmacy includes new developments in biotechnology and new developments in the use of stem cells and their potential. Chapter 9 examines the use of computer technology in dentistry. Chapter 10 looks at information resources made available by networks and computers, with an added section on the many health-related applications (apps) available for smartphones and tablet computers. The very interesting expanded use of computers in psychiatry is also discussed. Chapter 11 examines computerized devices, adaptive technology, functional electrical stimulation (FES), and computers in rehabilitative therapies. Chapter 12 is on the security and privacy of information with an emphasis on medical information. New information on the enforcement of HIPAA privacy protections and the added protections of HITECH has been added, as has a section on the privacy of genetic information.

A note on point of view: Over the last several years, politics and science have clashed over many issues including climate change and whether human action is contributing to it. This is not a debate within the scientific community, which has achieved a consensus on the issue. We take the consensus of the scientific community as our point of view.
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Health Information Technology (HIT) is health technology, particularly information technology, applied to health and health care. It supports health information management across computerized systems and the secure exchange of health information between consumers, providers, payers, and quality monitors. Based on an often-cited 2008 report on a small series of studies conducted at four sites that provide ambulatory care—three U.S. medical centers and one in the Netherlands—the use of Studying for the psychological professions. FAQs - psychological professions. Differences between psychology, psychiatry and psychotherapy. Wider healthcare team. Information and communication technology (ICT) is the development, management and support of the ICT infrastructure in health organisation, including the personal computers, email systems and mobile communications. This page has information on the opportunities and roles in information and communication technology. Working life. ICT staff are responsible for all internal and external electronic communication networks, including