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Now and Future Practice

In the past 11 chapters, we have visited some heroes, diseases, and treatments that are part of the heritage of the healing professions, we have discussed some of the language of medicine and some thoughts of our most erudite predecessors, and we have examined some instances of clinical practice, including a few times when what happened was not what we today would have wished. I hope that the 231 pages that we have traveled together so far have convinced you of the rich and (usually) honorable traditions of medicine. The tales are sometimes epic, at times tragic, sporadically triumphant, and occasionally lamentable. This last chapter suggests some ways that you, as a health professional or informed consumer, will now—I hope—learn more about medicine’s history and lore.

Recommended Reading

When seeking to learn more about anything, and especially what has happened in the past, books are a great place to start. Of course, you may be thinking, “The computer and the Internet are replacing books.” Perhaps this will be true some day; certainly e-mail has replaced handwritten letters as a means of personal correspondence. We should all grieve this loss of civility and of what should become of valuable historical records. Imagine what would have happened if the correspondence of Thomas Jefferson and John and Abigail Adams had been via e-mail, read by the recipients and then deleted forever.

As I wrote this book, I did a great deal of research on computer, as well as in books and scientific journals. The computer can provide fast facts: The Internet was invaluable in allowing me to tell dates of birth and death for persons mentioned in the various chapters; it permitted me to do a lot of important fact-checking. However, the Internet could seldom provide the context of facts presented and the linguistic richness of books. The World Wide Web lacks the thoughtful, often lyrical prose found in the best-written books. Also, with a book or article, I know who to blame if facts are wrong; the Internet is much more impersonal.

And so with that introduction, let us look at selected books that may help you learn more.

Osler's Recommendations

Sometime around 1904, Sir William Osler (1849–1919) collected a number of his addresses “delivered at sundry times and diverse places in the course of a busy life.” The book’s title is *Aequanimitas with Other Addresses to Medical Students, Nurses and Practitioners of Medicine*. On the last (and curiously unnumbered) page of the book, the one item in the book (other than the preface) that is not a record of an address is Osler’s recommendations for a “Bedside Library for Medical Students” (Osler, last page):

“A liberal education may be had at a very slight cost of time and money. Well filled though the day be with appointed tasks, to make the best possible use of your one or of your ten talents, rest not satisfied with this professional training, but try to get the education, if not of a scholar, at least of a gentleman. Before going to sleep read for half an hour, and in the morning have a book open on the dressing table. You will be surprised to find how much can be accomplished in the course of a year. I have put down a list of ten books which you may make close friends. There are many others; studied carefully in your student days, these will help in the inner education of which I speak.

- I. Old and New Testament
- II. Shakespeare
- III. Montaigne
- IV. Plutarch’s *Lives*
- V. Marcus Aurelius
- VI. Epictetus
- VII. *Religio Medici*
- VIII. *Don Quixote de la Mancha*
- IX. Ralph Waldo Emerson
- X. Oliver Wendell Holmes—Breakfast Table Series”

I have actually read some of Osler’s recommended books. I recall that in high school, a Spanish teacher and mentor excused me from class for a few days so that I could read Cervantes’ *Don Quixote de la Mancha*. I do my best to see a Shakespearean play each year. I have read bits and pieces of several of the other authors and works recommended.

Taylor's Recommendations

Inspired by Osler, I hereby humbly offer a list of 12 recommended books. Yes, my list has two more books than Osler’s, but it is, after all, a century later. I chose these books from the Bibliography that follows this chapter, and hence some are reference works. My recommended books all have to do with medical history, and some incidentally present epistemology and moral values in a medical context. A few of these read like mystery novels,

some are inspirational, and all tell facts we physicians should know. Here is the list, with some annotations:

- Ackerknecht EH. *History and Geography of the Most Important Diseases*. New York, NY: Hafner; 1972. This is a manageable book (210 pages, including the index) that traces the demographics of the major communicable diseases, plus deficiency diseases, diseases of unknown origin, and more.
- Bordley J. *Two Centuries of American Medicine, 1776–1976*. Philadelphia, PA: Saunders; 1976. A reference work of 844 pages, *Two Centuries* traces medical history from the founding of the United States until its bicentennial in 1976, the year of the book's publication.
- Cartwright FF. *Disease and History: The Influence of Disease in Shaping the Great Events of History*. New York, NY: Crowell; 1972. This readable book does just what the subtitle promises. It traces the influence of disease—such as typhus, syphilis, and the Black Death—on events in world history.
- Dirckx JH. *The Language of Medicine: Its Evolution, Structure, and Dynamics*. 2nd ed. New York, NY: Praeger; 1983. Perhaps I am assuming an elitist posture, but of all the medical word origin books available, I prefer this one for its scholarly approach. Dirckx discusses medical words in the context of our classical traditions, historical curiosities, modern coinages, slang, and jargon.
- Durham RH. *Encyclopedia of Medical Syndromes*. New York, NY: Harper and Brothers; 1960. If you want to know about the “stiff-man” syndrome, egg-white syndrome, or bullous malignant erythema multiforme syndrome (Stevens-Johnson syndrome), this is the place to look. Virtually all the popular and lesser-known eponymous diseases are here.
- Garrison FH. *History of Medicine*. 4th ed. Philadelphia, PA: Saunders; 1929. Garrison's is the “Bible” of medical history books. In my opinion, it is still unequaled in scholarship. Would you believe that as a young physician, I read this 996-page book cover to cover? My well-worn copy bears the underlining to support this claim.
- Martí-Ibáñez F. *A Prelude to Medical History*. New York, NY: MD Publications, 1961. The foreword to the book begins, “I am a lover of the spoken word. No violin rendition, no piano recital, no symphonic concert can transport me as does a well-turned lecture.” The book is a collection of the author's lectures to medical students of the New York Medical College, Flower and Fifth Avenue hospitals. The astute reader will note that I have begun and ended my book with quotes from Martí-Ibáñez.
- Osler W. *Aequanimitas with Other Addresses to Medical Students, Nurses and Practitioners of Medicine*. 3rd ed. Philadelphia, PA: Blakiston; 1932. Mentioned above in reference to the “Bedside Library for Medical Students,” Osler's collection of addresses retains its inspirational qualities a century after its initial publication in 1904.

- Porter R. *The Greatest Benefit to Mankind*. New York, NY: Norton; 1997. With the subtitle *A Medical History of Humanity*, this book is an ambitious, but comprehensible, story of the human side of medicine.
- Sebastian A. *The Dictionary of the History of Medicine*. New York, NY: Parthenon; 1999. Do not attempt to read this book for pleasure. Sebastian's *Dictionary* is an epic reference work weighing almost six pounds. In it you can find discussions of the Ebers papyrus, liver extract, and the Royal Society of London.
- Strauss MB. *Familiar Medical Quotations*. Boston, MA: Little, Brown; 1968. Strauss has assembled the most useful of all collections of medical quotations, not surprising in that, in the preface, the author describes his long-term attention to the task: "Just when I began collecting medical quotations remains a mystery. The yellowed scraps of paper suggest a minimum of twenty-five years ago." Every physician who writes or who delivers lectures should have this book in his or her library.
- Weiss AB. *Medical Odysseys: The Different and Sometimes Unexpected Pathways to 20th Century Medical Discoveries*. New Brunswick, NJ: Rutgers University Press; 1991. This book, telling stories of the often convoluted and occasionally unexpected routes to discovery, could be enjoyable bedtime reading.

Landmarks in Medical History

A good friend once told me, "There are two kinds of people in the world—those who travel and those who don't." Sometimes it's good to get out of the office and travel. When traveling in your own country or abroad, take some time to visit medical landmarks—historical sites and museums that recall medical history. Sometimes they are a little hard to find; the typical tourist is probably not likely to seek out the Semmelweis Museum in Budapest or the Museum of Questionable Medical Devices at the Science Museum in St. Paul, Minnesota. However, visiting the site of an important medical event or a collection of medical artifacts can become the highlight of a trip.

Here is a list of some suggested medical landmarks to visit. Some merit an afternoon excursion if you happen to be visiting a city; others, such as the Greek Island of Kos, represent worthwhile travel destinations.

Europe and Greece

Kos

From the balcony of our hotel in Kos, we could see Turkey across the waters of the Karpathian Sea. My wife and I visited Kos in 2002 with a group of

fellow physicians. Kos, of course, was the home of Hippocrates (ca. 460–377 BCE), and here we visited the two chief medical history attractions of the island.

The first, in a quiet city square, is the Plane tree—or at least a descendent of the original tree—under whose branches Hippocrates taught his pupils. The other awe-inspiring medical site is the Aesculapion, the temple of healing built in the fourth century BCE. Here, the physicians in our group recited in unison the Oath of Hippocrates on a bright, sunny morning in October.

Epidaurus

On the northeast coast of the Peloponnesus lies the ancient city of Epidaurus. Here was built the Aesculapion, a center of healing well known throughout Greece (mentioned in chapter 11). Sick persons came to spend the night in the sleeping hall, the *enkoimitiria*, where during the night Aesculapius might help them find their way back to health. The pilgrims to the Aesculapion brought riches to the city and allowed the construction of the nearby amphitheater, famous for its remarkable acoustics.

Baths of Caracalla

Some may hold that the Baths of Caracalla in Rome are not truly a medical attraction, but I include them to highlight that public health measures—including providing clean water and other advances in sanitation—were the chief medical contributions of the ancient Romans. Built in the early third century CE during the reign of Emperor Caracalla, the baths are worth a visit during the day or perhaps on a summer evening when the ruins are the backdrop for the *Teatro del Opera di Roma*.

Anatomy Theater in Padua

The oldest anatomy theater in the world is in Padua, Italy, and it was here that Andreas Vesalius (1514–1564) conducted his anatomic dissections. The remarkably well-preserved auditorium is part of the University of Padua. Among the other noteworthy persons who taught at the University were Copernicus, Galileo, and Giovanni Battista Morgagni. You will probably need a guide to find this well-preserved architectural treasure among the many halls and rooms of the university.

The Hunterian Museum in London

In 1783, our own ubiquitous John Hunter, recalled for making surgery a scientific discipline as well as for his syphilitic misadventure and his eventually fatal temper, began what is now the Hunterian Collection of the Royal

College of Surgeons in London. The collection holds thousands of specimens, including 3,500 of Hunter's original preparations, such as a specimen showing his successful ligation of the femoral artery for popliteal aneurysm.

Semmelweis Museum in Budapest

The home of Ignaz Semmelweis (1818–1865) in Budapest, Hungary, is now the site of a small museum showing artifacts from his life and a selection of other antique medical items.

The Handleless Pump in London

We recall that, in 1854, John Snow (1813–1858) helped stop a cholera epidemic in the Broad Street neighborhood of London (see chapter 1). A short walk from Leicester Square in Soho is Broadwick Street; in 1936, the suffix “wick” was added to the name of historic Broad Street—in my opinion, a sad distortion of historical nomenclature. You will not find a formal museum. What is there may be even better: There is a handleless pump, a commemorative plaque, and the John Snow Pub, with some framed memorabilia of Snow's work. Ironically, Snow did not drink alcohol, and yet the only building honoring his memory is a tavern.

Pasteur Museum in Paris

Nestled in the Pasteur Institute in Paris is the Pasteur Museum, opened in 1936. Here you will find mementos of the life and work of French microbiologist Louis Pasteur (1822–1895), whose work and name give us *pasteurization*. You can view the apartment where Pasteur and his wife lived, and you can visit Pasteur's tomb.

Asia and the Middle East

National Museum of Medical Science History of the Islamic Republic of Iran

This museum, opened just a few years ago in Tehran, presents Iran's historical contributions to medical science. The exhibits draw on an inventory of “more than 3,000 objects, tools, pictures, documents, and books related to medical sciences” (1).

Traditional Chinese Medical College

Although most medical schools in the People's Republic of China lean toward an allopathic, “Western” approach to medicine, there are still some traditional medical colleges in China. In 1980, I visited one such medical college and hospital in Beijing, where I witnessed acupuncture, moxibus-

tion, cupping using short pieces of bamboo, and cauterization of enlarged tonsils in children. (The children, wide awake during the procedure, felt no pain. The tonsils have no nerve fibers that conduct pain.) Shanghai, for example, has the Museum of Medical History of Shanghai College of Traditional Chinese Medicine. If the Chinese city you are visiting has a traditional medical college, a tour of the facilities will be memorable.

The United States

Ether Dome

You can tour the Ether Dome at the Bullfinch Building of Massachusetts General Hospital in Boston, Massachusetts, where William T.G. Morton (1819–1868) conducted his now-famous demonstration of ether anesthesia (see chapter 1).

National Library of Medicine

In Bethesda, Maryland, is the National Library of Medicine. It is simply the world's largest medical library. Visitors are welcome and tours are available. For information, visit their Web site (2).

Museum of Questionable Medical Devices

In St. Paul, Minnesota, is the Museum of Questionable Medical Devices at the Science Museum of Minnesota. Here you can see the psychograph, the vibrometer, and the foot-operated breast enlarger.

Other Medical History Museums and Sites

I could make this a very long list; there are hundreds of museums and sites around the world with medical significance. In Europe, consider visiting the Uppsala (Sweden) Museum of Medical History, where you can view the world's first obstetrical forceps. Consider also the Berlin Medical Historical Museum in Germany and the Western Australia Medical Museum in Perth. Consult your guidebook and use the Internet to find these places as you travel.

In the U.S. there is the Dittrick Medical History Center of Case Western Reserve University in Cleveland, Ohio. If you are visiting Indianapolis, Indiana, spend some time in the Indiana Medical History Museum. In Frederick, Maryland, you can visit the National Museum of Civil War Medicine. Countless American cities and towns have sites of medical interest; a good reference source is Lipp's book *Medical Landmarks USA: A Travel Guide to Historic Sites, Architectural Gems, Remarkable Museums and Libraries, and Other Places of Health-Related Interest* (3).

Thoughts Upon (Almost) Completing the Manuscript for This Book

This section is a personal indulgence, and it is risky for two reasons. The first is that I am stating—in print—some of my opinions, and a few of them have prognostic overtones, thus exposing myself to scorn if I am proven wrong in the future. The second risk is that opinions can be challenged, although such questioning should be considered an invitation for dialogue.

After reading the readable books and consulting the reference sources listed in the Bibliography, after spending hundreds of hours searching PubMed and other Internet sites, and after following the trail of scores of clues that might explain curious tales, I have formulated some thoughts. Here they are:

1. The Age of Self-Experimentation Is Over

John Hunter, Louis Pasteur, Pierre Curie, William T.G. Morton, Joseph Goldberger, and others all used themselves as experimental subjects. Wilhelm Roentgen took the first x-ray film—of his wife's hand. Jonas Salk injected his whole family, as well as himself, with his new polio vaccine. The days of heroically putting one's health, and that of one's family, at risk are gone and should not be lamented.

Today, human experimentation is performed under tight control. We in academic medicine sometimes grumble about the administrative hurdles placed in our path by institutional review boards and government agencies, but they help to ensure that episodes such as the Tuskegee Syphilis Study will not be repeated.

2. In the Future, Most Discoveries That Change the Course of Medical History Will Be Made by Teams

As I worked on this book and looked for the name of the single pioneering scientist responsible for breakthroughs in the mapping of the human genome, the control of the hemorrhagic fevers, and the new advances in treating acquired immunodeficiency syndrome (AIDS), I found lists of team members, but no Pasteur, Ehrlich, or Salk. In future books of medical tales, the great advances will be attributed to institutes, consortia, and teams, with the names of the individual scientists often ignored. Happily, Nobel Prizes still recognize individual scientists and physicians.

The ascendance of research teams and the twilight of the lone investigator do not mean that the single, stubborn innovator has vanished entirely from the scene. Furthermore, the traditional bias against novel advances that challenge current dogma is alive and well. More than 20 years ago,

Portland, Oregon otolaryngologist John Epley, MD developed what he believed was an effective and non-invasive treatment for benign paroxysmal positional vertigo. It was a simple maneuver involving moving the body to reposition particles in the inner ear canals. No surgery and no medication were needed. The technique came to be called the Epley maneuver and eventually involved a rotating, computer-controlled chair used to standardize movement of the patient. A 2006 investigative report in the Portland newspaper, *The Oregonian*, tells the reaction of Epley's colleagues: "Inexplicably, they rejected him, heaved accusations that threatened his license to practice medicine." Today, however, the Epley chair is gaining acceptance, has garnered several million dollars in federal grants, and may be on its way to a medical clinic near you (4).

3. *Chance Still Favors the Prepared Mind*

Pasteur's words still ring true, but many discoveries are made differently today than in the past. Instead of happy accidents and Eureka moments, investigators today may study hundreds of compounds hoping that one will prove clinically useful (and commercially successful). Nevertheless, Dr. John Eng must have had an "Aha" experience when he first realized that a drug for diabetes, now marketed as exenatide (Byetta), might possibly be derived from the venom of the Gila monster. Because he was a Veteran's Administration (VA) employee and because the VA was not interested in seeking a patent, Eng paid for the patent himself and subsequently licensed the patent to a pharmaceutical company (5). Eng shows that there is still a place in medical science for the persistent, intuitive entrepreneur.

4. *Medicine's Linguistic Treasury Continues to Grow*

The language of medicine is far from dead. Every year, we create new medical words, phrases, syndromes, abbreviations, acronyms, euphemisms, jargon, and slang. During my lifetime, and perhaps yours, we have had the following additions to *medicalese*: AIDS, human immunodeficiency virus, prion, erectile dysfunction (well known to all who view television today), nutraceutical, telemedicine, and eHealth. In prior chapters, I described jersey finger, runner's knee, Legionnaires disease, Fred Astaire legs, and the Salk vaccine. A few paragraphs ago, I told of the Epley maneuver; this technique is not in my current edition of *Stedman's Electronic Medical Dictionary* but probably will be at some point in the future. We have developed a host of new abbreviations, acronyms, and slang expressions: WASP (wait-and-see prescription), PET (positron emission tomography), SARS (severe acute respiratory syndrome), and EMR (electronic medical record). We also have learned the meanings of commonly used abbreviations such as NSAID (non-steroidal anti-inflammatory drug) and some that are more specialized, such as UVAL (ultraviolet argon laser). Medicine can take less

pride in the creation of squash (brain), fascinoma (an interesting and unexpected clinical finding), and positive gown sign (painting a somewhat graphic image of a patient who exits the hospital with neither permission nor street clothes).

How rapidly is medicine's vocabulary growing? The first edition of what we know as *Dorland's Medical Dictionary* was published in 1890, with the title *American Illustrated Medical Dictionary* (see chapter 10); it had 770 pages. (For temporal orientation, Osler's text *The Principles and Practice of Medicine* was first published in 1892.) By 2000, when the 29th edition of *Dorland's* was published, the book had ballooned to 2,088 pages describing 121,000 items. In 2003, the 30th edition discussed 125,000 items in 2,200 pages. In four short years, we added 4,000 new medical words, phrases, and abbreviations.

Yes, staying current in medicine today involves knowing not only new tests, drugs, and procedures, but new medical words and their permutations.

5. A Medical Scholar Can Do a Lot of Research Quickly on the Internet; Not Everything Found There Is Accurate

For example, I told above about Dr. John Eng paying for the patent for what is now the drug exenatide with his own money. Although the Internet has several sites telling about Eng and his discovery, the only source I could find telling about his personal payment for the patent was <http://www.mendosa.com/monster.htm> (5). This Web site is entitled Mendosa.com, with the subtitle: Your On-Line Diabetes Resource. The author is David Mendosa. I like Mendosa's story about Dr. Eng and his patent. Is the story accurate? Because Mendosa's piece provides no reference citations, I am not quite sure. In online research for this book, I tended to trust Web sites that are sponsored by government agencies, specialty organizations, and peer-reviewed publications. With appropriate skepticism, I pondered facts presented by Web sites maintained by advocacy groups, such as organizations concerned with single diseases (e.g., Morgellon disease), and I skipped by Web sites whose URL (uniform resource locator) contains words such as Aquarius, underground, and celestial.

6. Some of the Heroes Described in This Book Lived and Died During My Lifetime

These include Alexander Fleming (died in 1955), Abraham Flexner (died in 1959), and Jonas Salk (died in 1995). I wish that I had met these men. While I was in medical school, I heard a lecture by famed pediatrician and book editor Waldo E. Nelson. While in private practice in upstate New York, I met cardiologist Paul Dudley White when he spoke at a county medical society meeting; he struck me as a kind, humble man. If you get the chance

to hear or meet a medical giant—or a rising star—be sure to take advantage of the opportunity.

7. The Best Days of Medical Advances Are Ahead of Us

By no means have all the colorful tales of medicine been lived and written. Every scientific advance has the potential to set the stage for several more. I won't try to be Nostradamus and predict specific events in the future, but during the lifetimes of today's young physicians, we can hope to see effective vaccines for the infectious diseases to which we are currently vulnerable (e.g., AIDS), some means to prevent cancers of various types, and interventions to help patients avoid chronic diseases such as diabetes mellitus and hypertension.

8. Until Medical Schools and Residencies Offer Courses in Medical History, Culture, and Linguistics, There Will Be a Need for Books Like This

From time to time, I mention an event in medical history to a medical student or resident. Every month, when I teach a headache seminar for third-year students, I tell the story of ergot and St. Anthony's fire. I describe how Lewis Carroll might have visualized some characters in *Alice's Adventures in Wonderland* as part of a migraine aura visual distortion. I note too many blank stares. Only a few synaptic connections.

Fortunately, when I attended Temple Medical School long ago, we had some excellent lectures in medical history. I recall the image of Joseph Auenbrugger (1722–1809), inventor of percussion as a diagnostic maneuver, tapping on wine barrels filled to various levels. Could anyone in our class forget the story of how René Laennec (1781–1826) invented the stethoscope in 1816? Embarrassed to place his ear directly on the chest of a young woman he was examining, Laennec rolled several sheets of paper to make a tube that could carry sound from her chest to his ear. I wonder how many of today's young physicians learn these stories. I suspect not many. Until we senior physicians once again assume responsibility for passing on the oral history of our discipline, books like this will be needed.

9. Some Medical Truths Are Best Learned From Patients, Not From Books

I will share one example, humorously encapsulated by Woody Allen: "Eighty percent of life is showing up." I remember one day that—counter to all logic—I drove 18 miles over snowy roads to make a very routine hospital visit to an elderly patient. As I entered the room, she smiled and said, "I knew you would come." That day I felt especially proud to be a physician, and the snowy drive home didn't seem as long as the trip to the hospital.

A less happy lesson was learned in my very first year in practice. My patient, an older man, quite overweight and severely diabetic, was dying. He and his wife lived in a trailer about 40 minutes from our medical group's office. One day, not unexpectedly, his wife awoke to find that her husband had died at home during the night. As was local practice at the time, a physician was needed to go to the home to pronounce him dead. Our group had a designated "house call" physician each day, and this was not my day. My office schedule was full. What should I do? I kept seeing my scheduled patients and dispatched the "house call" doctor to my patient's home. He pronounced the patient dead, doing the job that needed to be done.

The next time I saw the widow, she began to weep. "Why didn't you come when he died? He was your patient." If there are ever times when persons remember every detail of what happens, it is at times of major life events; death is one of these.

You really can't learn lessons such as these from books.

10. Physicians Enjoy the Trust and Privilege We Do Today Because of the Dedication and Sacrifice of Generation of Healers That Have Gone Before Us—Only a Few of Whom Are Described in These Pages

Medical students and young physicians often do not understand this simple truth and seem to assume that the faith and respect that patients accord them is something that they somehow merit.

With few exceptions, our patients do trust us. For the experienced physician, the trust comes from past actions, but it comes also from patients' subconscious memories of their childhood physicians, the legends of Hippocrates and Maimonides, the discoveries of Pasteur and Fleming, and the clinical skills of Freud and Osler. Today's physician trust and respect have been earned, but largely by those who have gone before.

We, today's and tomorrow's physicians, must aspire to be like the best of our professional forebears. We must be hardworking, resourceful, and patient-centered. As Phillips and Haynes wrote (see chapter 8), we must "be there" when our patients need us. We must always act with integrity and do what is right for the patient, striving to be the physician our patients believe us to be.

Medicine's Future and Yours

Tomorrow's White Coat Tales

Some of the tales we will tell young physicians in the future will be about what happens today and tomorrow—perhaps in your examination room or hospital. Some of these stories will concern AIDS, which Oldstone calls "a

plague as bad as any ever known” (p. 140). Other viruses also threaten us, including Ebola, Marburg, and Hanta viruses. Could one of them mutate in a way that matches or even exceeds the devastation caused by the 1918 influenza pandemic? Then there is the concern that avian influenza (H5N1) will become a pandemic with human-to-human transmission.

On the more positive side, we can expect many new developments in genetic screening and gene therapy. Electronic technology promises to revolutionize day-by-day patient care, with electronic medical records serving as the platform. In years to come, we will see innovations in messaging between patients and physicians, virtual office visits and home visits, online group therapy, and much more. Robotic surgery is already a reality, and we will see innovations that are difficult to imagine today. In the end, perhaps we will even begin to conquer some of America’s actual causes of death, which include tobacco use, poor diet and physical inactivity, excessive alcohol consumption, motor vehicle accidents, careless sexual behavior, and illicit drug use (6).

Tomorrow and You

In the meantime, while the dramas that will generate tomorrow’s tales are unfolding, what should you and I do? First of all, we should take good care of our families and ourselves and enjoy the practice of medicine—a rare privilege for which we should give thanks every day. Famed investor Warren Buffet has been quoted as saying, “When I go to my office every morning, I feel like I’m going to the Sistine Chapel to paint” (7). My wish for you is that you share this feeling with Buffet and with me.

There is more. Medicine is much more than seeing your 20 patients in the office tomorrow, more than performing three operations or passing an endoscope four times in the morning, more than making hospital rounds or visiting a patient in the nursing home or whatever else your specialty calls for you to do in your workday. What is *more* is doing your part in regard to tomorrow’s white coat tales.

How can you or I do this? How can we—in some small way—help pass on the history of medicine to the next generation? To accomplish this, I suggest five tasks:

- Enhance your personal knowledge about medicine’s past. Begin a program of reading about medical giants, language, and culture. Choose among the books in the Bibliography or perhaps even Osler’s reading list (see page 232). Become, in Osler’s words, “close friends” with them. Keep an enrichment book at your bedside and read a little each night.
- Make the extra effort to learn about newly encountered medical terms and syndromes. Look up clinical word origins and search out the life stories of persons for whom diseases and syndromes are named. Then keep a notebook, entering new findings as you learn them.

- Become a medically oriented traveler. Use your personal tourism to expand your knowledge of medical history, visiting some of the sites listed above or by discovering some of your own. Involve your family in the exploration and learning.
- Add to the medical literature. You may find an intriguing connection between a current clinical finding and medical history. Perhaps you will have an insight involving a medical hero or one of the historic plagues. You may have noted a previously unreported cluster of diseases or an unusual manifestation of an illness. When you have a thought worth sharing, consider writing a short piece and submitting it for publication. If you do so, you have added a tale to medicine's anthology. Along the way, you will discover that writing for publication is a journey of education, self-discovery, and personal growth (8).
- Seek to develop a sense of how the medical information you use in daily practice has come not only from scientific "evidence-based" sources. Your medical knowledge and mine also has its roots in the lore of medicine. It began with the incense-burners, amulet-makers, and quasi-religious ritualists and evolved from those days through the centuries of discoveries to the knowledge we now take for granted. I urge you to stop often and reflect that every diagnostic maneuver, every therapeutic intervention, and every word and phrase in medicine come from some source, some person, or some event in history. The stories of these origins are medicine's *White Coat Tales*.

Thank you for reading my book. I will end, as I began 11 chapters ago, with a quote from Félix Martí-Ibáñez (p. 200):

In your future work, you will be in good company. The great physicians of history, the glorious figures of the past, will always be near you. When you perform a dissection, a red-bearded young man with flashing eyes, Andreas Vesalius, will be peering over your shoulder; when you conduct a physiological experiment, the melancholy, pensive eyes of William Harvey will be watching you; when you teach medicine, the venerable figure of William Osler with his Apollonian head will come and sit like a medical Goethe beside you; and when you approach the sickbed, the shades of Hippocrates, Sydenham, and Fleming will gather round to counsel you, the young princes [and princesses] of our profession.

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