Cecil Textbook of Medicine and Harrison’s Principles of Internal Medicine: A Comparative Review

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Cecil Textbook of Medicine and Harrison’s Principles of Internal Medicine occupy a privileged place in the pantheon of medical texts; every medical school class has a member who is known to his or her peers as “the person who memorized Harrison’s (or Cecil) from front to back.” The student who wishes to earn this designation may safely be said to suffer from delusions of grandiosity. Harrison’s runs 2,690 pages divided into fifteen parts and 398 chapters; Cecil, the featherweight of the pair, totals twenty-eight parts, 478 chapters, and 2,495 pages.

Cecil and Harrison’s are both edited by clinician-scientists of the very first rank; chapter authors are similarly distinguished (e.g. Judah Folkman and Stanley Prusiner in Harrison’s). As the overwhelming majority of chapter authors are American and the major target market is the United States, the strong American focus of the two books is not surprising; it is less of an annoyance to the Canadian reader than their use of conventional (rather than SI) units. International editions of both texts exist, but are not sold in North America. Both texts are available in single-volume and two-volume formats. Although the two-volume sets are more expensive, the greater portability and durability of the smaller volumes is a considerable advantage.

Harrison’s was first published in 1958 and has gone through fifteen editions, the most recent came out in 2001; a sixteenth will follow later this year. Cecil dates from 1927; its twenty-second edition has just been published. Adopting a histological metaphor, successive editions of these two texts have demonstrated a continual tendency towards hyperplasia (an increase in the number of topics covered), hypertrophy (an increase in the length of chapters), and anaplasia (an increased focus on topics outside internal medicine). The first two processes are part of the natural history of a textbook, especially one which covers a rapidly growing and changing subject such as internal medicine. The third may reflect a desire on the part of each group of editors to ensure that no topic covered by the rival text is omitted from their own. Thus, Cecil introduced a new chapter on complementary and alternative medicine in 2004, three years after a similar chapter was added to Harrison’s. Some readers will appreciate the discussions of topics outside internal medicine, while others will begrudge the extra weight of the book.

Both texts begin with general discussions of the practice of medicine, introduced with remarkably similar phrases. Harrison’s leads off succinctly with “The practice of medicine combines both science and art,” whereas Cecil’s more verbose “Medicine is a profession that incorporates science and the scientific method with the art of being a physician” is worthy of Polonius. The two texts then proceed through a variety of topics of general interest, including ethics, economics, decision making, preventive medicine, and alternative medicine. The degree to which these subjects are integrated into the rest of the text is variable; for example, while the alternative medicine sections of both Cecil and Harrison’s list glucosamine as an effective treatment for osteoarthritis, the osteoarthritis chapter of Harrison’s does not mention this agent and the corresponding chapter in Cecil mentions it but omits it from a table of treatment options.

Later chapters and sections cover subjects such as medical genetics, clinical pharmacology, nutrition, and environmental and occupational medicine. However, the bulk of each text is given over to an encyclopaedic discussion of the diseases of various organ systems. Because these texts are fundamentally organized around diseases rather than manifestations of disease, they are quite useful to the student or physician who wishes to review a particular disorder but less useful to the reader who wishes to learn how to approach a patient with a particular clinical presentation. The two texts deal with this issue in different ways. Harrison’s devotes a 320-page section to the “cardinal manifestations and presentation of diseases,” the aim of which is to provide the clinician with an approach to common complaints. Various “approach to the patient with...” chapters are also included in the sections on the disorders of each organ system (e.g. “Approach to the Patient with Heart Disease” in the Cardiovascular Diseases section). Cecil, by contrast, attempts to integrate the approach to diagnosis and therapy into the rest of the text by providing an index of symptoms, signs, and laboratory value inside the front cover to guide the reader to the relevant chapters.

Each of these approaches has advantages and shortcomings. The index in Cecil provides a much more thorough list of manifestations of disease than the table of contents in Harrison’s. Moreover, Cecil provides a number of useful diagnostic algorithms in flowchart form (e.g. male infertility.) However, Cecil’s treatment of some of the most important clinical presentations is disorganized; for example, abdominal pain is discussed in one chapter, but the approach to the acute abdomen is found in another, and no comprehensive differential diagnosis is given. Harrison’s is better organized in this regard.
but its chapters on manifestations of disease tend to be rather vague and to presuppose a high level of background knowledge. In the end, neither *Cecil* nor *Harrison’s* is designed primarily to teach the proper approach to clinical presentations of disease; the reader seeking this information may find a different text more useful.

While neither *Cecil* nor *Harrison’s* pretends to be a textbook of otolaryngology, ophthalmology, dermatology, or medical psychiatry, the brief sections on these disciplines provide a useful quick reference for the student or internist. *Cecil* also includes a short section on “Women’s Health,” although it omits discussion of many important disorders such as ectopic pregnancy and uterine leiomyomas. *Harrison’s* has no such section. Neither text should be consulted as an obstetrics or gynecology reference. Both texts include an appendix of reference ranges for laboratory values (in both conventional and SI units), covering clinical chemistry, serology, hematology, and drug levels. *Harrison’s* separates blood, urine, CSF, and stool tests into separate tables, whereas *Cecil* does not. *Harrison’s* also includes reference ranges for several other types of investigations, including echocardiography and circulatory and pulmonary function tests, which are absent from *Cecil*.

Full-color printing was introduced to *Cecil* in the current edition and will also be present in the forthcoming sixteenth edition of *Harrison’s*. *Cecil* integrates full-color photographs into the text, which is convenient to the reader who is reviewing the manifestations of a single disease. (The continued presence of a few black and white photographs, particularly of skin lesions such as urticaria and erythema marginatum, is puzzling.) By contrast, *Harrison’s* compiles color images into six “atlases” (cardiology, dermatology, endoscopy, fundoscopy, hematology, and microbiology), which is more convenient to the reader who seeks to review the spectrum of clinical findings across a range of diseases. Diagrams in *Cecil* are in full color, whereas in *Harrison’s* they are three-color (blue, black, and white); moreover, *Cecil*’s diagrams are more numerous and generally of higher quality. The layout of *Cecil* is visually more attractive than that of *Harrison’s*, due to the use of color in headings and the greater use of white space and shading in tables and text boxes. On the other hand, dark shading makes it difficult to photocopy from *Cecil* for personal use. The glossaries of acronyms at the beginning of each chapter of *Harrison’s* are of great use and have no counterpart in *Cecil*, which defines acronyms within the chapter text.

One notable shortcoming of both texts is the inadequate use of references. *Harrison’s* gives a brief bibliography at the end of each chapter. No comment is made on the referred works, which frequently fail to provide broad coverage of the chapter’s subject matter. No citations are made within the chapter text other than for some tables. *Cecil*’s chapter bibliographies are equally scanty, although each referred work is accompanied with a one-sentence description. *Cecil*’s chapters also incorporate a small number of citations to “Grade A” randomized controlled trials. However, no definition of the term “Grade A” is given, and no explanation is made of the rationale for failing to cite publications of other grades. The reader would be better served by more thorough referencing and the inclusion of a chapter on the nature of evidence in medicine. *Harrison’s* is even less explicitly evidence-based than *Cecil*, providing proper documentation of source material is perhaps the single greatest improvement that could be made to these two texts.

A unique feature of *Harrison’s* is its biographies of the winners of eleven Nobel Prizes in physiology or medicine. The quality of these biographies is inconsistent, perhaps due to a tension on the author’s part between describing “the lives of some of the most outstanding contributors [to biomedical science]” and writing a frank and critical history of scientific discovery. Thus, the controversy surrounding Watson’s and Crick’s use of Franklin’s crystallography data is glossed over, as is the completely accidental nature of Fleming’s role in the discovery of penicillin; on the other hand, the awarding of a 1923 Nobel Prize to Macleod rather than Best or Collip is admitted to be questionable. The editors of *Harrison’s* deserve credit for acknowledging the importance of medical history, but this is a subject that deserves to be treated more critically if it is raised at all.

The three-year gap between the publication dates of the most recent editions of these two texts should not be dismissed lightly. A number of landmark trials (e.g. Women’s Health Initiative), emerging diseases (e.g. severe acute respiratory syndrome), and new therapeutics (e.g. soluble TNF-α receptor for rheumatoid arthritis) are discussed in *Cecil* but not in *Harrison’s*. Needless to say, this discrepancy should be resolved when the sixteenth edition of *Harrison’s* is published later in 2004.

It is no accident that *Cecil* and *Harrison’s* are the two leading textbooks of internal medicine. Both texts have distinguished pedigrees, editors, and chapter authors. Both offer meticulous and thorough discussions of the entire spectrum of diseases faced by the internist. The student who intends to specialize in internal medicine may wish to acquire editions of both *Cecil* and *Harrison’s*, as he or she may prefer the exposition of certain diseases in the former to that in the latter or vice versa. Most likely, such a student would purchase *Cecil* immediately and *Harrison’s* once the new edition is published. The student who is not interested in internal medicine as a career would be well-advised to wait until the sixteenth edition of *Harrison’s* is published before deciding which text to purchase. For the student for whom waiting is not an option, *Cecil* is probably the text of choice at the moment, owing to its more recent publication and full-color format.

Conflict of interest: The author received a complimentary copy of *Cecil Textbook of Medicine (22nd edition)* for the purpose of preparing this review.