



Illustration by Eleeza Palmer

The Washington Manual

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I started residency 40 years ago, and one of my earliest memories was relief that our long white coats had pockets large enough to hold the *Washington Manual*. After an embarrassing attempt to look sophisticated, I learned that this invaluable sidekick was not from the seat of government but from the center of our country— St. Louis, the home of Washington University School of Medicine.

Back then if an intern dared to ask a question, the first reply, whether gruff or pleasant, was "Have you looked that up in the *Washington Manual*?" There was really only one answer.

Over the years I never once imagined that the *Washington Manual* selected its dimensions based on the size of lab coat pockets until I started writing this essay. Who knew?

The manual was thick but everything was laid out in a succinct and useful manner. There were "recipes" for common clinical problems such as the management of hyperkalemia or bacterial pneumonia (before its name was changed to community-acquired pneumonia). Most of us folded over the edge of the page for common problems so we could find the formulas rapidly.

The instructions were considered authoritative and upto-date even though we more or less knew that the authors had finished their work a few years earlier. Our attendings would either applaud us for using this amazing tool or chide us for not looking things up.

The *Washington Manual* was more than just a book. It was a bond. If you didn't have yours handy, there was always someone who left theirs in the call room or had it in their pocket. I relied on the *Manual* to guide my dosing of intravenous aminophylline as well as the later transition to theophylline for patients admitted with severe asthma.

We used it to guide "digitalizing" patients in heart failure (with all the attendant coprological jokes proffered

every time). We learned how to dose the anti-arrhythmics that we used to quell the dreaded "many PVCs" on our patients' Holter monitor reports.

While this may sound like reading from a cookbook printed before the Renaissance, it was the reality of American medicine in the late 20th century before personal computers, smart phones or tablets.

People rarely bought more than two manuals. They came out roughly every two years and by the time the third year of residency started most had committed the most common elements to memory, or on rare occasion followed newer practice and shunned the outdated formula in the *Manual*. We did not study for the boards from the *Manual*. Board questions were less granular than the exact timing of IV phenytoin in a patient with seizures.

I thought that the *Washington Manual* had ceased publication quite a while ago. I made that assumption using the finest inductive reasoning. First, I had not used it in nearly four decades, and second, I had not seen it for decades. Third, I also reasoned that no one seems to use books any more since everyone is connected at all times through phones and computers to resources that are updated much more frequently. However, as an empiricist, I elected to do a scientific survey about the ongoing existence of the *Washington Manual* by asking three residents I happened to run into on the elevator. The results: two believed that they had at least heard about it, and one of whom thought that there might be copy in the resident's library. The third asked about Georgetown.

My next step was going online to Google *Washington Manual.* To my surprise and delight, I learned that there is still a *Washington Manual*! It is in its 36th edition which was released June 6, 2019. With the latest edition, it has been published for more than 60 years. This means that a new version (paperback or hard-cover spiral editions) comes out approximately every other year.

The Amazon rating for the *Washington Manual* is 3.7 out of five stars, which is about what I would expect. The one- and two-star reviews featured criticisms that it is too thick, too heavy, too unwieldy, and that some elements are not even in the book but are on an accompanying electronic version. Who knew that the *Manual* had gotten all fat and digital like the rest of us?

The times they are a changing

What else do I assume no longer exists that was pivotal to my life? *The Sanford Guide for Antibiotics* was a must-have for residents but I have rarely seen anyone using it recently. I performed a Google search and found that the *Sanford Guide to Antimicrobial Therapy* is still being published, and the 47th edition is available on Amazon. It gets 3.5 stars. The official web page of the Sanford guide touts the electronic version and mentions only in passing that it still exists in corporeal form. As a clever distraction (which we might call a pivot), the web page emphasizes the utility of the *Sanford Guide* for antimicrobial stewardship. This term did not exist when the guide was first produced in 1969.

As Chair of Medicine, I'm often made to feel like an exotic dinosaur who survived the asteroid strike in a mysterious Shangri La-like valley. But the real dinosaur is my retired internist father. He has been asking for my (unused) "free" copy of the PDR (*Physician Desk Reference*) for years, except that I no longer get the PDR and would not even know where to put it if I did. I already have an excellent paper weight. However, you can obtain the 2016, 70th edition on Amazon.

Now all house staff have easy access to cell phones, a tablet or small laptop. Everyone is adept in finding suitable, if somewhat predigested, quick information from apps such as *Epocrates*, and resources such as *UpToDate* (which can be accessed from most hospital computers). They could be accessing the online versions of the *Washington Manual* and the *Sanford Guide* too.

The other big change is that we are now much more interconnected to each other and to the cyberverse. We have clinical pharmacists who share the task of selecting and adjusting medications. We have attendings who are highly visible on rounds. And in many cases, the order entry platform itself suggests medication doses and durations, or offers that box of confections delightfully named a "care pathway!" Even in my dotage, I use a mix of handheld and desktop products with the books relegated largely to dust collectors on my bookshelf.

The pathway to change

When Abraham Flexner and the Carnegie Foundation presented their comprehensive report on the status of medical schools in 1910 (also known less glamorously as the *Carnegie Foundation Bulletin Number Four*), there was a wholesale revision of American medical education (though the *Flexner report* is not kind to women or underrepresented minorities). Much of the change was in elevating expectations and creating standards for admission and curriculum that to a large extent still exist.

The acceptance of "bibles" such as the *Washington Manual*, the *Sanford Guide* and the *Physician Desk Reference* is consonant with the Flexner model since they were centralized, validated, and widely used. Much of the switch to handheld and online references is a form of "brand extension" in the way that younger learners find convenient and peer tested.

As an analogy, consider the Dow Jones Industrial Average. This is the best known stock index, but it is not widely known that the original Dow Jones index was composed of 12 companies: American Cotton Oil; American Sugar; American Tobacco; Chicago Gas; Distilling & Cattle Feeding; General Electric; Laclede Gas; National Lead; North American; Tennessee Coal Iron and RR; U.S. Leather; U.S. Rubber; and only one of which, General Electric, is still in business today. On the other hand, only one of the other 11 companies has disappeared completely with 10 being subsumed into other businesses but no longer part of the 30 companies that make up the modern Dow Jones.

Since students and residents are often provided with curated resources (mostly online), they may rely on these virtual reprints as well as PowerPoint presentations for a large share of their curricular learning. They are also asked to utilize a variety of resources for point-of-care evidence-based medicine. This disruptive assignment may not be best served by standard references or texts. Even when texts are available online (with some updates between official print editions), it is much easier to use apps or bookmarked references, or Google Scholar or PubMed to pull up a relevant article than ever before. In this new world, U.S. Leather and National Lead just seem too slow and heavy as compared to Nike or Walmart.

In the spirit of inquiry, I challenge each reader to imagine the elements of the practice of medicine that will be memorable to the current generation of young physicians in 40 years. And then imagine how the starting physician will face their practice 40 years hence, and how our profession will look backward at the quaint customs of 2059 in 2099.

What is still an open question is whether there will still be a *Washington Manual*, and if there is, how will we find and use it?

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