What the TV Show 'House' Has to Teach about the Importance of Medicine as a Team Effort

By Andrew Holtz

> *"The real fiction is not in the medical minutiae of individual cases. Dr. House lives in a physician's utopia of unlimited resources devoted to a single patient without distraction. He is never seriously constrained by pesky administrators or laws and regulations. He re-defines ethical behavior to suit his needs, including often overruling the decisions patients make about tests and treatments. In Dr. House's world, patient autonomy is subordinate to his 'superior' judgment."*

Last fall I got an assignment: Separate medical fact from fiction in the hit TV series "House, M.D." Of course, the show is a drama…and the purpose is to entertain, not teach. But fans would naturally be interested in what kernels of reality, if any, were to be found in the episodes.

If you haven't seen "House," the main character, Dr. Gregory House, is an infectious disease specialist who takes the cases no one else can figure out. In other words, when he hears hoof beats, he always looks for a zebra.

Despite his diagnostic brilliance, Dr. House is far from a paragon. In fact, he's a jerk. What's more, chronic pain from an infarct in his thigh has him gulping Vicodin by the handful. The show's producers have said his character borrows from Sherlock Holmes.

My resulting book, *The Medical Science of House, M.D.,* follows the chronological structure of the show… which in turn is based on a compressed timeline of medical cases, from presentation, through lab tests, scans, and other diagnostic procedures, the process of differential diagnosis, and then treatment decisions.

To say House's case mix is weird would be a monumental understatement. Almost all his patients are young; rare is the patient older than 40. Almost all are apparently in robust health until suddenly struck by a life-threatening crisis. Except for stints in the hospital's urgent care clinic—which House desperately tries to avoid—he leaves to others all the common maladies and chronic conditions.

Although the primary cases on House are improbable in the extreme, when I dug into the medical literature, I almost always found, somewhere in the vast libraries of case reports available today, that at least once, yes, there has been a case resembling the patient on the show.

For example, a young woman suddenly begins sleeping 18 hours a day. It's not depression. Malaria or some other tropical parasites are considered and rejected because she's never been out of the country.

Nevertheless, the symptoms are consistent with African Sleeping Sickness. Dr. House suggests the parasites were transmitted by sexual contact with someone who had been in Africa. He cites a case report from a Portuguese medical journal.

Well, indeed, doctors in Lisbon did report on a woman who was diagnosed with sleeping sickness. Her partner had been in Angola and was an asymptomatic carrier of the parasites that are typically spread by tsetse flies. However, the writers didn't have to be fluent in Portuguese to find their inspiration. The case was described in a letter to *Lancet* in 2004.

In order to pique Dr. House's interest, a diagnosis can never be obvious. So when tumors are involved, they hide from scans and other tests. Often the first hint of cancer is a paraneoplastic sign. After all, it's much more interesting if a case of lung cancer presents first as mental confusion in a young nonsmoker, not a chronic cough in an older two-pack-a-day puffer.

Of course, with the writers on his side, Dr. House defeats maladies that real world doctors often cannot. Some of the actual case reports that describe the ultimate diagnosis of a bizarre case that is similar to one featured on "House" are based on autopsy reports. The cases were solved…but too late to help the patient.

There are layers of truth in the storytelling. For instance, one episode grappled with the challenge of obtaining informed consent during a medical crisis. In this case, Dr. House and his team discovered that the neurological problems of their teenage patient were caused by a measles infection that had been dormant since he was an infant. They wanted to implant a device to deliver interferon directly into the ventricles of the patient's brain.

The condition, subacute sclerosing panencephalitis (SSPE), is quite real, and indeed not that rare in places where measles is still common. The proposed treatment is also an accepted option, if not usually the first choice.

But when one of the doctors presented his recommendation to the patient's parents, they were befuddled and he quickly gave up trying to explain the procedure. In actual clinical practice, physicians routinely explain this procedure (and more complicated ones) without much difficulty.

But while it may not be difficult to obtain informed consent for this specific procedure, the scene on "House" reflected a deeper truth: that consent is often not truly "informed." Consent forms are generally written for readers with at least solid high school, if not college-level, literacy…even though surveys show many patients have difficulty understanding even basic terms, such as "tumor."

Since the TV show includes an expected amount of exaggeration and time compression, composite patients needed to serve its dramatic needs. But as I explored the first two seasons of "House," my questions expanded beyond simple comparisons of plots to case reports, because the real fiction is not in the medical minutiae of individual cases.

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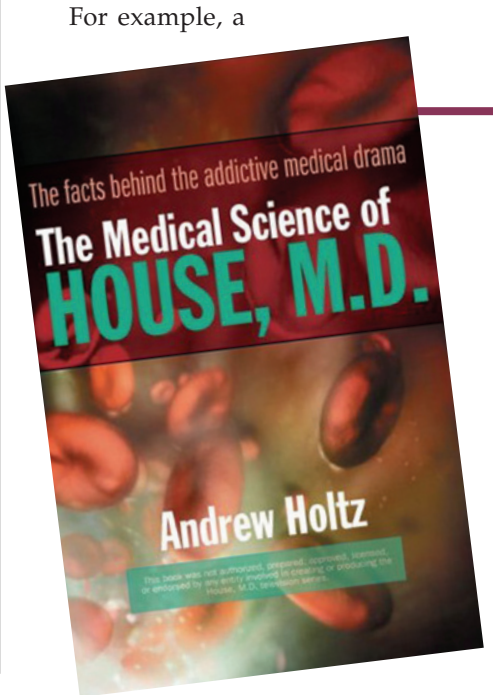
Another unreal aspect that clinicians immediately notice when watching "House" is that a small team of doctors do everything. Need a lab test? A physician on House's team personally draws the blood, operates the centrifuge and peers through the microscope. This TV hospital doesn't seem to have any lab techs or pathologists.

Need a scan? Two or three physicians roll the patient into the imaging room and then sit at the controls. Apparently there are no radiologists, either. Need an injection or overnight monitoring? A physician usually takes care of it. Nurses are nearly invisible.

In the final chapter of "The Medical Science of House, M.D.," an excerpt of which is reprinted here, I set out to explain to the shows' fans and other readers that medicine is increasingly a team sport, with many players and even more rules.



Excerpt from new book:

The Medical Science of House, M.D. *By Andrew Holtz*

Berkley Trade, New York City, Oct. 2006, ISBN #0425212300, 272 pages

As Edward Vogler began his brief tenure as the Chairman of the Board of Princeton-Plainsboro Teaching Hospital, he had a question for Dr. Lisa Cuddy, Dean of Medicine and hospital administrator: "What is a Department of Diagnostic Medicine?"

"That's Dr. House's department," replied Dr. Cuddy. "They deal with cases that other doctors can't figure out."

Vogler is perplexed by Dr. House's idiosyncrasies and challenged by his resistance to Vogler's efforts to run the hospital like any other business.

But even when you look past Dr. House's peculiarities, hospitals are not like any other businesses. The authors of a textbook titled *Health Care USA: Understanding it Organization and Delivery* highlighted the daunting complexity of modern hospitals. Hundreds or even thousands of people, many of