

SCRIPTDOCTOR: MEDICINE IN THE MEDIA

The Real 'Seattle Grace' Hospital, The True Stories of Surgery Residency

By Andrew Holtz, MPH

On a recent morning I went to meet some surgery residents. Shortly before 6 am, I walked across a bridge over a quiet ship canal. No boats were stirring from the small marinas. I envied the occupants of the houseboats moored along both canal banks. To my right, low darkly wet clouds hid Mount Rainier. Over my left shoulder, however, the Space Needle gleamed with low sunlight.

Let's see—boats, Mount Rainier, the Space Needle, and surgery residents. Some of you know immediately what that combination means to millions of TV viewers. For those of you not keeping up with pop culture, the answer is: *Grey's Anatomy*.

"What we have here is a story of how the dramatic potential of reality—the extreme circumstances of surgery residency and the vital stakes facing patients—begets entertainment—in the form of a primetime soap opera—which in turn creates an appetite for a description of the original reality."

The ABC TV medical drama, which this spring wrapped up its third season, is seen by 20 million or more viewers each week. It revolves around the personal, very personal, lives of troubled and attractive (it is TV after all) surgery residents at fictional Seattle Grace Hospital.

In a small auditorium deep within the real University of Washington Medical Center, Surgery Residency Program Director Karen Horvath, MD, introduced me to her residents. I told the young doctors that I wanted to hang out with them, to learn about the real experience of surgery residency through regular extended visits over several months.

The result of the observations and

conversations would be a book about life at a sort of real-world Seattle Grace Hospital. The book would try to answer the questions of fans and others who know only the primetime depiction of residency. While viewers understand that *Grey's Anatomy* is fiction, and that the heavy emphasis on sex and relationship trauma is there to keep people watching, I said that viewers believe some themes of the show echo reality. My job would be to help sort out fact from fiction.

No Shortage of Questions from the Residents

There was no shortage of questions from the residents: Would I end up hyping things to sell books? How would I protect the privacy of patients and staff, and so on. While there was trepidation about allowing an outsider into their lives, there was also some eagerness. One resident came up afterwards to say the book would be great, because then when friends and family ask her what she does, she could just hand it to them!

The first meeting didn't last long. I had to dash to get to surgery.

A book investigating the reality behind the concept of *Grey's Anatomy* wasn't something I really pushed hard for in the beginning. After I finished my first book, *The Medical Science of House, M.D.*, last year, my agent and I briefly discussed whether it could be followed by a similar book on *Grey's Anatomy*.

But we had our doubts. The plots on *House* often revolve around medical details—lots of medical details—and so there is lots to write about. But on *Grey's Anatomy* medicine is merely a backdrop to the relationship drama, so it seemed to me that a book about the medicine on that show would be a pretty short book.

Then my agent revived the idea: What about a book focusing more on the experience of surgery residency than on the medicine or surgery itself? The publisher was interested. So I contacted the University of Washington in Seattle and Harborview Medical Center, the city's public hospital and trauma center.

UW's Dr. Horvath was cautious. She hadn't been thrilled with some previous *Grey's Anatomy*-inspired stories about her residents. But after looking at the *House* book, she decided to give me a chance.

During my first visit, I watched one procedure in which a third-year resident was talked through the

repair of a minor umbilical hernia. Christian Hamlat, MD, did most of the actual surgery as the attending surgeon; Patchen Dellinger, MD, watched, assisted, and recommended where and how to cut and then suture. It all appeared easy and routine, but Dr. Hamlat later called it the kind of procedure that has no glory—that is, not technically difficult and yet, as with any procedure, still carrying risk of a mishap.

"While you are putting in the stitches to close the defect, if you go too deep you could hit her bowels and that could end up being disastrous for her. Outside of that it's a pretty straightforward thing," Dr. Hamlat said.

Apparently Easy Working Relationship Between Resident & Attending

I watched the apparently easy working relationship between resident and attending. Just as *Grey's Anatomy* focuses more on the personal lives of the staff than the medical details of patient cases, my nonfiction account will highlight the world that young surgeons inhabit, how it affects them, and why this part of medical education takes the form that it does.

Later in the day, I hung out in the residents room. They started spilling stories about where they came from, some of the things they'd seen, where they expected their careers were heading. They told me what is wrong with the picture painted by *Grey's Anatomy* (lots of sex at work) and what seems right (strong bonds between residents).

Their openness boosted my confidence in the project, but it also raised

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Send questions to him about how the media treat

medical topics or suggestions for future columns to OT@lwnny.com

questions: While the public is interested in surgery residents these days, they aren't public figures. How should I balance the readers' desires for a candid view with the residents' desire to protect their personal privacy?

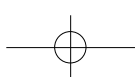
As I spend time with the residents, they'll relax, and I may well hear or see things not intended for public consumption. At the same time, I'm not part of the community relations department developing positive marketing materials. It's a dilemma that every journalist faces to some extent with every story. Our role as independent observers and reporters of fact seems straightforward, but reality always has twists and surprises.

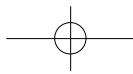
And this book project is not the same as a brief news report. I'll need to craft an approach that allows me to give readers an accurate taste of the residents' world without gratuitously embarrassing the people who have allowed me into their lives.

This dilemma has some parallels with the delicate task that every doctor must learn to handle: delivering bad news to patients and their loved ones. The Chairman of the UW Department of Surgery, Carlos Pellegrini, MD, spoke of that responsibility in our first meeting. He talked about the extreme care and personalized approach he uses in order to be honest, while also trying not to add to the pain.

Dr. Pellegrini displayed his enthusiasm for his craft. He spoke of floating out of the OR after successful procedures with a feeling so good that he suspects it is the kind reward drug users seek. Telling that part of the story will be fun. He chastised *Grey's Anatomy* for routinely portraying unprofessional conduct by the surgeon characters. He worries that viewers don't get a sense of the respect for pa-

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Cancer-Related News from the CDC

Use of Mammograms among Women Over 40—United States, 2000-2005

Reported by A.B. Ryerson, MPH; J. Miller, MD; C.R. Ehemann, PhD; M.C. White, ScD, Division of Cancer Prevention and Control, National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention.

Force, an independent panel of private-sector experts in prevention and primary care convened by the Department of Health and Human Services, recommends that women over 40 be screened for breast cancer with a mammogram

every one to two years.⁴ Although mammogram use increased substantially during the 1990s,⁵ results from a recent cohort study of health maintenance organization members revealed declining screening rates

between 1999 and 2002.⁶ This report describes Behavioral Risk Factor Surveillance System (BRFSS) findings that indicate a similar decreasing trend in self-reported (continued on page 44)

Breast cancer is the most commonly diagnosed cancer and the second leading cause of cancer-related death (after lung and bronchial cancer) among women in the United States.¹

Screening mammography can reduce mortality from breast cancer by approximately 20%-35% in women age 50 to 69 and approximately 20% in women 40 to 49.^{2,3} Organizations including the American Medical Association, American College of Obstetricians and Gynecologists, and American Cancer Society support mammography screening beginning at age 40, although these groups vary in their recommendations regarding intervals for re-screening.

The US Preventive Services Task

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tient dignity that he believes is a preeminent duty of physicians.

Dr. Pellegrini welcomed me by remarking that he wishes he had time to write a book about residency and the creation of new surgeons. He said new residents have ideas about what it means to be a surgeon that really don't match reality; so no doubt the viewers of *Grey's Anatomy* and the broader public have even more to learn.

What we have here is a story of how the dramatic potential of reality (the extreme circumstances of surgery residency and the vital stakes facing patients) begets entertainment (in the form of a primetime soap opera), which in turn creates an appetite for a description of the original reality.

Mine won't be the first book on residency, but the hook of *Grey's Anatomy* should attract readers who would not otherwise turn pages to learn about how new doctors are developed. I'll be exploring real life, with one eye on the reflected image absorbed weekly by many millions of viewers in the US and dozens of other nations.

I'll keep you posted; including how well I respond to the challenge of residents half my age who asked, "You're gonna do overnight call with us, right?" I'll be there, from first moment of the shift to the last, and we'll find out how these old bones hold up. 

Breaking the Complex Code of Tumor Resistance Mechanisms

Tumor resistance to cytotoxic drugs can occur at the start of therapy (known as intrinsic resistance), as early as the first treatment or over time after an initial period of tumor response (acquired resistance).¹


The mechanisms that cause intrinsic and acquired resistance are diverse. Below are examples of some of the more common tumor resistance mechanisms.

- Efflux pumps:** Responsible for transporting drugs out of the tumor cell, efflux pumps alter intracellular drug concentrations. Examples are P-glycoprotein or P-gp and the multidrug resistance proteins, MRP1-7.^{2,3}
- Regulation of apoptosis:** Tumor cells can evade signals that normally lead to apoptosis, conferring a survival advantage by making the cell resistant to apoptotic death. An example is the decreased cell surface expression of the Fas death receptor.⁴
- Drug detoxification:** Certain enzymes in the tumor cell play an important role in the cell's defense against invading foreign toxins. For example, glutathione S-transferase, or GST, works synergistically with the efflux pump MRP1 to expel drugs from the cell.⁵
- Drug sequestration:** Drugs can be trapped in special cellular compartments, keeping them away from their site of action. An example is the sequestration of an agent within cytoplasmic organelles.⁶
- Drug target alteration:** Alterations at the drug target site may impair binding. For example, variation in microtubule composition has been associated with tumor resistance.^{7,8}
- Damage repair:** Special enzymes within the tumor cell can identify and correct damage to the DNA molecules that encode its genome. For example, overexpression of the enzyme BRCC1 leads to increased DNA repair of drug-induced lesions and diminished response to apoptotic signaling.^{9,10}

In order to overcome intrinsic and acquired resistance, new anti-neoplastic agents that can address mechanisms of resistance and demonstrate activity against tumors are needed.

At Bristol-Myers Squibb, we are currently investigating potential new agents that may help break the code of intrinsic and acquired tumor resistance and help physicians inspect all viable forms of cancer.

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