


**SCRIPT DOCTOR: MEDICINE IN THE MEDIA**

## Hollywood Meets the Press

By Andrew Holtz, MPH

All the players were there: actors, writers, producers, a researcher and many, many journalists. The scene: a hotel ballroom in the Hollywood Hills. The title: "Hollywood & Health."

At the annual conference of the Association of Health Care Journalists earlier this year, we took a bit of time to peer over the fence at our colleagues on the entertainment side of the media, and the role they play in delivering health messages to the public. On the podium were two actors who play doctors on TV, two real MDs who write for hit primetime shows, a scriptwriter who majored in theater and now finds herself immersed in medical jargon, a researcher who tries to both measure and influence health communication via entertainment programming—and me.

million to 25 million viewers.

Second, while journalists write stories, entertainment show writers tell stories. Indeed, many viewers of soaps called the shows their "stories." Viewers develop an emotional connection with the characters—and while we often get all wrapped up in the technological formats of printing, broadcasting, Web pages, and podcasts, regardless of the medium it is emotional communication through storytelling that is the most powerful form of human communication.

Third, the huge popularity of top shows is evidence that the writers understand their viewers, and that's also a skill every journalist needs. After all, our reports can meet every standard of accuracy, balance and thoroughness, yet mean nothing if they aren't read or heard because they failed to engage readers, viewers, or listeners.

During my years in TV news I

it was the first medium anything, television or film, to show a heterosexual couple dealing with AIDS."

McCullough's character moved to Paris for several years. She returned all grown up, playing a physician. Her character continues to refer to aspects of life with HIV, including ongoing drug therapy and careful adherence to safer sex recommendations.

Jason Thompson plays her current love interest.

"When we first started getting involved in our relationship, I don't know how many times we had to mention spermicidal jelly, condoms—it was mandatory as far as our dialogue, which is part of the reason we're here, just educating people on the health risks, and obviously on HIV," he said.

A video clip showed the beginning of the latest health storyline for his character. He was performing brain surgery on a woman with late-stage AIDS and a very high viral count. During the procedure, something suddenly goes wrong.

Thompson as Dr. Patrick Drake: "What the hell was that?!"

Technician: "Sorry, doctor. It was mechanical. I have it under control."

Cut to a close-up of McCullough as Dr. Robin Scorpio, who was also in the OR. Although she is masked and gowned, her eyes show alarm. "Dr. Drake, you cut yourself."

Cue the dramatic music. Is Dr. Drake also now infected with HIV? Viewers had to stay tuned to find out...and stay tuned...and stay tuned...as the questions lingered. Unlike a primetime show, where almost all the loose ends are wrapped up within the hour, soap opera storylines go on and on. It was months before viewers were told that Thompson's character appears to have escaped infection.

"What's unique about a soap opera is that we can tell these stories in real time," McCullough said. "We actually took six months to find out. And it's



Andrew Holtz, MPH, is a former CNN Medical Correspondent and the author of "The Medical Science of House, M.D."

Send

questions to him about how the media treat medical topics or suggestions for future columns to [OT@lwnny.com](mailto:OT@lwnny.com)

*"What's unique about a soap opera is that we can tell these [health] stories in real time. It's difficult to do that in a film or a night-time story because you just have one show every week, which I think is why soaps are so groundbreaking as far as telling stories about cancer, because you can also see the entire process the patient has to go through."*

As emcee and moderator, it was my job to interrupt the lunch munching of a few hundred journalists and other guests and explain why newshounds chasing the health beat should care about fictional health and medical plot twists. After all, reporters cover real medicine and write about actual health facts, while entertainment shows just make stuff up.

So why should journalists pay attention to entertainment shows with medical themes?

First, in the media world impact is measured by circulation and ratings. On this score, entertainment shows blow news out of the water. The *New York Times* sells about a million copies a day. On most days, maybe a million people see CNN's top shows. Seven million to 10 million viewers watch the nightly broadcast TV newscasts.

The ratings of the top news shows would be considered merely mediocre for primetime shows. Shows like *House* and *Grey's Anatomy* routinely pull in 15

learned to open a story with my best video. And so although every member of the AHCJ panel brought expertise, we began this session with the panelists who, in addition to their professional skills, were no doubt the best-looking: a pair of soap stars: Kimberly McCullough and Jason Thompson, who portray Dr. Robin Scorpio and Dr. Patrick Drake on *General Hospital*.

### HIV

McCullough first appeared on that show as a young girl two decades ago. As a teenager, her character made a loud health statement.

"In 1996, my character was 17 years old and had heterosexual relations with this boy named Stone, who happened have been a street kid," McCullough told the audience. "Anyway, the point is he had AIDS and didn't know it—and she got it. He died of AIDS. And the reason the story was kind of groundbreaking back then was because

difficult to do that in a film or a nighttime story because you just have one show every week, which I think is why soaps are so groundbreaking as far as telling stories about cancer, because you can also see the entire process that that patient has to go through."

Several daytime dramas—soaps—make an effort to connect with experts to shape the course and check the facts of their health and medical storylines. But as I discussed in an earlier column (3/10/07 issue), much of the research on the effects of entertainment TV has focused on primetime shows.

Victoria Rideout, Director of the Program for the Study of Entertainment Media and Health at the Kaiser Family Foundation, recapped some central findings.

"First, entertainment is a really powerful platform for well-crafted stories about health information to reach people and make a real difference in their lives. And secondly, repetition is key," she said.

"Fortunately, we have repeats." Neal Baer, MD, writer and producer, first at *ER* and now at *Law & Order: SVU*, jumped right in. Although primetime shows usually collapse reality to fit into a single episode, successful shows get more than one shot to reach viewers.

"You can watch those *ER* shows still on TNT and you can watch *SVU* every night, many times. But the nice thing is that people do continue to see it and new viewers see it," Baer said, smiling as he referred to the ubiquity of *Law & Order* reruns.

### New England Journal Article that Criticized Portrayal of CPR

Baer played a pivotal role in the evolution of TV's portrayal of health and  
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*"The research leaves no doubt that these shows, while intended as simple entertainment, actually do affect viewers' knowledge and beliefs."*

## Genes May Predict Risk Level in Myeloma

By Brande Victorian

**R**esearchers have identified a subset of genes that could predict high-risk cases of multiple myeloma and potentially lead to more individualized treatment in the future.

A team led by John Shaughnessy, Jr. PhD, Director of the Lambert Laboratory of Myeloma Genetics at the University of Arkansas for Medical Sciences' Myeloma Institute for Research and Therapy, tracked 532 multiple myeloma patients for seven years after blood stem cell transplants to create a genetic profile to chart the severity of the disease. The activity in 17 genes was found to be able to differentiate between high or low risk in prognosis.

"This disease shows a highly variable outcome and that outcome variability is not recognized in current lab testing for diagnosis," Dr. Shaughnessy said in a telephone interview. "We hypothesized that gene profiling could provide better diagnostic models and tell us why certain cells from certain diseases behave so much more aggressively than others do."

Multiple myeloma usually responds well to initial treatment, but



**John Shaughnessy, Jr., PhD: "At diagnosis the patients will have a low-risk score, and then when they relapse that score increases to high risk—that implies that some evolution occurred during the disease. We want to find out if patients with a low-risk score can be treated less intensively than we normally treat patients, but patients with a high risk will need to be treated more intensely and within a specific time frame."**

often it becomes drug resistant, making patients prone to relapse.

"At diagnosis the patients will have a low-risk score, and then when they relapse that score increases to high risk—that implies that some evolution occurred during the disease," Dr. Shaughnessy said. "We want to find out if patients with a low-risk score can be treated less intensively than we normally treat patients, but patients with a high risk will need to be treated more intensely and within a specific time frame for it to work."

With that goal in mind, researchers categorized gene-expression patterns to determine which genes are active and inactive in both the idle and aggressive forms of the disease. The team screened some 540,000 genes for signs relating to multiple myeloma survival approximations using purified tumor cells from the 532 newly diagnosed patients.

Approximately 13% of all the patients displayed a genetic pattern that fit the high-risk category. That number rose to 76% in patients who had a relapse, suggesting that there are small subsets of high-risk

cells even in low-risk myeloma patients and that current treatment kills off only low-risk cells, leaving behind cells that create a high-risk genetic profile.

Dr. Shaughnessy elaborated, noting that you can have a cancer cell with a genetic defect, but as that cell divides and continues to divide it will incur another mutation. That cell is now different from the previous one and the drug can kill only the cell with the initial defect, not the new mutation.

Dr. Shaughnessy said the hope is to take this risk score and the diagnostic model, which has already been validated, and apply it universally to patients in various treatment centers.

"The goal is to use the new info, knowing that there are seven or eight types of the disease that can acquire a high-risk signature or mutation, to better treat patients based on the particular lesions that they have rather than generic treatment."

While high-risk patients will be the candidates for new therapies, Dr. Shaughnessy noted that the researchers hope to be able to help patients with a low risk in the long run because they know that those patients will eventually incorporate the gene mutation as well.

### ScriptDoctor

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medical facts. He recalled for the audience that in 1996 an article in the *New England Journal of Medicine* chastised *ER*, *Rescue 911*, and *Chicago Hope* for painting too rosy a picture of cardiopulmonary resuscitation. (*Diem SJ, Lantos JD, Tulsky JA: Cardiopulmonary resuscitation on television—miracles and misinformation. NEJM 1996;334:1578-1582.*)

Baer and others at *ER* quibbled with the study methodology. "We were lumped in with *Rescue 911*, which

always has positive outcome!" But the critique affected him—and the show.

"It did give us pause, because people were saying that they thought CPR worked—and it really doesn't work, particularly for elderly people. And so then we did a show with Noah Wiley resuscitating an elderly gentleman and breaking his ribs, puncturing his lung, and doing all the things that truly do happen, to try to atone for our sins," Baer said.

When I asked if their entertainment TV shows are also affecting larger public-policy discussions, he and *House* writer David Foster, MD, launched into

a bit of a fraternal debate. It was clear they'd had this chat before. Indeed, the two doctors who became prominent TV writers have been friends since medical school. It was Baer who introduced Foster to Hollywood.

Foster is more skeptical about the weight of their influence than Baer; and later he said the two aren't that far apart.

"The question was the degree to which television shows shape public knowledge and opinion. Ultimately, the two of us would agree on a nuanced, well-qualified statement," Foster says.

The research leaves no doubt that these shows, while intended as simple entertainment, actually do affect viewers' knowledge and beliefs. And as Baer remarked to the audience, viewers are learning things without even really being aware they are learning things. The lessons just seep into them.

One member of the audience mentioned that point later. She said that during the conference session, as she watched a clip from *ER* that talked about human papillomavirus and cervical cancer, the dialogue seemed to sound almost like it was from an "after-school special." You know, kind of preachy. But she had never noticed the instructional tone when she watched the show at home, as a regular viewer, wrapped up in the story.

The stories are so engaging that even people who know better can't help but let the characters take on a surprising substance. Panelist Elizabeth

Klaviter is the Director of Medical Research for *Grey's Anatomy*. The bonds that viewers develop with characters hit home to her, she said, when her mother wished for a consult with Addison Montgomery-Shepherd, MD, a surgeon at the fictitious Seattle Grace Hospital (this was before she left for her own spinoff this season).

"Klaviter's mother had stage zero, grade one breast cancer and she had gone through her operation and everything was extremely successful," Klaviter told the audience. "They got it all and she was confronted with whether she was going to take drug A or drug B or C: no drugs afterwards. And she says to me in a conversation, 'I just really wish I could talk to Addison about this.'"

The audience laughed. Klaviter continued, "To which, I thought, 'Wow, I approve all her dialogue.'" More laughter.

In a way, the character had become almost more real than the daughter. That's the power of a well-told tale.

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