

## How Grey's Anatomy Fooled Me into Thinking I Had Cancer: *A Conversation on the Uses of Empathy and Misinformation in Medical Dramas*

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### Abstract

It's often hard to distinguish between fact and opinion, especially in today's age of media. This becomes a controversial topic once the media disperses information that could potentially be harmful to the public, particularly involving medicine. In this essay, a patient case is used as motivation to understand the complex relationship between medical misinformation in the media and empathy. Following is a discussion of how misinformation and empathy work with the human mind, and how medical dramas use them to their advantage. Then, *Grey's Anatomy* is used as a case study to see how the show implements empathy and misinformation. Finally, an analysis of the positives and negatives of the medical drama is presented along with suggestions of how to improve medical dramas – particularly looking at possible outcomes for positive change in this medium of communication.

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A 19-year-old male with no past medical history presents in clinic with tachycardia. The patient was scheduled for a stress echocardiogram to assess heart structure and function. In the initial ultrasound, however, a mass was found in the patient's heart. The patient's stress echocardiogram was cancelled, and the patient was referred to a cardiologist.

During the visit with the cardiologist, the doctor points out the mass in the ultrasound images. The patient is anxious – hearing the word “mass” in the body is never a good sign. Being an avid fan of multiple medical dramas, the patient wonders through different scenarios of what could be happening. Going through the differential diagnosis, the doctor explains what each case could mean. There could be a blood clot, infection, or a tumor.

In the following weeks, the patient restlessly considers all of the different possibilities. Most of the options, of course, are from where a lot of people obtain their medical information – *Grey's Anatomy*. Could their life end up like the ones they watched on television? Would their story be akin to the moments when the doctors on *Grey's Anatomy* would tell patients their differential diagnosis and suddenly their entire life would drastically change after those few minutes? Perhaps. But what most people do not realize even after spending hours studying for biology tests and even more hours watching *Grey's Anatomy* is that just because a patient has a tumor, doesn't mean they have cancer. After coming to that realization, it's clear what could actually be going on – the public has been deceived by their favorite medical dramas into thinking they might have cancer.

Most people are easily persuaded by what they read online, what they see on television, and even what they hear out in public. The unfortunate aspect of human nature at play here is the tendency to accept information, whether it's true or not, instead of questioning it (Southwell & Thorson, 2015). Recently, the World Health Organization (WHO) reported that it is currently confronting an “infodemic” with the wide dispersal of inaccurate information about the COVID-19 pandemic and SARS-CoV-2 (Frenkel, 2020). This becomes problematic when people use social media, read articles from *BuzzFeed*, and watch television shows that provide misinformation. How do we know if the information we are absorbing is true or not? *Grey's Anatomy* does a fantastic job of blurring that line. They do an even better job of empathizing with viewers on controversial topics in today's society such as: racism, GSM issues, women's issues, and ethical issues (Burkhead & Robson, 2008). While *Grey's Anatomy* emphasizes the importance of highlighting social issues, they have made it less of a priority to convey accurate medical information.

In fact, scholars are discussing the positives of the show, as evidenced by the titles in a collection of scholarly *Grey's Anatomy* papers: “How *Grey's Anatomy* Negotiates the Feminine into a Masculinized Professional World” to “Between Black and White: The Ambiguous Politics of Race, Gender, and Desire in *Grey's Anatomy*” from the book “Grace under Pressure: *Grey's Anatomy* Uncovered” (GUP) (Burkhead & Robson, 2008). Despite all this critical acclaim, scholars neglect to discuss how *Grey's Anatomy*, although still thriving as one of the most successful dramas and recently becoming the longest running medical drama, surpassing *ER*, and planning to air for at least two more seasons (France, 2019), continues to comfortably produce episodes with important social issues, while sacrificing accurate medical information.

While *Grey's Anatomy* does use empathy in positive ways when it comes to raising awareness and understanding around social issues, I want to concentrate this essay on the expenses *Grey's Anatomy* makes with its medical information. In some ways, *Grey's Anatomy* could be more dangerous as a source of misinformation, since producers clearly do their research on social issues. So, viewers could be persuaded that it's probably true of medical issues, as well – which often isn't true. In addition to the focus on societal issues, *Grey's Anatomy* should use its platform to start making medical scenes more realistic, appropriate, and informative given its success.

Currently, scholars are discussing how medical misinformation conveyed through medical dramas can impact the public. Here, I take a look at some scenes from *Grey's Anatomy* to isolate how empathy is impacting scenes in positive and negative ways – perhaps by using melodrama, a major plot device, to amplify the drama and sense of justice and injustice. Ultimately, this paper will expound on how *Grey's Anatomy* is impacting the healthcare system and suggest what producers can do to make medical dramas more accurate, without sacrificing their impassioned scenes.

## Anatomy of Misinformation and Empathy in Medical Dramas

It's no surprise that one in four Americans receive their news from multiple media sources, and now, two-thirds of US adults get their news from social media (Smith & Anderson, 2018). As we continue to absorb more information, we sometimes get to points when we are not even able to distinguish if the Internet is telling the truth or not (Barthell, 2018). This is the starting point for why media can be a big difficulty when it comes to misinformation.

In his article, "The Prevalence of Misinformation, And Remedy of Misinformation in Mass Media Systems," Dr. Brian G. Southwell, an expert on mass communication and misinformation and professor at Duke University, defines three major reasons for why misinformation is common. First, humans "are geared towards acceptance of new information rather than toward[s] skepticism" (Lewandowsky et al. qtd in Southwell & Thorson, 2015). This is an issue since "as information gains acceptance among a population, it becomes more difficult to dislodge given that people attend to what others think" (Southwell & Thorson, 2015). As Southwell notes, the more that misinformation becomes widespread and popularly held, the more it becomes difficult to debunk. His second reason is that "regulatory structures in countries such as the United States tend to focus on post hoc detection of broadcast information" (Southwell & Thorson, 2015). Viewers often do not know if the media they are being presented with is correct or not, since systems are created such that we only figure out after something has been broadcasted. And since humans tend to accept information that they hear for the first time, this retroactive system becomes difficult to work with. In fact, a recent 2020 post about COVID-19 claiming to be from Stanford Medicine contained false information on how to avoid the novel coronavirus which reached tens of thousands of individuals (Fichera, 2020). Stanford University and other news outlets had to spend their time writing articles and posting on social media to correct the misinformation and may not have reached all the people who encountered the original post, which resulted in the wide dispersal of health information that may be detrimental to health. Unfortunately, "even when the companies are determined to protect the truth, they are often outgunned and outwitted by the internet's liars and thieves" (Frenkel, 2020). Finally, Southwell argues that it takes extensive effort to construct messages correcting misinformation, and then to distribute those messages them as well (Southwell & Thorson, 2015). And ultimately, the amount of time it takes to research and fund work to challenge misinformation is not attainable to companies – and instead of spending the time to check their information, they will release shows and content with false information. Is this the age of misinformation?

Whereas the news media has a clear ethical obligation to report the truth, these standards are murkier when it comes to stories told through literature, film, and television. Medical misinformation is particularly concerning because it affects how people understand and seek out healthcare. Antivaccination movements, rumors about secret COVID-19 governmental labs in China, and symptom searching on WebMD all point to media as a clear source of misunderstandings in medicine.

If media can be so powerful, then it can also be used for good. Dr. Jackson Thomas argues that “mainstreaming broadcasting media is a potentially powerful avenue for disseminating wellness education” (Thomas *et al.*, 2018). But he states that “there is also a risk of propagating incorrect and antisocial, poor public health information” if media is not used in the correct way and is instead used as a vehicle for misinformation, something many medical dramas are guilty of doing. According to the CDC, “67% of all primetime television (TV) viewers in the United States reported learning something new about a health or wellness topic during a 6-month period, simply by watching TV” (Thomas *et al.*, 2018). Although this may be true, viewers’ lack of medical knowledge may hinder their ability to identify if the health topic they learned is accurate. Thomas also notes that the information we hear from television and from the radio is not always supported by scientific data, and sometimes information could be spun or misrepresented for narrative impact. This becomes an issue when dealing with television shows whose first aim is to attract viewers, but also have a medical setting. Here’s why.

In many ways, empathy is built into narrative. Author Mary-Catherine Harrison discusses the relationship between fiction and empathy, stating that “whether or not our emotional responses are ‘bona fide,’ most readers have had the sensation of being moved by fiction” (Harrison, 2008, p. 257). Clearly, fiction is a powerful means to make readers and viewers more empathetic. Moreover, philosopher Martha Nussbaum “argues that novel reading has the potential to lead to heightened empathy” (Harrison, 2008, p. 258) which similarly happens with “film narratives” as they also may “facilitate the understanding of others’ minds” (Black & Barnes, 2015). However, one issue that arises when viewers interact with fiction is that sometimes narrative empathy can serve as “an escape from real-life ethical demands” (Harrison, 2008, p. 259).

During this escape from real-life while watching medical dramas, we get a heightened sense of empathy that often makes us more susceptible to believing in what we see. Ultimately, watching fictional media can often make more of an impact than factual text, as evidenced by Jémeljian Hakemulder: “narrative focus on individual characters actually results in a more profound impact on

readers' beliefs than non-fictional expository accounts of groups" (Harrison, 2008, p. 261). If we are able to empathize with fictional groups, and often have our own beliefs shaped by what we hear from media, then medical dramas will be able to convince us on social issues through empathy. But that also means that medical dramas can be a source of misinformation if viewers get hooked from empathic scenes. This is why the genre lends itself to doing work around social issues – the following section highlights examples of this.

#### Time for Rounds: A Case Study on *Grey's Anatomy*

*Grey's Anatomy* is well known for shedding light on controversial topics that often need to be discussed in greater detail. It's no surprise that a show that "brings in 21.4 million viewers a week opens up new discursive spaces in popular culture for the representation of a host of gendered and racial subjectivities by virtue of its diverse/ethnic cast and its complex explorations of the gendered realities of its characters" (Knisley from Burkhead & Robson, 2008, p. 121). *Grey's Anatomy* is able to achieve talking about these topics by using common melodrama techniques, including heated scenes, music, camera angles, in addition to love and hate that pull at the heart strings of the viewer. In fact, scholars on *Grey's Anatomy* note that the show "creates public discussion that extends beyond a water cooler," and "unlike other shows, narrative elements like titles, voicemakers, and music do more than merely compliment the stories in *Grey's Anatomy*; they are essential components of narrative" (Burkhead and Robson, 2008, p. 4). Here are some scenes to highlight these features.

In the episode "Sledgehammer," two girls are rushed into the operating room after getting caught on train tracks. Throughout the episode, the doctors learn that the two young girls, one Caucasian and the other Middle Eastern, are a lesbian couple who decide to stay on the train tracks so they could stay together, "dead or alive" (McKee, 2015). Viewers experience heightened empathy when listening to heated conversations between parents of the children and the surgeons on issues involving homophobia and race. This powerful and moving episode is just one instance where *Grey's Anatomy* uses heated dialogues that employ empathy to discuss important social topics.

In the episode "Trigger Happy," producer Shonda Rhimes brings up a hot topic for the United States – gun rights. She uses empathic melodramatic effects including sounds effects and music, intimate camera angles, and personal stories from characters to talk about gun rights. In a heated scene in the operating room, while attempting to save a child's life, surgeon Amelia Shepherd reminds us of the staggering statistic that "every single day, a kid is in the

O.R. with a gunshot wound” (Clack, 2016). Rhimes appeals to the viewers’ emotions and sparks an empathic response when discussing heated topics. It’s episodes such as these ones that get the public so interested in *Grey’s Anatomy*. Moreover, it’s episodes like these ones that are important for our society’s public discourse.

In a 2005 *New York Times* article about the diversity of the *Grey’s Anatomy* cast, author Matthew Fogel stated that:

When Ms. Rhimes [producer of *Grey’s Anatomy*] wrote the pilot, she didn't specify the characters' ethnicities, so her casting process was wide open: Mr. Washington, who once played a gay Republican in Spike Lee's "Get on the Bus," was nearly cast in the role played by Patrick Dempsey, who is white; his Dr. Burke was to be played by a white actor who was forced to drop out at the last moment. Ms. Rhimes imagined "The Nazi" as a "tiny, adorable blond person with lots of ringlets," until Chandra Wilson walked through the door ... And even though some network executives assumed Ms. Oh's hypercompetitive character would be white, Ms. Rhimes did not -- in the pilot's script she wasn't even given a last name -- so all it took was one "fabulous" audition from the "Sideways" star to christen the character Cristina Yang. (Fogel, 2005)

Rhimes has created a wave of crucial conversations, and even the morality of the production of the show falls in line with the ideas of discussing ethical and social topics. Clearly, *Grey’s Anatomy* is able to positively influence viewers by forcing them to consider important social and ethical topics – including topics from race, religion, and sexual orientation to issues involving gun rights. Rhimes is able to use *Grey’s Anatomy* as a vehicle to promote this important discussion and uses empathic techniques to do just that.

In an interview with Ellen DeGeneres, Ellen Pompeo – more commonly known as Meredith Grey, the lead actress of *Grey’s Anatomy* – discusses the impact that *Grey’s Anatomy* has had on young people. She discusses the role of a supporting character who, in real life is gay, and played a gay character in the series. This role was intended to show his parents what it looks like to have a gay son, and to let his parents know that he is gay. Pompeo says that she has “gotta keep doing it [making shows] ... because ... [they] are touching lives and making a difference” (DeGeneres, 2018). The impact of *Grey’s Anatomy* spans from the lives of the viewers to even the lives of the actors and actresses.

Although *Grey’s Anatomy* does use its powerful platform for important dialogue to challenge the public’s beliefs, I argue that by doing so, it often sacrifices the quality of a principal part of the show – medical information.

With fifteen seasons and over three-hundred episodes, *Grey’s Anatomy* is one of the nation’s most popular shows; however, with

so many episodes, there are bound to be mistakes. These mistakes, when so pervasive, build up to a sense that the show isn't interested in medicine. When comparing *Grey's Anatomy* to other medical dramas including *House*, *Nurse Jackie*, *Doc Martin*, and *Royal Pains*, *Grey's Anatomy* earned the “lowest appropriateness score, for medication advice and following clinical guidelines,” says Melissa Cowley, a faculty member at the University of Canberra. And in fact, only 25% of the medical information in *Grey's Anatomy* adheres to clinical guidelines (Thomas *et al.*, 2018). Here's one example of that in action.

In “Throwing It All Away,” Dr. Arizona Robbins, when talking with a pediatric patient who has a buildup of bile, says that if the bile continues to build up, the patient could be “looking at psoriasis or possible liver failure” (Harper, 2014). The latter condition that Dr. Robbins mentions, liver failure, makes sense in terms of the patient's current status; however, the former condition, psoriasis, makes less sense. Psoriasis is defined as a chronic skin condition caused by an overactive immune condition. It seems like Dr. Robbins meant to say *cirrhosis*, which is severe scarring of the liver and poor liver function. These two conditions may *sound* very similar, but manifest in completely different ways. Scenes like this can very quickly become an issue. Viewers without a medical background watching might be confused when thinking about their own health. There should be no ambiguity on whether someone needs a liver transplant or needs to go see a dermatologist. But scenes like this cause confusion, since the public is less attuned to recognizing medical misinformation. Such confusion can eventually lead to a public health and information issue.

Moreover, many of the conditions and diseases seen on *Grey's Anatomy* are rare, which skews viewers' view on rare diseases. It's not often people have tree conditions (Wilding, 2010), osteogenesis imperfecta (Marinis, 2014), or Von-Hippel-Lindau (VHL) syndrome (Vernoff, 2011), a cancer that causes tumors in places with a rich supply of blood vessels. In fact, *Grey's Anatomy* often uses tumors and cancers as a trope to scare viewers, as evidenced by a recent *Vanity Fair* article titled, “Which *Grey's Anatomy* Doctor Had the Fanciest Secret Tumor?” (Bradley, 2019). Author Laura Bradley pokes fun at *Grey's Anatomy* for using cancer as a common disease for our favorite doctors.<sup>1</sup> Possibly one of the most upsetting

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<sup>1</sup> It's shocking to see the disproportionate percentage of doctors and patients with serious medical problems in *Grey's Anatomy*. It seems like producers are normalizing what should be a low rate of people with extreme/life-threatening cases. And to make viewers even more convinced, to show the progression and development of certain doctors on *Grey's Anatomy* who always want to sign on for the hardest surgery, producers will make sure rare cases are shown in the series—ultimately skewing viewers' perceptions of extreme disease and medicine.

episodes was when Izzie was diagnosed with Stage IV metastatic melanoma (Rhimes, 2009). Although it's important to discuss these rare diseases on television, *Grey's Anatomy* uses availability bias to romanticize rare and fatal conditions, making viewers think that it is more common than in actuality. It's extremely troubling to see that, in a study done by Dr. Thomas, "almost as many participants placed some level of trust in cancer information obtained from TV as cancer information received for a physician (71% vs. 93%)" (Thomas *et al.*, 2018). In a lot of cases, there is no reason to be scared to go to the clinic and to hear what a doctor has to say. The likelihood of a life-threatening diagnosis is very low, argues Dr. Marc Siegel, clinical associate professor of medicine at New York University Medical School, saying that "we're afraid of the new, the mysterious," but often, "we're afraid of the wrong things" when talking about the odds of contracting a 'scary' disease (Geraghty, 2007).<sup>2</sup>

And in fact, a lot of cancers have good outcomes. It is common to hear that people pass away *with* prostate cancer, not *of* prostate cancer. In addition, a lot of tumors end up being benign and close to curable with surgery and modern medicine. So, if a lot of cancers are rare, and many have good outcomes, then why should the public be scared?

In no ways is this to disregard the medicine in *Grey's Anatomy*. In fact, there are often very valuable pieces of information in episodes for viewers to know. For example, when Dr. Miranda Bailey has a heart problem, the show makes a point of explaining that women are more likely to have heart conditions, reminding female viewers to be watchful (Finch, 2018). Instances like this are reassuring that medical dramas can disseminate important information, but if *Grey's Anatomy* disseminates both accurate and inaccurate information, how are viewers supposed to know what is true and what isn't? A study published in the journal *Trauma Surgery & Acute Care* says that *Grey's Anatomy* "may cultivate false expectations among patients and their families' when it comes to the realities of medical care, treatment and recovery" (Serrone *et*

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<sup>2</sup> I want to highlight this article a bit more. Geraghty talks about the odds of contracting several diseases and compares it to the odds of other events. For example, the odds of getting heart disease is 1 in 42, compared to the odds of Condoleezza Rice becoming president in 2008 (which didn't happen) is 1 in 50. Around 2.9 million women worldwide are hospitalized for heart disease – but often are elderly women with high risk factors. A few pieces of advice to combat heart disease, which are highlighted later in this essay, will lower the risk by a factor of six! The odds of getting ovarian cancer is 1 in 5440, compared to the odds of an asteroid hitting the Earth (1 in 5000). Finally, the odds of contracting mad cow disease is 1 in 10 billion, compared to odds of winning the Powerball grand prize (1 in 146 million). I don't want to speculate, but it's highly unlikely to contract many of the diseases showcased on *Grey's Anatomy*. This is why misinformation in medical dramas is worth talking about.

*al.* from Ducharme, 2018). Is it okay to have viewers with the notion that they have a better understanding of medicine after watching *Grey's Anatomy*? *Grey's Anatomy* raises questions about how medical dramas need to balance the use of fictional devices and medical “information” to create an interest. Sometimes, the balance is good when considering issues on ethical reasoning, races, sexual orientation, and disabilities – however this also raises the concern for what misinformation we are absorbing through collateral damage.

This is important to note because television dramas are not required to have accurate information. Dr. Thomas states that “although films and TV dramas produced for entertainment may not be required to present accurate information, many people use the information presented in the media to make decisions about their own health,” and in fact, the entertainment media has no legal obligation to present factual or scientifically accurate information. However, in 1994, the Hollywood, Health & Safety program was established to provide free medical advice to scriptwriters and producers via a quick facts and tips sheets (Thomas *et al.*, 2018).

*Grey's Anatomy* not only works to convince readers through a large-scale media company's ethos, but also through the pathos of an emotional drama with melodramatic elements. Perhaps instead of sacrificing medical information for the discussion of social issues, it's time for Ms. Shonda Rhimes to use its power to focus on both.

### Ready to Close: Sutures, Please

Having one of the most popular television shows provide important, but also incorrect, information, can skew our perception of health. *Grey's Anatomy's* use of empathy forces viewers to consider socially relevant topics, but also makes viewers connect their emotions with wrong information about health. For that reason, *Grey's Anatomy* is one of the most influential and powerful television series; however, it could be an even more impactful and forward moving television show if the producers don't sacrifice accurate medical information.

*Grey's Anatomy* may be doing more harm than good when “the truth gets stretched,” ending up in “inaccuracies that could hurt a viewer,” argues Dr. Roshan Sethi, a third-year resident at the Harvard Radiation Oncology Program, and a past consultant on other medical dramas including *The Resident* and *Black Box* (Ducharme, 2018). Television shows can be a helpful tool for providing information to the public, from community-based risk management to education around pandemic events “by increasing health knowledge, changing attitudes and intentions, and influencing health behavior” (Thomas *et al.*, 2018). Some authors argue that medical dramas disseminate important principles of

medicine such as performing life-saving cardiopulmonary resuscitation (Elkamel, 1995). Others argue that medical dramas may be doing a disservice by putting medical professionals in a less flattering light to the public (Aboud, 2012). But who would want to watch a show with simple cases like the stomach flu over rare cases that stir up drama? And realistically speaking, most viewers do not have an M.D. and are not acclaimed for the physiological understanding of a doctor. Ultimately, the viewer is responsible to understand that medical dramas are fictitious, and that television shows' main purpose is to deliver entertainment and not medical information. Rather, television dramas are capable of spreading incorrect information and viewers must be wary and hold those shows accountable for the misinformation.

But that doesn't mean that accurate medical information should be withheld from the public. What if *Grey's Anatomy* shared life-saving information regarding checking blood pressure often, or lowering salt intake if one has high blood pressure? What if they reminded everyone that it is important to drink eight glasses of water every day? What if they told people that just because someone has a tumor, it doesn't mean they have a malignant cancer, so there's no reason to wonder if they're going to end up like Izzie?<sup>3</sup> As a viewer, we should set higher standards for the television shows we watch and demand accuracy and disclaimers in the media we consume. Perhaps doctors and filmmakers should come together to produce what is of benefit as well as entertainment to the public (Aboud, 2012).

Clearly, an otherwise healthy individual with a common cold doesn't need to go to the hospital, and doctors don't want to see patients who just need to take a cough suppressant for a few days. But if medical dramas warned the public that chest pain and shortness of breath should result in a visit to the ER, then maybe television shows could be part of the solution to heart disease, the number one cause of death in the US. It was Aristotle who said that it is the mark of an educated mind to entertain a thought without accepting it. As consumers of media, we need to be cautious; and if contemporary media were more critical with handling medical information, then perhaps the overall health of our society could improve.

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<sup>3</sup> Here are some other pieces of advice that doctors want the public to know to lower risk for heart disease, cancers, and other diseases. For heart disease: hit the gym; walk; load up on fruits and vegetables; quit smoking. For osteoporosis and bone diseases: lift weights; load up on calcium and vitamin D. For breast cancer: no more than one sip of alcohol a day. For infectious diseases: rinse vegetables, cook meat to at least 160 degrees, rinse utensils. For ovarian cancer: no way to really prevent, but recognize symptoms early including persistent abdominal pain and bloating. It's information like this that shows need to have. (More information from Geraghty, 2007).

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