

September 2025

Primetime in a Warming World

Can Medical Dramas Save Lives?

The Impact of Extreme Heat Depictions in **GREY'S ANATOMY**



Dr. Anirudh Tiwathia
Dr. Samira Dodson
Dr. Sania Ashraf
Dr. Erik Thulin
Ellis Watamanuk



Table of Contents

Overview	2-5
Methodology	6
Key Results	7-16

Full interactive online report and supplementary materials
available at: rare.org/greys-anatomy-report

Key Takeaways

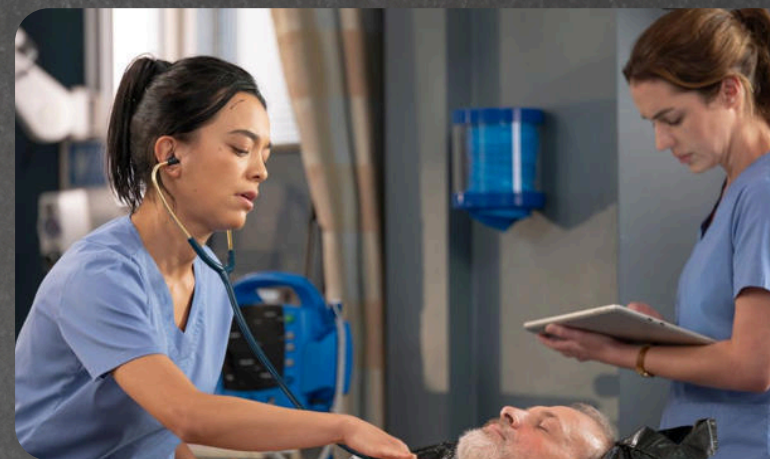
- Medical dramas like *Grey's Anatomy* can effectively engage and inform audiences about the health risks posed by our changing climate.
- Watching a heat wave storyline boosted knowledge of health risks, perceptions of heat wave severity, and support for adaptation measures.
- Audiences strongly approved of integrating real-world climate and health impacts into storylines, saying it enhanced the show's realism, relevance, and overall entertainment value.

Overview

Television medical dramas have long reflected the realities of our everyday lives. As the climate crisis drives more extreme weather events that threaten public health and strain our healthcare systems, these shows – where medicine, science, and human emotion converge – may offer more than compelling stories. Could they help audiences see weather not as a trivial, abstract issue, but as a pressing, personal one? And could they deliver potentially life-saving information and inspire support for critical solutions in a warming world?

To explore how entertainment can shape public understanding of climate-related health risks, Rare’s Entertainment Lab studied the impact of an extreme heat storyline in the long-running cultural landmark ***Grey’s Anatomy***.

In the Season 21 episode “Drop It Like It’s Hot,” staff at Grey Sloan Memorial Hospital respond to a record-breaking heat wave. Though climate change is never mentioned explicitly, the episode vividly depicts the cascading effects of extreme heat: power outages, overwhelmed emergency services, and difficult triage decisions. This provided a unique opportunity to test whether a dramatic medical storyline could shift perceptions about heat waves, their public health risks, and climate change more broadly.



The results were clear: the episode effectively raised awareness about heat-related health risks and significantly increased concern about the impacts of extreme heat.

The episode boosted:

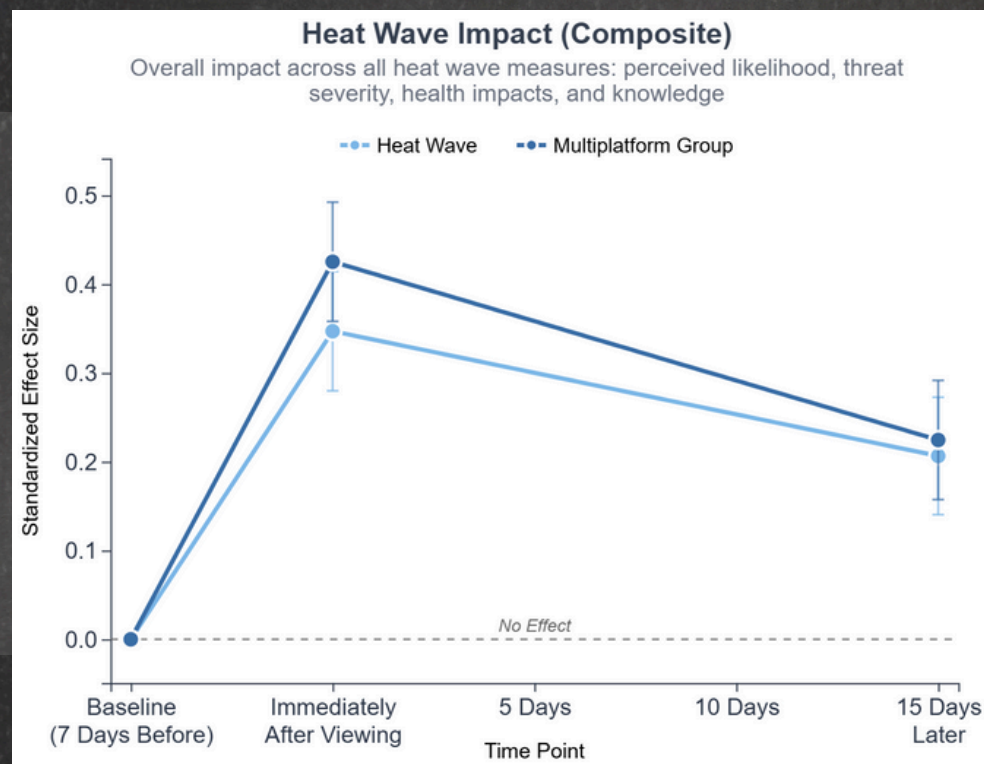
- **Perceived likelihood of heat wave exposure**, or how likely viewers think they or their community will experience a severe heat wave this summer
- **Perceived threat severity of heat waves**, or how worried viewers are about severity of heat waves, and the amount of harm they might cause
- **Perceived threat of heat waves to health**, or how worried viewers are about how severe heat waves can impact their health
- **Knowledge about the specific health impacts** of exposure to extreme heat
- **Support for heat-adaptive policies**, such as investments in hospital infrastructure and the expansion of public cooling centers

In addition to evaluating the episode on its own, the study also examined a **multiplatform** condition, which assessed the combined impact of the episode and a complementary social media campaign. Half of the viewers who watched the heat wave episode were then randomly assigned to watch one of four short-form videos immediately after the episode. Produced independently by an environmental organization, these social media videos explicitly linked the episode's events to climate science and included calls to action for health system resilience.

The strongest and most lasting effects were observed among viewers who saw both the heat wave episode and the follow-up social media videos. Additionally, this combined condition boosted:

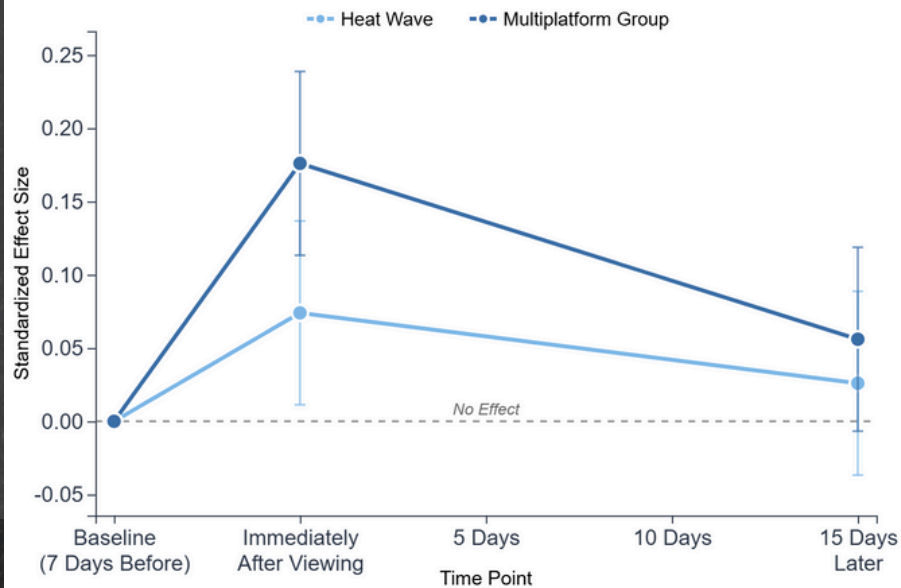
- **Perceived personal impacts of climate change**, including the belief that climate change will have a significant impact on daily life and it will do so sooner
- **Support for action** on climate change broadly

We found that many of the positive shifts in viewer attitudes **persisted even two weeks after viewing the episode** or the episode and the social media video together – providing empirical evidence of short-to-mid term impact.



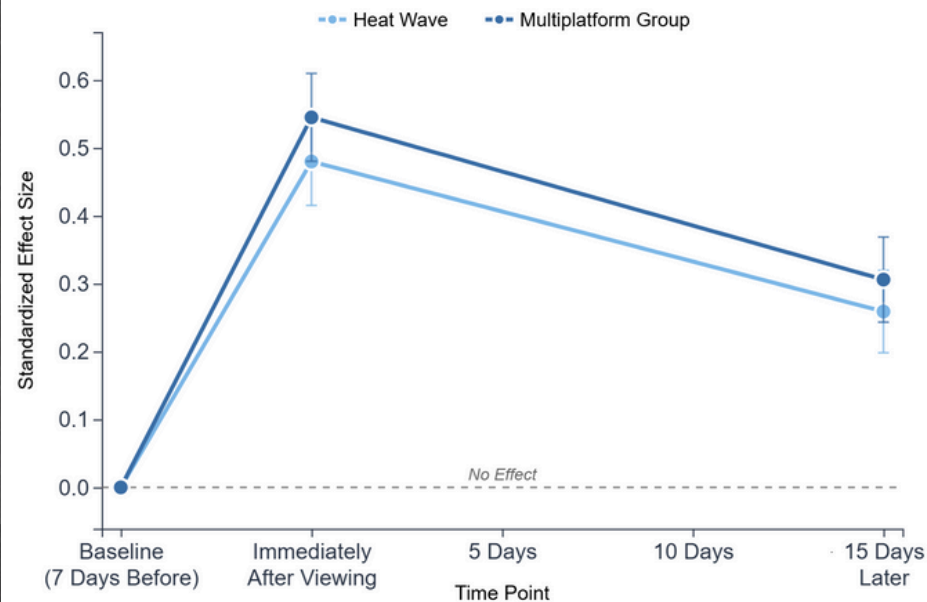
Perceived Likelihood of Heat Wave Exposure

How likely is it that you, your family, or your community will be seriously impacted by at least one severe heat wave this summer?



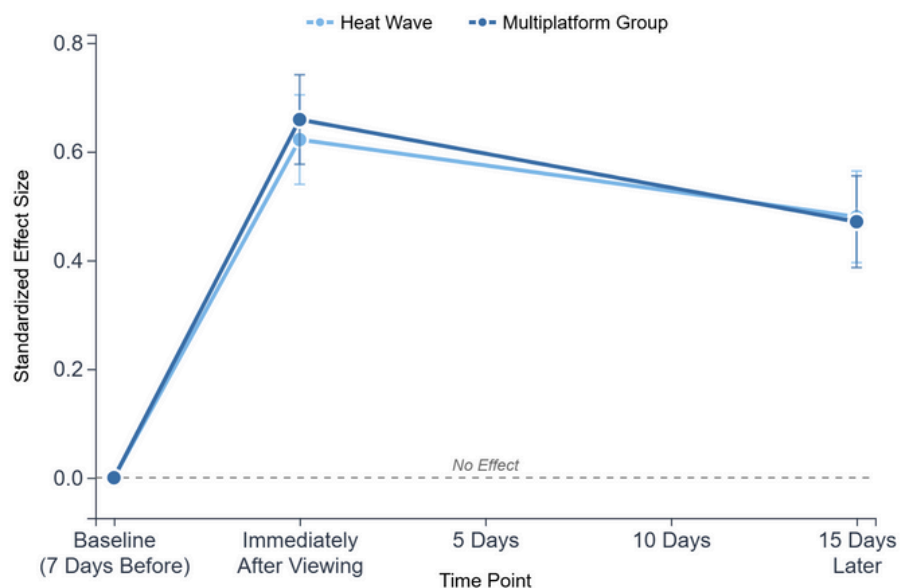
Perceived Threat of Heat Waves on Health

Composite measure of concern about health impacts of heat waves on self and loved ones



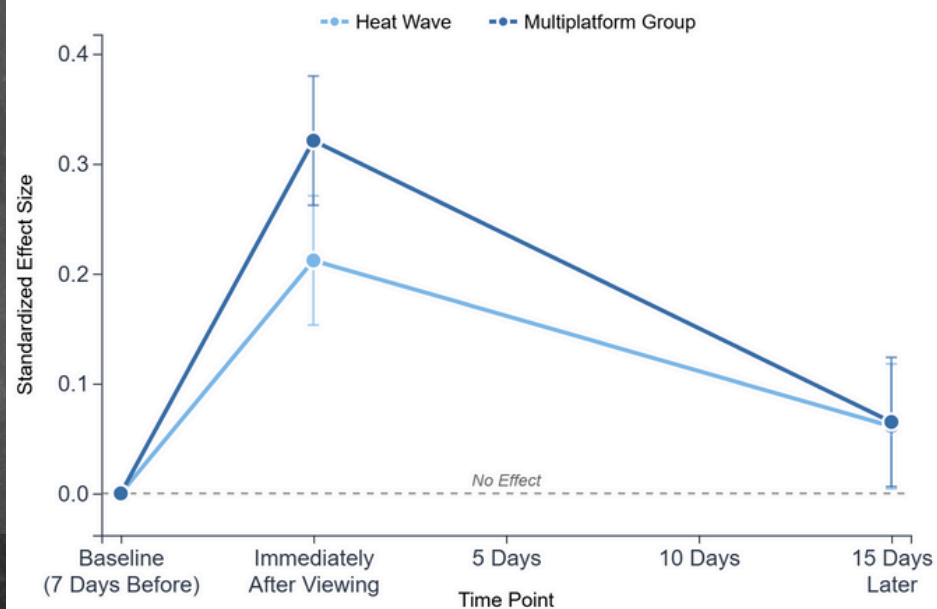
Knowledge of Heat Wave Health Impacts

Composite measure of understanding of serious health risks associated with extreme heat



Perceived Threat Severity of Heat Waves

Composite measure of perceived threat severity including harm to personal well-being, family, and community



Notably, through a series of interviews, we found that these gains came without sacrificing entertainment value or emotional impact.

Viewers:

- **Connected the on-screen heat wave to their personal experiences** with extreme heat and its serious health impacts within their own families.
- **Felt better prepared for the threats of extreme heat.** One interviewee said it was a reminder "how serious the heat is, and how it is deadly, and to not underestimate it...[the episode] makes you realize, 'Hey, I could very well be in that situation, and I shouldn't play around with it and always be prepared.'"
- **Commended the show for depicting real-world issues** like heat waves, and praised the show's legacy of addressing social issues.
- **Highlighted real-world medical techniques** – such as "using body bags and filling them with ice" to cool patients – as especially memorable. One mother, for instance, shared that she now knows to quickly cool down her overheated two-year-old by placing him in a cold bath—an insight she credited to what she saw on screen.

It is important to acknowledge the areas where attitudes remained unchanged. The episode alone did not move most measures related to climate change broadly, like the perceived personal impacts of **climate change** (as opposed to the impacts of **severe heat waves**). This lack of movement is perhaps unsurprising, given that the episode did not explicitly reference climate change and the larger issue may not have been top-of-mind for viewers. Additionally, we did not find any significant effects on the perceived responsibility of healthcare workers to raise awareness about heat-related health risks.

Nevertheless, these findings demonstrate the powerful potential of entertainment to both engage and educate, making complex public health and environmental issues feel immediate and personal. These findings also examine the added benefits (and potential risks) of complementary multiplatform campaigns that can more explicitly link climate change to human health and extreme weather events.

As the climate crisis deepens, integrating accurate, emotionally-resonant stories into popular film, TV, and social media may be one of the most impactful tools for life-saving public awareness and action. In fact, audiences agree...

Audience Opinions on the Role of Film and TV in Addressing Social Issues

In conversation with viewers, we found strong support for film and television engaging with real-world social issues—provided it's done without overt preaching. One interviewee praised the show, and particularly creator Shonda Rhimes and her team, for their legacy of tackling topical issues. She said the show **“does the world a service by... incorporating real-life national issues into the storyline.”**

Another viewer noted, “it just makes it more fun to watch because ... it feels like a real universe, not just like a TV show.” Others appreciated how addressing such topics can heighten entertainment value by allowing viewers to “connect with something that's real.”

Several conversations suggested that strong storytelling and compelling narratives can bridge political divides. As one viewer put it: “I do think that talking about social issues is great, and especially in the form of a TV show, where it's not like necessarily being shoved down your face like, ‘Vote for this person because of this’ ...I think it kind of opens people's minds a little bit, and makes them think like, ‘Oh, could that be me? Could that be my daughter... my grandson, my granddaughter?’”

One viewer also emphasized the potential for television to spark meaningful discussions, noting that certain shows can “get the conversation rolling” about topics like climate change. In her experience, such conversations often start casually, with a simple, **“Did you see that on TV?”**



Methodology

Quantitative Methodology

The study recruited U.S.-based participants whose demographic characteristics were matched using Nielsen data to resemble viewers of *Grey's Anatomy* Season 21. Our final sample closely matched the target demographic across core dimensions like gender, ethnicity, US region, and household income, with the primary deviation being a slightly younger age distribution.

Participants were randomly assigned to a Heat Wave Episode group; a Multiplatform group, and a Control group:

- **HEAT WAVE EPISODE GROUP** watched Season 21, Episode 8 ("Drop It Like It's Hot"), in which a severe heat wave disrupts hospital operations and patient care.
- **MULTIPLATFORM GROUP** watched the same episode as the Heat Wave Episode group, followed by social media content tying the episode content to climate change. This allowed us to study the joint effect of viewing content along with complementary social media campaigns.
- **CONTROL GROUP** watched Season 21, Episode 6 ("Night Moves"), which includes no mention of heat waves.

To track the impact of the content over time, we measured participants at three different points:

- **Baseline** (7-10 days prior to viewing)
- **Post-Viewing** (Immediately after watching the show)
- **Follow-Up** (15-20 days after watching the show)

At each wave, participants completed a survey measuring perceptions of heat waves, knowledge of heat-related health risks, confidence in taking protective actions, support for relevant policy measures, and beliefs about climate change's relevance to daily life.

A total of 3,062 participants completed all three waves of the study and form the complete-case sample used for all analyses.

Qualitative Methodology

The study recruited 20 participants in two waves, with Wave 1 (n=11) occurring before the quantitative survey and Wave 2 (n=9) after, informed by the survey's findings. Participants averaged 38.6 years old, were mostly female, and represented diverse racial backgrounds and U.S. regions; eight had prior exposure to *Grey's Anatomy* (ranging from loyal viewers to viewers who had watched most seasons). All completed ~80-minute Zoom interviews discussing their reactions to the heat wave episode, with Wave 1 focusing on unaided impressions and personal relevance, and Wave 2 exploring responses to survey results and political differences in policy support. Both waves assessed knowledge gains, messaging preferences, and the perceived influence of the episode or related social media videos on personal behavior and peer conversations.

Key Findings

Overall, the heat wave episode of *Grey's Anatomy* effectively increased viewer understanding of heat-related health risks, heightened concern about the impacts of extreme heat, and boosted support for heat-adaptive policies. Notably, through interviews with viewers, we found that these impacts occurred without diminishing the show's entertainment value or emotional impact. For most (but not all) of the measures, the combination of the episode and the social media videos produced the strongest and most lasting effects.

Perception and Knowledge of Heat Waves

Perceived Likelihood of Heat Wave Exposure

In our survey, we asked viewers: "How likely is it that you, your family, or your community will be seriously impacted by at least one severe heat wave this summer?"

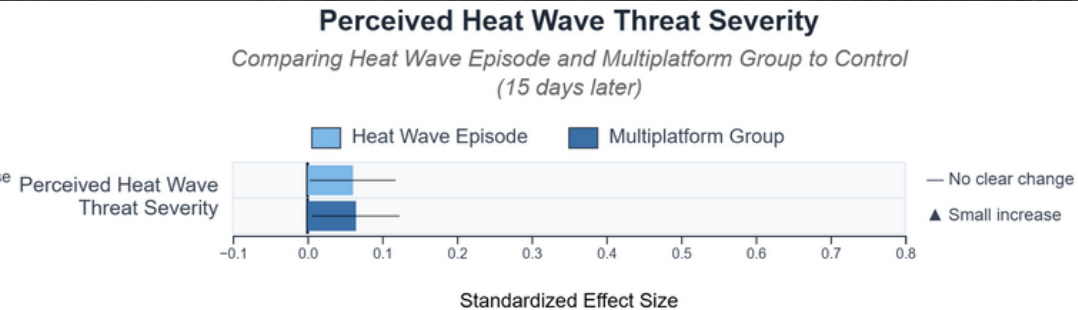
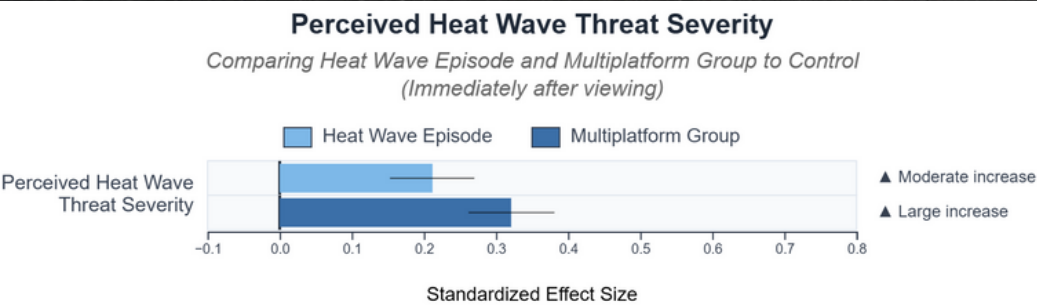
Viewers in the multiplatform condition were significantly more likely to believe that they would be personally impacted by a heat wave this summer, with significant gains evident immediately after viewing. Relative to the multiplatform condition, the heat wave episode condition showed a more modest, marginal increase in perceived likelihood. For both conditions, the effects faded over time.



Our one-on-one interviews confirmed how viewing the heat wave episode can influence perception of heat wave likelihood. One viewer remarked, "Wow...This is going to be more common, you know, every single year... There are going to be more heat waves in places that are not prepared or not used to heat waves."

Perceived Threat Severity of Heat Waves

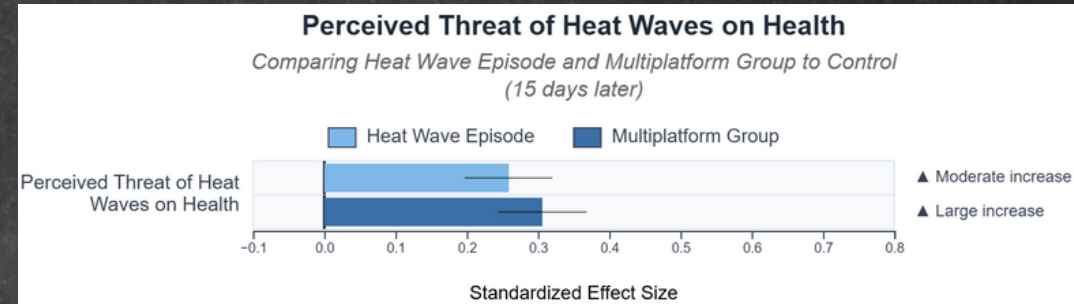
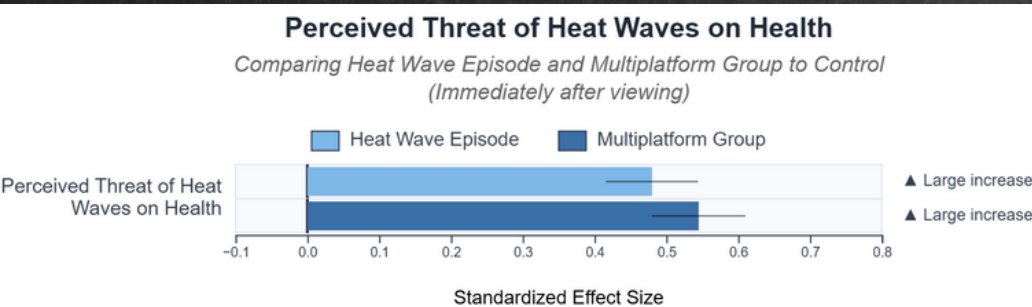
Both the heat wave episode and the multiplatform conditions significantly increased perceived threat severity—boosting concern about harm to personal well-being, family, and community. Viewing the content also increased the self-reported likelihood that they would take extra safety precautions and would check-in on vulnerable individuals. The multiplatform condition produced the strongest effects immediately after viewing and remained significant even 15-20 days later.



In our interviews, one regular Grey's Anatomy viewer, a 26-year-old female resident physician from New York, remarked: "I would personally show [the episode] to my own parents. I feel like there's times where they just don't realize, and they'll... stand outside and water their plants and ... they don't realize how much time they're spending outside. No protection, like nothing."

Perceived Threat of Heat Waves on Health

Viewers who watched the episode—especially those in the multiplatform condition—expressed significantly greater concern about the health impacts of heat waves. This included increased worry about risks to their own health and that of loved ones, as well as heightened awareness of how extreme heat can strain local hospital systems. These effects persisted even 15-20 days after viewing, suggesting that both the episode alone and the multiplatform campaign fostered lasting awareness that could support better preparedness and protective behaviors during future heat waves.



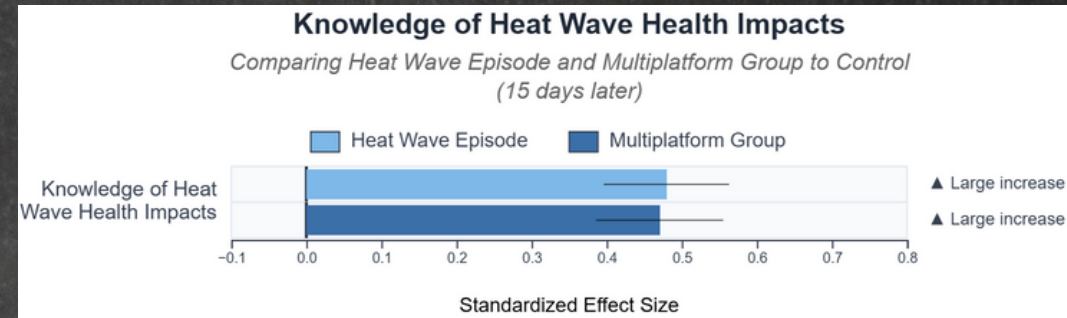
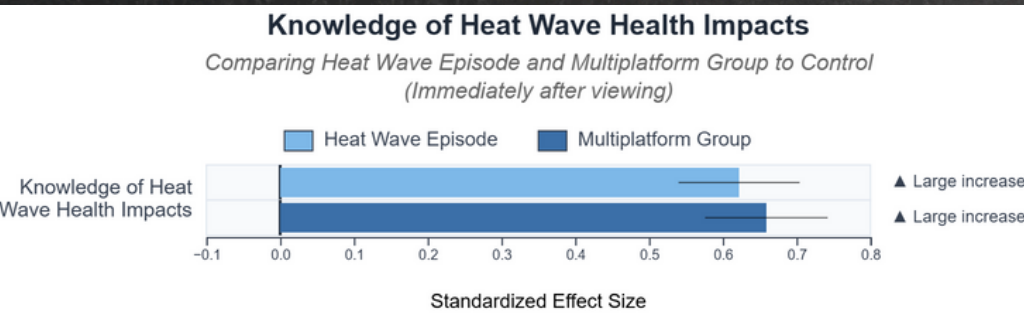
One interviewee remarked that the episode was “a reminder to me how serious the heat is, and how it is deadly, and to not underestimate it, to be prepared...” She further elaborated, “It makes you realize... ‘I could very well be in that situation, and I shouldn't play around with it and always be prepared.’”

Another, inspired by the episode, said that she would “call my family, making sure I check in on them, and when it's super hot outside, and tell them to look out for the different health risks that are being discussed [in the episode].”

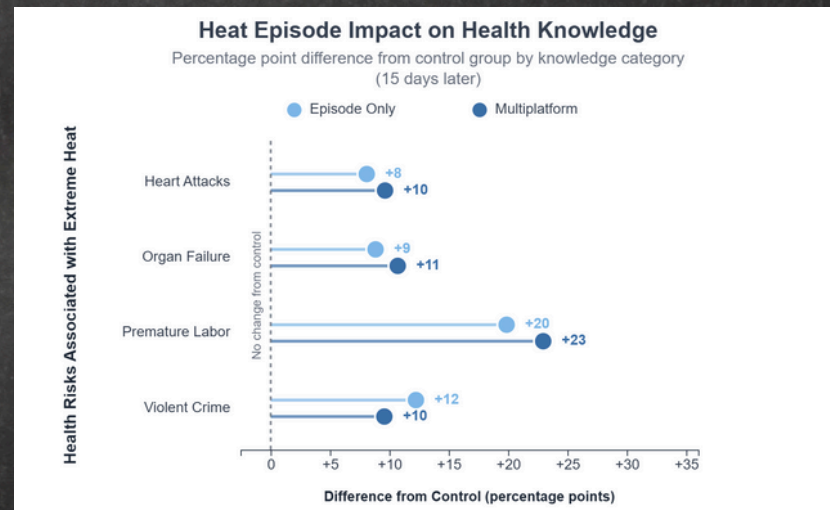
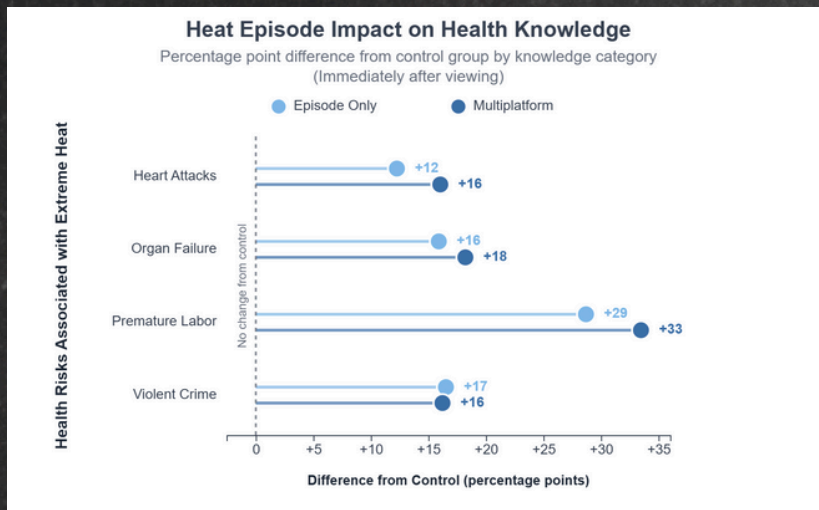


Knowledge of Heat Wave Health Impacts

The heat wave episode boosted viewer understanding of the serious health risks associated with extreme heat – including the risk of organ failure, heart attacks among the vulnerable, premature labor in pregnant women, and increased violent crime, all of which were highlighted in the episode. The knowledge boosts were primarily driven by viewing the episode, with minimal additional gain resulting from viewing the additional social media content (multiplatform group). Excitingly, the boost in knowledge persisted even 15-20 days after viewing the episode, suggesting that the storyline had a lasting impact on people’s knowledge about the severe health risks associated with heat waves.



In our interviews, one viewer found that the episode helped her understand that individuals "prone to heart problems" require more "heat protection" during hot weather. Only after viewing the episode did she fully connect how extreme heat could produce severe health consequences like "heart attacks, organ failure... all of these things."



Policy Support and Healthcare Worker Responsibility

Policy Support for Heat-Adaptative Measures

The heat wave episode increased viewer support for heat-adaptive policies, such as investments in hospital infrastructure and the expansion of public cooling centers – but the effects varied depending on self-reported political orientation and preexisting levels of support for such policies. For all audiences, gains in policy support were not significant after 15-20 days.

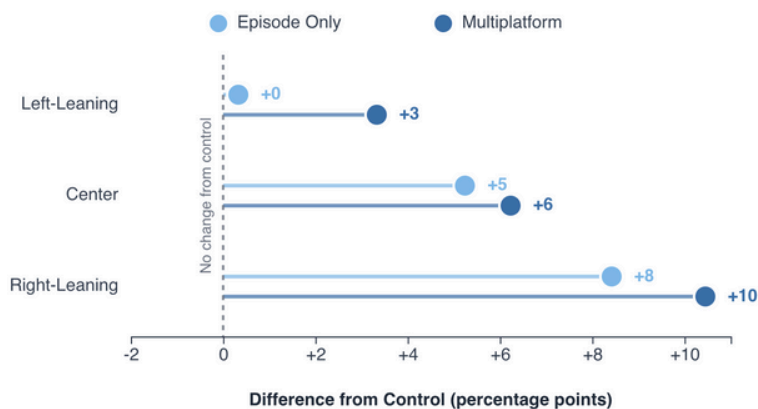
Among viewers who lean politically left, pre-existing levels of support were already high (82-84%), leaving little room for movement with the episode alone. However, when paired with supplemental social media videos in the multiplatform condition, support rose modestly to 86–87%, suggesting that explicit messaging linking climate science and policy solutions reinforced attitudes for an already receptive audience.

Among viewers who lean politically right, pre-existing levels of support for such policies began relatively lower (50–55%) but such viewers showed the strongest response. Support increased by 8-10 percentage points to 61-62% – indicating that the episode’s focus on hospital strain and public health challenges during extreme heat resonated with such audiences.

While anecdotal, interviews with right-leaning viewers suggested that the framing provided in the supplemental social media videos may not have been as effective as the emotional impact of the episode itself. One interviewee, who self-identified as, said he felt the inclusion of "climate change" in the social media video was "instantly assigning blame to the occurrences" and causes the conversation to go "in a whole different direction." Meanwhile, he felt the episode maintained a "balance of entertainment and message." He was "entirely entertained" and "wasn't focused on 'Hey, there's a message being given to me here,' which is a good thing."

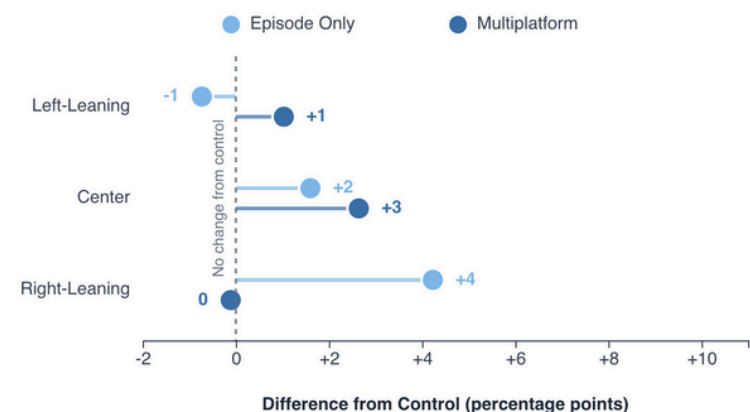
Heat Episode Impact on Policy Support

Average of government investment and cooling center support by political leaning
(Immediately after viewing)



Heat Episode Impact on Policy Support

Average of government investment and cooling center support by political leaning
(15 days later)



More on **Policy Support for Heat-Adaptative Measures**

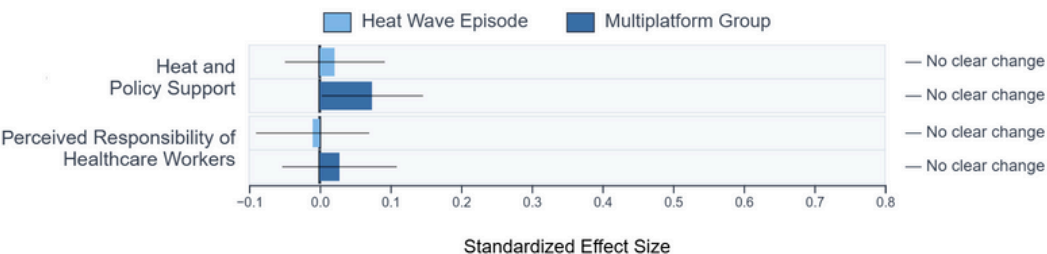
Different audiences require different approaches – especially when designing supplemental or impact-driven social media content. While some viewers may have needed the explicit climate change and health connections to boost policy support, others were more moved by emotionally grounded, human-centered storytelling. Interviewees who identified as right-leaning consistently preferred content that delivered the message with an entertainment-forward lens, while finding direct-to-camera appeals to be “preachy.”

These findings highlight the limitations of one-size-fits-all strategies, but they also underscore the unique potential of tailored and diverse messaging in multiplatform media campaigns that bring together film and TV with social media.



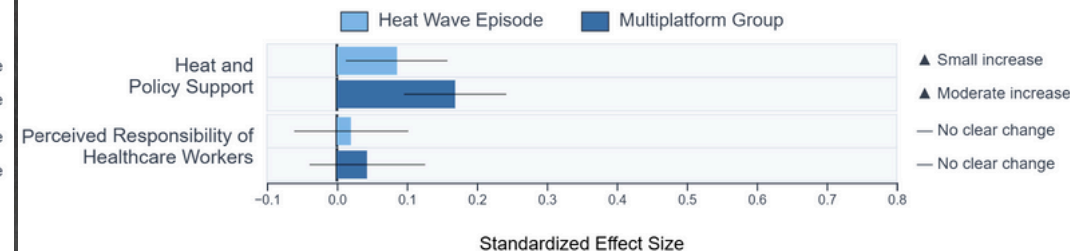
Policy Support and Healthcare Worker Responsibility

Comparing Heat Wave Episode and Multiplatform Group to Control
(15 days later)



Policy Support and Healthcare Worker Responsibility

Comparing Heat Wave Episode and Multiplatform Group to Control
(Immediately after viewing)



Healthcare Worker Responsibility

No significant effects were observed on perceptions of healthcare worker responsibility—either toward the public or policymakers—suggesting that the episode did not influence viewers' expectations about the role of medical professionals in addressing climate-health issues.

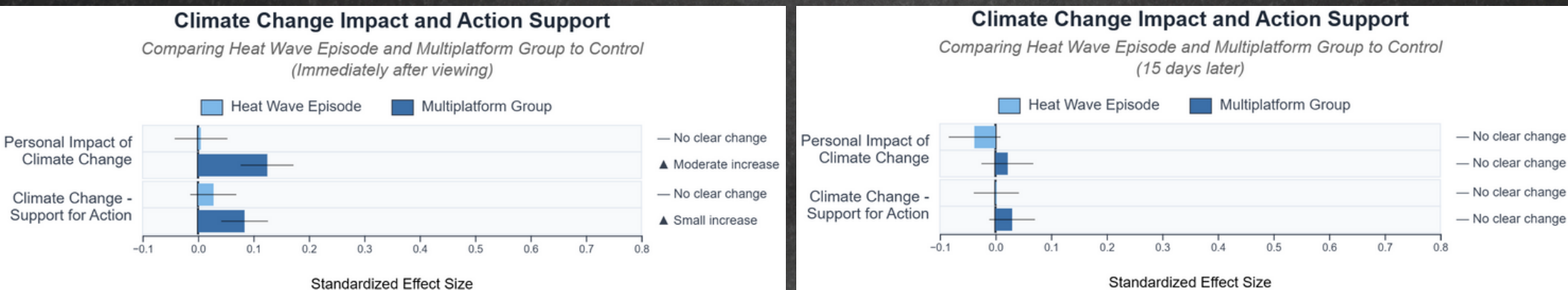
Climate Change Connections

Climate Change Impacts and Support for Climate Action

Viewers in the multiplatform group were more likely to attribute heat waves to climate change. They also perceived greater concern about climate change among others. This matters because people often underestimate the climate concern of those around them, a form of “pluralistic ignorance” (i.e. ignorance about how commonly shared a belief is). Research consistently shows that pluralistic ignorance can discourage individual action or reduce support for climate policies.

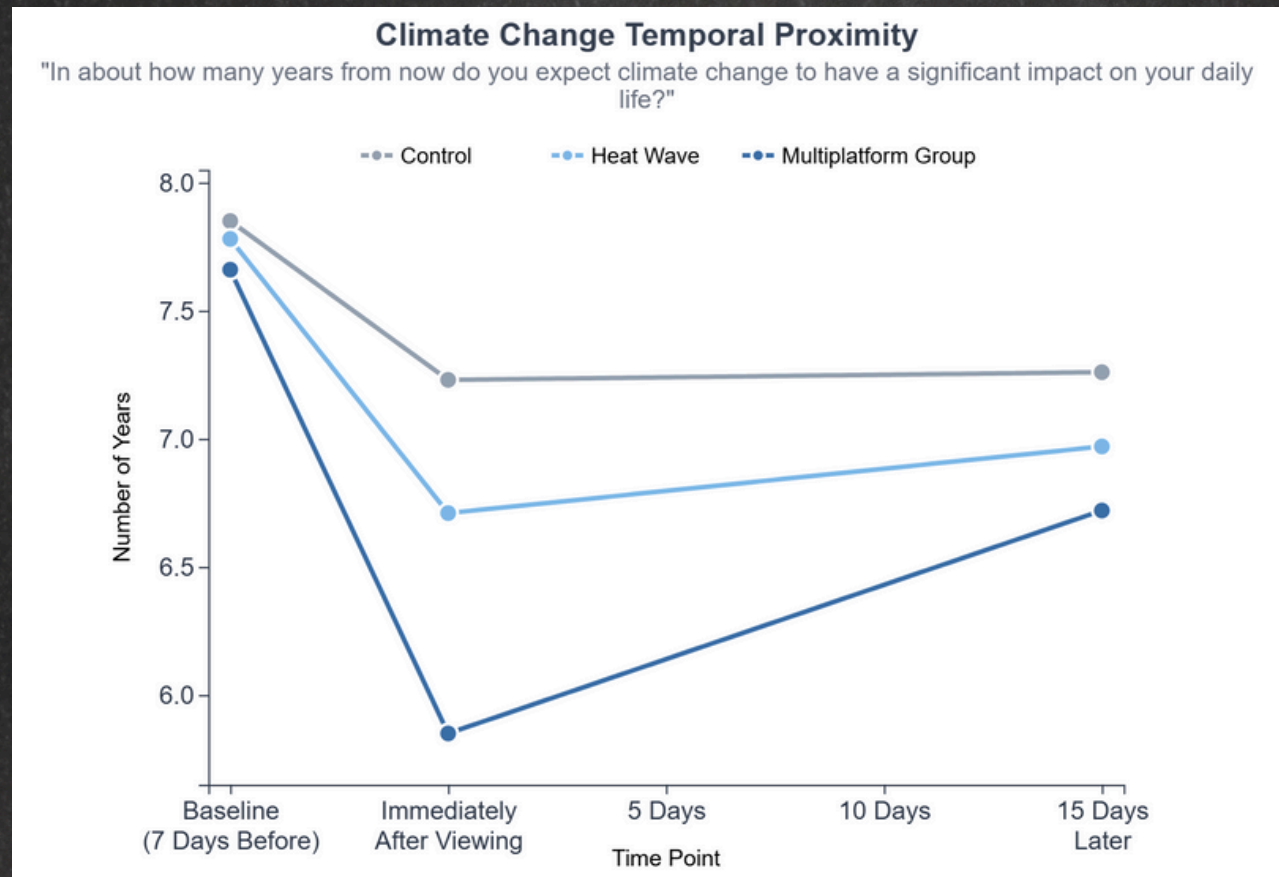
These climate attribution effects were stronger in the multiplatform condition than with the episode alone and remained statistically significant 15-20 days later, suggesting that the supplemental social media videos effectively reinforced connections between the episode’s heat wave storyline and broader climate science.

The multiplatform condition also increased support for climate action, particularly in normative beliefs (“Do you think that people should take action to address climate change because it is the right thing to do?”) and self-reported intention to take some action to address climate change in the next 12 months. These effects were modest but consistent.



Climate Change Temporal Proximity

Viewers in the multiplatform group were also more likely to believe that the impacts of climate change would affect their daily lives more imminently – over a year sooner when surveyed immediately after viewing. While we did see similar effects for the episode-only group immediately after viewing the episode, those effects did not persist when measured 15-20 days later.



It's important to note that the episode itself did not reference climate change. Given this, it is not surprising that the episode alone did not significantly increase climate attribution for heat waves or shift broader climate-related beliefs.

Impact of the Social Media Campaign on Episode's Entertainment Value

Critically, there was no significant difference between the heat wave episode only and multiplatform groups in participants' reported likelihood of recommending Grey's Anatomy after viewing the episode. The addition of impact-focused social media content did not reduce or enhance entertainment value, demonstrating that these campaigns can be added without compromising the viewing experience.

More Interview Insights

"Hearing about it is one thing, but actually seeing it, and thinking about it in terms of 'this could happen to me,' that's a different thing" - 26-year-old female, Biology Student, Texas

"[The episode] makes me realize: don't play with the weather. It's very serious, and it can cause you to experience different health issues and even death" - 24-year-old female, Cosmetologist, Arizona

"I never thought about that happening here in New York until I saw the episode. Because I'm like, 'If I'm gonna get sick, make sure it's not during the heatwave, because who knows?'" - 48-year-old male, Administrative Assistant, New York

"Some people don't really realize the depth with which...certain environmental factors can kind of lead to internal damage...I do like seeing that the episode kind of increases [knowledge] in all these aspects." - 26-year-old female, Resident Physician, New York

"[My friends] have a lot of strong opinions... But seeing [an issue] in a TV show where it's not somebody real telling them what to do or what to think, and it's just like, 'here, we're just putting this out here, and you kind of interpret it how you want'...that's definitely a way that you can reach the people that don't want to change." - 33-year-old female, Curriculum Coordinator, Florida

"If you can get a serious topic out in an entertaining way, I think probably we're all better for it." - 34-year-old female, Customer Service, Florida

Full Report

Full interactive report and supplementary materials available at: rare.org/greys-anatomy-report

Special Thanks

Rare's Entertainment Lab would like to extend special thanks to NRDC's Rewrite the Future, the Sustainable Entertainment Alliance, Green Screen, and the CAA Foundation for their contributions to this report.

The Impact of Depictions of Extreme Heat in **GREY'S ANATOMY**

Primetime in a Warming World

Can Medical Dramas Save Lives?

Full report and supplementary materials
available here: rare.org/greys-anatomy-report



Rare's Entertainment Lab brings together social science, sustainability, and storytelling to support the entertainment industry in reflecting the realities of our changing climate and highlighting the solutions all around us.

rare.org/entertainment-lab