

Episode: *Author Interview: “A Brief History of Antimicrobial Resistance”*

Guest: Devin Hunt

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Transcript: Cheryl Green

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[bright theme music]

[00:00:03] TIM HOFF: Welcome to another episode of the Author Interview series from the *American Medical Association Journal of Ethics*. I'm your host, Tim Hoff. This series provides an alternative way to access the interesting and important work being done by Journal contributors each month. Joining me on this episode is Devin Hunt, a second-year MD-PhD student at the Johns Hopkins University School of Medicine in Baltimore, Maryland. He's here to discuss his article, coauthored with Dr Olivia S. Kates, “A Brief History of Antimicrobial Resistance,” in the May 2024 issue of the Journal, [Antimicrobial Resistance](#). Devin, thank you so much for being on the podcast. [music fades]

DEVIN HUNT: Thanks so much for having me, Tim. Glad to be here.

[00:00:46] HOFF: So, what's the main ethics point that you and Dr Kates are making in this article?

HUNT: Yeah, well, I think first, it's important to recognize that the story of antimicrobial discovery, dissemination, and resistance is fairly multifaceted. And from the earliest days of discovery, researchers had to overcome difficulties associated with synthesis and scarcity, supply, demand, and the realities of complex economic and distribution systems. While most of these themes persist today, in our view, the greatest threat to antimicrobial resistance is really a problem of distributive justice. Put simply, the drugs are relatively available in high-income countries where disease burden is relatively low, and they're broadly inaccessible in low- and middle-income countries where disease burden, and therefore the need for therapeutics, is significantly higher. This problem of distribution has real-world and human consequences. For example, in our article, we reference a 2022 study published in *The Lancet* whose findings estimate that of the 1.27 million deaths attributable to antimicrobial resistance in 2019, 1 million of them occurred in low- and middle-income countries. So it's clear that while we may have wonderful drugs today, we're not getting them to the areas where they're needed most.

[00:02:03] HOFF: And so, what do you see as the most important thing for health professions students and trainees specifically to take from this article?

HUNT: Yeah, as a trainee, I spend a lot of time thinking about these sorts of problems, specifically the antimicrobial resistance crisis, because my clinical and research interests are directly related to antimicrobial resistance in infectious diseases. The one major thing that I think it's important for trainees and students to remember is that these problems aren't new, and at every step of the way, students and trainees have been

involved in this process, from graduate students directly contributing to benchtop research. In the synthesis of isoniazid, an anti-tuberculosis drug, to the discovery of streptomycin, students have been in the room. They've been major contributors to this process. And so, student involvement isn't just limited to the laboratory, although that's really what we discuss in this paper. Students with an interest in antimicrobial resistance can be changemakers at any level of this problem. They can work in the lab leading basic science of discovery, they can help to bridge the gap between the bench and the bedside, and they can serve as powerful advocates for patients, public policy, and antimicrobial stewardship. So really, there's no reason to think that students can't make a difference and help to usher in this next sort of antimicrobial era.

[00:03:15] HOFF: And finally, if you could add a point to this article that you didn't have the time or space to fully explore, what would that be?

HUNT: Yeah. Like most authors who are passionate about their subject matter, I'm sure Dr Kates and I would've desired twice the word count to tell this story. We told the story of antimicrobial resistance in the context of modern antimicrobial therapeutics. And I think we do a really good job of hitting the major highlights, but it does leave out a vast history of antimicrobials that aren't strictly limited to the allopathic tradition of Western medicine. So I think it's important to remember that the story of infectious diseases is a long one, and it's rather circuitous. And there are many other traditions of medicine that have grappled with these problems at some scale throughout history. And so, while we do a great job of summarizing the modern antimicrobial era, I wish we'd had a little bit more room to include some of those non-allopathic, non-Western histories in our paper. [theme music returns]

[00:04:13] HOFF: Devin, thank you so much for your time on the podcast today, and thanks to you and your coauthor for your contribution to the Journal this month.

[00:04:13] HUNT: Thank you.

HOFF: To read the full article, as well as the rest of this month's issue for free, visit our site, journalofethics.org. We'll be back soon with more *Ethics Talk* from the *American Medical Association Journal of Ethics*.