Episode: *Author Interview: "How High Reliability Can Facilitate Clinical, Organizational, and Public Health Responses to Global Ecological Health Risks"*

Guest: Lloyd Duplechan
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[bright theme music]

[00:00:04] 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 Lloyd Duplechan, president of the Healthcare Environment Institute and a retired hospital chief operating officer. He's here to discuss his article, "*How High Reliability Can Facilitate Clinical, Organizational, and Public Health Responses to Global Ecological Health Risks,*" in the February 2024 issue of the Journal, *Health Ecology and Disease Transmission.* Lloyd, thank you so much for being back on the podcast. [music fades]

LLOYD DUPLECHAN: Yeah, thank you so much for having me.

[00:00:46] HOFF: So, what is the main ethics point of your article?

DUPLECHAN: Well, actually, this article started out as a training PowerPoint deck that I developed for a Southern California hospital. It was instructional and designed to introduce key principles of high reliability to help guide this organization as they set out on their journey to a culture of safety and a culture of zero harm. Later, I filled in some details and submitted a rough draft to the *Journal of Ethics* for consideration for possible publication. The Journal's editor and managing director did a wonderful thing. She suggested expanding the scope and modifying the text to consider a question about high reliability organizations' roles in global health ecology. Specifically, how should high reliability organizations help clinical, organizational, and public health responses to global ecological health risks like zoological spillover, spillback, and other health threats that might be exacerbated by conditions such as poverty and climate change? From there, with some deft editing from the Journal's editorial staff, I attempted to assemble and align principles of high reliability, essentially borrowed from industry and sociology studies, with global ethical considerations as they relate to health risks the world is currently facing. And hopefully the effort and intent communicated themselves adequately through the text.

[00:02:06] HOFF: And so, what do you see as the most important thing for health professions students and trainees to take from this article?

DUPLECHAN: Methods of high reliability are designed to seek to understand system components that are, in fact, very complex and tightly coupled, and work to make systems stronger and more resilient. And it begins with an appreciation for the fact that we live and work amid delicately balanced, complex, and tightly connected systems, and as such, they're fraught with risk for failure. And the consequences of such failure can be dire, right, can be catastrophic, whether it's the Earth's vulnerable ecosystems; the mechanics of technological systems like keeping several tons of metal in the air, right; nuclear energy; clinical processes that literally drain a patient of blood, filter it, and then replace it back into the body; systems that keep a patient alive during invasive surgery; or sociopolitical systems that appear to be cracking at the seams sometimes. In fact, today's health systems have been described as complex entities governed by nonlinear interaction laws and self-organization, so recognition of these systemic complexities is imperative now more than ever, as the public health world continually crosses over into the chaos frontier, social and economic uncertainty, international conflicts, and unprecedented environmental crises.

So, the tenets of high reliability are the taproots through which systems can strengthen and a safety culture can burgeon, and organizations have to respond to local and global health risks. So, the article provides a few examples, one of which is poverty. Needless to say, COVID-19 pandemic amplified a global economic turndown. Diseases commonly associated with poverty, such as TB, malaria, AIDS, comorbid malnutrition often target the more vulnerable populations in socioeconomically marginalized areas. [00:04:02] It's important to understand that poverty is not just income deprivation, but optimism deprivation and the paucity of hopeful things. Principles of high reliability in this context can include, in particular, a preoccupation with system failure or, better still, the anticipation and prevention of failure, which includes making every effort to understand and address social determinants of health within impoverished areas and in underserved communities.

Another point is climate change is not just air-quotes "Mother Nature." Embedded within Shakespeare's *Hamlet* appears to be a harbinger of the environment. Because of man's negligence, the Earth's atmosphere is indeed rapidly becoming a "foul and pestilent congregation of vapors." In fact, in 2023, as part of filing a lawsuit against five of the world's largest oil and gas companies, California Governor Gavin Newsom said this, "Big Oil has been lying to us, covering up the fact that they've long known how dangerous the fossil fuels they produce are for our planet." A report from the Stanford Research Institute stated significant temperature changes are almost certain to occur, and there seems to be no doubt that the potential damage to our environment could be severe. Tim, get this. That report was from 1968, when environmental concerns were just starting to be part of the zeitgeist of the time. So, in this context, applying high reliability principles can include designing and implementing sustainable processes and environmental management systems, such as those fashioned after ISO 14001 standards, and the use of technologies that reflect environmental stewardship like energy management and carbon emissions reduction.

[00:05:54] HOFF: And finally, if you could add a point to your article that you didn't have the time or the space to fully explore, what would that be?

DUPLECHAN: Oh, good question. If I had the room, I would've expounded a little bit more on methods to transform an organization's culture into a culture of safety, applying some of the tools of high reliability. A folk song by the group America back in the day said, "Oz never did give nothing to the Tin Man that he didn't already have," right? What I would suggest here is that organizations already have a number of these high reliability principles at the ready, but then you have to splice the bits and pieces together to coalesce in ways that will underpin a new culture, a new way of thinking, forgetting what you know. Interweaving a culture of safety into the fabric of an organization requires a willingness to responsibly challenge assumptions, challenge the status quo, core maps, implicit bias, and an albeit often uncomfortable commitment to disruption, and a departure from the old way of doing things.

Eric Clapton said it best: "Every day the bucket goes to the well, but one day the bottom will drop out." That's from *I Shot the Sheriff*, I think. If we keep doing what we're doing, one day the bottom's going to drop out. So, I would suggest that high reliability isn't a deus ex machina, but rather a set of principles and methods that can give rise to a fundamental change in worldview, upend approaches, assumptions, and help transfigure the landscape. But to quote Rage Against the Machine, "It has to start somewhere. It has to start sometime. What better place than here? What better time than now?" [theme music returns]

[00:07:34] HOFF: Lloyd, as always, thank you for your time on the podcast today and for your contribution to the Journal this month.

DUPLECHAN: Thank you. I hope the readers like the paper.

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.*