



THE HEALTHCARE TRIAGE PODCAST

SPECIAL SERIES: SCIENCE CULTURE & REPRODUCIBILITY

Episodes Seven & Eight

Description

This podcast series focuses on the relationship between science culture and reproducibility. In the final two episodes, we discuss potential solutions to all the problems we've introduced and discussed throughout the series.

Materials needed

- A device capable of playing podcasts
- Internet connection for downloading or streaming audio
- Access to sources listed within lesson guide
- Make sure students know how to download/listen to podcasts:
 - <https://www.wired.com/story/podcasts-beginners-guide/>
- [Episode 7](#) & [Episode 8](#)

Learning goals

- Understand and discuss the solutions that have been presented in the episodes, that are contained in the resources below, or that participants in your group bring to the table.
- Discuss the ways, both good and bad, that these solutions will potentially change the culture of science and by extension, issues of reproducibility.
- Discuss the benefits (and maybe drawbacks, if you see them) of change for science, scientists, and society at large.

Suggested topics of discussion and related literature

1) Explore this [Nature series](#) on reporting principles in journals, code sharing, reducing irreproducibility, replicating findings, examining pitfalls when working with large amounts of data, and doing better in terms of sloppy mistakes.

2) Explore these resources on evaluation and metrics, and publishing and funding.

- [We need negative metrics too](#)
- [Bibliometrics: The Leiden Manifesto for research metrics](#)
- [Journal transparency index will be 'alternative' to impact scores](#)
- [Peer Review or Lottery? A Critical Analysis of Two Different Forms of Decision-making. Mechanisms for Allocation of Research Grants](#)
- [Institutionalizing the triple helix: research funding and norms in the academic system](#)

3) Is Science Broken? Probably not, but we can make it better.

- Science Isn't Broken

- Video: Towards a More Self-Correcting Science

4) 1) We spend a fair amount of time discussing the difficulties of changing this massive system. Shouldn't we spend more time talking about the benefits?

- How open science helps researchers succeed

5) Ending note:

Do We Want to Be Credible or Incredible?

Other general points of discussion:

1) How have your own experiences resonated with what our experts had to say in episodes seven and eight?

2) What are your thoughts on the proposed solutions? Any favorites? Any that you think are unfeasible? Any good ones that we didn't mention?

3) Overall, are you feeling optimistic or pessimistic about our ability to fix these issues and drive good science forward? Either way, what is contributing most to your stance on that?

4) How important do you feel it is for the scientific enterprise that we take action?

5) Does it feel possible, as individuals, to enact major changes in this system? If so, what are some concrete steps that can be taken?