THE HEALTHCARE TRIAGE PODCAST

SPECIAL SERIES: SCIENCE CULTURE & REPRODUCIBILITY

Episode Two

Description

This podcast series focuses on the relationship between science culture and reproducibility. Now that we've covered the "what" of the reproducibility crisis (in episode one), it's time to talk about the "why". Why would scientists engage in practices that compromise the integrity of science?

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 2**

Learning goals

- **Understand how incentives in academia play into behaviors that contribute to reproducibility issues in science**
- **Be able to discuss the issues with how we evaluate academic performance and what the outcomes of that are for both reproducibility and other factors such as novelty**
- **Discuss problematic understanding and use of statistics**

Suggested topics of discussion and related literature

1) Do we incentivize bad science? How?

- We're Incentivizing Bad Science
- Perverse Incentives
- Current Incentives for Scientists Lead to Underpowered Studies with Erroneous Conclusions
- Stagnation and Scientific Incentives
- Factors Associated with Scientific Misconduct and Questionable Research Practices in Health Professions Education

2) How do performance metrics contribute to the issue? Do we need to find a better way to evaluate scientific contributions?

- Reviewers are Blinkered by Bibliometrics
- Bias Against Novelty in Science: A Cautionary Tale for Users of Bibliometric Indicators
- Making Research Evaluation More Transparent: Aligning Research Philosophy, Institutional Values, and Reporting

3) How big a problem do we have with statistical misuses and misunderstandings?

- **Statistical Rituals: The Replication Delusion and How We Got There**
- **'Salami Slicing' Helps Careers but Harms Science**

Other general points of discussion:

1)How have your own experiences resonated with what our experts had to say in episode two?

2) Do you think there's a problem with our system of incentives and evaluation? How about with the ways in which we commonly use statistics? How do you feel about your own statistical training? Have you had experiences trying to address any of these issues? If so, how did that go?