Open Data @PLOS

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Open Access allows everyone to access research. Open Science and Open Data allow everyone to do research.
The Value of Research Data

- Replication/Validation
- New analysis
- Better interpretation
- Inclusion in meta studies
- Facilitate reproducibility
- Scrutiny post-publication
- Better financial and intellectual return on research investment
Probability of finding the data associated with a paper declined by 17% every year.

Vines, Timothy et al. “The Availability of Research Data Declines Rapidly with Article Age.” Current Biology (June 1, 2014)

Almost all data lost 10-15 yrs after publication.
PLOS journals require authors to make all data underlying the findings described in their manuscript fully available without restriction, with rare exception.

When submitting a manuscript online, authors must provide a Data Availability Statement describing compliance with PLOS's policy.
Exceptions

• **Ethical or legal reasons**, e.g., public availability would compromise patient confidentiality or participant privacy.

• Data deposition could present some **other threat**, such as revealing the locations of fossil deposits, endangered species, or farms/other animal enclosures etc.
Natural Tension & Resistance

https://commons.wikimedia.org/wiki/File:Water_surface_tension_2.jpg
>100,000 papers published with a data statement at PLOS

<0.1% of submissions rejected due to authors’ unwillingness or inability to share data

~20% of submissions use data repositories
Challenges

• Research areas such as clinical studies require more complex data sharing considerations and data release mechanisms. Community input is important for policy implementation.

• Data citations and mechanisms to provide author credit need to see a stronger uptake.

• Metadata of published data sets is often lacking, needs community-agreed standards.

• It is not always clear what constitutes compliance.
Thank you!