Embedding incentives for open research – a funder perspective

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Wellcome’s commitment to Open Research

• committed to ensuring research outputs (papers, data, code & materials) can be accessed and used in ways that maximise health & societal benefit

• making these outputs more widely available holds the potential to:
  – accelerate discovery and its application
  – help ensure findings can be validated and reproduced
  – increase efficiency – reduce duplication and waste

• we have been a passionate long-term advocate of open access & data sharing
Our policy

• Wellcome’s policy on Data Management and Sharing published 2007 (updated in 2010):
  – expects all researchers we fund to maximise access to research data with as few restrictions as possible
  – requires data management & sharing plan, where the research is likely to generate data of value as a resource for the community
  – commits to review and support costs of plans as integral part of grant

• challenges remain around clarifying expectations, allowable costs and post-award tracking

• currently finalising a broader outputs management policy to incorporate data, software and materials

https://wellcome.ac.uk/funding/managing-grant/policy-data-management-and-sharing
Overcoming the challenges

• there are significant hurdles to outputs sharing
  – reward and assessment structures
  – patchy repository infrastructure
  – shortage of skills and lack of career paths for data specialists
  – need for platforms and tools to enable discoverability and re-use

• different disciplines at very different places in developing resources and practices to support data sharing

• committed to working with other funders, journals researchers and institutions to address these challenges.
Running innovative pilots

Wellcome Open Research

The Open Science Prize

Pre-prints

ASAPbio  bioRxiv

THE PREPRINT SERVER FOR BIOLOGY
Developing Open Research

• Dedicated Open Research team established at Wellcome in 2017 to lead and coordinate activity

• Our work will encompass:
  – Funder-led activities – driving forward major initiatives (e.g. pre-prints and clinical trial data sharing); building the evidence base & leading in our policies and practices
  – Community-led activities – supporting researchers and innovators to develop and test cutting-edge approaches to openness; piloting discipline-specific initiatives

• Partnership & ongoing engagement with the research community at heart of our approach
Incentives & culture change – developing the evidence base

- Expert Advisory Group on Data Access report in May 2014 found that research culture and environment did not provide sufficient support nor rewards for data sharing.

- Key recommendations focused on:
  - strengthening processes for review and tracking of data management plans
  - providing more explicit recognition for high quality data outputs in key assessment processes (especially REF)
  - recognising and building career paths for data managers
  - enhancing key data resources
Incentives & culture change – developing the evidence base

- Commissioned five literature reviews in 2016 looking at key challenge areas – including incentives & skills.
- Key findings included:
  - Direct incentives to share data are weak: there are few consequences for not meeting funder mandates, and funders need to do more to support researchers and meet costs
  - Systems for data citation are emerging, but take up is limited
  - Shortage of data skills is widely highlighted, but there has been little work to quantify the scale of the gap or the effectiveness of existing training mechanisms
  - Funders could coordinate efforts more effectively and sustain training models of demonstrated effectiveness
Researcher attitudes & practices

Concerns persist around fear of misuse of data, loss of publication opportunities and resource & time required to share data...

Van den Eynden, Veerle; Knight, Gareth; Vlad, Anca; Radler, Barry; Tenopir, Carol; Leon, David; Manista, Frank; Whitworth, Jimmy; Corti, Louise (2016): Survey of Wellcome researchers and their attitudes to open research. figshare. (https://dx.doi.org/10.6084/m9.figshare.4055448.v1)
Enhancing incentives: ideas for cross-funder activities

1. Sign up to and implement the San Francisco Declaration on Research Assessment (DORA):
   - be explicit about the criteria used in evaluating scientific productivity and clearly highlight that the scientific content of a paper is much more important than publication metrics or identity of the journal
   - consider the value and impact of all research outputs (including datasets and software) in addition to publications, and consider a broad range of impact measures including qualitative indicators, such as influence on policy and practice
Enhancing incentives: ideas for cross-funder activities

2. Change funder grant application processes:
   - ask applicants to focus on a small number of publications or discoveries and explain their significance
   - ask applicants to describe research outputs other than journal articles
   - introduce an ‘Open Research’ question – asking applicants how they support and practice open research

“Our department embraces the values of open science and strives for replicable and reproducible research. For this goal we support transparent research with open data, open material, and pre-registrations. Candidates are asked to describe in what way they already pursued and plan to pursue these goals.”

http://www.nicebread.de/open-science-hiring-practices/
Enhancing incentives: ideas for cross-funder activities

3. Develop and support community-wide solutions
   - change citation practices: awarding authorship credit to researchers who share data; incentivising replication studies through citation
   - develop an international badging system to support and recognise ‘open’ behaviour – building on the model trialled in *Psychological Science* and existing badges (e.g. ImpactStory)

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https://osf.io/tvyxz/wiki/home/
Closing thoughts

• funders are committed to maximising the value of research outputs – including data, software and materials

• working to strengthen implementation of policies – providing guidance and meeting the costs

• embedding incentives and changing broader research assessment processes is absolutely critical to open research

• wish to encourage innovation and experimentation in open research – including around incentives and training

“Production of open research data should be acknowledged formally as a legitimate output of the research process and should be recognised as such by employers, research funders and others in contributing to an individual’s professional profile in relation to promotion, research assessment and research funding decisions.”

http://www.rcuk.ac.uk/documents/documents/concordatonopenresearchdata-pdf/
Any Questions?