Open Research Questionnaire – Wellcome Trust grant holders

You are invited to participate in this Wellcome Trust funded survey investigating the current attitudes and actual practices of researchers to open research, the barriers that inhibit or prevent researchers from practising open research, and the measures that Wellcome Trust could take to mitigate these barriers. We define open research as the sharing and reuse of research outputs, in particular research data, articles and code.

This survey will provide essential baseline information for Wellcome to inform its emerging thinking for advancing open research - helping to ensure that its strategy enhances the research enterprise and meets the needs of its research communities. It equally provides solid research evidence on this topic.

Even if you do not share your data or outputs we would like you to take part in this survey.

Your participation in this survey is voluntary and will not influence any future Welcome Trust funding. By completing the survey you agree with your anonymous responses being used by the project team for research purposes. Information will not be used in a manner that would allow identification of you or your responses. De-identified data will be placed in the UK Data Service ReShare repository for future reuse.

If you have any questions about this research project, contact Veerle Van den Eynden, UK Data Service or Gareth Knight, London School of Hygiene and Tropical Medicine (email details provided in your invitation email).

This survey will take about 20 minutes to complete.

We recommend not using small mobile devices as some questions might overflow on a small screen.

YOU AND YOUR RESEARCH

Q1.2 Which of the following best describes your current position as a researcher?

- Graduate student (PhD) (1)
- Researcher (incl. post-doc) (2)
- O Lecturer / reader / professor (3)
- O Other (please specify) (4) _____

Q1.3 Would you describe yourself as primarily:

- **O** A basic biomedical scientist (1)
- **O** A clinician or clinical researcher (2)
- **O** A population or public health researcher (3)
- **O** A humanities researcher (4)
- **O** A social science researcher (6)
- Other (please specify) (5)

Q1.4 How many years have you been working in research? (write number)

Q1.5 In which country do you mainly carry out your research? (dropdown selection list)

Q1.6 Which methodologies do you apply in your research? (select all that apply)

- □ Qualitative (interview, focus group,...) (1)
- Survey (2)
- Observation (20)
- Experiment (clinical, trial,...) (9)
- □ Secondary analysis / meta-analysis (16)
- □ Simulation (17)
- Other (please specify) (19) _____

Q1.7 Besides the Wellcome Trust, who else has funded your research in the last 5 years? (select all that apply)

- D Public research funders (e.g. research councils) (1)
- Private research funders (2)
- □ Charities / not for profit organisations (3)
- Industry (4)
- □ My institution (5)
- □ No other funder (6)
- Other (please specify) (7) _____

PUBLISHING

	Not at all important (51)	Slightly important (52)	Moderately important (53)	Very important (54)	Extremely important (55)
Journal impact factor (1)	О	O	0	О	O
Journal reputation (2)	О	C	O	О	O
Audience of journal (3)	O	O	O	О	O
Journal has high quality peer review process (4)	o	О	О	o	O
My peers publish in this journal (5)	О	О	О	О	Ο
Short time from submission to publication (6)	0	О	О	О	O
I can publish for free (7)	0	О	О	О	O
Low cost of publishing (8)	О	О	О	О	O
Journal makes article Open Access to all readers immediately (9)	o	О	О	О	О
Journal expects supporting data to be available (10)	o	O	О	О	O
Other (elaborate) (11)	О	О	O	О	O

	delet neuse nute the importance of the following neutors when selecting papers to read and elterin your research					
	Not at all important (1)	Slightly important (2)	Moderately important (3)	Very important (4)	Extremely important (5)	
Journal reputation (1)	O	O	O	О	O	
Author reputation (2)	O	O	O	О	O	
Content quality of paper (3)	О	О	Ο	О	О	
Paper available as Open Access (from journal or repository) (4)	о	О	О	о	О	
Paper available through institutional subscription (5)	О	О	О	О	o	
Data that underpin paper are available (6)	О	О	О	О	О	
Other (elaborate) (7)	О	O	O	О	О	

Q2.2 Please rate the importance of the following factors when selecting papers to read and cite in your research

Q2.3 How many peer-reviewed journal papers (approx) have you published in the last 5 years? (write number)

Q2.4 How many of these papers (approx) did you make Open Access? (write number) (publishing in an OA journal, publishing in a journal that can make individual articles OA, or self-archiving your manuscript in a repository)

Answer If How many peer-reviewed journal papers (approx) have you published in the last 5 years? (write num... Text Response Is Greater Than 0

Q2.5 Focusing on your papers that are NOT Open Access, what are your reasons for not making them Open Access? (select all that apply)

- □ No funding to pay article processing charges (APCs) (1)
- Chosen publisher does not facilitate Open Access publishing (2)
- Department/research community discourages Open Access publishing (3)
- Lupload my papers to a social network platform such as ResearchGate, Academia.edu, Mendeley (4)
- □ Not applicable as all my papers are Open Access (6)
- Other (please specify) (5) ____

Answer If How many peer-reviewed journal papers (approx) have you published in the last 5 years? (write num... Text Response Is Greater Than 0

Q2.6 In the last 5 years, have you (or someone on your behalf) used Wellcome Trust funding to cover article processing charges (APC) for papers resulting from Wellcome Trust?

- O Yes (1)
- O No (2)
- O I don't know (3)

Q2.7 The Wellcome has just announced that it is launching a new publishing platform – Wellcome Open Research – that will allow its researchers to rapidly publish any results they think are worth sharing. Of the factors listed below, please assess their importance with regard to encouraging you to publish your research findings on this platform.

	Not at all	Slightly	Moderately	Very important	Extremely
	important (1)	important (2)	important (3)	(4)	important (5)
All articles are open access (1)	О	О	О	О	O
Underlying data are available alongside article (2)	0	О	О	о	o
Peer review process is open and transparent (3)	o	О	o	O	O
Peer review process is author- led (4)	O	О	О	О	O
Platform allows publishing all my research outputs including research articles, datasets, case reports, protocols, and null and negative results (5)	О	О	О	Э	Э
Publishing on this platform demonstrates my commitment to openness and transparency (6)	O	О	О	О	O
As the platform is Wellcome branded I have confidence that outputs here will be reviewed in researcher assessment exercises (7)	Э	О	Э	Э	Э
Open Access costs are met directly by Wellcome (8)	0	о	О	о	o

Q2.8 Which extra features do you think should be provided in future research publication systems? (select all that apply)

- Online publication of preprints that can later be submitted to a journal (1)
- Usibility of preprint revisions (2)
- Dest-publication peer review by invited reviewers (review after online publishing) (3)
- Dest-publication peer review by volunteers (review after online publishing) (4)
- Ability to see reviewer comments (open peer review) (5)
- D Portable peer review systems: peer review comments are passed between journals (6)
- Commentary and discussion forum for published papers (7)
- D Post-publication version control (8)
- Data visualisation features integrated in the paper (9)
- Compulsory data sharing statements (12)
- Article-level metrics (13)
- Other (elaborate) (14) ______

Q2.9 In just a few words, what single thing would encourage you to publish more of your work in fully Open Access journals?

Q2.10 In just a few words, what would you change about the scholarly publishing system if you were able to?

DATA SHARING PRACTICES

Q3.1 Choose the (multiple) characteristics that describe the kind of research data you generate (select all that apply)

Quantitative data (numeric files, survey responses, geospatial,...) (1)

- Qualitative data (interview, focus groups, field notes, images, audio, video,....) (2)
- Omics data (3)
- Imaging data (4)
- Disclosive data that are difficult to anonymise (5)
- Commercially sensitive data (6)
- Longitudinal data (7)
- □ I do not produce data in my research (8)
- □ Other (please specify) (9) _

If I do not produce data in my... Is Selected, Then Skip To End of Block

Q3.2 In the last 5 years how many datasets have you made available to the research community through a repository, data archive, journal, project website, online database or other online form? (write number)

If In the last 5 years how man... Is Equal to 0, Then Skip To What do you see as barriers to making...

Q3.3 What amount of data did you make available? (select all that apply)

- □ Full dataset from a research project (1)
- □ Subset of full dataset (2)
- □ Subset linked to a publication (3)
- Other (please specify) (4) _____

Q3.4 What access level did you set for these data? (select all that apply)

- Open Access (1)
- Access restricted to immediate collaborators (2)
- □ Access restricted to registered users (3)
- Access upon request via application (4)
- Other (please specify) (5) _____

Q3.5 In which repositories or databases have you made these data available? (and provide names)

- Institutional (1) _____
- Community/disciplinary (2) ______
- Generic e.g. figshare, Zenodo, Dryad (3) ____
- Private repository or website (only for my study) (4) _____
- I don't know (6)
- Other (5) ______

Q3.6 How important are these reasons for you to make data available in a repository, data archive, journal, project website or other online form?

	Not at all important (1)	Slightly important (2)	Moderately important (3)	Very important (4)	Extremely important (5)
My funder requires me to share my data (1)	О	О	О	О	O
Journal expects data underpinning findings to be accessible (2)	о	о	о	о	O
My research community expects data sharing (3)	о	о	о	О	O
It is good research practice to share research data (4)	о	о	о	О	O
It enables collaboration and contribution by other researchers (5)	o	O	O	о	O
It has public health benefits, e.g. disease outbreaks (6)	О	О	О	O	O
Ability to respond rapidly to public health emergencies (7)	о	о	о	о	O
Ethical obligation towards research participants to maximize benefits for society (8)	О	О	О	О	о
Contributes to academic credentials (9)	о	о	о	о	o
Enables validation and /or replication of my research (10)	O	О	О	o	o
Improved visibility for my research (11)	О	О	О	О	o
I can get credit and more citations by sharing data (12)	О	О	О	O	O
Other (elaborate) (13)	O	О	О	О	O

Q3.7 What benefits have you personally experienced from making your research data available? (select all that apply)

- Career benefits (1)
- More publications (2)
- Higher citation rate (3)
- New collaborations (4)
- □ More funding opportunities (5)
- □ Financial benefit (6)
- New patents (7)
- □ Improvements to public health (8)
- □ Use in health emergencies (9)
- None (10)

Other (please specify) (11) _____

Q3.8 Have you had any bad experiences from making data available to other researchers?

- O Yes (please describe) (1)
- O No (2)

Q3.9 What do you consider to be barriers to making your research data available?

	Not at all	Slightly important (2)	Moderately important (3)	Very important (4)	Extremely
I may lose publication opportunities if I share data (1)	important (1)	O	O	(4) O	important (5)
Other researchers may misuse or misinterpret my data (2)	О	О	О	O	О
I have insufficient skills to prepare the data (3)	О	О	О	О	О
It requires time/effort to prepare my data for deposit (4)	о	О	О	О	O
I do not have sufficient funding to prepare data for sharing (5)	O	О	О	О	о
I do not have permission (consent) from my research participants to share data (6)	о	О	О	о	о
Data contain confidential / sensitive information and cannot be de- identified (7)	О	О	О	о	о
My data are commercially sensitive or has commercial value (8)	О	О	О	O	о
There are third party rights in my data (9)	O	O	O	О	O
No suitable repository exists for my data (10)	О	О	О	О	O
Country-specific regulations do not allow sharing (11)	О	О	О	O	О
Other (elaborate) (12)	О	O	О	О	O

Q3.10 What would motivate you to make (more) data available in a repository, data centre or other online form? (select all that apply)

- □ Financial incentive from my institution (1)
- □ Extra funding to cover the costs (2)
- □ Enhanced academic reputation (3)
- Data access metrics (4)
- □ Knowing how other people use my data (5)
- □ Co-authorship on papers resulting from reuse (6)
- □ Case study that showcases my data (7)
- Data deposit leads to publication of a data paper (8)
- □ It is looked on more favourably in funding and promotion decisions (9)
- Evidence of data citation (10)
- $\hfill\square$ Ability to limit data access to specific purposes or individuals (11)
- □ Assistance from institutional/funder staff to prepare data (12)
- Nothing (13)
- Other (elaborate) (14) _____

Q3.11 Overall, what one or two key things could Wellcome do to help you make more data available in a repository or other online form? (we will explore this topic in more detail in focus group discussions; please sign up at the end of the survey if you want to be part)

DATA REUSE

Q4.1 How have you used existing data in your research? (select all that apply)

- □ Research validation (1)
- Replication (2)
- Meta-analysis (3)
- □ Background or context to my research (4)
- Develop my methodology (5)
- Baseline data (6)
- Teaching material (7)
- New analysis (8)
- □ I have not used existing data (9)
- Other (please specify) (10) _____

If I have not used existing data Is Selected, Then Skip To End of Block

Q4.2 Where do you obtain existing data to use in your research? (select all that apply)

- □ Institutional repository (1)
- Community/disciplinary repository (2)
- Generic repository e.g figshare, Zenodo, Dryad (3)
- □ From colleagues (4)
- **Upon request from the data creator (5)**
- Other (please specify) (6) _____

Q4.3 What is important when using existing data? (select all that apply)

- Data are obtained from a reputable source (1)
- Papers exist based on the data (2)
- High quality data (9)
- Dataset is well documented (3)
- Reuse rights are clearly defined (4)
- Data can be cited (5)
- Data are openly accessible (6)
- Access is immediate (7)
- Other (elaborate) (8) _____

CODE SHARING PRACTICES

Q5.1 Are you producing code in your research (e.g. Stata do files, Perl scripts, source code, R analytical code, syntax, algorithms, software, simulation models) ?

• Yes (1)

O No (2)

If No Is Selected, Then Skip To End of Block

Q5.2 In the last 5 years, how many code packages/bundles have you made available to the research community in a repository or via another online form? (write number)

If In the last 5 years, how ma... Is Equal to 0, Then Skip To What do you consider to be barriers t...

Q5.3 In which repositories have you made this code available? (and provide names)

- Institutional (1) _____
- Community/disciplinary (2) _____
- Generic e.g. GitHub, BitBucket, GitLab, LaunchPad.net, Assembla.com, SourceForge (3)
- Private (only for my study) (4) ______
- Don' know (6)
- Other (please specify) (5) ______

Q5.4 How important are these reasons for you to make code available in a repository of other online form?					
	Not at all important (1)	Slightly important (2)	Moderately important (3)	Very important (4)	Extremely important (5)
My funder requires me to share my code (1)	O	О	О	О	O
Journal expects code to be accessible (2)	О	О	О	О	O
My research community expects code sharing (3)	O	О	О	О	O
It is good research practice to share code (4)	О	О	О	О	О
To enable collaboration and contribution by other researchers (5)	O	О	O	О	o
Contributes to my academic credentials (6)	О	О	О	О	о
Enables validation of my research (7)	O	О	О	О	O
Enables replication of my research (8)	О	О	О	О	o
Improved visibility for my research (9)	о	О	О	О	o
I can get credit and more citations by sharing code (10)	О	О	О	О	o
Other (elaborate) (11)	O	O	О	О	O

Q5.4 How important are these reasons for you to make code available in a	repository or other online form?

Q5.5 What benefits have you personally experienced from making your code available to other researchers? (select all that apply)

- □ Career benefits (1)
- More publications (2)
- □ Higher citation rate (3)
- □ New collaborations (4)
- □ More funding opportunities (5)
- □ Financial benefit (6)
- New patents (7)
- □ Improvements to public health (8)
- **Use in health emergencies (9)**
- None (10)
- Other (please specify) (11) _____

Q5.6 Have you had any bad experiences from making code available?

O Yes (please describe) (23)

O No (24)

	Not at all important (1)	Slightly important (2)	Moderately important (3)	Very important (4)	Extremely important (5)
Desire to patent (1)	О	О	О	О	C
Protecting intellectual property (2)	Ο	О	О	О	О
Software and systems dependencies (3)	0	О	О	O	О
I may lose publication opportunities if I share code (4)	0	o	О	0	о
Other researchers may misuse or misinterpret my code (5)	0	0	О	о	O
I have insufficient skills to prepare the code for public use (6)	0	o	О	0	о
It requires time/effort to prepare my code for deposit (7)	0	o	О	o	о
I do not have sufficient funding to prepare code for public use (8)	0	o	О	o	о
My code has commercial value (9)	о	о	О	о	O
There are third party rights in my code (10)	о	о	О	О	o
No suitable repository exists for my code (11)	o	О	О	О	O
Other (elaborate) (12)	•	О	О	O	O

Q5.7 What do yo	ou consider to be	barriers for you t	o make code available?
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Q5.8 What would motivate you to make (more) code available in a repository or other online form? (select all that apply)

- □ Financial incentive from my institution (1)
- □ Extra funding to cover the costs (2)
- □ Enhanced academic reputation (3)
- Code access and metrics (4)
- □ Knowing how others use my code (5)
- Co-authorship on papers resulting from reuse (6)
- □ Case study that showcases my code (7)
- □ It is looked on more favourably in funding and promotion decisions (8)
- Evidence of code citation (9)
- Assistance from institution/funder staff to prepare code (10)
- Nothing (11)
- Other (please specify) (12)

Q5.9 Overall, what one or two key things could Wellcome do to help you make more code available in a repository or other online form? (we will explore this topic in more detail in focus group discussions; please sign up at the end of the survey if you want to be part)

CODE REUSE

Q6.1 Have you used existing code in your research?

- **O** Yes (1)
- O No (2)
- O Don't know (3)

If Yes Is Selected, Then Skip To Where do you obtain existing code to ... If No Is Selected, Then Skip To End of BlockIf Don't know Is Selected, Then Skip To End of Block

Q6.2 Where do you obtain existing code to use in your research? (select all that apply)

- □ Institutional repository (1)
- □ Community/disciplinary repository (2)
- Generic repository e.g figshare, Zenodo, Dryad (3)
- From colleagues (4)
- Upon request from the data creator (5)
- Other (please specify) (6) _____

Q6.3 What is important when using existing code? (select all that apply)

- Code is obtained from a reputable source (1)
- Papers exist based on the code (2)
- Code is well documented (3)
- **Q** Reuse rights are clearly defined (4)
- Code can be cited (5)
- Code is openly accessible (6)
- Access is immediate (7)
- Other (please specify) (8) ______

FOCUS GROUPS

Q7.1 Please provide any additional comments or ideas on open research not covered in your responses to the questions above.

Q7.2 We will hold follow-up focus group discussions in late August - early September 2016, both face-to-face and via videoconference, to discuss practical actions the Wellcome Trust can take to remove or mitigate barriers to open research and maximise the opportunities for practising open research. If you would like to participate, please provide your email address to invite you.