

Research data: To share or not to share?

Michelle Krahe¹, Julie Toohey², Malcolm Wolski³, Paul Scuffham⁴, Sheena Reilly¹

1. Health Group, Griffith University, Gold Coast, Australia;
2. Library and Learning Services, Griffith University, Gold Coast, Australia;
3. eResearch Services, Griffith University, Nathan, Australia;
4. Menzies Health Institute Queensland, Griffith University, Gold Coast, Australia

Setting the Scene:

It is well accepted that data sharing facilitates the progress of research and is vital towards science that is open; where data is easily accessible, intelligible, reproducible, replicable, and verifiable. Despite the extensive benefits of data sharing, it is yet to become common practice among health and medical researchers. Evidence-based interventions that aim to encourage sharing and reuse of research data are lacking.

Objective:

- This study aims to:
- Describe the current data sharing behaviours of researchers.
 - Identify the enablers and barriers to data sharing practices.
 - Characterise intervention functions likely to improve sharing practices.

Methods:

Participants were drawn from a research institute at Griffith University, Australia and invited to complete an anonymous online survey. Data were mapped onto the theoretical domains framework (TDF) and the COM-B model (capability, opportunity, motivation and behaviour) [1, 2] to emerging themes related to data sharing and characterisation of behavioural functions that can be easily targeted by specific interventions. Participation in the study was voluntary and approved by the Human Research Ethics Committee of Griffith University.

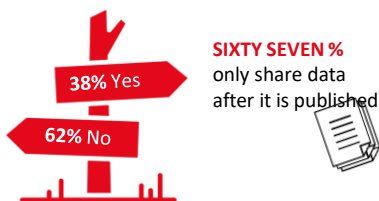
1. Cane J, O'Connor D, Michie S (2012) Validation of the theoretical domains framework for use in behavior change and implementation research. *Implementation Science* 7(37);
2. Michie S, van Stralen M, West R (2011) The behavior change wheel: A new method for characterizing and designing behavior change interventions 6(42).

Data Sharing Behaviours of Health and Medical Researchers

In total, responses from sixty-five researchers were included in the analysis. The majority were members of academic staff (69%); 25% were research fellows or research assistants and the remaining were adjunct staff (6%). All researchers are affiliated with the Faculty of Health most belonging to the School of Medical Sciences or Medicine (41.6%). Nearly 25% of the cohort considered themselves early-career researchers and 60% had worked in research for more than 10 years.

Sharing Behaviours

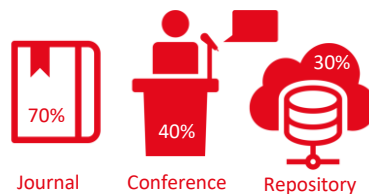
Who Shares Data?



Why is Data Shared?

78% Collaboration with Colleagues	70% Founding or Journal Req.
39% Advance Knowledge	40% Increase Impact and Visibility
40% Public Benefit	

How is Data Shared?



Factors That Influence Sharing Behaviours

Ten themes were identified to influence the data sharing behaviours of health and medical researchers.

Behaviours To Target For Change

BARRIERS

- Knowledge**
Lack of understanding of the data sharing process
- Skills**
Not knowing how, where and who to share with
- Resources**
No time or resources to prepare data for sharing
- Capability**
Not knowing who is responsible for sharing
- Consequence**
Not understanding how to protect confidentiality
- Consequence**
Worried about IP being stolen, misinterpreted or misused

ENABLERS

- Consequence**
Having trust in the person requesting data
- Social Influence**
Recognising the public or patient benefit
- Professional Identity**
Receiving credit or increased visibility
- Environmental Context**
A funding, journal or Institutional requirement

A Sharing Future

We will apply and evaluate a series of evidence-based intervention functions that have been specifically designed to target barriers and enablers to data sharing.

Key Outcomes:

- ✓ This study provides a systematic and theoretically-based approach to designing interventions that will promote data sharing practices among health and medical researchers.
- ✓ Using the Behavior Change Wheel (BCW) we have identified the most effective functions to promote enablers and mitigate barriers of researcher data sharing behavior's.
- ✓ For example, to address the behaviour associated with knowledge the BCW identifies education, training or enablement interventions as effective functions.

For more detail about this study contact
Michelle Krahe
m.krahe@griffith.edu.au