Working with Sensitive or Confidential Research Data

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Our Focus Today

• Are you creating or using existing data
• Protecting all your data
• Aware of appropriate strategies
• Aware of the support at Oxford
• Focus is on your needs: introductions?
Types of Data

- Numerical - Text based - Audio Visual
- Each are representations of information that may be confidential
- Goal: understand
  - **Why** your data is considered confidential or sensitive in some way
  - **Impact** of this on research process
  - **How** you manage and **preserve** it
Consider Reasons

• Why confidential?
• Because of content?
  • Broadly two types

OR

• Framework in which data is used
  • Undertakings given to research participants
  • Funder or institutional requirements

All of the above?
Particular Content

- Consent agreement or legislation define it
- **Specific** sections are confidential
  - Example; survey data where post codes have been collected as one of the variables
  - Example; Interview data that includes names and accounts of illegal activity
  - Example; Information defined as confidential by the participant
- Opens up possibility of tagging
- Editing / ‘Anonymisation’ (framework)
Handling Particular Content

In practice;

• Security during collection and handling paramount
• More options on reducing sensitivity of future versions
• ‘Safer’ preservation copy
  • ‘safer’ in what sense?
General Content

• Subject matter as a whole is sensitive or confidential
• Non-sensitive elements cannot be separated
• Everything has to be dealt with in the same way
• Editing not appropriate
• Consent agreement or legislation play a role
Handling General Content

In practice;

• Security during collection and handling paramount
  • More so perhaps – throughout data use

• Fewer options on reducing sensitivity of future versions

• Judgement of researcher

• Greater responsibility on researcher
  • Demonstrate this is the case
Content and Stakeholders

• Not just about content but also stakeholders in the research process

• Who are the concerned parties?
  • Project Participants – supplying the information
  • The audience – for the information and related analysis
  • The researcher – who will gain or lose based on how it is used and received
  • See Cybersecurity article on live data options
Better Insight

- Understanding reasons your data is confidential helps you make best use of it
  - In current project
  - Gain ethical approval/ curec
  - In the future
    - Retaining
    - Depositing
    - Sharing
Consent Undertakings

• Help ensure participation BUT also define interests of stakeholders

• Avoid agreements that are too restrictive – don’t make unnecessary promises – negotiate!
  • “only to be used by this researcher” - “will be destroyed” - “no one else will read”

• Useful Informed Consent?
  • Undertakings need to encourage participation
  • Protect everyone involved
  • Create trust
  • Pilot/ trial your agreements
  • [Website 1]
  • [Website 2]
Support at Oxford

- Research Data Oxford platform
- Bodleian Libraries
- Research Services – CUREC etc.
- IT Services
- Infosec
- Departmental or College IT
Data Storage or preservation?

• Securely holding the data is key
  • But only one part (see HFS handout)

• Enabling efficient access for you
  • Short term
  • Long term
  • Encryption / disaster planning

• Managing data
  • Version control
  • Honouring agreements made
  • Storage becomes active preservation
Legal Regulation

• Data Protection Act

• General Data Protection Regulation (EUGDPR) 2018
  • Research occupies a privileged position within the Regulation. Organizations that process personal data for research purposes may avoid restrictions on secondary processing and on processing sensitive categories of data (Article 6(4); Recital 50). As long as they implement appropriate safeguards, these organizations also may override a data subject’s right to object to processing and to seek the erasure of personal data (Article 89).
  • Also learn from commercial sector (see handout)
Three Main Approaches

Managing data during and after a project

• Destruction
  • Requires good reasons
  • Wasteful

• Anonymisation
  • Clearly defined
  • Time consuming and imperfect

• Access Restriction
  • Leaves content intact
  • Needs active management
Blurring, Masking or Anonymisation

• During and after a project
• **Light** touch; limited key identifiers e.g. Names and addresses only
• Replacement / Pseudonyms – data blurring
• Aggregation – fine grain detail/numbers removed
• Randomised sampling
• Effectiveness tests?
  • Singling out
  • Linkability
  • Inference
Blurring, Masking or Anonymisation

- Perhaps best used for **particular content**
  - Removing columns from spreadsheets
  - Specific names/words in transcripts
- But an imperfect solution – too blunt a tool?
- Dangers of data degradation or distortion
- ICPSR Guidance - [www.icpsr.umich.edu/icpsrweb/deposit/index.jsp](http://www.icpsr.umich.edu/icpsrweb/deposit/index.jsp)
- UK Data Archive Guidance - [https://www.ukdataservice.ac.uk/manage-data/legal-ethical/anonymisation](https://www.ukdataservice.ac.uk/manage-data/legal-ethical/anonymisation)
- UK Anonymisation network - [//ukanon.net/](http://ukanon.net/)
Restricting Access

• Anonymisation allows wide access to less data (ie by removing content) post project

• An alternative approach is to leave content but make access harder
  • E.g. Microdata from Eurostat
  • Vetting of access from UKDS
  • Requires clear access and usage conditions
  • Restrict what content may be reproduced
  • Introduce embargoes (last resort)
Restricting Access

• During and after a project?
  • Data security

• Best used for general content confidentiality?

• Effective or credible policing of restrictions needed

• Both approaches can increase usage potential of data but require planning from the beginning
Effective Handling and Use

- Document the research process
  - Metadata that captures decisions and clear requirements
  - How sensitive data is managed and processed
- Pilot consent paperwork
- Think about what could go wrong!
  - Collecting inappropriate data
  - Hardware /software failure
  - Security – breaches - theft
  - Managing *accusations* of disclosure
What next?

• Seek support and advice
• Check out RDO platform
• Final Questions??
Welcome to the Research Data Oxford website

About RDM
Overview of research data management and funder policies.

Working with data
Data management day-to-day and at the project planning stage.

Sharing data
Sharing, licensing, depositing, and citing your data.

ORA-Data

Not sure if you’re ready?
See the Pre-deposit checklist

Tools, services, and training

Research data glossary

Oxford research data blog

Recent blog posts