

Guidelines on Good Practice in Research

Author: The University's Research Integrity Manager, Research and Innovation Services (RIN) with the University Research Ethics Committee (UREC), working from the document approved by Senate in November 2017.

Date: 17th April 2019 (Approved by Senate 5th June 2019)

Original - July 2003; updated April 2006, November 2009, February 2012, November 2015, November 2017.

Version	Date	Notes
5	09/07/2015	Scheduled review and updates in light of the <i>Concordat to Support Research Integrity, Open Access Policy, Research Data Management Policy</i> and comments received from individual staff. Approved by Senate (SEN15D007) on 4 th November 2015.
6	05/07/2017	Scheduled biennial review and updates in light of the <i>Concordat on Open Research Data</i> , the University's new <i>Policy for Approving the Integrity of UEA Research and Innovation Related Activities and Funding</i> , and comments from the University Research Ethics Committee, and Research Executive on 15 th June 2017. Approved by Senate (SEN17D012) on 8 th November 2017.
7	17/04/2019	Scheduled biennial review and updates in light of the new Data Protection Act 2018 and General Data Protection Regulation, the University encouraging researchers to have an ORCID identifier and making their research data (including computer code used to prepare and analyse data) openly available, clarifying delegated authority, and comments from the University Research Ethics Committee. The document has been reformatted to address the UEA standard for layout and certain verbal forms.

Background

As a University committed to excellence in the quality of the research our staff and students undertake, it is essential to have guidelines on good practice in research as part of our framework to support the integrity of our research.

These Guidelines serve both as a means of developing and supporting a culture of good practice in research and demonstrating to the organisations which the University works with, that it is committed to a culture and environment where high standards of personal and professional conduct are encouraged and expected.

Review

These Guidelines will be reviewed and updated by the University Research Ethics Committee

and recommendations will be made to the University Research Executive, and thereafter to Senate before 31st July 2022.

Content

Part A. The Principles of Good Research Practice	3
Part B. Management of Good Research Practice	4
Part C. Research Results	8
Part D. Exploitation and Protection of Intellectual Assets	11
Part E. Professional, Clinical and Ethical Practice	11
Part F. Research Misconduct	12

In this document, the following verbal forms are used:

- “shall” and “must” indicate a requirement;
- “should” indicates a recommendation;
- “may” indicates a permission;
- “can” indicates a possibility or a capability.

Part A. The Principles of Good Research Practice

Introduction

- A1 Honesty, openness, accountability and integrity are vital qualities for any academic researcher no matter what their discipline or level of experience. The University of East Anglia needs to ensure that all research it supports is carried out in a climate where high standards of personal conduct are encouraged and expected. The University expects all staff and students engaged in research to act with the highest standards of integrity irrespective of the source from which their post or research is funded.
- A2 The term 'research' has been used throughout this document to refer to all aspects of the research process including outlining or drawing up a hypothesis, preparing applications for funding, protocol design, project set up and management, generating data, data recording and analysis, writing-up and publishing and other forms of disseminating results including knowledge exchange and impact generating activities.
- A3 This document provides guidance on the issues involved in the proper conduct of research, and on the standards expected. Whilst detailed aspects of these Guidelines are more applicable to some subject areas or groups of people than others, the principles of good research practice are relevant to all subject areas.
- A4 These Guidelines apply to **all** researchers:
- academic, research and relevant support staff employed by the University, and other individuals carrying out research at, or on behalf of, the University;
 - all students (undergraduate, post-graduate taught, post-graduate research) undertaking research and their supervisors;
 - any persons with honorary positions conducting research within, or on behalf of, the University;
 - and the University also expects ethical oversight of research undertaken by any institution utilising UEA resources. This would/could include the University as a site for data collection.
- A5 These Guidelines should be read in conjunction with the University's other policies and guidelines available to researchers which relate to research integrity issues, and the University's range of Research Ethics Guidance Notes. These documents are available on the Research and Innovation Services' (RIN) Research Integrity webpages.

Principles of Good Research Practice

- A6 It is important that a culture of honesty, integrity, openness and accountability in research be fostered and maintained. The University cannot be prescriptive about approaches taken by individuals to solving particular research problems. However, in the conduct of all research, the University expects the following general principles to be understood and observed by all researchers:
- maintaining open and honest professional standards;

- ensuring leadership, organisation and cooperation in research groupings;
- balancing the allocation of resources to support the University's research commitments at all levels and stages;
- taking special account of the needs of inexperienced researchers;
- planning and conducting research in accordance with the requirements of funders and the University and all relevant codes of practice, legislation and regulatory bodies;
- having regard for the legal obligations of the University and those that have delegated authority to accept such legal responsibility on behalf of the University;
- documenting fully results and any research material used, questioning one's own findings and acknowledging honestly the contribution of others;
- ensuring data is stored, shared, made accessible, preserved and disposed of in an appropriate and responsible manner;
- ensuring the results of the research are disseminated widely and made open access, wherever possible and in line with meeting the other principles;
- taking appropriate measures to protect intellectual property;
- being honest about conflict of interest issues;
- following best current professional, clinical and ethical practice.

Any proposed research whether externally funded or not needs to be consistent with the University's stated goals of integrity and ethical practice. These are set out in the University's *Policy for Approving the Integrity of UEA Research and Innovation Related Activities and Funding*, which also provides a procedure to be followed where there are any issues of doubt arising from considerations prior to any approval of activity or acceptance of funding.

Part B. Management of Good Research Practice

Professional Standards

- B1 Honesty. At the heart of all research, regardless of discipline or institution, is the need for researchers to be honest in respect of their own actions in research and in their responses to the actions of other researchers. This applies to all aspects of the research process.
- B2 Openness. While recognising the need for researchers to protect their own research interests in the process of planning their research and obtaining their results, the University encourages researchers to be as open as possible in discussing their work with other researchers within and outside the University and with the public.

Researchers should consider the publication of protocols and the registration of research on publicly available databases, prior to research commencing. This may be a requirement of regulatory approval. As a supporter of the AllTrials Campaign, the University expects researchers to make empirical results available irrespective of whether they support the initial hypothesis of the research. Even where research is not pre-registered, researchers should be clear in published outputs about the full set of statistical analyses performed on the data.

Researchers should contact RIN for advice on releasing results that might affect the potential to protect the research at a later date. Once results have been published, researchers should make available relevant data and materials to others for appropriate purposes according to the University's *Research Data Management Procedures and Guidance*.

However, researchers must also take into account legislation affecting the storage and release of data. For example:

The Freedom of Information Act (FOIA) came into effect in 2000 and aims to promote transparency and accountability in the public sector. Under the terms of the Act, individuals have the right to request any information that is held by the University including all digital and print records and information whether current or archived. There are situations where information is not required to be released or should not be released due to exemptions. The University, as a public body, is obliged to comply with the Act, and all staff have the responsibility to make themselves aware of their obligations under the Act.

The Environmental Information Regulations (EIR) came into effect in 2004 and aims to encourage access to environmental information and to promote wide and systematic dissemination of environmental information to the public. Under the terms of the Regulations, individuals have the right to request any environmental information that is held by the University including all digital and print records and information whether current or archived. There are situations where information is not required to be released or should not be released due to exemptions. The University is obliged to comply with the Regulations, and all staff have the responsibility to make themselves aware of their obligations under the Act.

The Data Protection Act 2018 (DPA 2018) and General Data Protection Regulation (GDPR) which came into force in 2018 place responsibilities and obligations on the University and individual researchers in the way that it processes personal data about living and identifiable individuals. DPA2018 and GDPR give individuals certain rights and also specify that those who record and use personal data must be open about how that information is used and must follow the six data protection principles of the DPA2018 and GDPR when processing that information, unless an exemption applies.

B3 Accountability. Researchers, and in particular those named as Principal Investigators, must ensure that the research that they are undertaking is consistent with the terms and conditions covered by agreements between the University and the funder, and all relevant codes of practice, legislation and regulatory bodies. This includes, but is not restricted to ensuring that:

- the research programme carried out is as defined in the original proposal to the funder, unless amendments have been agreed in writing;
- the finance is used solely for the research purpose that it was intended;
- reports are both accurate and produced on time;
- conditions relating to publication and ownership of Intellectual Property are adhered to;
- those exercising authority delegated to them must do so in accordance with all

relevant University Regulations, Policies, Procedures and Guidance.

- B4 Integrity. Researchers must be honest about conflict of interest issues, whether real, potential or perceived, at the earliest opportunity and at all stages of research, for example when applying for funding, when identifying collaborators and when reporting results. Examples of conflicts of interest include employment (whether directly or of a family member), financial links to other organisations and financial benefit from commercial exploitation of the research.

RIN will work with researchers to ensure that where collaborative research is taking place there are clear statements of the standards and frameworks that will apply to the work, both nationally and internationally.

Research misconduct or malpractice is regarded as a serious disciplinary offence. All researchers are encouraged to report cases of suspected misconduct or malpractice and to do so in a responsible and appropriate manner in accordance with the University's *Procedures for Dealing with Allegations of Misconduct in Research* and the University's *Public Interest Disclosure (Whistleblowing) Policy*.

Leadership and Organisation in Research Groupings

- B5 Within the University, it is the responsibility of the Vice-Chancellor, Pro-Vice-Chancellors, and Heads of Schools and their formal delegates to ensure that a climate is created which allows research to be conducted in accordance with good research practice.
- B6 Within a research grouping, responsibility lies with the Group Leader / Research Coordinator (or equivalent). Where there are no research groupings, the responsibilities of Group Leader shall fall to the Head of School (and may be delegated to a nominee such as the Chair of a relevant committee or School Research Director). Group Leaders should create a research environment of mutual cooperation, in which all members of a research team are encouraged to develop their skills and in which the open exchange of ideas is fostered. Also, they must ensure that appropriate direction of research and supervision of researchers is provided, which in the case of students undertaking research must comply with University and national codes of practice and in the case of Research Staff in accordance with the *Concordat to Support the Career Development of Researchers*. Responsibilities in conducting research must be clearly allocated and understood.

The Needs of New Researchers

- B7 Researchers who are new to the academic community may face particular difficulties. Responsibility for ensuring that new researchers understand good research practice lies with all members of the community, but particularly with Group Leaders, or Heads of School where there are no Group Leaders (or equivalent). Good practice includes the induction of researchers to their new environment and the relevant School and University policies, guidelines and procedures.

Training and Supervision of Researchers

B8 All researchers should receive good supervision appropriate to their experience. Researchers must not be put under unwarranted pressure to produce results. Supervision should include all relevant stages of the research process. Group Leaders, or Heads of Schools where there are no Group Leaders (or equivalent), are responsible for ensuring that all new researchers undertake appropriate training in accordance with their specific requirements and the University's *Equality and Diversity Strategy*, details of which are available on the Equality and Diversity Office's webpages. Training in supervisory skills should be provided where appropriate. Particular requirements apply in the case of postgraduate research students and are set out in the University's *Guide to Good Supervisory Practice* and in *The Code of Practice for Research Degrees 2018-19* (and subsequent updates).

Planning and Conducting Research

B9 In applying for external funding, researchers must take all reasonable measures to ensure accuracy of information and compliance with University policies and procedures.

B10 Contracts and agreements relating to the commissioning, funding and conduct of research, including data sharing, collaboration, equipment and non-disclosure agreements must all be processed through RIN and only signed by those with the appropriate delegated authority to do so on behalf of the University. If in any doubt, RIN will advise on appropriate signatories.

B11 Purchasing and expenditure of funds must be in accordance with the terms and conditions of any grant or contract held for the research and the University financial / procurement regulations. The University's financial regulations and procedures are available on the Finance Division's webpages. Any further guidance on compliance with the financial regulations in the conduct of research should be sought from RIN.

B12 Researchers need to establish whether ethical approval is likely to be needed for a research project in accordance with the University's *Research Ethics Policy* and associated *Research Ethics Guidance Notes*.

B13 All research that includes the appointment of researchers must be carried out in a manner that complies with:

- the University's *Equality and Diversity Strategy*;
- the *Concordat to Support the Career Management of Researchers*;
- the *Concordat to Support Research Integrity*;
- the Health and Safety at Work Act (1974) and the Regulations approved under this Act;
- the University's health and safety policies and rules;
- and other University health and safety management documents including those for lone working, travel for business and off campus working.

School health and safety policies and handbooks should detail local health and safety rules

that must also be followed. Advice on health and safety issues should be sought from School Safety Advisers or the University Safety Services.

B14 All members of research groupings should be made aware of the:

- legal and ethical requirements, including *the Joint NNUH/UEA Standard Operating Procedures (SOPs)*, relating to human participants, animals and personal information;
- requirements on confidentiality of data and publications;
- requirements on open access of research data and publications;
- information legislation including the FOIA2000 and EIR2004 as they apply to research;
- appropriate methods of record keeping, data management, including storage, archiving and disposal relevant to the discipline;
- the importance of recognising and reporting unforeseen results or incidents;
- the University's health and safety policies, rules and other health and safety management documents, including those for lone working, travel for business and off campus working;
- all other relevant guidance, codes of practice and regulations related to their work.

Part C. Research Results

The Need for a Critical Approach

- C1 Researchers must always be prepared to question the outcome of their research. The University expects all research results to be checked before being made public. It is important that research ideas can be challenged and tested once published.
- C2 It is important that researchers or research groupings must not become subject to other pressures such that the normal processes of research inquiry cannot be enforced, for example by constraints imposed by the source of funding of the research. Any pressure to produce results that suit the specific interests of a funder must, of course, be resisted. This is particularly the case where the individual researcher(s) could be perceived to have a conflict of interest, for example where they might have an equity share in the funder, or may hold a position (for example, a Director) or be involved in consultancy with the funder. Any such conflict of interest, whether real, potential or perceived, must be disclosed at the earliest opportunity to the Head of the School (or other equivalent senior officer in non-School units) or to the Pro-Vice-Chancellor for Research and Innovation if the office holder is involved.

Documenting Results

- C3 Throughout their work researchers must keep clear and accurate records of the procedures followed (e.g. computing code used to prepare and analyse data), of the sources of research material where archives, collections etc. are researched and of the results obtained, including interim results. This is necessary not only as a means of demonstrating proper research practice, but also in case questions are subsequently asked about the

conduct of the research, the results obtained or ownership of the data or results. Proper documenting and storage procedures will minimise cases of allegations of research misconduct where original data have allegedly been lost or cannot be replicated and is also important in ensuring that copyright, a third party's intellectual property rights and confidentiality are not breached.

- C4 It is the duty of the researcher to ensure that their work is compliant with DPA 2018 and GDPR. Both apply to research that involves personal data collected about living individuals and require that such data must not be used for purposes other than those for which it was collected. Guidance on how to make a researcher's work GDPR compliant should be sought from the University's Data Protection Officer.
- C5 In cases where transcripts of interviews are the basis for research, these must be kept according to the procedures in place when ethical approval was given for the research, including any confidentiality clauses. In social sciences and humanities research, any sources (for example, other published works, archives, collections) must be accurately recorded and any transcription or data archive rules recorded at the start of the project to ensure consistency. The keeping and maintenance of laboratory notebooks, and other data sources, can also help to ensure that intellectual property is recognised and can be protected. In all cases, research data should be managed in line with the data management plan prepared as part of the research grant application, or at the beginning of the research project.

Storage and Disposal of Data

- C6 Primary data which is the basis for publications should be securely stored for an appropriate time in a durable form, in accordance with the Data Management Plan, the University's *Research Data Management Policy* and funder requirements. The means of data storage (paper, disk, electronic data archive etc.) should be appropriate to the task, and for studies requiring ethical review must be consistent with the methods set out in the proposal awarded ethical approval. Provision should be made for the automatic back-up of data or software stored on a computer and special attention must be paid to guaranteeing the security of electronic data. Advice should be sought from the University's Information Security Manager.
- C7 The University's *Research Data Management Policy* specifies how long research data should be kept following any publication and that metadata should be kept indefinitely. The appropriate timescales and mode of data storage and the process for review in the light of changing technology should be confirmed in writing at the outset of the research programme and captured in a Data Management Plan.
- C8 Disposal of data and samples should be carried out in accordance with the appropriate internal or external procedures according to the nature of the research data and any ethics committee requirements.

Publishing Results

- C9 The issue of authorship is important in the context of good research practice, and the University expects the matter to be taken seriously. The University expects anyone listed as an author on a paper to have contributed to the writing of and to accept personal responsibility for ensuring that they are familiar with the contents of the paper. Where there is any query about any claim of authorship or acknowledged contribution, researchers should seek advice at the earliest opportunity from the Head of the School (or other equivalent senior officer in non-School units) or to the Pro-Vice-Chancellor Research and Innovation if the office holder is involved.
- C10 In order to ensure a high standard of publication, researchers should seek an appropriate form of peer review prior to publication; peer review may be provided by the publisher.
- C11 If an error is found that diminishes the worth of the published results, the researcher should discuss the matter with the lead researcher and notify any co-authors. A correction should be published as soon as possible setting out the basis of the reservation. Where the findings are found to be in serious doubt, a retraction should be applied for speedily.
- C12 The standard position of the University is that research should be published when appropriate and wherever possible. This is a necessary adjunct to making research available to the public and is frequently a condition imposed by funders. Delays in publication should be avoided except, for example, in relation to proprietary information of the University or the funder incorporated in the research results or where journals require amendments or modifications.
- Where the University and / or the funder wish to secure patent protection for inventions made in the course of the research, delays in publishing are acceptable to allow patents to be filed (refer to D2). Access to a thesis may be restricted in accordance with the *Consultation and Borrowing of Theses* set out in the University Academic Calendar.
- C13 The published outcomes of research should be promoted and the outputs of research must be made openly available whenever possible. Researchers should follow the requirements set out in the University's *Open Access Policy*.
- C14 Researchers are encouraged to make their research data openly available for discovery and reuse, whenever this is appropriate for the data, as laid out in the University's *Research Data Management Policy* and the *Concordat on Open Research Data*. This especially applies to data that underpins publications and the analytic techniques (e.g. codes and algorithms used). Researchers are also encouraged to provide appropriate metadata to describe this data.

Acknowledging the Role of Collaborators and Other Participants

- C15 Any person who participates in a substantial way in conceiving, executing or interpreting a significant part of the relevant research must be given the opportunity to be included as an author of a publication derived from that research. The practice of honorary authorship is

unacceptable, i.e. only those who have participated in the research should be listed. The contributions of formal collaborators and all others who directly assist or indirectly support the research should also be properly acknowledged. This applies to any circumstances in which statements about the research are made, including provision of information about the nature and process of the research, and in publishing the outcome. Where appropriate, the funders of the research and other collaborating bodies must be acknowledged.

C16 The University encourages the use of ORCID identifiers for researchers when publishing research publications, data, and other outputs, to allow unambiguous identification of those involved.

Part D. Exploitation and Protection of Intellectual Assets

D1 The University recognises there are instances where the potential for exploiting intellectual property (IP) generated by research is important both to improve economic competitiveness and to generate revenue. The potential to exploit IP should be considered at the application and contract stages and certainly before data are submitted for publication or presented in any other public forum including the internet.

D2 The ownership, protection and exploitation of IP is governed by the University's *Intellectual Property Regulations* published in the University's Academic Calendar. Advice from RIN should be sought in all instances where a potential to exploit IP generated by the University is identified or where data or resources belonging to another organisation are required to conduct the research.

Part E. Professional, Clinical and Ethical Practice

E1 The University's *Research Ethics Policy* applies to **all** researchers:

- academic, research and relevant support staff employed by the University, and other individuals carrying out research at, or on behalf of, the University;
- all students (undergraduate, post-graduate taught, post-graduate research) undertaking research and their supervisors;
- any persons with honorary positions conducting research within, or on behalf of, the University;
- and the University also expects ethical oversight of research undertaken by any institution utilising UEA resources. This would/could include the University as a site for data collection.

Researchers must conduct research with care and respect for all participants in and subjects of research, including humans, animals, the environment and cultural objects.

E2 The standards of scientific practice set out in guidelines published by scientific societies and other relevant professional bodies should be observed by researchers.

E3 Researchers involved in clinical research must comply with:

- the *Good Clinical Practice Guideline* published by the International Conference on Harmonisation;
- the *Medicines for Human Use (Clinical Trials) Regulations 2004*;
- the Health Research Authority's *UK Policy Framework for Health and Social Care Research*;
- the Human Tissue Act 2004;
- the Mental Capacity Act 2005;
- the *Joint NNUH/UEA Standard Operating Procedures*.

Particular attention must be given to:

- maintenance of confidentiality;
- informed consent for participation in the research;
- the allocation and agreement of Sponsor responsibilities for designing, managing, financing, conducting and analysing the research between the individual researchers, the University, appropriate NHS Trusts and any other external organisations involved in the research;
- noting and reporting serious adverse events or serious drug reactions in line with regulatory requirements;
- seeking appropriate NHS Research Ethics Committee approval, NHS Research Governance approval and / or independent review.

- E4 Research must only be carried out when all the necessary approvals, notifications and licences required by University Committees and legislation, through national and local regulatory bodies, are in place. The Group Leader / Research Coordinator (or equivalent) or Head of School (or formal delegate) must ensure that the appropriate approvals are identified, obtained and documented prior to the start of the research.
- E5 These are the minimum standards expected of researchers and do not override or replace any professional codes or practices, or those codes or practices governing the terms of any external funding received by researchers to carry out their research work, which must be followed in addition to these Guidelines.

Part F. Research Misconduct

- F1 Responsibility for ensuring that no misconduct occurs rests primarily with individual researchers. Notwithstanding, the University takes seriously any allegation of research misconduct and will investigate any such allegation sensitively and in confidence, in accordance with these Guidelines and the University's *Procedures for Dealing with Allegations of Misconduct in Research*. However,