QUEEN'S UNIVERSITY BELFAST

Code of Conduct and Integrity

in Research

Contents

1. Introduction

1.1 A central mission of the University is to promote integrity and excellence in the practice of research. In doing so, the University has a responsibility to ensure that all research carried out under its auspices is conducted to the highest standard achievable and in accordance with the law and public interest.

1.2 The University has embedded Universities UK (UUK) Concordat to Support Research Integrity into its research practice. The Concordat, which provides a framework for good research conduct and governance has five key principles which apply to all fields of research. These are:

   (i) "to uphold the highest standards of rigour and integrity in all aspects of research;
   (ii) to ensure that research is conducted according to the appropriate ethical, legal and professional frameworks, obligations and standards;
   (iii) to support a research environment that is underpinned by a culture of integrity and based on good governance, best practice, and support for the development of researchers;
   (iv) to use transparent, timely, robust, and fair processes to deal with allegations of research misconduct should they arise;
   (v) to work together to strengthen the integrity of research and to review progress regularly and openly".

1.3 Queen's University Belfast expects the principles identified in the Concordat, and the standards outlined in this Code of Conduct and Integrity in Research (hereafter referred to as the Code) to be adhered to by all staff, research students, and by those working within or on behalf of the University to further knowledge through research. It applies to:

   (i) researchers (including academic staff, research assistants, research fellows and academic related staff) and other staff involved in the research process (including technical, clerical, academic related and administrative staff) employed by the University, whether involved in the research process within the University, or whilst at another institution;
   (ii) students undertaking research and their supervisors;
   (iii) any persons with honorary positions (including Professor Emeriti) involved in research within, or on behalf of, the University.
   (iv) third parties involved in research such as service users and/or those participating in personal and public involvement (PPI).

   The term researcher has been used for convenience throughout this Code and can be taken to refer to any or all of the above categories, as is appropriate.

1.4 This document addresses the issues involved in the proper conduct of research, and provides guidance on the standards expected. In its Code of Practice the UK Research Integrity Office states that it "aims to encourage all those involved in research of the wider consequences of their work", a view supported by Queen's. This Code cannot be guaranteed as an exhaustive document, subsequently it should be viewed as the minimum standard with which University staff and research students should comply "in terms of practical, ethical and intellectual challenges inherent in the conduct of high-quality research" (UK RIO). The lack of mention in this Code of a particular act or omission should not be taken as conclusive on any question of professional conduct, should an enquiry arise.

1.5   This Code should be read in conjunction with other Regulations, Policies and Operating Procedures, found on the [Research Governance, Ethics and Integrity webpages](). In addition, researchers should seek out other additional policies that may impact, directly or indirectly on their activities e.g. data protection, National Security and Investments Act, Export Control, Nagoya Protocol, Due Diligence, Bullying and Harassment and/or wider Trusted Research matters.

1.6   The Code may be supplemented or updated from time to time by additional guidance notes on specific areas. On the most part such information will be on the web pages of the Research Governance, Ethics and Integrity Team.

1.7   Failure to comply with this Code may result in actions being taken under the Regulations Governing the Allegation and Investigation of Misconduct in Research.

2.   Principles of good research practice

2.1   The University cannot be prescriptive about individual approaches taken by researchers to solving particular research questions. However, in the conduct of all research, the University expects the following general principles to be complied with. That good research practices are adhered to and individuals will:

  (i)   maintain open, honest and fair standards, including a readiness to question their own findings;
  (ii)   ensure the proper attribution of the contribution made by others;
  (iii)   provide leadership, organisation and co-operation in research, including appropriate supervision and mentoring of young researchers;
  (iv)   ensure appropriate planning, execution, recording (including the storage of data), maintenance and security of research, in particular, research data that allows for ready verification of its quality, integrity and security;
  (v)   undertake the appropriate dissemination of research findings, including negative results ensuring that the results of research are not compromised through unethical/dual use;
  (vi)   ensure compliance with relevant regulations or policies, whether legal, institutional or other, which govern particular aspects of research, e.g. children, adults at risk, data protection, export control, national security, etc.;
  (vii)   participate only in work which conforms to accepted ethical standards and which ensures the safety and care of all those associated with the research;
  (viii) participate only in work which the researcher is competent to perform;
  (ix)   avoid or declare any real or apparent conflict(s) of interest;
  (x)   ensure the fair and equitable treatment of research partners and/or of external collaborators.

3.   Integrity

3.1   As one of the University's core values, researchers are expected to act with integrity in that they are honest in their own actions and in their responses to the actions of other researchers, they are ethical and transparent. This applies to all aspects of research, including experimental design, applying for funding, research ethics, the use of resources be they research partners, biobanks or internal facilities, generating and analysing data, declaring conflict of interest, publishing results, and acknowledging the direct and indirect contribution of colleagues, collaborators and others.

3.2   Researchers will apply rigour, be accountable, transparent, and show care and respect throughout their research.

3.2   All individuals in the University's employment, or working within the University, must refrain from plagiarism, falsification, fabrication of results, or other forms of research misconduct.

3.3   Researchers are expected to undertake the necessary training and development to ensure they are competent in their role.

3.3   The University expects the quality of research results to be assured before being made public. It is important that ideas can be challenged and tested without loss of reputation. Equally, it is important that researchers or research groups should not become subject to commercial pressures. Researchers must have a critical and impartial approach to results including not rejecting results that are perceived to be negative or are unexpected and not in accordance with the hypothesis tested.

3.4   The University is committed to the highest standards of openness, accountability and integrity. As such, individuals who believe they have discovered malpractice or impropriety are able to raise these matters in accordance with the University's [Regulations Governing the Allegation and Investigation of Misconduct in Research](#), or the [Whistleblowing Policy](#). If there are more appropriate procedures available for addressing concerns raised then the individual will be advised accordingly (e.g. University's Fraud Policy and Procedures, Bullying and Harassment/Grievance Procedure).

4.   Openness and Transparency

4.1   The University supports the principle of open research data, where legally, ethically and commercially appropriate to do so. This is part of the University's commitment to robust [Research Data Management](#) processes.

4.2   Researchers must build into their research process the ability to support the requirements of open access data and be transparent, when possible. Where research involves human participants, this requirement should be considered when developing information sheets, consent forms, applying for research ethics etc.

4.3   The results of applied research in certain STEM subject areas may be subject to controls. Individuals are responsible for exploring whether their research is subject to such controls (e.g. Export Control) and must ensure compliance with same.

5.   Leadership and cooperation

5.1   The Pro-Vice Chancellor for Research and Enterprise is the senior academic lead for research integrity. He/she is supported by the Faculty Deans of Research, the Director of Research and Enterprise, Associate Director for Research Services, and relevant academic support personnel in the delivery of good, safe, and secure research practices.

5.2   All those in academic leadership, including supervisors of postgraduate students have a responsibility to promote, develop, encourage and implement the good research practice standards amongst their staff and students.

5.3   As part of its leadership, the University is committed to:

5.3.1   A positive research culture where good research practices prevails. The research culture action plan supports the ongoing development and implementation of this;

5.3.2   A zero tolerance approach to bullying and harassment;

5.3.3   The provision of training and development to ensure researchers are equipped to deliver their research.

5.3.4   A research community that does not discriminate based on gender, race, age, disability, sexual orientation, religious affiliation, political or scientific viewpoint, ethnic or national origin or whether a person does or does not have dependents r. The University's Equality and Diversity Policy must be complied with.

5.4   It is the responsibility of individual researchers to comply with this Code and the [Concordat to Support Research Integrity](#).

6. Supervision and mentoring

6.1   Those leading research groups/supervisors have a responsibility to foster the appropriate intellectual, technical, ethical and career development of new staff, students, and supervisees in order for them to fulfil their potential. It is important that researchers understand good research practice, as such research group leaders and supervisors should mentor new researchers on the components of good research practice.

6.2   Supervisors are responsible for the overall progress of their students, and should follow good supervisory practice. Supervisors and postgraduate students should be familiar with all applicable sections of the University Calendar: General Regulations, in particular, the Study Regulations for Research Degree Programmes and Study Regulations for Higher Doctorates.

6.4   The University is actively engaged with The Concordat to Support the Career Development of Researchers and in doing so is committed to ensuring researchers are skilled and equipped to undertake their research. All researchers should receive appropriate training, for example in research design, Trusted Research, regulatory and ethics approvals, equipment use, data management, record keeping and data protection.

6.5   Researchers should be able to raise concerns and admit to errors without the fear of retribution. Developing and maintaining an open and transparent culture will facilitate learning and enable corrections to be made to the research record in a timely manner.

6.6   Upon completion of the research project research students must provide all primary source material, raw research data, records of analysis, software, and laboratory books to their supervisor. All such materials should be handed over prior to the submission of the thesis.

7. Commitment to competency

7.1   Researchers are responsible for actively maintaining professional competency and remaining knowledgeable within their areas of expertise. To this end researchers should conduct their work within the scope of their own training and knowledge base.

7.2 Researchers should not claim any level of competence that they do not possess, and should take all reasonable steps to ensure that their qualifications, capabilities or views are not misrepresented by others. If this should occur they should take necessary steps to correct any such misrepresentation.

7.3 Researchers should also ensure that all persons who assist in the conduct of their research are adequately trained and perform their responsibilities competently.

7.4 Training is also available to all staff to enhance understanding of the wider Trusted Research/Global Compliance and Integrity requirements (e.g. partner due diligence, export control, bullying and harassment, preventing harm in research etc.). Details of training programmes can be found on the Research Governance, Ethics and Integrity webpages.

8. Documenting results and storing primary data

8.1 Research data can be considered sensitive for a variety of reasons (personal data; pose a threat to national security; considered illegal and/or immoral within the country/community it is collected from; considered political/controversial depending on context/country; subject to contractual obligations; involve or generate materials, methods, technologies or knowledge that could be harmful such as dual use goods, services or technologies). It is vital that researchers know and understand their research data and any sensitivities relating to it.

8.2 Individual researchers are responsible for ensuring they collect, maintain and retain their data in a secure manner that will prevent harm to participants, themselves and wider society. This may include the need for the following:
   8.2.1 Anonymising data at the point of collection (or as soon as possible after collection);
   8.2.2 Clarifying at the outset of the research any issues regarding the ownership of the data, the samples used or created in the course of the research and also the results of the research. Any issues regarding ownership of these should be resolved before the research commences.
   8.2.3 Whether the research data is subject to specific security measures and/or legislation.

8.3 Researchers must ensure they keep clear and accurate records of research procedures and of results, 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 either the conduct of the research or the results obtained. Robust research records are important in the process of protecting intellectual property rights.

8.4 Where appropriate for their use, laboratory notebooks should be kept, where appropriate, and each key document and any changes should be signed and dated. Laboratory notebooks should be maintained in accordance with the University's SOP Maintaining Laboratory Books.

8.5 Data generated in the course of research must be kept securely and back-up records should always be kept for data stored electronically. Data should be stored in such a way that permits a complete study reconstruction, if necessary, and records should be monitored regularly to ensure completeness, accuracy and ability to access the record in the future. Further information on research data management can be found in library services webpages.

8.6   The University expects primary data to be securely held for a minimum period of 5 years after the completion of a research project. However, researchers must be aware of and comply with any specific Funder's requirements.

8.7   If a member of staff leaves the University, for whatever reason, before the required period of data retention expires, they have a responsibility to ensure that the data is securely held, either by the University, or if agreed to by the University may be held by themselves or transferred to another institution/establishment in accordance with an appropriate data transfer agreement.

8.8   Researchers must also ensure that they do not transfer data and/or technologies that are subject to Export Control requirements, unless the relevant process for such transfer has been followed.

9.   Intellectual Property Rights and ownership

9.1   Intellectual Property Rights (IPR) include patents, registered designs, copyright, design rights and know-how. Creative work, including research and development, can lead to IPR and some of these can be protected under one or more headings.

9.2   In patent law, the IPR created during an employee's normal or specifically assigned activities belongs to the employer. This means that most of the IPR arising from the activities of University teaching and research staff belongs to the University. The University IPR Policy must be adhered to.

9.3   Where work is being carried out under contract from an outside organisation, specific provisions about IPR may apply. The Research Contracts Team will have worked closely with the IP and Innovation Team to protect any IP. In any circumstances where a researcher feels there is any ambiguity or uncertainty regarding IPR or the University's IPR Policy then the researcher must seek advice from the IP and Innovation Team in Research and Enterprise.

10.   Confidentiality

10.1   Researchers must ensure the confidentiality of personal information relating to the participants in research, and that the research fulfils any related legal requirements, such as those of the Data Protection Act 2018. Researchers must adhere to the University's Data Protection Policy.

10.2   Researchers who have access to confidential information, or information from other parties to whom the University has an obligation of confidentiality, must not disclose such information without the prior consent of the University. Confidential information may include, but is not limited to, protocols, processes, techniques, computer readable software, data, drawings or documents.

11.   Conduct of reviewers/referees

11.1   Peer review requires that the reviewer/referee be expert in the subject under review or the methodology to be used. If a researcher considers themselves to be insufficiently expert in the area on which they have been asked to comment, they must make this clear, and would normally be expected to return the material unread.

11.2   A researcher asked to serve as a reviewer/referee should declare any possible conflict of interest, whether real or perceived, such as competitive, collaborative or other close relationship with one or more of the authors under review, or a close

professional or commercial interest in the work. If there is any real or perceived conflict of interest, the researcher should normally not participate further in the review process, and should return the material unread.

11.3 All information made available to reviewers/referees must be treated in the strictest confidence, and they must not take advantage of any information obtained as a result of their role, e.g. using ideas or material contained therein or presenting the information as their own. In particular they must not plagiarise unfunded grant applications or unpublished manuscripts (the latter including use of knowledge of a work before its publication, unless granted permission by the author(s), to further their own interests).

12. Conflict of interest

It is the responsibility of researchers to identify and declare any conflicts of interest, whether of a legal, ethical, moral, financial, personal or other nature, so that it does not become a complicating or actionable issue. The University's Register of Interests Policy must be adhered to.

13. Publishing results

13.1 Researchers should make every effort to ensure research findings are widely disseminated to both the academic community and where appropriate to the general public. This includes the sharing of negative results as appropriate.

13.2 The person with overall responsibility for the research programme should authorise publication of results: authorisation should cover both the content of the publication (integrity of results, adequacy of internal peer review, appropriate protection of intellectual property rights, appropriate authorship) and the intended place of publication.

13.3 When publishing, researchers should not misrepresent their work by omitting information that changes the meaning or significance of their findings.

13.4 Work should normally be published as a coherent entity rather than being artificially divided into a number of smaller parts. This does not necessarily preclude preliminary publication where appropriate, such as in letter format, or presentation at conferences, but caution should be exercised that redundant or duplicate publication does not result.

13.5 Redundant or duplicate publication, which is a publication that overlaps substantially with one already published elsewhere (in print or electronic media), is not good practice and should be avoided. There may be exceptions to this, such as a publication of a complete report that follows the publication of a preliminary report, or a paper presented at a meeting but not published in full or that is being considered for publication in a proceedings or similar format. When submitting a manuscript, the author should always make a full statement to the editor about all submissions and previous reports that might be regarded as redundant or duplicate publication of the same or very similar work. The author should alert the editor if the work includes subjects about which a previous report has been published. Any such work should be referred to and referenced in the new paper. Copies of such material should be included with the submitted paper to help the editor decide how to handle the matter.

13.6 Researchers are, however, encouraged to communicate their results to as wide an audience as possible. In this context secondary publication may be justified and can be beneficial. For example, publication in another language or publication of a more

accessible and widely disseminated report, might be appropriate. In this situation approval should be received from the editors of the publication outlets involved and the editor concerned with secondary publication informed.

13.7   More detailed guidance on issues of redundant or secondary publication is usually available in the guidance to authors provided by academic journals or, for instance, in the 'Vancouver Guidelines' (ICMJE Recommendations for the Conduct, Reporting, Editing, and Publication of Scholarly Work in Medical Journals: Overlapping Publications) or by the Committee of Publication Ethics (COPE).

13.8   In the context of communicating academic information it is always good practice to use as clear and accurate language as possible, without recourse to unnecessary jargon. This is essential when communicating information to a lay audience.

13.9   The University supports the freedom to publish research findings. There may, however, be occasions when a legitimate request for deferral of publication is made, for example, in the interests of national security or when collaborating with an industrial partner, who may wish publication to be deferred until adequate protection of any intellectual property has been arranged. The University would expect the period of deferral requested to be no longer than necessary.

13.10   There may, however, be occasions when an external funder of research exerts pressure in an attempt to suppress results, for example to conceal results they perceive to be detrimental to their interests. In this situation the University will take whatever action it deems necessary to counter any attempt at suppression.

13.11   When negotiating contracts with external funders the right to publish the results of the study should be protected. The Research Contracts Team in Research and Enterprise will, on behalf of the University, negotiate these protections.

13.12   Many research funders (e.g. UKRI) advocate open access to research publications. Depending on the funding stipulations this may or may not also include open access to research data. Researchers must be aware of and comply with any funding requirements with regards to open access and data management.

13.13   The University places importance on appropriate protection of IPR (see section 9), and researchers should refrain from any form of publication or disclosure until it is clear that any necessary protection has been secured.

13.14   Researchers must ensure that all publication and presentation of material arising from research is correct and accurate. If it subsequently becomes clear that this is not the case, the researcher must take appropriate steps to correct the research record and if necessary make a retraction, in all outlets in which the information has appeared. Where appropriate, funding or external agencies should also be informed.

14.   Authorship

14.1   The issue of authorship is important in the context of good research practice. Although authorship practices may vary across disciplines the University supports an approach based on the 'Vancouver Guidelines' (ICMJE Recommendations for the Conduct, Reporting, Editing and Publication of Scholarly Work in Medical Journals, 2013) with authorship credit based on all four of the following criteria being met:

> (i)   substantial contributions to conception and design, or acquisition of data, or analysis of interpretation of data;

(ii)   drafting the article or revising it critically for important intellectual content;

(iii)   final approval of the version to be published;

(iv)   agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

14.2   The above criteria are not intended to be used to deny authorship to those who deserve credit and individuals who meet the first criterion should have the opportunity to participate in the review, drafting and final approval of the article or manuscript.

14.3   It should be noted that the acquisition of funding, collection of data, or general supervision of the research group, alone, does not justify authorship. Each author should have participated sufficiently in the work to take public responsibility for appropriate portions of the content. All contributors, who do not meet the criteria for authorship, should be listed in an acknowledgements section. The practice of honorary authorship is unacceptable.

14.4   In order to minimise authorship disputes occurring it is good practice to discuss authorship, including order of authorship, at the start of projects rather than on submission of the research to a journal or conference.

14.5   Where an internal authorship dispute occurs, involving research that is not yet published or presented, researchers should attempt to resolve the dispute at a local level. Where it is not possible for the researchers to resolve the dispute, the matter should be referred to the Head of School or Institute Director to review and mediate an agreed solution. Manuscripts for which there is an unresolved authorship dispute should not be submitted for publication before consulting with the Head of School or Institute Director. Where there is a conflict of interest, an alternative Head of School or Institute Director or the relevant Faculty Dean of Research may be asked to consider the dispute.

14.6   Authorship disputes involving published manuscripts may be considered under the procedures detailed in the University's [Regulations Governing the Allegation and Investigation of Misconduct in Research](). An individual or individuals with concerns regarding authorship of published works by a member of the University should raise the issue in writing to their Head of School in the first instance.

14.7   When an external authorship dispute involves collaborators or contributors from another institution, the procedures for dispute resolution at the lead author's institution should be followed.

15.   Research collaborators and other participants

15.1   In all aspects of research, the contributions of formal collaborators and all others who directly assist or indirectly support the research must be properly acknowledged or a conflict of interest disclosed, including the source of funding where appropriate. 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. Failure to acknowledge the contributions of others is regarded as unprofessional conduct. Conversely, collaborators and other contributors carry their share of the responsibility for the research and its outcome.

15.2   It is important that researchers know and understand their vulnerabilities, in particular, in international research collaborations. This is particularly important in terms of national security risks. The University has in place processes to support the

requirements of Trusted Research (due diligence, export control, National Security and Investment Act, and cyber security). Further information can be found on the Research Governance, Ethics and Integrity webpages.

16.   Health and safety

16.1   Research should be conducted to the highest possible health and safety standards, both for the research participants, collaborators, and the general public. Researchers must adhere to current safety practices and legal requirements, and all researchers must be familiar with relevant University regulations, including the University's Health and Safety Manual and the University Calendar: General Regulations.

16.2   Researchers should also be cognisant of matters relating to their own health and safety. Guidance and information on managing occupational stress and promoting wellbeing are available from the University's Wellbeing webpage. University policies and procedures on lone working and out of hours working should also be adhered to.

16.3   Guidance for researchers working in conflict zones is also available from the Research Governance, Ethics and Integrity webpages.

17.   Ethical practice

17.1   Researchers are expected to be aware of and to comply with all relevant ethical and legal standards and frameworks including the standards of research practice as published by the University, scientific and learned societies, funders and other relevant professional bodies or stakeholders.

17.2   The University's Regulations for Research Involving Human Participants and the Policy on the Ethical Approval of Research detail the University's requirements for research involving human participants.

17.3   Research involving animals should have approval through the appropriate Animal Welfare and Ethical Review Body and the researcher involved should ensure appropriate Personal and Project Licences are in place. The use of animals in research should conform to current laws and regulations, including the Animal (Scientific Procedures) Act (1986) and any subsequent amendments. The Regulations for Research Involving Animals provide the detailed requirements.

17.4   Researchers should consider, at an early stage in the design of any research involving animals, the opportunities for reduction, replacement and refinement of animal involvement.

18.   Managing research projects

18.1   Researchers must take all reasonable measures to ensure compliance with sponsor, institutional, legal, ethical and moral obligations in managing projects.

18.2   Researchers must familiarise themselves with the terms and conditions of any research contract or agreement entered into by the University on their behalf. In doing so researchers are then aware of expectations relating to Trusted Research, safeguarding, bullying and harassment, partner due diligence, training requirements and records of same.

18.3 Researchers must follow established University financial procedures as detailed on the Finance Directorate's webpage (http://www.qub.ac.uk/directorates/FinanceDirectorate/FinancialProcedures/).

18.4 The person with overall responsibility for a research programme should ensure that it runs within its allocated budget, and ensure that no penalties are incurred by failure to meet sponsor's requirements, for example submission of reports according to schedule.

18.5 In accordance with the University's Bribery Act (2010) Policy in no case should any offer of bribery or inducement be accepted.

19.   Compliance with audit or other monitoring procedures

19.1 Researchers must comply with any audit or monitoring procedures, whether external or internal, with which they legitimately may be asked to cooperate. Examples of such audit or monitoring may include examination of management of specific research projects, compliance with procedures, such as this Code of Conduct and Integrity in Research or with external sponsor requirements, review of researcher training records, evidence of partner due diligence.

19.2 The University will comply with funder's requirements, in particular, any audits requested relating to bullying and harassment.

20.   Sources of research funding

20.1 In accordance with Cancer Research UKs Code of Practice and UUKs Protocol on Tobacco Industry Funding to universities, the University will not knowingly accept funds from the tobacco industry. Researchers must also be aware that companies may be owned by a company from the tobacco industry, yet this may not be easily observed from their primary concern.

20.2 It is important that when applying/accepting funding for research activities there is careful consideration of any potential ethical implications associated with the funding source. As part of a research grant process due diligence (DD) is undertaken on potential overseas funders to ensure integrity of funding source.

22.   Additional Resources/Reading

Concordat to Support Research Integrity

UK Research Innovation Policy on the Governance of Good Research Practices

UK Research Integrity Office Code of Practice for Research