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PrAISED

Promoting Activity, Independence and Stability in Early Dementia

The Promoting Activity, Independence and Stability in Early Dementia (PrAISED) research programme is a NIHR funded project that has been designed to help people with mild cognitive impairment or early stage dementia to remain healthier and more independent for longer. We have designed an activity and exercise programme consisting of a combination of exercises, activities of daily living and memory strategies to help improve and maintain individual physical and mental health.

PrAISED Discussion Paper Series

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Writing for Publication

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'Building on established research excellence, and on the infrastructure for knowledge exchange that has been developed over the last decade, we are committed to working together to continue embedding throughout the research base a culture in which excellent research departments consistently engage with business, the public sector and civil society organisations, and are committed to carrying new ideas through to beneficial outcomes'

Joint statement on impact by HEFCE, RCUK and UUK

INTRODUCTION

This document describes a structured approach to writing and disseminating publications associated with the PrAISED research programme, but is also intended to be of wider value to other research teams.

If PrAISED, or any other research study, is to achieve its aim and lead to beneficial outcomes it is important to optimise the dissemination of new knowledge and insights arising from it. Publications are one of the key ways in which the new knowledge of a research study is disseminated. Critical peer review appraisal by academics assures that the findings reported in research papers are sound. This allows potential users of the new knowledge, such as the public, practitioners, providers, funders and policy makers, as well as other researchers, to trust the findings and have the confidence to make use of them. A clear writing style, anticipating such audiences, is important. So too is the publication in widely available journals, including open access journals. The number and quality of publications are metrics through which research team members gain recognition of their contribution to the project.

We recognise two broad categories of publications: peer reviewed publications of research findings in scientific journals; and a broad category of written outputs such as opinion pieces, summaries of preliminary work, preparatory literature reviews, methodology papers, study methods, results too detailed for peer reviewed publications for archiving and so on. This latter category allows the study team to mobilise some of the tacit knowledge, experience and opinions and hence capture some of the less tangible new knowledge and understanding arising from the research project and the expertise of the team. To support this, we have established the PrAISED Discussion Paper Series (ISSN 2399-3502) but we may also submit or be invited to submit such work as editorials or as articles in professional or media magazines, websites, or as book chapters.

Given the importance of publications to a research study, we aim to adopt a consistent optimal approach to all publishing activities in PrAISED.

WHERE TO PUBLISH – PEER REVIEWED JOURNAL ARTICLES

Open access publication is now considered essential by most research funders and universities. Evidence shows that open access articles are, on average, more widely read than those in subscription-only journals. The number of open access journals, publishing freely available articles online rather than through paid subscription portals, has increased over recent years. Such routes to publication tend to avoid most copyright and licensing restrictions and allow a wider access to scholarly outputs for 'fair use' (see the directory of open access journals https://doaj.org/oainfo for a more detailed discussion). Although such journals provide free access to the article, they may charge the authors to publish, transferring the cost of access to the article from the potential reader to the research institution or research funder. Similarly, subscription journals also offer the opportunity for researchers to pay to make their individual articles freely available on line. Pay-to-publish and open access fees are generally in the range of £1000-£2000 per article. Whilst efforts to allow more public access to research and other scholarly outputs are commendable on many levels, there are a growing number of open access publishers who have been criticised for poor standards. There are a range of resources available online for evaluating open access journals (see http://learn.library.ryerson.ca/scholcomm/Journaleval and https://scholarlyoa.com/individual-journals/ for example). Such resources provide information on journals and publishers who do not operate within reasonable parameters of quality assurance. Nevertheless, publication in open access journals has sometimes been described as 'gold' open access.

> *"In our previous NIHR research programme we published over 50 research papers and if all of them had incurred publication or open access fees of £1500, this would have been a significant drain on the study budget: given that several papers were published after the grant had ended, there may have been no budget to pay such fees."*

An alternative model is for a journal article to be published on a university electronic repository after an embargo period after publication in a print journal, subject to agreement with the journal, with a disclaimer that the citation for the paper remains with the original journal and not the repository. This is referred to as 'green' open access and incurs no fees. The Higher Education Funding Council for England provide a useful diagram which illustrates the difference between 'gold' and 'green' open access (see http://www.hefce.ac.uk/rsrch/oa/whatis/)

The University of Nottingham open access policy prefers green open access because it avoids fees.

The University of Nottingham open access policy (http://www.nottingham.ac.uk/library/research/open-access/policy.aspx) states that *'all research papers (including journal articles, conference proceedings, book chapters and similar material), where copyright allows, should be made available in an open access form upon publication'* and that *'all academic staff are required to make their research outputs open access wherever possible through the University repository'*.

NIHR funded research is required *'to make the outputs from its research publicly available – not just to other researchers, but also to potential users in business, charitable and public sectors, and to the general tax-paying public'* (http://www.nihr.ac.uk/policy-and-standards/nihr-policy-on-open-access-for-its-funded-research.htm).

Whilst the cost of open access publishing of peer reviewed papers was included in the PrAISED research award, the PrAISED Discussion Paper series incurs no costs: it is entirely online and hence has full open access.

There is a tension between the desire to publish as many papers as possible including the minimum amount of publishable information in each to bulk up researcher cv's, often called 'salami publication', and the need to produce the most impactful paper which might require several results to be presented together. Salami publication might also be encouraged by the requirement to demonstrate to funders that we are producing outputs. However, our research and publication strategy should recognise that for the most impactful outputs that arise from the PrAISED programme – especially for papers that might be among those selected for submission to the research excellence framework exercise – we should ensure that these papers are as impactful as possible, which may require several research results to be presented simultaneously.

Selecting which journals to aim for is often a challenge. A list of possible journals should be considered at outset in the writing process. It is helpful not only to consider the suitability of the research to the scope of the journal, but also the impact factor of the journal. We should aim high, and write accordingly. Impactful journals have an international readership and aim to address the big issues: we need to avoid parochialism in our writing such as by assuming a UK readership only, and we should always locate our work in the context of the bigger picture to which we are contributing rather than get lost in the detail.

HOW PUBLICATIONS ARE WRITTEN

Planning, organisation and authorship

Whilst there is no one-size-fits–all approach that dictates how experienced academics and practitioners approach writing articles for publication, there are some important steps to follow in order to maintain a rigorous and fair approach to publishing papers.

One important issue is authorship. It is important for the right people to be authors on an article to ensure that it draws from the relevant knowledge and understanding in the research team. But it is also important to ensure that those who contributed to the work are appropriately recognised either by authorship or acknowledgment. Recognising that arguments about authors have been known to be acrimonious, our approach has been to have an open policy. Most important of all is that the criteria for authorship are set down by the International Committee of Medical Journal Editors.

The International Committee of Medical Journal Editors [ICMJ] (http://www.icmje.org/) recommends that authorship be based on the following 4 criteria:

1. *Substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of data for the work; AND*
2. *Drafting the work or revising it critically for important intellectual content; AND*
3. *Final approval of the version to be published; AND*
4. *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.*

To ensure best practice when publishing articles it is essential that these four criteria are evident when planning articles and deciding who will be cited as a contributor. Implicit in these criteria is that the head of department does not automatically justify authorship simply because of this role, nor does a research assistant involved in recruitment or outcome assessment if he or she does not meet the criteria. Before the research is conducted, all members of the team should be aware of these criteria so that later on, for example, the head of department does not expect to be credited if they do not meet the criteria, there is no 'gift' authorship, and research assistants can be encouraged to play a greater role in the writing of outputs so that they meet the criteria for publication. We advise that decisions about authorship are always discussed and shared with all potential authors, with no secret discussions. In our experience, using this open method, we have not generally found research colleagues trying to claim authorship of papers to which they are not entitled, and in fact many potential authors have taken themselves off writing groups in recognition of the fact that they fail to meet the criteria.

Another important issue is for a research programme at its outset to estimate what publications it expects to write, when they are to be written, as well as who will contribute to them. Doing so helps individual researchers to be clear of their roles and where they will receive credit in due course. It helps project management and encourages publications to be prepared during the lifespan of the project rather than be left over until after the project has ended, which can delay publications for years and sometimes indefinitely. In large and complex research programmes, it avoids duplication or overlooking important new knowledge. It also allows the writing team to more easily cross refer, which is often helpful when publishing one section of a larger programme of work.

Where there are disagreements about authorship the Committee on Publication Ethics (2003) document 'How to handle authorship disputes; a guide for new researchers' contains suggestions for good authorship practice and advice on what to do if authorship problems arise.

In addition to the clarification of paper topics, teams and timescales, it is important to specify a lead author at outset. This is the person who is responsible for writing the initial draft of the paper, sending it out to co-authors for comments, collating and including these comments and maintaining version control, preparing the manuscript for publication, submitting it, and coordinating the response to journal editors and reviewers. This person should also be prepared to ensure that the principles of authorship are upheld. The lead author can delegate some of these responsibilities to other members of the research team by negotiation.

Management groups of research studies should keep a regular review of the publication plans, to allow the publication plan to alter as the research progresses and to identify and overcome any problems that may interfere with it. These arrangements apply both to peer reviewed publications and other publications.

In the PrAISED programme, we are fortunate to have a research fellow with a responsibility for dissemination and implementation who can help to administer and assure that all the principles outlined above are adhered to (see publication flowchart).

Writing the text

Many aspects of the preparation of a research manuscript for peer-review are determined by standardised reporting schedules (e.g. PRISMA for reviews, CONSORT for RCTs), and by the house style of the journal.

The general approach we take to writing an article is to aim to adhere to the IMRaD approach – introduction, method, results and discussion.

The introduction introduces and justifies the research question. It should explain the problem that the research addresses. It should articulate what is known but also what is not known and why this needs to be known. It should explicitly state the research question to be answered. It may often explain how (in broad terms) it should be answered. An introduction does not need to be a long and detailed exposition of the topic.

The method section should follow smoothly from the introduction, explaining what was done to answer the research questions posed in the introduction. Sometimes a section to justify the methodology (why the particular approach was used) is required. Often it is quite obvious why RCT methodology is required and what it is, and in such cases virtually no methodology needs to be reported. But with novel, less standardised, or very complex research designs it is usually necessary to explain and justify the approach before giving the precise details of what was done. But otherwise, the method section should list as simply as possible what was done. Standardised reporting schedules should be applied whenever possible. Results should not be given. Potential methodological weaknesses should not be identified or discussed in this section. The method section should provide enough detail for a reader to know what was done to be able to understand and know how well to trust the results. Judging how much detail to provide is a balancing act, and even in the best hands journal reviewers commonly request more detail and clarification.

The results section should map smoothly to the methods. No results should be given for which methods are not described. All the results anticipated by the methods should be given. New methods should not be introduced. Interpretation and discussion should be avoided.

The final main text section is the discussion. The first paragraph of this should be a brief summary of the key results pertinent to the research questions – and not a lengthy repeat of the results. The second section should cover the internal validity of the study – otherwise understood as the strengths and weaknesses of the study itself. No research is perfect, and the admission of weaknesses is part of good science and not an admission of failure. Careful discussion of the weaknesses helps avoid over-interpretation. By the same token, convincing recognition of the study's strengths allows readers to have trust in the veracity of the findings. The third section should refer to the external validity of the research findings: the degree to which they support, refute and add to what is already known. In this section, it is important to discuss any findings that appear to refute what was previously understood to be known. These three sections (summary, internal validity, external validity) prepare for the primary function of the discussion in the fourth and final section, which is to point out to potential users of the research what the findings mean. Other research users could be other researchers (it is usual to point out what further research is required) but in applied health research it is important to spell out the implications of the work to patients, professionals, providers, managers, commissioners and policy makers. Recognition of the wide variety of potential research knowledge users will help writers adopt language that is likely to be understood by these audiences. As a general rule, jargon and abbreviations should be avoided.
When the IMRaD system is applied well, there is no need for a conclusion, as this risks simply repeating what has already been said. Some journals require structured texts which do not adhere precisely to the guidance given here, in which case the journal's guidance should be followed.

Appendices are generally to be avoided. Authors should ask themselves if the text is understandable without the appendix. If the text is not understandable without the appendix, the relevant material should be in the main text. If the text is understandable without the appendix, then it is probably not needed. Sometimes reviewers ask for extra material which ends up being in an appendix, but often when authors consider inserting appendices it reflects their failure to have distilled the core messages of their paper.

In an Acknowledgment section, it is usual to list the source of funding if not entered elsewhere. It is also courteous to recognise people who assisted in the research but who did not qualify as authors. It is also good practice early in the preparation of the manuscript to let such people know that they are to be acknowledged – especially if they think that they might have an expectation of being listed as an author so that any misunderstanding can be resolved. In PrAISED, as in many complex pieces of research, there are many people and organisations that will have contributed to the work and it is good practice briefly to mention them. This includes the local NHS Trusts, and CLAHRC East Midlands. All people who are acknowledged should be sent a copy of the final manuscript and asked to confirm that they are content with the acknowledgment or to offer amendments if required.

A specific requirement for NIHR funded research outputs is the insertion of a disclaimer. The suggested wording for the papers arising from PrAISED study is:

'This paper/article/abstract/presentation/poster presents independent research funded by the National Institute for Health Research (NIHR) under its Programme Grants for Applied Research Programme (Reference Number RP-PG-0614-20007). The views expressed are those of the author(s) and not necessarily those of the NIHR or the Department of Health and Social Care.'

It is PrAISED policy to invite internal peer review of a completed manuscript before submitting it for external review. This may seem burdensome and may produce a delay in the process. However, most people asked to do so enjoy doing so, seeing this as a reciprocal task (they may ask us to review their articles). More importantly, we need to aim to get our papers in the best and most suitable journal possible, which is a highly competitive process. It would be a shame if our papers are not accepted for publication in our preferred journal due to problems which could have been dealt identified before submission.

Manuscript production and submission

There are many steps to consider when preparing a manuscript for final publication. These include ensuring that all references are correct and cited in the required journal format. The URLs of on line references should be carefully checked and the date this was done should be inserted as part of the reference. All tables, figures and illustrations should be carefully examined to ensure that they meet the requirements of the particular publication. At the submission stage, which is now usually electronic, it is important to have to hand as many details of all authors including full names, qualifications, affiliations, email and postal address, telephone and fax numbers. Some journals may require additional information to be submitted alongside the article, such as a CONSORT checklist. Lead authors should give themselves enough time to do this and ensure good internet connection.

A covering letter may or may not be required. It is unclear how much importance is given to this. Our advice is that a long or emotional plea is to be avoided. On the basis that editors of journals receive many submissions and wish to reject as many appropriate ones as possible on initial assessment, the covering letter should primarily explain simply why the article fits the scope of the journal and make reference to the likely impact of the findings. However, the simple 'Please accept this manuscript for consideration of publication in your journal' is often sufficient. The covering letter is not usually seen by reviewers, and so no vital information should be found solely in the covering letter.

Commonly, electronic submission of an article for consideration of publication is followed by a deluge of emails to all authors to confirm authorship, and declare their conflicts of interests – but sometimes it is up to the lead author to assemble these statements. Authors should be aware of the responsibility to deal with these requests rapidly.

If the article is not rejected without review, the lead author will co-ordinate response to reviewers' comments. It is useful, whether required or not by the journal, to prepare a table where every point by every reviewer is listed, and where a response to each and every one is given. This can run to several pages. This helps assure the journal editor that all of the reviewers' points have been addressed. Addressing a point does not always mean agreeing with the reviewer, and rebuttals are often needed. At all times the response should never appear disrespectful to the reviewer, even if the reviewer is disrespectful (which sometimes they can be). A helpful stance to take when facing what seems to be unreasonable criticism is to assume that the paper has not been written with enough clarity. It is important for all authors to contribute to the amendments just as they did to the initial text.

A stipulation of some research funders but specifically the NIHR is that it should be sent the text of all outputs (not just peer reviewed publications) prior to their release. This is not for the NIHR to assume an editorial role, but to ensure that the NIHR (and the politicians it reports to) can be prepared for media questions that might arise. Researchers are reminded that the NIHR asserts the right to insist that journal articles do not stray into discussion of government policy when not justified by the research findings. Submission to research funders should be done at the point that the article or output is accepted for publication and not at the point of submission.

The NIHR stipulate that, when submitting a paper or article for publication, you should make sure:

- *the NIHR's contribution is acknowledged in full*
- *a copy of the paper/article is sent to the relevant coordinating centre 28 days before it is due to be published*
- *a copy of the final manuscript of any research papers supported in whole or in part by the NIHR is deposited with UK PubMed Central upon acceptance for publication, to be made freely available as soon as possible and in any event within six months of the journal publisher's official date of final publication to meet our open access commitment*
- *the principal award holder submits an end-of-project report within 14 days of the end of the study, in accordance with the research contract.*

(http://www.nihr.ac.uk/policy-and-standards/publishing-research-findings.htm)

A flow chart (APPENDIX A) and publication checklist (APPENDIX B) are appended to this document in order to assist the lead author in ensuring that they address the key steps required for a PrAISED publication.

After publication

Publication of an article is not the end of the research team's responsibility. It is vital that we adhere to the guidance set out by the University of Nottingham around open access and depositing articles in the University's repository.

The purpose of all research is to have impact, and impact is impossible if the research findings are not disseminated. Given the enormous amount of research information and the many potential users of research knowledge, it cannot be assumed that publication of an article will necessarily reach and be acted upon by the intended audiences. We discuss this issue in the first paper in this series on dissemination and implementation (Discussion Paper Series 1, November 2016; Dissemination and Implementation).

BIBLIOGRAPHY

The Committee on Publication Ethics [COPE] http://publicationethics.org/

Directory of Open Access Journals https://doaj.org/

The Higher Education Funding Council for England [HEFCE], open-access requirement in the next Research Excellence Framework http://www.hefce.ac.uk/rsrch/oa/whatis/.

The International Committee of Medical Journal Editors [ICMJE] http://www.icmje.org/

The NIHR guidelines on publications http://www.nihr.ac.uk/policy-and-standards/publishing-research-findings.htm

The University of Nottingham guidance on open-access http://www.nottingham.ac.uk/library/research/open-access/policy.aspx

The University of Nottingham 'Mediated Deposit Service' http://www.nottingham.ac.uk/library/research/open-access/depositing-article.aspx

Vitae https://www.vitae.ac.uk/doing-research/leadership-development-for-principal-investigators-pis/intellectual-leadership/demonstrating-research-impact/publications-strategy

There are several hyperlinks to sources of information throughout the text of this document. Click on the links highlighted in blue or copy and paste the link into your browser to gain access to the original source.

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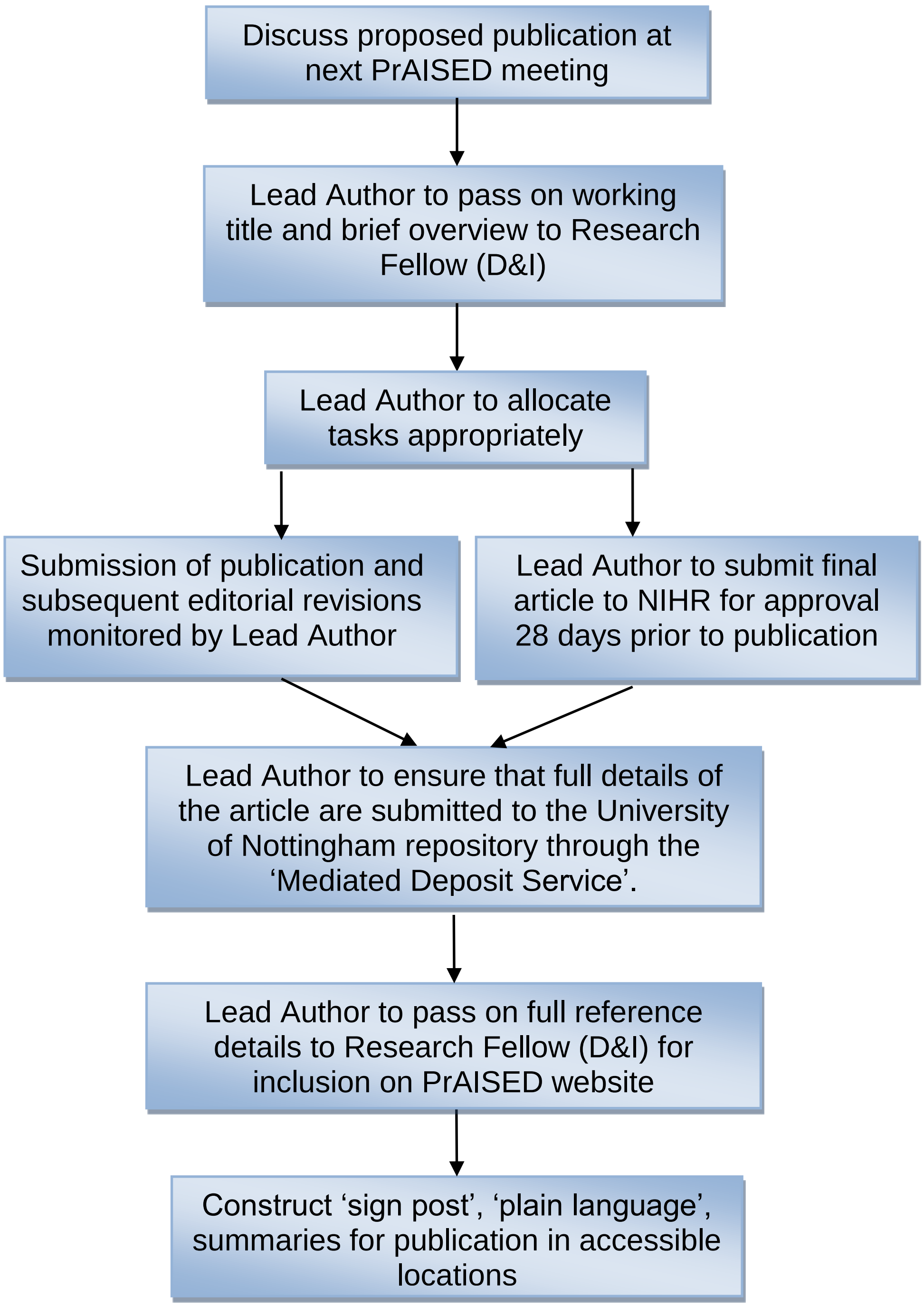
APPENDIX A: PrAISED publications flowchart



APPENDIX B: PrAISED publications Lead Author's checklist

Lead Author's responsibilities	Achieved/ date
The proposed article has been discussed at the first possible PrAISED meeting (including authors and journal).	
A working title and brief overview of the article has been submitted to the PrAISED Research Fellow (D&I) for entry into the PrAISED repository.	
All authorial tasks have been appropriately allocated to individuals who will be cited as an author.	
The paper has been peer reviewed by an academic outside the authorship team prior to submission	
The article has been submitted to the agreed journal.	
Any editorial revisions have been monitored and appropriately addressed.	
The publication has been sent to the relevant NIHR coordinating centre at time of submission (and at least 28 days before it is due to be published).	
The final manuscript of any research paper has been deposited with UK PubMed Central upon acceptance for publication (subject to any embargo if the paper is not gold open access).	
The final manuscript of any research paper has been made freely available in order to meet the NIHR open access commitment (within six months of the journal publisher's official date of final publication).	
Full details have been deposited in the University of Nottingham repository via the 'Mediated Deposit Service' at: http://www.nottingham.ac.uk/library/research/open-access/depositing-article.aspx	
Full reference details have been passed to the PrAISED Research Fellow (D&I) for inclusion on PrAISED website.	
A 'sign post', 'plain language', summary of the article, for publication in accessible locations, has been constructed and passed on to the PrAISED Research Fellow (D&I) for dissemination (where appropriate).	