Narrator: preparatioN, Assessment and use of impact plans in NIHR standaRd ApplicaTion fORms
Study report*

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*Earlier versions of this report were shared with stakeholders at the point of study completion. To prepare the document for publication, the report was updated to incorporate current NIHR guidelines.

Key messages

Impact plans[1] are a section in the National Institute for Health and Care Research (NIHR) standard application process (see https://www.nihr.ac.uk/researchers/i-need-help-funding-my-research/tips-for-making-your-application/ for further details of NIHR applications) where applicants are asked to provide information on the potential impact of their research. The information required in the impact plan varies depending on the specific program or funding opportunity, but generally includes information on the potential benefits of the research, how the research will be disseminated, and how the impact of the research will be measured.

The study found that impact plans need to be:

- **Specific and measurable.** The plan should identify the specific outcomes that the research will achieve, and how those outcomes will be measured.
- **Realistic and achievable.** The plan should be realistic about what can be achieved with the available resources, and should be achievable within the time frame of the project.
- **Research relevant.** The plan should be directly relevant to the research that is being proposed, and should be tailored to maximise specific skills of the research team.
- **Flexible and adaptable.** The plan should be flexible enough to allow for changes as the research progresses, and should be adaptable to unexpected challenges.

The study also found that the impact plan can be a valuable tool for monitoring impact. The plan can be used to track progress towards the desired outcomes, and to identify any areas where there are challenges or opportunities for improvement.

Overall conclusion. Impact plans are an important tool for researchers and funders. By following the guidelines outlined in this study, researchers can develop plans that are more likely to support achieving the study dissemination and impact goals. Funders can use the impact plans to assess the potential impact of research applications, and to monitor the progress of research projects.

[1] Impact plans in this document refer to the narratives where applicants provide detailed information of the activities, outputs and outcomes planned and expected from the proposed research. In NIHR guidelines, these are referred to as *Anticipated Impact and Dissemination*, *Dissemination, Outputs and anticipated Impact* and are also found in guidance to *outline plans for the capturing, evaluating and reporting the impact of patient and public involvement activities.*

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Introduction and background

Tracking and assessing the benefits to society resulting from research presents challenges to funders across the world. To address such a challenge, in the UK, the National Institute for Health and Care Research (NIHR) has implemented systems to monitor impact (e.g, Researchfish) to capture the outputs, outcomes and impacts from their awards throughout the lifecycle of the award and for 5 years following completion. The plan for dissemination and impact that researchers propose in applications submitted to the NIHR offer a source of data to assess the potential impact (e.g., societal, scientific, technological, health services, etc.) of awards. In the detailed research plan of the stage 2 standard application form, researchers present strategies, mechanisms, or activities geared towards realisation of research impact. Deciding how to assess this information in funding applications presents unique challenges to funding committees, as the impact plan presents the informed potential value of an idea or scientific activity, rather than certainty that the research will have the impact expected, and thus requiring that assessment to weigh the future value of a research proposal.

This paper reports a study which analysed a cross-sectional sample of plans for impact and dissemination in the standard application form for research funds to the NIHR between 2018-2020, with the goal of writing recommendations for the assessment of impact plans submitted to NIHR applications. These recommendations may in turn support the writing of impact plans. It is worth noting that the NIHR application process and guidance are subject to continuous improvement initiatives focused on increasing the impact of the funded research, efficiencies and in response to changing research landscapes.

Study aims and objectives

Aim

This study aimed to investigate the impact plan in the standard application form provided by researchers who applied to NIHR research programmes between 2018-2020. The study assessed the type of information provided by applicants in the plans and its use in funding committees.

Objectives:

- to develop guidelines to support the assessment by funding committees or reviewers of impact plans submitted to the NIHR
- to develop recommendations and guidelines to enhance the quality and value of impact plans submitted in applications to the NIHR.

Research questions

Four research questions guided the study:

1. What information is provided in the impact plans of applications submitted to the NIHR?

2. How does the information in the impact plans inform funding recommendations?
3. What guidelines could researchers use to write impact plans? What guidelines could be used to support assessment of impact plans by committee members?
4. What is the potential of the impact plan as a tool to monitor impact?

Methods

A qualitative, multi-methods study of document analysis and semi-structured interviews that received ethics approval from Faculty of Medicine, University of Southampton ethics committee (ERGO 48724.A2). Data collected and analysed were:

- 138 application-related documents comprising: standard application forms, feedback from funding committees, feedback from external reviewers, responses from applicants following external reviews; published NIHR application guidelines.
- Eight semi-structured telephone interviews with committee members (n=4), applicants (n=2) and research impact experts (n=2) were conducted.
- 36 commissioned and researcher-led applications with successful and unsuccessful outcomes submitted to seven NIHR research programmes:
    - Public Health Research;
    - Health Technology Assessment;
    - Efficacy and Mechanism Evaluation;
    - Health and Social Care Delivery Research;
    - Global Health Research;
    - Research for Patient Benefit;
    - Programme Grants for Applied Research.

Analysis strategy

In the first iteration of document analysis, the impact plans in ten application forms were analysed by the main author (AR-S) to extract types of impact-related information and individual elements of the plan (e.g., public engagement, publications, etc). The list of elements extracted were used as a framework to guide the analysis of the full document sample (AR-S). The full sample was analysed for the presence or absence of impact plans or impact-related information in other sections of application documents. Coding and analysis were conducted in NVivo (qualitative analysis software). A thematic analysis approach was used to analyse the audio recordings of the interviews. AR-S and KM developed the themes which were refined following discussions with the team and colleagues from other areas of NIHR (see Appendix A). Findings from document and interview analyses are presented as a narrative, in themes within headers aligned to the study research questions.

Findings

Description and requirements of impact plans submitted to NIHR applications

- In stage 1 applications, the standard application form included a section within the detailed research plan (a free-text section limited to 20,000 characters or 4 pages where the scientific plan of the proposal is described) where applicants added a brief impact plan. Applicants were asked to provide overall

information on the potential impact or benefits of the research by answering the question: *Why is this research important in terms of improving the health and/or wellbeing of the public and/or to patients and health and care services?* To ensure that researchers have considered the question in their proposal, there is a checklist at the end of the application form where applicants are asked to reflect whether the proposal offers: 1. A clear demonstration of the need and importance of the research, and 2. A clear, appropriate and relevant plan.

- In the standard application form at Stage 2, applicants were asked to develop the detailed research plan in full. Anticipated impact and dissemination information was requested in the Scientific Abstract, a text field of 500-550 words, 3500 characters, or one page (A4), also including the research question, background, aims and objectives, methods, and timelines for delivery. Further detail of the impact plan was requested in the detailed research plan within the *Dissemination, Outputs and anticipated Impact section*.
- Slight variations to the standard application form guidelines due to specific requests of programmes may be found (e.g., at Stage 1, EME requires information on Intellectual Property (IP) or PHR requires the submission of a logic model or equivalent).
- Applicants were required to complete the standard application form following the funding opportunity guidance provided for each call. In addition, overall guidelines to complete the standard application form are available on the NIHR website (please see https://www.nihr.ac.uk/documents/generic-supporting-information-for-applicants/28196). The guidance for the question '*Why is this research important in terms of improving the health and/or wellbeing of the public and/or to patients and health and care services?'* reads: *It is essential that you clearly identify the health and care need your research meets or contributes to* and *Please outline the anticipated value or contribution the study will provide*.

(RQ1.) Information and elements of impact plans in applications submitted to the NIHR

Content of impact plans

From the analysis of the application documents included in the study sample, we extracted five categories of information that applicants included in the dissemination and impact plans and/or within other sections of the application (i.e., scientific abstract, detailed research plan, patient and public involvement section, plans for implementation, justification and relevance):

1. Scientific communication
2. Stakeholders relevant to the study and mechanisms for engagement
3. Resources and skills within the team
4. Long-term ambition for the research, and
5. Metrics to track engagement or other impact-conducing activities (including for example altmetrics).

The presence of these categories in the plans varied. Plans always included elements of scientific impact (e.g. publications, conference presentations) but not always mechanisms to engage with stakeholders or long-term

ambition for the research. Well-informed impact plans highlighted the relevance, need or importance of the research, and gave a clear indication of 'where the research was going' throughout the detailed research plan. Applications that weaved and constantly referred to activities that lead to impact throughout the proposals provided clearer messages of the relevance of the research and its future value.

Overall quality of impact plans

The quality of the impact plan was highly variable, ranging from basic plans focused on scientific dissemination that provide standard information on publications and conference attendance to comprehensive plans that described engagement with patient networks or policy makers together with a timeframe and methods for tracking engagement and outputs. Most of the plans fell somewhere in the middle, indicating engagement with relevant stakeholders but not when or how engagement activities would be tracked, measured, or used to assess impact. An interview participant provided the following example: *"Writing that the [issue] was identified as a priority in a James Lind Alliance (JLA) Priority Setting Partnership is not sufficiently strong. It would be considered as basic and not innovative or conducive to understanding the high relevance of an idea."* Not providing reasons why the study is important beyond identifying it as a priority is a poor case for relevance and insufficient to inform committee members in determining the potential impact of the research.

(RQ2.) Current practice and views on the use of impact plans in funding decisions

Perspectives on impact: what it means and how to measure

- Applicants and decision-makers interviewed agreed on the importance of planning for impact when designing research studies and the need to agree on terminology/definitions. Participants discussed the terminology used to refer to impact in research applications, reporting preference to use pathways or routes to impact instead of research impact. As such, the primary focus of an impact plan should center on impact-conducing activities and mechanisms within the direct scope of researchers' control. The changes resulting from these actions are referred to as 'impact.' It is crucial to recognize that while researchers have influence over impact, they may not necessarily be the ones implementing the changes. Nevertheless, they play an integral role in ensuring that their findings reach those who can affect the desired changes.
- Decision-makers defined impact as *a form of measurable change* in service provision (e.g., redesigning services), policy (e.g., NICE Guidelines), practice, the economy or in public attitudes and behaviours. The level of change resulting from research varies from small, incremental (micro-changes) to ground-breaking (macro-changes) and most research will produce results that have small increments of change. Changes that fall within the incremental space include contributions to literature or biomedical research that

informs future research. These types of impact are commonly measured using bibliometrics or altmetrics, generated from publishers and social media (however, these are a measure of exposure of an output not directly of impact). Changes that directly impact the lives of many patients or members of the public are those that would fall in the macro- or ground-breaking category. These changes tend to be mostly measured by randomised controlled trials or qualitative research that explores, for instance, the consequences in people's lives that follow the introduction of a new technology, the publication of NICE guidelines, or changes in policy that affects provision of health and care services.

- Interview participants discussed that in funding committees, for the most part, the scientific community will focus on the micro and patient and public representatives on the macro, with the exceptions of research programmes that fund implementation or applied science. Differences may also be seen between disciplines, for example basic scientists often thinking that they are too far removed to be able to create measurable change whereas social science is much more contributory. Participants indicated that raising awareness of the differing views of funding committee members needs to be explicit during funding decisions and they should also recognise that for some applications the micro will be more important than the macro.
- Research that focuses on micro-level questions has a clear, measurable route to impact (e.g., exploring the effect of a specific protein on a specific physiological mechanism), and building cases for the impact of research is straightforward when the object of change is known. For example, observing the effect of a new medication or the economic cost of that medication. However, when research questions explore macro-level issues, tracking impact can be more challenging (e.g., observing the effect on the quality of life of older people when social, primary and secondary care offer integrated health services), as the change that this can have on the quality of life to patients is less visible and therefore is more difficult to track, measure consistently and report.
- Committee members indicated that in funding decisions, plans should not be assessed in isolation but can be used to emphasise the importance of the research during assessment and decision making. Other participants also expressed that the impact plan should not influence the decision for funding. This does not underestimate the huge value of assessing impact, but it is not integral to the question of whether the project is funded at the decision stage.

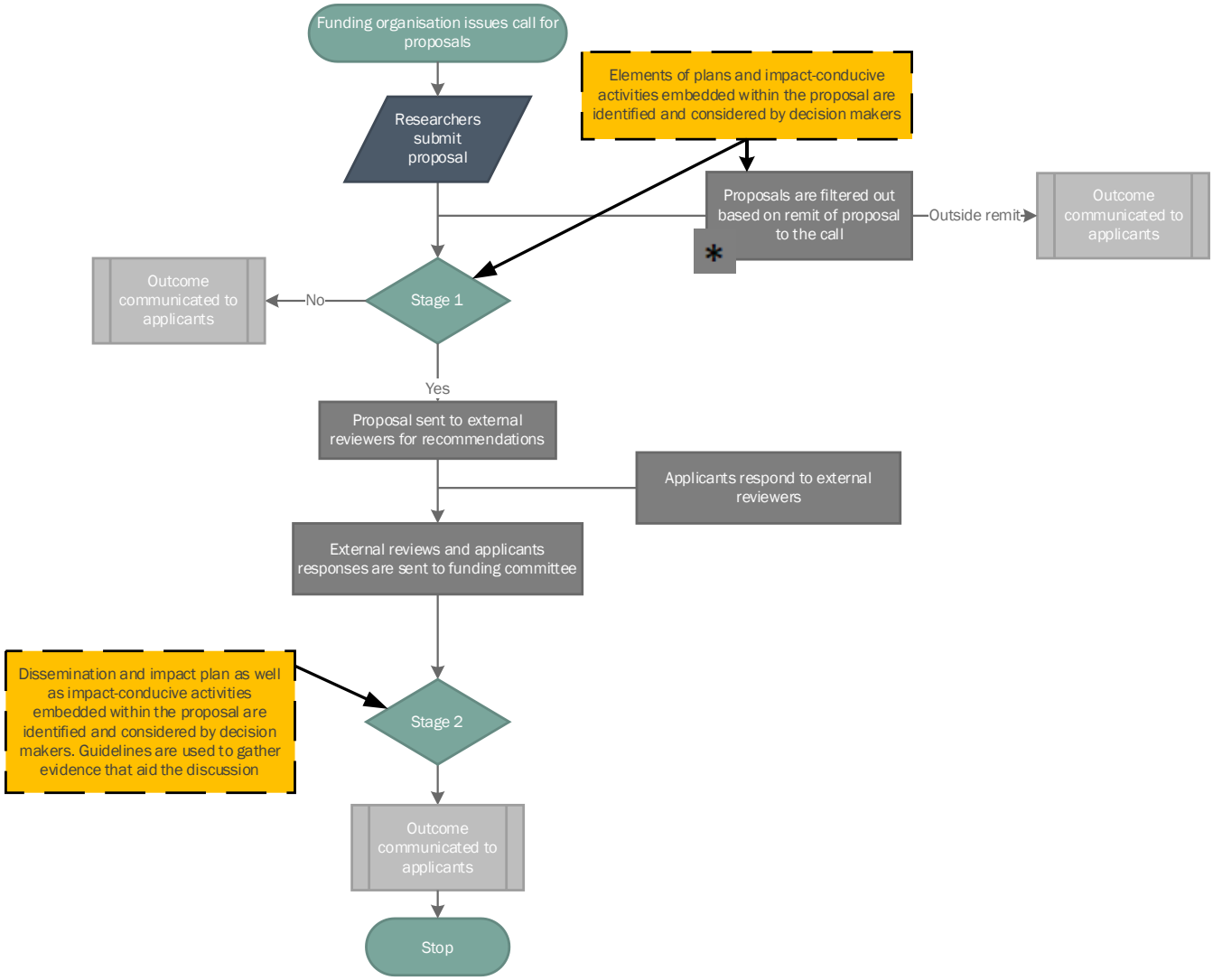

Figure 1: Information in the impact plan can inform decisions at Remit, Stage 1 and Stage 2

Note. *The step between *Researchers submit* application and *Stage 1,* where applications are filtered based or remit, is not applicable to all applications as the remit of funding calls is predefined only when relevant. When remit checks are not necessary, applications move to Stage 1.

Elements of the impact plans highlighted in feedback from funding committees and reviewers

- Analysis of feedback from funding committees and external reviewers in their assessments of applications showed that information in impact plans informed decision making at Remit, Stage 1 and Stage 2 of the application process (see Figure 1). Elements of the impact plans highlighted in feedback documents included the following:

  a. Resources from the skills of the research team
  b. Stakeholder engagement
  c. Intellectual property of research outputs
  d. Value for money
  e. Measures to track engagement.

  However, the presence of these statements was not consistent across feedback documents. Feedback of stage 2 applications in this study did not include statements highlighting any weakness in an impact plan,

however other studies have shown this. Fackrell et al (2021) found that the feedback statements requested clarification of dissemination plans, ensuring it was generalisable to all audiences; and clarification and justification of implementation plans, including logic models, and whether the research would lead to clinical impact (see Table 1). This discrepancy in feedback consistency shows the opportunity to raise awareness on the impact plan and encourage a consistent approach in providing feedback. Aspects related to the scientific quality of a proposal were predominantly the focus of Stage 2 feedback and relevance of research was an element found in Stage 1 feedback documents.

Why impact plans are needed

- From the perspective of applicants to NIHR research programmes, impact plans are a vital component of a research application. This was explained by one interviewee through the following scenario: '*Imagine that a team of researchers discover the cure for all diseases. The researchers work at a space station orbiting around Mars. What would be the point of such discovery if people on Earth do not know?*' Science can't have impact unless it is communicated but communication needs to be tailored to context and audience.
- Impact plans can provide evidence of the work from the research community towards accountability of public money expenditure. Notably, it was found that committee members agreed on the need to generate benefit from research and the usefulness of impact plans. However, the way in which different research programmes weighed or considered the impact plan during the funding committee differed based on the aim of the programme and the routes to impact that each programme focuses on. In addition, assessment of impact plans is conducted alongside the assessment of other aspects of the application that are equally or more important at the application stage, such as the scientific contribution of the proposal or its relevance to the NHS.

(RQ3.) Developing guidelines for assessing and writing impact plans

Overall guidelines to assess impact plans in the standard application form

Based on the interviews, we developed simplified guidelines to assess impact plans and impact-related information found in the standard application form. Interviewees agreed that criteria to assess impact plans need to be general and reflect 'common sense' to address the wide range of research that the NIHR funds, as prescriptive guidelines may stifle research creativity. The simplified assessment is based on six key questions to encourage conversations with the applicants at relevant points in the application process, throughout the lifecycle of their research, or at the end of the award.

Drawing on the analysis we developed guideline questions to help reviewers and funding committees to assess impact plans. These questions may also be used to develop reviewer and committee member training materials:

1. What are the expected broader impacts of the proposed activity?
2. Who will benefit from the research?
3. How will engagement with those receiving the benefits be done?
4. How will engagement be monitored/measured?
5. Does the team have resources (in skills and monetary) to deliver the activity? If not, do they bring external support to guide them in delivering impact-leading activities?
6. Does the plan match the aim, impact and long-term outcomes expected from the call and research programme, as laid out in the programme's Logic Model?

Information to answer these questions will be included in the impact plan and embedded throughout the research application. The following considerations may support reflection and the task of gathering relevant information during assessment of a research application:

Table 1. Considerations for the assessment of impact plans

Issue	**Rationale**	**Types of questions/questions to consider**
Importance and relevance of the issue under investigation.	The application shows that the research is grounded in real issues.	What did the researchers do to determine that the issue to investigate is important? What research has been done to ensure that the topic needs to be studied? (e.g. commissioned call; the application describes how and why the topic identified as priority by the JLA is addressing the priority). How is the team proposal addressing the importance and relevance of the issue investigated? What measures within the outcomes link to the changes that the NIHR wants to see as presented in the remit section of the call and the logic models of the programme?
Size of studies	The level of scale required of a study to have system-wide impact will mean larger investments. This will mean that larger studies will have higher potential for impact but for the funder, this presents a balancing challenge.	How many large-scale studies should be funded? What would be the impact on research culture (e.g., Early Career Researchers) from funding a majority of large-scale studies which may require input from more experienced researchers? In addition, not all contexts lend themselves to this type of research. For example, studies in rural areas might need a smaller-scale, multiple-studies approach. In addition, evidence from meta-analysis studies can also support change in NHS services which means that several smaller-scale studies are also impactful.

Issue	Rationale	Types of questions/questions to consider
Getting engagement right	Identify involvement of patient networks, knowledge brokers and mobilisers, people with the expertise to support dissemination and uptake of the research evidence. Preliminary work that supports the statements in the plans includes names of individuals or organisations that will be part of the research or support evidence dissemination activities.	Is there clear involvement of public contributors and/or patient organisations? If so how? or Please include brief description.
Dissemination activity	The application needs to show thorough thinking in the way of disseminating research. Research studies that are fundamental to how services are run need to be more ambitious in planning impact. Getting out and about, talking to people, using social media are examples of what committees look for in impact plans.	Are PPI involved in dissemination activities at different points in the research lifecycle? Are there plans to use scientific publications or reports during engagement events?
Scientific impact is the main consideration of the impact plan	The research application needs to show ambition about the ways in which it will be disseminated. Dissemination that is moving beyond scientific impact should include engagement with key stakeholders (community, social care, GP, NHS directors, policy makers, CQC, the general public) and conversations with the public using social media.	Is the standard approach to dissemination (e.g. publication of academic papers and attending academic conferences) the only impact-oriented activity in the plan? Are researchers making a distinction between dissemination outputs and impact conducing activities?
Policy relevance	When relevant, a pathway to inform policy provides a line of sight for science to contribute to wider societies	Where relevant, what is the value and contribution of the research to local, national or international policies? Does the team composition show thorough knowledge of policy around the area/field (e.g., NICE, Colleges, NHS England)? If not, have they considered bringing in expertise that becomes active in the study at the right time?

Issue	Rationale	Types of questions/questions to consider
Skills and experience of the research team to deliver on the study as well as impact orientated activities	Highlighting the skills of researcher teams clarifies roles of collaborators and their expertise to deliver on the research and dissemination of results	If relevant to the application, is multidisciplinarity observable in the team involved in the research that will increase the dissemination and potential uptake of findings?
Validity and scale of the study	Provide detail for the pathway of the research from influencing local practice to affecting societal change	Is the study big enough to influence a large and complex organisation (e.g., NHS)? If the study is small-scale, search for the ways in which applicants seek to contribute to the evidence that has been generated through other studies or to a gap in existing evidence.

Considerations of research programmes when assessing impact plans in the standard application form

NIHR research programmes have differing foci and goals represented in published logic models[2], as a result impact plans will necessarily vary. These differences include target groups that should be reached and the timing to conduct dissemination and impact orientated activities. Overall, it is important to tailor the impact plan to the specific research programme and its target audience. However, all research programmes should start thinking about impact as soon as possible, and should use a variety of dissemination and engagement activities to reach the widest possible audience. Findings from interviews highlighted some considerations that applicants to different research programmes could take when planning for targeting audiences that would be interested in taking up the findings of the research. Key target audiences to consider in the HTA, EME, HSDR and Public Health Research programmes included the NHS, general public, patients and policy makers, knowledge brokers and knowledge mobilisers; mechanisms included publications, conferences, publications on institutional websites with input of PPI, press releases, and engagement with patients, patient advocates.

Evaluation of the impact plan against the remit of the call and goal of the research programme. Comparing the impact plan against the goal of the research programme will generate evidence on the suitability of the research to deliver the long-term vision of the programme and the short/mid-term goals of the call. Consider

[2] Programmes Logic Models:
HTA - https://doi.org/10.3310/nihropenres.1115206.1
PGfAR - https://doi.org/10.3310/nihropenres.1115200.1
HSDR - https://doi.org/10.3310/nihropenres.1115209.1
PHR - https://doi.org/10.3310/nihropenres.1115208.1
EME - https://doi.org/10.3310/nihropenres.1115205.1
ESP - https://doi.org/10.3310/nihropenres.1115203.1
GHR - https://doi.org/10.3310/nihropenres.1115213.1

whether the impact-oriented activities in the plan focus on micro or macro-changes and whether they 'fit' with the goal of the programme (see Figure 2).

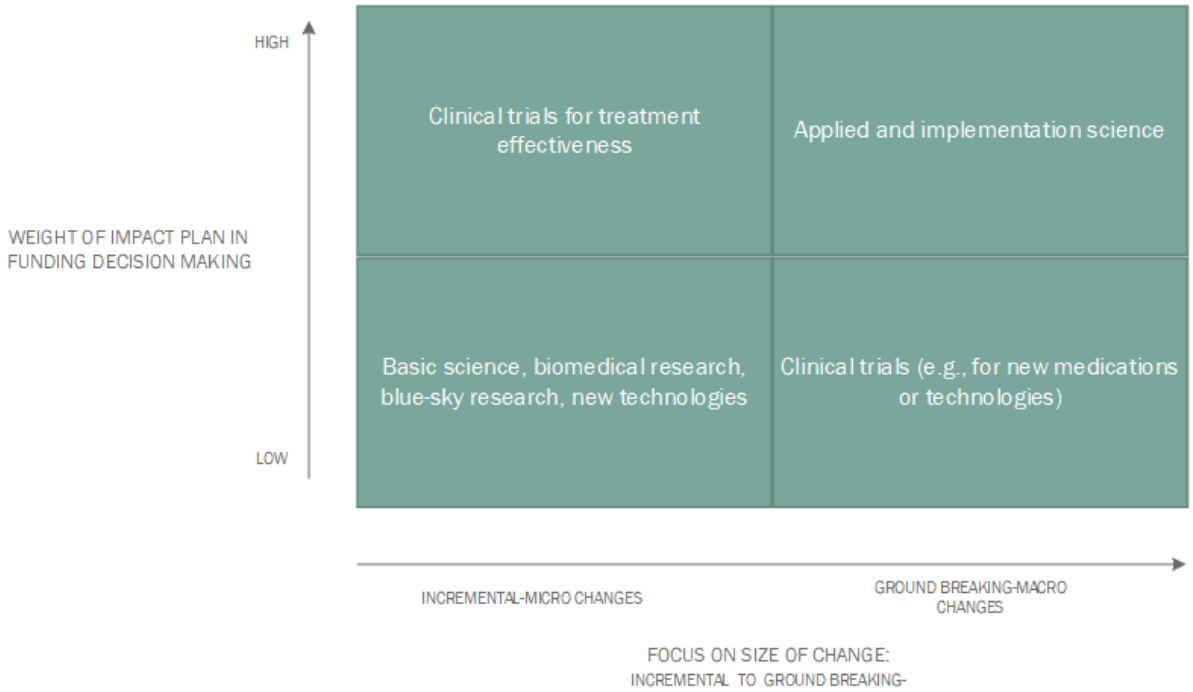

Figure 2: Representation of the use of impact plans by funding committees to inform funding decisions based on results from the study

Recommended good practice for writing impact plans drawn from the findings of the study

Writing an impact plan can be a demanding task, especially if the expectation is to embed impact ambitions throughout research applications. Based on the interviews with researchers and committee members we developed guidelines to support writing impact plans:

1. **Articulate a clear 'line of sight' from the research through to uptake and benefit.** The impact intentions of the work should be clear and explicit. What is the ambition for your research? - short-and long-term.
2. **Engage with the funder.** Clarify expectations for the research short and long-term. Looking at the remit section of the call, answer the question: What is the change that the funder would like to see? Programme Logic models[1] are a useful tool to support applicants with a clear understanding of the expected inputs, activities, outputs, outcomes and impact expected for the programme.
3. **Develop a short- and long-term-plan for outreach and engagement at the same time as you start thinking about your research.** Active identification (in some cases, that is all that can be done) or engagement and involvement with stakeholders who are able to act on your research findings throughout the lifecycle of the award is desirable. Find resources in your research organisation or others to guide you through the process or to find support for early engagement activities.

4. **Think about the audience for the study, key patient organisations, industry partners, or policy makers that can benefit from your research.** Briefly describe relevant stakeholders and who they are. Include views of why something is important and who it could affect and how. Report the information that your audience needs and the ways in which they can get that information (including who is best placed to give them that information – e.g., the researcher, clinicians, patient networks, etc). Articulate what methods are available to reach the target audiences. Ask for help from knowledge dissemination researchers, knowledge brokers, the NIHR Research Design Service, and online resources.
5. **Think about "how".** List the mechanisms for engagement providing a brief answer to 'how' you will engage with relevant stakeholders and audiences. Consider how the evidence will reach the right people, the timing for engagement and the format and accessibility of the materials that will be used.
    a. When approaching stakeholders who struggle to find time to sift through research evidence published as academic outputs (e.g., chief executives of NHS Trusts, social care professionals, clinicians), make sure to be very clear, concise, and present a case about improving services and patient experience. Some stakeholders will also be interested in the economic aspect of a proposal.
    b. Approach stakeholders using top-down and bottom-up approaches. Top-down push: attend national conferences that give opportunity to talk to large audiences of relevant stakeholders in one place. Bottom-up pull – get ideas and evidence to members of the public, patients and frontline staff so that they pull the relevant research and mobilise it.
6. **Plan your resources.** Clearly describe the skills within the team to bring the outputs of your research to relevant audiences. Think about budget and skills from your team (e.g., PPI representatives; specialists) who can champion stakeholders' engagement or who liaise with industry representatives.
7. **Use plain English.** Applications written in a clear language address the multidisciplinary experience of the funding committees' members.
8. **Tailor your approach and be proportionate.** The impact plan should not be a template but a starting point, researchers need to think of writing a plan considering the impact expected, the route to get to that impact, and the performance indicator that will support the tracking not only of the activities performed, but the effect of engaging in those activities.

(RQ4.) Some opportunities to use the impact plan as a tool to monitor impact orientated activities

Interviewees discussed the potential of the impact plan to be used not only at the application stage but during the delivery of the research study. The impact plan may be used as a tool to identify resources required to deliver the benefit of the research, monitoring activities during the study and supporting reporting of outputs, outcomes and impacts. Linking the impact plan from application stage to ongoing award monitoring would

support researchers and research managers to follow up planned activity and support the research throughout the research lifecycle. This could have a positive knock-on effect at the end of the research when research outputs, outcomes and impacts are reported. There were however some views on the difficulties of using impact plans to track impact whilst research is underway, as some research will have limited opportunities for impact generating activities until the research results are available and disseminated. This is particularly true for research programmes that fund clinical trials, making the distinction between the programme goals apparent. Finally, some indicated that there are specialised skill sets required to assess impact and requiring this task from research managers may present a challenge.

Discussion

This study explored dissemination and impact plans submitted to the National Institute for Health and Care Research (NIHR) to identify core elements of plans, understand their role in assessing applications for funding, develop guidelines to support their assessment and overall, enhance the value of impact plans submitted to the NIHR.

We found that in addition to scientific dissemination activities (i.e., publications and conferences) impact plans include identification of stakeholders; mechanisms and resources for engagement; the long-term ambition for the research; and metrics to track engagement or other impact orientated activities. These elements are in line with guidelines in the wider impact literature. Importantly, these categories matched the views of committee members on the type of information expected to be found in these plans, with two additional categories of information discussed by committee members: value for money and Intellectual Property (IP). It is important to note that in the standard application form, information about value for money and IP (when relevant) was described in other sections (e.g., justification for costs where researchers indicate how the research will potentially benefit the NHS and/or public health and social care or describing cost savings or benefits). The structure of the standard application form is likely the reason why value for money and IP are not found in the dissemination and impact plan but are still present in the application and highlights the importance of looking at the full application when assessing potential impact of a proposal.

Participants' views on the use of impact plans in funding committees varied between research programmes. The difference was linked to the goal and type of research of the programme (e.g., blue-sky research vs implementation science). This was found to be an important consideration that should be used to guide assessment as well as writing the impact plans. These considerations are relevant to funding committees who assess applications for research funding and make recommendations about which research should be supported, and who provide feedback to applicants. Programme-specific consideration of the impact plan will shift as the NIHR research programme focus moves along the translational pathway (see for instance Best

Research for Best Health: The Next Chapter, 2021 https://www.nihr.ac.uk/documents/about-us/best-research-for-best-health-the-next-chapter.pdf and Strengthening the research journey from 'bench to bedside'). Considerations are also relevant to external reviewers, including public contributors, who must identify the potential benefit and long-term impact of an application during assessment by answering the question from the guidelines: *How will the research make a difference?*

Whilst impact plans are part of the wider context of the research, they are not the focus of the funding decision. Applications describe the potential for research impact, but cannot be predictive, and are not used as a deciding factor to make a recommendation to support a research proposal for funding.

Based on the analysis of application documents and interviews, and considering the way that decision makers use impact plans written in the standard application form, we developed some considerations to help the assessment of impact plans that may be used across research programmes, and to build some consistency and clarity in guidelines for funding committee members. The proposed considerations allow for different programmes to identify information that is relevant to the programme goal and to support funding committee members to conduct a quick assessment of the potential impact of an application. The considerations would need to be further evaluated to determine their efficiency and effectiveness.

There is support for the use of the impact plan as a supporting aid in monitoring awards as they progress but noting that the plan reflects the initial plan that will need to evolve, and must be flexible and changeable to meet changes in policy and practice. Elaborate plans for impact may lead to wasted effort. In addition, monitoring of impact during the lifecycle of a study needs to reflect that different kinds of research will produce outputs, leading to outcomes and impacts on very different timescales. Detailed assessment of impact requires specialised skills and training.

Impact planning and assessment in the wider research funding landscape

UK Research and Innovation (UKRI)

In February 2020, UKRI announced changes to its application process, introducing a simplified application that does not include a Pathway to Impact section. At the same time, however, it emphasised their commitment to deliver research benefits and demonstrate impact. According to the communication, pathways to impact strategies will be embedded throughout an application[3]. It can be argued that having a dedicated section to develop an impact plan within application forms gives applicants an opportunity to *focus the mind.* On the

[3] Excerpt from "Supporting Guidance for applicants applying during the removal period of the 'Pathways to Impact' and 'Impact Summary' for applications to UK Research and Innovation (up to 01 March 2020)": What is UKRI putting in place to replace Pathways to Impact? We are not replacing the Pathways to Impact document within our application processes but taking steps to embed impact more centrally within our application and assessment processes. The exact requirements will therefore vary depending on the objectives of each opportunity.

other hand, it may inadvertently discourage creativity and fresh thinking by focusing on dissemination (e.g. publication and conference attendance) and not in the uptake and adoption of research. The challenge for funders is to encourage researchers to plan the mid/long term vision for the research whilst recognising that there will be things outside the sphere of control which may alter that vision. Impact plans must adapt without losing the line of sight.

Association of Medical Research Charities (AMRC)

The AMRC carries out quinquennial audits to collect information about the peer review processes followed by 150 members. This activity ensures that member organisations adhere to the standards of the AMRC, raising opportunities to advise members and enabling the AMRC to reassess the principles of peer review in line with changing research landscapes.

The 2020 AMRC audit on peer review included a question about the assessment of the potential value of a proposal during the peer review process. The responses to this question indicated that 94% (133/142) responded *Yes* to having a structured approach/mechanism for reviewers to assess the potential value of a proposal; 4% (6/142) responded No; and, 2% (3) N/A. Respondents who answered No or N/A to using a structured mechanism or approach but provided no reasons for this were either smaller charities (those that spend £500,000 or less on research in the UK each year) or charities that fund a single centre or institute and therefore do not necessarily review individual applications. Of those that responded, 69 indicated the use of a form or report/template, and 41 provided guidelines on how to assess the application. Some respondents also provided information on aspects of impact that reviewers are asked to comment on (the counts reported in brackets do not represent individual charities but mentions, as some charities ask for comments on multiple different types of impact). The aspects of *Impact/potential impact (15), Patient/public health benefit (14), and Advance/contribute significantly to the understanding [of the issue] (8)* had most mentions, followed by *Clinical impact/clinical translation and Subsequent grants/funding* with 5 mentions each. Other factors mentioned were: *Societal impact (3), Scientific/academic impact (3), Contribute to the education and training of future scientists (2), Therapeutic/treatment development (2), Dissemination /reaching key audiences (1), Impact for the charity (1) and improve diagnosis (1)*. Although value for money is not commonly linked to assessment of potential impact, it links to impact assessment through the translational research pathway, informing efforts to determine whether the investment is justified against the magnitude of the potential benefit. Value for money is a factor that will be taken into consideration in funding decisions. In the audit, 12 respondents indicated asking reviewers to assess this concept. Overall, these findings give indication of the widespread practice of assessing impact in research applications and the importance of the potential value of research for funding organisations.

Conclusions

The in-depth analysis of application documents and the interviews with funding committee members and applicants provided rich insight into the way that information about impact is used by funding committees. This report can be used to encourage conversations and raise awareness on the ways that funders can support researchers to plan for impact.

Allocating research funds through a process of peer review is challenging. Guidelines to support a critical assessment of the future value of research could provide support to funding committees, reviewers, and researchers.

It is difficult to use impact plans as a discriminator between applications, however, there is recognition that elements of the plan (e.g., early stakeholder engagement; clear links between outputs and audiences; strategies to mobilise research findings) provide insight into the mid-long-term potential of the proposed research. Those elements inform the assessment made by funding committee members who must balance many factors to inform a recommendation for funding.

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2. Published guidelines to develop, write and assess impact strategies: Broader Impacts Guiding Principles and Questions for National Science Foundation https://researchinsociety.org/wp-content/uploads/2021/02/GuidingPrinciplesDoc2020.pdf
3. Cochrane Knowledge Translation resources https://community.cochrane.org/review-development/knowledge-translation
4. Cochrane Skin Dissemination checklist https://training.cochrane.org/online-learning/knowledge-translation/how-share-cochrane-evidence/dissemination-essentials-checklist
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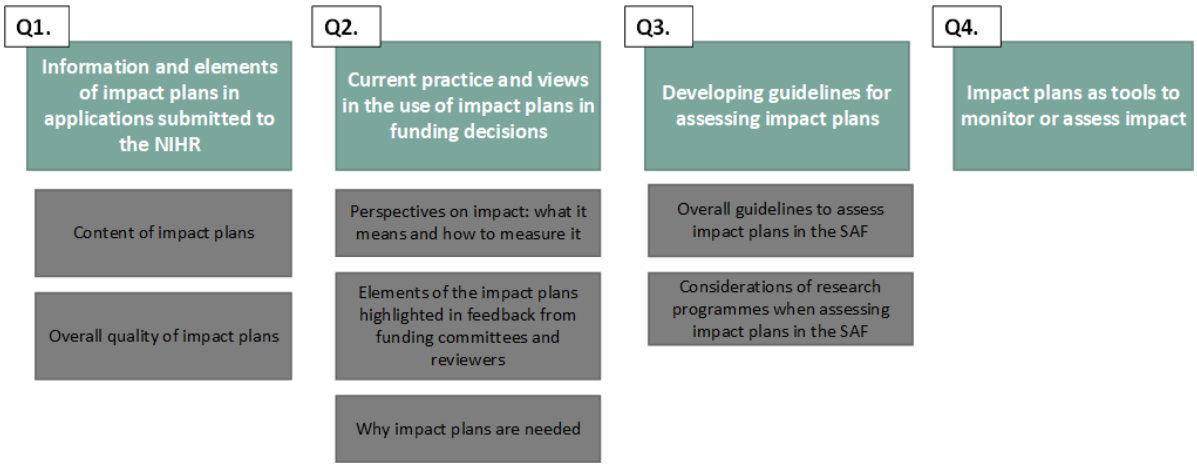
Appendices

Appendix A: Thematic categories of findings



Appendix B: Dissemination and engagement activities of the Narrator study

- Poster presented at the Southampton Faculty of Medicine Conference 2020 (18th June 2020).
- Conversations and collaboration with functional areas in the business including HS&DR prioritisation and shortlisting, A&F; and with RDS South Central.
- Collaboration with impact teams who are conducting impact-related projects (e.g., Embedding Impact) and developing the NIHR Outcomes Framework.
- Contributed to the Funder reviewer impact toolkit led by Dr Julie Bayley: https://lili.blogs.lincoln.ac.uk/research-publications/projects/developing-a-funder-reviewer-impact-toolkit/ (Accessed 30/10/2023)