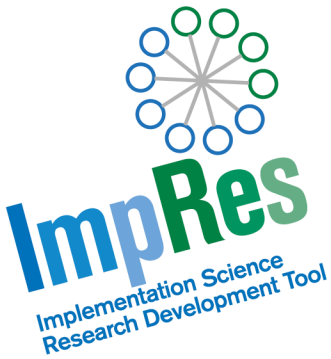


Implementation science research development (ImpRes) tool

A tool to improve the quality of implementation projects

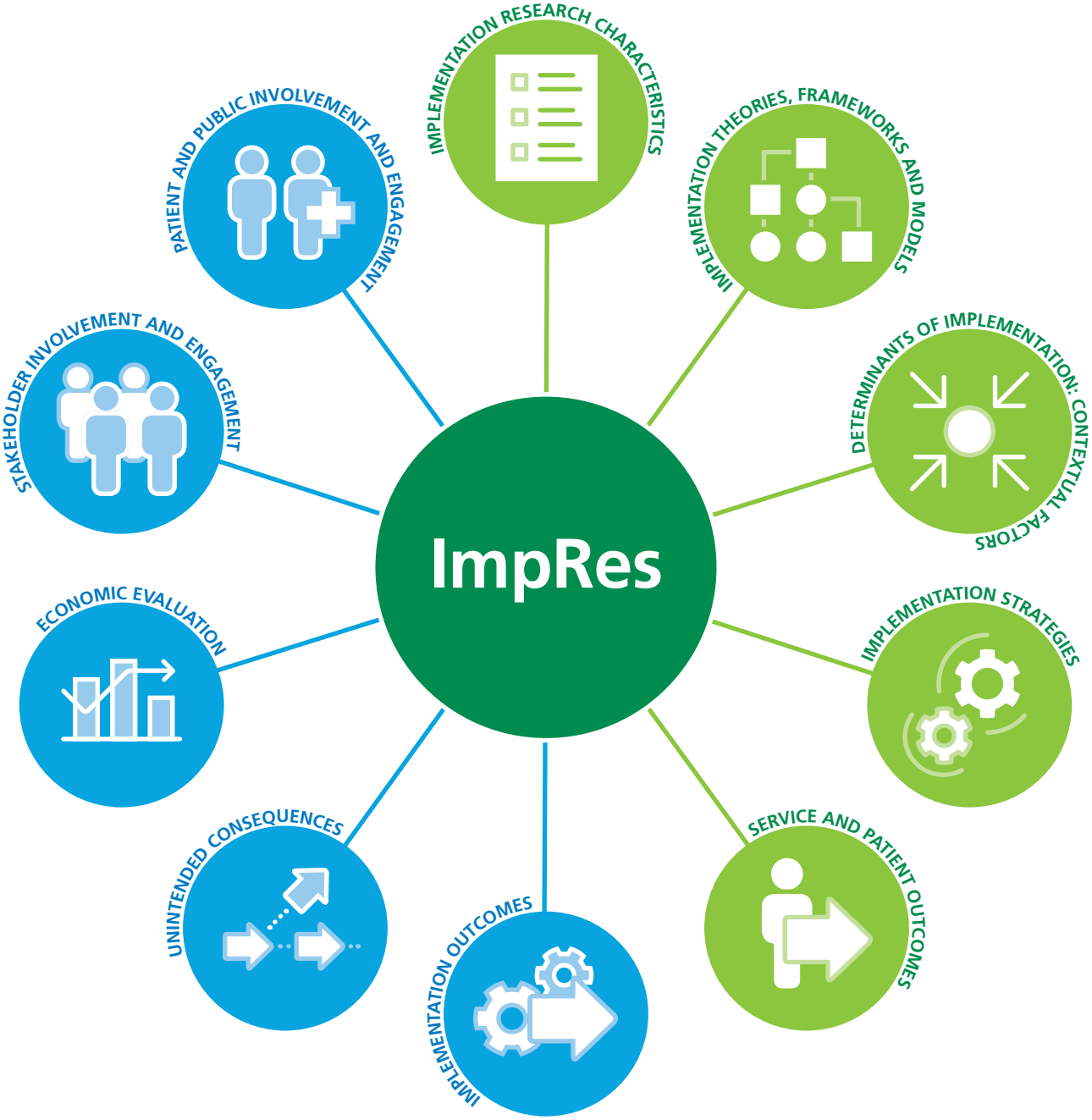
Version 1.0
April 2018

Implementation Science Research Development (ImpRes) Tool

ImpRes can help you successfully apply implementation science concepts, principles and methods to implementation research by providing a step-by-step approach to designing high-quality and rigorous implementation projects.

ImpRes was developed following a scoping review of the implementation science literature, to identify the core principles of implementation science, and following an iterative process of consulting international experts in the field of implementation science. See the ImpRes supplementary guide for a full list of experts involved in the development and refinement of ImpRes.

ImpRes contains 10 domains that cover the core principles and methods of implementation science that research teams should consider when planning and designing implementation research in the context of healthcare. You may find that some domains of the tool will be more relevant to your implementation project than others, though considering all of them will ensure that your implementation research is high-quality. ImpRes is intended to be used in conjunction with the ImpRes supplementary guide.



Implementing evidenced-based healthcare interventions is a complex and challenging task, therefore we strongly recommend that ImpRes is completed by the research team, rather than an individual researcher. We recommend you save a version of the document for reference purposes before you start to complete it in case you accidentally delete some of the notes/prompts.

Implementation Research Characteristics

Title of Research Project:

Research Summary (guide 350 words)

Provide a brief summary of the project rationale and aims:

Implementation Questions or Interests of Research

Describe the implementation questions or interests of your project. These may be practical implementation issues, e.g., how to optimally increase the uptake of a guideline or evidence-based intervention; or primary implementation research questions, e.g., a scientific investigation of which one of two implementation strategies works optimally for an evidence-based intervention.

Implementation Stage of Research Project

Select the implementation stage of your project by highlighting the option that best describes your project:

1. Exploration: identifying the need for change, learning about possible evidence-based interventions that may provide solutions, learning about what it takes to implement the intervention effectively, developing stakeholders and champions, assessing and creating readiness for change, and deciding to proceed (or not).
2. Installation: establishing the resources needed to use an evidence-based intervention and the resources required to implement the intervention as intended.
3. Initial Implementation: the first use of an evidence-based intervention by healthcare professionals or patients/service users and learning how to support the new ways of work.

4. Full Implementation: the skilful use of an evidence-based intervention that is well-integrated and routinely and effectively supported.

Design of Implementation Research

Select the design of your project by highlighting the option that best describes your project:

- Hybrid designs (continuum between hybrid effectiveness-implementation research and 'pure' implementation research):
    1. Hybrid design type 1: Primary aim: determine effectiveness of a clinical intervention. Secondary aim: better understand context for implementation.
    2. Hybrid design type 2: Co-primary aims: determine effectiveness of a clinical intervention and determine feasibility and potential utility of an implementation intervention/strategy.
    3. Hybrid design type 3: Primary aim: determine utility of an implementation intervention/strategy. Secondary aim: assess clinical outcomes associated with implementation trial.
- Pure implementation research: Focusses on the adoption or uptake of clinical interventions by providers and/or systems of care. Research outcomes are usually provider and/or system behaviours, for example, levels and rates of adoption and fidelity of the clinical intervention.

2. Implementation Theories, Frameworks and Models

Many theories, frameworks, models and guidelines exist to facilitate implementation efforts (e.g. Consolidated Framework for Implementation Research (CFIR), Reach, Effectiveness, Adoption, Implementation, Maintenance (RE-AIM) framework).

Name the theory/framework/model(s) you intend to apply to your project:

If you intend to apply a theory/framework/model(s) indicate the reason(s) for applying:

1. To describe, guide or optimise the process of translating research/evidence into practice
2. To understand or explain what influences implementation
3. To evaluate implementation success
4. Other, state:

If you are not intending to apply an existing theory/framework/model but intend to use a customised approach instead, describe it and provide the rationale for this approach:

If you are not using any such theory/framework/model, justify your reason(s) for not doing so:

3. Determinants of Implementation: Contextual Factors

Context is defined as a set of factors or attributes that can facilitate or act as a barrier to implementation efforts. Contextual factors include all drivers and/or barriers to intervention implementation, wherever these may stem from (e.g. characteristics of the intervention, individual characteristics, team, financial, cultural, and organisational characteristics).

Describe how you will identify contextual factors that might facilitate or impede implementation:

Describe any modifications or adaptations to the evidenced-based intervention that you intend to make, to suit the local context, and justify or provide the rationale for the modifications or adaptations.

4. Implementation Strategies

This section explores the implementation strategies that you intend to use. Implementation strategies are methods or techniques used to improve the adoption, implementation, and sustainability of an evidence-based intervention.

Implementation strategies include activities such as training and educating stakeholders (e.g. conducting ongoing training; developing training materials), developing stakeholder interrelationships (e.g. identifying and preparing champions), and supporting clinicians (e.g. reminders).

Describe the implementation strategies that you intend to use:

Provide justification/rationale for the implementation strategies you intend to use:

5. Service and Patient Outcomes

This section explores the outcomes that you intend to assess and measure in your project.

Service Outcomes

Outcome	Measurement method(s) (e.g. observations, surveys, routinely collected data)	Level of measurement, i.e. individual patient or service user, individual healthcare professional or service provider, health service facility (e.g. hospital)	Measurement time point(s)

Add rows if necessary

Patient Outcomes

Outcome	Measurement method(s) (e.g. observations, surveys, routinely collected data)	Level of measurement, i.e. individual patient or service user, individual healthcare professional or service provider, health service facility (e.g. hospital)	Measurement time point(s)

Add rows if necessary

6. Implementation Outcomes

This section explores the implementation outcomes that you intend to assess and measure in your project.

Implementation Outcome and definitions	Intend to measure? (Yes/No)	Measurement method(s) (e.g. observations, surveys, routinely collected data)	Level of measurement, i.e. individual patient or service user, individual healthcare professional or service provider, health service facility (e.g. hospital)	Measurement time point(s)
Acceptability: degree to which an intervention is perceived to be agreeable				
Adoption: intention to adopt or initial implementation of intervention				
Appropriateness: perceived suitability and usefulness of intervention to address problem				
Feasibility: fit and suitability of the intervention for everyday use				
Fidelity: the extent to which an intervention is implemented as intended				
Implementation cost: costs associated with implementation, including cost of delivery of the intervention and cost associated with the implementation strategy used				
Penetration: diffusion into practice				
Sustainability: sustained use of the intervention				

If you intend to assess implementation outcomes, will you explore the relationship between these outcomes and the service or patient outcomes?

Yes/No

If you intend to assess implementation outcomes, will you explore the relationship between these outcomes and implementation strategies?

Yes/No

7. Unintended Consequences

Unintended consequences refer to outcomes that are not anticipated and intended at the time of intervention implementation; they can be both positive (e.g. improved job satisfaction) and negative (e.g. increased workload for healthcare professionals).

Specify whether and how you will explore potential unintended consequences:

8. Economic Evaluation

This section explores the health economics and cost of implementation.

Implementation costs and definitions	Intend to Measure? (Yes/No)	Measurement method (i.e., directly measured or modelled based on existing evidence)
Implementation project costs: Resources required for developing and delivering the implementation project (e.g. project labour, clinicians' time away from clinical practice, engaging with project, travel expenses)		
Intervention costs: Cost of increased patient exposure to intervention		
Wider systems impact: Intended or unintended consequences for performance and resource use locally and across the wider system and other agencies		
Net intervention cost: Number of additional patients exposed to recommended intervention *multiplied by* Cost of recommended intervention per additional patient		
Net implementation cost: Implementation costs *plus* Net intervention Cost *plus* any wider system costs arising in consequence of implementation		
Health benefits: E.g. quality adjusted life years gained (QALYs)		
Net implementation health benefit: Number of additional patients treated with recommended intervention *multiplied by* QALY gains per patient treated with recommended treatment.		
Implementation cost-effectiveness: Net implementation health benefit *minus* Net implementation cost		

If you intend to calculate any of the above health economic costs, do you intend to explore the association between these and implementation outcomes?

YES/NO

9. Stakeholder Involvement and Engagement

This section explores the degree and level of stakeholder involvement and engagement in implementation projects. This section refers to all stakeholders (e.g. policy makers, frontline clinicians) except patients/service users and the public (a separate section on patient and public involvement and engagement follows this section).

Involvement refers to the active involvement between researchers and stakeholders who, for example, deliver services (e.g. frontline clinicians), rather than the use of stakeholders as participants in research. Engagement refers to where information and knowledge about research is provided and disseminated, for example at conferences.

Who are the stakeholders of your project?

Please indicate the stage(s) of your project where you intend to involve and/or engage stakeholders and the approach used/level of involvement.

Research Stage (involvement examples)	Intend to involve? (Yes/No)	Consultation/ Collaboration/ Combination of both approaches	Intend to engage? (Yes/No)
Identifying and prioritising research topics (e.g. stakeholders are involved in selecting and developing research topics)			
Commissioning (e.g. stakeholders review proposals/sit on commissioning boards; commission research)			
Designing and Managing (e.g. Designing: advising on stakeholder involvement across the life of the project; advising on methods and recruitment strategy. Managing: co-applicants; setting up an advisory group (where all members are stakeholders); sitting on a steering group (where at least two members are stakeholders)			
Undertaking (e.g. carrying out interviews or running focus groups; analysing and interpreting the results of research)			
Disseminating (e.g. developing newsletters/progress reports; co-presenting papers at conferences/workshops; co-authoring journal articles and report)			
Implementing (e.g. advising on/co-constructing implementation strategy; becoming part of an implementation team)			
Evaluating impact (e.g. working on evaluation of involvement in the project; identifying short and long term impact of involvement)			

How many stakeholders do you intend to involve in your project?

How many stakeholders do you intend to engage in your project?

10. Patient and Public Involvement and Engagement

This section explores the degree and level of patient and public involvement and engagement in implementation projects.

Indicate the stage(s) of your project where you intend to involve and/or engage patients and the public and the approach used/level of involvement you intend to use:

Research Stage (involvement examples)	Intend to involve? (Yes/No)	Consultation/ Collaboration/ Combination of both approaches	Intend to engage? (Yes/No)
Identifying and prioritising research topics (e.g. patients are involved in selecting and developing research topics)			
Commissioning (e.g. patients review proposals/sit on commissioning boards; user organisations commission research)			
Designing and Managing (e.g. Designing: advising on patient involvement across the life of the project; advising on methods and recruitment strategy. Managing: co-applicants; setting up an advisory group (where all members are patients); sitting on a steering group (where at least two members are patients)			
Undertaking (e.g. carrying out interviews or running focus groups; analysing and interpreting the results of research)			
Disseminating (e.g. developing newsletters/progress reports; co-presenting papers at conferences/workshops; co-authoring journal articles and report)			
Implementing (e.g. advising on/co-constructing implementation strategy; becoming part of an implementation team)			
Evaluating impact (e.g. working on evaluation of involvement in the project; identifying short and long term impact of involvement)			

Approximately how many patients/service users and the public do you intend to involve in your project?

Approximately how many patients/service users and the public do you intend to engage in your project?

Do the patients/service users you intend to involve in your project have formal research training?

Do the patients/service users you intend to involve in your project have experience of the specific health condition that is the subject of your research?

Thank you for using the ImpRes tool. If you have any questions about ImpRes, please contact Dr Louise Hull | Senior King's Improvement Science Fellow | Centre for Implementation Science | Health Service and Population Research Department | King's College London | Institute of Psychiatry, Psychology & Neuroscience (IoPPN) - Main Building | 2nd Floor | Room E2.19 | De Crespigny Park | Denmark Hill | London SE5 8AF | Email: louise.hull@kcl.ac.uk

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The NIHR CLAHRC South London is a research organisation that brings together researchers, health professionals, NHS managers, commissioners, patients and service users in south London. Its aim is to improve health services by investigating the best way to implement research results and clinical guidelines that demonstrate the most effective treatments and ways of working. To find out more, visit: www.clahrc-southlondon.nihr.ac.uk

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