



A scoping review on the methodological frameworks for supporting transferability and implementation of practices in the health and care systems



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Executive Summary

The aim of this scoping review was to produce knowledge of the existing methodological frameworks and their means for supporting transferability and implementation of practices across health and care systems, of the obstacles and enablers of transferability and implementation of practices in health and care systems, and of the needs for the further development of these kinds of frameworks.

This scoping review mapped and studied a sample of 1) existing reviews on transferability and implementation in health and care systems and 2) existing methodological frameworks for supporting the transferability and implementation in health and care systems developed earlier in EU projects and other selected projects. 19 reviews and 21 frameworks were included in scope and reviewed by researchers through a qualitative synthesis.

The study material was heterogeneous and diverse, and the distinction between frameworks and reviews was not always clear. In some cases, reviews had a framework included within them.

In the further development of support for the transfer and implementation of practices across systems, greater attention should be given to developing clear and standardized terminology, conceptual frameworks, and assessment frames and tools. Interdisciplinary collaboration from both the transferring and receiving systems and knowledge sharing across research fields, such as implementation science and improvement science, can help bridge the gap between research and practice. Additionally, more emphasis should be placed on synthesizing evidence through systematic reviews to inform dissemination and implementation efforts. Clear communication, cultural sensitivity, adaptability, and a focus on client-centred care are key factors in overcoming these challenges and facilitating the successful transfer of practices across health and care systems.

The following conclusions were drawn in the review for the further development of the methodological frameworks to support the transferability and implementation of practices across the health and care systems:

- 1) defining the theoretical commitments of the frameworks on the entire innovation activity, including transfer and implementation of practices,
- 2) defining the key concepts related to the transfer of practices, such as, scalability, translation, transferability, adaptation, implementation, applicability, and feasibility,
- 3) defining the 'practice' related concepts, and the concept of 'model' as a boundary object in the transfer process,
- 4) defining the basic principles of innovation activity, including transfer and implementation, which go through the whole innovation process,
- 5) focusing both on the original context of a practice and on the receiving context of a given practice; looking at the transfer from both sides and the interaction between them; connecting and combining the two viewpoints,

- 6) defining the whole operational picture of transferring practices from the original contexts to other contexts; different perspectives, actor groups/stakeholders and their roles, and phases, tasks, etc.,
- 7) defining the knowledge needed in the different phases and tasks of transferring practices from a system to other systems,
- 8) utilising and combining the existing means and tools for producing knowledge and performing evaluation on transferability and implementation of practices,
- 9) collecting/designing different means for the collaboration and knowledge sharing between the developers of the original practices and the adopters of the given practices, and
- 10) defining the roles of documenting the knowledge concerning original practices in addition to practices adapted in new contexts and of creating / modelling models which define the transferable core of a solution.

Table of contents

1	Background	9
2	Study aims and questions	11
3	Search strategy and study selection	12
3.1	Inclusion and exclusion criteria	12
3.2	Search words and databases	12
4	Data extraction and synthesis	14
5	Results	15
5.1	General characteristics and themes of the study material	15
5.2	Theoretical suppositions in the frameworks and reviews.....	17
5.3	Purposes and users of the frameworks	18
5.4	Means and tools in the frameworks for supporting transferability and implementation	20
5.5	Obstacles and challenges in transferring practices across the systems in health and care	21
5.6	Enablers of transferring practices across the systems in health and care	23
6	Discussion	24
7	Conclusions	28
8	References	30
9	Annexes	32
9.1	<i>Reviews analysed</i>	32
9.2	<i>Descriptions of the frameworks analysed</i>	34

Glossary

Adaptation refers in this review to the activities of adjusting a solution as necessary to ensure its workability, success, and sustainability in a new context.

implementation refers in this review to the process of translating knowledge of a solution into practice in a context to achieve a particular goal or objective.

Innovation activity refers in this review to the different research and development activities and phases from the definition of problem and needs to the implemented solution and its evaluation regardless of whether the activity develops a new solution from the scratch or adopts a solution developed elsewhere.

Methodological framework refers in this review to the different ways of thinking and orientation and means and tools to produce knowledge of and perform evaluation in relation to transferability and implementation of practices.

Model refers in this review to the description of the transferable core elements and features of a solution; it consists of hypotheses and theory of change; it can be in the form of text, speech, video, figures, etc.; and with the help of it a solution can be shared and communicated between the systems.

Practice refers in this review to the ways and routines to do things repeatedly in the same way. Practices have a purpose, and they are constituted by human actors, tools, technologies, rules, norms, laws, etc. and their interactions.

Transfer of practices refers in this review to the entire process of transferring certain practices, for example services, processes, or strategies, from one context to another. The process consists of, among other things, evaluating the transferability of the original practice and adapting and implementing it in a new context.

Transferability of practices refers in this review to the knowledge of to what extent practices and their effects are possible to repeat and enact in other than their original contexts.

1 Background

The challenge of transferring solutions and practices across the health and care systems has gained increasing attention in recent years for several reasons. The health and care systems in Europe are facing similar challenges and problems, including the demographic and epidemiological transitions (population ageing with an increase of the incidence and prevalence of chronic diseases) (Omran 2005; Bongaarts 2009), the multiplication of health and social problems, and the diminishing of budgets (OECD/European Union 2020; European Union 2019; European Commission 2017; Nuño-Solinis & Stein 2015). Novel solutions and practices for organizing, producing, and delivering health and care are needed to meet these challenges and problems. However, the principal challenge is not the shortage of workable solutions and practices, but rather that solutions which have worked and been successful in certain contexts only minimally scale and transfer across the organizations, regions, and countries, where they could be adapted and implemented into regular use. This challenge is a bigger issue for complicated and complex practices which involve several interconnected actors, activities, and elements.

In this review, “transfer of practices” refers to the entire process of transferring certain practices, for example services, processes, or strategies, from one context to another. The process consists of, among other things, evaluating the transferability of the original practice, and adapting and implementing it in a new context. It is about taking practices that have proven to be workable and effective in one context, and transferring and applying them in a different, often related, context to achieve similar positive outcomes. “Transferability of practices” refers in this review to the knowledge of to what extent practices and their effects are possible to repeat and enact in other than their original contexts.

In this review, “implementation of practices” refers to the process of translating knowledge of a solution into practice in a context to achieve a particular goal or objective. (See Scarbrough & Kyratsis 2022.) The successful implementation of a solution requires, among other things, clear communication, stakeholder involvement, resources allocation, training, and ongoing evaluation. A practice must be adjusted as necessary to ensure its workability, success, and sustainability.

Transferring existing solutions and practices over developing new ones can offer several advantages in terms of efficiency, reliability, and cost-effectiveness. By adopting existing solutions, it may be possible to save time and reduce development costs. Established solutions have often been tested and refined over time, leading to a higher degree of reliability and stability. Utilising existing solutions might allow to skip time-consuming research and design and enable quicker implementation of the solution. Established solutions often come with comprehensive documentation, user communities, and support networks that is helpful to the adopters. However, sometimes it is necessary to develop novel solutions, for example when the

existing solutions do not meet the needs, goals, and requirements of an organisation. (Fakhruddin et al. 2020).

To transfer a practice from the original context to other contexts requires understanding and knowledge of the core elements and features of the practice and its context that make the practice work and that are needed to enact and repeat it in other contexts to achieve similar outcomes as in the original context (Nolte & Groenewegen 2021).

The health and care systems, and in particular organisations in them, need means for producing knowledge of the practices in their original context of development and for evaluating the transferability of them and, on the other hand, for adapting and implementing the practices to the local contexts in the receiving sites.

This scoping review aimed at producing knowledge of the existing methodological frameworks for supporting transferability and implementation of practices across the health and care systems, of the obstacles, challenges, and enablers for transferring practices across the systems and settings, and of the needs for the further development of these kinds of frameworks.

This scoping review was a part of the activities of the European Partnership on Transforming Health and Care Systems (THCS, 2023-2029), the general objective of which is to contribute to the transition towards more sustainable, efficient, resilient, innovative, and high-quality people-centred health and care systems inclusive and equally accessible to all people. The review was performed as an analysis of the current state of the frameworks for supporting the transfer of practices across the systems and as a starting point for developing the THCS framework for supporting transferability and implementation of practices to be adopted and used by policy makers, health and care authorities, management, and professionals.

2 Study aims and questions

The aim of this scoping review was to produce knowledge of the existing methodological frameworks and their means for supporting transferability and implementation of practices across the systems, of the obstacles and barriers and enablers and facilitators of transferability and implementation of practices in health and care systems, and of the needs for the further development of these kinds of frameworks. In this review 'methodological framework' refers to the different ways of thinking and orientation and means and tools to produce knowledge, or perform evaluations, of transferability and implementation of practices.

This review aimed at answering the study questions below. The study questions were studied by analysing the existing frameworks and reviews for supporting transferability and implementation in health and care systems.

- 1) On what kind of theoretical suppositions of transferability and/or implementation are the frameworks and the reviews based?
- 2) For what kind of purposes and users have the frameworks been developed?
- 3) What means and tools are included in the frameworks to support transferability and implementation in health and care systems?
- 4) What are the enablers, barriers, and challenges to transferring practices across health and care systems?

Finally, basing on the analysis of the study material and on the expert evaluation of the research group this scoping review defined conclusions for the further development of the methodological frameworks to support the transferability and implementation of practices across the health and care systems.

3 Search strategy and study selection

This scoping review studied 1) existing frameworks for supporting transferability and implementation of practices in health and care systems and 2) existing reviews on transferability and implementation of practices in health and care systems.

3.1 Inclusion and exclusion criteria

This review was not a systematic review which analyses all the possible material concerning the frameworks of transferability and implementation in health and care systems, but a scoping review which aimed at mapping and analysing a sample of 1) existing reviews on transferability and implementation in health and care systems and 2) existing methodological frameworks for supporting the transferability and implementation in health and care systems developed earlier in EU projects and other selected projects. This research strategy was chosen because of the available time and researcher resources for performing the review.

The inclusion criteria for this scoping review were the following:

- reviews studying transferability and implementation in health and care, published 2000-2023
- concrete framework/model for supporting/evaluating the transferability and/or implementation of practices/innovations/solutions developed in EU projects 2007-2023 and other projects
- web-based frameworks
- frameworks in publications

The exclusion criteria for this scoping review were the following:

- theoretical research papers
- empirical primary studies

3.2 Search words and databases

A sample of existing reviews and frameworks for supporting transferability and implementation of practices in health and care systems were searched for the analysis. The following databases and data sources were used for the search: Web of Science Core Collection, Medline (via Web of Science), Ebsco Discovery Service, Google Scholar and European Commission's publications web site. The search yielded a total amount of 1837 publications. In addition, researchers working on the review added in reviews and frameworks they were already familiar with from their own work.

The search strategy included terms and related terms for 1) innovations, 2) implementation, transferability, diffusion, or acceptability of innovations, 3) terms related to tools, strategies,

methods, or frameworks 4) characteristics of a successful implementation or transferable innovation and 5) health and social care. In addition, some of the searches were limited with search terms for a European context and/or search terms for reviews.

Examples of search terms are:

1) practices, innovations, knowledge valorisation, knowledge valorisation, implementation science, translational science, improvement science

2) implementation, transfer, diffusion, translation, adaption, acceptance, acceptability, drivers, feasibility, transferability, suitability, feasibility

3) tool*, instrument*, transfer*, translat*, strategy, strategies, framework*, methods, methodology, practice, model, policy, policies

4) feasib* or transferab*, translat*, acceptability, relevance, relevant, suitability, appropriate, adaptability, attributes, features, successful

5) health, care or e-health or m-health or medicine or social

The titles and abstracts underwent an initial scan, and a large amount of irrelevant material was excluded based on the title and abstract, resulting in 59 reviews and frameworks for the first phase of analysis. A data extraction exercise was performed, and during this exercise further frameworks and reviews were excluded, because their focus was too discipline or subject specific. Following data extraction, 19 reviews and 21 frameworks were included in the analysis for this review. It is noteworthy that some of the reviews also contained frameworks within them.

4 Data extraction and synthesis

The data was extracted by several researchers from the research material to an Excel file for the reviews and to another Excel file for the frameworks. The data gathered from the study material was qualitative data.

The data gathered from the frameworks was the following:

- Name of the framework (+URL)
- Who maintains/owns the framework?
- When was the framework developed / last updated?
- What kinds of challenges, needs or other starting points have there been in the background when developing the framework?
- What is the purpose of the framework? What kind of framework is it?
- On what kinds of theoretical definition/model/approach of “transferability” and/or “implementation” is the framework based?
- What kind of key concepts are used in the framework?
- What is meant by evidence in the framework?
- On what kinds of solutions/practices/innovations is the framework focusing (services, policies, systems, etc.)?
- To what kind of users have the frameworks been developed?
- What kind of parts, phases, sections, means and tools are there in the frameworks to support and evaluate transferability and/or implementation?

The data gathered from the reviews was the following:

- Name of the review, authors, biblio, URL
- Background for the review – challenges, needs, problems, etc.
- Aims and research questions of the review
- Study materials
- Key results
- Implications, recommendation, frameworks, etc. concerning the support for and evaluation of transferability and implementation of practices in health and care systems

Mainly a qualitative synthesis of the gathered data was performed by several researchers. The researchers also co-wrote the different sections of the review.

5 Results

The results of this scoping review are displayed through layered approach: first we describe the general characteristics of the study material, the variety of themes found in the reviews and frameworks, and what kind of theoretical base the frameworks have; secondly, we describe the identified purposes and users of the frameworks; thirdly, we dwell to the frameworks to identify the different means and tools of them to support transferability and implementation; finally, we investigate the possible obstacles and enablers of transferring practices across the systems identified in the frameworks and reviews.

5.1 General characteristics and themes of the study material

The study material was heterogeneous, diverse, and mostly European (with a few exceptions). The distinction between frameworks and reviews was not always clear; whilst most reviews were systematic, scoping or narrative in nature and produced quantitative and / or qualitative review research outcomes, some reviews also generated and contained a framework within them. In overall, the reviews considered the topics of transferability and implementation from a broad spectrum of viewpoints, both analytically aiming at establishing categories or clarifying terminology as well as describing recognized enablers or obstacles when transferring knowledge and practices.

Also, the definition of a framework was not clear-cut and included different formats. Some reviews were larger manuals describing the process and principles of implementation with examples or tools to support implementation, others provided a process description of implementation phases to consider or described a step-by-step process and a minority were presented as tables providing an overview, definitions or lists of distinct factors or questions to consider when transferring practices. Online assessment tools and platforms where practices or models were described and shared were both considered frameworks.

The themes concerning transferability and implementation which were found in the reviews and frameworks can be characterized with the help of the figure 1. In overall, part of the reviews and frameworks were more focused on analysing the original practice in a system while others focused more on the adaptation and implementation of existing practices to new environments and systems. Some of the material obtained a more holistic view and focused on the entire process.

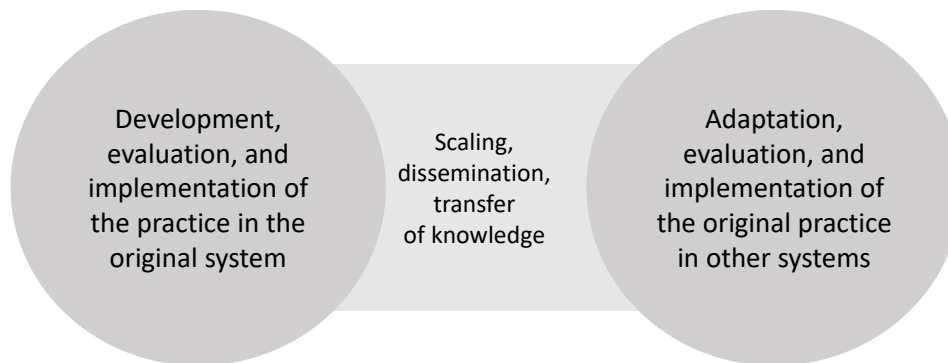


Figure 1 - The thematic focuses in the reviews and frameworks

The individual reviews and frameworks contained typically several themes and focuses; thus, it was not possible to classify them into only one specific theme or focus. The following diversity of themes were found in the study material:

- *Development, evaluation, and implementation of practices in the original system*: In some reviews and frameworks the focus centred on the original practice, its development, evaluation, and/or implementation, as well as on the evaluation of its applicability and transferability to other systems. The background supposition was that to implement a practice in other systems knowledge of the original practice and its context, its workability and effectiveness is needed.
- *Learning, scaling, and transfer of knowledge between the systems*: In some reviews and frameworks, the focus was on the ways knowledge transfer and exchange between systems occurs. This included the interaction and learning between the original system and receiving system where a practice was adapted and implemented.
- *Adaptation, evaluation, and implementation of the original practices in other systems*: In some reviews and frameworks the focus centred principally on the adaptation of the original practice in a new context; then the emphasis was in the contextual factors that make sense in the adaptation; for example, system, structural, organizational, provider, patient, and solution level elements, features, and measures.
- *Strategies of implementation*: Some of the reviews and frameworks thematised the overall strategies of implementation, containing for example the actors, roles, phases, and activities of implementing a practice. These strategies can be applied when implementing the original practice in its context of development and the original practice in other contexts.
- *Translating knowledge and evidence into practice*: Few reviews and frameworks had a detailed focus on translating knowledge and evidence into policy and practice. This kind of translation is needed both in the original context of development of a practice and in the contexts where the practice will be adapted and implemented.
- *Improving systems and processes*: Few reviews and frameworks focused on the improvement of the quality and effectiveness of complex systems, processes, and

outcomes in the frame of improvement science, and on the differences between and complementarity of improvement science and implementation science.

The frameworks studied focused on different attributes in relation to transferability, ranging from theoretical concepts to health services and policies. Most frameworks focused on transfer at the intervention, initiative, or service level. This includes transferring eHealth solutions, technologies, or products.

In the material studied there was also a set of frameworks sharing best practices at the healthcare system level. These include sharing clinical best practice, or digitally enabled integrated care best practices.

Some frameworks were conceptual in nature and are at “a higher level”, aiming at transferring knowledge which can be applied at multiple levels. This included frameworks supporting identifying the conditions or determinants for success for the transfer of service and policy innovations between regions or providing a generic implementation framework which can apply at intervention, system, or policy level.

A subset of frameworks aimed at transferring at the policy level, including EU level policy insights and public health interventions with a policy focus.

In overall, the sample of reviews and frameworks chosen into the analysis was small, and in the analysis only slight saturation was generated concerning the different themes. If much more study material had been chosen to the analysis, it would have generated a more accurate picture of different themes concerning transferability and implementation of practices.

5.2 Theoretical suppositions in the frameworks and reviews

Concerning the whole study material, most of the reviews and frameworks analysed in this review focused primarily on implementation science, with a minority focused on improvement science. Implementation science and improvement science are two distinct but interconnected fields that focus in health care on enhancing health care practices and achieving better outcomes. Implementation science primarily examines the systematic integration of evidence or knowledge-based interventions into real-world settings. On the other hand, improvement science aims to identify and test innovative strategies for enhancing quality and performance within healthcare systems. It emphasizes iterative, data-driven approaches to continuous improvement, focusing on understanding and addressing system-level issues to optimize care delivery. Around 60 % of the reviews and over 70 % of the frameworks focused on implementation science and/or implementation strategies for knowledge, practices, and technologies in general. Less than a third of the reviews and about quarter of the frameworks addressed both sciences, while less than 10 % of the reviews and 5 % of the frameworks focused on improvement science.

Two principal approaches on how solutions and practices, their workability, effectiveness, and transferability are tackled were found in the study material: evidence-based intervention and practice-based evidence. However, the theoretical suppositions in the study material were mainly implicit, therefore it is not possible to easily segment the material into one of the two approaches. The following descriptions are simplified characterisations of the approaches.

Most of the frameworks and reviews studied were based on the evidence-based intervention approach. This approach relies (in its strict and narrow sense) on a linear understanding of evidence and transfer of interventions. According to it, innovation activity starts from research and proceeds linearly to the development of a new intervention and its implementation. Evidence is mainly seen as external research informing the context of an intervention and its adopters. Robustness is based on a hierarchy of evaluation methods, with randomised controlled trials viewed as being as the strongest evidence demonstrating effectiveness. The approach supposes that a technology or an intervention has inner properties, such as, effective; and they can be easily scaled and adopted to use in different contexts where similar outcomes will be achieved on patients or other actors if the intervention is enacted correctly (fidelity). A patient or client is an object on which the intervention is performed.

Practice-based evidence approach shifts the focus from relying solely on external research evidence to incorporating real-world experiences, insights, and data generated within practice settings to the evaluation. It starts with the healthcare challenges and / or problems faced by the multiple actors involved in the project (e.g., practitioners, managers, policy makers) to co-develop, implement, and evaluate a solution. The development of solutions does not proceed linearly from a phase to another but is rather systemic and interactive. The effects of a practice are generated in the manifold interactions of various human actors and non-human elements (technologies, tools, etc.). A patient or client is not an object of an intervention, but a co-producer of a practice.

5.3 Purposes and users of the frameworks

The frameworks were developed for a myriad of purposes. By far the most common purpose for frameworks were to provide tools and models, with half of the frameworks covering this purpose. This includes both original practices and adapting original practices for other systems. Purposes of frameworks in this subcategory include:

- Supporting implementation transferability applicability reporting
- Thinking through implementation and integration problems in healthcare
- Evaluating public health interventions and providing a reliable basis for informed decision making in resource poor settings
- Enabling transfer of good practices to new contexts
- Supporting working with stakeholders, selecting suitable interventions, undertaking adaptations, making decisions on evaluation and implementation, and reporting adapted interventions

- Assessing a region's readiness for integrated care
- Financing the exchange of knowledge and good practice in digital health solutions with high potential for replicability and scaling up
- Identifying, transferring and scaling-up existing care coordination and telehealth good practices across Europe for the benefits of European citizens
- Measuring integrated care designed as "building blocks" in the form of indicators and good practices that are transferable across Europe
- Providing toolkits to support thinking through implementation and integration processes
- Identifying conditions for and determinants of successes and failures for the transfer of service and policy innovations between regions and countries
- Supporting development of implementation protocols through a generic implementation framework
- Considering the determinants of diffusion, dissemination, and implementation of innovations in health service delivery and organization

In addition, over a quarter of frameworks provide best practice guidance. Frameworks in this category provide evidence-based guidance. This includes:

- Supporting the implementation of best practice guidelines developed by Registered Nurses' Association of Ontario (RNAO)
- Providing evidence-based recommendations to enhance the capacity of all individuals involved in the implementation of eHealth within a healthcare organisation
- Raising awareness of work-related musculoskeletal disorders (MSDs) and the importance of preventing them
- Exchanging and transferring good practices in tackling chronic diseases between different European countries and regions
- Supporting users with how to transfer service and policy innovations between health systems

A proportion of frameworks had a focus on evaluating the contextual factors that influence whether the transfer of an innovation is successful. The context in which a tool, initiative or innovation is transferring from is a critical component to the success of the innovation. In our sample this includes:

- Evaluating and assessing contextual factors across the life cycle of the innovation from design phase to sustained spread
- Evaluating existing initiatives based on their local context
- Assessing the transferability of health interventions, including the contextual themes and criteria of population, intervention, environment, and transfer

A minority of frameworks describe and analyse knowledge transfer and exchange (KTE) approaches and clarify and describe terms and definitions. This includes frameworks:

- Making a connection between knowledge and improvement and creating a 14-step model for improvement
- Refining and publishing strategy terms associated with implementation science

The frameworks aim to guide the users during the implementation process to achieve specific objectives. Most of the frameworks focus on more than one user group and emphasize the need of collaboration of all the key partners in order the implementation to be successful. In the frameworks three primary user groups can be identified, who would be responsible for successful implementation: 1) at the macro level, policy and decision makers at national, regional, or local levels with regulatory, legislative or political decision-making responsibilities; 2) at the meso level, stakeholders who oversight the health care systems, and quality and change management; stakeholders may include healthcare top managers, clinicians and other frontline staff, implementation supervisors, and researchers; and 3) at the micro level, health care professionals who implement changes in their clinical environments and practices.

5.4 Means and tools in the frameworks for supporting transferability and implementation

The means and tools in the frameworks studied can be classified into four overlapping categories based on the specific themes they had for supporting the transfer and implementation of practices (see also the section 5.1). It was not possible to classify every individual framework solely to only one of the four categories. The annex 9.2. contains the detailed descriptions of the 21 frameworks studied and the means and tools in them for supporting transferability and implementation.

- 1) *Evaluating transferability of the original practices*: The means and tools in this category aimed at generating knowledge of the original practice and evaluating its workability, effectiveness, and transferability to support its transfer and implementation across the systems. 5/21 of the frameworks evaluate the transferability of the original practices: 3 of them [7,11,12] provide a theoretical framework or a guideline for evaluating transferability, while 2 of them [4,5] provide practical tools for conducting a questionnaire and further rating the results for evaluating the transferability of an original practice.
- 2) *Determinants of implementation processes*: The means and tools in this category aimed at understanding and explaining what influences implementation outcomes by specifying types of determinants and individual determinants that may influence the implementation process, either as facilitators or barriers. The frameworks provide several factors or determinants that are grouped into higher level dimensions, and some of them can be found in several of the frameworks, such as, organization, and system factors, leadership, workforce-related factors, support and monitoring systems. 5/21 of the frameworks focused as their main objective on the determinants of the implementation processes: 2 of them [6,12] focused the attention on the contextual factors, while other 2 frameworks [1,18] sought for the assessment of the readiness of the system and the main actors and stakeholders to implement a certain intervention or practice. Finally, one framework [3]

described an approach to understand the facilitators and barriers for achieving a successful implementation of the original practice.

- 3) *Supporting implementation processes*: The means and tools in this category aimed at supporting the implementation of practices in a particular context or enable transfer of practices to new contexts. These frameworks specify steps, stages, or phases in the process of translating research/knowledge into real practice, providing practical guidance in the planning and execution of the implementation endeavors. 13/21 of the analysed frameworks belong to this category, as they comprise the entire process of implementation. From the frameworks belonging to category 3, four of them are guidelines or theoretical frameworks regarding the implementation process; among them two frameworks support the implementation of an original practice in terms of diffusion [8] and reporting [1], while two others are theoretical guidelines of implementation process in a new context [11,20]. On the other hand, 9/13 of the frameworks in this category provide practical tools to assess the implementation process in new contexts. Among those, five of them present a step-by-step methodology [3,13,14,15,17] to be followed, two of them being online tools [14,17]. Four of the 9 frameworks suggest activities related to the stages described in the frameworks to achieve a successful implementation [2,9,16,19].
- 4) *Evaluating implementation success*: Most of the frameworks (13/21) contemplated including evaluation in their mode independently of the means and tools for supporting implementation. Two types of evaluation were found in the frameworks: 4/13 of them evaluate the practice and its effectiveness [1,7,10,16]; while 9/13 evaluate the implementation process, its effectiveness, sustainability, and/or engagement. Among the frameworks which evaluate the implementation process, three of them suggest the Plan-Do-Study-Act (PDSA) model of evaluation [5,13,15], while five of the frameworks 5/9 propose activities and specific tools for evaluation (i.e., answer question to be further rated, tables, criteria, indicators). Only one of these 9 frameworks that consider evaluation as part of the implementation process does not specify any evaluation method [9].

5.5 Obstacles and challenges in transferring practices across the systems in health and care

Transferring practices across systems in health and care can be a complex and challenging process due to various obstacles and barriers. Here are some of the common obstacles and challenges encountered in the studied frameworks and reviews:

- Understanding the feasibility/requirements for the successful transfer of good practices
- Assessing the applicability of the solution/good practice in different implementation settings
- Addressing context in intervention/good practice implementation
- Lack of practical tools/models/techniques that enable the identification and evaluation of success factors of a particular solution/good practice for the transferability

- Lack of experience of how to adapt, scale-up and transfer existing good practices are major barriers preventing widespread take-up of existing good practices
- Lack of ‘findability’, insufficient documentation about the practices, and the associated knowledge needed for it to be applied by another organisation, or lack of knowledge on how to adapt the practice to the conditions of another health and care system
- Complexity of transferring a successful practice to a new context where the interests, expectation, ambition and resources may vary locally
- Timing for the transferability of good practices, both from the strategic point of view (if the suggested good practice matches the local demands) and also more from the implementation point of view which is often the case when the transfer of good practices is envisaged in a particular funded project, there is always lack of time for the actual adaptation and transfer of the good practice on the ground
- A lack of longitudinality which impacts the ability to monitor success
- Limited potential of good practices for the transferability, e.g., practices developed in silos, practices with lack of interoperability, etc.
- Language and cultural barriers may influence the understanding/interpretation of the transferred solution/good practice
- Engagement/interest of the adopting organisations to learn from others and invest the efforts in the adaptation and transferability process
- Lack of long-term funding for scaling-up/transferability of the solutions

This review identified several common challenges and obstacles across different contexts and frameworks. These challenges include the lack of standardized terminology and conceptual frameworks, which leads to inconsistent interpretation and application of terms related to research translation, knowledge translation, and implementation science. The diversity of interventions employed in the field further complicates the transferability of practices, as different models, theories, and frameworks may not encompass the full range of concepts required for successful implementation.

Contextual factors play a crucial role in the transferability of practices. The influence of contextual elements, such as organizational structures, policies, and workforce dynamics, can significantly impact the implementation outcomes. Failure to account for these contextual factors may limit the generalizability of study findings and hinder the successful transfer of practices to different settings.

Sustainability of knowledge translation interventions emerged as a critical concern. While efforts have been focused on overcoming barriers to initial implementation, there is a need for more research on the long-term sustainability of these interventions. Evaluating the sustainability of knowledge translation interventions is essential to ensure continuous improvements in healthcare quality and patient outcomes.

Furthermore, the scoping review highlights the lack of validated tools and frameworks for assessing transferability and guiding the implementation of proposed programs and interventions. This hampers the ability to determine which elements of interventions are crucial for success and limits the replicability and scalability of effective practices.

5.6 Enablers of transferring practices across the systems in health and care

The review revealed several key enablers that play a significant role in facilitating the transfer of practices across health and care systems. These concrete enablers are crucial for overcoming challenges and obstacles identified in previous studies:

- Understanding of local context/local conditions, including socio-economic and socio-cultural context, enabling the transferability of good practices, and informing the implementation process
- Understanding of maturity requirements of transferring good practice and how they fit the local context/needs
- Flexibility for the adaptation of the proposed solution/good practice for its transferability
- Alignment and management of expectations/ambitions and resources in the adopting organisations to successfully adapt and implement the transferring practice
- Secured “buying” of the transferred solution/good practices by local decision-makers, managers etc.
- Awareness-raising/promotion of the benefits of proposed transferring solution and of added-value of mutual learning in general to key local stakeholders
- Strong stakeholder and change (culture) management engagement in the adopting organization
- Secured resources (both human and financial) to successfully transfer and adopt a good practice
- Targeted support for managers/professionals to scale-up/transfer good practices
- Availability of expertise to navigate through the adaptation and transferability process at adopting as well as transferring organisations
- Good open working partnerships/relationships between transferring and adapting entities
- Sharing of reliable and practical information on a given solution/good practices for the transferability which is especially important for the professionals at local levels and those directly in charge of the service provision
- Existence of business case/business models for the scaling-up/transferability of good practice and its sustainability
- Ability to quantify the impact of the proposed transferring solution/good practice
- Early detection/assessment of potential risks in the transferring and implementation processes

In addition, the presence of clear and standardized terminology and conceptual frameworks emerged as a crucial enabler. Consistent and shared understanding of terms related to research translation, knowledge translation, and implementation science enables effective communication and collaboration among stakeholders involved in the transfer process. It allows for the development of common language and a shared understanding of the goals and objectives of the practice transfer.

Generally, interdisciplinary collaboration and knowledge sharing were found to be important enablers as well. Effective transfer of practices requires engagement and collaboration among researchers, practitioners, policymakers, and other relevant stakeholders. By bringing together diverse perspectives and expertise, interdisciplinary collaboration fosters innovation, enhances the contextual relevance of transferred practices, and promotes shared ownership and accountability.

The involvement of local stakeholders and end-users was identified as a critical enabler. Inclusion of those who will be directly affected by the transferred practices, such as healthcare providers, patients, and community members, ensures their active participation and engagement throughout the transfer process. By involving local stakeholders, practices can be tailored to fit specific contextual needs and preferences, increasing the likelihood of successful implementation and adoption.

The availability of robust assessment tools and frameworks for evaluating transferability was highlighted as an important enabler. Validated instruments that assess the transferability of practices and guide implementation efforts facilitate systematic and evidence-based decision-making. These tools aid in identifying potential barriers, tailoring interventions to specific contexts, and monitoring the progress and outcomes of the transfer process.

Lastly, the recognition and support of leadership and organizational commitment emerged as key enablers. Strong leadership, both at the organizational and system levels, is crucial for creating a culture of innovation, fostering a supportive environment for practice transfer, and allocating necessary resources. Organizational commitment to the transfer process, including dedicated funding, training, and infrastructure, further enhances the likelihood of successful transfer and long-term sustainability.

6 Discussion

This scoping review aimed at generating insights for the future development of frameworks for supporting transfer and implementation of practices across the health and care systems. This review mapped only a small sample of existing reviews and frameworks on transferability and

implementation. It provides and summarizes a general overview of the purposes, users, means, and tools of the existing frameworks for supporting the transfer of practices and of the obstacles, challenges, and enablers of transferring practices from one system to another. However, even if the sample is small, the review gives a sufficient picture of the current state of the discussion on and means for transferring and implementing practices across health and care systems, and it provides knowledge and means to further develop the support for transferring and implementing practices.

The reviews studied are not principally focusing on theoretical discussion on transferability and implementation (Nilsen 2015), and in the frameworks the theoretical suppositions are often implicit. Nevertheless, two simplified paradigms on evidence and transferability were possible to identify, and reviews and frameworks explicitly or implicitly incorporated one of them; in some cases, the reviews or frameworks were very general and therefore it was hard to identify which paradigm was most applicable.

The first paradigm is the “traditional”, linear, evidence-based, and “context-free” approach to developing, transferring, and implementing interventions or solutions. In this paradigm, solutions can be scaled and implemented into other systems when the effectiveness of the solution is proven by scientific research and assessment. The assessment of effectiveness is based on the hierarchy of assessment methods. The solution is the same, and able to produce the same outcomes, at every site where it has been adopted. The second approach is a non-linear, systemic, and practice-based approach on evidence which focuses on the interaction of the solution and contextual factors and on how this interaction moulds and affects implementation and generates effects.

These two paradigms seem to live simultaneously in the discussion on the transferability of solutions and practices in health and care. The frameworks are often implicit in relation to these paradigms and very practical when it is not possible to observe to which one they are based on. Analysis of theoretical literature would provide insight into which direction discussions are moving on this topic, however, in general there appears to be a shift towards the non-linear systemic model (Koivisto & Pohjola 2011).

There is ambiguity in the study material concerning the definition of terminology and concepts such as, scalability, translation, transferability, implementation, applicability, and feasibility, and on the other hand, such as, intervention, practice, good practice, best practice, and model. These concepts are not often defined in the study material, but rather implied according to the paradigm the review or framework was based on. In future development of frameworks, there should be a clear definition for core terms.

In many cases, it was unclear what was literally being transferred from one context to another; there was considerably ambiguity surrounding whether descriptions and knowledge of original practices, their effects, and their contexts were transferred, or whether generalised models containing a theory of change or hypotheses were shared, or if it was both.

The frameworks studied contained several means and tools to support the transfer of practices from the original context to other contexts. The further development of frameworks can build upon these individual means and tools. The frameworks typically focused on supporting some specific phases, steps, or tasks in the transfer and implementation process. The emphasis was on the adopter point of view and the adaptation and implementation of the original practice into new contexts. However, the frameworks lacked a systematic picture of the process from one context to another, for example referencing that a successful implementation relies on sufficient knowledge on the context of the original practice. Future framework development should focus on the entire process and identify generally the different perspectives to the transfer process and the key actor groups/stakeholders and their tasks and roles in the transfer process. The similarities and differences between the activities and effort involved in developing an entirely new solution compared to adapting and adopting a solution developed elsewhere should be clarified and defined. There is also need for approaches to help to decide and prioritize what to implement. In overall, the future framework development could be based on new agile approaches on the design, implementation, and scaling of locally sensitive solutions through rapid cycle learning (Boustani et al. 2018).

The study material emphasized the core elements and features which should be replicated and enacted when practices move to new contexts. Also, the characteristics of local contexts and their importance in the adaptation and implementation was highly emphasized. However, a lot of theoretical, conceptual, and practical work is still required in order to evaluate these dimensions in terms of transferability. In addition, the relationship between practice and organizational context is often studied as dualistic which forgets the fact that organization is performed, reformed, and maintained by the diverse activities and practices of humans. Then there is no line between practice and organization, and then the focus is on the links between different activities and practices which mould each other, and which are mediated by technologies, tools, texts, models, architecture, etc.

In general, practices are not only human activities and interactions but also material. The material aspects of practices, such as objects, tools, and technology, are integrated with social and cultural aspects, such as humans, meanings, norms, and values. Practices are embodied, constituted, and enacted through the interaction of human and non-human elements. Practices are linked to other practices, they mould each other, and they are preconditions for the existence, workability, and sustainability of each other. (Gherardi 2018; 2019.)

As a rule, practices are not universally effective and workable, and as such ready to be scaled up and transferred to different sites. Their implementation and workability in a new context require the simultaneous moulding of the original practice and the context where it will be adopted. The challenge is to identify the core elements and features needed for the workability of a practice and, on the other hand, to identify the features that are solely local. (Koivisto et al. 2015.)

The discussion on the core elements and features of practices is also relevant when considering outcomes and changes a practice may produce when it is enacted in a different context. Simple

practices, such as vaccination, can be enacted in different sites whilst achieving the same outcomes as when the practice was tested. Complicated practices can, in principle, be enacted in the same way with the core elements and features remaining the same in different sites whilst maintaining positive outcomes, however, it is more challenging. Complex practices are constituted by many human and non-human elements, and some of their elements and features can be enacted in different sites, but the outcomes they produce are usually different in different sites (see Villeval et al. 2016). This diversity and difference of practices should be considered when further developing methodological support to the transfer and implementation of practices.

7 Conclusions

This scoping review identified the enablers that facilitate the transfer of practices across health and care systems. The findings underscore the importance of clear terminology, interdisciplinary collaboration, involvement of local stakeholders, robust assessment tools, and supportive leadership and organizational commitment. By recognizing these enablers, policymakers, researchers, and practitioners can develop strategies and interventions that optimize the transfer process, leading to improved healthcare outcomes and system-wide improvements. Further research is needed to explore these enablers in more depth and develop practical guidelines for their implementation.

In the further development of support to the transfer and implementation of practices across the systems, greater attention should be given to developing clear and standardized terminology, conceptual frameworks, and assessment tools. Interdisciplinary collaboration from both the transferring and receiving systems, knowledge sharing across research fields, such as implementation science and improvement science, can help bridge the gap between research and practice. Additionally, more emphasis should be placed on synthesizing evidence through systematic reviews to inform dissemination and implementation efforts. Clear communication, cultural sensitivity, adaptability, and a focus on client-centred care are key factors in overcoming these challenges and facilitating the successful transfer of practices across health and care systems.

This scoping review and its results imply the following conclusions for the further development of the methodological frameworks to support the transferability and implementation of practices across the health and care systems:

- 1) defining the theoretical commitments of the frameworks on the entire innovation activity, including transfer and implementation of practices,
- 2) defining the key concepts related to the transfer of practices, such as, scalability, translation, transferability, adaptation, implementation, applicability, and feasibility,
- 3) defining the 'practice' related concepts, and the concept of 'model' as a boundary object in the transfer process,
- 4) defining the basic principles of innovation activity, including transfer and implementation, which go through the whole innovation process,
- 5) focusing both on the original context of a practice and on the receiving context of a given practice; looking at the transfer from both sides and the interaction between them; connecting and combining the two viewpoints,
- 6) defining the whole operational picture of transferring practices from the original contexts to other contexts; different perspectives, actor groups/stakeholders and their roles, and phases, tasks, etc.,
- 7) defining the knowledge needed in the different phases and tasks of transferring practices from a system to other systems,

- 8) utilising and combining the existing means and tools for producing knowledge and performing evaluation on transferability and implementation of practices,
- 9) collecting/designing different means for the collaboration and knowledge sharing between the developers of the original practices and the adopters of the given practices, and
- 10) defining the roles of documenting the knowledge concerning original practices in addition to practices adapted in new contexts and of creating / modelling models which define the transferable core of a solution.

8 References

Bongaarts, J. (2009) Human population growth and the demographic transition. *Philos Trans R Soc Lond B Biol Sci.* 2009 Oct 27;364(1532):2985-90. doi: 10.1098/rstb.2009.0137. PMID: 19770150; PMCID: PMC2781829.

Boustani, M., Alder, CA & Solid, CA (2018) Agile Implementation: A Blueprint for Implementing Evidence-Based Healthcare Solutions. *J Am Geriatr Soc.* 2018 Jul;66(7):1372-1376. doi: 10.1111/jgs.15283.

European Commission (2017) Tools and methodologies to assess integrated care in Europe. Report by Expert Group on health Systems Performance Assessment. European Commission, Luxemburg. 13.4.2017.

European Union (2019) Ageing Europe Looking at the lives of older people in the EU. Statistical books, Eurostat, 2019 edition, European Union.

Fakhruddin, B., Torres, J., Petrenj, B. & Tilley, L. (2020) 'Transferability of knowledge and innovation across the world', in: Casajus Valles, A., Marin Ferrer, M., Poljanšek, K., Clark, I. (eds.), *Science for Disaster Risk Management 2020: acting today, protecting tomorrow*, EUR 30183 EN, Publications Office of the European Union, Luxembourg, 2020, ISBN 978-92-76-18182-8, doi:10.2760/571085, JRC114026:<https://drmhc.jrc.ec.europa.eu/portals/0/Knowledge/ScienceforDRM2020/Files/ch05.pdf>

Gherardi, S (2018) Practices and knowledges. *Teoria e Prática em Administração* 8(2):33-59. DOI: [10.21714/2238-104X2018v8i2S-38857](https://doi.org/10.21714/2238-104X2018v8i2S-38857).

Gherardi, Silvia: *Practice as a collective and knowledgeable doing*. Siegen: Universität Siegen: SFB 1187 Medien der Kooperation 2019 (SFB 1187 Medien der Kooperation – Working Paper Series 8). DOI: <https://doi.org/10.25969/mediarep/12641>.

Koivisto, J. & Pohjola, P. (2011) Practices, modifications and generativity – REA: a practical tool for managing the innovation processes of practices. *Systems, Signs & Actions. An International Journal on Communication, Information Technology and Work*, Vol. 5(1), 100–116.

Koivisto, J., Pohjola, P. & Pitkänen, N. (2015) Systemic innovation model translated into public sector innovation practice. *The Public Sector Innovation Journal*, 20(1), 2015, article 6.

Nilsen, P. (2015) Making sense of implementation theories, models and frameworks *Implementation Science* volume 10, Article number: 53 (2015) <https://implementationscience.biomedcentral.com/articles/10.1186/s13012-015-0242-0>

Nolte, E. & Groenewegen, P. (2021) How can we transfer service and policy innovations between health systems? Policy Brief 40. World Health Organization. Regional Office for Europe. <https://apps.who.int/iris/rest/bitstreams/1350707/retrieve>

Nuño-Solinis, R. & Stein, V. (2015) Measuring Integrated Care – The Quest for Disentangling a Gordian Knot. *International Journal of Integrated Care*, 15(3), 1-3.

OECD/European Union (2020), *Health at a Glance: Europe 2020: State of Health in the EU Cycle*, OECD Publishing, Paris. doi.org/10.1787/82129230-en.

Omrán, AR. (2005) The epidemiologic transition: a theory of the epidemiology of population change. *1971. Milbank Q.* 2005;83(4):731-57. doi: 10.1111/j.1468-0009.2005.00398.x. PMID: 16279965; PMCID: PMC2690264.

Scarbrough, H. & Kyratsis, Y (2022) From spreading to embedding innovation in health care: Implications for theory and practice, *Health Care Manage Rev.* 2022 Jul-Sep;47(3):236-244. doi: 10.1097/HMR.0000000000000323.

Villeval, M., Bidault, E., Shoveller, J. et al. (2016) Enabling the transferability of complex interventions: exploring the combination of an intervention's key functions and implementation. *Int J Public Health* 61, 1031–1038 (2016). <https://doi.org/10.1007/s00038-016-0809-9>

9 Annexes

9.1 Reviews analysed

Chaudoir, SR., Dugan, AG. & Barr, CHI. (2013) Measuring factors affecting implementation of health innovations: a systematic review of structural, organizational, provider, patient, and innovation level measures. *Implementation Science* 2013 FEB 17 2013;8:22:

<https://implementationscience.biomedcentral.com/articles/10.1186/1748-5908-8-22>

Crable, EL., Biancarelli, D., Walkey, AJ., Allen, CG., Proctor, EK. & Drainoni, M. (2018) Standardizing an approach to the evaluation of implementation science proposals. *Implementation Science* 2018 MAY 29 2018;13:71: <https://implementationscience.biomedcentral.com/articles/10.1186/s13012-018-0770-5>

Dwayne Van, E. (2019) Knowledge transfer and exchange in health and safety: a rapid review, *Policy and Practice in Health and Safety*, 17:1, 54-77. <https://doi.org/10.1080/14773996.2018.1508116>

Greenhalgh, T., Robert, G., Macfarlane, F., Bate, P. & Kyriakidou, O. (2004) Diffusion of innovations in service organizations: systematic review and recommendations *Milbank Q* 2004;82(4):581-629 doi: 10.1111/j.0887-378X.2004.00325.x.

Hawe, P. (2015) Lessons from Complex Interventions to Improve Health. *Annual Review of Public Health*, Vol 36 2015 2015;36:307-323: <https://www.annualreviews.org/doi/10.1146/annurev-publhealth-031912-114421>

Leeman, J., & Rohweder, C., Lee, M. et al. (2021) Aligning implementation science with improvement practice: a call to action. *Implement Sci Commun* 2, 99 (2021). <https://doi.org/10.1186/s43058-021-00201-1>

Lokker, C., McKibbin, KA., Colquhoun, H., & Hempel, S. (2015) A scoping review of classification schemes of interventions to promote and integrate evidence into practice in healthcare. *Implementation Science* 2015 MAR 3 2015;10:27 <https://implementationscience.biomedcentral.com/articles/10.1186/s13012-015-0220-6>

McCalman, J., Tsey, K., Clifford, A., Earles, W., Shakeshaft, A. & Bainbridge, R. (2012) Applying what works: a systematic search of the transfer and implementation of promising Indigenous Australian health services and programs. *BMC Public Health* 2012, 12:600
<https://bmcpublichealth.biomedcentral.com/articles/10.1186/1471-2458-12-600>

Milat AJ. & Li, B. (2017) Narrative review of frameworks for translating research evidence into policy and practice. *Public Health Res Pract.* 2017;27(1): e2711704.

Moullin, J.C., Sabater-Hernández, D., Fernandez-Llimos, F. & Shalom I Benrimoj, S.I. (2015) A systematic review of implementation frameworks of innovations in healthcare and resulting generic implementation framework. *Health Res Policy Syst.* 2015 Mar 14;13:16. doi: 10.1186/s12961-015-0005-z.

Nilsen, P. & Bernhardsson, S. (2019) Context matters in implementation science: a scoping review of determinant frameworks that describe contextual determinants for implementation outcomes. *BMC Health Services Research* (2019) 19:189: <https://doi.org/10.1186/s12913-019-4015-3>

Nolte, E. & Groenewegen, P. (eds.) (2021) How can we transfer service and policy innovations between health systems? *European Observatory on Health Systems and Policies. Policy Brief 40.*:
<https://apps.who.int/iris/rest/bitstreams/1350707/retrieve>.

Nilsen, P., Thor, J., Bender, M., Leeman, J., Andersson-Gäre, B. & Sevdalis, N. (2021) Bridging the Silos: A Comparative Analysis of Implementation Science and Improvement Science. *Frontiers in Health Services*. Vol. 1: <https://www.frontiersin.org/articles/10.3389/frhs.2021.817750/full>

Powell, BJ., McMillen, JC., Proctor, EK., Carpenter, CR., Griffey, RT., Bungler AC., et al. (2012) A Compilation of Strategies for Implementing Clinical Innovations in Health and Mental Health. *Medical Care Research and Review* 2012 APR;69(2):123-157: <https://journals.sagepub.com/doi/10.1177/1077558711430690>

Prihodova, L., Guerin, S., Tunney, C., & Kernohan, W.G. (2018) Key components of knowledge transfer and exchange in health services research: Findings from a systematic scoping review. *Journal of Advanced Nursing*. Vol 75 (2): <https://doi.org/10.1111/jan.13836>

Schloemer, T., & Schröder-Bäck, P. (2018) Criteria for evaluating transferability of health interventions: a systematic review and thematic synthesis. *Implementation Sci* 13, 88 (2018).
<https://doi.org/10.1186/s13012-018-0751-8>

Tierney, A., C. Haverfield, M., P. McGovern, M. et al. Advancing Evidence Synthesis from Effectiveness to Implementation: Integration of Implementation Measures into Evidence Reviews. *J GEN INTERN MED* 35, 1219–1226 (2020). <https://doi.org/10.1007/s11606-019-05586-3>

Tricco, A.C., Ashoor, H.M., Cardoso, R. et al. Sustainability of knowledge translation interventions in healthcare decision-making: a scoping review. *Implementation Sci* 11, 55 (2015). <https://doi.org/10.1186/s13012-016-0421-7>.

Walsh-Bailey, C., Tsai, E., Tabak, R.G. et al. A scoping review of de-implementation frameworks and models. *Implementation Sci* 16, 100 (2021). <https://doi.org/10.1186/s13012-021-01173-5>

9.2 Descriptions of the frameworks analysed

1. [Adapting interventions to new contexts—the ADAPT](#)

The ADAPT is a guidance to improve the conduct and reporting of intervention adaptations that focuses on involving stakeholders in adaptation, selecting a suitable evidence-informed intervention, planning, and undertaking adaptations, evaluating adapted interventions, implementing adapted interventions in routine practice, and reporting adaptation processes and outcomes. The framework discusses how during the ADAPT process the adaptation team's judgments regarding the nature, quality, and transferability of previous evidence will inform decisions on what uncertainties remain, and thus what kinds of additional evidence are needed in the new context. Decisions on whether to implement, adapt further, or terminate an adapted intervention will be informed by evidence relating to factors including feasibility, effectiveness, and cost effectiveness. Also process evaluations are considered useful for understanding perceived impacts of adaptations, as well as documenting unintended harms, and understanding mechanisms. The framework consists of three steps that are interconnected depending the outcome obtained in each of them: 1) assess rationale for intervention, and consider intervention-context fit of existing interventions; 2) plan for and undertake piloting and evaluation and implement and maintain adapted intervention at scale; 3) reporting the adapted interventions include: describe the population health program, describe the original intervention, describe new context, describe rationale and processes to adapt the intervention, described how to enable replication, describe the intervention in the new context, and describe the rationale for the type of re-evaluation. If uncertainty is high, then the recommendation is to be cautious or pause; whereas if the uncertainty is low, the program can be adopted. Factors related to feasibility influence whether the program implementation may be adopted or terminated. The framework was intended for researchers, policy and practice stakeholders, funders, and journal editors.

2. [Adopting eHealth Solutions: Implementation Strategies](#)

Adopting eHealth Solutions: Implementation Strategies: The purpose of this guideline is to provide evidence-based individual, organization, education, and system / policy recommendations to 1) enhance the capacity of all individuals involved in the implementation of an eHealth solution within a health care organization; 2) establish suitable infrastructures to support eHealth education needs, and 3) facilitate technology-enabled health system transformation. Each of the recommendations in the guideline has its process (objective) and (expected) outcome defined to assess the implementation. Each of the recommendation is associated to a tool to ensure the evaluation and the impact of implementing the guideline.

3. [Advancing Care Coordination and Telehealth \(ACT\)](#)

Advancing Care Coordination and Telehealth (ACT) project identified best practice and enabled healthcare regions to monitor progress. The collaborative approach is increasingly used to conduct widespread improvements in care. This methodology requires multidisciplinary teams to come together periodically to learn change ideas and quality methods, and to exchange experiences with making changes. The collaborative learning proposed has seven steps: topic selection, purpose and expectations, expert recruitment, learning sessions, action periods and measurement and evaluation. An evaluation engine was designed to support data collection. Engine provides dashboards consistent with evaluation framework to monitor their progress. Evaluation framework is a 4 x 3 table of outcomes. Axis X: Experience, population, cost, staff; Axis Y: scaling, cluster, program. The primary users of the frameworks are health and social care authorities and policy-makers responsible for the design and implementation of telehealth solutions.

4. [Applicability and transferability of interventions in evidence-based public health framework](#)

Applicability and transferability of interventions in evidence-based public health framework is an approach to assessing applicability and transferability from a study setting to a local setting using evidence about both the

local setting and the public health intervention of interest. The framework provides a list of question to ask in determining applicability and transferability attributes and suggest a rating of the attributes due the relevance to other settings.

5. [CHRODIS - Joint Action on Chronic Diseases and Promoting Healthy Ageing across the Life Cycle](#)

CHRODIS - Joint Action on Chronic Diseases and Promoting Healthy Ageing across the Life Cycle is a framework developed under the EU project which aim was to identify, validate, exchange, and disseminate good practices for chronic diseases across EU Member States and to facilitate their uptake across local, regional, and national borders. The evaluation consists of Plan-Do-Study-Act (PDSA) cycle with intermediary evaluation: partners assess implementation, describing if criteria were fulfilled. The framework Includes assessment of key performance indicators. Evaluation should address social and economic aspects from both the target population and the formal and informal caregiver perspectives. The tool is meant to be used by implementation team. It provides key steps for project managers, policymakers, stakeholders, and practitioners.

6. [Contextual Factors Framework to Inform Implementation and Evaluation of Public Health Initiatives](#)

A Contextual Factors Framework to Inform Implementation and Evaluation of Public Health Initiatives is a framework for evaluating contextual factors affecting an initiative at multiple phases of its life cycle, including design, implementation, scale-up, spread, and sustainability. The framework can be used by evaluators for public health initiatives. The authors noted it was useful for stakeholders such as program planners, implementation partners, and evaluators.

7. [Criteria for evaluating transferability of health interventions](#)

Criteria for evaluating transferability of health interventions is a theoretical model for the assessment of transferability of health interventions through identification and systemization of criteria for transferability. Four overarching themes influence transferability of health interventions, consisting of 44 criteria grouped in conditional transferability criteria (30): 1. Population (P), 2. Intervention (I), 3. Environment (E); Process criteria for transferring the intervention to the target context (14), 4. Transfer of the intervention (T). Two models: the conceptual PIET-T model explains the underlying mechanisms of transferability of health interventions and the PIET-T process model provides practical guidance for a transferability assessment.

8. [Diffusion of innovations in service organizations](#)

Diffusion of innovations in service organizations model is intended mainly as a memory aid for considering the different aspects of a complex situation and their many interactions. The model defines dimensions, factors and features which have relevance on the diffusion and adoption of innovations. Innovation: Relative Advantage, Compatibility, Complexity, Trialability, Observability, Reinvention, Fuzzy Boundaries, Risk, Task Issues, Knowledge Required to Use It; Adoption by Individuals: General Psychological Antecedents, Context-Specific Psychological Antecedents, Meaning, The Adoption Decision, Concerns in Preadoption Stage, Concerns during Early Use, Concerns in Established Users; Assimilation by the System: Assimilation; Diffusion and Dissemination: Network Structure, Homophily, Opinion Leaders, Harnessing the Opinion Leader's Influence, Champions, Boundary Spanners, Formal Dissemination Programs; System Antecedents for Innovation: Structural Determinants of Innovativeness, Absorptive Capacity for New Knowledge, Receptive Context for Change; System Readiness for Innovation: Tension for Change, Innovation-System Fit, Assessment of Implications, Support and Advocacy, Dedicated Time and Resources, Capacity to Evaluate the Innovation; The Outer Context – Interorganizational; Networks and Collaboration: Informal Interorganizational Networks, Intentional Spread Strategies, Wider Environment, Political Directives; Implementation and Routinization: Organizational Structure, Leadership and Management, Human Resource Issues, Funding, Intraorganizational Communication, Interorganizational Networks, Feedback, Adaptation/Reinvention; Linkage among

Components of the Model: Linkage at the Development Stage, Role of the Change Agency, External Change Agents.

9. [“Digital Health Europe Twinning” Knowledge Transfer and scaling up of digital health and care](#)

The purpose of the Digital Health Europe Twinning” Knowledge Transfer and scaling up of digital health and care framework is to speed up the scaling up of digital health and care solutions. It is the collaborative framework with “twinning” as the main instrument which contributes to sharing and exchange of already developed, digitally enabled, good practices in health and care. It does so in a structured way that aims at maximising the practices’ impact and scaling up. The twinings are evaluated based on the achieved outcomes as explained in the questions on parts, phases, and sections.

10. [ERIC – a compilation of implementation strategies](#)

A compilation of implementation strategies (ERIC) is a compilation of implementation strategy terms and definitions (73 strategies). There are several uses of this compilation. First, it provides a list of discrete strategies that can serve as “building blocks” for constructing multifaceted, multilevel implementation strategies for implementation efforts or in comparative effectiveness research. Second, the core definitions and ancillary materials can be used in conjunction with available reporting guidelines to improve the specification and reporting of implementation strategies in efficacy, effectiveness, and implementation research. Finally, the refined compilation can be used as a tool to assess discrete strategies that have been used in published implementation research.

11. [EU Best Practice Portal:](#)

In the EU Best Practice Portal, the Qualifier criteria of the practice will assess the quality of the intervention in terms of its implementation and transferability. These qualifiers will assess the following aspects: transferability, sustainability, participation, and intersectoral collaboration. The transferability criterion measures to which extent the implementation results are systematized and documented, making it possible to transfer it to other contexts/settings/countries or to scale it up to a broader target population/geographic context. Sub-criteria that could be considered to assess this criterion are: the practice uses instruments (e.g. a manual with a detailed activity description) that allow for repetition/transfer, the description of the practice includes all organizational elements, identifies the limits and the necessary actions that were taken to overcome legal, managerial, financial, sociocultural or skill-related barriers, the description includes all contextual elements of the beneficiaries (e.g. patients, subpopulation, general population) and the actions that were taken to overcome personal and environmental barriers, a communication strategy and a plan to disseminate the results have been developed and implemented, the practice has already been successfully transferred / repeated, the practice shows adaptability to different contexts and to challenges encountered during its implementation.

12. [Framework for Implementation Transferability Applicability Reporting \(FITAR\)](#)

The Framework for Implementation Transferability Applicability Reporting (FITAR) describes the methodological process which underpinned development of a tool to support the identification and reporting of data relating to applicability and transferability across studies. FITAR comprises seven main elements relating to patients and populations, organizations and systems, financial and commissioning processes, systems leadership, features of services, features of the workforce, and elements of the interventions/initiatives. Future use is intended for systemic review teams regarding applicability and transferability.

13. [Improvement Science Step by Step Guide](#)

The Improvement Science Step by Step Guide is meant to create a way to scale successful improvement development to other sectors and organizations. It provides a 14 step method with tools and tasks to be

performed in order to achieve a successful improvement process which are: decide on the process that needs improving, form project sponsor and project teams, develop an aim statement, perform a literature review, flowchart the current process, collect baseline and diagnostic data, brainstorm the problem causes using sticky notes, brainstorm using the Five Whys, create an affinity diagram, spin the affinity diagram to create a driver diagram, re-word each primary and secondary driver, brainstorm change ideas, assess priority of change ideas, test change ideas via PDSA cycles, devise measures, collect data and measure impact and sustain the gains and spread the improvement.

14. [Innovillage](#)

Innovillage is an on-line platform for supporting the (co-)development, evaluation, description, sharing, and transfer of practices in health and social care. The framework suggests evaluating as early as possible the workability and effectiveness of a developed practice. The evaluation of a practice in context consists of at least the following elements: goals for change, evaluation questions and criteria, and methods and schedules for the data collection and evaluation, analysis of the material collected, and conclusions on the conditions for the workability and effects of the practice. The framework provides a space for describing a developed practice and its context and the core elements of them to support the transfer and implementation of it across the systems and contexts.

15. [JADECARE implementation strategy](#)

JADECARE implementation strategy is a framework that intends to facilitate the transfer of successful practices, programs, or interventions to new contexts in the field of digitally enabled integrated-person-centred care. A three-step implementation strategy will be used for original practice transfer: 1) pre-implementation: planning and preparation; 2) implementation: roll-out and operation (based on Plan-Do-Study-Act PDSA cycles); and 3) post-implementation: impact assessment and learning. JADECARE is a guideline that was designed for the end users, specifically for the front-line staff.

16. [Kasvun tuki](#)

Kasvun tuki evaluates the evidence of effectiveness of the methods and promotes implementation know-how. The Kasvun tuki data source is an evaluation site for early support methods. It contains information about psychosocial methods, the aim of which is to improve the psychological and social well-being of children, young people, and parents. Kasvun tuki gathers the research literature together and informs about the effectiveness of the methods in a general sense. The aim is to support managers of children medical centres and family services, decision makers, and actors who want to ensure that the method becomes part of the routine practices of operations. Intervention evaluation is based on systematic reviews and on an assessment manual, and the evidence of the effectiveness of an intervention is rated on 1) strong (RCTs, systematic reviews), 2) moderate (e.g. quasi-experimental), 3) weak evidence (no control group, case studies) or 4) no evidence (qualitative research, no experimental research) to strong, moderate, weak, or no evidence.

17. [NoMAD survey](#)

NoMAD survey is a theory-based measurement tool underpinned by Normalization Process Theory for assessing implementation processes from the perspective of individuals involved in implementation activity. The NoMAD is a 23-item instrument for measuring implementation of complex interventions in healthcare. The items are grouped in four categories: monitoring, sense-making, action, and participation. After the self-assessment survey, a radar plot is created to show the strength assigned to each item in order to provide information about the gaps of the implementation. The NoMAD survey provides information to follow and support the implementation process. For example, it can be used to compare situations in different stages of the process or in recognizing the areas of the implementation process that require more support.

18. [SCIROCCO Scaling Integrated Care in Context self-assessment tool](#)

SCIROCCO Scaling Integrated Care in Context self-assessment tool is an online self-assessment tool with an objective to assess a region's readiness for integrated care. The tool helps regions to understand the strengths and weaknesses of their local context for integrated care and inform national, regional and local policy-makers about potential areas of improvement, to facilitate multi-stakeholder dialogues on progress towards the implementation and delivery of integrated care, and to facilitate twinning and coaching activities that help regions and organizations to better understand the local conditions that enable the successful deployment of integrated care. In the tool, the many activities that need to be managed in order to deliver integrated care have been grouped into 12 dimensions, each of which addresses part of the overall effort: readiness to change, structure & governance, information & eHealth services, finance & funding, standardisation & simplification, removal of inhibitors, population approach, citizen empowerment, evaluation methods, breadth of ambition, innovation management, and capacity building.

19. [Toolkit: Implementation of Best Practice Guidelines](#)

Implementation of Best Practice Guidelines contains frameworks that delineate a systematic, well-planned implementation process, and is designed to assist nurses and other healthcare professionals to support evidence-informed clinical and management decision-making. This Toolkit is based on emerging evidence that the likelihood of achieving successful uptake of best practice in health care increases in cases that: leaders at all levels are committed to support facilitation of guideline implementation; guidelines are selected for implementation through a systematic, participatory process; the guideline is tailored to the local context; barriers and facilitators to guideline use are assessed and addressed; guideline use is systematically monitored and sustained; evaluation of the impacts of guideline use is an integral part of the entire process; there are adequate resources to complete the activities related to all aspects of guideline implementation. The evaluation consists of monitoring the adherence of proposed implementation to the adherence of BPG recommendations and to evaluate if the outcomes from the new implementation process would be considered best practice.

20. [Tools and methodologies to assess integrated care in Europe \(HSPA\):](#)

The Tools and methodologies to assess integrated care in Europe (HSPA) is framework for the measurement of integrated care designed as "building blocks" in the form of indicators and good practices that are transferable across Europe. The framework is based on a number of definitions/models and approaches, namely: SCIROCCO Maturity Model of integrated care; number of existing and fully operationalized good practices in Europe; review on experiences in implementing integrated care in Europe carried out by the European Innovation Partnership on Active and Healthy Ageing (EIPonAHA); a survey on experiences of integrated care in the EU member states carried out by the HSPA sub-group on integrated care; a policy focus group on the measurement of integrated care, with experts from 17 European countries and international organisations led by the European Observatory on Health Systems and Policies

21. [Vigour Scaling Up Approach](#)

Vigour Scaling Up Approach contextualizes available knowledge/tools/initiatives that are already successful according to local capacity, priority, and ambition of health authority involved. The framework consists of the following phases: the baseline phase is fully dedicated to gain a thorough understanding of the factors that shape the framework conditions for care integration; the preparation phase entails review of available good practices from a variety of sources and synthesise a knowledge base of successful care integration interventions that match the ambitions of the participating care authorities; during the last phase of the project, the scaling-up phase, interested stakeholders will implement local scaling-up pilots in their day-to-day care settings.