Interactive systems framework (ISF) for dissemination and implementation

A summary of

How to cite this NCCMT summary:

Categories:
Method, Implement, Knowledge dissemination, Knowledge exchange

Method

Relevance For Public Health
The framework applies to the implementation of prevention programs, policies, processes and principles.

Description
The Interactive Systems Framework (ISF) describes relevant systems to help bridge the gap between science and practice. It describes three interacting systems:

1. Prevention Synthesis and Translation System
2. Prevention Support System
3. Prevention Delivery System

A single system is unlikely to be successful on its own in implementing a prevention program, policy or process. For example, even if knowledge is created through the scientific process, it is unlikely to be used if it is not synthesized and translated. The Prevention Synthesis and Translation System completes these activities. Once this has been done, additional support for implementation needs to come from the Prevention Support System and Prevention Delivery System to put this synthesized and translated knowledge into use. The ISF outlines individual, organizational and community factors that influence implementation. These factors contribute to how well a system functions.

When these systems work together, prevention programs, policies or processes can be successfully put into practice. The ISF details the structures and functions that work bi-directionally to bridge science and practice. It provides a useful way to organize existing theories and research pertaining to dissemination and implementation and situate them within one of the three systems outlined. The ISF does not specify how best to promote interaction between the systems, and identifies this as an area for further research.

Implementing the Tool

Who is Involved?
The framework is intended for use by anyone interested in implementation of a public health program, policy, process or principle, including funders, practitioners and researchers.

Steps for Using Tool
The Interactive Systems Framework (ISF) presents three systems:

1. Prevention Synthesis and Translation System: distills information about innovations and translates it into user-friendly formats.
2. Prevention Support System: provides training, technical assistance or other support to users in the field.
3. Prevention Delivery System: implements innovations in the world of practice, or delivers the
programs.

The term systems is used broadly and describes a set of systematic or coherently organized activities. This means that systems are characterized by activities, not by individuals or organizations. The term innovation refers to any prevention program, policy, process or principle.

The Prevention Synthesis and Translation system is comprised of two actions: synthesis, or the process of compiling and summarizing information; and translation, or the process of converting scientific knowledge into products usable by practitioners for implementation.

The Prevention Support System involves two types of supports: innovation-specific support and general support. Innovation-specific support happens through innovation-specific capacity building such as providing information about an innovation, providing training on how to carry out an innovation and providing technical assistance for its use. General support is provided through general capacity-building activities such as enhancing infrastructure, skills and motivation of an organization.

The Prevention Delivery System carries out the activities that are necessary to implement innovations. These activities may be undertaken by individuals, organizations or coalitions, which all have varying levels of capacity to implement the innovation. This system includes the use of general implementation capacity, as well as innovation-specific capacity to serve in the implementation of the innovation. The use of general capacity includes activities such as maintaining the functioning of an organization through sufficient staffing and leadership. The use of innovation-specific capacity consists of activities such as gathering information about possible innovations that have been implemented, choosing which innovations to use and taking steps to ensure innovation sustainability.

The three systems work together for successful dissemination and implementation of prevention programs. Interaction between the systems is crucial because successful implementation of an innovation is unlikely to occur without it. Contextual factors (found in the circle surrounding the systems boxes of the framework) such as funding, climate, macro policy and existing research and theory need to be taken into account.

This framework can be used to understand key systems, functions and relationships relevant to dissemination and implementation. The framework can help to identify key stakeholders, and it highlights the need for communication among stakeholders in the system. The framework can be viewed from the perspective of either of the three systems and can thus be used by various people working from different perspectives within a system.

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Evaluation and Measurement Characteristics

Evaluation
Information not available

Validity
Not applicable

Reliability
Not applicable

Methodological Rating
N/A Not applicable

Tool Development

Developers
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These summaries are written by the NCCMT to condense and to provide an overview of the resources listed in the Registry of Methods and Tools and to give suggestions for their use in a public health context. For more information on individual methods and tools included in the review, please consult the authors/developers of the original resources.
Method of Development

This framework was created in response to a gap identified between science and practice. The ISF arose out of a Dissemination and Implementation (D/I) planning project by the Division of Violence Prevention at the Centres for Disease Control and Prevention (CDC). This project involved both the CDC and a consultant group of experts from the University of South Carolina and Miami University of Ohio. The framework was originally designed as a heuristic for organizing and guiding discussions in the planning group. However, it was determined that the framework had utility beyond this single purpose and thus was developed as a conceptual and practical way to guide thinking on D/I issues in many public health domains.

A literature review was completed that explored the individual, organizational and community-level factors (See Supplemental Materials).

Release Date

2008

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### Resources

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<th>Title of Primary Resource</th>
<th>Bridging the gap between prevention research and practise: The interactive systems framework for dissemination and implementation</th>
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<th>Unpacking capacity: The intersection of research to practice and community centered models.</th>
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