

IMSH 2024

Workshop Booklet

IMPLEMENTATION 101:

AN EXPLORATION OF IMPLEMENTATION SCIENCE STRATEGIES AND APPLYING THE ADAPTED IMPLEMENTATION MODEL FOR SIMULATION (AIM-SIM)

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Copenhagen Academy for
Medical Education and Simulation

RESOURCES



SCAN THE QR CODE TO
ACCESS THE
IMPLEMENTATION
RESOURCES USED IN THIS
WORKSHOP!

OBJECTIVES

Objective 1: Define implementation science

Objective 2: Recall key implementation frameworks and outcomes

Objective 3: Demonstrate the application of some of implementation sciences tools to the implementation of simulation programs in health professions education

CASE STUDY

In response to the need for efficient and cost-effective training for nurses in interosseous insertion (IO) skills, a collaborative initiative has been established between a hospital's nurse education department and a local university-based research and innovation hub. This project aims to develop inexpensive IO simulators to train 500 nurses over a year, considering the constraints of a limited budget.

Scan the QR code to
get more details
about the case
study!



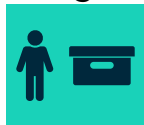
ACTIVITIES

Activity 1: Develop your implementation team

Activity 2: Adjust the Hexagon's domains to fit the nature of implementation

Activity 3: Determine your CFIR constructs

Stage 1



Explore

Activity 1: Develop your Implementation Team

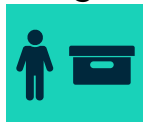
Identify your **implementation leaders** (people in the organization who have been formally appointed with the responsibility of implementing the program as a coordinator, manager, team leader etc).

Identify your **opinion leaders** (people in the organization who have influence on others with respect to the program).

Identify your **champions** (people dedicated to supporting the program and overcoming possible barriers).

Identify your **external change agents** (people who are affiliated with an outside entity such as Ministry of Health, Colleges, who formally influence or facilitate decisions).

Stage 1



Explore

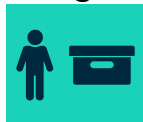
Activity 2: Adjust the Hexagon Domains

Adjust the Hexagon's "Evidence" domain to fit the the nature of implementation:

1. Are there research data available to demonstrate the effectiveness (e.g. randomized trials, quasi-experimental designs) of the program or practice?
2. What is the strength of the evidence? Under what conditions was the evidence developed?
3. What outcomes are expected when the program or practice is implemented as intended? How much of a change can be expected?
4. If research data are not available, are there evaluation data to indicate effectiveness (e.g. pre/post data, testing results, action research)?
5. Is there practice-based evidence or community-defined evidence to indicate effectiveness? If yes, provide citations or links.
6. Is there a well-developed theory of change or logic model that demonstrates how the program or practice is expected to contribute to short term and long term outcomes?
7. Do the studies (research and/or evaluation) provide data specific to the setting in which it will be implemented (e.g., has the program or practice been researched or evaluated in a similar context)?
8. Do the studies (research and/or evaluation) provide data specific to effectiveness for culturally and linguistically specific populations?

Develop 5 questions that you could use to **gather evidence on the program** (i.e., outcome data, fidelity data, cost-effectiveness data).

Stage 1



Explore

Activity 2: Adjust the Hexagon Domains

Adjust the Hexagon's "Supports" domain to fit the the nature of implementation:

1. Is there a qualified “expert” (e.g., consultant, program developer, intermediary, technical assistance provider) who can help with implementation over time?
2. Are there start-up costs for implementation of the program or practice (e.g., fees to the program developer)? What does the implementing site receive for these costs?
3. Are there curricula and other resources related to the program or practice readily available? What is the cost of these materials?
4. Is training and professional development related to this program or practice readily available? Is training culturally sensitive? Does it address issues of race equity, cultural responsiveness or implicit bias? Include the source of training and professional development. What is the cost of these materials?
5. Is coaching available for this program or practice? Is coaching culturally sensitive?
6. Are sample job descriptions and interview protocols available for hiring or selecting new staff for this practice?
7. Is guidance on administrative policies and procedures available?
8. Are there resources to develop a data management plan for this program or practice (including data system and monitoring tools) available?
9. Is there a recommended orientation to facilitate “buy-in” for staff, key stakeholders and collaborative partners?

Develop 5 questions that you could use to **identify supports for the program.**

Stage 1



Explore

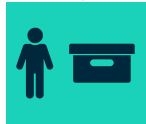
Activity 2: Adjust the Hexagon Domains

Adjust the Hexagon's "Usability" domain to fit the the nature of implementation:

1. Is the program or practice clearly defined (e.g. what it is, for whom it is intended)?
2. Are core features of the program or practice identified, listed, or named (e.g. key components of the program or practice that are required in order to be effective)?
3. Is each core feature well operationalized (e.g., staff know what to do and say, how to prepare, how to assess progress)?
4. Is there guidance on core features that can be modified or adapted to increase contextual fit?
5. Is there a fidelity assessment that measures practitioner behavior (i.e., assessment of whether staff use the practice as intended)?
6. Has the program or practice been adapted for use within culturally and linguistically specific populations and/or is there a recommended process for gathering community input into culturally specific enhancements?
7. What do we know about the key reasons for previous successful replications?
8. What do we know about the key problems that led to unsuccessful replication efforts previously?
9. Are there mature sites with successful histories of implementing the program or practice who are willing to be observed?

Develop 5 questions that you could use to **assess the usability of the program.**

Stage 1



Explore

Activity 2: Adjust the Hexagon Domains

Adjust the Hexagon's "Need" domain to fit the the nature of implementation:

1. Who is the identified population of concern?
2. What is/are the identified needs of this population?
3. Was an analysis of data conducted to identify specific area(s) of need relevant to the program or practice? If yes, what data were analyzed? Were these data disaggregated by race, ethnicity and language?
4. How do affected individuals and community members perceive their need? What do they believe will be helpful? How were community members engaged to assess their perception of need?
5. Is there evidence that the program or practice addresses the specific area(s) of need identified? If so, how was this evidence generated (e.g., experimental research design, quasi- experimental research design, pre-post, descriptive)?
6. If the program or practice is implemented, what can potentially change for this population?

Develop 5 questions that you could use to **assess the need of the program.**

Stage 1



Explore

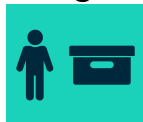
Activity 2: Adjust the Hexagon Domains

Adjust the Hexagon's "Fit" domain to fit the the nature of implementation:

1. How does the program or practice fit with priorities of the implementing site?
2. How does the program or practice fit with family and community values in the impacted community, including the values of culturally and linguistically specific populations?
3. What other initiatives currently being implemented will intersect with the program or practice?
4. How does the program or practice fit with other existing initiatives?
5. Will the other initiatives make it easier or more difficult to implement the proposed program or practice and achieve the desired outcomes?
6. How does the program or practice fit with the community's history?

Develop 5 questions that you could use to **assess the fit between the program** (IO for nurses) **and the host site** (hospital based sim lab).

Stage 1



Explore

Activity 2: Adjust the Hexagon Domains

Adjust the Hexagon's "Capacity to Implement" domain to fit the the nature of implementation:

1. Typically, how much does it cost to run the program or practice each year? Are there resources to support this cost?
2. What are the staffing requirements for the program or practice? (Number and type of staff, e.g., education, credentials, content knowledge)
3. Does the implementing site currently employ or have access to staff that meet these requirements?
4. If so, do those staff have a cultural and language match with the population they serve, as well as relationships in community?
5. What administrative practices must be developed or refined to support the use of this program or practice?
6. Is leadership knowledgeable about and in support of this program or practice? Do leaders have the diverse skills and perspectives representative of the community being served?
7. Do staff have the capacity to collect and use data to inform ongoing monitoring and improvement of the program or practice?
8. What administrative policies or procedures must be adjusted to support the work of practitioners and others to implement the program or practice?
9. Will the current communication system facilitate effective internal and external communication with stakeholders, including impacted families and the community?
10. Will the program or practice require use of or changes to building facilities?
11. Does the program or practice require new technology (hardware or software, such as a data system)?
12. Does the program or practice require use of or changes to the monitoring and reporting system?

Develop 5 questions that you could use to **assess the capacity to implement the program.**

Stage 2



Plan

Activity 3: Determine CFIR Constructs

Rate the CFIR constructs as **importation or not important** to consider when developing an implementation plan (in the context of the simulation program that we are working with).

I. SIMULATION PROGRAM DOMAIN

CONSTRUCT	NOT IMPORTANT	IMPORTANT
A. Source - The group that developed and/or visibly sponsored use of the Simulation Program is reputable, credible, and/or trustable.		
B. Evidence-Base - The Simulation Program has robust evidence supporting its effectiveness.		
C. Relative Advantage - The Simulation Program is better than other available Simulation Programs or current practice.		
D. Adaptability - The Simulation Program can be modified, tailored, or refined to fit local context or needs.		
E. Trialability - The Simulation Program can be tested or piloted on a small scale and undone.		
F. Complexity - The Simulation Program is complicated, which may be reflected by its scope and/or the nature and number of connections and steps.		
G. Design - The Simulation Program is well designed and packaged, including how it is assembled, bundled, and presented.		
H. Cost - The Simulation Program purchase and operating costs are affordable.		

II. OUTER SETTING DOMAIN

CONSTRUCT	NOT IMPORTANT	IMPORTANT
A. Critical Incidents - Large-scale and/or unanticipated events disrupt implementation and/or delivery of the Simulation Program.		
B. Local Attitudes - Sociocultural values and beliefs encourage the Outer Setting to support implementation and/or delivery of the Simulation Program.		
C. Local Conditions - Economic, environmental, political, and/or technological conditions enable the Outer Setting to support implementation and/or delivery of the Simulation Program.		
D. Partnerships & Connections - The Inner Setting is networked with external entities, including referral networks, academic affiliations, and professional organization networks.		
E. Policies & Laws - Legislation, regulations, professional group guidelines and recommendations, or accreditation standards support implementation and/or delivery of the Simulation Program.		
F. Financing - Funding from external entities is available to implement and/or deliver the Simulation Program.		
G. External Pressure - External pressures drive implementation and/or delivery of the Simulation Program.		
G1. Societal Pressure - Mass media campaigns, advocacy groups, or social movements or protests drive implementation and/or delivery of the Simulation Program.		
G2. Market Pressure - Competing with and/or imitating peer entities drives implementation and/or delivery of the Simulation Program.		

II. OUTER SETTING DOMAIN CONT.

CONSTRUCT	NOT IMPORTANT	IMPORTANT
<p>G3. Performance-Measurement Pressure - Quality or benchmarking metrics or established service goals drive implementation and/or delivery of the Simulation Program.</p>		

III. INNER SETTING DOMAIN

CONSTRUCT	NOT IMPORTANT	IMPORTANT
<p>A. Structural Characteristics - Infrastructure components support functional performance of the Inner Setting.</p>		
<p>A1. Physical Infrastructure - Layout and configuration of space and other tangible material features support functional performance of the Inner Setting.</p>		
<p>A2. Information Technology Infrastructure - Technological systems for tele-communication, electronic documentation, and data storage, management, reporting, and analysis support functional performance of the Inner Setting.</p>		
<p>A3. Work Infrastructure - Organization of tasks and responsibilities within and between individuals and teams, and general staffing levels, support functional performance of the Inner Setting.</p>		
<p>B. Relational Connections - There are high quality formal and informal relationships, networks, and teams within and across Inner Setting boundaries (e.g., structural, professional).</p>		
<p>C. Communications - There are high quality formal and informal information sharing practices within and across Inner Setting boundaries (e.g., structural, professional).</p>		

III. INNER SETTING DOMAIN CONT.

CONSTRUCT	NOT IMPORTANT	IMPORTANT
<p>D. Culture - There are shared values, beliefs, and norms across the Inner Setting.</p>		
<p>D1. Human Equality-Centeredness - There are shared values, beliefs, and norms about the inherent equal worth and value of all human beings.</p>		
<p>D2. Recipient-Centeredness - There are shared values, beliefs, and norms around caring, supporting, and addressing the needs and welfare of recipients.</p>		
<p>D3. Deliverer-Centeredness - There are shared values, beliefs, and norms around caring, supporting, and addressing the needs and welfare of deliverers.</p>		
<p>D4. Learning-Centeredness - There are shared values, beliefs, and norms around psychological safety, continual improvement, and using data to inform practice.</p>		
<p>E. Tension for Change - The current situation is intolerable and needs to change.</p>		
<p>F. Compatibility - The Simulation Program fits with workflows, systems, and processes.</p>		
<p>G. Relative Priority - Implementing and delivering the Simulation Program is important compared to other initiatives.</p>		
<p>H. Incentive Systems - Tangible and/or intangible incentives and rewards and/or disincentives and punishments support implementation and delivery of the Simulation Program.</p>		

III. INNER SETTING DOMAIN CONT.

CONSTRUCT	NOT IMPORTANT	IMPORTANT
<p>I. Mission Alignment - Implementing and delivering the Simulation Program is in line with the overarching commitment, purpose, or goals in the Inner Setting.</p>		
<p>J. Available Resources - Resources are available to implement and deliver the Simulation Program.</p>		
<p>J1. Funding - Funding is available to implement and deliver the Simulation Program.</p>		
<p>J2. Space - Physical space is available to implement and deliver the Simulation Program.</p>		
<p>J3. Materials & Equipment - Supplies are available to implement and deliver the Simulation Program.</p>		
<p>K. Access to Knowledge & Information - Guidance and/or training is accessible to implement and deliver the Simulation Program.</p>		

IV. INDIVIDUALS DOMAIN

ROLES SUBDOMAIN

CONSTRUCT	NOT IMPORTANT	IMPORTANT
<p>A. High-level Leaders - Individuals with a high level of authority, including key decision-makers, executive leaders, or directors.</p>		

IV. INDIVIDUALS DOMAIN CONT.

ROLES SUBDOMAIN CONT.

CONSTRUCT	NOT IMPORTANT	IMPORTANT
B. Mid-level Leaders - Individuals with a moderate level of authority, including leaders supervised by a high-level leader and who supervise others.		
C. Opinion Leaders - Individuals with informal influence on the attitudes and behaviors of others.		
D. Implementation Facilitators - Individuals with subject matter expertise who assist, coach, or support implementation.		
E. Implementation Leads - Individuals who lead efforts to implement the Simulation Program.		
F. Implementation Team Members - Individuals who collaborate with and support the Implementation Leads to implement the Simulation Program, ideally including Simulation Program Deliverers and Recipients.		
G. Other Implementation Support - Individuals who support the Implementation Leads and/or Implementation Team Members to implement the Simulation Program.		
H. Simulation Program Deliverers - Individuals who are directly or indirectly delivering the Simulation Program.		
I. Simulation Program Recipients - Individuals who are directly or indirectly receiving the Simulation Program.		

IV. INDIVIDUALS DOMAIN CONT.

CHARACTERISTICS SUBDOMAIN

CONSTRUCT	NOT IMPORTANT	IMPORTANT
A. Need - The individual(s) has deficits related to survival, well-being, or personal fulfillment, which will be addressed by implementation and/or delivery of the Simulation Program.		
B. Capability - The individual(s) has interpersonal competence, knowledge, and skills to fulfill Role.		
C. Opportunity - The individual(s) has availability, scope, and power to fulfill Role.		
D. Motivation - The individual(s) is committed to fulfilling Role.		

V. IMPLEMENTATION PROCESS DOMAIN

CONSTRUCT	NOT IMPORTANT	IMPORTANT
A. Teaming - Join together, intentionally coordinating and collaborating on interdependent tasks, to implement the Simulation Program.		
B. Assessing Needs - Collect information about priorities, preferences, and needs of people.		
BI. Simulation Program Deliverers - Collect information about the priorities, preferences, and needs of deliverers to guide implementation and delivery of the Simulation Program.		

V. IMPLEMENTATION PROCESS DOMAIN CONT.

CONSTRUCT	NOT IMPORTANT	IMPORTANT
B2. Simulation Program Recipients - Collect information about the priorities, preferences, and needs of recipients to guide implementation and delivery of the Simulation Program.		
C. Assessing Context - Collect information to identify and appraise barriers and facilitators to implementation and delivery of the Simulation Program.		
D. Planning - Identify roles and responsibilities, outline specific steps and milestones, and define goals and measures for implementation success in advance.		
E. Tailoring Strategies - Choose and operationalize implementation strategies to address barriers, leverage facilitators, and fit context.		
F. Engaging - Attract and encourage participation in implementation and/or the Simulation Program.		
F1. Simulation Program Deliverers - Attract and encourage deliverers to serve on the implementation team and/or to deliver the Simulation Program.		
F2. Simulation Program Recipients - Attract and encourage recipients to serve on the implementation team and/or participate in the Simulation Program.		
G. Doing - Implement in small steps, tests, or cycles of change to trial and cumulatively optimize delivery of the Simulation Program.		

V. IMPLEMENTATION PROCESS DOMAIN CONT.

CONSTRUCT	NOT IMPORTANT	IMPORTANT
<p>H. Reflecting & Evaluating - Collect and discuss quantitative and qualitative information about the success of implementation. Note: Use this construct to capture themes related to Reflecting & Evaluating that are not included in the subconstructs below.</p>		
<p>H1. Implementation - Collect and discuss quantitative and qualitative information about the success of implementation.</p>		
<p>H2. Simulation Program - Collect and discuss quantitative and qualitative information about the success of the Simulation Program.</p>		
<p>I. Adapting - Modify the Simulation Program and/or the Inner Setting for optimal fit and integration into work processes.</p>		