Greetings from the University of Michigan (now Michigan Medicine)!

Objectives
1. Be able to articulate key concepts from multiple implementation models.
2. Be able to identify effective and ineffective strategies for implementation.

Definition of Implementation
The communication and subsequent use of information or knowledge, into a culture or setting.

Implementation AKA...
- Translation
- Knowledge Translation
- Research Utilization
- Diffusion of Innovation
- Research Adoption
- Adoption of EBP
Implementation Models

Diffusion of Innovations (Rogers)
Translating Research into Practice (TRIP) (Titler & Everett)
Promoting Action on Research Implementation in Health Services (PARIHS) Framework

4 Components in Diffusion of Innovations
1. The Innovation
2. Communication Channels
3. Time
4. Social System

Each of the four components has greater detail as it relates to implementation

Titler & Everett: Translating Research into Practice (TRIP) Model

Roger's work serves as a foundation for this model
4 Component Influence the Rate of Adoption
1. Characteristics of the EB Innovation
2. Communication Process
3. Social System
4. Users of the Innovation
Promoting Action on Research Implementation in Health Services (PARIHS) Framework


1. **Evidence**: The level and nature of the evidence.
2. **Context**: The setting in which practice takes place.
   - Includes the culture of the setting, the leadership, and users in the setting.
3. **Facilitation**: Making things easier for a person or group of people. In this case, easing adoption of evidence into practice.

Components Across Models

**Innovation (EBP)**

Users of the innovation

Communication

End Users

Context: organization & local

Communication
The interactions among the four key components of implementation are what determines the rate and extent of adoption.

**What is Implementation Science?**
Findings generated from implementation research.

**Implementation Science**

“\[\text{The scientific investigation of methods and variables that affect adoption of evidence-based health care practices by individual practitioners and health care systems to improve clinical and operational decision-making} \] (p.38).


**Purpose of Implementation Research**
- The primary focus of implementation research is to understand how to improve, increase, or more rapidly get research into practice.
- The focus is **NOT** to test the effectiveness of a treatment.

**Common Outcomes Studied in Implementation Research**
- Time/rate of implementation
- Adherence to evidence-based protocol (i.e., fidelity)
- Extent/penetration of implementation
- Sustainability
- **Patient outcomes**
Common “Interventions” Studied in Implementation Research

- Facilitators and barriers to implementation
- Usually multifaceted
- Communication or dissemination methods (e.g. word of mouth, written reminders, etc)
- “Packaging” of the innovation (e.g. marketing, building into systems, etc)
- Use of people (e.g. facilitators) to aid in the implementation

End Users Often Studied

- Attitudes/beliefs about evidence-based practice and the innovation itself
- Knowledge
- Self-reported behavior change

Measuring Context

- Many studies try to examine this concept
- Messy subject
- Difficult to measure

What does the Research Show?

EFFECTIVE AND INEFFECTIVE STRATEGIES FOR IMPLEMENTATION

Ineffective: One Intervention Alone

- No one, magic bullet
- More success when multiple strategies are used

Examples of the Magic Bullet Approach

- E-mail
- Policy change
- Presentation
- Flyer/Newsletter
Effective: Strong Leadership

BEHAVIORS OBSERVED:
- Rounding
- Over-communicating and listening
- Translating to local context
- Recognizing positive behaviors in staff
- Holding people accountable

Ineffective: Poor Leadership

BEHAVIORS OBSERVED:
- Not coming out of office
- Punitive approach
- Not understanding the practice change

Effective: Local Change Champions

- Change champions are end users who help roll-out a change locally.
- They are more effective when they are:
  - Within the discipline (and doing the work of the end users)
  - Respected by colleagues (i.e., their opinion is valued)
- One of the most effective implementation strategies

The Innovation
Characteristics or Attributes of the Innovation

1. **Relative advantage**: The degree to which an innovation is better than the idea it is replacing.
2. **Compatibility**: Extent to which the innovation fits with current system, processes, and adopters.
3. **Complexity**: How difficult is the innovation to understand and use?
4. **Trialability**: The extent to which the innovation can be tried out before fully adopting.
5. **Observability**: Extent to which the end results of the innovation are visible.
6. **Reinvention**: Ability for the innovation to be modified.


Two Most Important Innovation Attributes

1) **Relative Advantage**
   - How is this change better than what we had?

2) **Compatibility**
   - How well does this fit within our current structures and processes?

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Effective: Built into Existing Structures/Processes

- The degree to which existing structures or processes can be used will help it feel like it’s not a new thing.

Ineffective: Physical Materials Unavailable

- Lack of equipment needed to implement an innovation is a common barrier
  
  Examples:
  - Availability of hand sanitizers when needed
  - Bladder scanners to avoid indwelling urinary catheters
  - Kits (central line, foley, etc) that do not support the sterile technique

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Ineffective: Relying on Memory

Possibly Effective: Marketing Strategies

- Use of logos
- Color schemes
- Items that will visually appeal to audience and be immediately recognizable
Ineffective: Grand Rounds or Presentation

Education is Necessary but not Sufficient

Unclear Effectiveness: Printed Materials
* May have some positive impact compared to nothing
* When compared to other strategies, effect is not impressive

Effective: Reminders
* Somewhat hard to tease out effect of reminders because the types vary so significantly.
* Seem to be more effective when they can be acted on in real-time (i.e., when the reminder is received).
The End User

5 Stages in Innovation Decision Process

- Individual end users will move through the stages at their own pace.


Effective: Gap Analysis

- Showing a gap in performance can provide motivation or make the case for change (ie. gap analysis)
- Benchmarking can help
- Peer-to-peer comparisons
- The more specific to an individual’s practice, the better
- Helps persuade the end user that they need to change

You are Here

Effective: Audit and Feedback

- After implementation has started, showing people progress and/or how far left to.
- One of the most effective strategies in implementation.

Example: Weekly feedback on sign accuracy

Example: Weekly Feedback on Missing Mobility Status
Sustainability

Many elements that increase implementation, will also positively impact sustainability.

Additional Strategies for Sustainability

Adoption of the EB guideline by a larger audience (Nursing EBS)
Build into documentation systems
Build into on-going competencies (e.g. every 2 years)
Build into orientation
Build into individual evaluations
Build into on-going quality improvement monitoring & efforts
Notice the “Build Into”- utilize existing structures and processes.

Summary

• Context, communication, the innovation and the end users are key components to consider when implementing a practice change.
• Context is the most important, and most challenging component to influence.
• Having a multi-faceted strategy for implementation will be more effective than one, single strategy.
• Local change champions, conducting a gap analysis, and audit and feedback are three of the most effective strategies to increase the rate and/or extent of implementation.

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References

References


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