

The Implementation of Evidence-Based Practices: Applying a Goal Commitment Framework

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Evidence-based Practices

- Evidence-based practice:
 - integrates clinical expertise with best available evidence from systematic research to make decisions concerning patient care.
 - may be promoted using clinical practice guidelines, defining standards of care.

What is implementation?

- The study of methods to promote systematic uptake and consistent integration of research findings and evidence-based practices into routine practice.

Barriers to Implementation

- Consistent delivery of guideline-indicated care remains a challenge:
 - Lack of organizational support and resources
 - Provider resistance
 - Lack of understanding of the implementation process

Why We Need Theory

- The implementation process is infrequently driven by theoretical constructs.
- Theories may help identify individual characteristics and organizational conditions that facilitate effective implementation.

Study Objectives

- Using VA's roll-out of the Major Depressive Disorders Guidelines as an example, the study aims to:
 1. Test a theoretical framework that identifies factors facilitating guideline implementation;
 2. Understand the effects of the intermediate implementation outcomes on provider practice.

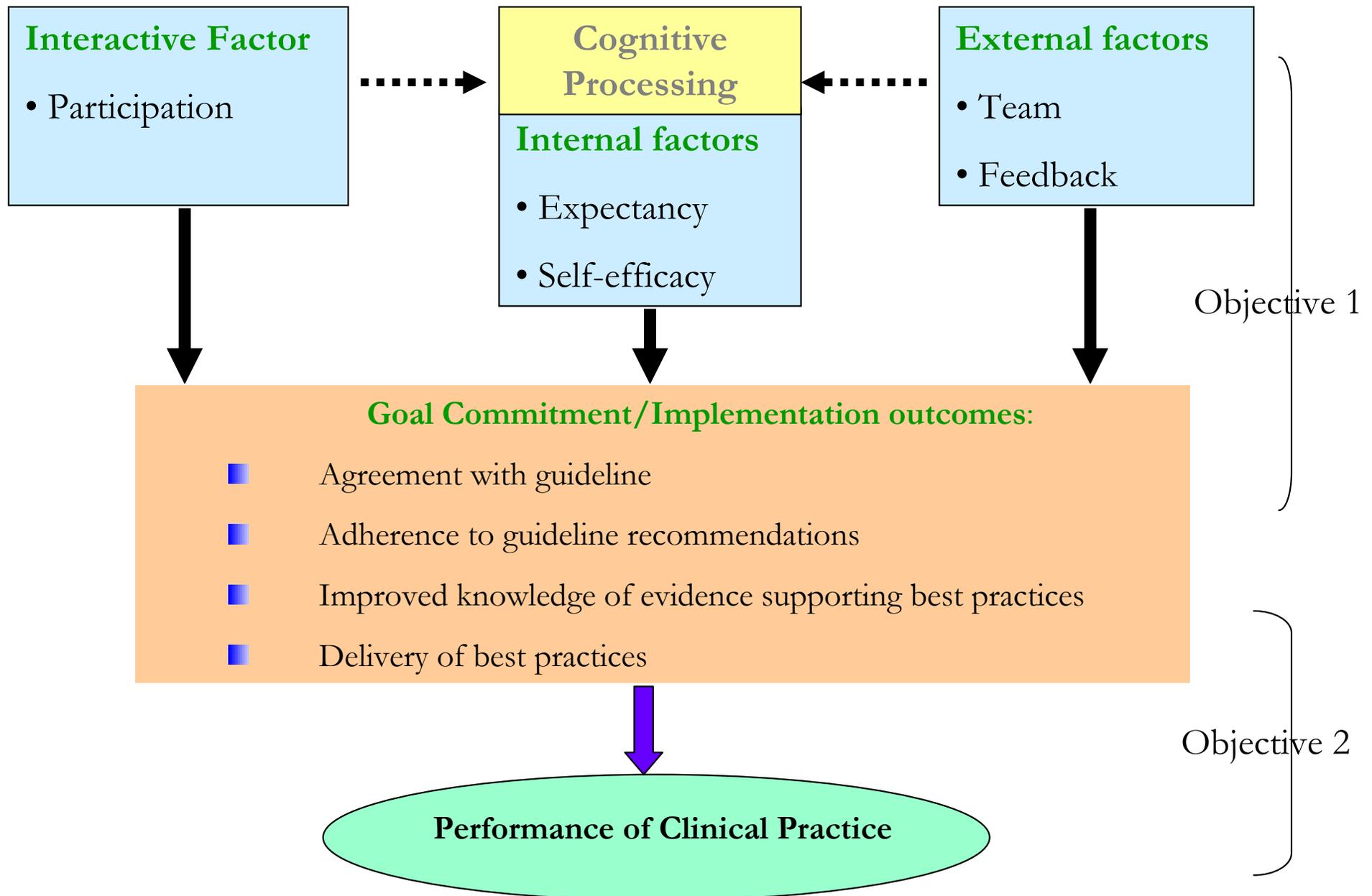
Major Depressive Disorder Screening Guideline

- An initial screening for Major Depressive Disorder should be conducted annually for all primary care patients except those currently being treated for depression.

Identifying a Framework

- Goal setting and task performance:
 - Assign specific goals that organizational participants can meet and accept
 - Involve all participants in defining goals and determining strategies to implement
 - Provide feedback concerning goal attainment on both individual and organizational level

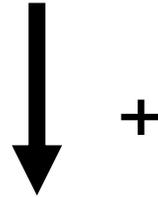
Conceptual Framework



Hypotheses 1: Implementation

Interactive Factor

H1: Participation



Goal Commitment/Implementation outcomes:

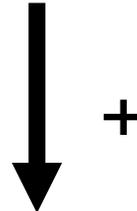
- Agreement with guideline
- Adherence to guideline recommendations
- Improved knowledge of evidence supporting best practices
- Delivery of best practices

Hypotheses 2 and 3: Implementation

External factors

H2: Team

H3: Feedback



Goal Commitment/Implementation outcomes:

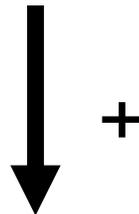
- Agreement with guideline
- Adherence to guideline recommendations
- Improved knowledge of evidence supporting best practices
- Delivery of best practices

Hypotheses 4 and 5: Implementation

Internal factors

H4: Expectancy

H5: Self-efficacy



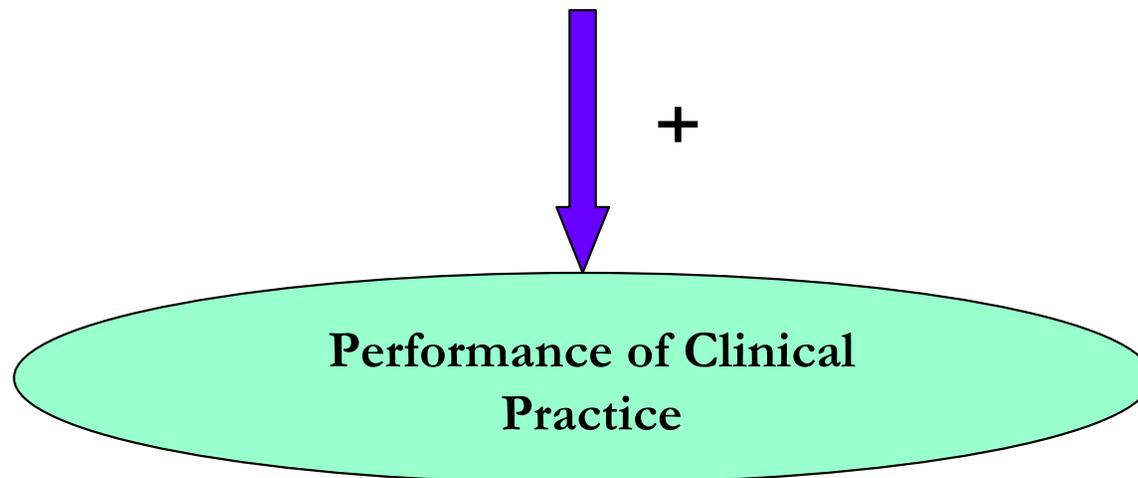
Goal Commitment/Implementation outcomes:

- Agreement with guideline
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Hypothesis 6: Performance

Goal Commitment/Implementation outcomes:

- Agreement with guideline
- Adherence to guideline recommendations
- Improved knowledge of evidence supporting best practices
- Delivery of best practices



Data Source: Provider Level

- **Determinants of Clinical Practice Guideline Implementation Effectiveness Study**
 - Primary data collected to assess provider experience, work conditions, attitudes and experience with guideline implementation, culture, quality improvement efforts

Data Sources: Organizational Level

- **External Peer Review Program (EPRP)**
 - Review of clinical records on achieving depression screening for eligible patients
- **American Hospital Association (AHA) Annual Survey**
 - Hospital characteristics including size, teaching status, rural/urban location

VA's Quality Enhancement Research Initiative (QUERI)

- The VA has recognized the adoption and implementation of evidence-based practices in its medical centers as an area for improvement.
- An example is QUERI, with the **Mission** to “enhance the quality and outcomes of VA health care by systematically implementing clinical research findings and evidence-based recommendations into routine clinical practice.”

QUERI

- It is a partnership of health services researchers and clinical managers.
- QUERI provides a unique opportunity to understand guideline implementation.

Sampling

■ Survey Recruitment

- National sample of VA providers from 139 VA hospitals, stratified by provider type (physicians, nurse, nurse practitioners, physician assistants)

■ Sample

- N= 2,438 VA providers
- Response rate= 58%

Sample Demographics

- Gender: 61.8% male
- Age: 47.8% over age 50
- Professional Training:
 - Physicians: 37.8%
 - Nurse Practitioners: 13.0%
 - Nurses: 37.9%
 - Physician Assistants: 6.7%
 - Other: 6.1%

Methods: Understanding the Implementation Process

- **Hierarchical Generalized Linear Model (HGLM):**
 - Implementation outcome_x = f (external factors, internal factors, interactive factors, control)

Variable Construction

With regard to the Major Depressive Disorder guideline recommendations, please indicate to what extent:

	Not at all	Very little	Some	Great	Very great
You adhere to the recommendations	1	2	3	4	5

Implementation Outcome Variables

- Agreement with guideline recommendations
- Adherence to guideline recommendations
- Improved knowledge of evidence supporting best practices
- Delivery of best practices

Measures

Interactive Factor

H1: Participation

- **Interactive Factors**
 - Clinicians have input into guideline implementation
 - Provider involvement in quality of care improvement
 - Culture emphasizes participative decision-making

Measures

External factors

H2: Team

H3: Feedback

■ External Factor

- Providers receive individualized feedback on performance
- Providers receive feedback on organizational guideline adherence
- Team work exists for guideline implementation
- Inter-departmental coordination

Measures

Internal factors

H4: Expectancy

H5: Self-efficacy

■ Internal Factors

- Providers believe feedback improves performance
- Frequency of performance data distribution
- Access to information/literature at point of care

Control Variables

- Provider demographics
 - Age
 - Gender
- Provider practice
 - Years in practice
 - Type of provider (physician, nurse practitioners, nurses, physician assistants)

Methods: Effects of Implementation on Practice

- **HGLM:**

- Clinical performance = f (4 intermediate implementation outcomes, control)

Measures

- **Dependent Variable:** Achieving an 85% or greater rate of appropriate depression screenings in eligible patients
- **Independent Variables:**
 - Agreement with guideline implementation
 - Guideline adherence
 - Improved knowledge in best practices
 - Delivery of best practice

Control Variables

- **Provider Level:**
 - Provider gender
 - Number of years in practice
- **Hospital Level:**
 - Bed size
 - Teaching status of facility
 - Urban location

Results: Interactive Factors

	Intermediate Implementation Outcomes			
	Agreement with Guideline	Guideline Adherence	Improved knowledge	Delivery of Best Practice
Provider have input into guideline implementation	1.44*	1.84***	1.50*	1.61**
Involved in improving quality of care	1.19	1.47**	1.65***	1.41*
Participative culture	1.19	0.92	1.18	1.15

**** $p \leq 0.0001$ *** $p \leq 0.005$ ** $p \leq 0.01$ * $p \leq 0.05$ † $p \leq 0.10$

Results: External Factors

	Intermediate Implementation Outcomes			
	Agreement with Guideline	Guideline Adherence	Improved knowledge	Delivery of Best Practice
Team work in implementation	2.02****	1.30	1.92***	1.96***
Inter-departmental coordination	0.95	1.11	1.01	1.09
Receipt of feedback on organizational adherence	0.93	0.96	0.93	0.90
Receipt of individualized feedback	1.21	1.37*	1.34†	1.18

**** $p \leq 0.0001$ *** $p \leq 0.005$ ** $p \leq 0.01$ * $p \leq 0.05$ † $p \leq 0.10$

Results: Internal Factors

	Intermediate Implementation Outcomes			
	Agreement with Guideline	Guideline Adherence	Improved knowledge	Delivery of Best Practice
Expectancy				
Feedback affects performance	1.59***	1.45*	1.52*	1.62**
Self-efficacy				
Frequency of performance data distribution	1.15***	1.25****	1.17***	1.14**
Ready access to information	1.32*	1.11	1.14	1.26

**** $p \leq 0.0001$ *** $p \leq 0.005$ ** $p \leq 0.01$ * $p \leq 0.05$ † $p \leq 0.10$

Results: Performance

Intermediate Implementation Outcomes	Dependent Variable: ≥85 % Screened (OR)
Agreement with Guideline implementation	0.87
Guideline Adherence	1.70*
Guideline implementation improved knowledge	1.08
Guideline implementation enhanced delivery of best practice	0.98

**** $p \leq 0.0001$ *** $p \leq 0.005$ ** $p \leq 0.01$ * $p \leq 0.05$

Summary of Findings

Hypothesis	Hypothesis was
H1: Participation	Supported
H2: Teamwork	Partially Supported
H3: Feedback	Partially Supported
H4: Expectancy of Success	Supported
H5: Self-efficacy	Supported
H6: Guideline implementation enhanced delivery of best practice	Partially Supported

Conclusion

- Goal commitment framework can be useful in understanding factors that facilitated the implementation and use of depression guidelines.
- Participation, performance feedback, teamwork, expectancy, and self efficacy led to greater goal commitment, facilitating the implementation process.

Limitations

- Self-reported performance
- Lack of data to adjust for patient characteristics and utilization
- Single-operational measures as proxies for self-efficacy and expectancy
- Cross sectional data

Implications

- Understanding mechanisms through which improved implementation and care delivery outcomes are achieved is important.
- This framework may be generalizable to other settings and useful to study the implementation of other care models/innovations.
- Instituting systems/programs to facilitate timely, appropriate performance feedback and provider participation in decision-making should enhance organizational change and learning.

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Thank You

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