Implementation Strategies & Outcomes: Methods advances & challenges

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Implementation Science Summit

March 21, 2014

Washington University in St. Louis
Institute for Public Health

George Warren Brown School of Social Work

Institute of Clinical and Translational Sciences

Session overview: Implementation research tools

1. Priority Q's
2. Constructs and measures
3. Data sources

Priority Questions in Implementation Research

SIX KEY Q'S

Priority question 1: What is our repertoire of evidence-based practices?

What interventions ready for dissemination and implementation?

What is their appropriateness? Balancing discovery v roll out

When we have effective interventions, it’s time to delivery them

Priority question #2: What is the implementation gap?

What is the quality of health and educational service?

To what extent are we providing evidence-based service?

Services that "could be" vs services that "are

Implementation gap:

$$\% = \frac{number\ recieving\ EB\ care}{total\ service\ recipients}$$

$$\% = \frac{number\ recieving\ EB\ care}{total\ \ number\ needing\ service}$$

Priority question #3:
What is the implementation context?

Who are key stakeholders?

What are the policy and practice drivers?

Organizational climate and readiness for change?

Setting's implementation history

- Prior and current
  - barriers
  - facilitators

Priority question #4: What implementation strategies/ processes are effective?

Testing implementation strategies for:

- this setting
- this evidence-based program/ service

Priority question #5:
How do we support settings' capacity to implement multiple evidence-based approaches?

Delivering multiple evidence based approaches?

Reality of most service delivery:

Co-occurring conditions → Multiple EBI's

Evidence evolves → continually adopt

Limited capacity → must de-adopt

Fit to local context → adaptation

Staff turnover→ continual training

Priority question #6: How do we scale up and sustain evidence-based service?

Moving from “what works here” to “what works there and there?”

Evidence continues to evolve

Treatment Evidence Continues to Grow

What strategies can enable providers & organizations to implement and sustain interventions in the face of evolving evidence?

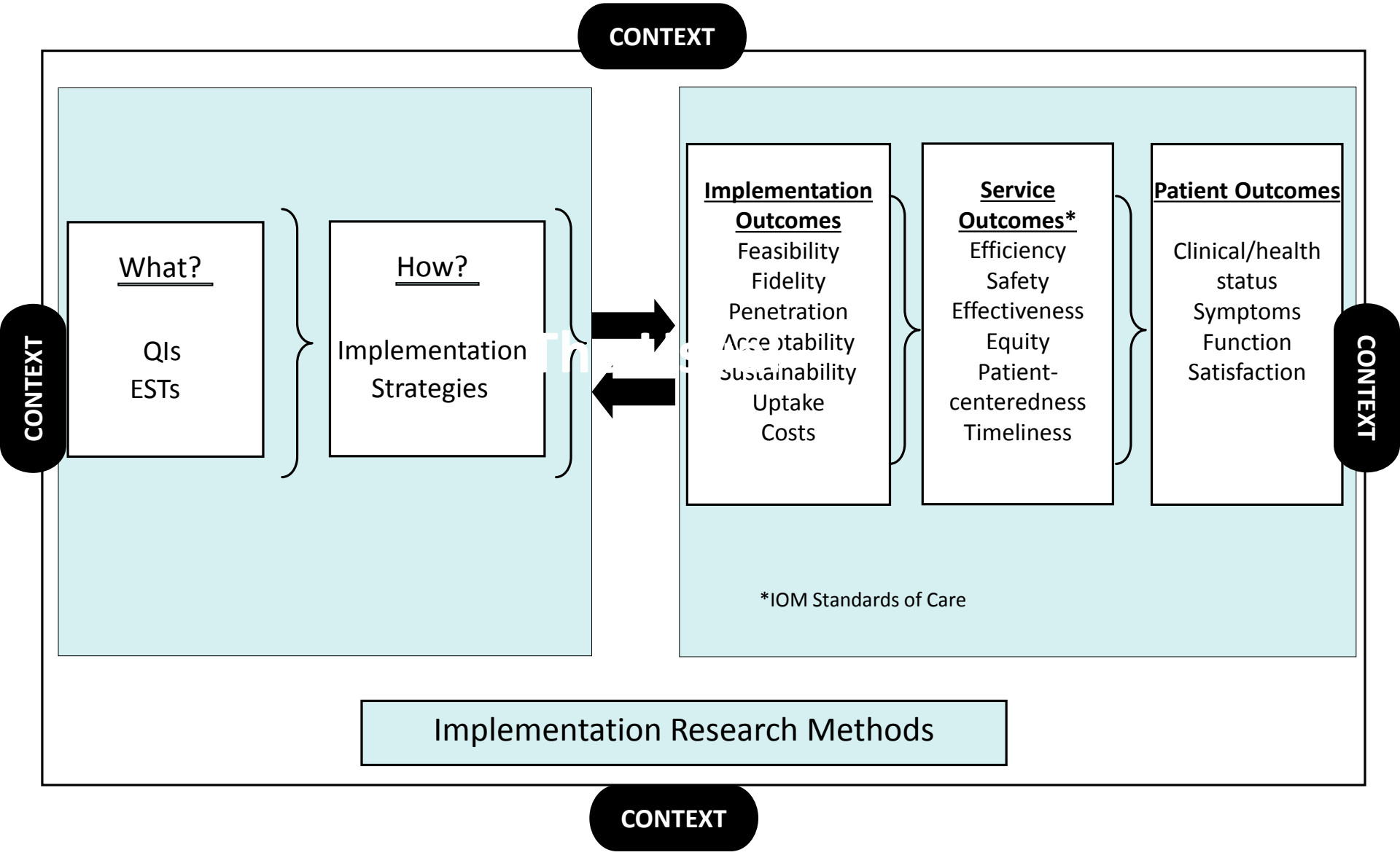
Key constructs

IMPLEMENTATION CONTEXT
IMPLEMENTATION OUTCOMES
IMPLEMENTATION STRATEGIES

Key constructs

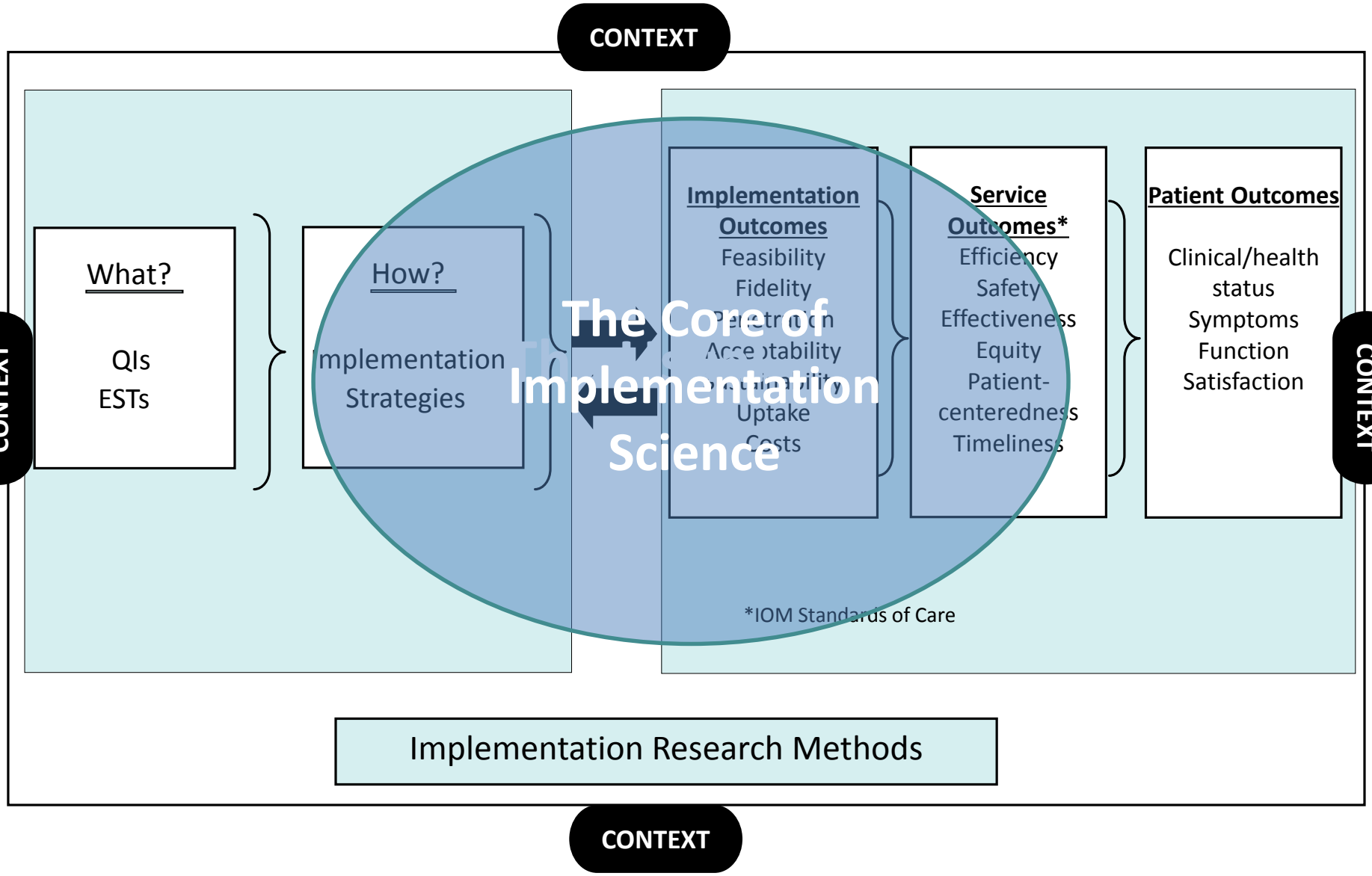
IMPLEMENTATION CONTEXT

Conceptual Model for Implementation Research



Proctor et al 2009 Admin. & Pol. in Mental Health Services

Conceptual Model for Implementation Research



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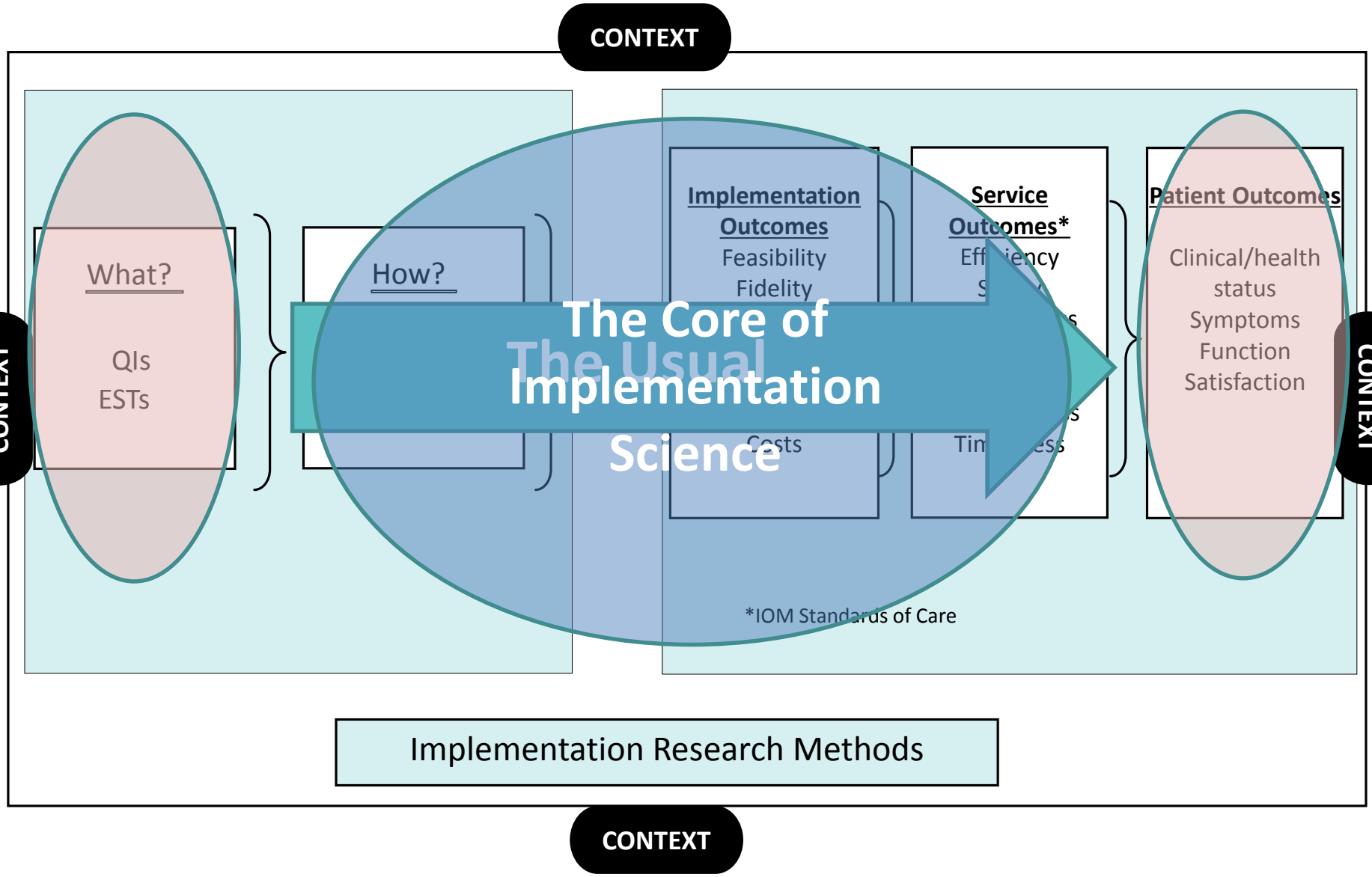

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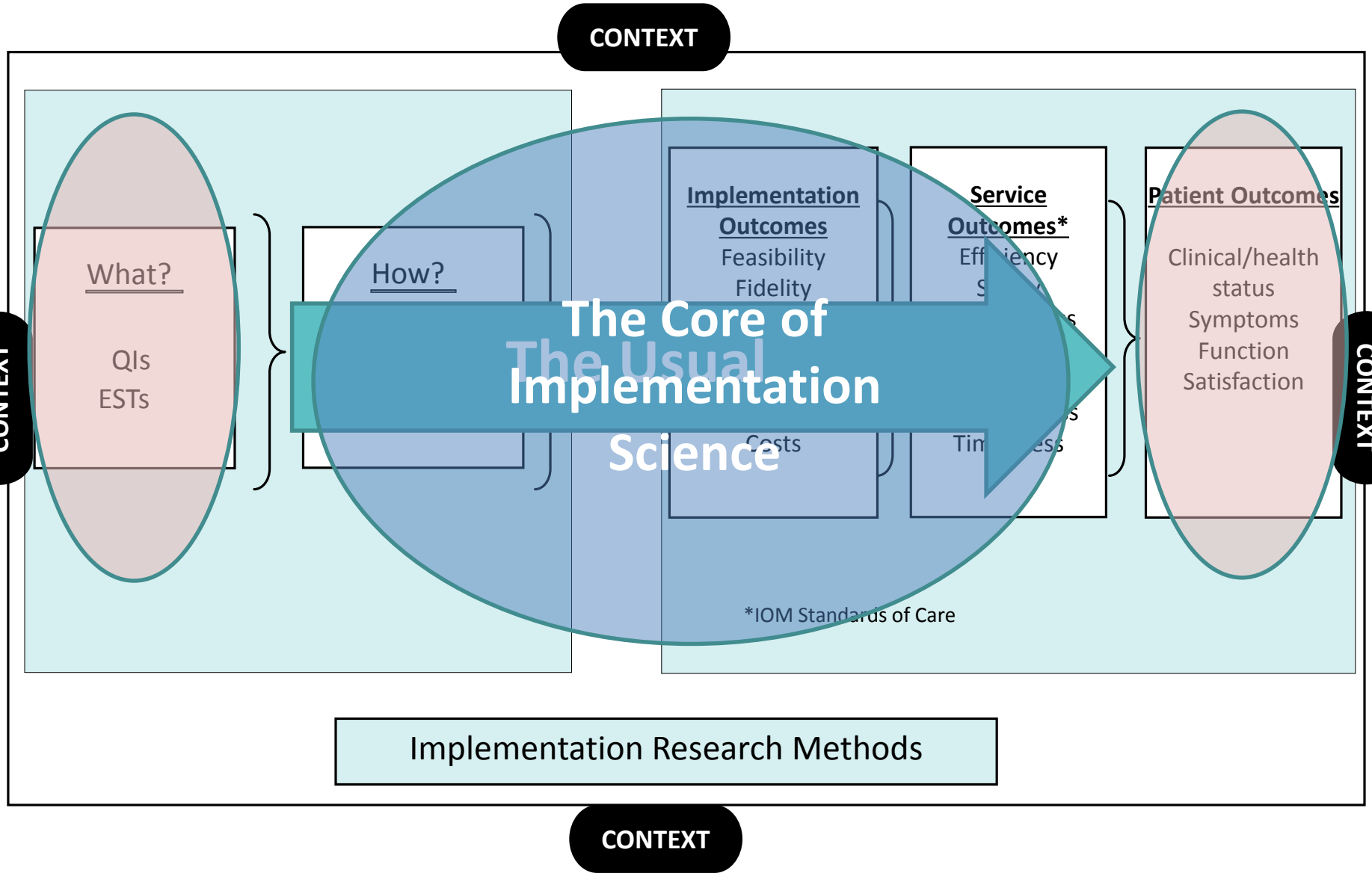


Proctor et al 2009 Admin. & Pol. in Mental Health Services

Constructs: Frameworks and Theories

Now: Many models!!!

109 identified models

How to choose?

Tabak, Khoong, Chambers, & Brownson (2012), Bridging Research and Practice: Models for Dissemination and Implementation

Research, *J Prev Med*, 43(3):337–350

Implementation Context: Who are the key stakeholders?

Payers, Policy makers

Administrators

Researchers

Clients/ Patients , Families

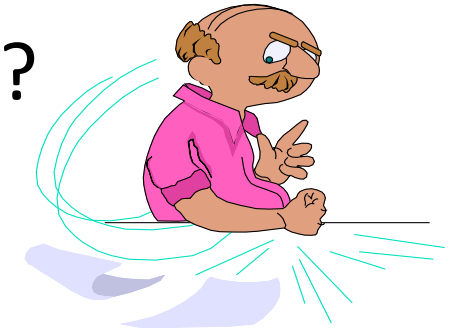
Providers (clinicians, counselors, M.D.'s, nurses, OT, PT, SW)

- Support staff (units, labs, medical records)
- Supervisors, training teams

Where are they re: the implementation?

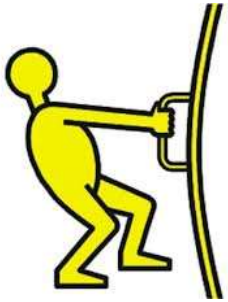
Implementation context

Is there a demand to implement?



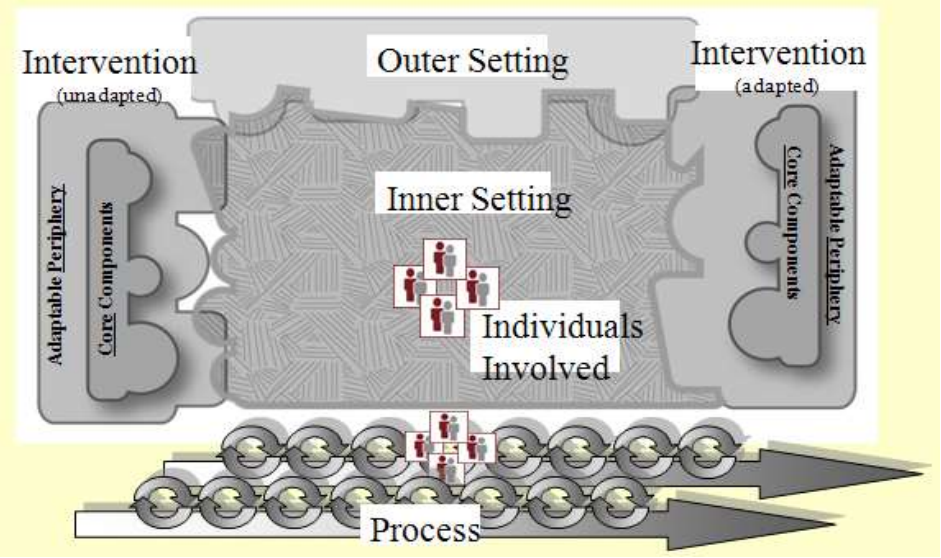
Is there a push out?

Is there a pull?



Context: Consolidated Framework for Implementation Research (CFIR)

- Composed of 5 major domains:
  - Intervention characteristics
  - Outer setting
  - Inner setting
  - Characteristics of the individuals involved
  - Process of implementation



Damschroder L, Aron D, Keith R, Kirsh S, Alexander J, Lowery J.: Fostering implementation of health services research findings into practice: a consolidated framework for advancing implementation science. *Implement Sci* 2009, 4(1):50.

Implementation Context

Advancing measurement for contextual constructs

- Measures exist for several of CFIR's constructs
- More information on the Wiki:

  http://wiki.cfirwiki.net/index.php?title=Main_Page

Understanding how to fit changing EB interventions into changing context*

* Dynamic sustainability framework, Chambers et al., Implementation Science, 2013

Contextual assessment

Practice change needs to aligned with

Practice determinants

Flottorp (2013, Implementation Science) checklist for practice determinants

Priorities and trends in policy ecology

Raghavan (2009, Implementation Science)

Agency infrastructure, system antecedents

Emmons (2011, Health Education & Behavior)

Key constructs

IMPLEMENTATION OUTCOMES

Implementation Outcomes

Distinct from client outcomes

- Could have an effective intervention, poorly implemented
- Could have an ineffective treatment, successfully implemented

Implementation Outcomes: Key Concepts

- Acceptability
- Adoption
- Appropriateness
- Feasibility
- Fidelity
- Implementation cost
- Penetration
- Sustainability

Implementation outcome measurement

- Fidelity = most frequently measured outcome
- Provider attitudes frequently assessed
- Implementation outcomes are interactive:
  - Effectiveness → greater acceptability
  - Cost ↓ feasibility
- We don't know much about:
  - Sustainability
  - Scale up and spread

Measurement: Toward Standardization & Harmonization

- Seattle Implementation Research Conference Measures Project
  - http://www.seattleimplementation.org/sirc-projects/sirc-measures-project/

- Grid-Enabled Measures developed by the National Cancer Institute
  - http://cancercontrol.cancer.gov/brp/gem.html

Key constructs

IMPLEMENTATION STRATEGIES

Implementation *Strategies*

……the '**how to**' component of changing healthcare practice.

…….*Key*:

How to make the "right thing to do"

the "easy thing to do…Carolyn Clancy

Implementation Strategies: Definition

Systematic intervention process to adopt and integrate evidence-based healthcare innovations into usual care *

Active ingredient in processes for moving EST's and QI's into usual care

*Powell, McMillen, Proctor et al., Medical Care Research and Review, 2012

Implementation Strategies: Complexity*

Discrete

- involve one process or action, such as “meetings,” “reminders”

Multifaceted**

- uses two or more discrete strategies, such as “training + technical assistance”

Blended

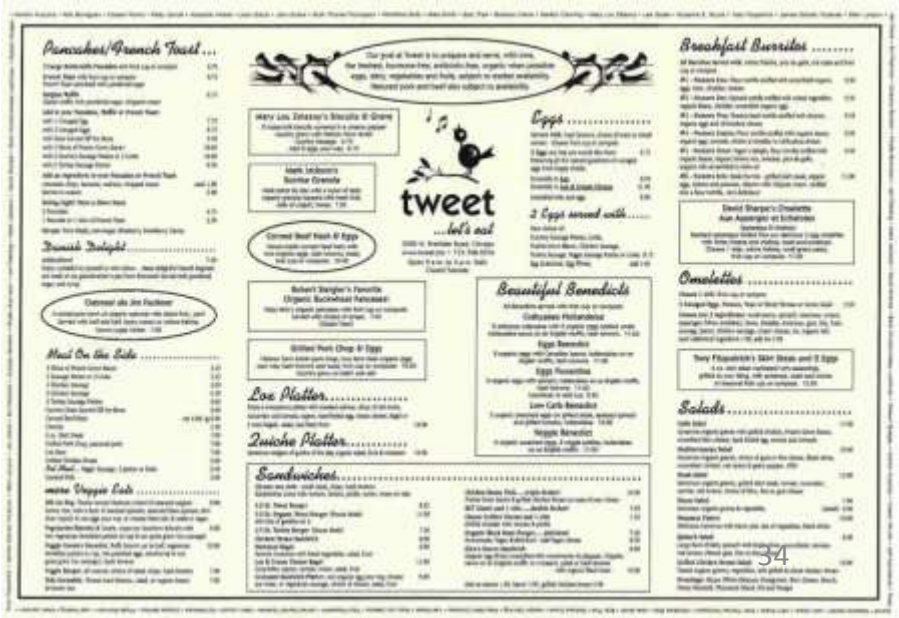
- several discrete strategies are interwoven & packaged as protocolized or branded strategies, such as “ARC,” IHI Framework fro Spread”

*Powell, McMillen, Proctor et al., 2012

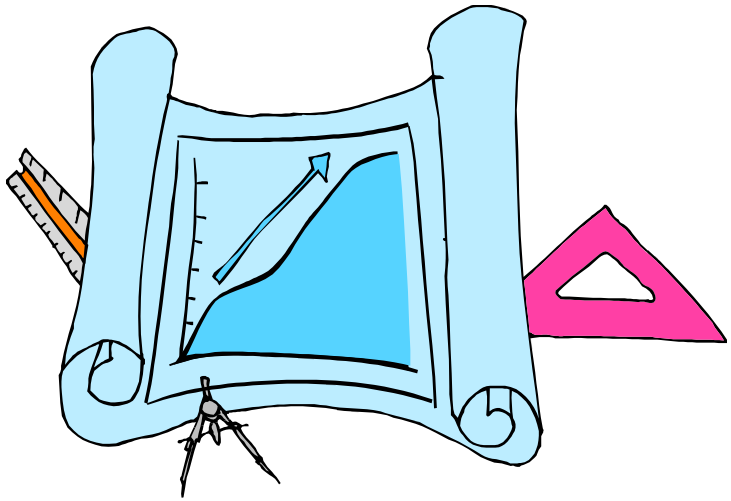
** Grimshaw et al., 2001, Grol & Grimshaw, 2003

A Compilation or “menu”
68 strategies grouped by six key processes*

*Powell, McMillen, Proctor et al., Medical Care Research and Review, 2012



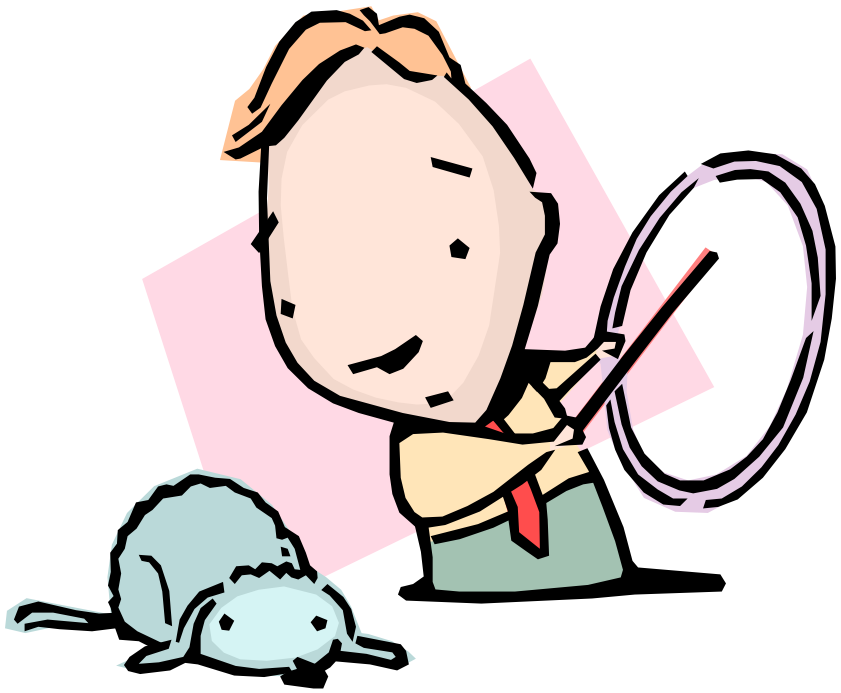
Plan Strategies



- Gather information
- Select strategies
- Build buy-in
- Initiate leadership
- Develop relationships

Educate Strategies

- Develop materials
- Provider training
- Inform and influence stakeholders



Restructure strategies

- Revise roles
- Create new teams
- Change sites
- Change record systems
- Structure communication protocols

Finance Strategies

- Modify incentives for clinicians, consumers, reduce disincentives
- Facilitate financial support: place on formularies

Quality Management Strategies

- Audit and provide feedback
- Clinician reminders
- Develop T.A. systems
- Conduct cyclical small tests of change
- Checklists

Policy Strategies

Licensure

Accreditation

Certification

Liability

Strategies: What do we know?

- Passive dissemination is ineffective
  - E.g. publishing articles, issuing a memo, “edict”
- Training is most frequently used strategy
- Multi-component, multilevel are more effective

Implementation Strategies: Specification & reporting*

Implementation strategies carry same demands as interventions

- Operational definitions
- Protocols & manuals
- Fidelity

Define strategies conceptually, operationally

Proctor *et al. Implementation Science* 2013, **8**:139
http://www.implementationscience.com/content/8/1/139

IMPLEMENTATION SCIENCE

DEBATE **Open Access**

Implementation strategies: recommendations for specifying and reporting

Enola K Proctor[1*], Byron J Powell[1] and J Curtis McMillen[2]

Selecting Implementation Strategies

Implementation strategies should be:

- Theory-based presented with a logic model
- Multi-faceted and multi-level *if appropriate*
- Robust *or* readily adaptable
- Feasible and acceptable to key stakeholders
- Compelling, saleable, trialable, observable
- Sustainable, cost effective
- Scalable

… in practice (evidence) or in principle (potential)

Mittman, 2010, 2012

Data

SOURCES

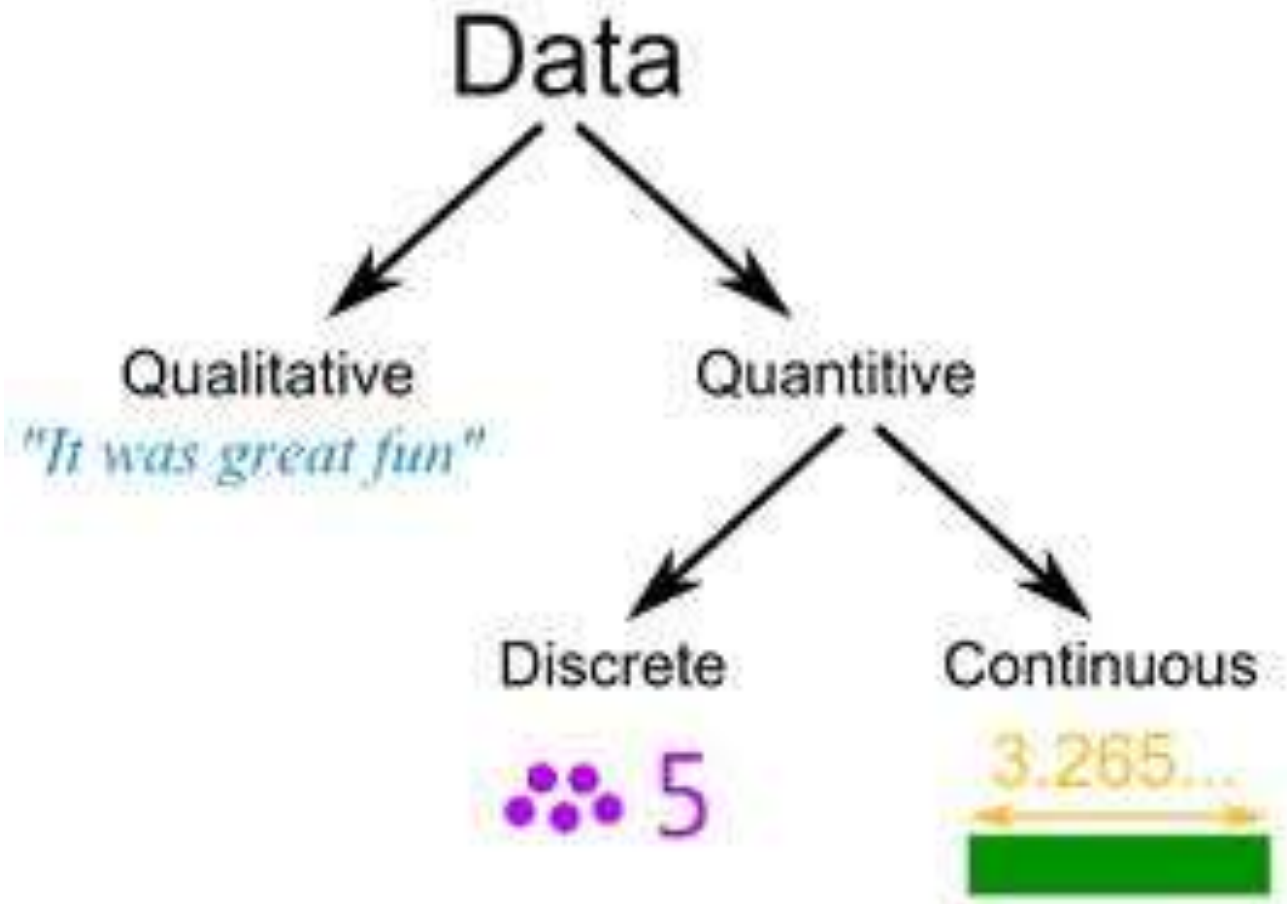
TYPES

Data sources

Implementation participants		How?
Administrators Supervisors Front line providers Support staff Service users		Surveys Key informant interviews Focus groups Group model building Checklists

Data sources

What		How?
Implementation processes		Ethnographic observation
Implementation footprint/ impact		Document review Charts, records Board notes Budget line items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"It was great fun"
Quantitive
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Disclosure: Enola Proctor

Shanti K. Khinduka Distinguished Professor of Social Work

Funding sources

- National Institute of Mental Health. R25 MH080916: Implementation Research Institute (Proctor, PI)
- National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) P30 DK092950 Center for Diabetes Translational Research (Haire-Joshu, PI)
- National Cancer Institute (U54 CA155496) (Transdisciplinary Research on Energetics and Cancer (TREC) Centers (Colditz PI).
- National Center for Advancing Translational Science (NCATS) UL1 RR024992 (Clinical and Translational Science Award, CTSA), Evanoff PI
- Washington University
  - Institute for Public Health
  - Brown School of Social Work

Conflicts: none

Questions…

….????????

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