



Center for Mental Health Services Research

GEORGE WARREN BROWN
SCHOOL OF SOCIAL WORK

 Washington University in St. Louis

Conceptual Models for Implementation Research

2nd Annual NIH Conference on the
Science of Dissemination and Implementation
January 28, 2009



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Panel purpose:

***Advance development of conceptual models for
implementation research***



Moving forward: 2007 NIH D&I meeting call for model development

- Grimshaw:
 - We have 30+ definitions of D & I
 - We need broad theory, and fewer theories
- Chambers call:
 - [advance theoretical models](#)
 - methods
 - and outcome measures



Features of conceptual models

- Consistent language
- Clearly defined constructs for which measures can be located or developed
- Analytic model hypothesizing links between measured constructs



Panel: Models guiding the work of Implementation Research centers

- VA Center for Implementation Research and Improvement Science, Brian Mittman
- Developing Center in Children's Mental Health, NY State Office of Mental Health, Kimberly Hoagwood
- Center for Mental Health Services Research, Washington University in St. Louis, Enola Proctor



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Models guiding the work of Implementation Research Centers



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Conceptualizing Implementation Research in Public Social Services:

Enola Proctor

Center for Mental Health Services Research
George Warren Brown School of Social Work
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Our work: Improving quality of MH care in public social services

High rates of need for mental health care

Poor quality of mental health care

- Low rates of detecting mental disorder (little use of standardized assessment tools)
- Over- and under medication;
- Low access to primary medical care and specialty mental health care



Our work: Improving quality of care in public social services (cont'd)

**Work is with, but not in, Specialty MH Care
Yet high potential to improve MH care**

- System serves primary care functions
- Workforce with some mental health training
- Staff eager to learn about, or already know about, evidence-based mental health treatments
- Don't know how to implement



Theoretically informed: Implementation conceptualized as:

Innovation (Rogers)

Multi-level change (Shortell)

Influenced by context: organizational (culture, climate, Glisson), policy, resource, human capital

Explicit change

Conceptualized as a form of intervention

Inherently dynamic process



Challenges for Implementation Science

Informing choice of implementation strategy
Menu of options from national studies

Multiple levels of analysis
policy, organizational, medical team, practice

Multiple stakeholders
payers, administrators, patients, providers, families

Design challenges in testing effects of practice change
small “n;” randomization, contamination

Selecting and measuring implementation outcomes



Our heuristic conceptual model draws on:

NCI's "stage" pipeline model

Shortell's multi-level model of change for performance improvement

Health services model distinctions between:

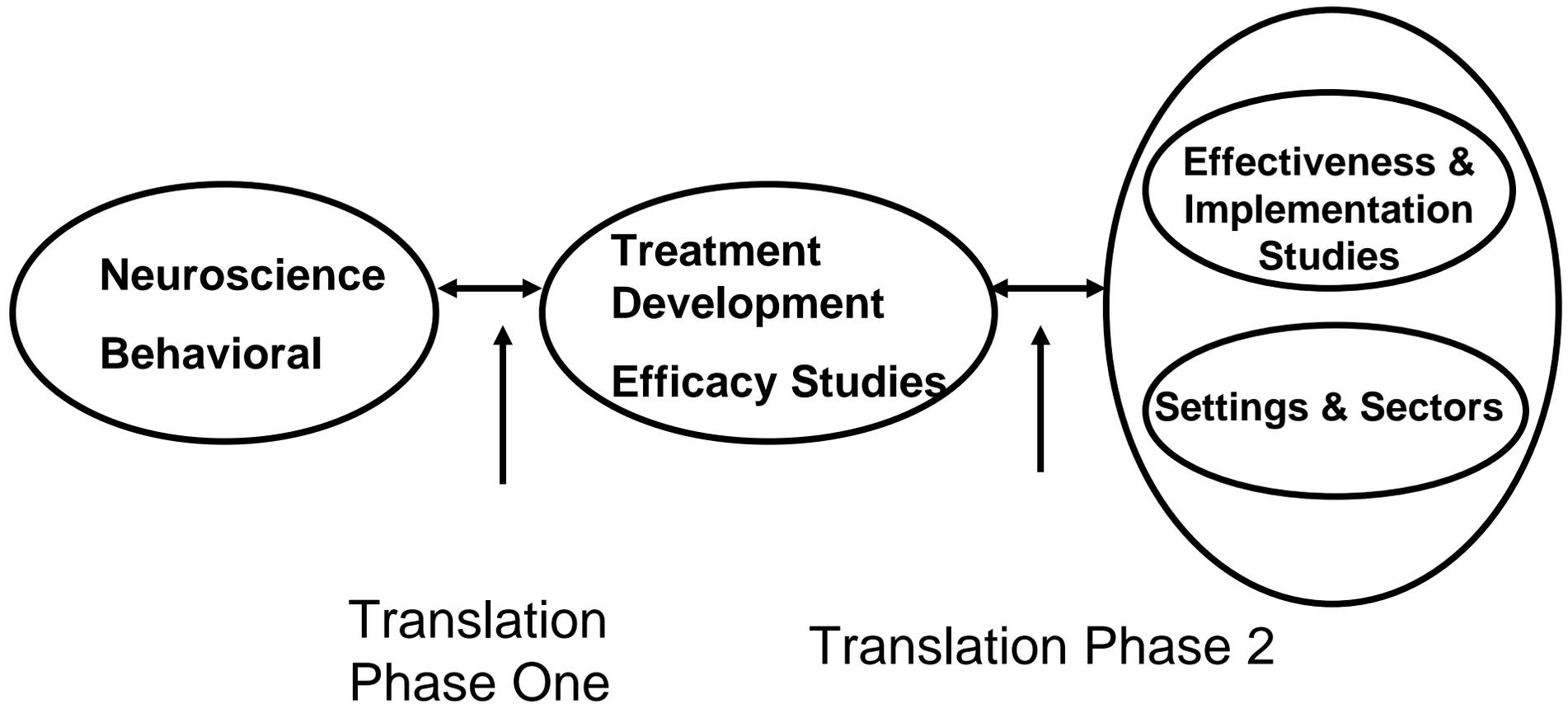
structure

process

outcomes



Translational research: one pipeline model





Phase Model with Top Down Processes

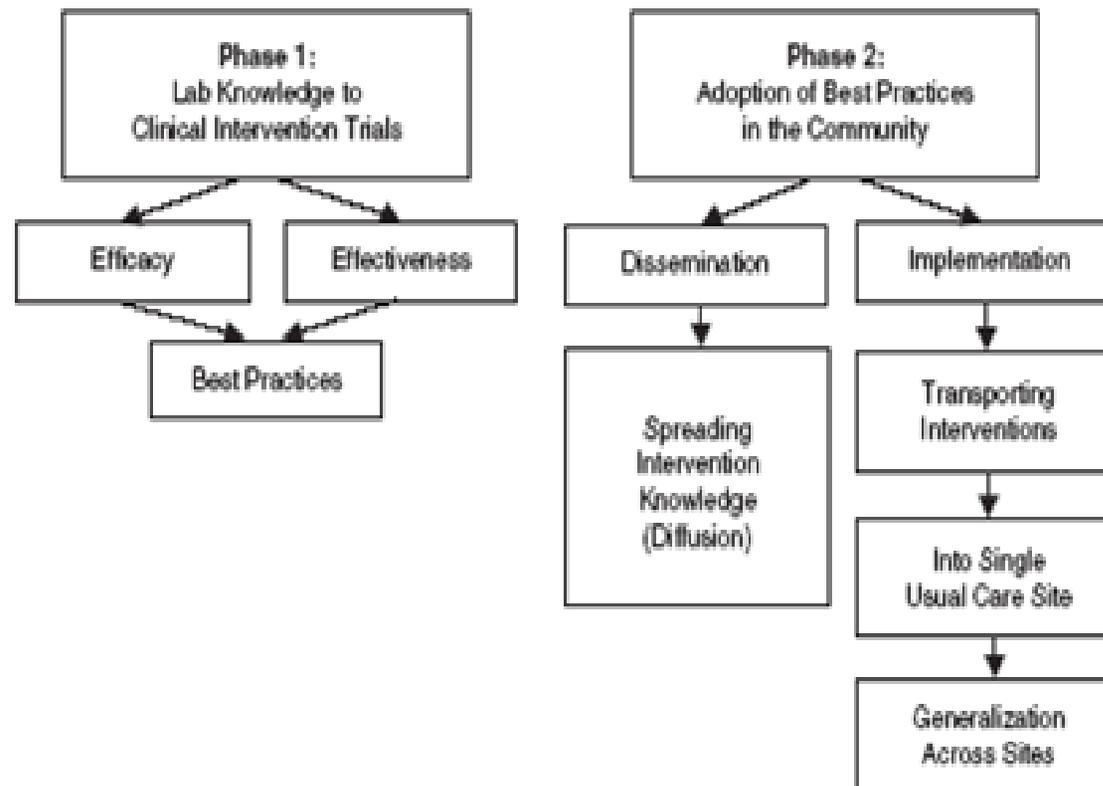
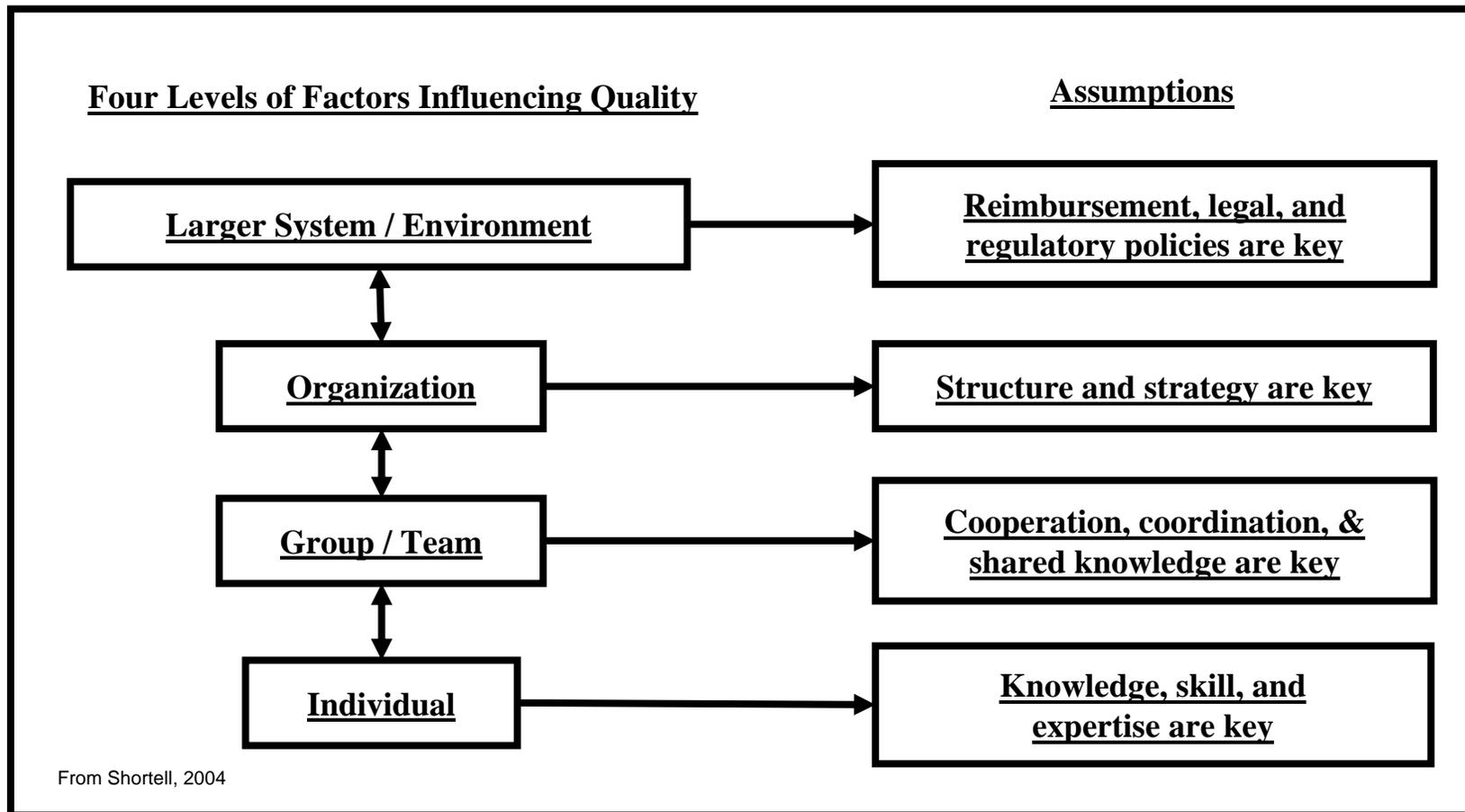


Figure 1. Conceptual Model for Translational Research (Brekke, 2007)



Implementation as a Four Level Problem





Limitations of extant conceptual models

Pipeline models:

- Underscore distinctiveness of types of T research
- Posit implementation as “last stage,” afterthought

Top down models:

- Distinguish research tasks, terminology
- Unsustainable, don't engage stakeholders, don't capture multiple levels

Fail to specify variables for manipulation

- Point to “where,” not “what”

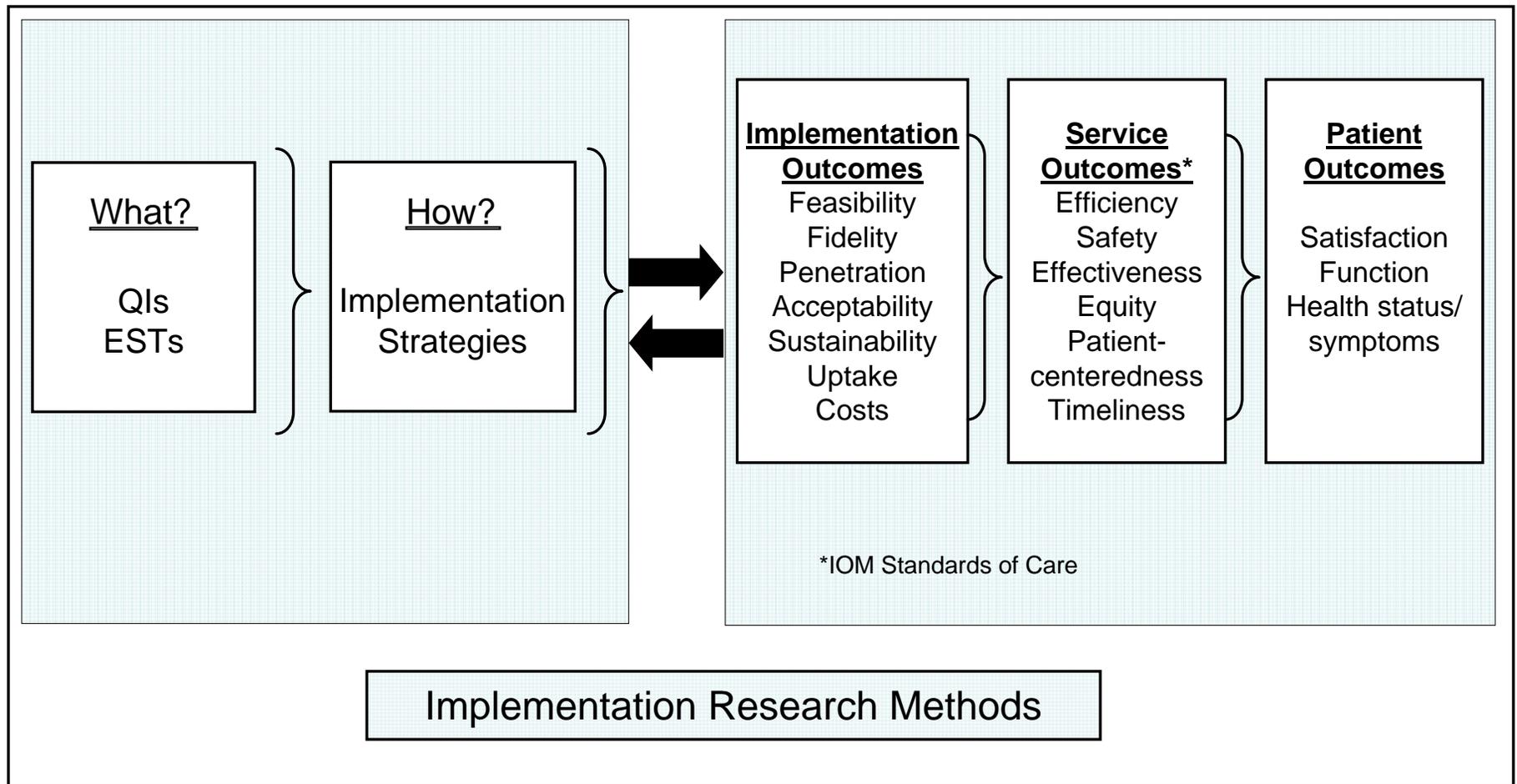


Implementation

- Active process of moving new treatments into care: requires *strategies*
- Outcome = change in real-world care



Conceptual Model for Implementation Research





Value-added of conceptual model

- Distinguishes processes and outcomes
- Two process technologies:
 - EST's
 - Implementation strategies
- Outcome distinctions
 - Implementation outcomes versus service & client outcomes
 - Types of implementation outcomes



Need: Model-guided research

- To determine effective implementation mechanisms (NIMH Road Ahead Report)
 - *Thus models must specify mechanisms, processes, outcomes*
- To test implementation in varied service settings:
 - Specialty mental health
 - Primary care
 - Criminal justice
 - Schools
 - Social Services



Emerging understanding of implementation as distinct process

Success of implementing EST's varies widely
Implementation challenges vary by
intervention (Isett et al., 2007)

Yet current knowledge of implementation
processes largely theoretical

- Rogers model: how does D & I take place, based on a synthesis of many case studies



Questions for empirical testing

Relationships between EST's and
Implementation strategies:

Are implementation strategies effective across
different EST's?

Core components of implementation strategies

Relationships among outcomes

Among implementation outcomes

Between IO's, service outcomes, client outcomes

Generalizability of models across settings



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