



# A Public Sector Implementation Model to Guide Theory and Process

Gregory A. Aarons, Ph.D.  
University of California, San Diego  
Department of Psychiatry

Presented at the Enhancing Implementation Science in VA  
2011 Conference . September 15-16, 2011. Phoenix, AZ

# Roadmap

- Where do theories and frameworks come from?
- Are there multiple frameworks?
- What are theories and frameworks good for?
  - Theories – moving the science
  - Frameworks – moving for implementation
- The Public Sector Implementation Model
- Applications to adaptation and implementation efficiency

Ultimately we want EBTs to be  
accepted and implemented



# Where do Theories and Frameworks Come From?

- Management Science
- Organizational development
- Organizational psychology
- Business Quality Improvement
- Health Care Quality Improvement
- Public health
- Population health
- Education
- Ethnography
- Case study (e.g., HBR)
- Informatics
- Economics
- Engineering/Systems Dynamics

# Why Frameworks?



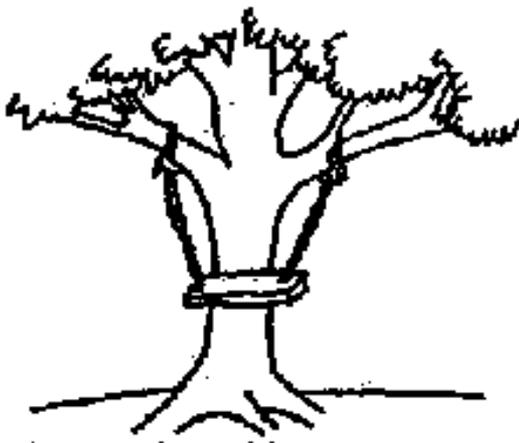
As proposed by the project sponsor.



As specified in the project request.



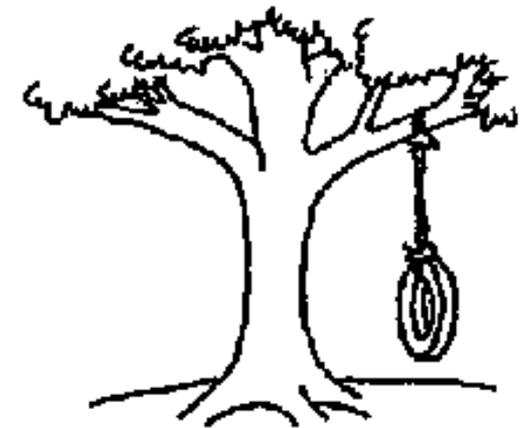
As designed by the senior analyst.



As produced by the programmers.



As installed at the user's site.

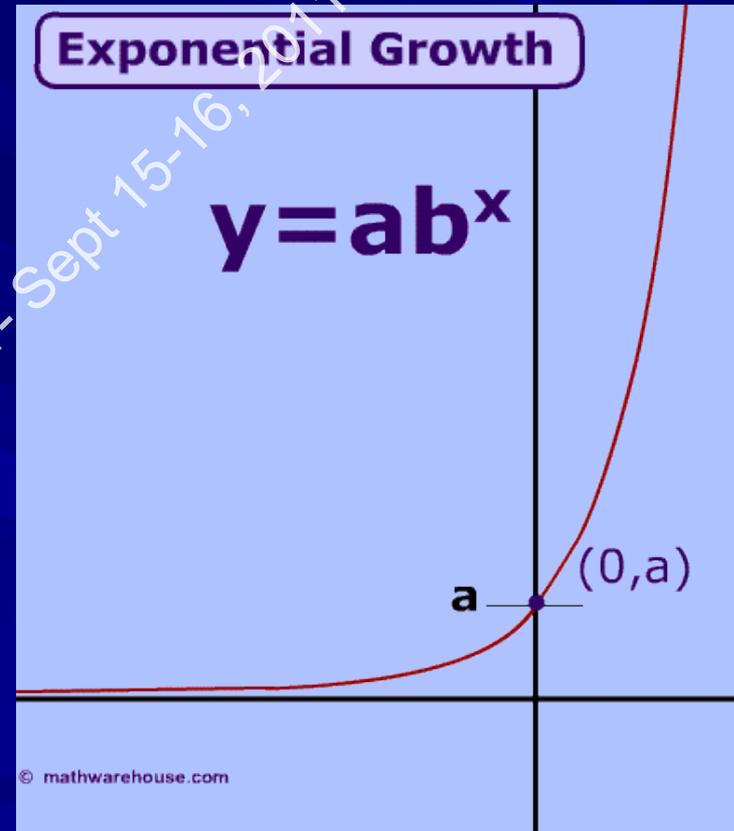


What the user wanted.

To (hopefully) create effective implementation

# Are There Multiple Frameworks?

- YES – and they seem to be multiplying....



## CONTEXT

## ADDITIONAL FILE 2: Matrix of Constructs from Models in the Literature to CFIR Constructs

Damschroder LJ, Aron DC, Keith RE, Kirsh SR, Alexander JA, Lowery JC: Fostering implementation of health services research findings into practice: A consolidated framework for advancing implementation science

See Table 1 in main paper for full citations:

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
	Owenagh et al. <sup>13</sup>	Klein, Conn & Sorensen <sup>14,15</sup>	Hofinger & Whipple <sup>16</sup>	Leaman <sup>17</sup>	PARISH Model <sup>18,19</sup>	Others Model <sup>20</sup>	Slingson <sup>21</sup>	Kochhar & Yano <sup>22</sup>	Seifer <sup>23</sup>	Edmondson et al. <sup>24</sup>	Kilbourne et al. <sup>25</sup>	VanDeusen Luban et al. <sup>26</sup>	Geel et al. <sup>27</sup>	Syrdal et al. <sup>28</sup>	Flanagan et al. <sup>29</sup>	Bouchard et al. <sup>30</sup>	Gilman et al. <sup>31</sup>	Fredstein & Glasgow <sup>32</sup>	Frankfort & Schillweert <sup>33</sup>
Code	Topic/Description																		
<b>I. INTERVENTION CHARACTERISTICS</b>																			
A	Intervention Source																		
B	Evidence Strength & Quality																		
C	Relative advantage																		
D	Adaptability																		
E	Triability																		
F	Complexity																		
G	Design Quality and Packaging																		
H	Cost																		
<b>II. OUTER SETTING</b>																			
A	Patient Needs & Resources																		
B	Cosmopolitanism																		
C	Peer Pressure																		
D	External Policies & Incentives																		
<b>III. INNER SETTING</b>																			
A	Structural Characteristics																		
B	Networks & Communications																		
C	Culture																		
D	Implementation Climate																		
1	Tension for Change																		
2	Competibility																		
3	Relative Priority																		
4	Organizational Incentives & Rewards																		
5	Goals and Feedback																		
6	Learning Climate																		
D	Readiness for Implementation																		
1	Leadership Engagement																		
2	Available Resources																		
3	Access to knowledge and information																		
<b>IV. CHARACTERISTICS OF INDIVIDUALS</b>																			
A	Knowledge & Beliefs about the Intervention																		
B	Self-Efficacy																		
C	Individual Stage of Change																		
D	Individual Identification with Organization																		
E	Other Personal Attributes																		
<b>V. PROCESS</b>																			
A	Planning																		
B	Engaging																		
1	Opinion Leaders																		
2	Formally appointed internal implementation leaders																		
3	Champions																		
4	External Change Agents																		
C	Executing																		
D	Reflecting & Evaluating																		

# Why Theories and Frameworks?

## ■ Theories

- Moving the science
- Developing hypotheses
- Testing hypotheses

## ■ Frameworks

- Thinking about implementation process
- Thinking about structural requirements for implementation
- Planning for implementation
- Guiding implementation

- Helps us to consider multiple determinants of implementation

©PRS - US 2017 - Sept 15-16, 2017

# Ways to Think about Implementation

- Phases

- Levels

- Structures

- Process

- Interactions

CIPRS - EIS 2011 - Sept 15-16, 2011

# Why Phases?

- Characterizes process of implementation
- Develops a way to think about what supports are needed during the implementation process

CIPRS - EIS 2011 - Sept 15-16, 2017

# Why Consider Multiple Levels?

## ■ System

- Policies (do policies support EBP readiness?)
- Collaboration (is collaboration required, if so does it exist?)
- Funding mechanisms and allocations
- Contracting – is it consistent with EBP (e.g., reimbursement)?

## ■ Organization

- Relationships within and between organizations may be critical
- Organizational climate/culture (Glisson, 2002)
- Implementation climate – (Klein & Sorra, 1996)
- Adoption decision under risk (Panzano & Roth, 2006)

## ■ Individual

- Impact of provider characteristics on implementation effectiveness and outcomes
  - Demographics, Job Tenure, Personality
  - Service provider readiness/openness to EBP (Aarons, 2004,2005)

## ■ Interaction

- Multi-directional influences of system, organization, and person
- Org type, adoption stage, type of innovation Damanpour (1991)

# Public Sector Implementation Model

- Key phases of the implementation process
- Multilevel
- Frames implementation issues across levels within each phase
- Emphasizes critical concerns for each phase
- Enumerates common issues across phases

# Public Sector Implementation Model

## Phases

- Exploration
  - Consideration of EBP implementation
- Adoption Decision/Planning
  - Once decision is made → planning begins
- Active Implementation
  - Involves implementation activities and problem solving
- Sustainment
  - Factors that promote continued use of a new practice

# Public Sector Implementation Model Outer Context

## ■ System Level

- Host Service System
- Structures
- Processes
- Structures and processes within the host service system
  - leadership, policies, funding, infrastructure, regulation
  - Child Welfare
  - Mental Health
  - Alcohol/Drug

## EXPLORATION

### OUTER CONTEXT

Sociopolitical Context  
Legislation  
Policies  
Monitoring and review  
Funding  
Service grants  
Research grants  
Foundation grants  
Continuity of funding  
Client Advocacy  
Consumer organizations  
Interorganizational networks  
Direct networking  
Indirect networking  
Professional organizations  
Clearinghouses  
Technical assistance centers

### INNER CONTEXT

Organizational characteristics  
Absorptive capacity  
Knowledge/skills  
Readiness for change  
Receptive context  
Culture  
Climate  
Leadership  
Individual adopter characteristics  
Values  
Goals  
Social Networks  
Perceived need for change

## ADOPTION DECISION / PREPARATION

### OUTER CONTEXT

Sociopolitical  
Federal legislation  
Local enactment  
Definitions of "evidence"  
Funding  
Support tied to federal and state policies  
Client advocacy  
National advocacy  
Class action lawsuits  
Interorganizational networks  
Organizational linkages  
Leadership ties  
Information transmission  
Formal  
Informal

### INNER CONTEXT

Organizational characteristics  
Size  
Role specialization  
Knowledge/skills/expertise  
Values  
Leadership  
Culture embedding  
Championing adoption

## ACTIVE IMPLEMENTATION

### OUTER CONTEXT

Sociopolitical  
Legislative priorities  
Administrative costs  
Funding  
Training  
Sustained fiscal support  
Contracting arrangements  
Community-based organizations.  
Interorganizational networks  
Professional associations  
Cross-sector  
Contractor associations  
Information sharing  
Cross discipline translation  
Intervention developers  
Engagement in implementation  
Leadership  
Cross level congruence  
Effective leadership practices

### INNER CONTEXT

Organizational Characteristics  
Structure  
Priorities/goals  
Readiness for change  
Receptive context  
Culture/climate  
Innovation-values fit  
EBP structural fit  
EBP ideological fit  
Individual adopter characteristics  
Demographics  
Adaptability  
Attitudes toward EBP

## SUSTAINMENT

### OUTER CONTEXT

Sociopolitical  
Leadership  
Policies  
Federal initiatives  
State initiatives  
Local service system  
Consent decrees  
Funding  
Fit with existing service funds  
Cost absorptive capacity  
Workforce stability impacts  
Public-academic collaboration  
Ongoing positive relationships  
Valuing multiple perspectives

### INNER CONTEXT

Organizational characteristics  
Leadership  
Embedded EBP culture  
Critical mass of EBP provision  
Social network support  
Fidelity monitoring/support  
EBP Role clarity  
Fidelity support system  
Supportive coaching  
Staffing  
Staff selection criteria  
Validated selection procedures

# Exploration Phase

## OUTER CONTEXT

### Sociopolitical Context

Legislation

Policies

Monitoring and review

### Funding

Service grants

Research grants

Foundation grants

Continuity of funding

### Client Advocacy

Consumer organizations

### Interorganizational networks

Direct networking

Indirect networking

Professional organizations

Clearinghouses

Technical assistance centers

## INNER CONTEXT

### Organizational characteristics

Absorptive capacity

Knowledge/skills

Readiness for change

Receptive context

Culture

Climate

Leadership

### Individual adopter characteristics

Values

Goals

Social Networks

Perceived need for change

# Adoption Decision / Planning

## OUTER CONTEXT

### Sociopolitical

Federal legislation

Local enactment

Definitions of “evidence”

### Funding

Support tied to federal and state policies

### Client advocacy

National advocacy

Class action lawsuits

### Interorganizational networks

Organizational linkages

Leadership ties

Information transmission

Formal

Informal

## INNER CONTEXT

### Organizational characteristics

Size

Role specialization

Knowledge/skills/expertise

Values

### Leadership

Culture embedding

Championing adoption

# Active Implementation Phase

## OUTER CONTEXT

### Sociopolitical

- Legislative priorities
- Administrative costs

### Funding

- Training
- Sustained fiscal support
- Contracting arrangements
- Community based organizations.

### Interorganizational networks

- Professional associations
- Cross-sector
- Contractor associations
- Information sharing
- Cross discipline translation

### Intervention developers

- Engagement in implementation

### Leadership

- Cross level congruence
- Effective leadership practices

## INNER CONTEXT

### Organizational Characteristics

- Structure
- Priorities/goals
- Readiness for change
- Receptive context
- Culture/climate

### Innovation-values fit

- EBP structural fit
- EBP ideological fit

### Individual adopter characteristics

- Demographics
- Adaptability
- Attitudes toward EBP

# Sustainment Phase

## OUTER CONTEXT

### **Sociopolitical**

**Leadership**

**Policies**

**Federal initiatives**

**State initiatives**

**Local service system**

**Consent decrees**

### **Funding**

**Fit with existing service funds**

**Cost absorptive capacity**

**Workforce stability impacts**

### **Public-academic collaboration**

**Ongoing positive relationships**

**Valuing multiple perspectives**

## INNER CONTEXT

### **Organizational characteristics**

**Leadership**

**Embedded EBP culture**

**Critical mass of EBP provision**

**Social network support**

### **Fidelity monitoring/support**

**EBP Role clarity**

**Fidelity support system**

**Supportive coaching**

### **Staffing**

**Staff selection criteria**

**Validated selection procedures**

# Where to from Here?

- Many theories and frameworks but we need rigorous testing
  - and we aren't there...
- Ways to accelerate the implementation process
- Ways to adapt and develop system and organization deficits
- Tools to measure the constructs and success of our implementation frameworks

CIRRS EIS 2017 - Sept 15-16, 2017

# How to Facilitate Implementation

- Need for process models of implementation
- Consider multiple levels
- Applicable across phases
- Adaptation of EBT
- Adaptation of system level factors
- Adaptation at organization level factors

CIPRS - EIS 2011 - Sept 15-16, 2011

# Is Implementation a Marathon or Sprint?



CIPRS - EIS 2017, Sept 15-16, 2017



# Improving Efficiency of Implementation

- Multiple Stakeholders Consider:
  - What is needed at each phase
  - What is needed in outer context
  - What is needed in the inner context
- What are some strategies likely to accelerate the process:
  - Strong multi-level leadership
  - Structure for the Process
  - Set Timelines
  - Accountability for meeting goals
  - Continuous Strategic Planning
  - Continuous communications

CIPRS - EIS 2011 - Sept 15, 2016, 2017

# Contact

Gregory A. Aarons, Ph.D.  
Professor of Psychiatry  
University of California, San Diego  
School of Medicine  
9500 Gilman Drive (0812)  
La Jolla, CA 92123-0812

E-mail: [gaarons@ucsd.edu](mailto:gaarons@ucsd.edu)

Web: <http://psychiatry.ucsd.edu/faculty/gaarons.html>