




## Conceptual Frameworks for Implementation



RTC Conference, 2005

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## The Problem

- ★ Science to Service Gap
  - ▶ What is known is not what is adopted to help children, families, and adults
- ★ Implementation Gap
  - ▶ What is adopted is not used with fidelity and good effect
  - ▶ What is implemented disappears with time and staff turnover




## Method

- ★ Synthesis of the implementation evaluation literature (funded by W.T. Grant Foundation)
- ★ Retrieval Criteria
  - ▶ Search of nine electronic databases
  - ▶ Published in English 1970 - 2004
  - ▶ Implementation search terms in title or abstract (problem: no common language)
  - ▶ Empirical studies, meta-analyses, or literature reviews
  - ▶ Any domain (e.g., agriculture, business, child welfare, engineering, health, juvenile justice, manufacturing, medicine, mental health, nursing, and social services)




## Method

- ★ Full text reviews of 1,054 articles
- ★ After review, 743 articles remained in the database
- ★ 50% (377) designated as “significant” by the review team (empirical study, literature review, or relevant theory)



## What's Common Across Disciplines?


- ★ Human service treatment programs
- ★ Advanced manufacturing technologies
- ★ WHO TB treatment (DOTS)
- ★ Interstate bridge maintenance
- ★ Hotel service management
- ★ National franchise operations
- ★ Cancer prevention & treatment
- ★ Education innovations




## What's Common Across Disciplines?

At a conceptual level and at a general practice level, implementation processes are *independent of the content* of the practice or program being implemented


- ★ They have similar implementation problems
- ★ They have similar implementation solutions






## Results

- ★ Highlights from the literature
  - ▶ Conclusions
  - ▶ Tentative Conclusions
  - ▶ Research Agendas
- ★ Conceptual frameworks based on the literature
- ★ Monograph available in a few weeks (<http://nirn.fmhi.usf.edu>)




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## Conclusion

- ★ The usability of a program has little to do with the weight of the evidence regarding that program
  - ▶ Evidence on intervention effectiveness for specific populations helps us choose what to implement
  - ▶ Evidence on the effectiveness of the intervention does not help implement the program or practice successfully




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## Conclusion

Effective *intervention* practices  
**PLUS**  
Effective *implementation* practices  
**EQUALS**  
Good outcomes for consumers



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## Implementation

“The investment in developing structures to ensure gold standard research evidence has yet to be matched by equal investment in ways of elucidating how organisations change cultures or use different techniques to manage the change process.”

(Kitson, Harvey, & McCormack, 1998)



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## Implementation

### Good News and Bad News


**Bad News:** 99% of the NIH research budget is devoted to understanding etiologies and developing effective therapies

About 1% is devoted to learning how to implement those therapies effectively with consumers


Pronovost, Rinke, Emery, Dennison, Blackledge, & Berenholtz (2004)

**Good News:** That ratio is up from one-fourth of 1% in 1977

Brown & Flynn, (2002)




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## Clear Conclusion

- ★ There is very little experimental evidence regarding implementation
  - ▶ We found 22 randomized group designs or within subject designs or meta-analyses & 377 “significant studies”
  - ▶ Ellis, Robinson, Ciliska, Armour, Raina, Brouwers, et al. (2003) found 31 experimental studies (cancer prevention)
  - ▶ Greenhalgh, Robert, MacFarlane, Bate, & Kyriakidou (2004) found 213 “empirical studies” (health literature)




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## Clear Conclusion

- ▶ Excellent experimental evidence for what does *not* work
  - ▶ Dissemination of information by itself does not lead to successful implementation (research literature, mailings, promulgation of practice guidelines)
  - ▶ Training alone, no matter how well done, does not lead to successful implementation

These have been two of the most widely used strategies in human services, education, health, business, and manufacturing.




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## Tentative Conclusions

- ▶ Successful implementation requires a purveyor -
  - ▶ An individual or group of individuals representing a program or practice who actively work with local individuals & groups to implement that practice or program with fidelity and good effect
  - ▶ Who can accumulate experiential knowledge and data and become more effective and efficient over time




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## Tentative Conclusions

1. Stages of implementation
2. Vertical integration of practitioners, organizations, and systems
3. Horizontal integration of implementation drivers
4. Implementation components are transactional & compensatory




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## Stages of Implementation

Implementation occurs in stages:

- ▶ Exploration
- ▶ Installation
- ▶ Initial Implementation
- ▶ Full Implementation
- ▶ Innovation
- ▶ Sustainability




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## Stages of Implementation

- ▶ Exploration
  - ▶ Awareness, preplanning, initiation (stakeholders, leaders, champions)
  - ▶ Community-Purveyor information exchange, mutual assessment
  - ▶ Perceived risk, ability to manage risk
- ▶ Installation
  - ▶ Structural and instrumental changes (hire/redeploy staff, cell phones, HR policies, funding and referrals, space)
  - ▶ Resources consumed but no consumers seen (start up may add 10-20% to first year costs)




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## Stages of Implementation

- ▶ Initial Implementation
  - ▶ Change practices, provide services
  - ▶ Put components in place, change organizational structures & culture, manage change process, overcome fear & inertia
- ▶ Full Implementation
  - ▶ Components integrated, fully functioning
  - ▶ New implementation site ready to be evaluated re: consumer outcomes




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## Stages of Implementation

- **Innovation**
  - First do it right (high fidelity)
  - Then do it differently (evaluate changes, improvement/drift)
- **Sustainability**
  - Starts during exploration, never stops
  - Information and trust, good outcomes, expanding support base during all stages
  - Ability to retain *function* while changing *form* given turnover, changing needs and context




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## Stages of Implementation: Research Findings

(Panzano, Seffrin, Chaney-Jones, Roth, Crane-Ross, Massatti, et al, in press).

- Top management support and access to dedicated resources during the **exploration stage** were important to the adoption decision but were not related to later implementation outcomes.
- Top management support and access to dedicated resources during the **initial implementation stage** were directly related to implementation outcomes.
- Access to technical assistance during the **exploration stage** was related to 3 of the 7 later implementation outcomes
- Access to technical assistance during the **initial implementation stage** was related to all 7 implementation outcomes




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## Stages of Implementation: Research Findings

(Panzano, Seffrin, Chaney-Jones, Roth, Crane-Ross, Massatti, et al, in press).

- Implementation seems to require a sustained effort in order to produce desired outcomes at each stage



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## Work of Implementation

- Changing the behavior of adult human service professionals
- Changing organizational structures, cultures, and climates
- Changing the thinking of system directors and policy makers

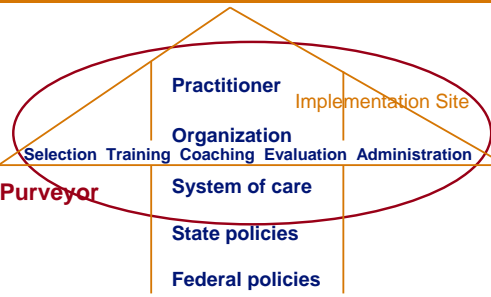

**Successful and sustainable implementation of evidence-based practices and programs always requires organizational change.**




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## Vertical and Horizontal Integration


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## Vertical Integration

- Practitioner
- Organization
- System of care
- State policies
- Federal policies

**New Freedom Commission**  
**System Transformation**




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## Vertical Integration

- Practitioner
- Organization
- System of care
- State policies
- Federal policies

Facilitate    Hinder


Active alignment of policies and coordination of efforts in support of practitioner's use of effective practices to benefit consumers



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## Vertical Integration

- No matter how good the program may be, if national policy changes and certain services are no longer funded, those services will disappear (e.g., nearly all of the "great society" programs ended when Reagan became president)
- Without hospitable leadership and organizational structures, core components cannot be installed and maintained
- Without adequate pay, skillful evidence-based practitioners will be hard to find and keep and programs will falter



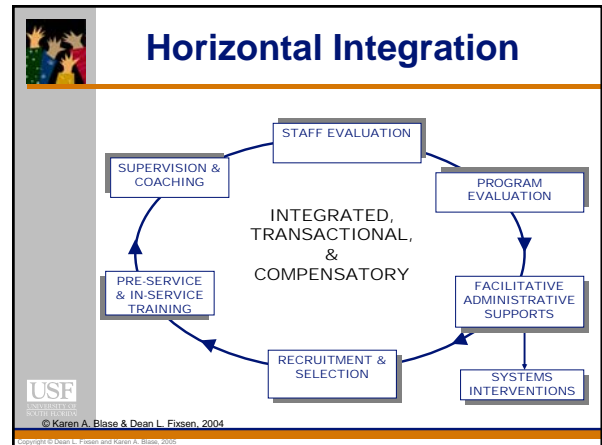
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## Vertical Integration

- "Systems trump programs."  
(Patrick McCarthy, Annie E. Casey Foundation)
- Organizations exist in a shifting ecology of community, state, and federal social, economic, cultural, political, and policy environments that variously and simultaneously enable and impede implementation and program operation efforts




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## Horizontal Integration

- Practitioner selection (little data)
  - Experience, GPA, "fit"
  - Behavior rehearsal (judgment, style, ability to learn)
- Practitioner training (substantial data)
  - Practice knowledge, demonstrations of skills, practice to criterion
- Practitioner coaching (little data)
  - Prompts to use skills, craft knowledge, judgment, form/function




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## Horizontal Integration

TRAINING COMPONENTS	OUTCOMES		
	Knowledge	Skill Demonstration	Use in the Classroom
Theory and Discussion	10%	5%	0%
...+ Demonstration in Training	30%	20%	0%
...+ Practice & Feedback in Training	60%	60%	5%
...+ Coaching in Clinical Setting	95%	95%	95%

— Joyce and Showers, 1995



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## Horizontal Integration

- Practitioner evaluation** (46% integrated, 54% research)
  - Context (more data):** staffing, practitioner ratios, supervisory ratios, location of service, completion of training
  - Compliance (more data):** use of core intervention components prescribed by the evidence-based program
  - Competence (little data):** level of skill shown by the therapist in using the core intervention components while delivering treatment to a consumer (e.g., appropriate responses to context, sensitivity of timing, recognizing and acting on opportunities to intervene)

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## Horizontal Integration

- Program evaluation (little data)**
  - Advice: Continue to monitor consumer outcomes
- Facilitative administration (little data)**
  - Advice: Desired practices are the focus of the organization
- Systems intervention (little data)**
  - Advice: Active, ongoing work needed to keep systems lined up to support the desired practices

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## Horizontal Integration

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## Integrated -Transactional - Compensatory

- Integration ensures that values, knowledge and skills are consistent as the implementation drivers are applied
- Transactional (interactive) effects of vertical and horizontal implementation components
- Weakness in one component can be compensated for by strength in another

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## Integrated -Transactional - Compensatory

- Leaders create opportunities
- Coaching actuates workshop training
- High fidelity is associated with better consumer outcomes across many programs and methods of data collection
- Practitioner fidelity outcomes are used to inform coaching, training, and administrative decision-making as well as systems interventions


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## Vertical and Horizontal Integration

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## Implementation Research - Prerequisites

The ultimate effectiveness and efficiency of implementation may depend upon well-defined core *intervention* components

- ▶ What *intervention processes* have to be implemented more precisely to achieve the desired benefits for consumers
- ▶ What *processes* may be more adaptable to local needs and conditions



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## Implementation Research

- ▶ Need evidence for cross-program, multi-site effectiveness of implementation strategies at the practitioner, organization, and systems levels
- ▶ Need a community of practice for purveyors of evidence-based practices and programs



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## More Implementation Research

- ▶ Need evidence for methods of organizational development and change management processes
- ▶ Need evidence for how to impact larger systems
- ▶ Need evidence-based strategies for creating “buy-in”
- ▶ Need an evidence base for effective matching of implementation strategies with stages of implementation



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## More Implementation Research

- ▶ Need evidence for staff selection methods
- ▶ Need evidence for staff training methods
- ▶ Need evidence for staff coaching methods
- ▶ Need evidence for staff evaluation methods (performance & fidelity)



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## More Implementation Research

- ▶ Need evidence for methods to train trainers, coaches, evaluators, administrators
- ▶ Need evidence for methods to coach trainers, coaches, evaluators, administrators
- ▶ Need evidence for methods to evaluate trainers, coaches, evaluators, administrators




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## Thank You

- ▶ **Review Team Members:**
  - ▶ Beverly Crockett, Yvonne Frazier, Michael Haines, and Ardis Hanson
- ▶ **Expert Reviewers:**
  - ▶ Jonathan Baron, Barbara Burns, William Carter, Patrick Canary, Robert Paulson, Sonja Schoenwald, and Phillip Strain




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## Thank You

We thank the following organizations and agencies for recent and past support that made this presentation possible:

- ▶ W. T. Grant Foundation  
(implementation literature review grant)
- ▶ National Institute of Mental Health  
(research and training grants)
- ▶ Juvenile Justice and Delinquency Prevention  
(program development and evaluation grants)
- ▶ Substance Abuse and Mental Health Administration  
(ORC Macro sub-contract for SOC implementation analyses; implementation strategies grant)



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