



CANCER PREVENTION & RESEARCH  
INSTITUTE OF TEXAS

# Individual Investigator Research Awards for Prevention and Early Detection (IRRAP)

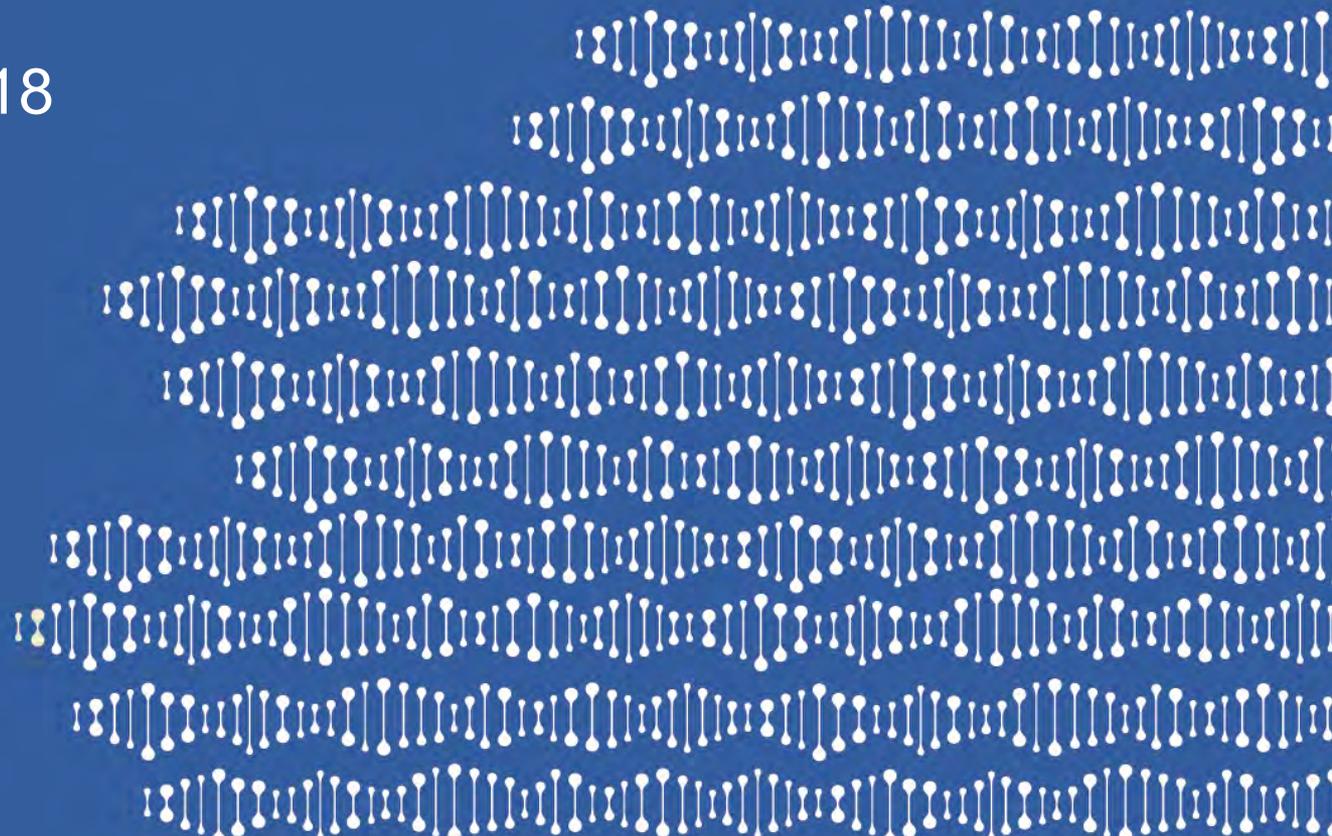
February 15, 2018

Presented By:

James Willson, M.D.

Ross Brownson, PhD

Becky Garcia, PhD



# Individual Investigator Research Awards for Prevention and Early Detection (IIRAP)

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## AGENDA

9:30 – 9:40

Welcome and high-level overview of new area of emphasis to the IIRAP RFA.  
(James Willson, M.D., Chief Scientific Officer)

9:40 – 10:15

High-level review of implementation research and examples. (Ross Brownson, PhD)

10:15 – 10:30

Q&A

Becky Garcia, PhD, Ross Brownson, PhD and James Willson, M.D.



# Individual Investigator Research Awards for Prevention and Early Detection (IIRAP)

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## Research Objectives:

- Innovative research projects addressing questions that will advance current knowledge of the causes, prevention, early-stage progression from normal to neoplastic cells, and/or the early detection of cancer.
- Research projects that propose to conduct implementation research designed to accelerate the adoption and deployment of sustainable, evidence-based cancer prevention and screening interventions at multiple levels and in different clinical and community settings are encouraged.



# Funding Information

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- Maximum of \$300,000 in total costs per year for up to 3 years for laboratory and clinical research and
- Up to \$500,000 in total costs per year for up to 3 years for population-based research, including implementation research designed to accelerate the adoption and deployment of sustainable, evidence-based cancer prevention and screening interventions at multiple levels and in different clinical and community settings.



# Key Dates - Cycles 19.1

Process	Timeline
RFA Posted	January 11, 2018
CPRIT Application Receipt System (CARS) Opens	March 7, 2018
CPRIT Application Receipt System (CARS) Closes	June 6, 2018
Peer Review	October 2018
Oversight Committee	February 2019



# Applying for an IIRAP Award

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- Go to <https://cpitgrants.org/> to view current RFAs
- Go to <https://cpitgrants.org/> to submit an application



# Contact Information

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Phone: 866-941-7146

Email: [Help@CPRITGrants.org](mailto:Help@CPRITGrants.org)

Monday through Friday, 8 a.m. to 6 p.m. CT



# Scientific and Programmatic Questions

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Phone: 512-305-8491

Email: [pmoore@cprit.texas.gov](mailto:pmoore@cprit.texas.gov)

Web: [www.cprit.state.tx.us](http://www.cprit.state.tx.us)



# ***What is implementation science?***

**CPRIT Webinar on Prevention and Early Detection Funding  
February 15, 2018**



Ross C. Brownson  
Washington University in St. Louis

Think of a common  
implementation problem  
in your field...

# Objectives

1. Describe the underpinnings of implementation science.
2. Begin to understand the differences between implementation science and other types of research.
3. Explore CPRIT-supported topics that are candidates for implementation science.
4. Describe resources for building your capacity in implementation science.

THE LATEST RESEARCH SHOWS THAT  
WE REALLY SHOULD DO SOMETHING  
WITH ALL THIS RESEARCH



*What's in a name?*

# NIH definitions and CPRIT usage

- ***Dissemination research*** is the scientific study of targeted distribution of information and intervention materials to a specific public health or clinical practice audience. The intent is to understand how best to spread and sustain knowledge and the associated evidence-based interventions.
- ***Implementation research*** is the scientific study of the use of strategies to adopt and integrate evidence-based health interventions into clinical and community settings in order to improve patient/population outcomes.
- For today and in the RFA, we use ***implementation research***.

# The Gap: Scurvy

What progress have we made in getting evidence into practice?

Total elapsed time from Lancaster to adoption: 264 years



104 years

146 years

48 years

70 years

1497 → 1601 → 1747 → 1795 → 1865

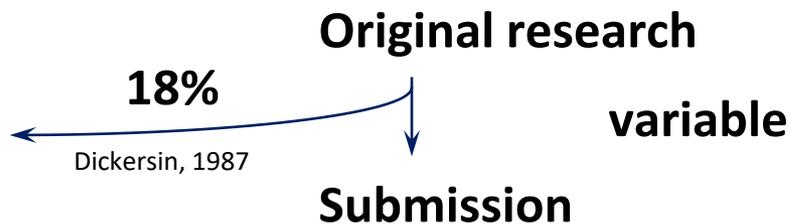
Vasco da Gama:  
100 of 160 crew  
died of scurvy;  
citrus suspected  
as cure

Capt James Lancaster  
sails with 4 ships:  
crew on Ship #1 given  
3 tsps of lemon juice  
daily; 0% mortality.  
40% of crew on other  
3 ships perish.

James Lind, British  
Navy physician  
conducts random trial  
of 6 treatments for  
scorbutic sailors on  
HMS Salisbury: citrus  
again proves effective  
against scurvy

British Navy orders  
that citrus fruits  
become the diet on  
all navy ships.

British Board of  
Trade adopts the  
innovation, ordering  
proper diets on  
merchant vessels.



It takes 17 years to turn 14 percent of original research to the benefit of patient care



Poynard, 1985

Reviews, guidelines, textbook



“PUBLICATION PATHWAY”

# An Evidence-Based Cancer Control Intervention

Is only so good as how and whether...

- It is adopted?
- Practitioners are trained to deliver it?
- Trained practitioners choose to deliver it?
- Eligible populations receive it?

If we assume 50% threshold for each step...  
(even w/perfect access/adherence/dosage/maintenance)

**Impact:  $.5 * .5 * .5 * .5 = 6\%$  benefit**

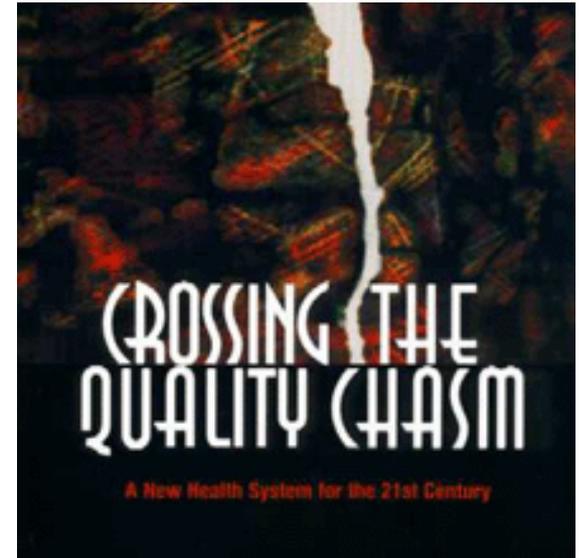
Too often, we have assumed...  
“If you build it...”



# “Know-Do” Gap

## The Quality of Health Care Delivered to Adults in the United States

Elizabeth A. McGlynn, Ph.D., Steven M. Asch, M.D., M.P.H., John Adams, Ph.D.,  
Joan Keeseey, B.A., Jennifer Hicks, M.P.H., Ph.D., Alison DeCristofaro, M.P.H.,  
and Eve A. Kerr, M.D., M.P.H.



- Americans receive “recommended care” approximately 50% of the time. (McGlynn et al., 2003; Levine 2016)
- Between the health care we have and the care we could have lies not just a gap, but a chasm. (IOM, 2001)

# The push/pull dilemma...



Quiz

# Q1. What do these have in common?

TRUTH  
BEAUTY  
PORNOGRAPHY  
CONTACT LENSES  
EVIDENCE  
D&I SCIENCE

**...in the eye of the beholder**

Adapted from Melissa Brouwers (KT CaNADA)

# Q2. Is this a D&I Research Project?

- **Chemotherapy:** The objective of this study is to determine the most effective chemotherapy regimen (as measured by overall survival) for individuals with stage III colon cancer who have not been previously treated.

# Q3. Is this a D&I Research Project?

- **Tool for Health Systems Guidance:** The objective of this study is to develop a measurement instrument designed to evaluate the methodological quality of health systems guidance documents.

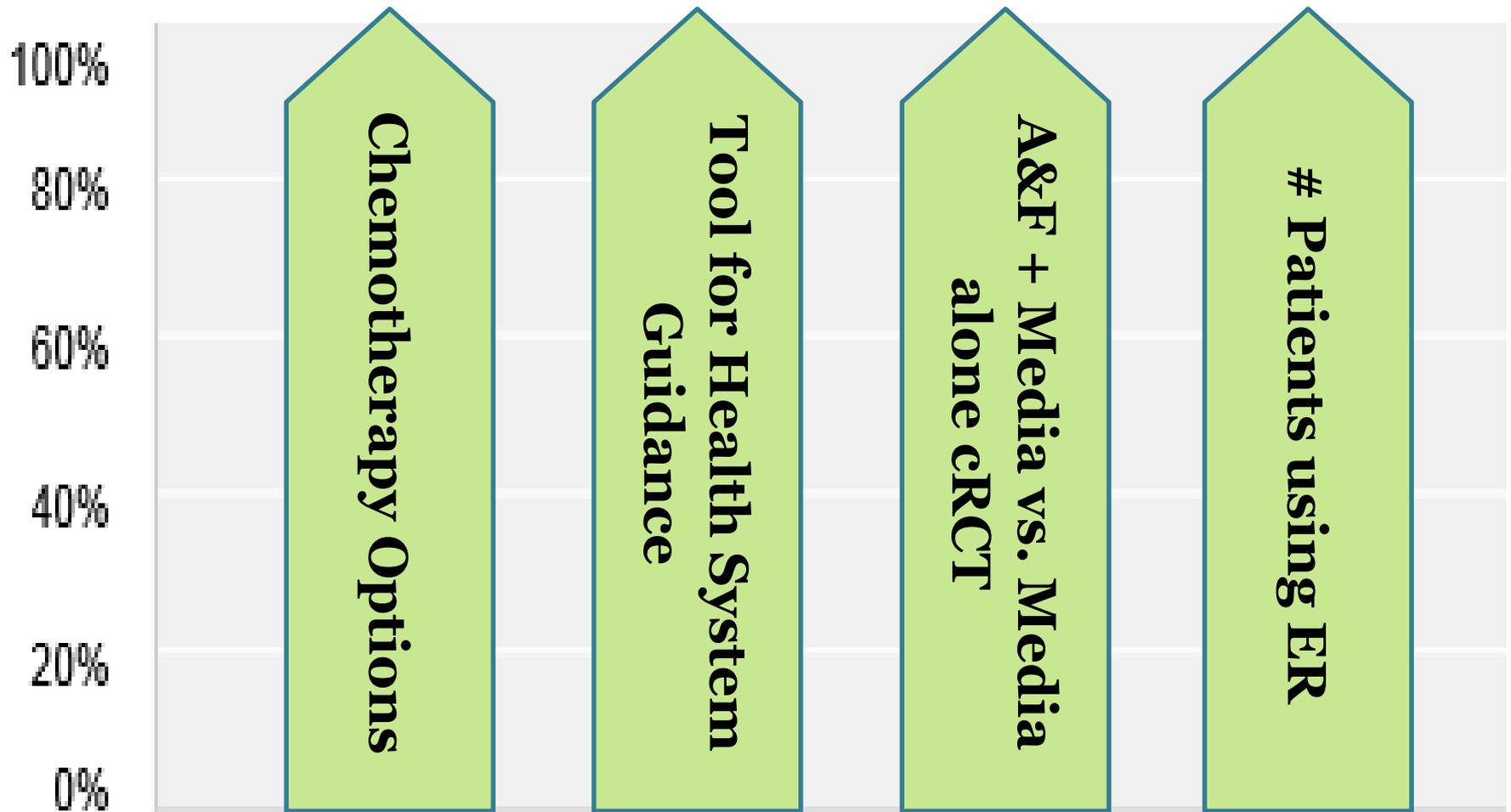
# Q4. Is this a D&I Research Project?

- **AF+Media vs. Media alone cRCT:** The objective of this cluster randomized control trial is to determine if small media combined with audit & feedback are superior to small media alone at increasing primary care providers' rates of flu vaccination of their elderly patients in their practice. Do differences exist as a function of type of primary care provider (physician, nurse practitioners vs. others)?

# Q5. Is this a D&I Research Project?

- **# Patients Using ER:** Using clinical databases, the objective of this study is to examine the proportion of patients who visit the emergency department within 2 weeks of death and to compare patterns of practice across 14 local health integrated networks (i.e. health regions).

# ...And The Survey Said...



**Green = no**

**Blue = yes**

**Orange = not sure**

# Interpretation

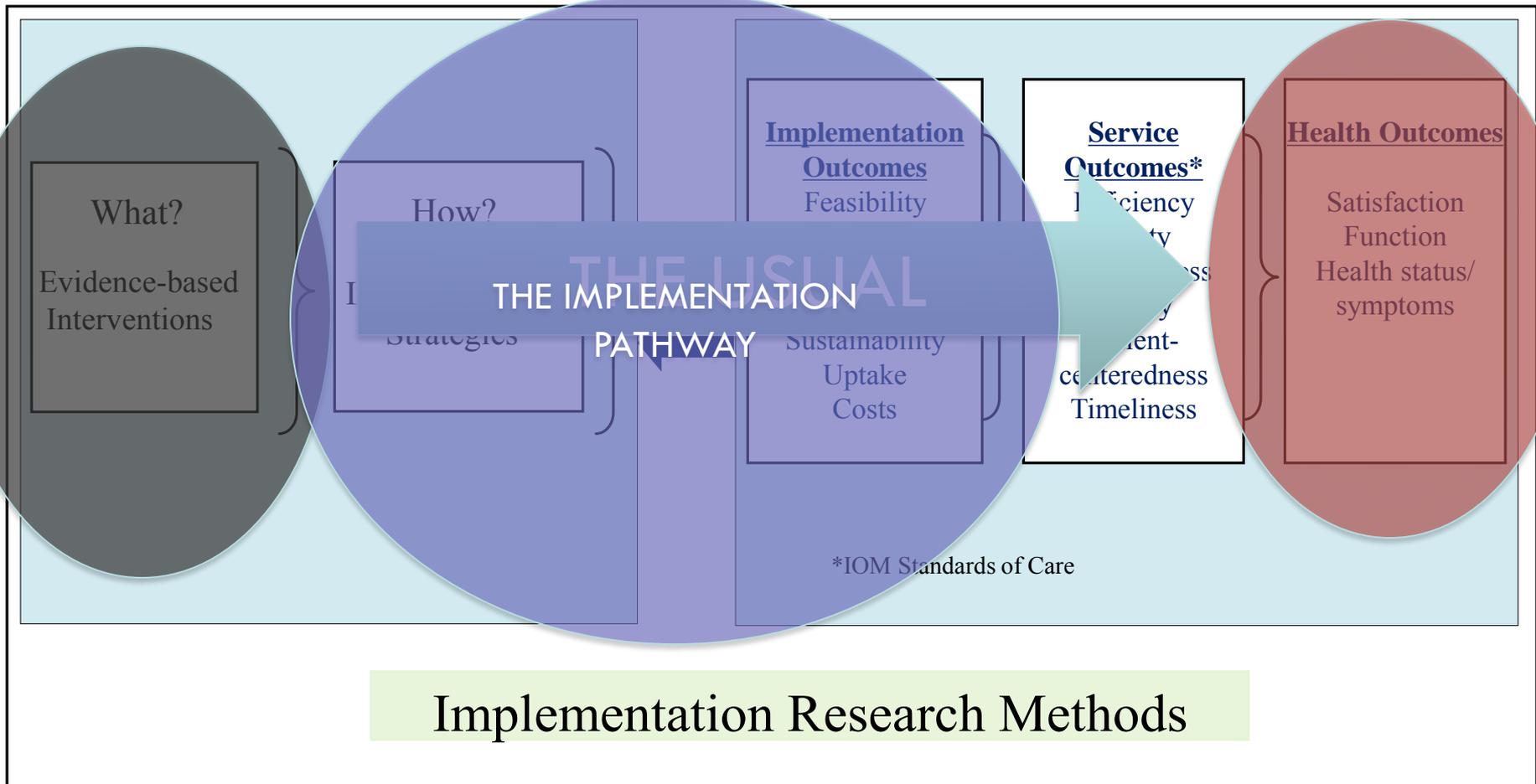
- Even among the old-timers, differences of opinion (...in the eye of the beholder)
- **Benefit:** Likely an appetite for a broad range of ideas
- **Challenge:** Variety of opinions on your review committees (funding, publication)

# What we know, implementation\*

1. Implementation generally does not occur spontaneously and naturally;
2. Passive approaches to implementation are largely ineffective;
3. Single-source prevention/early detection messages are generally less effective than comprehensive, multilevel approaches;
4. Stakeholder/partner involvement in the research or evaluation process is likely to enhance implementation ;
5. Theory and frameworks for implementation are beneficial; and
6. The process of implementation needs to be tailored to various audiences

**\*These all inform implementation research**

# Studying Implementation



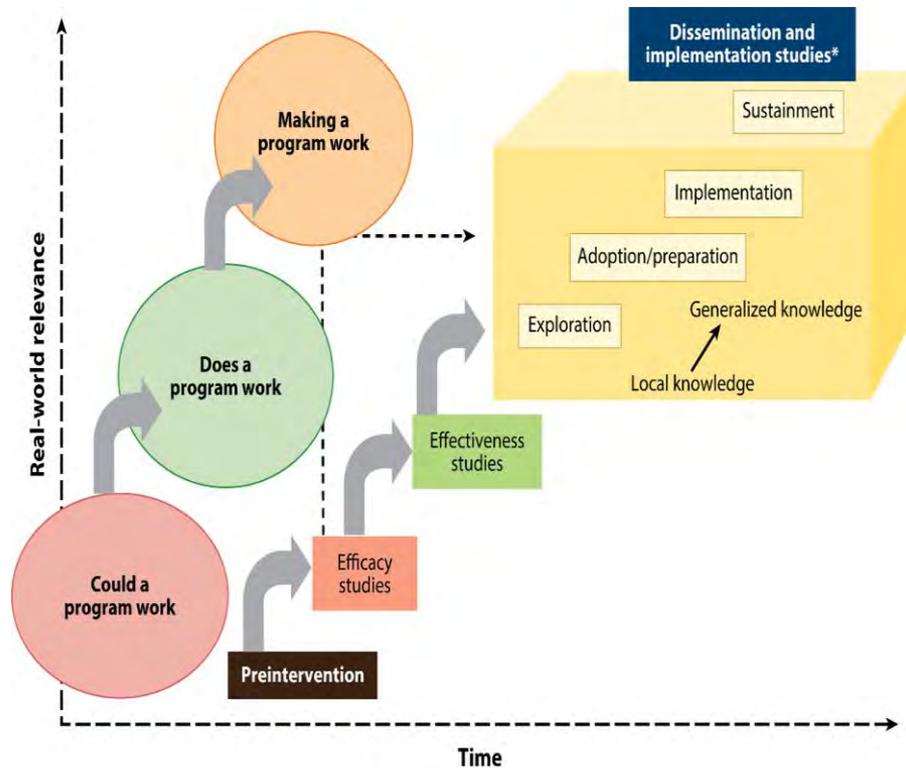
Proctor et al 2009 *Admin. & Pol. in Mental Health & Mental Health Services Research*

# Key Characteristics of D&I Science

Point #	Characteristic	Implication
Systems Perspective		
1	Context is critical	Research should focus on and describe context
2	Multilevel complexity	Most problems, and interventions are multilevel and complex
3	Focus on systems characteristics	More emphasis needed on interrelationships among system elements and systems rules
Robust, Practical Goals		
4	Representatives and reach	Focus on reaching broader segments of population and those most in need
5	Generalizability	Study generalization (or lack of such) across settings, subgroups, staff, and conditions
6	Pragmatic and practical	Producing answers to specific questions relevant to stakeholders
7	Scalability and sustainability	From outset, greater focus on scale-up potential and likelihood of sustainability
Research Methods to Enhance Relevance		
8	Rigorous	Identify and address plausible threats to validity in context of question. Greater focus on replication
9	Rapid	Approaches that produce faster answers
10	Adaptive	Best solutions usually evolve over time, as a result of informed hypotheses and mini-tests with feedback
11	Integration of methods; triangulation	For greater understanding, integrated Quantitative and Qualitative methods are often required
12	Relevance	Relevance to stakeholders should be top priority
Flexibility		
13	Multiplicity	Encourage and support diverse approaches with the above characteristics (all models are wrong)
14	Respect for diverse approaches; humility	Different perspectives, goals, methods and approaches are needed. Continuing the same existing approaches will produce the same unsatisfactory results

Glasgow RE, Chambers D. Developing robust, sustainable, implementation systems using rigorous, rapid and relevant science. *Clin Transl Sci*. Feb 2012;5(1):48

# Implementation research questions



What implementation strategy is most relevant to the population and the EBI?

What factors impact the decision to implement?

Does implementation of the EBI work with the chosen strategies?

What strategies are needed to maintain or extend use of the EBI?

# The CPRIT call

- “...conduct implementation research designed to accelerate the adoption and deployment of sustainable, evidence-based cancer prevention and screening interventions at multiple levels and in different clinical and community settings are encouraged.”
- “...address any topic or issue related to cancer causation, prevention, early progression, early detection, or implementation of evidence based interventions.”

# Example

- CPRIT Prevention Program has supported colorectal (CRC) cancer screening
- Certain regions and populations in Texas have low screening rates
- Scenario
  - **Setting:** Community health centers serve high risk individuals
  - **Context:** Office systems are not in place to ensure every eligible person is offered screening; pilot works suggests that office-system changes are needed + potential of outreach workers
  - **Design:** Roll-out (stepped wedge) randomized design
  - **Outcomes:** New office systems, organizational climate/culture, screening rates

# Capacity Building Resources

EVENT

# 10th Annual Conference on the Science of Dissemination and Implementation in Health

A decade of progress and the path forward

**DATE & TIME** December 4-6, 2017    **LOCATION** Crystal Gateway Marriott, Arlington, VA

# Training Programs

## NIH Training Institute for D&I Research in Cancer

July 9 and 10, 2018, Bethesda, MD



# Training Programs

## Mentored Training for Dissemination and Implementation Research in Cancer (MT-DIRC)

<http://mtdirc.org/>

- Washington University in St. Louis (PI: Brownson)

## Implementation Research Institute in Mental Health (IRI)

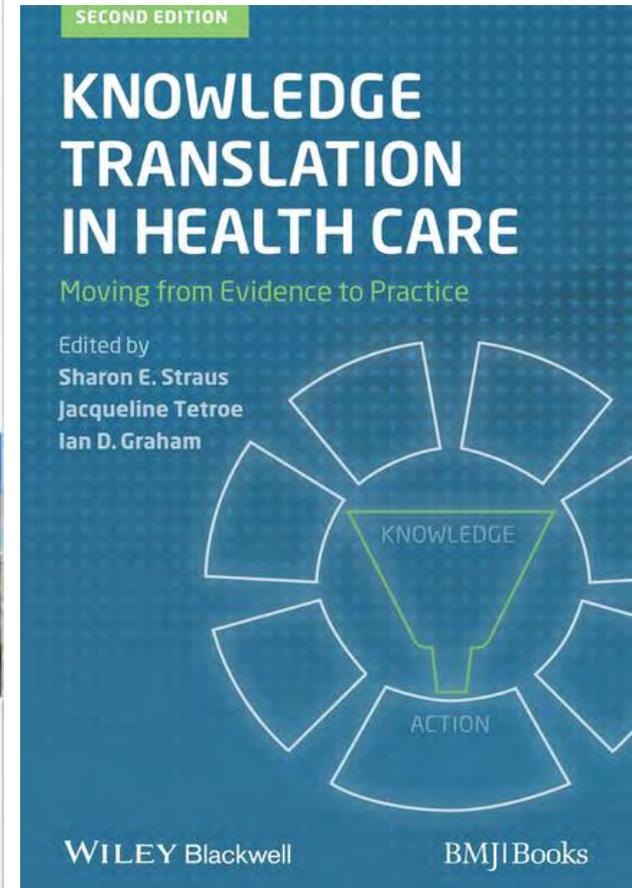
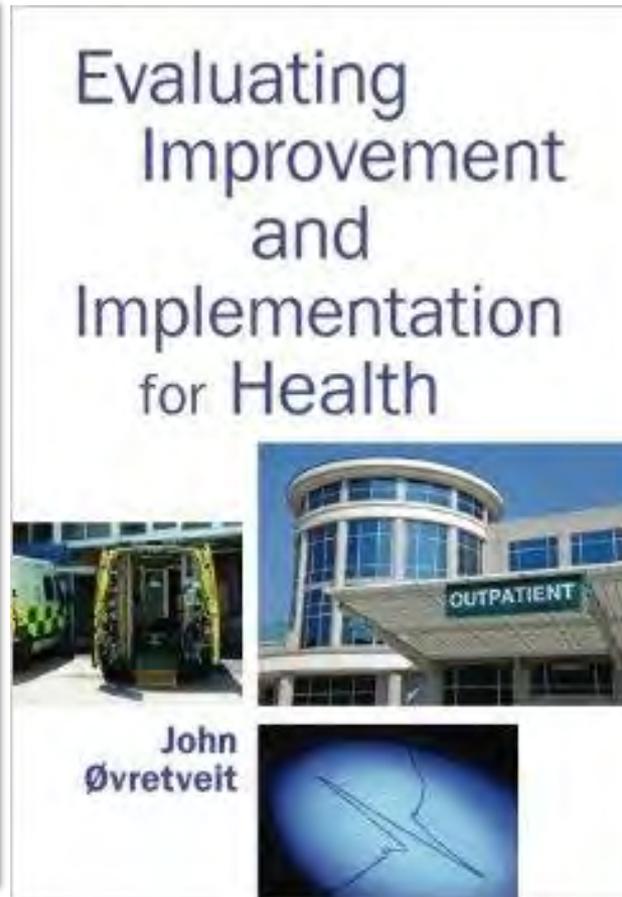
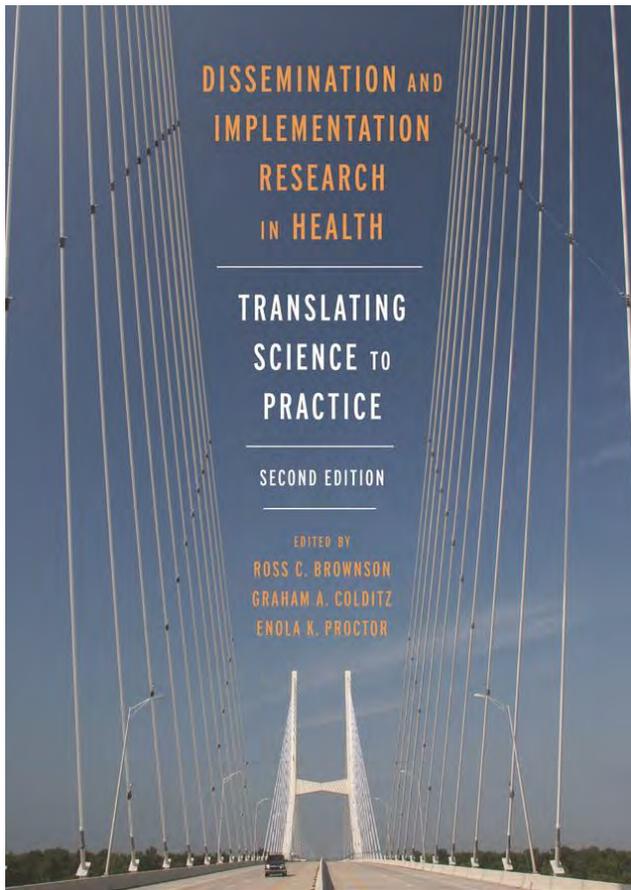
<http://iristl.org>

Washington University in St. Louis (PI: Enola Proctor)

# NIH Funding Opportunities

- Dissemination and Implementation Research in Health
  - R01 PAR-18-007
  - R21 PAR 18-017
  - R03 PAR 16-237
- Standing study section
- Many associated materials to support your CPRIT application
- It is worth the investment of your time!!

# Textbooks



# The WashU story

Brownson *et al. Implementation Science* (2017) 12:104  
DOI 10.1186/s13012-017-0634-4

Implementation Science

DEBATE

Open Access

## Building capacity for dissemination and implementation research: one university's experience



Ross C. Brownson<sup>1,2\*</sup>, Enola K. Proctor<sup>3,4</sup>, Douglas A. Luke<sup>5</sup>, Ana A. Baumann<sup>3</sup>, Mackenzie Staub<sup>6</sup>, Matthew T. Brown<sup>4</sup> and Mallory Johnson<sup>4</sup>

# *Take home points*

1. Implementation research is a vibrant field with many practical applications.
2. As you build a research or practice-oriented project, keep in mind the key characteristics of implementation science.
3. There are many opportunities for meaningful implementation science under the CPRIT umbrella.



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