NIH Dissemination and Implementation Research
...at the Crossroads...

David Chambers, DPhil
Associate Director, Dissemination and Implementation Research, NIMH
5th NIH Conference on the Science of Dissemination and Implementation, Bethesda, MD
March 19, 2012
Annual D and I Meetings

“State of the Science” Venue

* First meeting: September 2007: “Showcase”, ~350 participants
* Second meeting: “Building Capacity”, January 2009, 500 registrants
* Third meeting: “Methods and measures,” March 2010, 900 registrants
* Fourth meeting: “Policy and Practice,” March 2011, 1200 registrants
* Fifth meeting: “D and I at the crossroads,” March 2012, 1200 registrants
Challenging Assumptions
Valuing Consistency

ITV Development ➔ Efficacy ➔ Effectiveness ➔ Implementation

Intervention X Evidence

Site 1

Intervention X Evidence

Site 2

Intervention X Evidence

Site 3

Intervention X Evidence

Site 4
“Voltage Drop” of an intervention as it moves through stages of development.
“Program Drift” of a fielded intervention (ITV) over time, with expected decrease of effect

Intervention X
Evidence

Intervention X
Evidence

Intervention X'
Evidence

Optimal Effect

Program Drift

Unintentional shift

Expected Effect

Time
I0 → I1 → I2 → I3

ITV
Evidence
Effect
Emphasizing Multi-level, Multi-Domain Change

Evidence

Intervention

Context

- Evidentiary Changes
- Environmental Changes
- Practice Changes
- Personnel Changes
- Knowledge Changes
- System Changes
- Policy Changes

Chambers, Glasgow, Stange, 2012, In Preparation
Sustainability in a Dynamic Context

Intervention Adapted Over Time To Improve and Sustain Outcomes

Intervention X

Evidence

Context A

Intervention X

Evidence

Context A

Intervention X

Evidence

Context A

Public Health Outcomes and Expected Benefit

Internal and External Context

- Environmental Changes
- Practice Changes
- Personnel Changes
- Knowledge Changes
- System Changes
- Policy Changes

Chambers, Glasgow, Stange (2012), Sustainability: It’s a Dynamic World Out There. In Preparation
Funding Opportunities
The Current Trans-NIH PARs

* PAR-10-038; 10-039;10-040
* NIMH, NCI, NIDA, NIAAA, NIAID, NHLBI, NINR, NIDDK, NINDS, NIDCD, NIDCR, NCCAM, FIC, OBSSR
* 2010 CSR standing review committee
* Every round Submission (typically 50-60 apps/round)
“The (DIRH) Study Section reviews applications intending to bridge gaps between public health, clinical research, and everyday practice. The focus of the studies reviewed is on the transmission and implementation of knowledge from scientific discovery to transform healthcare delivery, improve health outcomes, and manage acute and chronic illness.

- **SRO: Jacinta Bronte-Tinkew, Ph.D.**
- Any reviewers in the audience?
Strategies to improve sustainability
Studies of mature implementation sites to look at sustainability/evolution
Implementation in the context of a learning HC organization
Implementation as an ongoing process (is it ever complete?)
When is de-implementation warranted? How can ineffective practices be stopped?
Additional FOAs

* NHLBI: PAR-12-063: Research Dissemination and Implementation Grants (R18)
* NIMH: RFAs-MH-13-060, 061: Harnessing Advanced Health Technologies to Drive Mental Health Improvement
* AHRQ/PCORI: RFA-HS-12-006: Patient Centered Outcomes Research-Dissemination by Health Professionals Associations (R18)
* NIH(Common Fund): RFAs-RM-12-002: Health Care Systems Research Collaboratory-Pragmatic Clinical Trials Demonstration Projects (UH2/UH3)
* OBSSR-led: PA-12-024: Behavioral Interventions to Address Multiple Chronic Health Conditions in Primary Care (R01)

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* NIDDK: RFA-DK-10-009: NIDDK Centers for Diabetes Translation Research (P30) (expired)
Other D&I Opportunities

* PCORI ([www.pcori.org/funding-opportunities](http://www.pcori.org/funding-opportunities))
* VA HSR&D ([http://www.hsrn.research.va.gov/funding/](http://www.hsrn.research.va.gov/funding/))
* Foundation Initiatives (e.g. WT Grant, RWJ)
* International Efforts (e.g. FIC, NIAID, CIHR, WHO, PEPFAR, USAID)
* CMS: Center for Medicare & Medicaid Innovation Program (CMMI)
Thanks!

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And now over to Russ...
Russ Glasgow, Deputy Director, Implementation Science, Division of Cancer Control and Population Sciences
5th Annual NIH Annual Conference on the Science of Dissemination and Implementation Research
March 19, 2012
Top 10 Key D & I Research Accomplishments

10. NIH Annual D & I Research Conference, permanent DIHR study section, and emerging training options

9. eHealth, mHealth applications: enhancing reach to those in need

8. Diabetes Prevention Program—YMCA community translation

7. International models—KT and importance of context and policy

6. WHO, CONSORT (pragmatic trials), and IOM (childhood obesity) adoption
5. Chronic Care Model and Chronic Disease Self-Management programs
4. CBPR demonstrations and acceptance
3. HIV AIDS interventions—especially in low/moderate income countries
2. VA QUERI and rapid learning system changes
1. Lessons from the tobacco wars—natural experiments and policy, brief interventions
Proliferation of D&I Models—61 and Counting?

Key Common Points:

• Context is critical
• Begin with stakeholders—take their perspective
• Design for dissemination—from beginning
• Need balance between fidelity to EB program and adaptation to local setting
Key Common Points (cont.)

- There is more than evidence needed for successful adoption, implementation, and sustainability
- Implementation science is a multi-level, multi-component, and multi-stakeholder affair
- D & I science is complex—and about “fit” and interaction effects
- Select the DESIGN and the MODEL that best fits your question—less important WHICH model than that you use it well
The Road Ahead
Challenges on the Road Ahead

- Rapid and practical results
- Culture change: impacting basic science industrial complex, review system
- Making “best bets” on emerging approaches and technologies—e.g., big data; modeling; mHealth
- Demonstrating value—e.g., cost; cost-effectiveness; ROI
- Reducing impact of health inequities, including low literacy/numeracy
Implementation Science Opportunities

- Pragmatic Trials*
- Simulation Modeling
- Economic Analyses
- Scale-up and Sustainability
- Global health
- Public Health Genomics
- CTSAs
- Comparative Effectiveness Research- Translation (CER-T) and PCORI
- Harmonization of Measures

Types of D & I Evidence Needed: 2R’s and “RCCT”

- Relevant
- Rigorous and
- Rapid*
- Cost
- Convergent*
- Transparent

http://cancercontrol.cancer.gov/IS/
William Riley, NLHBI, with permission
Convergent Evidence

- Much to learn from well-conducted observational studies
- Great potential for simulation modeling—especially regarding interactions and unintended consequences\(^1,2\)
- Evaluability\(^3\)—aka initial “sniff test”
- Qualitative and mixed methods\(^4\)
- Practice-based evidence on efficiency and feasibility
- Combine with experimental data
- Emphasis on replication and consistency

Evidence Integration Triangle (EIT)

- Intervention Program/Policy
  *(Prevention or Treatment)*
  (e.g., key components, principles, guidebook, internal & external validity)
- Participatory Implementation Process
  (e.g., stakeholder engagement, CBPR, team-based science, patient centered)
- Practical Progress Measures
  (e.g., actionable, longitudinal measures)
- Evidence
- Stakeholders
- Multi-Level Context
  - Intrapersonal/Biological
  - Interpersonal/Family
  - Organizational
  - Policy
  - Community/Economic
  - Social/Environment/History

EIT Conclusions

• The evidence-based movement is a good start, but only gets us so far

• To make greater progress, two other elements also need attention:
  ▪ Practical MEASURES to track progress, and
  ▪ Implementation PROCESSES that use partnership principles.
  ▪ These 3 legs of the “EIT” are each necessary but not sufficient by themselves.

http://cancercontrol-dev.cancer.gov/IS/presentations/
D & I Science Resources


- **Websites** and other virtual resources supporting D & I, including:
  - Cancer Control P.L.A.N.E.T. ([ccplanet.cancer.gov](http://ccplanet.cancer.gov)),
  - Research to Reality (R2R) ([researchtoreality.cancer.gov](http://researchtoreality.cancer.gov))
  - AHRQ
  - VA QUERI and CIPRS
  - KT Canada ([ktclearinghouse.ca/ktcanada](http://ktclearinghouse.ca/ktcanada))

- **D & I Health** e-newsletter - contact [wynne.norton@gmail.com](mailto:wynne.norton@gmail.com)
Dissemination and Implementation Measures and Methods Initiative

- https://www.gem-beta.org/ (GEM Homepage)
- http://cancercontrol.cancer.gov/IS/resources.html (IS Team Website)
Join the Initiative! Where and How

Visit the D&I GEM Workspace [https://www.gem-beta.org/](https://www.gem-beta.org/) and review, comment on, and rate existing D&I measures and constructs, and add additional ones.

Review the D&I methods tables ([http://cancercontrol.cancer.gov/IS/resources.html](http://cancercontrol.cancer.gov/IS/resources.html)) and join the discussion on the Research to Reality ([http://researchtoreality.cancer.gov](http://researchtoreality.cancer.gov)) community of practice on these approaches to provide feedback and share your experiences.
Watch a Prezi Presentation on how to engage and become a D&I Champion on the workspace

Questions? We’re all ears....