

Title Slide: Implementation Science Issues and Opportunities for Cancer Center Prevention and Control Programs

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Slide 1: NCI Implementation Science Team Vision

To achieve the rapid integration of scientific evidence, practice, and policy, with the ultimate goal of improving the impact of research on cancer outcomes, and promoting health across individual, organizational and community levels.

IS team "About Us" website (<http://cancercontrol.cancer.gov/is/about.html>)

Slide 2: Key Issues in Implementation Science (IS)

- Contextual
- Complex
- Multi-component programs and policies
- Non-linear
- Transdisciplinary
- Multi-level
- Addresses “wicked”, messy, important problems

Glasgow R & Steiner J. (2012). In: *Dissemination and Implementation Research*.

Brownson R, Colditz G, and Proctor E (Eds.). Oxford University Press

Slide 3: T1-T4 Figure

[Figure] Figure is divided into three segments. On the left hand of the figure are two boxes (1) Basic Scientists and (2) Decision Makers in public health, clinical practice, community organizations, workplaces, schools, government, and residents. On the right are three boxes, (1) Clinical and behavioral scientists, (2) Health services and public health scientists, and (3) Dissemination and implementation (D&I) scientists. All the boxes are connected by two-way arrows indicating distal stakeholder connection. Additionally, in the middle of the figure between basic scientists and clinical and behavioral scientists in an arrow indicating proximal stakeholders and is titled T1- case series, efficacy trials. Between clinical and behavioral scientists and health services and public health scientists is another proximal stakeholders arrow titled, T2 – effectiveness studies, clinical guideline development; systematic reviews. A third proximal stakeholders arrow appears between health services and public health scientists and is titled T3-effectiveness studies, implementation guidelines development, systematic reviews, mathematic modeling. Finally, between Decision makers and D&I Scientists is the last proximal stakeholder arrow, this one titled T4-use of evidence-based intervention and implementation strategies in the real world. [End Image]

From Lobb & Colditz, Annu Rev Public Health, 2013; 74(2):1-20

Slide 4: Bench to Bookshelf

[Image] Researcher examining vial with arrow pointing to dusty bookshelf. [End Image]

Slide 5: Examples of Implementation Science Research Programs

- Tobacco control programs—state experiments and national adoption
- VA QUERI program
- Flu-FIT program to increase CRC screening
- Mullen-Fernandez ADAPT program for EB programs
- CPCR Network—crosscutting research groups
- Lorig Chronic Disease Self-Management Programs UK Adaptation
- NIH Health Care System Collaboratory
- Wetter Ask-Advise-Connect smoking program

Glasgow, Vinson et al, *Am J Public Health* 2012;102(7):1274-1281

Slide 6: Key Lessons Learned in Implementation Science

- There is more than evidence needed for successful adoption, implementation, and sustainability
- Implementation Science is a multi-level affair
- Select the DESIGN and the MODEL that best fits your question—less important WHICH model than that you use it well
- Need to focus on science issues of *replication, relevance, transparency, and costs*

Slide 7: RE-AIM—Inequity Implications

[Image] Various scenes of clinical research and care [End Image]

<u>RE-AIM Issue</u>	<u>Disparity</u>	<u>Overall Impact</u>
Reach	30%	70% of benefit
Effectiveness	0 (equal)	70% of benefit
Adoption	30%	49% of benefit
Implementation	30%	34% of benefit
Maintenance	30%	24% of benefit

IS Team Presentation on Health Inequities (Jan. 2013): [Implementation Science Presentation Webpage \(http://cancercontrol.cancer.gov/IS/presentations.html\)](http://cancercontrol.cancer.gov/IS/presentations.html)

Slide 8: Pragmatic Study Methods: Key Characteristics

- Questions from, and important to, stakeholders
- Multiple, heterogeneous settings
- Diverse populations
- Comparison conditions are real-world alternatives
- Multiple outcomes important to decision and policy makers

Thorpe KE et al., *Can Med Assoc J*, 2009;180:E47-57

Tunis SR et al. Practical clinical trials...*JAMA* 2003;290:1624-1632

Glasgow RE et al. Practical clinical trials...*Med Care* 2005;43(6):551-557

Slide 9: EHR Measures for Primary Care

Domain	Final Measure (Source)
1. Overall Health Status	1 item: BRFSS Questionnaire
2. Eating Patterns	3 items: Modified from Starting the Conversation (STC) [Adapted from Paxton AE et al. <i>Am J Prev Med</i> 2011;40(1):67-71]
3. Physical Activity	2 items: The Exercise Vital Sign [Sallis R. <i>Br J Sports Med</i> 2011;45(6):473-474]
4. Stress	1 item: Distress Thermometer [Roth AJ, et al. <i>Cancer</i> 1998;15(82):1904-1908]
5. Anxiety and Depression	4 items: Patient Health Questionnaire—Depression & Anxiety (PHQ-4) [Kroenke K, et al. <i>Psychosomatics</i> 2009;50(6):613-621]
6. Sleep	2 items: a. Adapted from BRFSS b. Neuro-QOL [Item PQSLP04]
7. Smoking/Tobacco Use	2 items: Tobacco Use Screener [Adapted from YRBSS Questionnaire]
8. Risky Drinking	1 item: Alcohol Use Screener [Smith et al. <i>J Gen Int Med</i> 2009;24(7):783-788]
9. Substance Abuse	1 item: NIDA Quick Screen [Smith PC et al. <i>Arch Int Med</i> 2010;170(13):1155-1160]
10. Demographics	9 items: Sex, date of birth, race, ethnicity, English fluency, occupation, household income, marital status, education, address, insurance status, veteran's status. Multiple sources including: Census Bureau, IOM, and National Health Interview Survey (NHIS)

Slide 10: My Own Health Report (MOHR)

Pragmatic Implementation Trial: Developing and implementing a patient-report tool (MOHR) for provider/patient planning and goal setting

- Nine pairs of primary care clinics (18 total): Half FQHC community health centers (NCI), half other PBRN primary care clinics (AHRQ)
 - Cluster Randomized *pragmatic study*—delayed lx control—assess at 4 and 8 months
 - Clinics selected to be diverse and at different stages of EHR implementation
 - Context assessment to be conducted
 - Key outcomes include implementation; creation of action plans
 - Final protocol designed collaboratively

*Funded by NCI, AHRQ, and NIH OBSSR

www.MyOwnHealthReport.org

Slide 11: Types of Pragmatic Methods and Evidence Needed: 2R's and "RCT"

- Relevant

- Rigorous and
- Rapid
- Cost informative
- Transparent

Glasgow R, *Health Education and Behavior*, 2013, April, in press.

Glasgow R, Chambers D. *Clinical and Translational Science*, 2012, 5(1):48-55

[Implementation Science Website \(http://cancercontrol.cancer.gov/is/index.html\)](http://cancercontrol.cancer.gov/is/index.html)

Slide 12: The Trans-NIH D&I Funding Announcement (International Investigators Eligible)

- R01 - PAR 13-055 (\$500k per annum up to five years)
- R03 - PAR 13-056 (\$50K per annum up to two years)
- R21 - PAR 13-054 (\$275K up to two years)
- Participating Institutes: NIMH, NCI, NIDA, NIAAA, NIAID, NHLBI, NINR, NIDDK, NINDS, NIDCD, NIDCR, NCCAM, NHGRI*, NIA* & Office of Behavioral & Social Sciences Research
- Standing review committee, Dissemination and Implementation Health Research
- Three submission dates per year: February, June, October

*New Institute Added to PAR in 2013

[Link to Full Announcements \(http://cancercontrol.cancer.gov/funding_apply.html#is\)](http://cancercontrol.cancer.gov/funding_apply.html#is)

Slide 13: Training Institute for D&I Research in Health (TIDIRH)

GOAL: Provide participants with a thorough grounding in conducting D&I research in health and have them return to their home institutions prepared to share what they have learned to help grow the field of D&I research.

Organizers: OBSSR; NCI; NIMH; VA

- First Annual Training Institute – August 2011
(Chapel Hill, NC)
 - 33 participants; Training materials available online

<http://conferences.thehillgroup.com/OBSSRinstitutes/TIDIRH2011/index.html>

- Second Annual Training Institute – July 9-13, 2012
(San Jose, CA)
 - 36 participants; Training materials available online

<http://conferences.thehillgroup.com/OBSSRinstitutes/TIDIRH2012/index.html>

- Upcoming Third Annual Training Institute – June 3-7, 2013 (St. Louis, MO)

<http://conferences.thehillgroup.com/OBSSRinstitutes/TIDIRH2013/index.html>

Meissner HI, Glasgow RE, Vinson CA, Chambers D, Brownson RC, Green LW, Ammerman AS, Weiner BJ, Mittman B. The U.S. training institute for dissemination and implementation research in health. *Implement Sci.* 2013 Jan 24;8(1):12

Slide 14: Coming in 2013

- **Support of Meetings and projects to identify and propose solutions to key D&I research to build the field:**
 - Funding Review of and Recommendations for D&I Reporting Criteria.
 - Revamped D&I Science Annual Meeting to focus on key issues.

- **Ongoing partnerships with:**
 - AHRQ, CDC, National Council on Aging Self-Management Alliance, Office of Cancer Survivorship around issues of multiple chronic conditions and primary care, self-management, practical measure, pragmatic trials and prevention issues.
- **Increased training opportunities:**
 - Partners in Global health on Writing D&I Grants (with WHO and CGH).
 - Advanced Topics in Implementation Science Research webinar series.

Slide 15: Implementation Science Funding Opportunities

- PCORI—and “true” patient/family-centered research
- “Team Science” and collaborative approaches to care transformation
- Guidelines implementation research, especially across networks—screening, survivorship
- Enhancing patient engagement and long-term use
- Patient Health Records—patient portal to EHR
- Collection and meaningful use of patient report measures for care and research

Slide 16: Future Evidence Needs and Opportunities—Keys to Advance Implementation Science

- Context—key factors that may moderate results
- Scalability—potential to impact large numbers
- Sustainability
- Health equity impacts
- Patient/citizen/consumer and community perspective and engagement throughout
- Multi-level interactions, especially between policy and practice

Slide 17: Evidence-based Program and RE-AIM Resources

[Image] Series of screen shots for three tools: Cancer Control P.L.A.N.E.T., RE-AIM Self-Rating quiz, and RTIPs program summary. [End Image]

Slide 18: Take Home Points

- There is a pressing need for a DIFFERENT type of cancer research, models, and methods — “IS” that translates more rapidly and is more relevant to stakeholders
- This field is still emerging, but there is agreement on key common points among different models of IS research
- There are many opportunities for this type of cancer research, especially among research networks and for international coalitions to study context

Slide 19: Time for Questions

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