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IMPLEMENTATION SCIENCE MODELS (AND RELATED METRICS) TO HELP REDUCE HEALTH DISPARITIES

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OUTLINE

- Implementation Science (IS) Models-overview
- RE-AIM Model—and metrics
- Evidence Integration Triangle (EIT)
- Commonalities and Conclusions

Implementation Science Frameworks: Converging Recommendations

- Recent review of Implementation Science Models (Tabak RG, et al. *Am J Prev Med* 2012;43:337-50)

- RE-AIM: Reach, Effectiveness, Adoption, Implementation and Maintenance—the "What"
  www.re-aim.org

- Evidence Integration Triangle (EIT)—the "How"
  http://cancercontrol.cancer.gov/IS/presentations.html

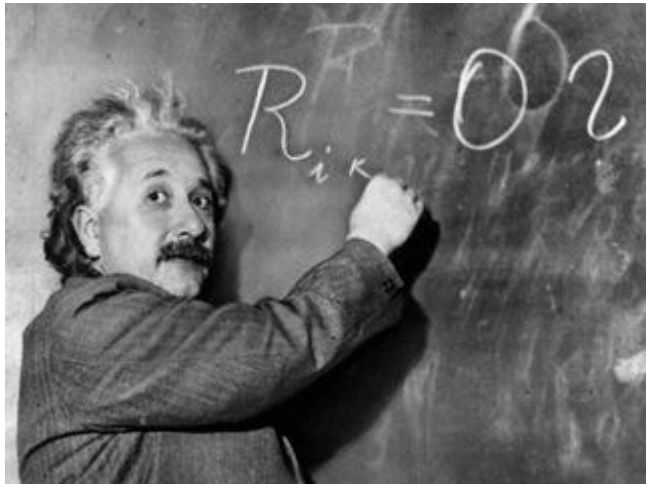
Implementation and Dissemination Research Characteristics (Russ' view)

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

Glasgow RE, Steiner JF In: Brownson RC, Colditz G, Proctor E, eds. Dissemination and implementation research in health: Translating science and practice. New York: Oxford University Press, 2012:72-93.

THE SAME POLICIES, RESEARCH METHODS, PARADIGMS AND APPROACHES THAT PRODUCED TODAY'S INEQUITIES ARE NOT LIKELY TO REDUCE THEM

"The significant problems we face cannot be solved by the same level of thinking that created them."



A. Einstein

Recommended Purpose of Research (*ala* RE-AIM—www.re-aim.org)

Collect evidence to document interventions that can:

- Reach large numbers of people, especially those who can most benefit
- Be widely adopted by different settings
- Be consistently implemented by staff members with moderate levels of training and expertise
- Produce replicable and maintained effects (and minimal negative impacts) at reasonable cost

Gaglio B, Glasgow RE. In: Brownson R, Colditz G, Proctor E, eds. Dissemination and implementation research in health: Translating science to practice. New York: Oxford University Press, 2012:327-56

RE-AIM—Disparities Implications

RE-AIM Element	
Reach	• Characteristics of those who participate vs. decline • Expand categories used for classification of potential disparities- e.g. literacy, numeracy, address, geospatial
Effectiveness	• "Representative narrative" • Impact of context • Unanticipated consequences
Adoption	• Engage stakeholders from low resource settings from outset • Document and address reasons for non-participation
Implementation	• Monitor Delivery • Track costs of implementation • Be transparent
Maintenance	• Assess long-term results of different subgroups…If inequities, find out why • Prepare delivery settings with tools to guide, monitor and adapt intervention • Support and study sustainability

RE-AIM—Disparities Implications Continued

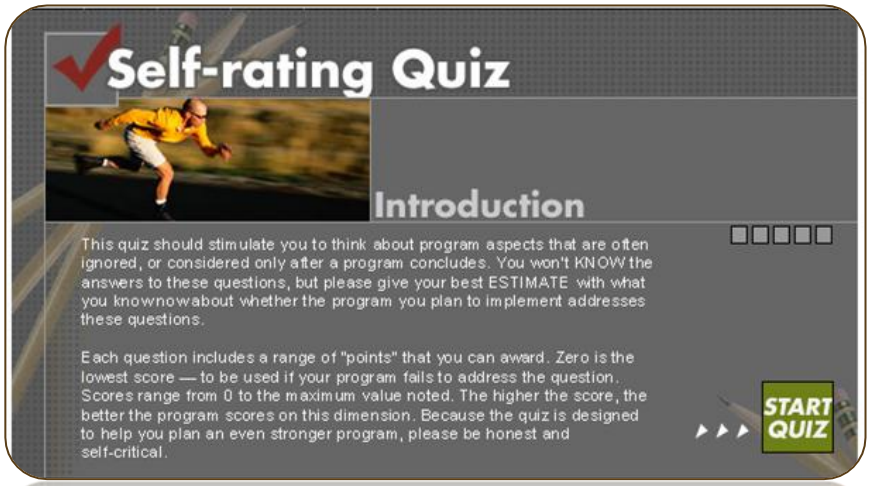
RE-AIM Issue	Disparity	Overall Impact
Reach	30%	70% of benefit
Effectiveness	0 (equal)	70% of benefit
Adoption	30%	49% of benefit
Implementation	30%	34% of benefit
Maintenance	30%	24% of benefit

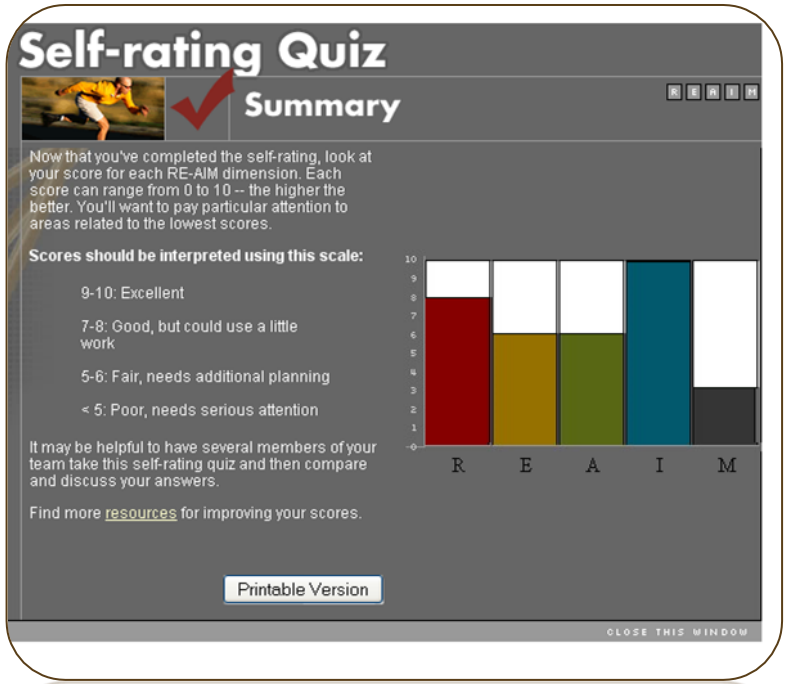
RE-AIM Implications— What Outcomes and Metrics are Valuable?

- Beyond Mean Effect Size?
- Ask- at multiple levels WHO is reached, WHAT type settings are implementing; WHICH staff can implement, etc.
- All 5 RE-AIM dimensions are important—need to broaden usual focus

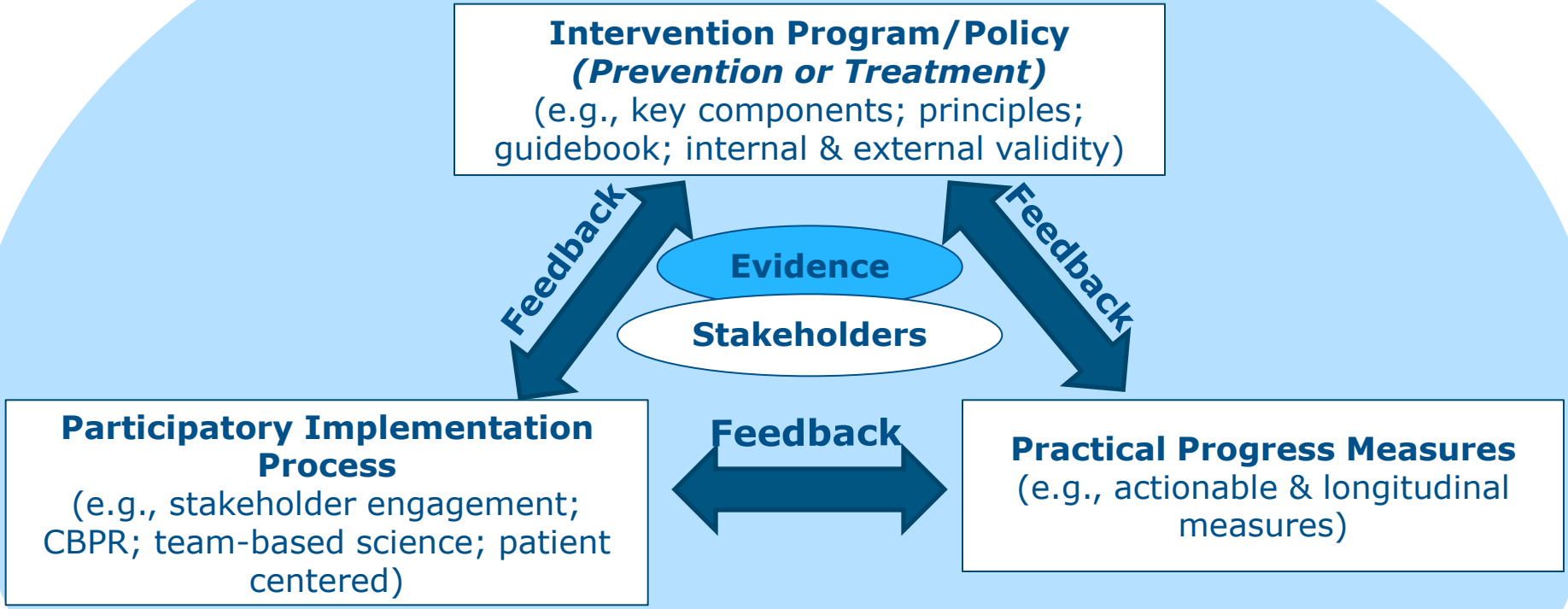
RE-AIM Self-Rating Quiz

http://re-aim.org/resources_and_tools/index.html





Evidence Integration Triangle (EIT)



Multi-Level Context

- Intrapersonal/Biological
- Interpersonal/Family
- Organizational
- Policy
- Community/Economic
- Social/Environment/History

Glasgow RE, Green LW, Taylor MV, et al. *Am J Prev Med* 2012;42:646-54

IMPLICATIONS OF EIT FOR REDUCING DISPARITIES

- Evidence alone is a start, but not enough
- Need relevant, practical Measures and Metrics of progress
- Both of above need to be selected with partnership of stakeholders
- Expect iteration and adaptation—rather than immediate success

QUESTIONS TO ASK….

- **In this world of "the 4 P's" of personalized medicine…. ALSO ask the 4 "W's":**
  - ✓ **Who Benefits**
  - ✓ **Who Suffers**
  - ✓ **Who Pays**
  - ✓ **Who Profits**

Glasgow RE, Fisher EB, Haire-Joshu D, Goldstein MG. *Am J Public Health* 97(11):1936-1938 (Editorial)

TAKE-HOME POINTS

- Start with the End (Dissemination? Scale-Up: Sustainability? Reducing Disparities?) in Mind
- Start with and Partner with Stakeholders Throughout All Phases…… including Design and Analyses
- Implementation Science is Complex, Dynamic, Contextual, Learning, Systems Based…. and our models, designs and metrics need to be also
- All Models (including these) are WRONG….but may be useful