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ADULT AND CHILD CONSORTIUM FOR HEALTH OUTCOMES RESEARCH AND DELIVERY SCIENCE
UNIVERSITY OF COLORADO | CHILDREN'S HOSPITAL COLORADO

What Can Researchers Do to Address Health Inequities? Pragmatic Models, Methods and Measures

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About Me

- Trained as behavioral scientist
- Experience working in academic, health research (managed care and VA), and government (NCI Implementation Science) settings
- Focus on health equity at levels of recruitment, implementation, sustainability and dissemination stages of research and evaluation
- Primary focus on pragmatic research*
- Content experience in research on behavior change (organizational, staff and patient/family levels), chronic illness prevention and management, and cancer prevention and control
- Work with community health centers, tribal communities, diverse worksites, community initiatives, and primary care settings
- .....and an old, white male

***Glasgow RE** (2013). What Does it Mean to Be Pragmatic? Opportunities and Challenges for Pragmatic Approaches. Heath Education and Behavior, June;40(3):257-65.

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ACCORDS Dissemination and Implementation Science Program, University Colorado School of Medicine

- **Collaborative learning partnerships** to translate research into practice more quickly and successfully
- **Local consultation** on D&I related research to increase funding and publication success
- **Interactive on-line resources and support** for patients, medical and public health students, trainees and faculty researchers
- **Frequently updated information** on D&I related conferences, articles, grant opportunities, events, webinars, talks, and training
- **Cutting edge research** on: pragmatic research and measures, adaptation of interventions, designing for dissemination, shared decision making, planning for and evaluation of reach, implementation and sustainability

- www.ucdenver.edu/accords/implementation

Problems Applying Evidence-Based Research to Health Equity

- Lack of information on inclusion criteria and participation for settings and patients creates questions about relevance
- Lack of focus on reducing rather than documenting inequities
- Not assessing or considering impact of social determinants of health or context*
- Focus on average outcomes rather than different subgroups

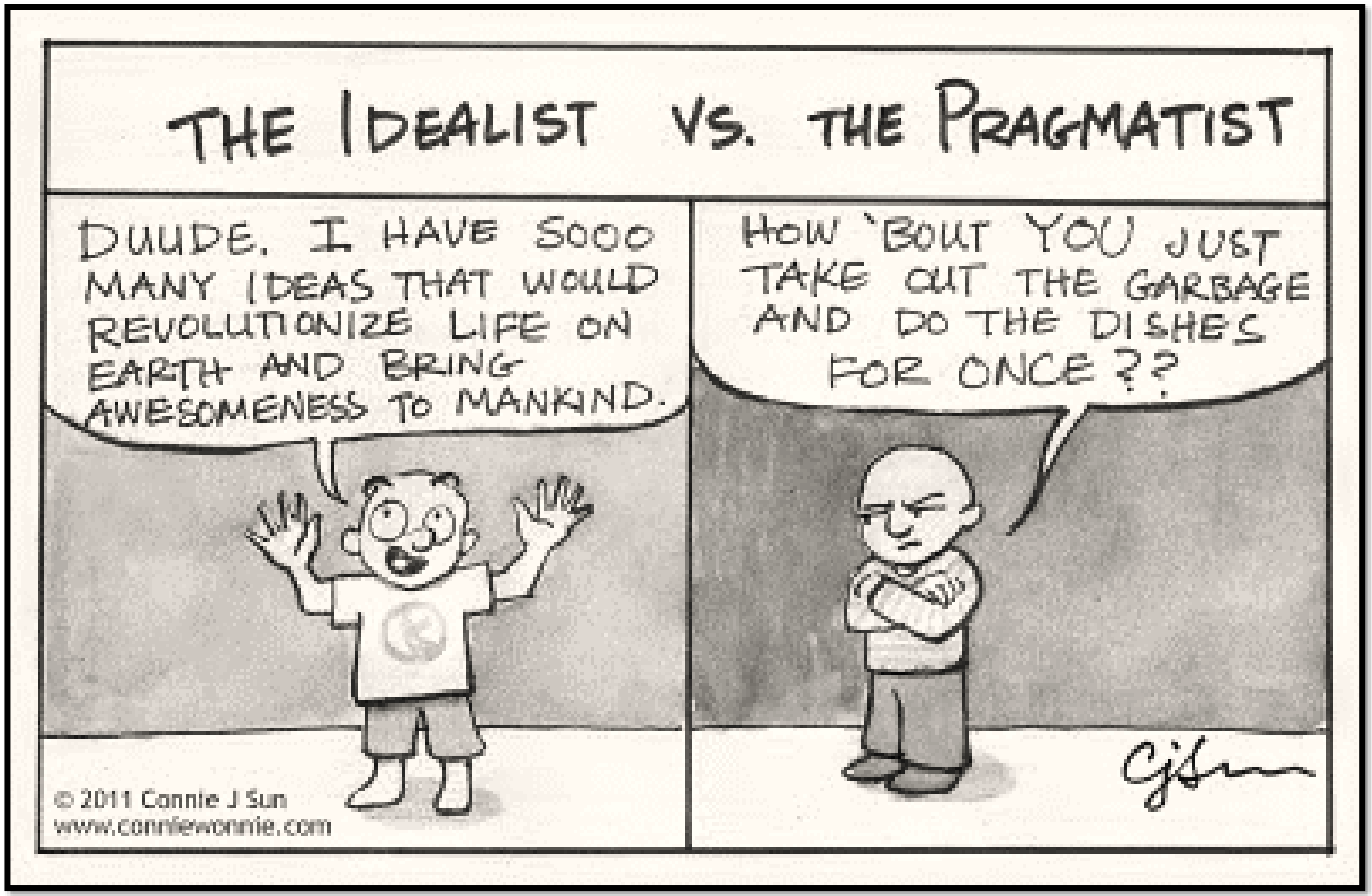
*Rasanathan, K. and Diaz, T. *International Journal for Equity in Health* (2016) 15:202
Starfield, B. Pathways of influence on equity in health. *Social Science & Medicine.* 2007;64(7):1355-1362.

Opportunities to Address Health Inequities

- Problem Identification and Question Specification
- Planning and Design (PRECIS pragmatic methods*)
- Implementation
- Analyses
- Interpretation and Dissemination

*Loudon K, Treweek S, Sullivan F, et al. The PRECIS-2 tool: Designing trials that are fit for purpose. *BMJ*. 2015; 350:h2147.

Pragmatic Research



Problem Identification and Question Specification

- Select a problem where there are important health inequities (not just what is easy to study or you have researched before)
- Consider studying or at least including policies and context
- Study interventions to reduce health inequities, not just more documentation
- Ask more sophisticated questions than just overall effects- e.g., what effects for which subgroups on which outcomes under what conditions over what time period?

*Rasanathan, K. and Diaz, T. *International Journal for Equity in Health* (2016) 15:202

Planning and Design

- Purposively include low-resources settings in sample
- Diversity and variation are good; not to be controlled or minimized
- Research occurs in a multi-level context*
- Specify eligibility, recruitment, and participation at several levels:
  - Setting (worksite, community, clinic)
  - Staff or intervention agent (physician, lay health worker, nurse)
  - Patient and family
  - Choose a Pragmatic Design

*Bayliss EA, Bonds DE, Boyd CM, et al. Understanding the Context of Health for Persons with Multiple Chronic Conditions: Moving from What Is the Matter to What Matters. *Ann Fam Med*. 2014; 12(3): 260-269.

PCTs: Fewer Exclusions Allow for a Broader Subset of Settings, Staff, and Participants

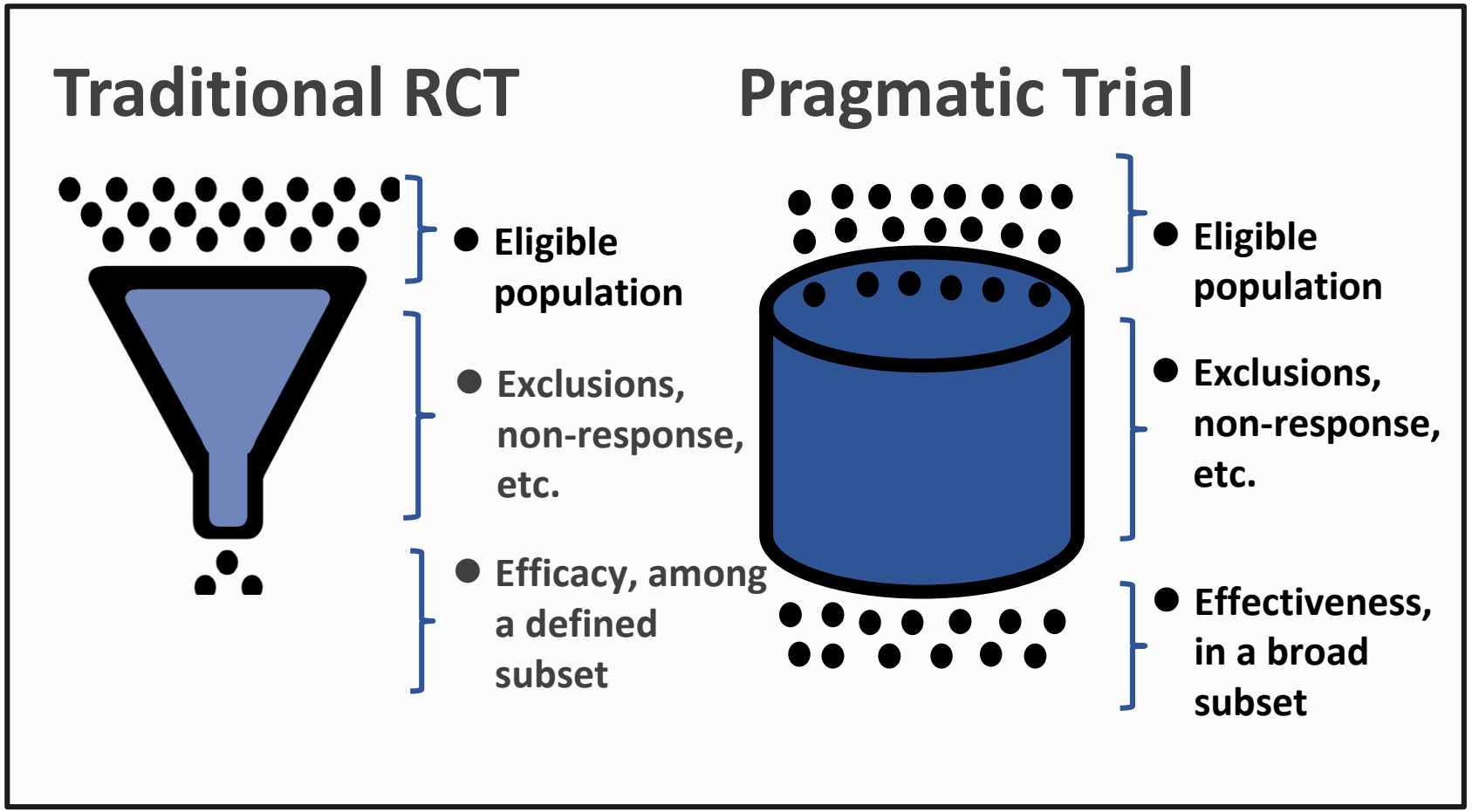
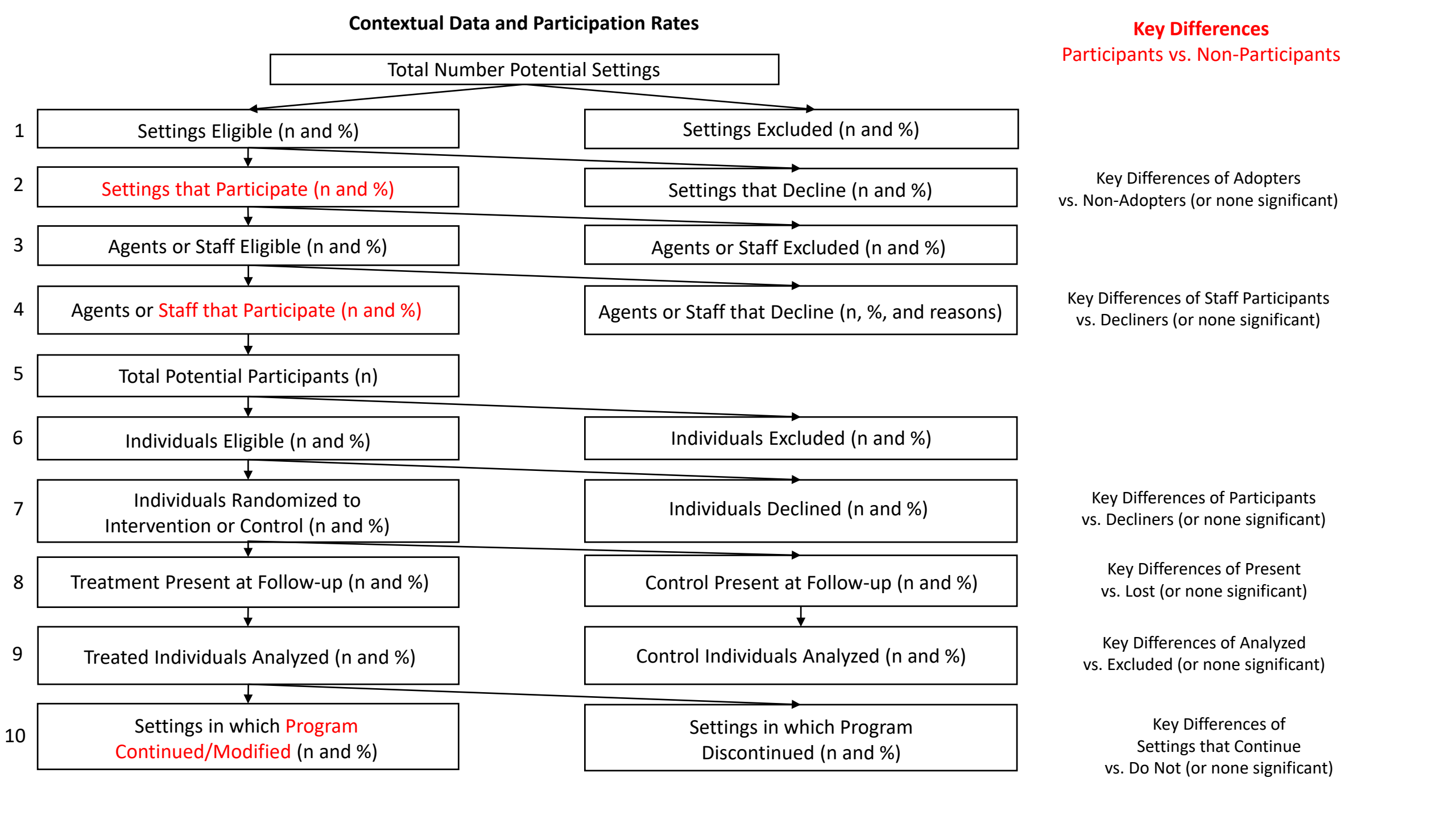


Fig. provided by Gloria Coronado, PhD, Kaiser Permanente Center for Health Research


Contextual Data and Participation Rates
Key Differences
Participants vs. Non-Participants
Total Number Potential Settings
1
Settings Eligible (n and %)
Settings Excluded (n and %)
2
Settings that Participate (n and %)
Settings that Decline (n and %)
Key Differences of Adopters vs. Non-Adopters (or none significant)
3
Agents or Staff Eligible (n and %)
Agents or Staff Excluded (n and %)
4
Agents or Staff that Participate (n and %)
Agents or Staff that Decline (n, %, and reasons)
Key Differences of Staff Participants vs. Decliners (or none significant)
5
Total Potential Participants (n)
6
Individuals Eligible (n and %)
Individuals Excluded (n and %)
7
Individuals Randomized to Intervention or Control (n and %)
Individuals Declined (n and %)
Key Differences of Participants vs. Decliners (or none significant)
8
Treatment Present at Follow-up (n and %)
Control Present at Follow-up (n and %)
Key Differences of Present vs. Lost (or none significant)
9
Treated Individuals Analyzed (n and %)
Control Individuals Analyzed (n and %)
Key Differences of Analyzed vs. Excluded (or none significant)
10
Settings in which Program Continued/Modified (n and %)
Settings in which Program Discontinued (n and %)
Key Differences of Settings that Continue vs. Do Not (or none significant)

Implementation

- Consider and assess costs- to whom, including time and opportunity costs
- Study variability in results-over time, across settings, staff, and subgroups
- Evaluate if tasks can be performed by less expensive staff (work on task shifting from LMICs)
- Study adaptation*- it always happens; need to understand it
- Issues discussed thus far can create IMPACT and population health inequities even if apparent effectiveness is not differential

*Chambers DA, Glasgow R, and Stange KC. The dynamic sustainability framework: addressing the paradox of sustainment amid ongoing change. *Implementation Science.* 2013; 8:117.





RE-AIM—Health Equity Implications

RE-AIM Issue	Disparity	Overall Population Impact
REACH- patient/citizen participation.	30%	70% of benefit
Effectiveness- main outcome	0 (equal)	70% of benefit
ADOPTION- Setting participation	30%	49% of benefit
IMPLEMENTATION- delivery of program or policy	30%	34% of benefit
MAINTENANCE- long term sustainability	30%	24% of benefit

IS Team Presentation on Health Inequities: http://cancercontrol.gov/IS/presentations.html

Analyses

- Consider all levels above- settings, staff, patient/family subgroups when interpreting results and making conclusions
- How generalizable are results?
- Include social determinants of health (e.g., food scarcity, transportation, housing insecurity, violence, social isolation, etc.)
  - These can have main effects, interactions or both

- Analyze for robustness and specificity of effects- not just overall averages
- Power for and analyze specific subgroup effects

Interpretation and Dissemination

- "Design for Dissemination"*- from the outset- do NOT wait until end of study
  - Engage stakeholders- throughout and in ongoing, meaningful level
  - Report what it takes to implement the program- what resources by whom for how long
  - One size does not fit all- need for cultural and local adaptation
  - Provide guides to adaptation and customization to ones setting- cultural, resource, patient population, workflow, etc.

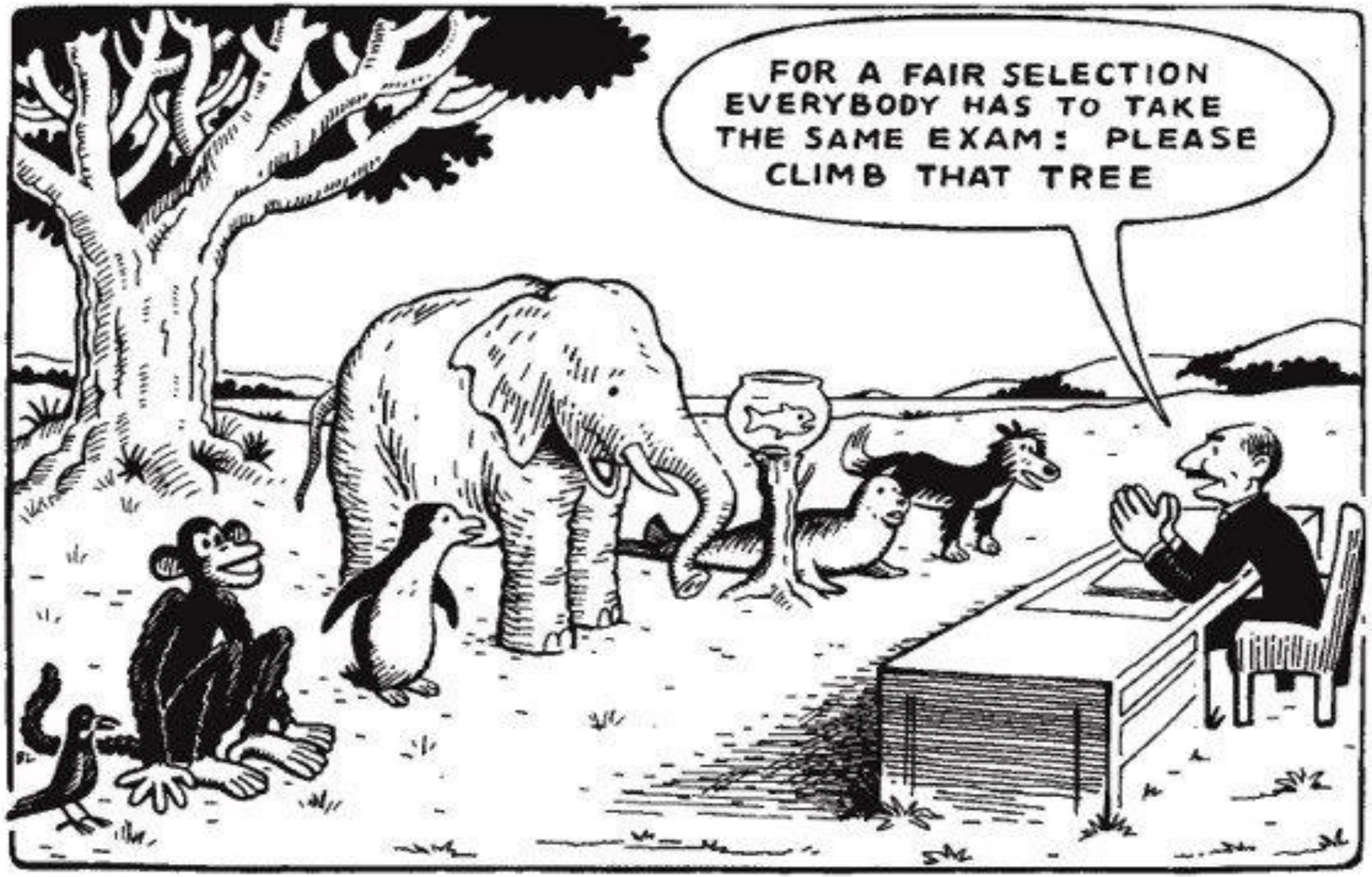
*Gagnon, M. (2011). Moving knowledge to action through dissemination and exchange. Journal of Clinical Epidemiology, 64(1), 25-31.
Klesges, L. et al. (2005). Beginning with the application in mind: Designing and planning health behavior change interventions to enhance dissemination. Annals of Behavioral Med 29 Suppl, 66-75.

Crosscutting Issues

- Consider, study and report context
- Combine quantitative and qualitative methods to give voice to study results
- Consider all levels- broad setting and context, specific setting, delivery staff, patients
- Ask "who participates, who benefits (and who does not), who suffers and who profits?"*
- Most important is transparency- in selection, methods, results, and their application

*Glasgow RE, Fisher, EB, Haire-Joshu D, Goldstein MG. NIH science agenda: A public health perspective. Am J Pub Health, 2007; 97: 1936-1938

It won’t always seem fair….



Key Differences between Traditional RCTs and Pragmatic Controlled Trials (PCTs)

	A TRADITIONAL RCT TESTS A HYPOTHESIS UNDER IDEAL CONDITIONS	A PCT COMPARES TREATMENTS UNDER EVERYDAY CLINICAL CONDITIONS
GOALS	To determine causes and effects of treatment	To improve practice and inform clinical and policy decisions
DESIGN	Tests the intervention against placebo using rigid study protocols and minimal variation	*Tests two or more real-world using flexible protocols & local customization*
PARTICIPANTS	Highly defined and carefully selected	More representative because eligibility criteria are less strict
MEASURES	Require data collection outside routine clinical care	Brief and designed so data can be easily collected in clinical settings
RESULTS	Rarely relevant to everyday practice	Useful in everyday practice, especially clinical decision-making