

Pragmatic Measures and Methods: Approaches Based on the PRISM and RE-AIM Framework

Meredith Fort
Russell Glasgow



Outline

- What do we mean by pragmatic?
- Basics of PRISM and RE-AIM
- Pragmatic measurement issues:
 - General issues
 - PRISM context assessments: quantitative, qualitative and descriptive data
 - RE-AIM outcomes: quantitative, qualitative and descriptive data
 - Capturing equity related factors
- Last words - future directions, needs, cautions and resources
- Q & A

Pragmatic Research

THE IDEALIST VS. THE PRAGMATIST

DUUDE. I HAVE SOOO MANY IDEAS THAT WOULD REVOLUTIONIZE LIFE ON EARTH AND BRING AWESOMENESS TO MANKIND.



HOW 'BOUT YOU JUST TAKE OUT THE GARBAGE AND DO THE DISHES FOR ONCE??



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The 5 R's to Enhance Pragmatism and Likelihood of Translation

Research that is:

- Relevant
- Rapid and Recursive
- Redefines Rigor
- Reports Resources Required
- Replicable

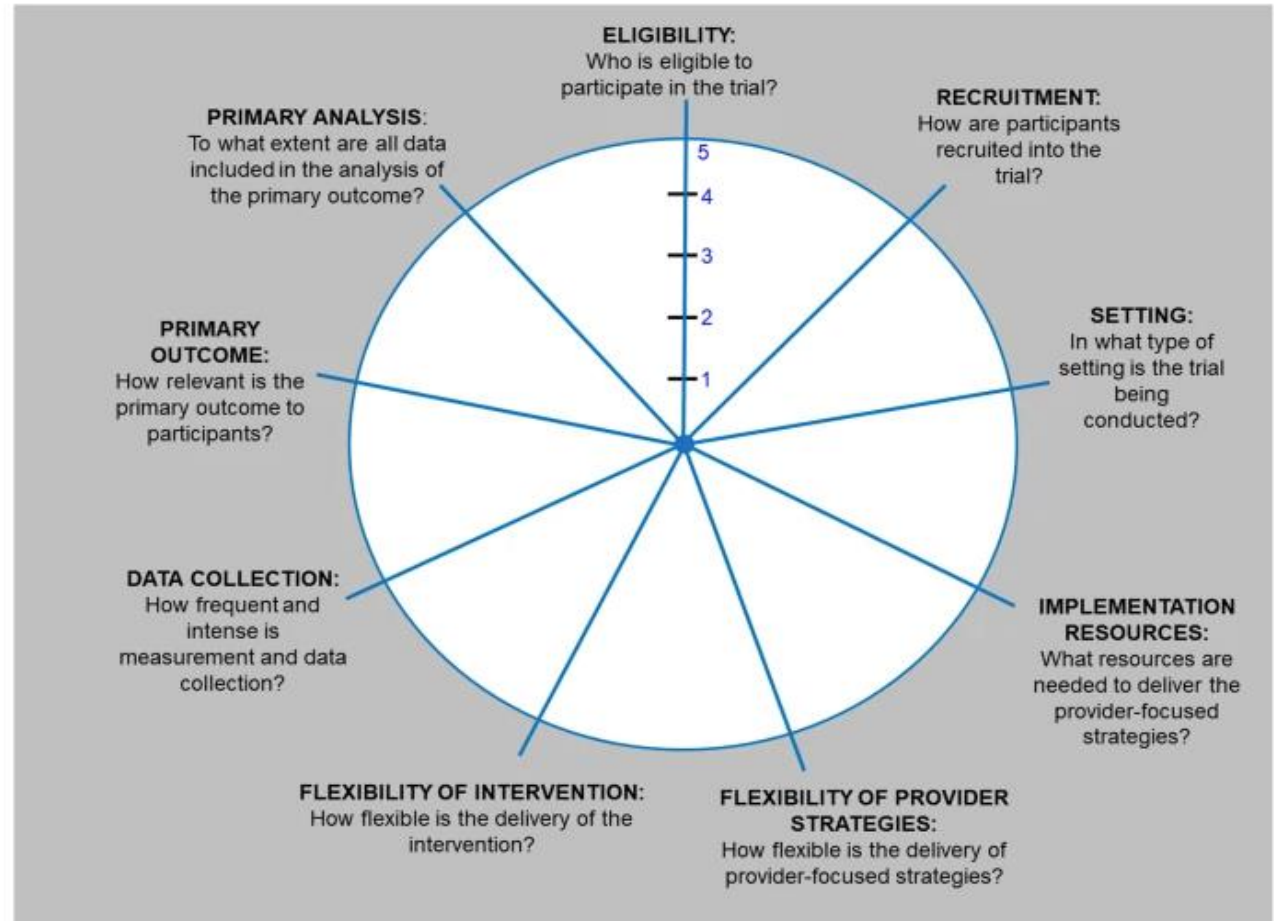


Peek, C.J, et al. (2014). The 5 Rs: An Emerging Bold Standard for Conducting Relevant Research in a Changing World. *Annals Of Family Medicine*, 12(5), 447-55. doi:10.1370/afm.1688

DeGruy, F.V, et al. (2015). A plan for useful and timely family medicine and primary care research. *Family Medicine*, 47(8), 636-42.

PRECIS-2 PS

Fig. 1



Source: Norton, W.E., Loudon, K., Chambers, D.A. *et al.* Designing provider-focused implementation trials with purpose and intent: introducing the PRECIS-2-PS tool. *Implementation Sci* **16**, 7 (2021).

The PRagmatic-Explanatory Continuum Indicator Summary 2 Provider Strategies (PRECIS-2-PS) wheel

(Desired) Characteristics of Pragmatic Measures

1. Required Criteria*

- Important to stakeholders
- Burden is low to moderate and simple to score
- Broadly applicable, has norms to interpret
- Feasible, acceptable,
- Sensitive to change

2. Additional Criteria

- Actionable
- Low probability of harm
- Addresses public health goal(s)
- Related to theory or model
- “Maps” to “gold standard” metric or measure

*Adapted from: Glasgow, RE and Riley, WT. (2013) *Am J Prev Med* 2013;45(2):237–243) and Stanick C, et al *Transl Behav Med* 2021 Feb 11;11(1):11-20.

Example Models: RE-AIM and PRISM = RE-AIM in Context



<https://www.re-aim.org>



Pragmatic Use of RE-AIM- What is Feasible?

RE-AIM Dimension	Key Pragmatic Priorities to Consider and Answer
Reach (Individual Level)	WHO is (was) intended to benefit and who actually participates or is exposed to the 'program' or policy?
Effectiveness (Individual Level)	WHAT is (was) the most important benefit you are trying to achieve and what is (was) the likelihood of negative outcomes?
Adoption (Setting Levels)	WHERE is (was) the program or policy applied WHO applied it?
Implementation (Setting Levels)	HOW consistently is (was) the program or policy <u>delivered?</u> HOW will (was) it be <u>adapted?</u> HOW much will (did) it <u>cost?</u> WHY will (did) the results come about?
Maintenance (Individual and Setting Levels)	WHEN will (was) the program become operational; how long will (was) it be sustained (setting level); and how long are the results sustained (individual level)?

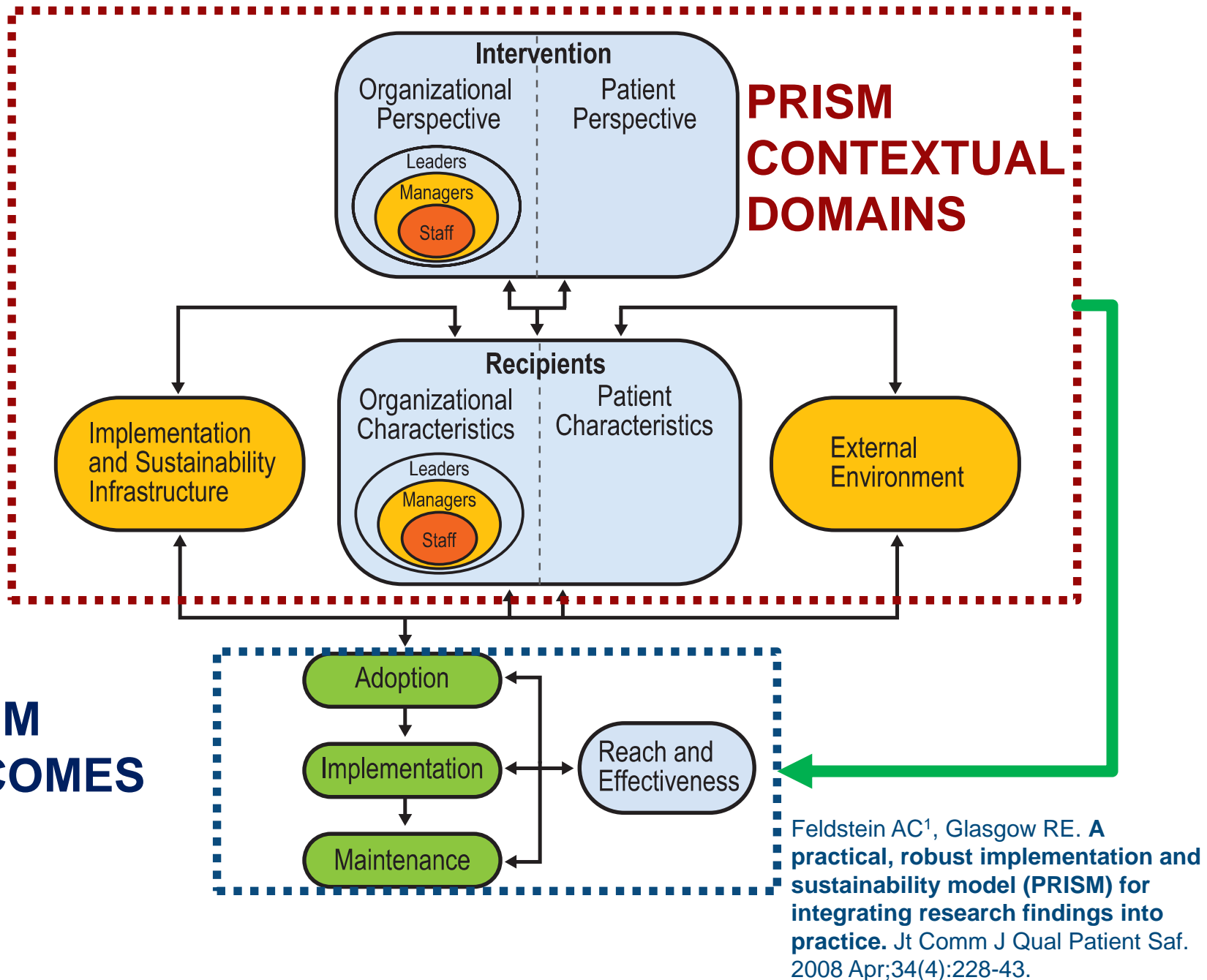
Glasgow RE & Estabrooks, P. *Preventing Chronic Disease*, 2018; 15: E02

RE-AIM Summary Points

- RE-AIM is not a theory, but it tells you where to look; *where things often break down*
- *Pragmatic RE-AIM use involves prioritizing with stakeholders- **do not need to intervene on all dimensions***
- RE-AIM is an outcomes framework that can be used **for planning and evaluation....and iteratively**
- Context is critical- same program has different results under different conditions
- What else?

<https://www.re-aim.org>

RE-AIM OUTCOMES



PRISM context and RE-AIM outcomes: Key points

- PRISM includes RE-AIM- they are not different frameworks
 - PRISM context factors with RE-AIM implementation outcomes
- Context is dynamic- and should be assessed iteratively; as should RE-AIM outcomes
- Usually need to align EBI and/or implementation strategies to context- may need to change context
- PRISM/RE-AIM are multilevel

Chambers, D.A., Glasgow, R.E. & Stange, K.C. The dynamic sustainability framework: addressing the paradox of sustainment amid ongoing change. *Implementation Sci* 8, 117 (2013).

PRISM Survey Context Assessment

Responses recorded on a six-point scale
See attached survey for complete set of measures



Practical, Robust Implementation and Sustainability Model



PRISM Survey Context Assessment



- Area 1: Program Characteristics
- Area 2: Recipient Characteristics – patients or community members
- Area 3: Recipient Characteristics – organizational (setting) stakeholders
 - How well does your current program **align** with the **characteristics** of the organizational **stakeholders**?
- Area 4: Implementations and Sustainability Infrastructure
- Area 5: External Environment

**Complete set of measures can be found on the attachment

PRISM descriptive data: Data sources used to capture PRISM domains within a type 2 hybrid trial

- **REDCap:**

- Baseline setting-level characteristics (2018)
- Participant forms
- Medication availability (monthly: health post and center levels), BP monitors
- Extent of implementation:
 - Team-based collaborative care meetings
 - Supervision visits
 - Health coaching sessions
 - Home BP monitoring

- **Records from healthcare provider training:** attendance, knowledge (pre and post), certification

- **Interviews and observations** (context, implementation, sustainability)

- Pre-implementation (2018)
- 2020 (Zacapa, Chiquimula and Baja Verapaz)
- 2021 (Zacapa, Chiquimula and Baja Verapaz)
- 2022 (Sololá and Huehuetenango, Central level MOH)

- **Census** (2018 data): Representativeness

- **Setting-level data capture** (updated forms from baseline/needs assessment): 2022 (representativeness, capacity, and scalability potential)



RE-AIM Impact Assessment- via survey

Responses recorded on a six-point scale
See attached survey for complete set of measures



Area 1: Adoption

The number and percent of those **settings** (e.g., clinics, schools) and **staff** invited that agree to participate in a program.

1. To what extent is the XXXX program being adopted by a high percentage of the intended **settings**?

Adoption Representativeness: Considers if those **settings** and **staff** with the fewest resources and serving socially and economically disadvantaged clientele participate as much as other settings.

1. To what extent is the XXXX program being adopted by a high percentage of the intended **settings**?

**Reach, Effectiveness, and Maintenance found on attached full set of measures along with complete set for Adoption and Implementation

Area 2: Implementation

Implementation describes how the program is delivered and is concerned with fidelity to core functions (or components), adaptations to the program, and the costs and resources required.

1. To what extent are the core functions (or components) of the XXXX program being **delivered with high quality**?
2. To what extent is the XXXX program being **adapted as needed to fit** your setting?
3. To what extent are the **costs and resources** needed to deliver the program feasible for your setting?

****Reach, Effectiveness, and Maintenance** found on attached full set of measures along with complete set for Adoption and Implementation

RE-AIM Qualitative Assessment: Key Tips

- Qualitative methods help understand the how and why for individual RE-AIM dimensions and patterns across dimensions
- Consider qualitative assessment at multiple time points:
 - Pre-implementation (to understand context and priority needs),
 - During implementation (to understand or guide adaptations, improve reach or adoption, support increase in equity etc.), and
 - Evaluation/sustainment phases (to explain/interpret effectiveness and the implementation experience)
- Prepare interview guides for different kinds of actors (e.g. community members, participants, family members, implementation staff, policymakers)
- Combine methods (e.g. interviews, observation, implementer journals, reflections during meetings, etc.)

Holtrop JS, Rabin BA, Glasgow RE. Qualitative approaches to use of the RE-AIM framework: rationale and methods. BMC Health Serv Res. 2018;18(1):177. doi: 10.1186/s12913-018-2938-8.

Addressing Health Equity with PRISM/RE-AIM

- **Engagement:** build relationships with community partner organizations and members, those who are expected to benefit from the intervention.
- **Representation:** elevate underrepresented voices on the research team and as partners.
- **Context:** understand deep-rooted inequities and how they may be addressed. Recognize dynamic nature of context.
- **Reach and Representativeness:** assess who is participating, who is not, and why the intervention is missing certain people/sites
- **Effectiveness:** Expand assessment beyond individual-level behavioral and clinical outcomes.
- **Implementation:** address inequities in delivery (e.g., access, language, technology, etc.). Targeted universalism. Support equity-enhancing adaptations.
- Promote **assessment of equity** over the long-term (implementation and sustainability infrastructure).

Phone calls to participants to understand effects of COVID-19



Hernández-Galdamez D, et al. Monitoring Study Participants and Implementation with Phone Calls to Support Hypertension Control During the COVID-19 Pandemic: The Case of a Multicomponent Intervention Trial in Guatemala. *Global Heart*. 2021; X(X): X. DOI: <https://doi.org/10.5334/gh.954>

ORIGINAL RESEARCH

Monitoring Study Participants and Implementation with Phone Calls to Support Hypertension Control During the COVID-19 Pandemic: The Case of a Multicomponent Intervention Trial in Guatemala

Diego Hernández-Galdamez¹, Kristyne Mansilla¹, Ana Lucía Peralta¹, Javier Rodríguez-Szaszdi¹, Juan Manuel Ramírez¹, Dina Roche¹, Pablo Gulayin², Manuel Ramirez-Zea¹, Jiang He³, Vilma Irazola² and Meredith P. Fort^{4,5}

¹ INCAP Research Center for the Prevention of Chronic Diseases (CIIPEC), Institute of Nutrition of Central America and Panama (INCAP), Guatemala City, GT

Changing context can reduce and enhance equity: Challenges to implementation during COVID

Health coaching sessions	Total (%)
Participants who received at least 1 session in the last 3 months (Summer 2020)	423 (62.48%)
<u>Reasons for not having received the session</u>	
Lack of time	52 (20.47%)
Do not want to leave home due to the risk of COVID 19 infection.	31 (12.20%)
Lack of transportation due to COVID-19 restrictions	101 (39.76%)
Lack of money to pay for transportation	3 (1.18%)
Forget the appointments	23 (9.06%)
Do not like the sessions	7 (2.76%)
Auxiliary nurses concerned about giving the health coaching session in-person	95 (37.40%)
Other	39 (15.35%)

* In response to restricted access due to COVID: medication delivery to patients' homes, flexibilities to allow family members to pick up medications, etc.

Sources: Hernández-Galdamez D et al., *Global Heart*, 2021; Paniagua-Avila, analysis in progress.

There are equity
issues at EACH
STAGE of the
RE-AIM process:
**Representation and
Representativeness**

Reach

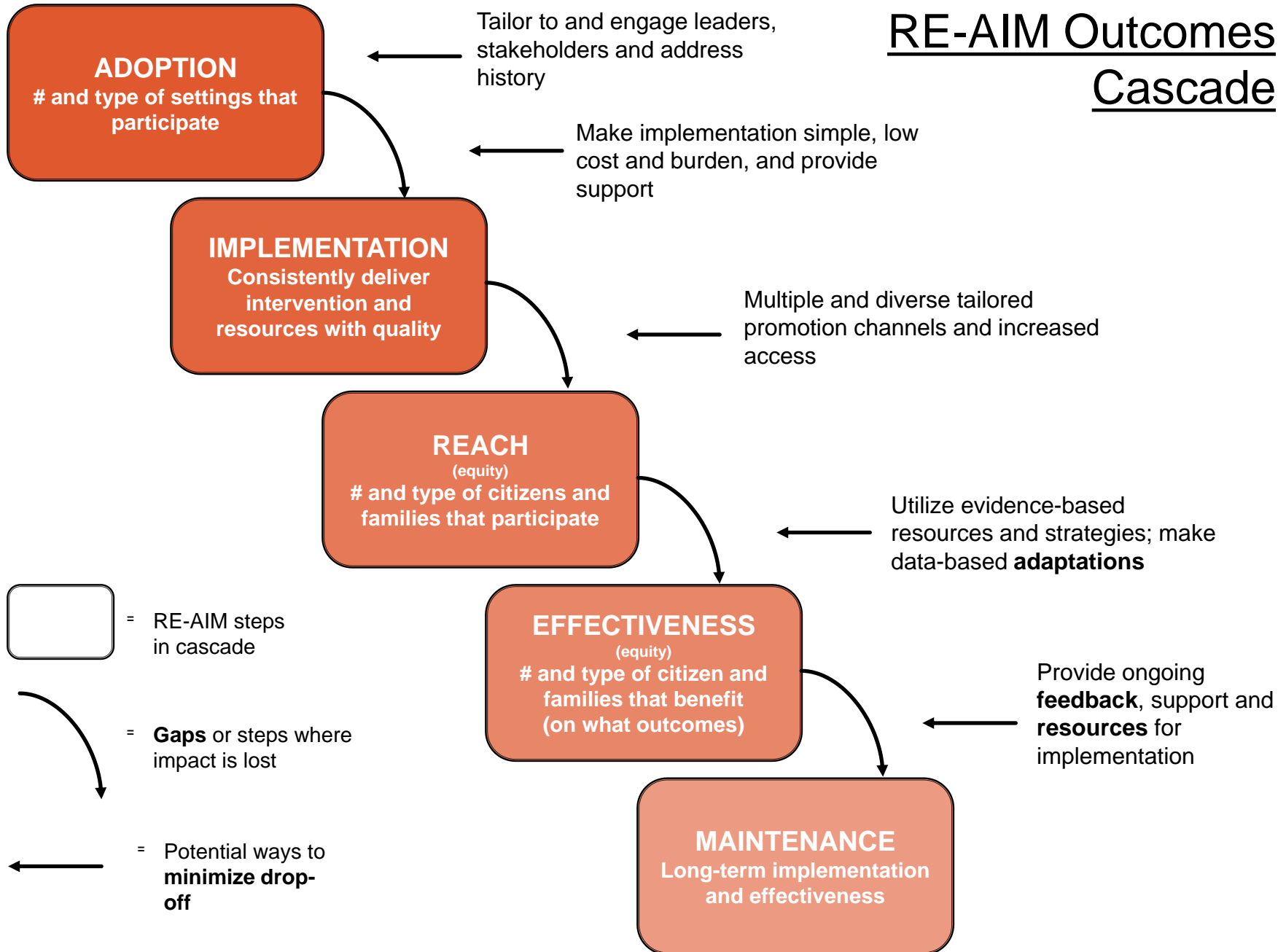
Effectiveness

Adoption

Implementation

Maintenance

RE-AIM Outcomes Cascade



Final Thoughts, Resources and Take Away Points

- Always best to use ***mixed methods*** to triangulate and better understand results- each has strengths and limitations
- ***Context is critical-*** and can be everything- PRISM is one way to pragmatically identify 6 key contextual factors related to RE-AIM outcomes
- Need to work with partners to identify priority RE-AIM issues- do ***not need to address all issues- focus on representation***
- Remember each RE-AIM dimension has equity issues involved- focus on ***representativeness (equity) on each outcome***
- Future is about rapid, iterative pragmatic use

Questions for Discussion

- What are the pros and cons of pragmatic measures?
- What challenges have you had applying PRISM and RE-AIM?
- References for resources on pragmatic measures and survey items for PRISM and RE-AIM questions are available in the handout for this session

Moving from Pragmatic to Rapid

- Iterative PRISM/RE-AIM

How do you use Iterative RE-AIM?

Iterative RE-AIM is a 4-step process to:

1. **Identify** and decide upon your team, the Iterative RE-AIM process leader, and the project goals and outcomes
2. **Score** your project with your team on the importance and progress on each RE-AIM dimension at that point in time
3. **Review** and discuss scores and identify 1-2 areas to prioritize adaptations with SMART goal action plans
4. **Evaluate** progress- and repeat as needed

Types of Adaptations – Cultural; Resources; AND Local: *ALL WITH AND DRIVEN BY RESEARCH PARTNERS*

Focus of Adaptation	Timing of Adaptation (point in the project)		
	Planning	During	Sustainment-Dissemination
Intervention			
Implementation Strategy			
Setting			