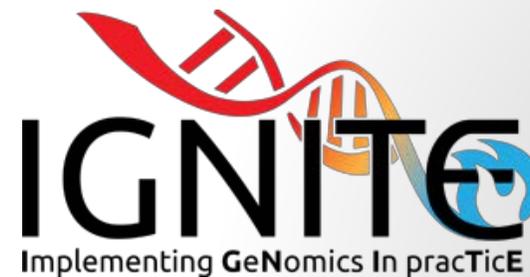




Frameworks Models and Genomic Medicine

Lori A. Orlando, MD MHS



Implementation Research

Implementations without structure provide no guidance on implementation in other settings–

- Lack generalizability
- Lack sustainability

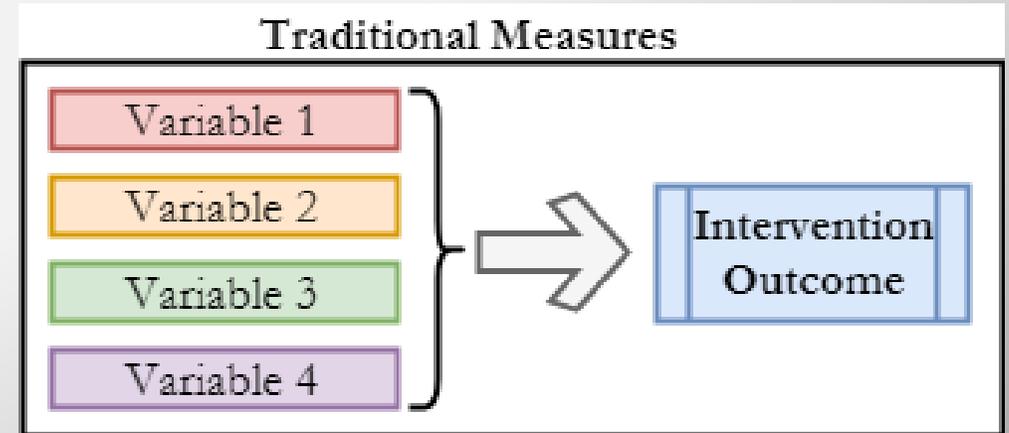
**ONE-OFF
SOLUTION**

Example: Central Line Infections

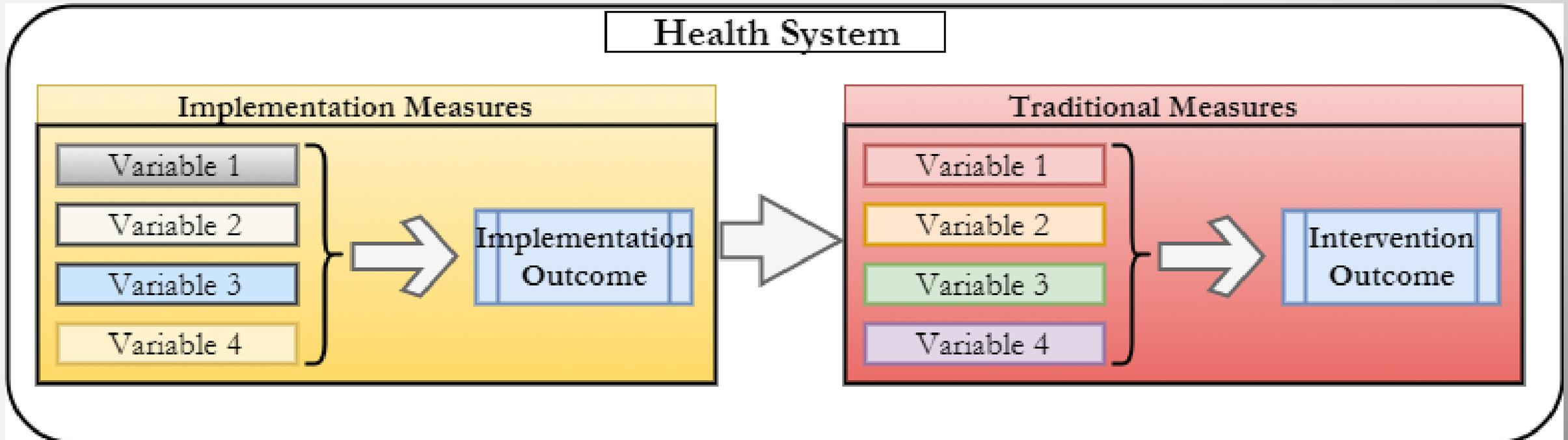
- Peter Pronovost's ICU checklist (NEJM 2006)
- 108 ICUs in Michigan
- Catheter related infections decreased by 80% at all sites



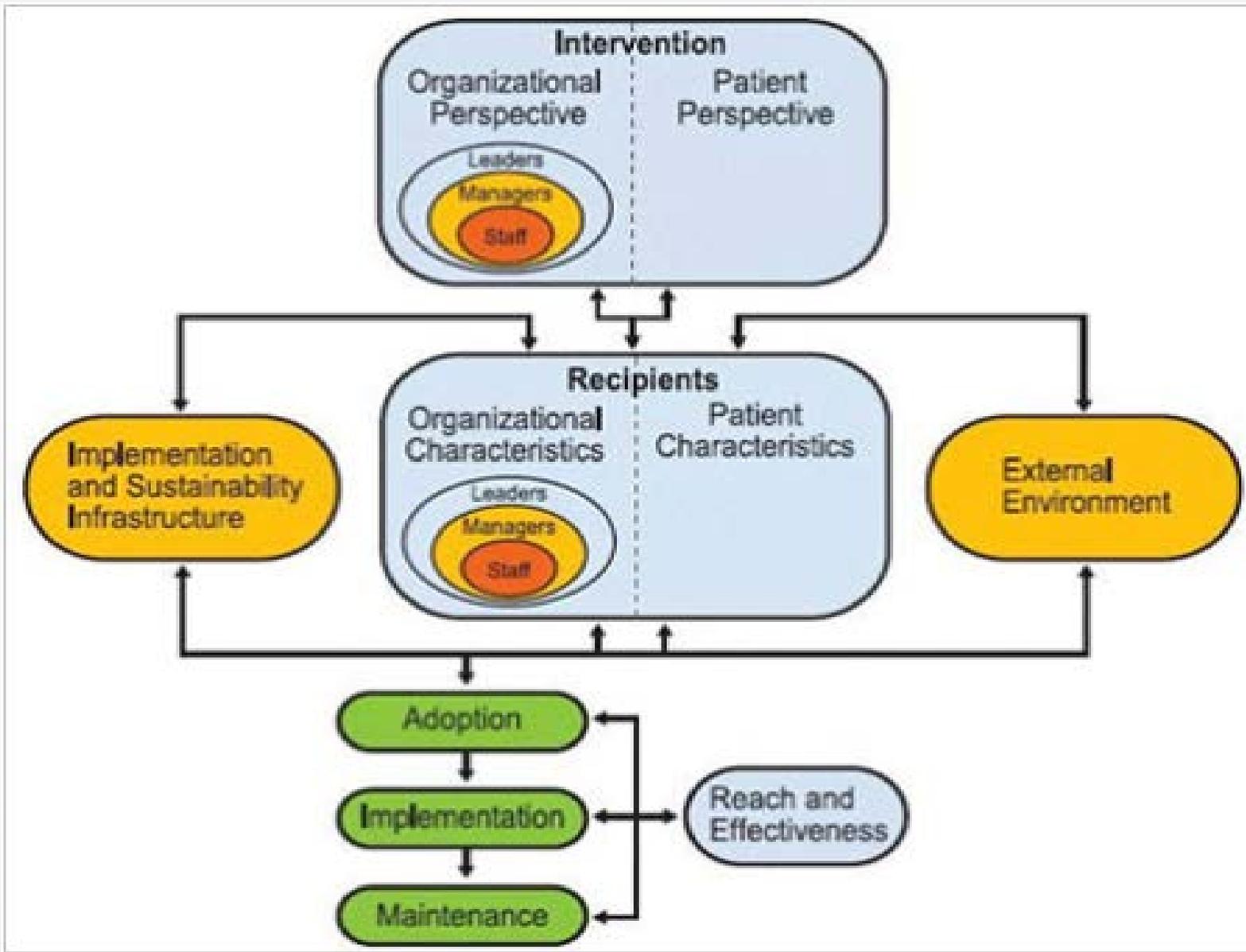
How You Get to Outcomes is Important



How You Get to Outcomes is Important



Practical, Robust Implementation and Sustainability Model (PRISM)



Source: Feldstein & Glasgow, 2008

<https://www.fic.nih.gov/About/center-global-health-studies>

Promoting Action on Research Implementation in Health Services (PARIHS) Framework

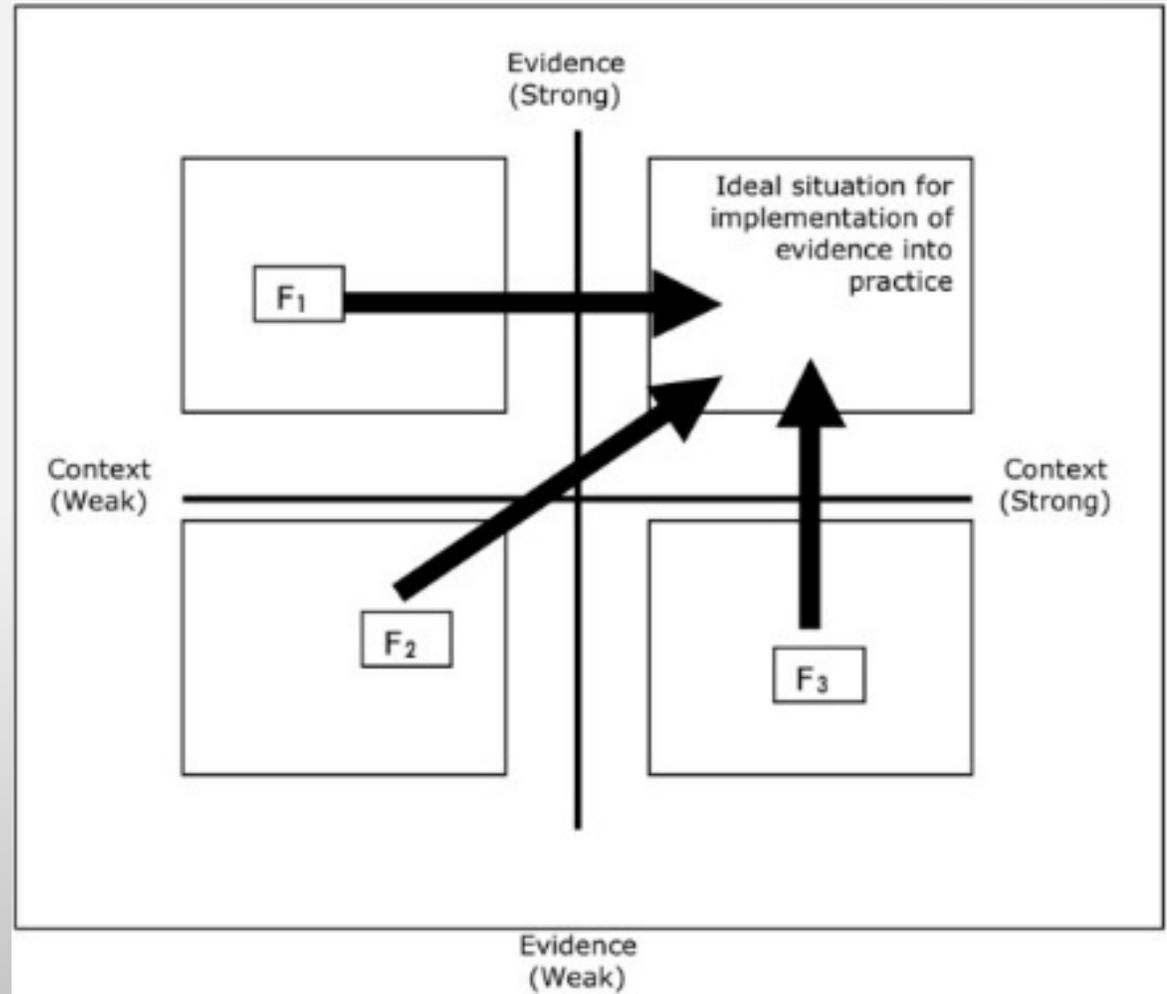
Published guide

(Stetler in Imp Sci 2011)

Evaluating the successful implementation of evidence into practice using the PARIHS framework: Theoretical and practical challenges - Scientific Figure on ResearchGate.

Available from:

https://www.researchgate.net/The-PARiHS-Diagnostic-and-Evaluative-Grid_fig1_5670027 [accessed 27 Aug, 2018]



RE-AIM

Development and application of the RE-AIM QuEST mixed methods framework for program evaluation

Author links open overlay panel
Jane Forman
Michele Heisler
Laura

J. Damschroder
Elizabeth Kaselitz
Eve A. Kerr
ab

Show more

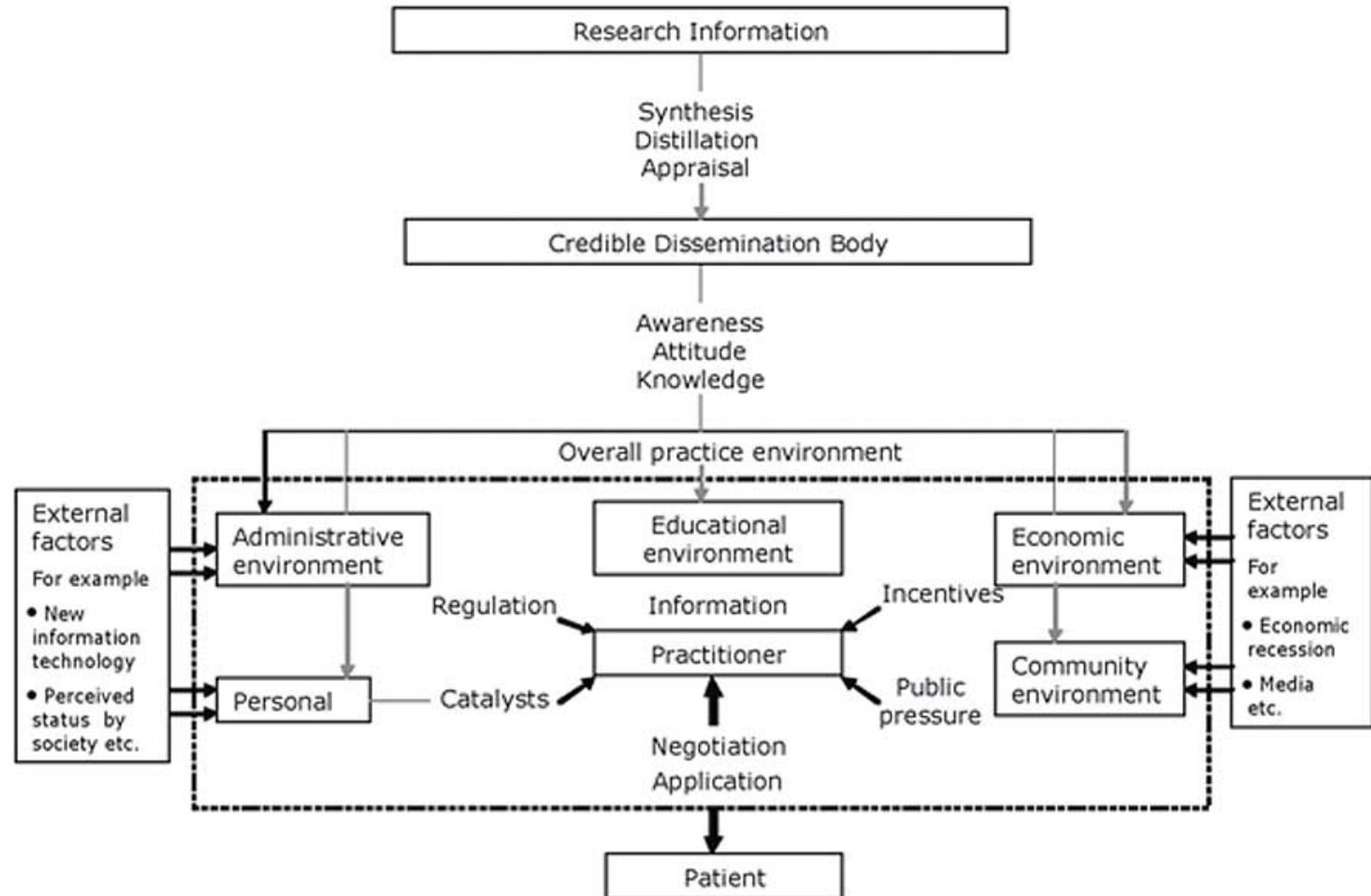
<https://doi.org/10.1016/j.pmedr.2017.04.002>

Dimension	
Reach	Number, percentage and representativeness of eligible patients who participated in the intervention. •Is the intervention reaching the target population? Those most in need?
Effectiveness	Intervention effects on targeted outcomes, •Does the intervention accomplish its goals?
Adoption	Number, percentage and representativeness of participating settings and providers. •To what extent are those targeted to deliver the intervention participating?
Implementation	The extent to which the intervention was consistently implemented by staff members.
Maintenance	The extent to which an intervention becomes part of routine organizational practices, and maintains effectiveness.

Coordinated Implementation Model

Knowledge translation

to transfer research knowledge into practice must take into account the views, activities, and available implementation instruments of at least four potential groups. Those include community interest groups, administrators, public policymakers, and clinical policymakers.



Precede- Proceed Model

Predisposing, Reinforcing and Enabling Constructs in Educational Diagnosis and Evaluation (PRECEDE) – Policy, Regulatory and Organizational Constructs in Educational and Environmental Development (PROCEED)

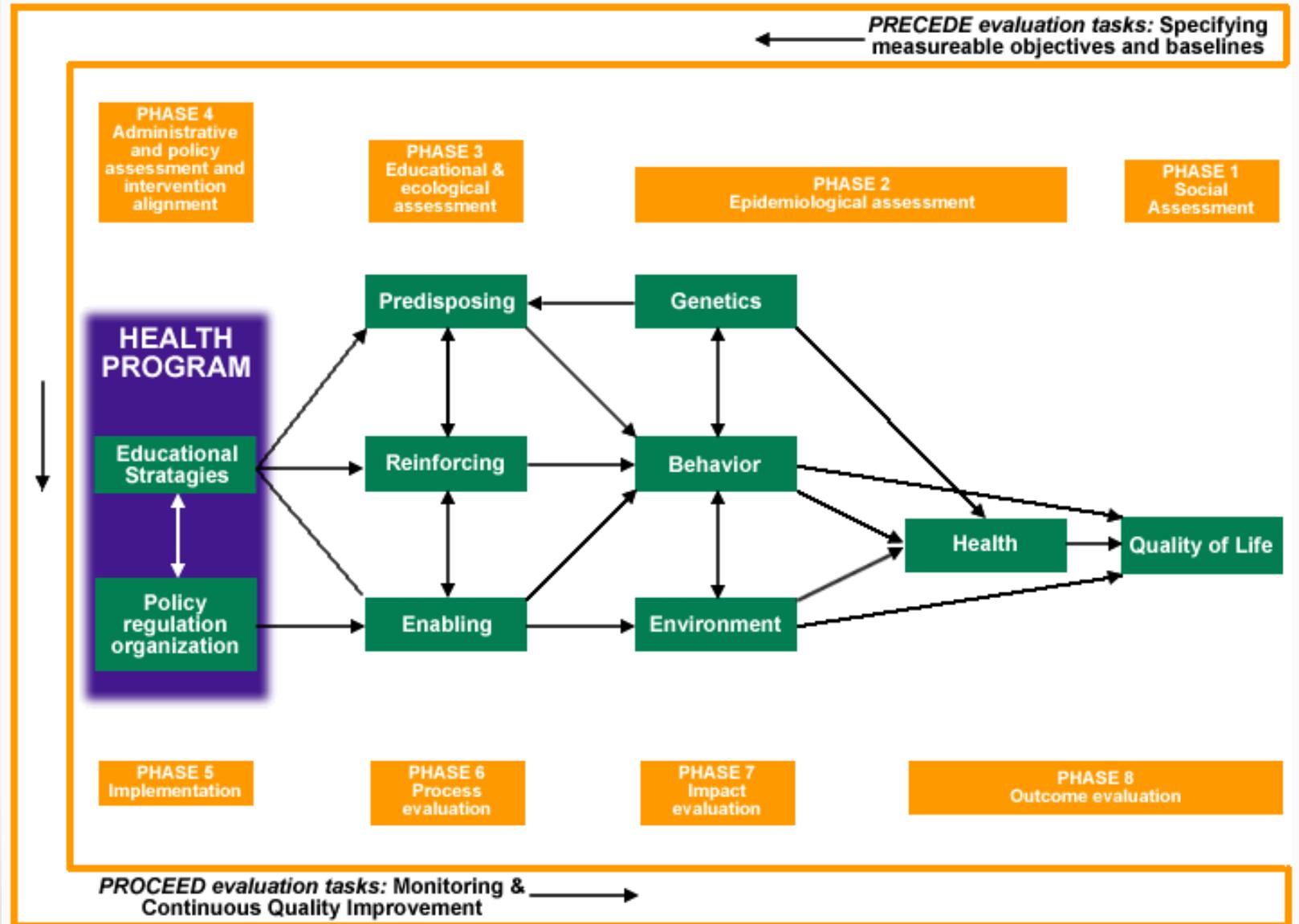


FIGURE 1. GENERIC REPRESENTATION OF THE PRECEDE-PROCEED MODEL. FROM L. GREEN AND M. KREUTER. (2005). HEALTH PROMOTION PLANNING: AN EDUCATIONAL AND ECOLOGICAL APPROACH (4 TH ED.). MOUNTAIN VIEW , CA : MAYFIELD PUBLISHERS.

Implementing Genomics in Practice (IGNITE)

- 6 Projects with different genomic interventions
- Implement in at least one community partner
- Create shared knowledge
- Facilitate knowledge transfer

IGNITE
Implementing GeNomics In practice

TOOLBOX PUBLICATIONS NEWS EVENTS NETWORK ABOUT IGNITE SEARCH

Get Started

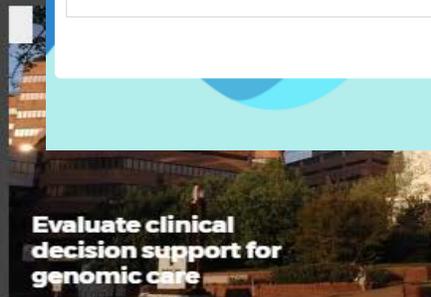
Implementing Genomics in Practice?
Search **Clinical** Tools

Search...

Researching Genomics in Practice?
Search **Research** Tools

Search...

Research Goals



Consolidated Framework for Implementation Research (CFIR)

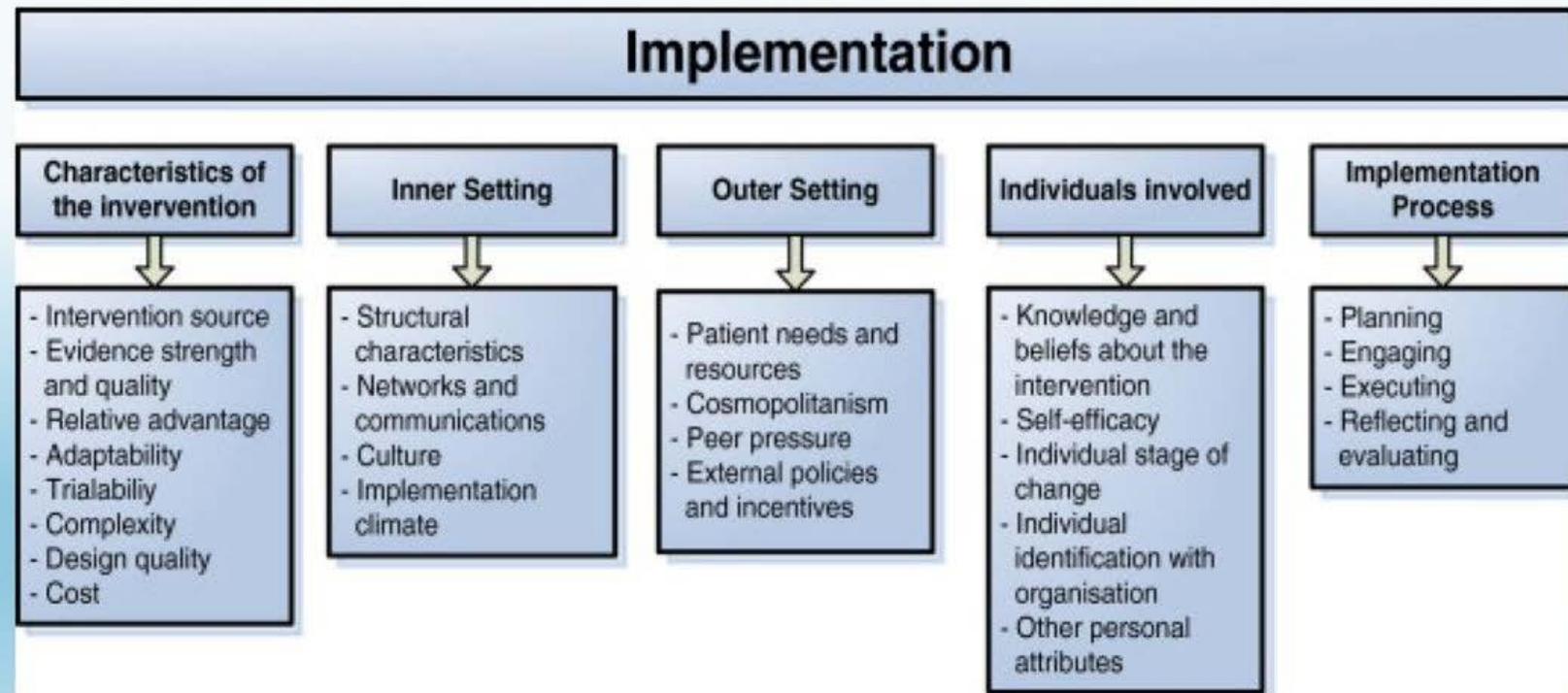
The Consolidated Framework for Implementation Research (CFIR)

Overall:

26 constructs

13 sub-constructs

Derived from 19 published implementation models



(Damschroder LJ, et al ;2009)

CFIR Constructs Ranked for Genomic Medicine

- Intervention: costs
- Intervention: evidence strength & quality
- Implementation Readiness: Available resources
- Implementation Readiness: Leadership Engagement
- Engaging: Champions

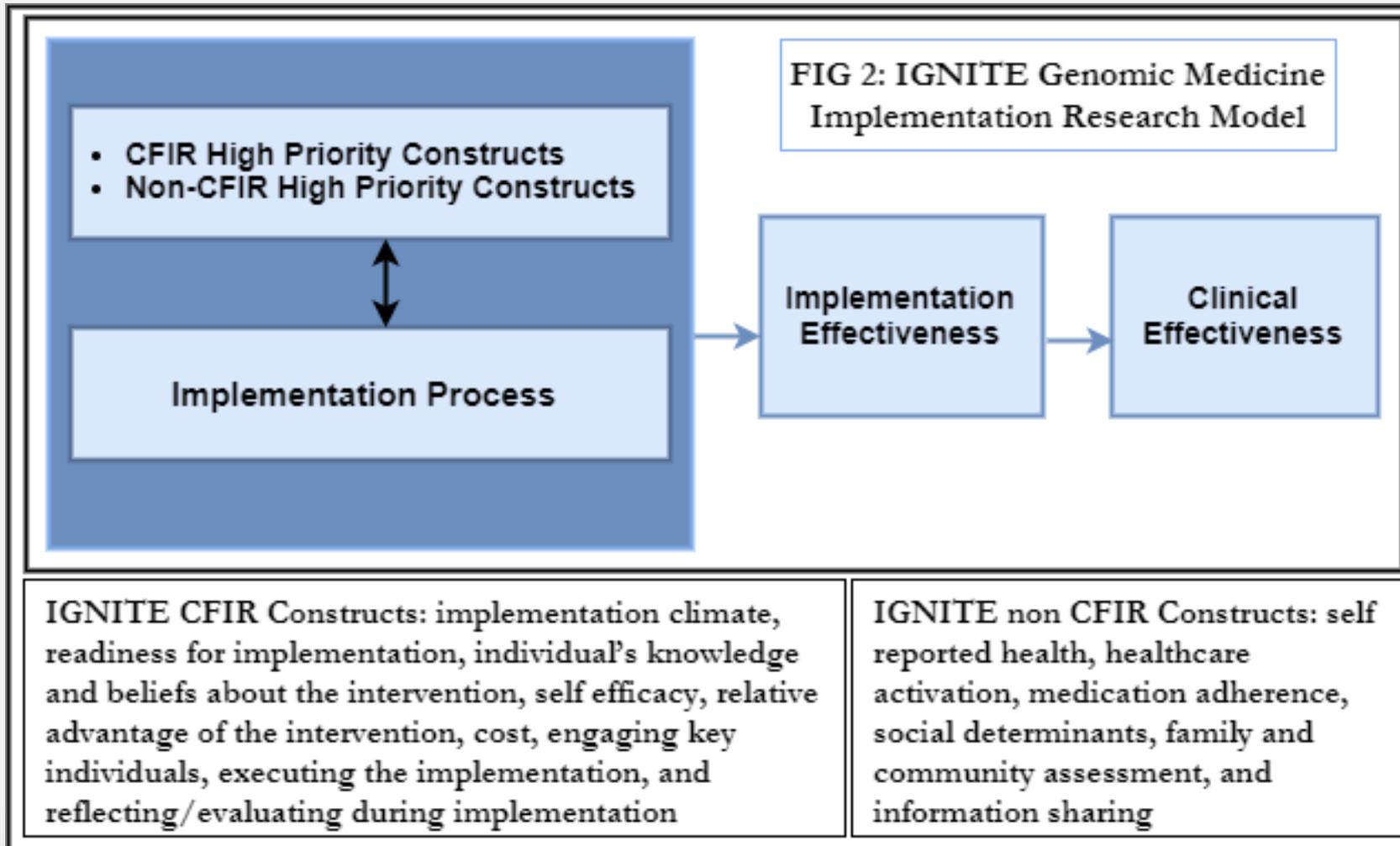
- Intervention: relative advantage
- Intervention: adaptability
- Intervention: complexity
- Outer Setting: patient needs & resources
- **Implementation climate**
- Implementation climate: relative priority
- Engaging: Internal implementation leaders
- Process: planning
- Process: executing

NON-CFIR Constructs for Genomic Medicine

Patient Measures

- Demographics
- Self Reported Health
- Healthcare Activation
- Social Determinants of Health
- Information Sharing
- Health literacy
- Family and community assessments
- Attitude toward genomic intervention
- Preference for who returns results
- More to come.....

Draft Genomic Medicine Implementation Research Model



Additional Benefits

- Increases reach of the intervention ... generalizability
- Increases effectiveness of the intervention
- Provides a broader frame for assessing health disparities

Dissemination and Implementation Models

Dissemination & Implementation Models in Health Research & Practice

Need Help?

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This interactive website was designed to help researchers and practitioners to select the D&I Model that best fits their research question or practice problem, adapt the model to the study or practice context, fully integrate the model into the research or practice process, and find existing measurement instruments for the model constructs. The term 'Models' is used to refer to both theories and frameworks that enhance dissemination and implementation of evidence-based interventions more likely.

Select

Search, view, and select
D&I Models

Adapt

Read strategies for
adapting D&I Models to
research or practice
context

Integrate

Read strategies for
incorporating D&I Models
into the full spectrum of
your project

Measure constructs

Find a list of constructs
and links to measurement
tools associated with the
D&I Models

<http://www.dissemination-implementation.org>



 **LiveSlides** web content

To view

Download the add-in.

liveslides.com/download

Start the presentation.

Summary

- Including system measures with traditional measures and outcomes will help create sustainable interventions
- Implementation models and frameworks can be adapted to meet the needs of the genomic medicine community
- Draft Genomic medicine implementation research model is available and we are looking for opportunities to refine it