

- Bethany Kwan, PhD, MSPH
- May 26, 2021









Colorado Clinical and Translational Sciences Institute (CCTSI)

UNIVERSITY OF COLORADO DENVER | ANSCHUTZ MEDICAL CAMPU

# COPRH Con Evidence Life Cycle

#### Phase I:

Pragmatic research conceptualization, planning, & getting funded

#### Phase IV:

De-implementation of ineffective or supplanted evidence

#### Phase II:

Conduct and implementation of pragmatic research

#### Phase III:

Dissemination, implementation, and sustainment of evidence-based practice in real-world clinical and public health settings







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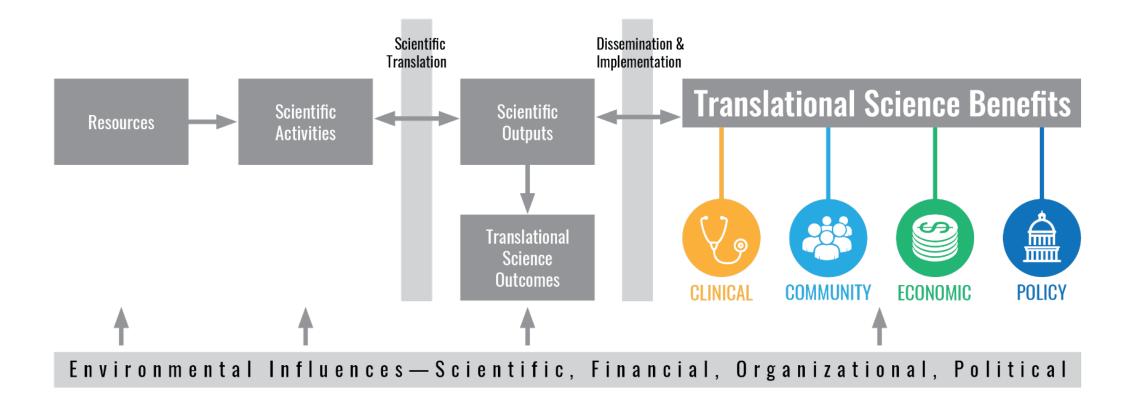






Table 2. Planned COPRH Content: Evidence Life Cycle Highlighted Over Years 1-3				
Year 1 Theme: Methods for <u>Planning</u> Pragmatic Research	Year 2 Theme: Methods for Conduct and Implementation	Year 3 Theme: Methods for Sustainability and Dissemination		
<ul> <li>Planning Frameworks and Models</li> <li>Pragmatic Trial Design</li> <li>Randomized Designs</li> <li>Natural Experiments</li> <li>Hybrid Designs</li> </ul>	<ul> <li>Implementation and Adaptation Frameworks</li> <li>Implementation Strategies</li> <li>Implementation Measures</li> <li>Feasibility Trials</li> </ul>	<ul> <li>Dissemination and Sustainability Frameworks</li> <li>Dissemination and Sustainability Strategies</li> <li>De-Implementation and Sustainability Trials</li> </ul>		
Beginner Pragmatic Methods				
Stakeholder Engagement Inte	Pragmatic Trial Conduct & Ethics <sup>55</sup> ermediate-Advanced Pragmatic Meth	Reporting Pragmatic HSR <sup>56</sup>		
Qualitative and Mixed Methods	Data Science and Analytics	Economic and Cost Analysis <sup>57</sup>		

# Ensuring Equitable Impact of Pragmatic Research: Dissemination, Sustainability, and De-Implementation







## Health Equity or Bust

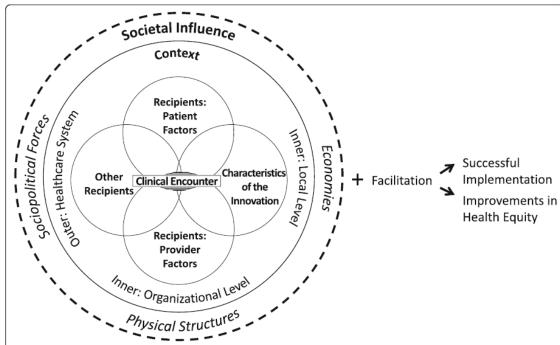


Fig. 1 The Health Equity Implementation Framework explains factors relevant to implementation and disparities in healthcare. In this framework, the innovation is delivered in the clinical encounter. We posit that the clinical encounter is an interaction between recipients (e.g., patient and provider) and the innovation itself (e.g., HIV prevention medication), although the interaction could occur in other settings (e.g., between patient and peer navigator). The Health Equity Implementation Framework identified healthcare system factors, broadly, which most closely aligned with the outer context in i-PARIHS. i-PARIHS specified two other levels within context inner (local—clinic or unit or ward) and inner (organizational—hospital or network). In the Health Equity Implementation Framework, we highlight that societal influence is especially important to consider when assessing all other factors because of the impact society can have on healthcare disparities. Implementation facilitation, or facilitation, is an essential active process to ignite change to any of the elements or factors

Woodward EN, Matthieu MM, Uchendu US, Rogal S, Kirchner JE. The health equity implementation framework: proposal and preliminary study of hepatitis C virus treatment. Implementation Science. 2019 Dec;14(1):1-8.

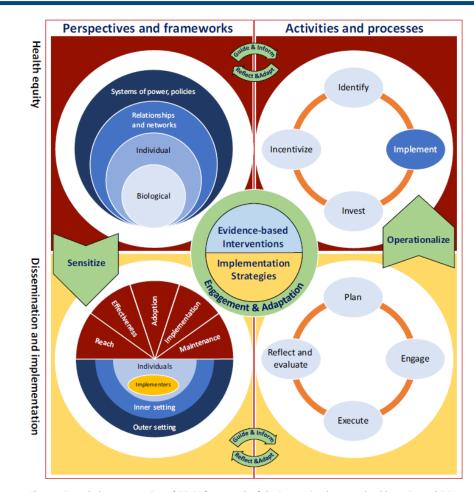


Fig. 2. Extended representation of EQ-DI framework of the interaction between health equity and D&I.



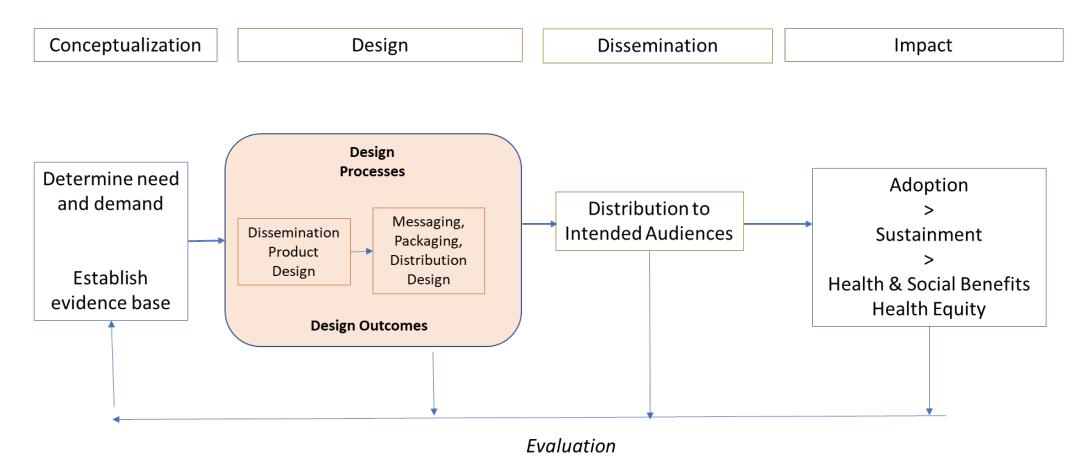




Yousefi Nooraie R, Kwan BM, Cohn E, AuYoung M, Clarke Roberts M, Adsul P, and Shelton RC. (2020) Advancing health equity through CTSA programs: Opportunities for interaction between health equity, dissemination and implementation, and translational science. Journal of Clinical and Translational Science 4: 168–175. doi: 10.1017/cts.2020.10

# Designing for Dissemination and Sustainability

Designing for Dissemination, Sustainability, and Impact Organizing Schema











### **Design Processes**



Context and situation analysis

Marketing and business approaches

Systems and Complexity Science

Application of D&I Frameworks for Planning for Dissemination

Communication and the Arts









### User-Centered and Collaborative Design



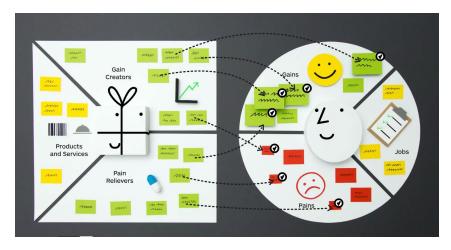








### Messaging, Packaging, and Distribution



https://www.strategyzer.com/canvas/value-proposition-canvas

bootcamptranslation.org/#:~:text=Boot%20Camp%20Translation%20(BCT)%20is,and%20engaging%20to%20community%20communit







# Reframing the Dissemination Challenge: A Marketing and Distribution Perspective

Matthew W. Kreuter, PhD, MPH, and Jay M. Bernhardt, PhD, MPH

A fundamental obstacle to successful dissemination and implementation of evidence-based public health programs is the near-total absence of systems and infrastructure for marketing and distribution.

We describe the functions of a marketing and distribution system, and we explain how it would help move effective public health programs from research to practice. Then we critically evaluate the 4 dominant strategies now used to promote dissemination and implementation, and we explain how each would be enhanced by marketing and distribution systems.

Finally, we make 6 recommendations for building the needed system infrastructure and discuss the responsibility within the public health community for implementation of these recommendations. Without serious investment in such infrastructure, application of proven solutions in public health practice will continue to occur slowly and rarely. (Am J Public Health. 2009; 99:2123-2127. doi:10.2105/ AJPH.2008.155218)

FROM 2003 TO 2008. THE

American Journal of Public Health

published 100 research papers

about programs and policies that were found to significantly improve health or behavioral outcomes in areas including condom use, prenatal care, drug abuse, smoking, and obesity. Unfortunately, history tells us that few of these promising programs will be used outside a research setting. Fewer still will become ubiquitous in public health practice; those that do will take decades to achieve that status. We argue that the fundamental obstacle to successfully disseminating and implementing evidence-based public health programs is the near-total absence of systems and infrastructure to carry out marketing and distribution. This perspective is consistent with new dissemination and implementation models' and recent calls to build greater delivery capacity to support the spread of evidence-based pro-

WHAT IS A MARKETING AND DISTRIBUTION SYSTEM?

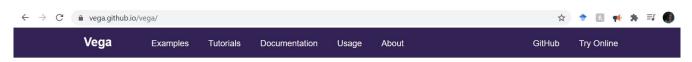
for example, much happens from the time a car rolls off a manufacturer's assembly line to the time it rolls into a buyer's driveway. Cars are packaged and shipped to a national network of local dealers, where they are cleaned, displayed, and advertised. Local sales agents are in place to provide information and test-drive experiences to potential buyers. Online sales systems provide similar functions for virtual customers. A financing system is in place to help customers get purchase loans. Repair shops and parts suppliers are widely available to service automobiles after purchase.

Collectively, this chain of intermediaries identifies potential users, promotes the product to them, provides them with easy access to the product through multiple channels, allows them to evaluate the product before acquiring it, helps them buy it, and supports the product after purchase.5 Without such systems, every producer would have to interact directly with every potential user to promote, distribute, and support every product. Such interaction would be impractical and inefficient, and it is rare in busialways be "within an arm's reach of desire" for anyone who wanted them. 7(p16-17) This principle became the cornerstone of Coca-Cola's marketing and distribution practices as they developed a worldwide system of local bottlers and vending machines to serve as intermediaries, guaranteeing close proximity between demand and supply.

Marketing and distribution are equally important in public health. We have produced effective products through research, but we have not invested in customercentered marketing and distribution systems to bring these products to public health organizations when, where, and how they are needed. Such systems fulfill a range of critical operational functions that most program developers are ill-equipped to carry out, including:

 Customer research and segmentation—collecting and analyzing data from potential adopting organizations and developing data-driven segmentation strategies to inform targeted marketing and distribution systems;

### Arts-Based Dissemination: Data Visualization and Graphic Design



#### **Vega** – A Visualization Grammar



**Vega** is a *visualization grammar*, a declarative language for creating, saving, and sharing interactive visualization designs. With Vega, you can describe the visual appearance and interactive behavior of a visualization in a JSON format, and generate web-based views using Canvas or SVG.

Vega provides basic building blocks for a wide variety of visualization designs: data loading and

Version 5 20 2

# RIDE Reposeds in Drant Solucition The Journal of Applied Thesine and Performance

# The SAGE Handbook of Visual Research Methods



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#### Research in Drama Education: The Journal of Applied Theatre and Performance

Publication details, including instructions for authors and subscription information:

http://www.tandfonline.com/loi/crde20

# Genetic testing in a drama and discussion workshop: exploring knowledge construction

Emily Dawson  $^a$  , Anne Hill  $^b$  , John Barlow  $^b$  & Emma Weitkamp  $^a$   $^a$  Science Communication Unit , The University of the West of England , Bristol, UK

b Faculty of Media, Arts and Society, Southampton Solent University, Southampton, UK









## De-implementing ineffective and inappropriate interventions



factors	Characteristics	Sample research questions	
Intervention	Strength of evidence	What happens if the strength of the evidence for an intervention changes during a de- implementation trial?	
	Complexity	Are simpler interventions easier to de-implement than mor	Apr€
Patient	Anxiety, fear, and worry	What are some predictors of patients' level of anxiety in an intervention?	Apre <b>ww</b>
	Inaccurate beliefs and social norms	What are some common misperceptions about de-implement	
	Distrust of medical establishment	Under what conditions might de-implementation lead to paprofessionals?	,
professional	Negative past events	What is the relationship between severity of negative past e events, and health professionals' willingness to de-impleme	ĎM
	Cognitive dissonance	What are some predictors of health professionals who expe	_ I.
	Fear of medical malpractice	What differentiates health professionals who fear medical n defensive medicine from those who do not?	aD
0	Revenue	Why do some organizations embrace the de-implementation	in in in the

Norton, W.E., Chambers, D.A. Unpacking the complexities of deimplementing inappropriate health interventions. *Implementation Sci* **15**, 2 (2020). https://doi.org/10.1186/s13012-019-0960-9 Cómo Elegir
Sahiamente

Una iniciativa de la Fundación ABIM

Aprende más:







Multi loval Characteristics





### Reporting Pragmatic Research

# American Journal of Preventive Medicine

#### RESEARCH METHODS

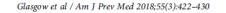
# Expanding the CONSORT Figure: Increasing Transparency in Reporting on External Validity



Russell E. Glasgow, PhD, 1,2 Amy G. Huebschmann, MD, MS, 2,3,4 Ross C. Brownson, PhD 5,6

**Conclusions:** Improving transparent reporting on external validity by using the proposed expanded CONSORT figure would help to address both the scientific replication crisis and health equity concerns. This figure provides a method to efficiently address the representativeness, generalizability, and sustainability of outcomes research.

Am J Prev Med 2018;55(3):422-430. © 2018 American Journal of Preventive Medicine. Published by Elsevier Inc.



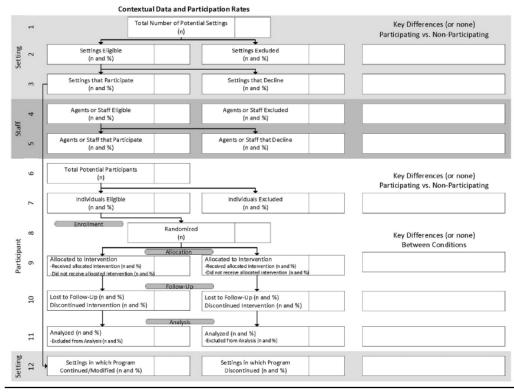


Figure 1. Expanded CONSORT figure.







### Sustainability, Cost, and Value



https://medschool.cuanschutz.edu/accords/educational-offerings/archive/seminar-series-(2020---2021)



Economic and policy analysis



Cost- and value-informed dissemination and sustainment plans



**Business models** 



Commercialization

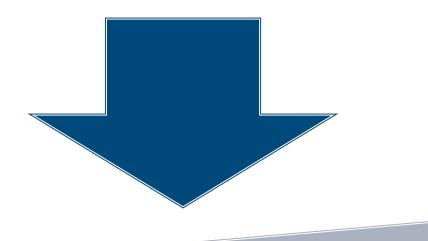






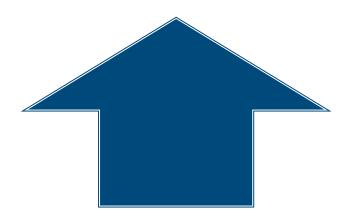


# Post-COVID Conferencing: Do we stay virtual?



Human interaction
Screen fatigue
Immersion

Access
Low travel burden
More speakers









# COPRH Con 2022: Pragmatic Research Symposia and Posters

- Start planning now!
- Symposium submissions focused on novel dissemination and sustainment strategies
  - o Creative messaging, packaging, and distribution of health innovations
  - Examples of long-term sustainment
  - Successful policy change and scale up of evidence-based practices
- Abstracts on projects informed by the COPRH Con series and/or webinars
  - Methods
  - Measures
  - Frameworks







## COPRH Pragmatic Methods Research Agenda

 Seeking those interested in participating in a consensus approach to establishing a research agenda in pragmatic methods









# **Learning Community**

- Colorado Pragmatic Research in Health Conference Virtual Learning Community
  - ACCORDS research blog and discussion forum, free monthly webinars and newsletter
  - Currently 134 members

http://bit.ly/VLCsignup











# ACCORDS - Let us help you

### **University of Colorado Faculty**

Consultations & Grant Support: <a href="https://medschool.cuanschutz.edu/ACCORDS">https://medschool.cuanschutz.edu/ACCORDS</a>

### **International Offerings**

Dissemination & Implementation Science Graduate Certificate Program: <a href="https://bit.ly/DICert">https://bit.ly/DICert</a>

Recorded Webinar Series: <a href="http://bit.ly/EdArchives">http://bit.ly/EdArchives</a>



Methodologic Cores
& Program Areas



**Consult Request** 



**Grant Awards** 







# Additional Resources

Methods (Design)

Guides & Tools

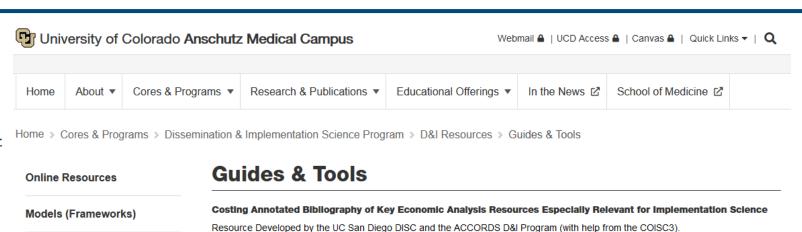
**D&I Training** 

Presentations

**Key General References** 

Measures (Outcomes)

- ACCORDS D&I program website resources
  - https://medschool.cuanschutz.edu/accords/cores-andprograms/dissemination-implementation-scienceprogram
- ACCORDS D&I Graduate Certificate training
  - https://medschool.cuanschutz.edu/accords/DICert



#### RE-AIM Dimensions Checklist

Review the Resource

This checklist can be used to identify the number of RE-AIM dimensions a study includes. This may be useful for designing one's study and reviewing the literature.

Click HERE for the Checklist

Beidas, R. S., Stewart, R. E., Walsh, L., Lucas, S., Downey, M. M., Jackson, K., ... & Mandell, D. S. (2015). Free, brief, and validated: Standardized instruments for low-resource mental health settings. Cognitive and behavioral practice, 22(1), 5-19. Read the Article







# COPRH Con 2021 archives

Available now and in perpetuity... publicly available for all later this summer

\*\*Please complete the evaluation\*\*

