



Implementation Science

A Critical Element of Precision Public Health



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Objectives

- Define Precision Public Health.
- Define Implementation Science.
- Describe how implementation science can be used to improve the integration of precision public health into clinical and public health settings.



Conflicts

- Spouse holds stock in Merck and Thermo Fisher Scientific

Training in Dissemination and Implementation Research in Genomics and Precision Public Health



Training in Dissemination and Implementation Research in Genomics and **Precision Public Health**



prevention personalized
public precision
health genetic
medicine genomic
individualized



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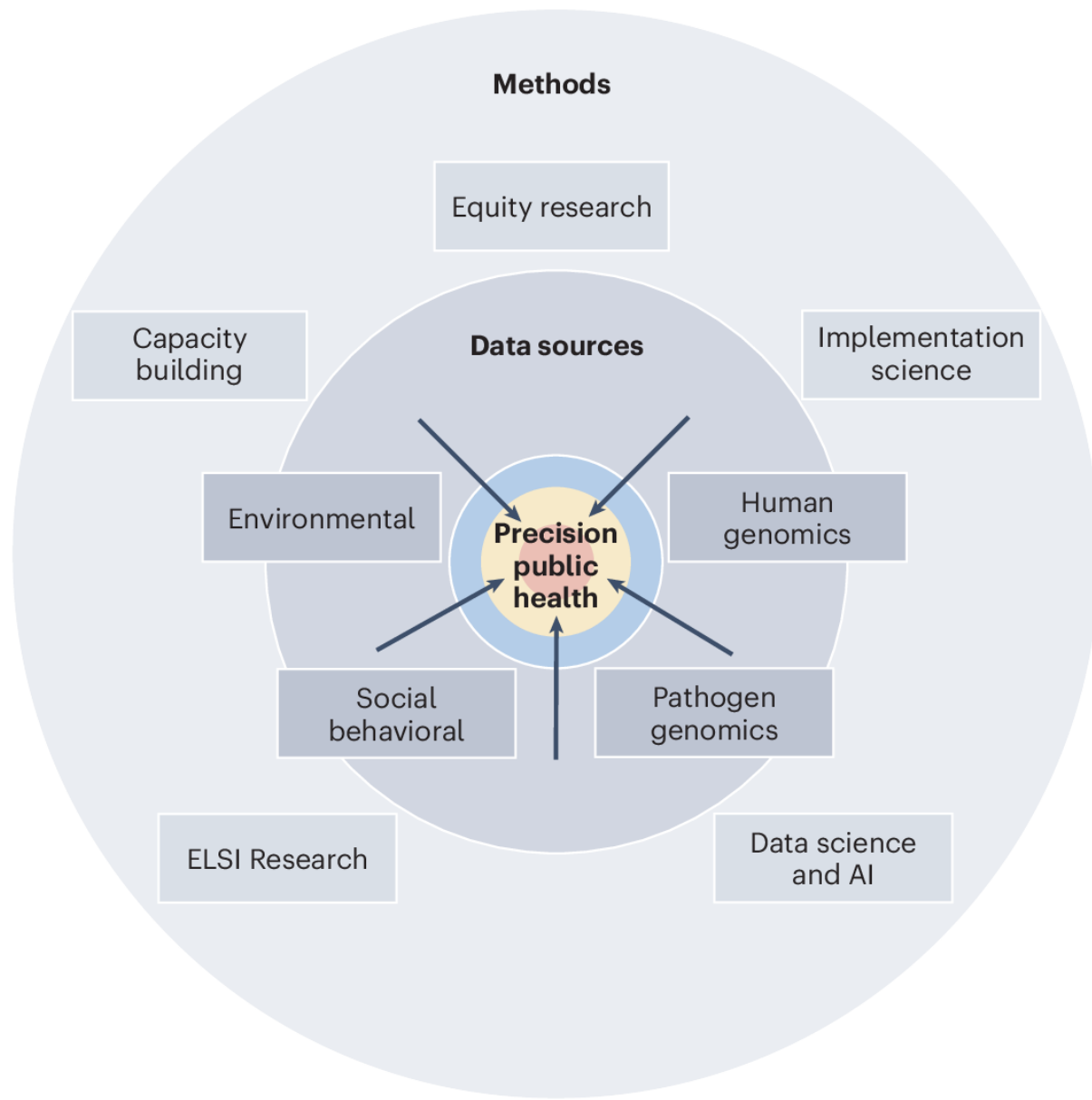


Precision Public Health

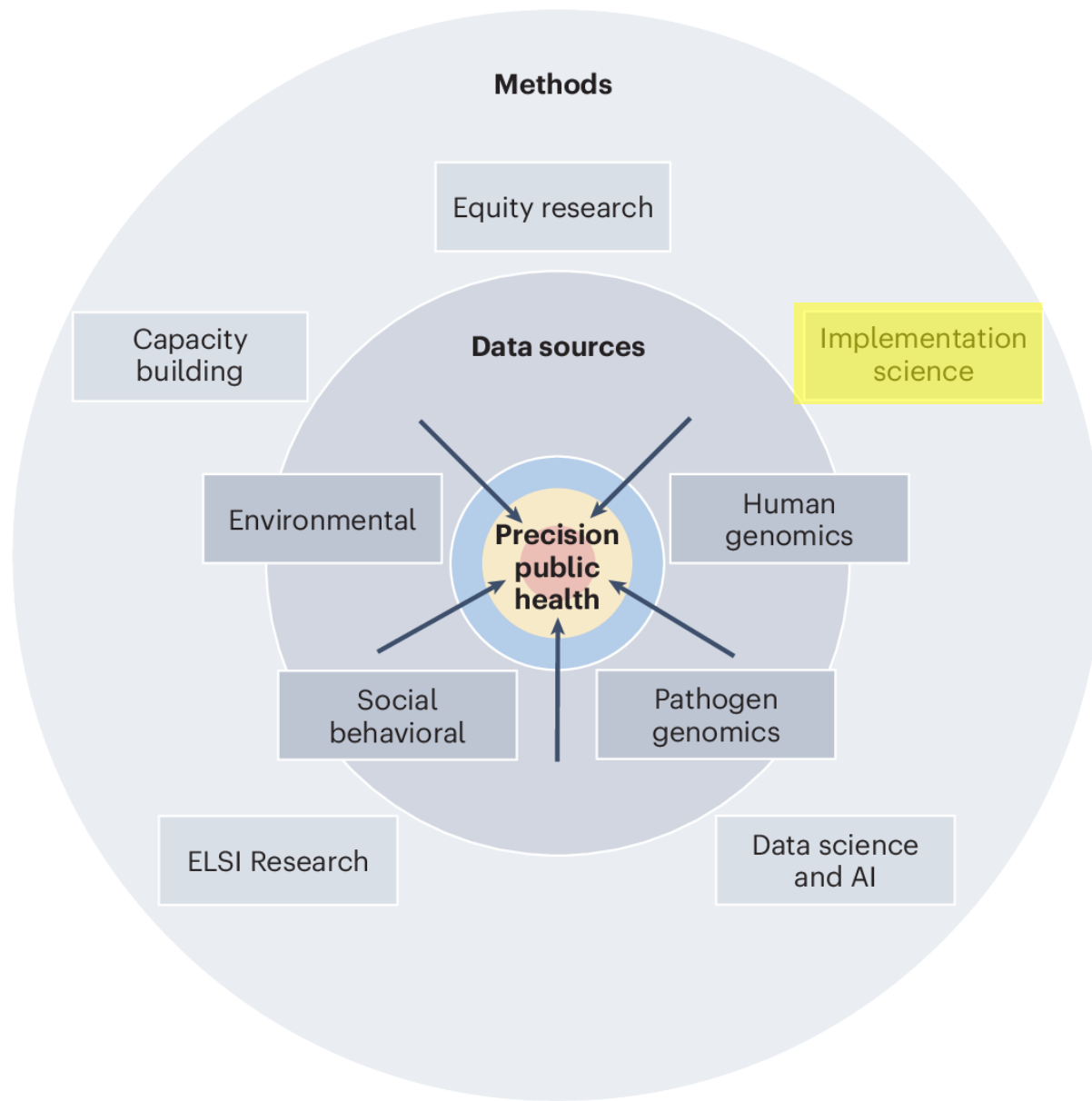
Right *intervention* at the right
time every time to the right
population

Khoury et al. *Am J Prev Med* 2016





Roberts et al. *Nature Medicine* 2024



Roberts et al. *Nature Medicine* 2024

THE PRESENT AND FUTURE

JACC STATE-OF-THE-ART REVIEW

Precision Health Analytics With Predictive Analytics and Implementation Research

JACC State-of-the-Art Review

Thomas A. Pearson, MD, MPH, PhD,^a Robert M. Califf, MD,^b Rebecca Roper, MS, MPH,^c
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This Issue

Views **18,841** | Citations **227** | Altmetric **250**

Viewpoint | Innovations in Health Care Delivery

May 10, 2016

Convergence of Implementation Science, Precision Medicine, and the Learning Health Care System

A New Model for Biomedical Research

David A. Chambers, DPhil¹; W. Gregory Feero, MD, PhD^{2,3}; Muin J. Khoury, MD, PhD^{1,4}

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JAMA. 2016;315(18):1941-1942. doi:10.1001/jama.2016.3867



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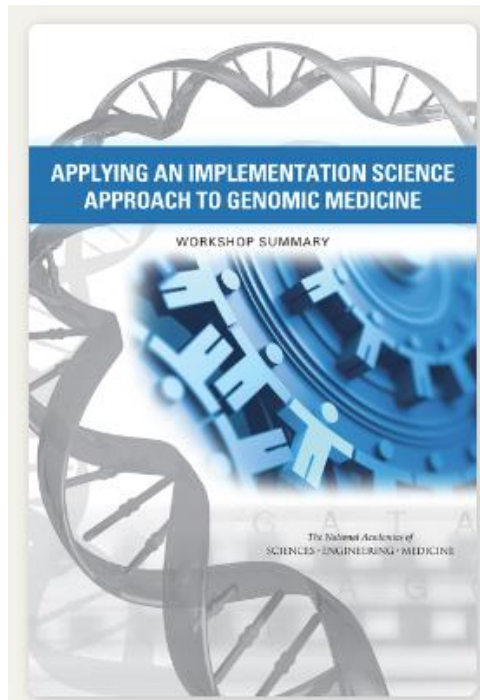
Subscrip

Home » American Journal of Public Health (AJPH) » November 2023

Extending an Antiracism Lens to the Implementation of Precision Public Health Interventions

Caitlin G. Allen PhD, MPH, Dana Lee Olstad PhD, MSc, RD, Anna R. Kahkoska PhD, MD, Yue Guan PhD, Paula S. Ramos PhD, Julia Steinberg PhD, Stephanie A. S. Staras PhD, Crystal Y. Lumpkins PhD, Laura V. Milko PhD, Erin Turbitt PhD, Alanna K. Rahm PhD, Katherine W. Saylor PhD, Stephanie Best PhD, Ashley Hatch MPH, Isabella Santangelo BS, and Megan C. Roberts PhD

Accepted: July 06, 2023 Published Online: October 11, 2023



ARTICLE | RESEARCH | VOLUME 65, ISSUE 1, P36-40, JANUARY 2017

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Implementation science, genomic precision medicine, and improved health: A new path forward?

Janet K. Williams, PhD, ✉ • W. Gregory Feero, MD, PhD • Debra G.B. Leonard, MD, PhD • Bernice Coleman, PhD, ACNP-BC, FAAN

Published: August 21, 2016 • DOI: <https://doi.org/10.1016/j.outlook.2016.07.014> • Check for updates

Using a Participatory Approach to Develop Research Priorities for Future Leaders in Cancer-Related Precision Public Health

Megan C. Roberts^{1*}, June Mullaney Mader², Erin Turbitt³, Amelia K. Smit^{4,5}, Latrice Landry⁶, Dana Lee Olstad⁷, Lauren E. Passero¹ and Caitlin G. Allen⁸



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D&I in Precision Public Health

Research priority	Description	% votes <i>n</i> = 28
Equity and access	Increase the diversity of participants included in precision public health research so that everyone has access to it	19
Evaluation	Standardize evaluation of precision public health interventions and research (e.g. clinical utility, cost-effectiveness, and patient-reported outcomes)	21
Research capacity	Advance training, mentorship and opportunities for researchers at all levels (particularly early career) in precision public health	8
Infrastructure	Identify data sources, leverage existing databases and improvements in how to store, access and link data from multiple sources	9
Implementation research	Support delivery and long-term sustainability of precision public health research initiatives and interventions	15
Workforce preparation	Prepare health professionals to deliver precision public health interventions, including appropriate training and education	8
Stakeholder engagement	Involve stakeholders (e.g., communities, payers etc.) at all stages of precision public health research	10
Public education	Increase public understanding of precision public health, genetic and genomic risk communication	5
Collaboration	Advance transdisciplinary and cross-industry partnerships in tackling precision public health challenges	4
Ethical considerations	Advance understanding about key ethical considerations in precision public health	1

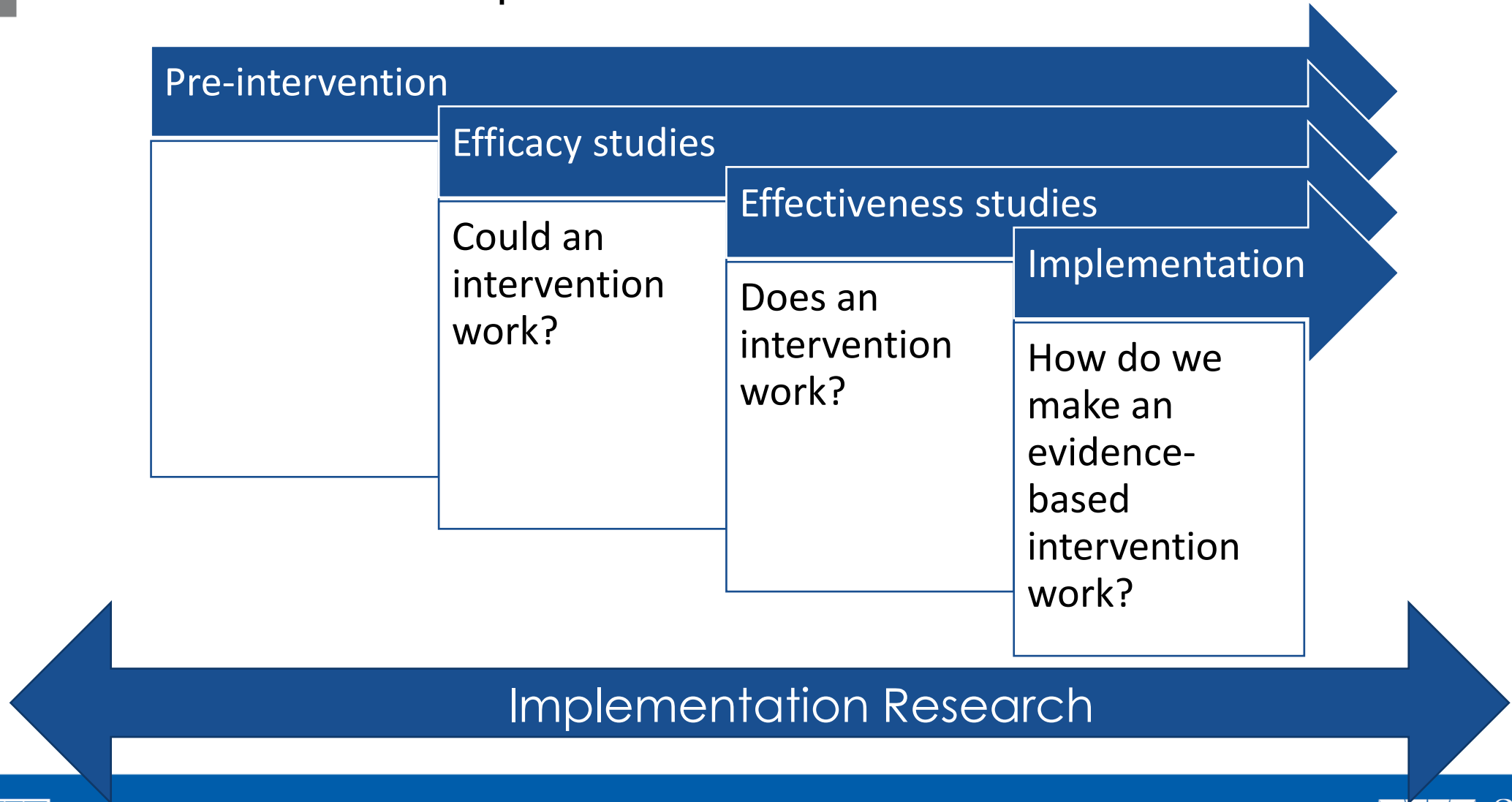
Roberts et al. *Front Genet*, 2022

D&I in Precision Public Health

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Roberts et al. *Front Genet*, 2022

Translational Pipeline





Thank you!

And have a great course!
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