Four Ways to Conceptualize and Study Policy in Implementation Science Research

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Prevention Science & Methodology Group

NIMH R01MH131649, P50MH113662, R21MH111806

Chapter 24: Policy Dissemination and Implementation Research

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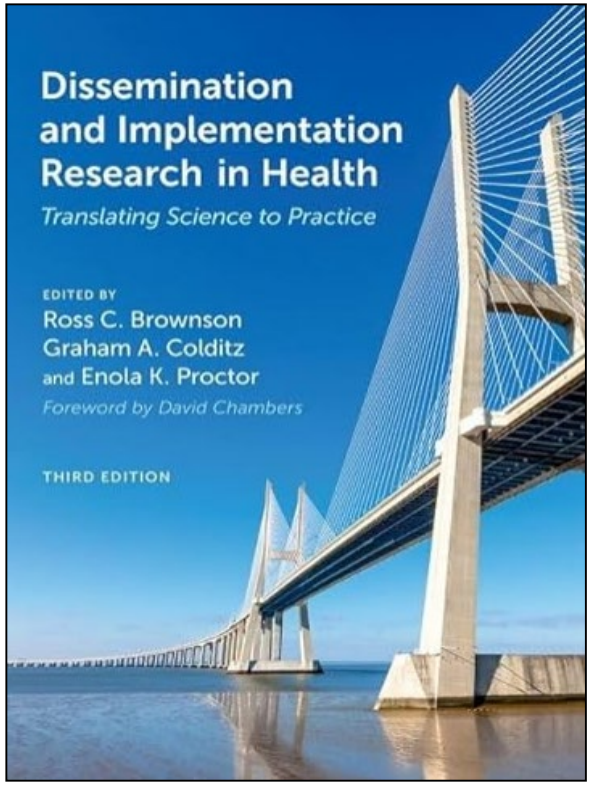


Purtle *et al.*
Implementation Science Communications (2023) 4:111
https://doi.org/10.1186/s43058-023-00497-1

Implementation Science Communications

DEBATE

Open Access

Four very basic ways to think about policy in implementation science

Jonathan Purtle[1*], Corrina Moucheraud[1], Lawrence H. Yang[2] and Donna Shelley[1]

Personal Journey:
Evolution of Research Questions

Psychiatric Services

Health Affairs

JAMA Psychiatry

AJPH
A PUBLICATION OF THE AMERICAN PUBLIC HEALTH ASSOCIATION

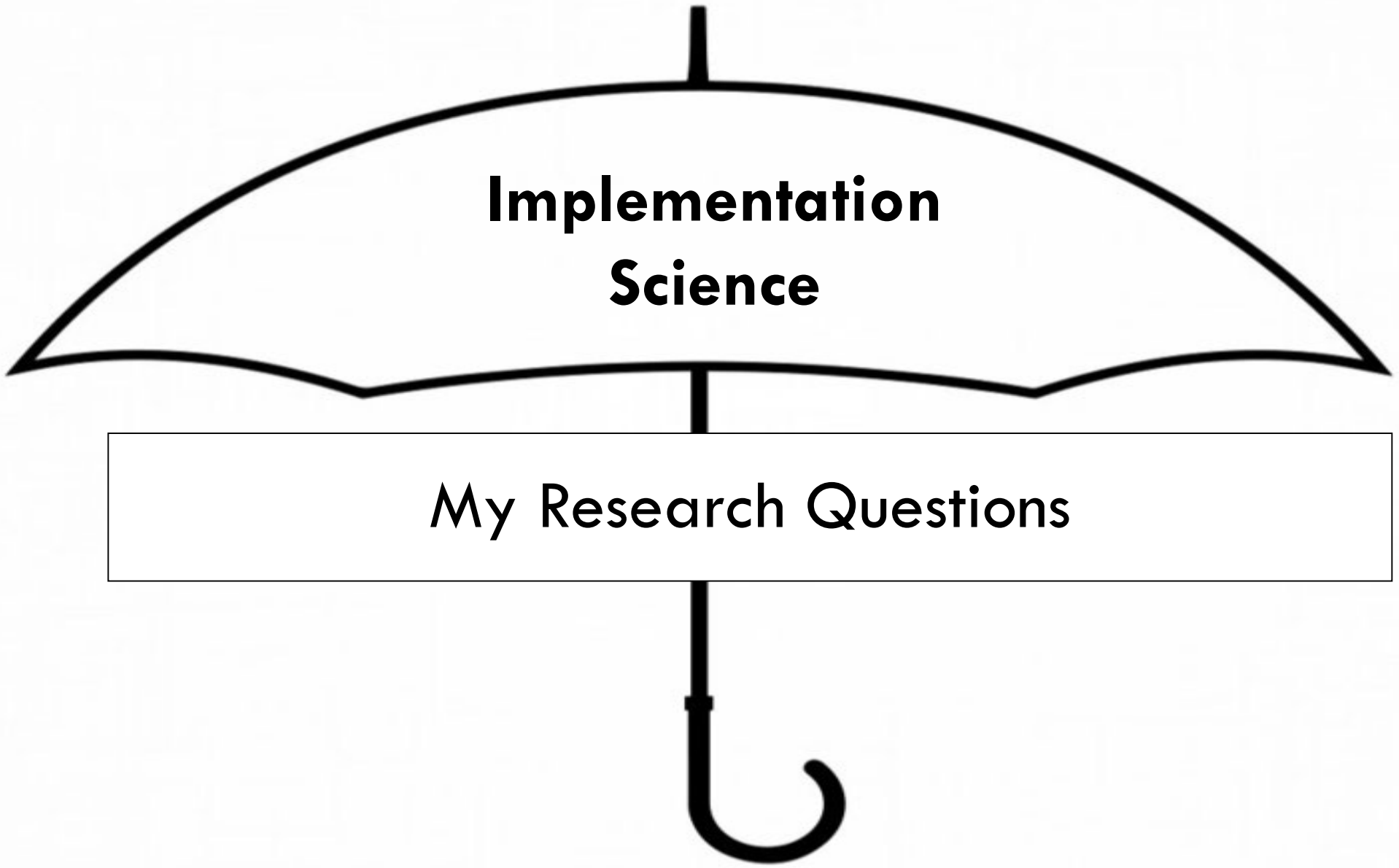
Research Evidence

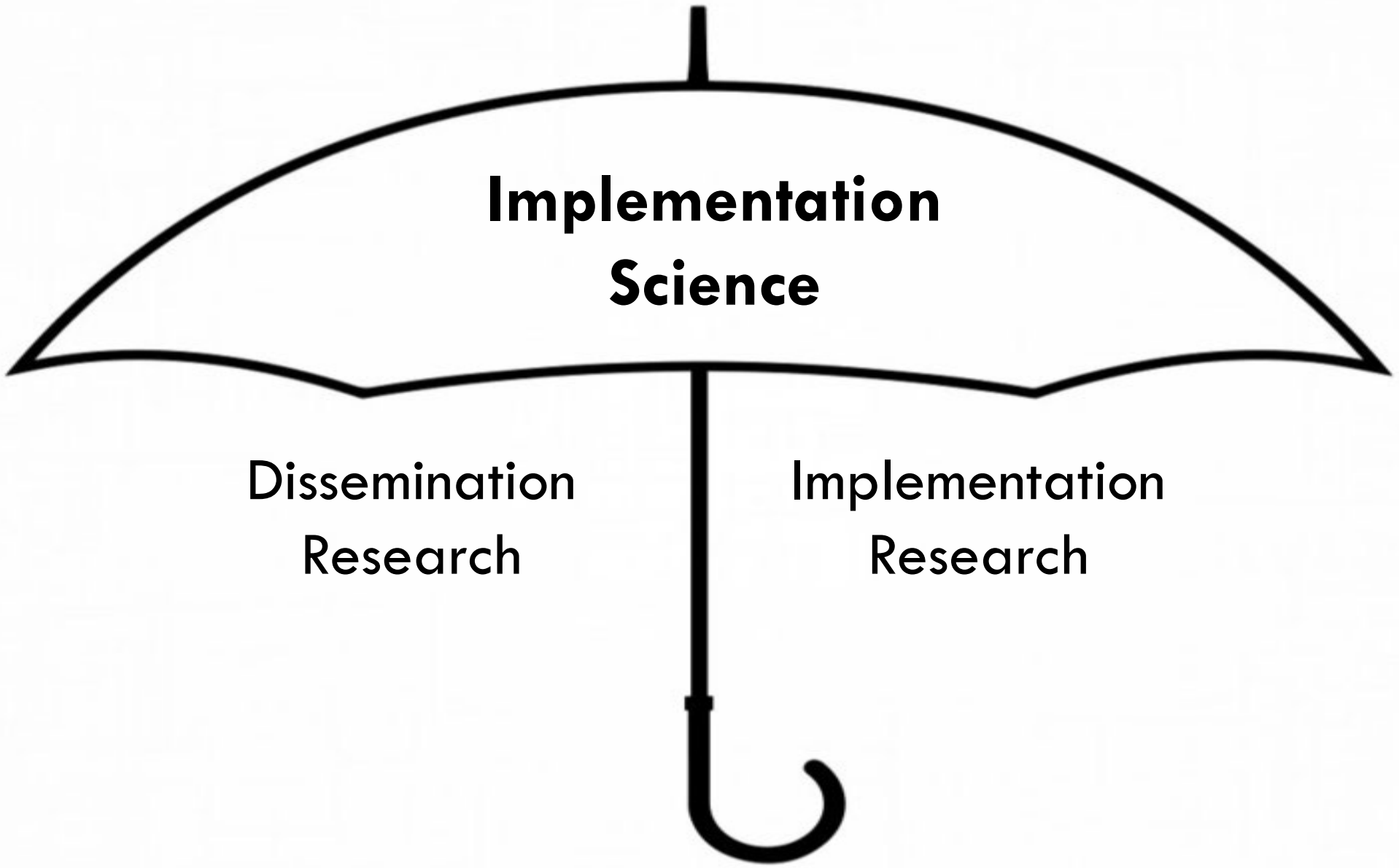
?

Policy

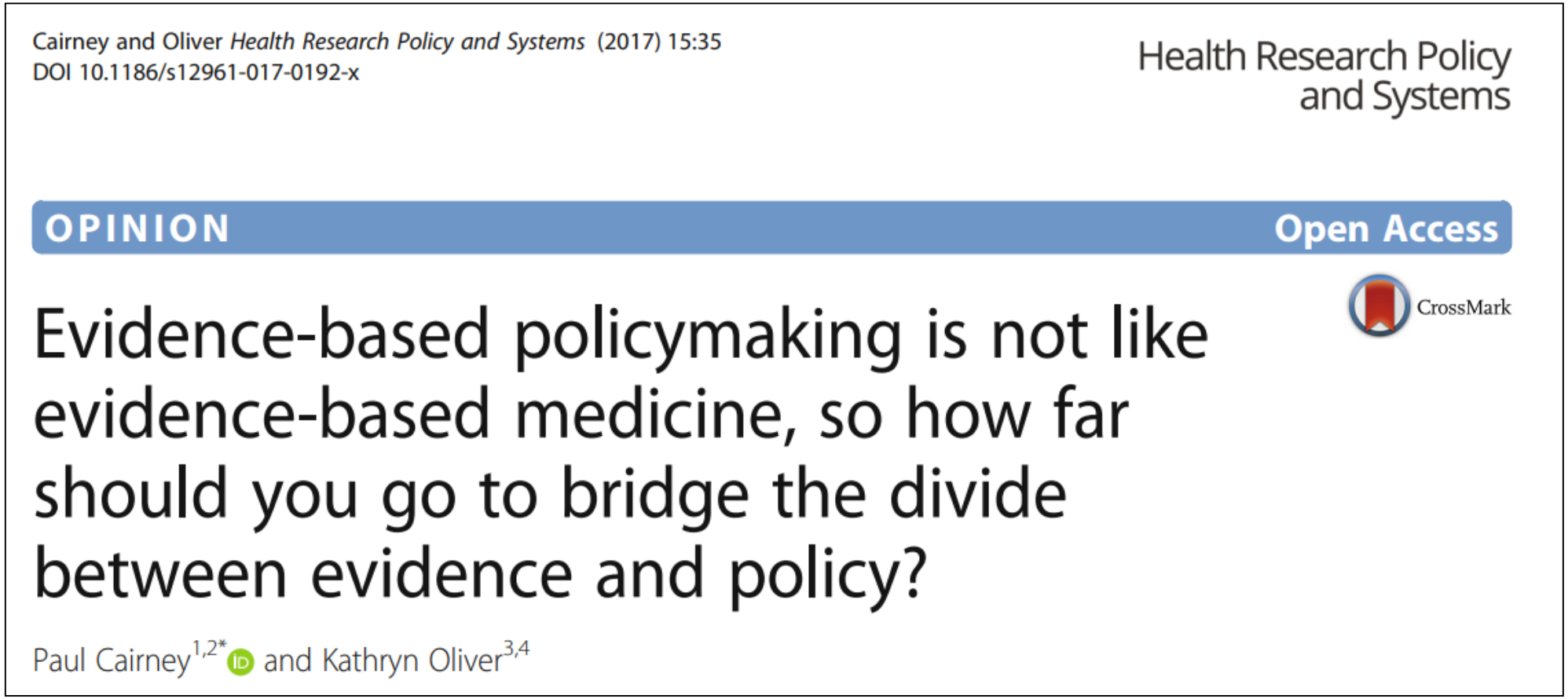
?

Improved Population Mental Health


Implementation
Science
My Research Questions


Implementation Science
Dissemination Research
Implementation Research

Policy-Focused Work in the Field of Implementation Science Often Feels Like…



Cairney and Oliver *Health Research Policy and Systems* (2017) 15:35
DOI 10.1186/s12961-017-0192-x

Health Research Policy and Systems

OPINION Open Access

CrossMark

Evidence-based policymaking is not like evidence-based medicine, so how far should you go to bridge the divide between evidence and policy?

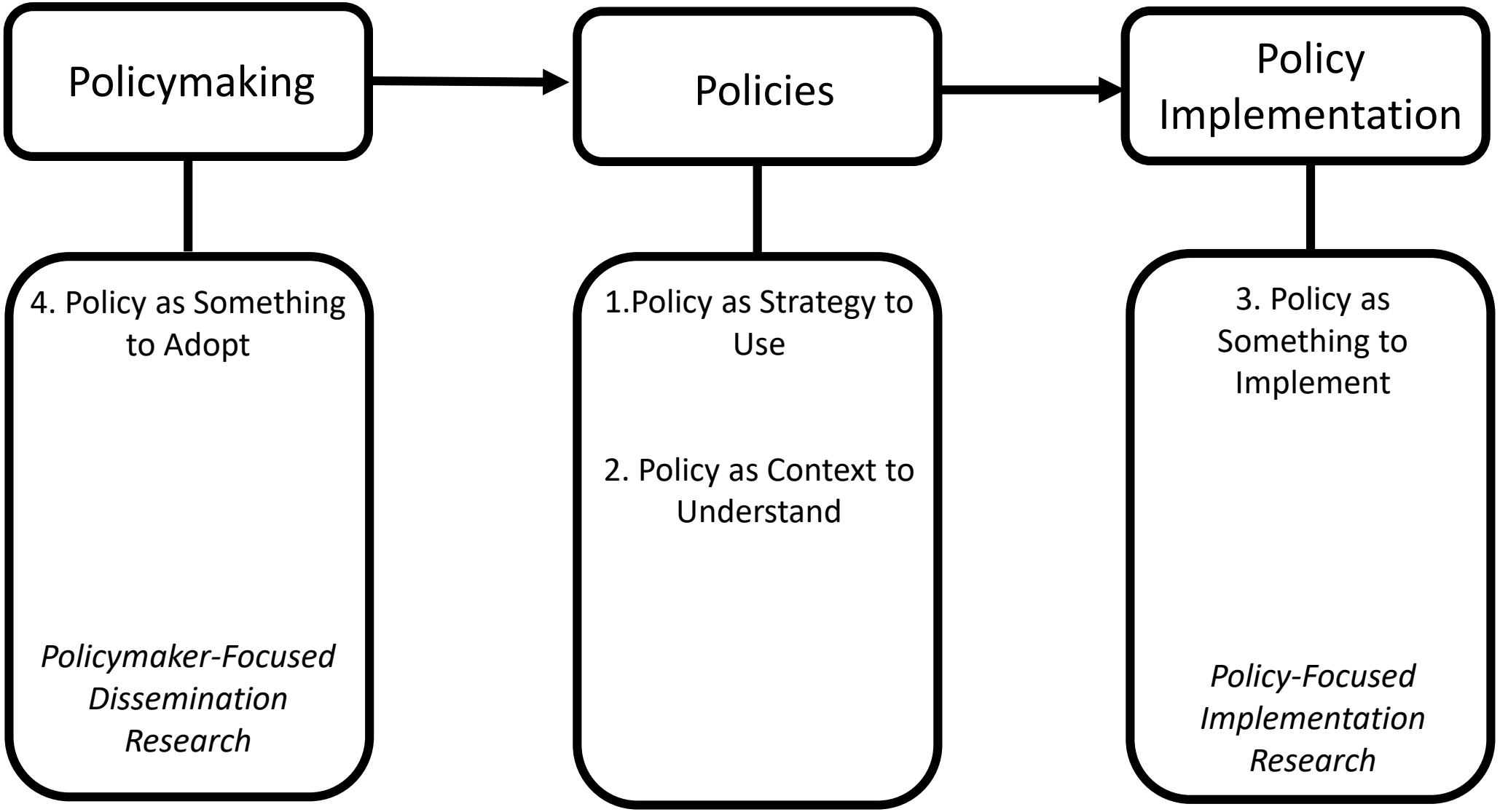
Paul Cairney[1,2*] and Kathryn Oliver[3,4]

Orienting Definitions for Policy-Focused Implementation Science

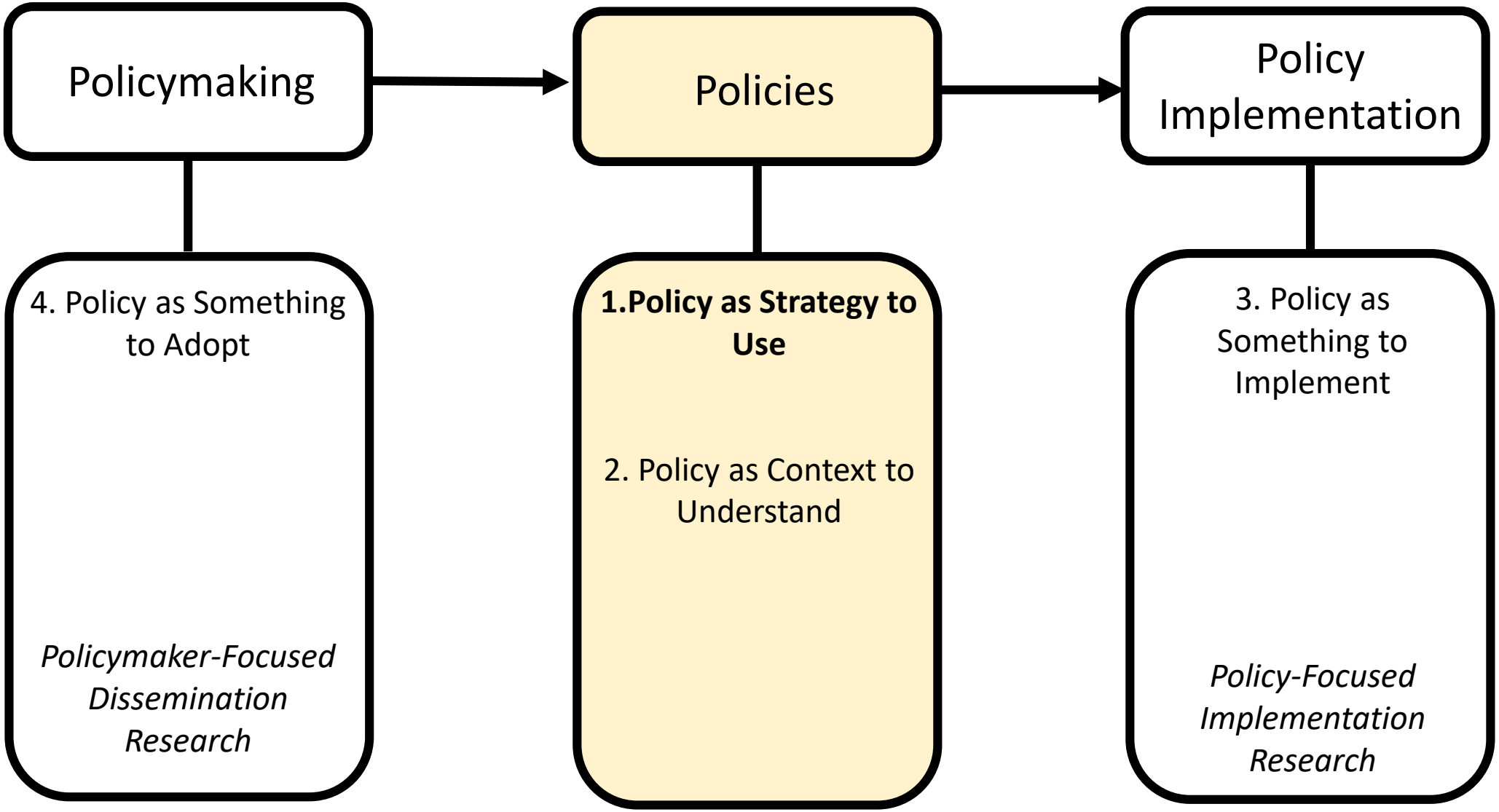
- **Policy Dissemination Research:**
  - Seeks to understand how research evidence can be most effectively communicated to policymakers and integrated into policymaking processes
  - Enact policies that are aligned with high quality evidence and promote health equity
  - Improve use of research evidence in policymaking
- **Policy Implementation Research:**
  - Seeks to understanding how the roll out of polices can be optimized to maximize health benefits and health equity
  - Improve use of research evidence in policy implementation

Purtle, J., Crable, E., Cruden, G., Lee, M., Rebecca Lengnick-Hall, R., Silver, D. Raghavan, R. Policy Dissemination and Implementation Research. In *Dissemination and Implementation Research in Health*. 2023. 3rd Edition. New York: Oxford University Press.

4 Ways to Think About Policy in Implementation Science



4 Ways to Think About Policy in Implementation Science



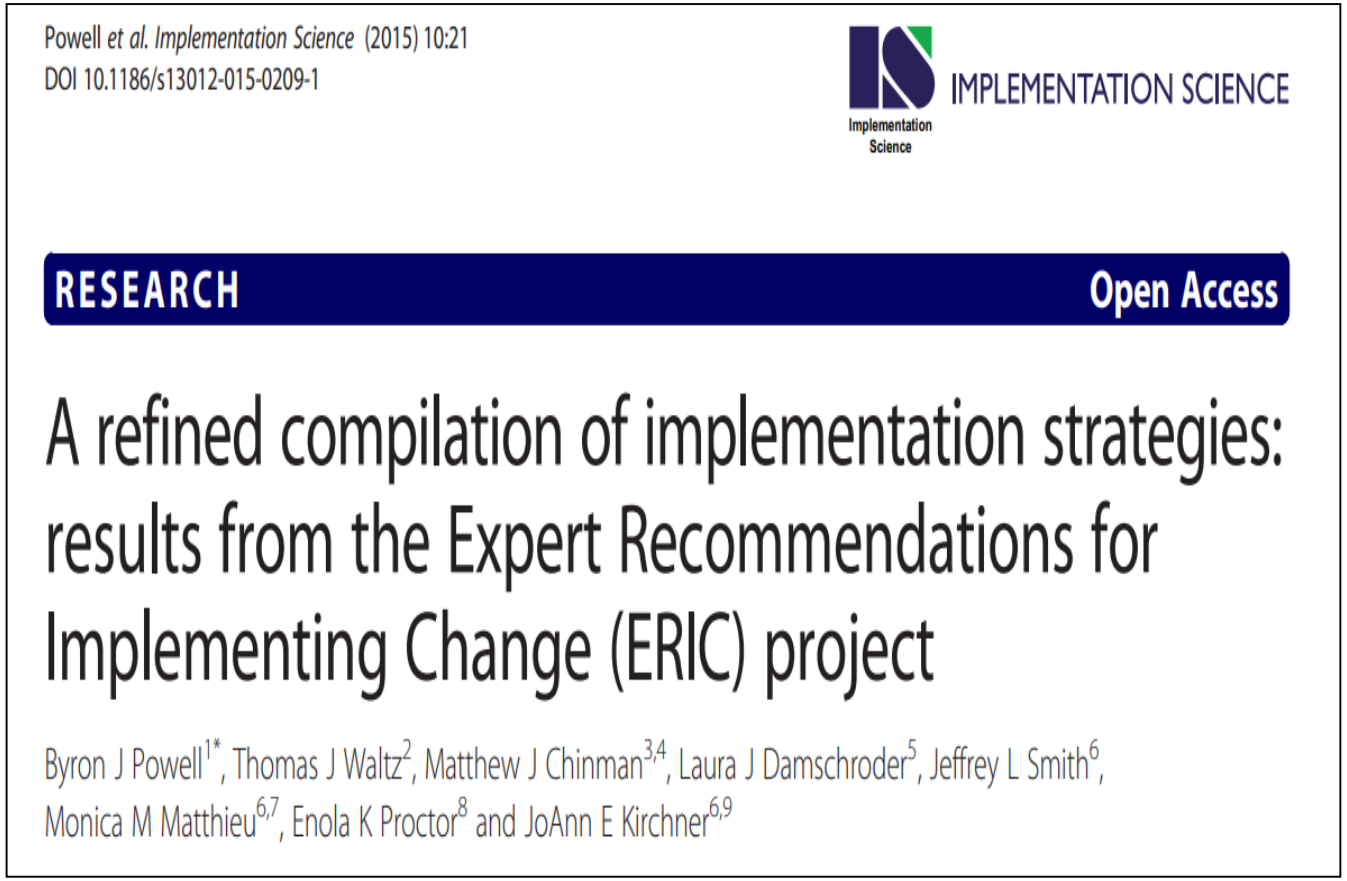
1. Policy as Strategy to Use

- Goal:
  - Use policy as a strategy to **directly** address barriers and activate facilitators to implementation of an intervention (“the thing”)

- Caveats: Using policy as strategy often…
  - Requires political will/commitment from policymakers, may not be feasible
  - May be technically challenging, slow to change
    - But also can happen quickly, within a political moment

Implementation Strategies That Are Especially Policy Relevant to Policy

- Access new funding
- Alter patient/consumer fees
- Change accreditation or membership requirements
- Change liability laws
- Fund and contract for the clinical innovation
- Make billing easier
- Mandate change



Powell *et al. Implementation Science* (2015) 10:21
DOI 10.1186/s13012-015-0209-1

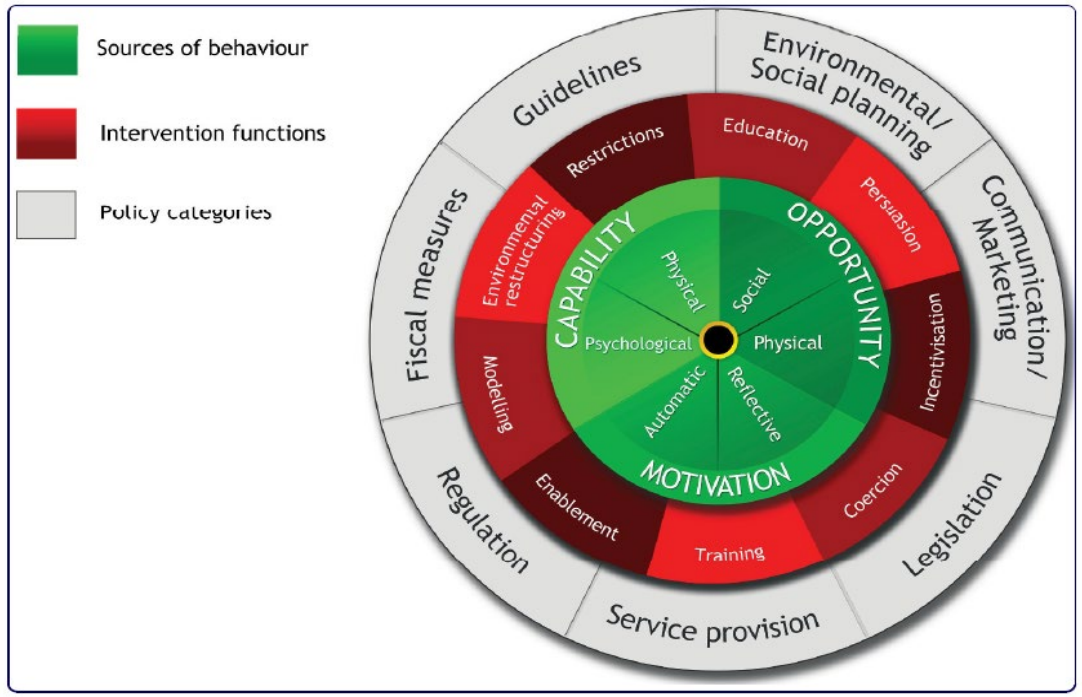
IMPLEMENTATION SCIENCE

RESEARCH Open Access

A refined compilation of implementation strategies: results from the Expert Recommendations for Implementing Change (ERIC) project

Byron J Powell[1*], Thomas J Waltz[2], Matthew J Chinman[3,4], Laura J Damschroder[5], Jeffrey L Smith[6], Monica M Matthieu[6,7], Enola K Proctor[8] and JoAnn E Kirchner[6,9]

IMPLEMENTATION SCIENCE



The behaviour change wheel: A new method for characterising and designing behaviour change interventions

Michie *et al.*

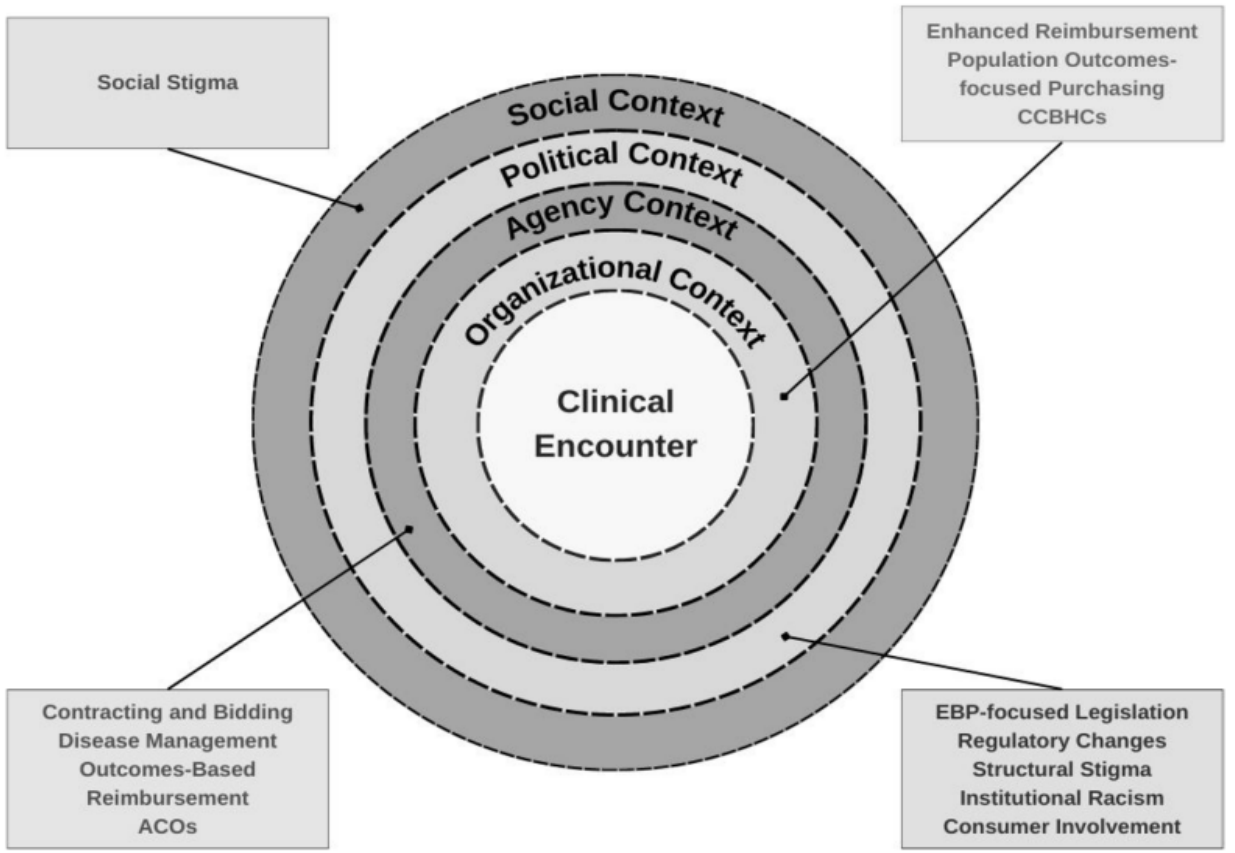
BioMed Central

Michie *et al. Implementation Science* 2011, **6**:42
http://www.implementationscience.com/content/6/1/42 (23 April 2011)

DEBATE **Open Access**

Revisiting the policy ecology framework for implementation of evidence-based practices in mental health settings

Whitney K. Wortham[1*], Aaron H. Rodwin[1], Jonathan Purtle[2], Michelle R. Munson[1] and Ramesh Raghavan[1]



Policy as Strategy to Use: Example

Dopp *et al. Implementation Science* (2023) 18:50
https://doi.org/10.1186/s13012-023-01305-z

Implementation Science

RESEARCH

Open Access

Comparing organization-focused and state-focused financing strategies on provider-level reach of a youth substance use treatment model: a mixed-method study

Alex R. Dopp[1*], Sarah B. Hunter[1], Mark D. Godley[2], Isabelle González[1], Michelle Bongard[1], Bing Han[3], Jonathan Cantor[1], Grace Hindmarch[1], Kerry Lindquist[1], Blanche Wright[1,4], Danielle Schlang[1], Lora L. Passetti[2], Kelli L. Wright[2], Beau Kilmer[1], Gregory A. Aarons[5] and Jonathan Purtle[6]

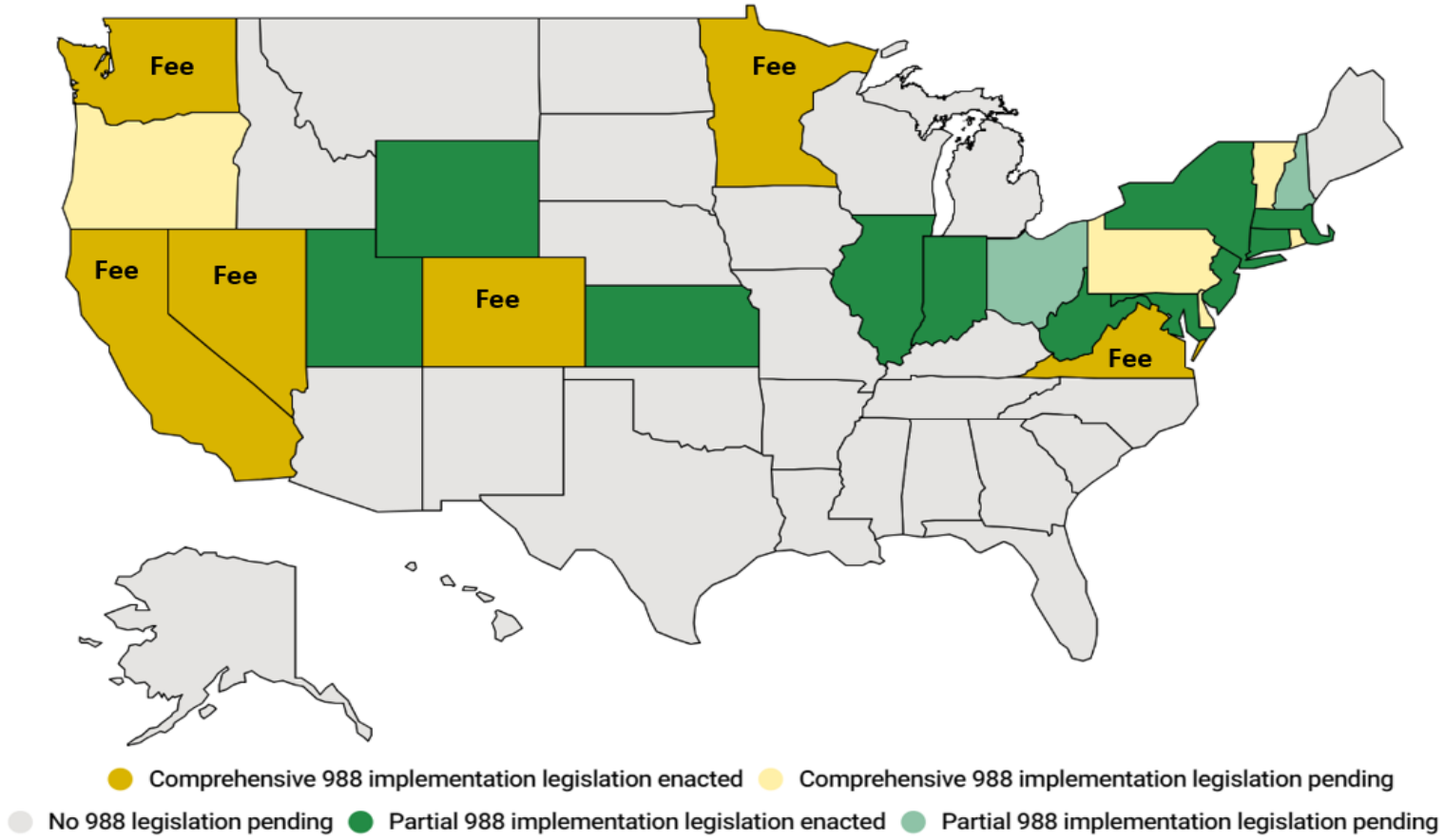
Policy as Strategy to Use: Example

Implementation of the Federal 988 Suicide and Mental Health Crisis Hotline Policy: Determinants and Effects of State Policy Implementation Financing Strategies
(NIMH R01MH131649)

- "The thing"= the services people receive via the Lifeline
- Implementation strategy: State financing for Lifeline services, specifically telecom fees

Policy as Strategy to Use: Example

Implementation of the Federal 988 Suicide and Mental Health Crisis Hotline Policy: Determinants and Effects of State Policy Implementation Financing Strategies



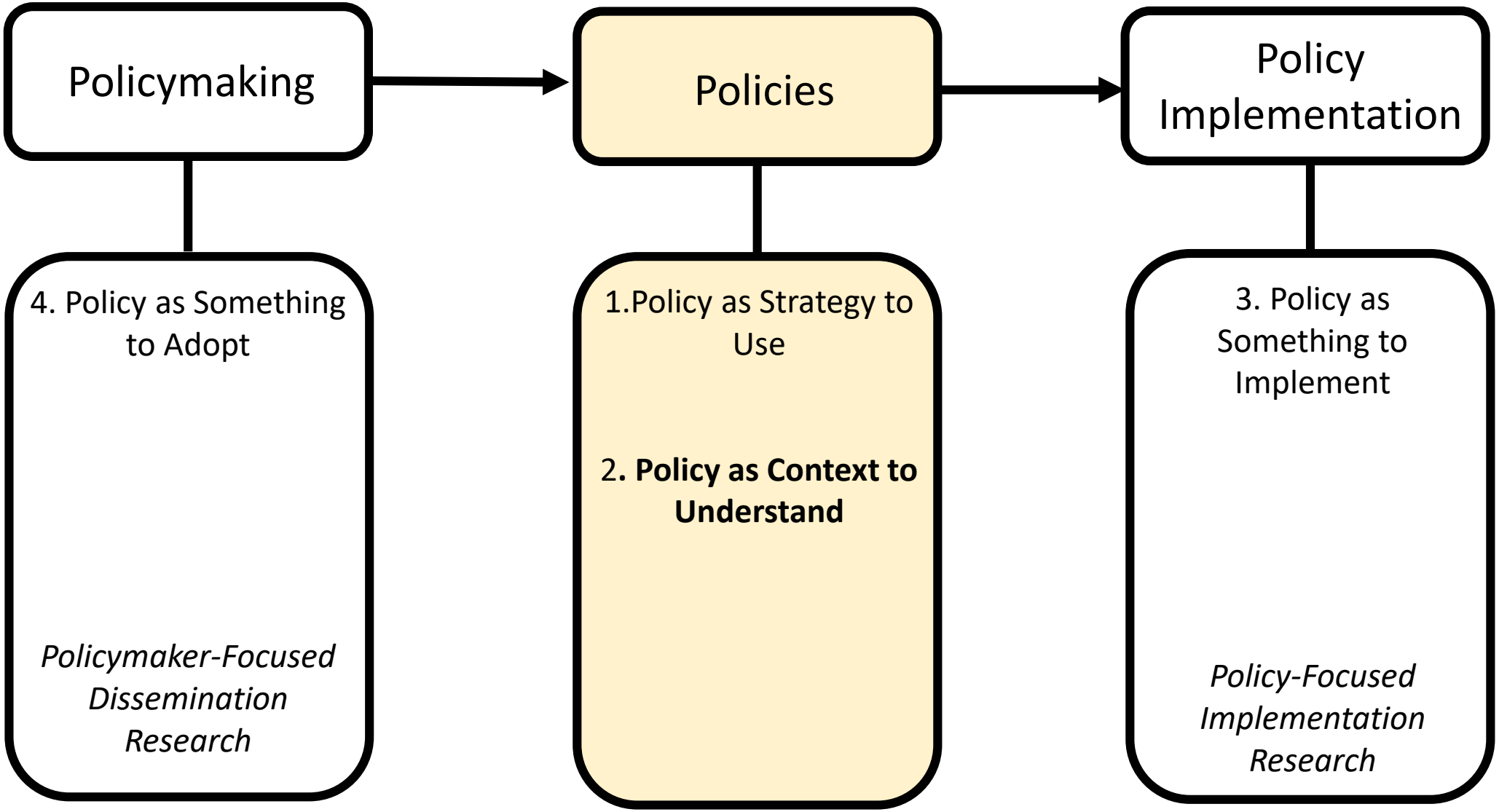
988
SUICIDE
& CRISIS
LIFELINE

Policy as Strategy to Use: Example

Implementation of the Federal 988 Suicide and Mental Health Crisis Hotline Policy: Determinants and Effects of State Policy Implementation Financing Strategies

- Aim 1: Characterize states' 988 implementation financing strategies and identify determinants of implementation strategy adoption
- Aim 2: Explore perceptions of the financing determinants of 988 policy implementation success and acceptability and feasibility of legislative financing strategies to improve implementation.
- Aim 3: Determine the effects of 988 user fee legislation on policy implementation fidelity and reach and mental health crisis outcomes, and assess effect heterogeneity across demographic groups.

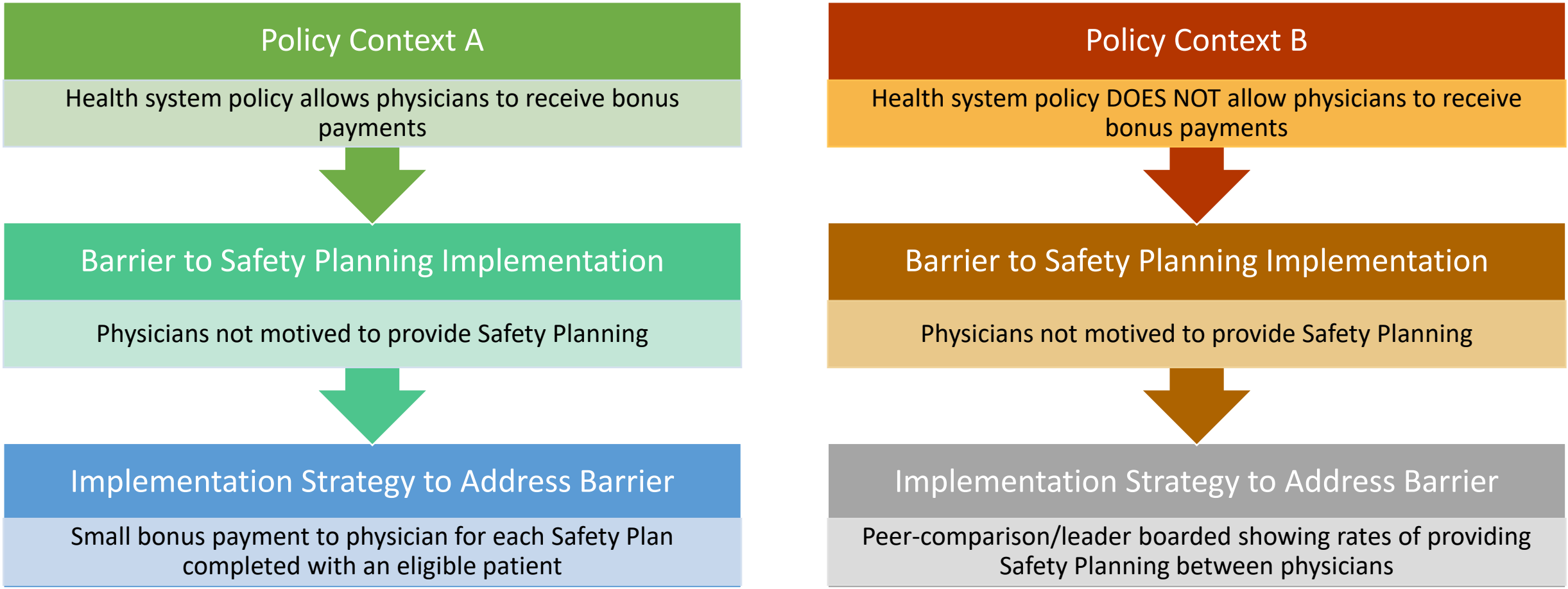
4 Ways to Think About Policy in Implementation Science



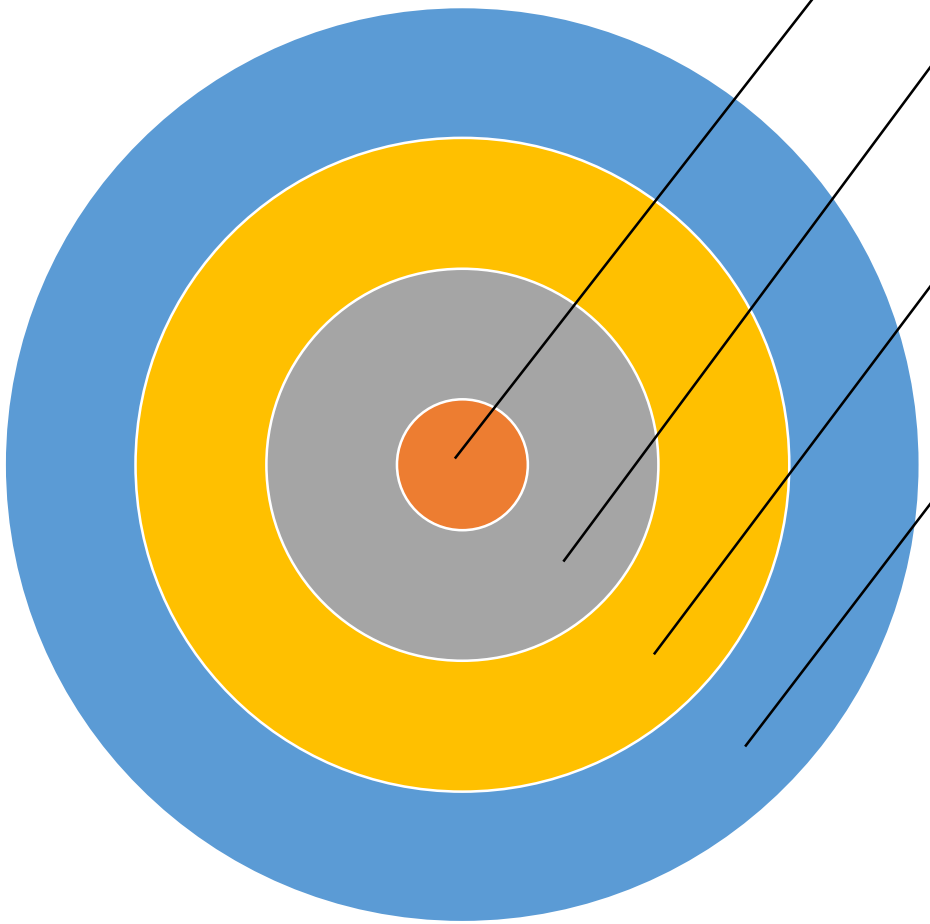
2. Policy as Context to Understand

- Goal:
  - Select and tailor clinically/organizationally-focused implementation strategies for **different policy contexts** (clinical/programmatic intervention is “the thing”)

Policy as Context to Understand: Example Suicide Safety Planning in the ED



Levels of Context in "Typical" Clinical D&I Study



Intervention

- Evidence-based intervention

Adopters

- Clinicians
- Org. leaders

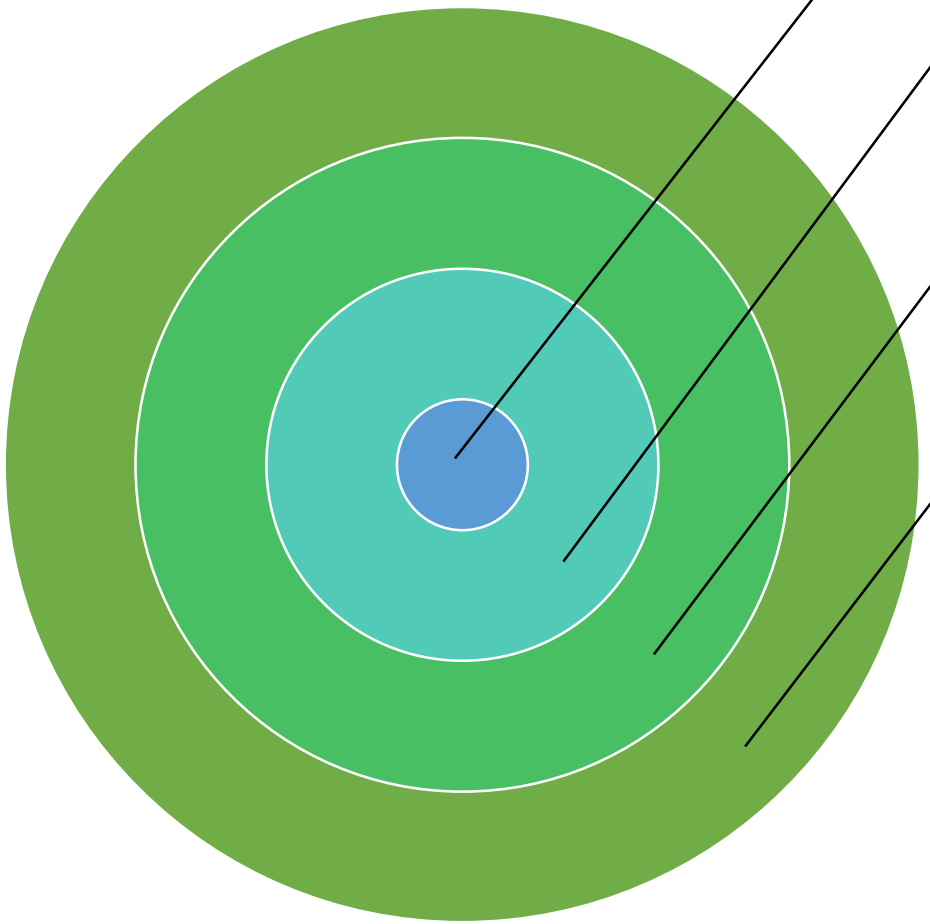
Inner-setting

- Imp. climate
- Org. culture

Outer-setting

- Policy

Levels of Context in Policy-Focused D&I Study



Intervention

- Policy, evidence-supported

Adopters

- Legislators
- Admin. policymakers

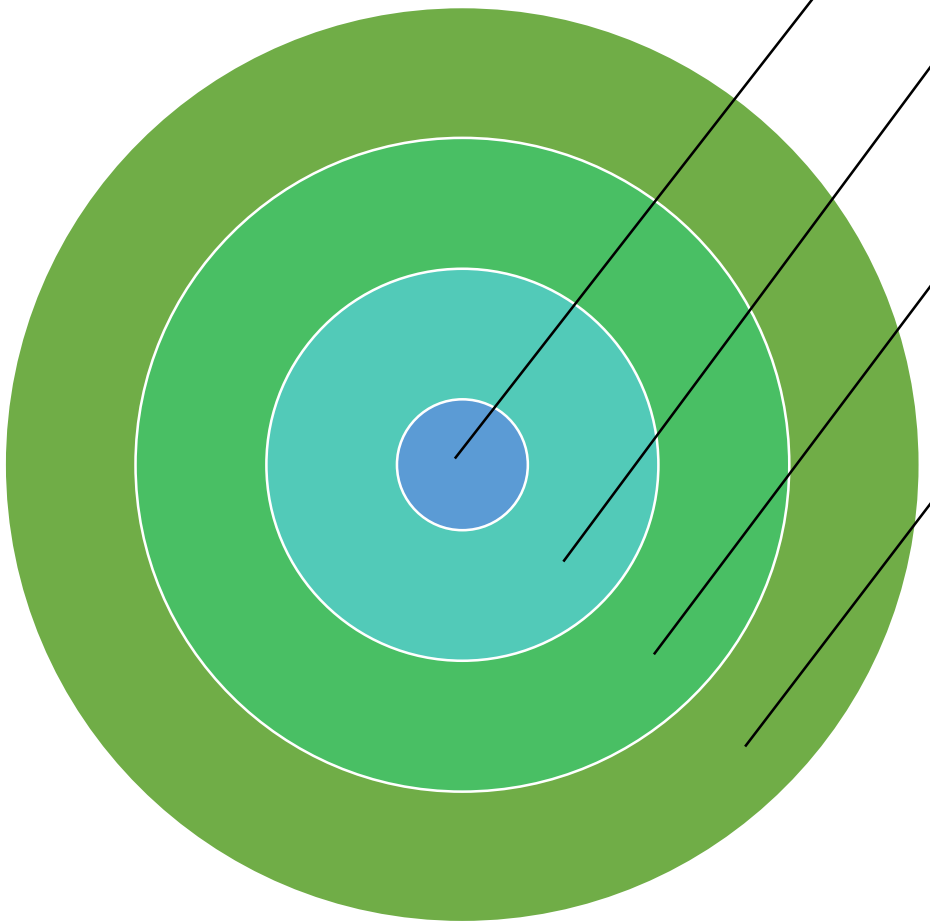
Inner-setting

- Legislature politics
- Governor agenda

Outer-setting

- What influences policymaking?

Levels of Context in Policy-Focused D&I Study



Intervention

- Policy, evidence-supported

Adopters

- Legislators
- Admin. policymakers

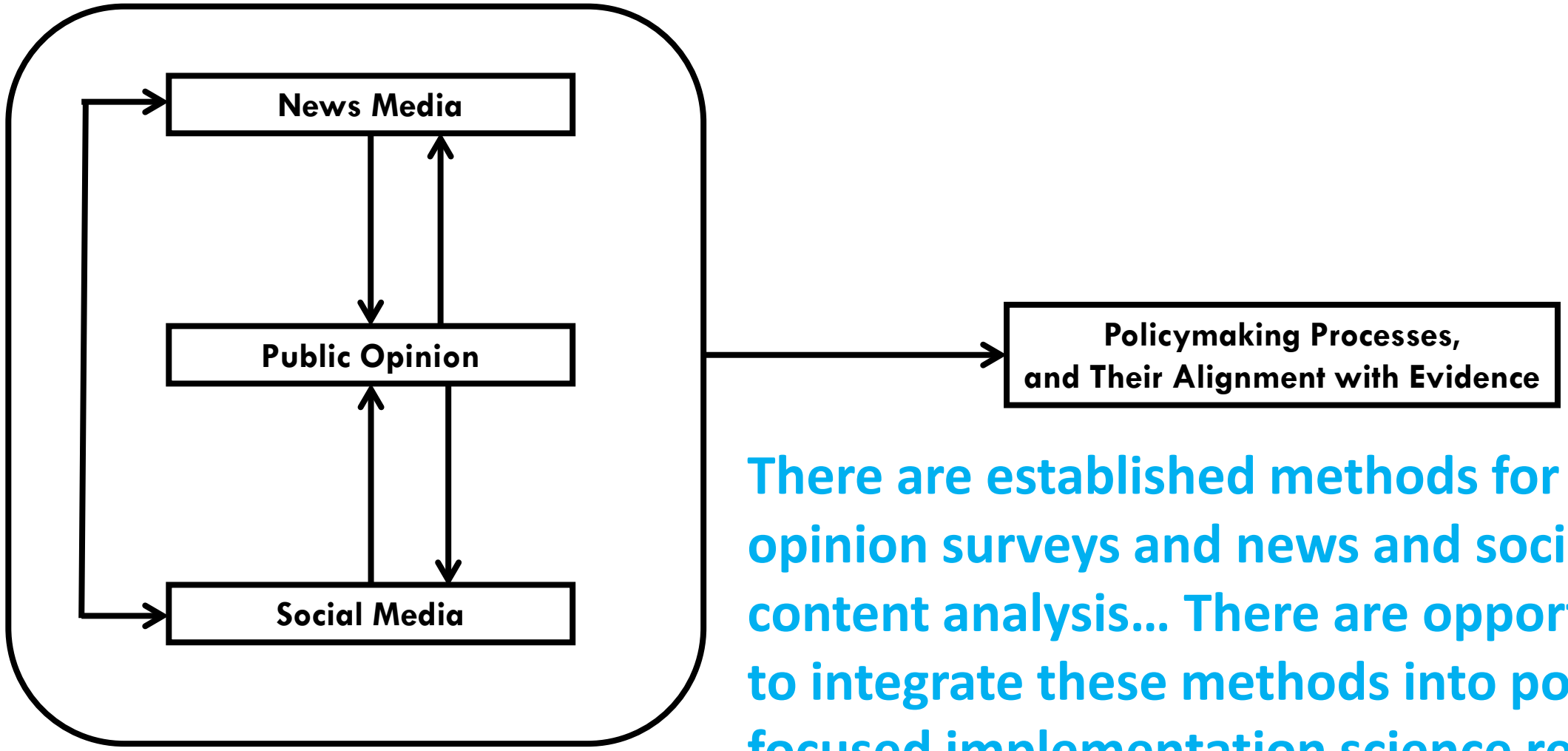
Inner-setting

- Legislature politics
- Governor agenda

Outer-setting

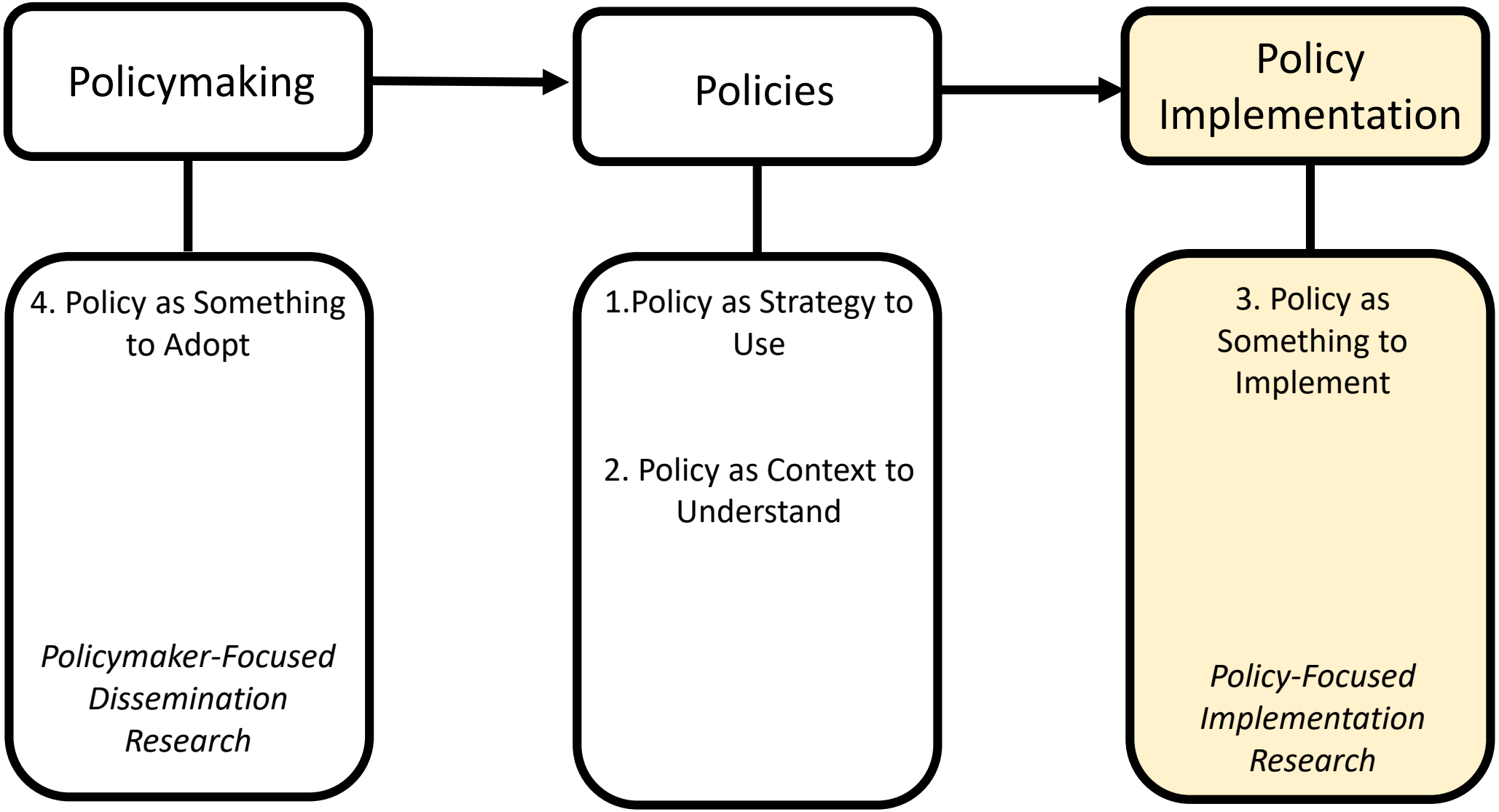
- Public opinion
- Fiscal environments

Influences and Indicators of Public Opinion



There are established methods for public opinion surveys and news and social media content analysis… There are opportunities to integrate these methods into policy-focused implementation science research.

4 Ways to Think About Policy in Implementation Science



3. Policy as Something to Implement

- Goal:
  - Understand how the **process of implementing an evidence-supported policy can be improved**

- Example research aims:
  - Describe the process through which the policy was implemented
  - Assess knowledge about the policy among key groups
  - Assess the extent to which the policy was enforced
  - Identify barriers and facilitators to policy implementation
  - Compare the effects of different approaches to policy implementation (dif-in-dif, or randomized designs)

Policy as Something to Implement: Example

McGinty *et al. Implementation Science* (2021) 16:2
https://doi.org/10.1186/s13012-020-01071-2

Implementation Science

STUDY PROTOCOL Open Access

Protocol: mixed-methods study of how implementation of US state medical cannabis laws affects treatment of chronic non-cancer pain and adverse opioid outcomes

Emma E. McGinty[1*], Kayla N. Tormohlen[1], Colleen L. Barry[1], Mark C. Bicket[2], Lainie Rutkow[1] and Elizabeth A. Stuart[1]

Policy as Something to Implement: Example

STUDY PROTOCOL Open Access

A policy implementation study of earmarked taxes for mental health services: study protocol

Check for updates

Jonathan Purtle[1*], Nicole A. Stadnick[2], Megan Wynecoop[1], Eric J. Bruns[3], Margaret E. Crane[4,5] and Gregory Aarons[2]

Policy as Something to Implement: Example

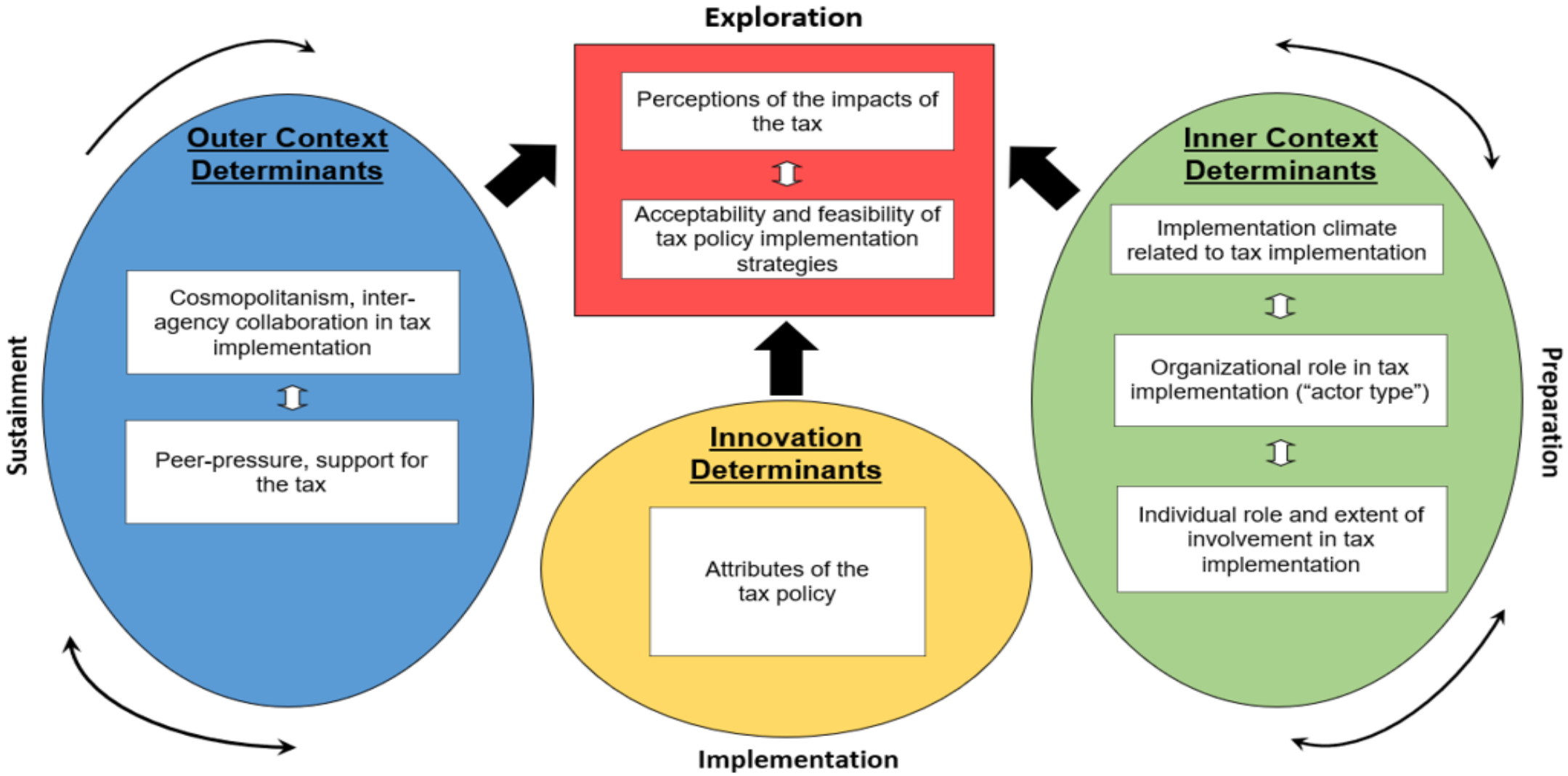
Policy Implementation Research on Earmarked Taxes for Mental Health Services
(NIMH R21MH125261)

- Aim 1: Identify all jurisdictions in the U.S. that have implemented earmarked taxes for mental health services and catalogue information about tax design.

- Aim 2: Characterize mental health agency leaders' experiences implementing earmarked taxes, understand the determinants of decisions about tax-funded programs using the EPIS framework, and assess the acceptability and feasibility of different types of implementation strategies.

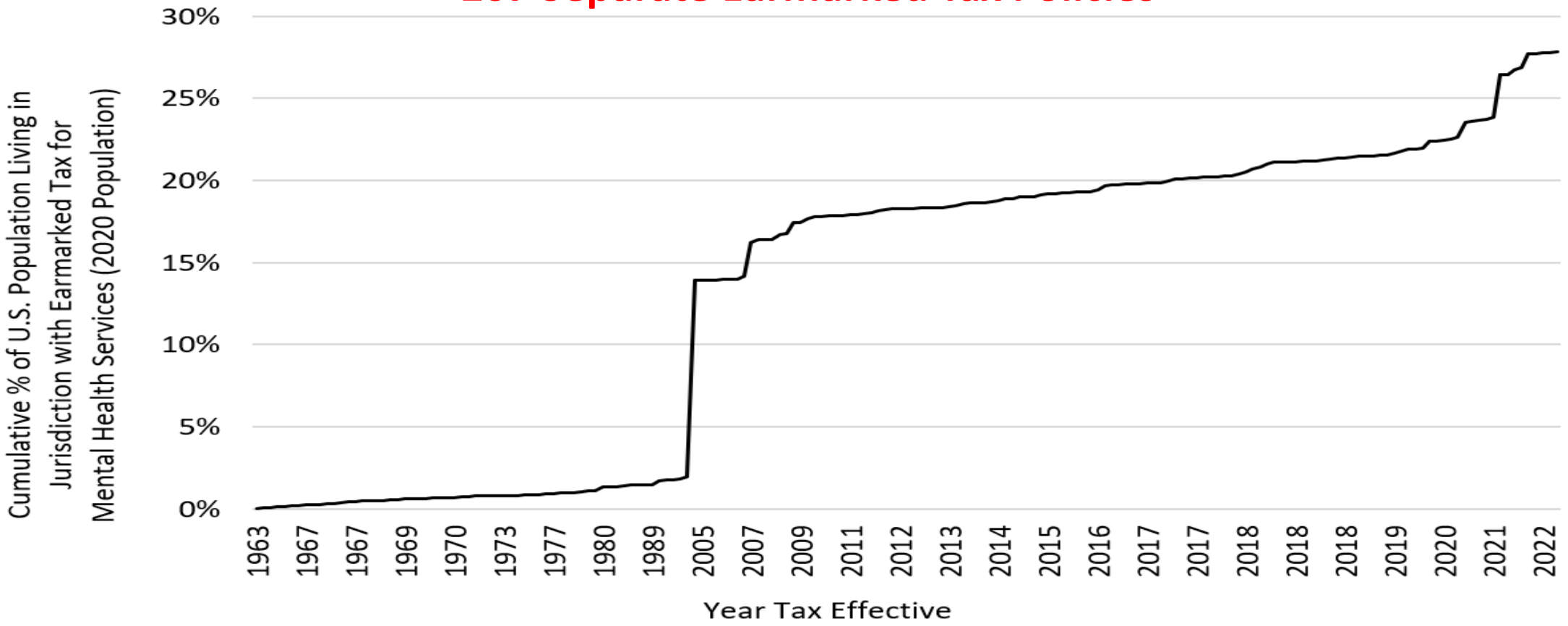
- Aim 3: Develop a conceptual policy implementation framework to improve earmarked tax design, inform the selection of implementation strategies to increase the taxes' reach of EBPs, and disseminate the framework to policy audiences.

Conceptual Framework: EPIS



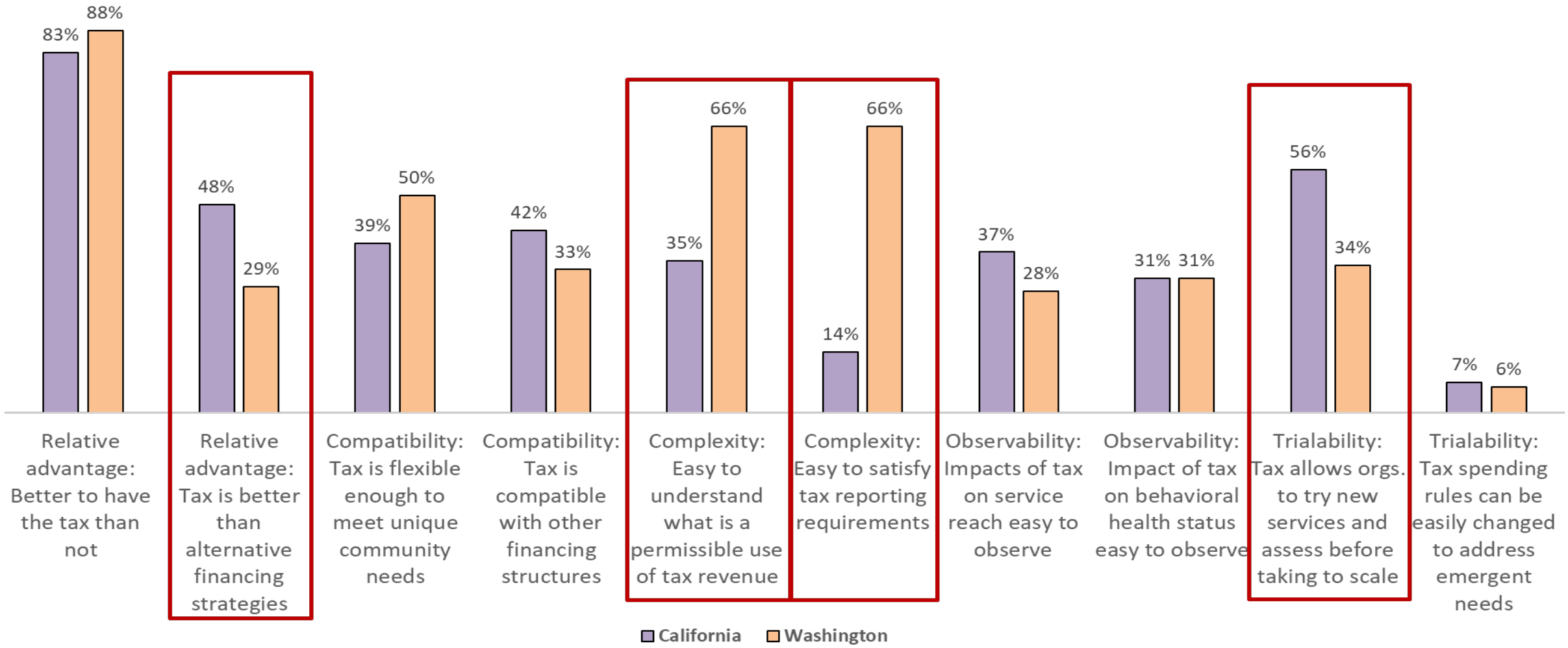
Cumulative Percentage of U.S. Population Living in a Jurisdiction with an Earmarked Tax for Mental Health Services

207 Separate Earmarked Tax Policies



Purtle, J., Wynecoop, M., Crane, M. E., & Stadnick, N. A. (2023). Earmarked Taxes for Mental Health Services in the United States: A Local and State Legal Mapping Study. *The Milbank Quarterly*.

Perceptions of the Attributes of Taxes Earmarked for Behavioral Health Services in CA and WA, "Strongly Agree" Ratings of 6-7 Dichotomized, N=155

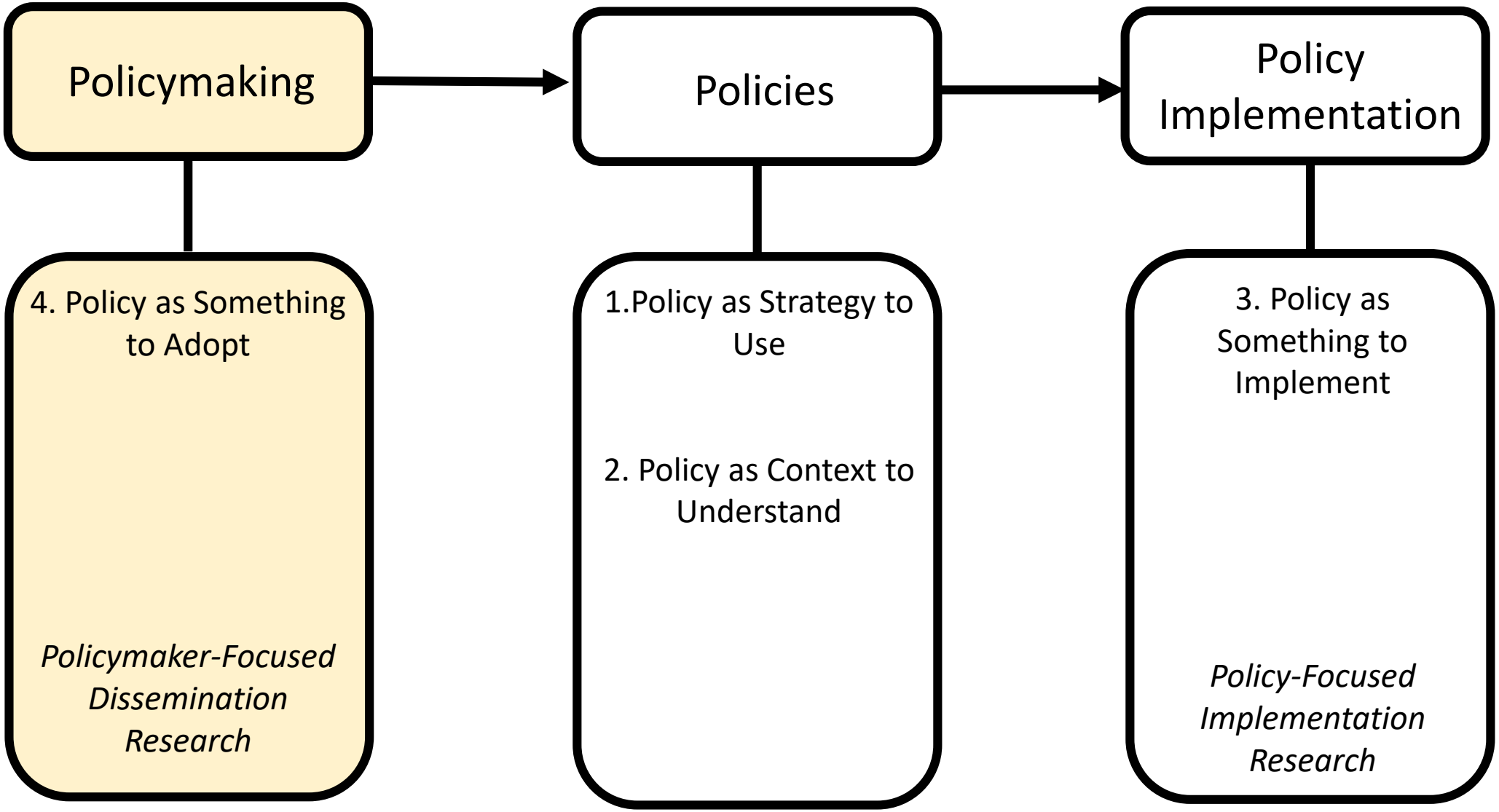


Purtle, J., Stadnick, N. A., Wynecoop, M., Walker, S. C., Bruns, E. J., & Aarons, G. A. (2023). A Tale of Two Taxes: Implementation of Earmarked Taxes for Behavioral Health Services in California and Washington State. *Psychiatric Services*.

Identity Determinants of Perceived Policy Implementation Success

	Model 1: All		**Model 2: Delivery System Orgs.**		**Model 3: Non- Delivery System Orgs.**	
	β	*p*	β	*p*	β	*p*
Inner Context						
Individual role in tax implementation	0.11	0.09	0.04	0.65	0.23	0.06
Implementation climate related to the tax being used to support EBPs	0.36	<. 001	0.45	<. 001	0.33	0.004
Outer Context						
Cosmopolitanism	0.08	0.29	0.04	0.75	0.03	0.77
Peer pressure	0.1	0.19	0.07	0.51	0.11	0.39
Innovation Determinant						
Perceptions of earmarked tax policy	0.44	<. 001	0.36	0.001	0.66	<. 001

4 Ways to Think About Policy in Implementation Science



4. Policy as Something to Adopt

- Goal:
  - Understand how **policymakers' minds can be changed**, and **policymaking processes can by modified,** to increase adoption, and thus reach, of an evidence-supported policy
  - Policymaker-focused dissemination research
    - Focused on clear and compelling communication of research evidence to policymakers
- Example research aims:
  - Characterize policymakers'
    - Knowledge about the policy and/or the issues that it addresses
    - Support for the policy (define it for them)
    - Attitudes towards the policy
  - Characterize the sociopolitical environment related to the policy and/or the issue it addresses
    - Public opinion
    - News, entertainment, and social media
  - Tailor and test different messages about the policy for policymakers with different characteristics (audience segmentation)
  - Evaluate researcher-policymaker collaboratives' effects on policy adoption

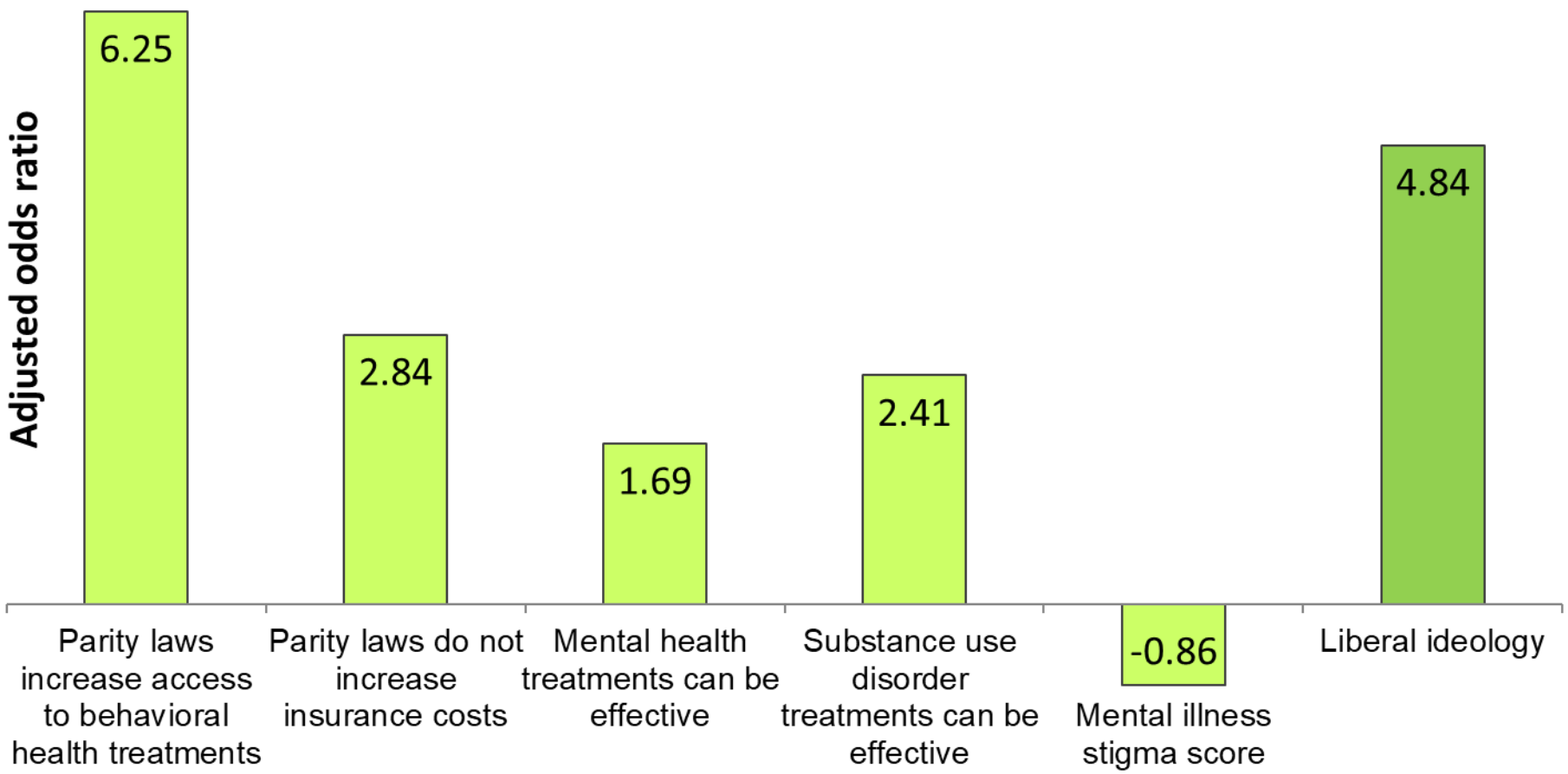
Three Stage Approach to Policymaker-Focused Dissemination Research

Purtle, J., Marzalik, J. S., Halfond, R. W., Bufka, L. F., Teachman, B. A., & Aarons, G. A. (2020). Toward the data-driven dissemination of findings from psychological science. *American Psychologist*, *75*(8), 1052.

Formative Audience Research: Characterizing Policymakers'

- Knowledge and Attitudes about Issues
- Prevalence and Correlates of Policymaker Support for Policies

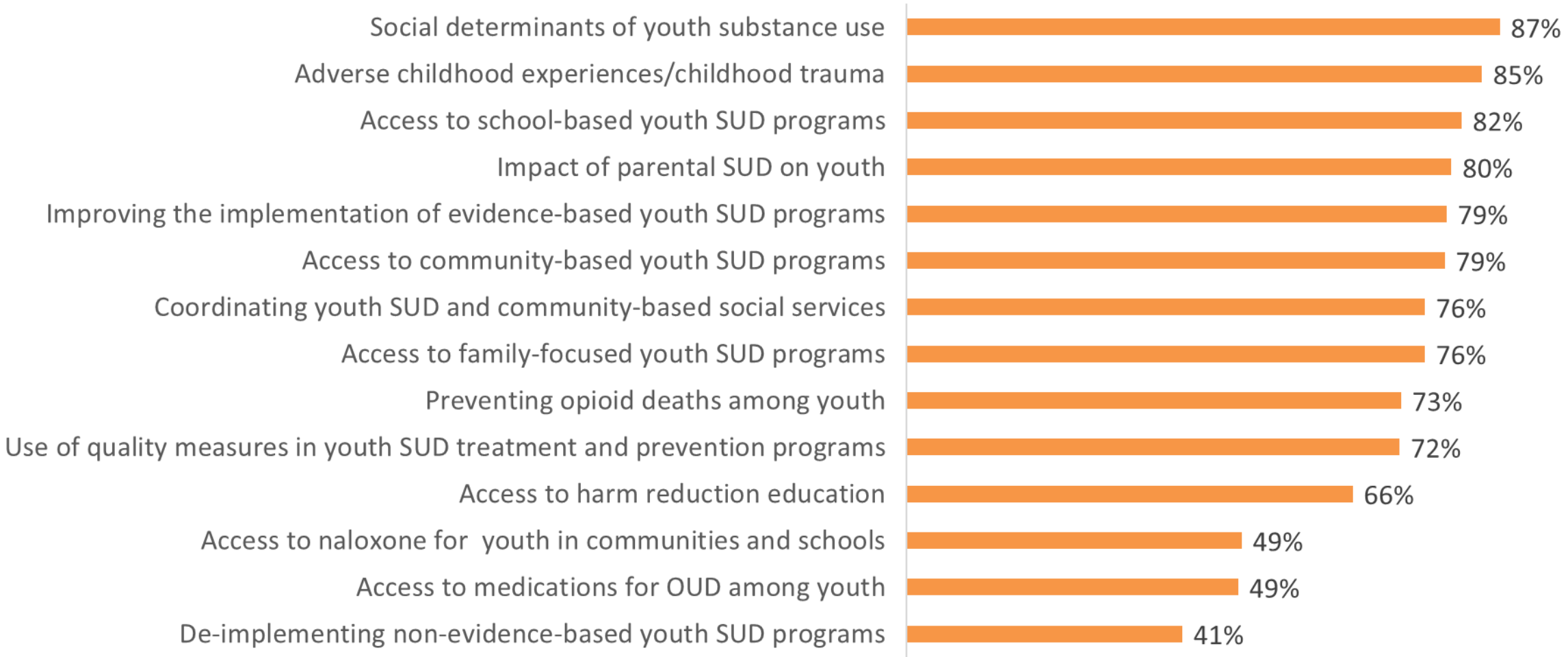
Legislator Factors Associated with Support for State Behavioral Health Parity Laws (39.0% strongly support)



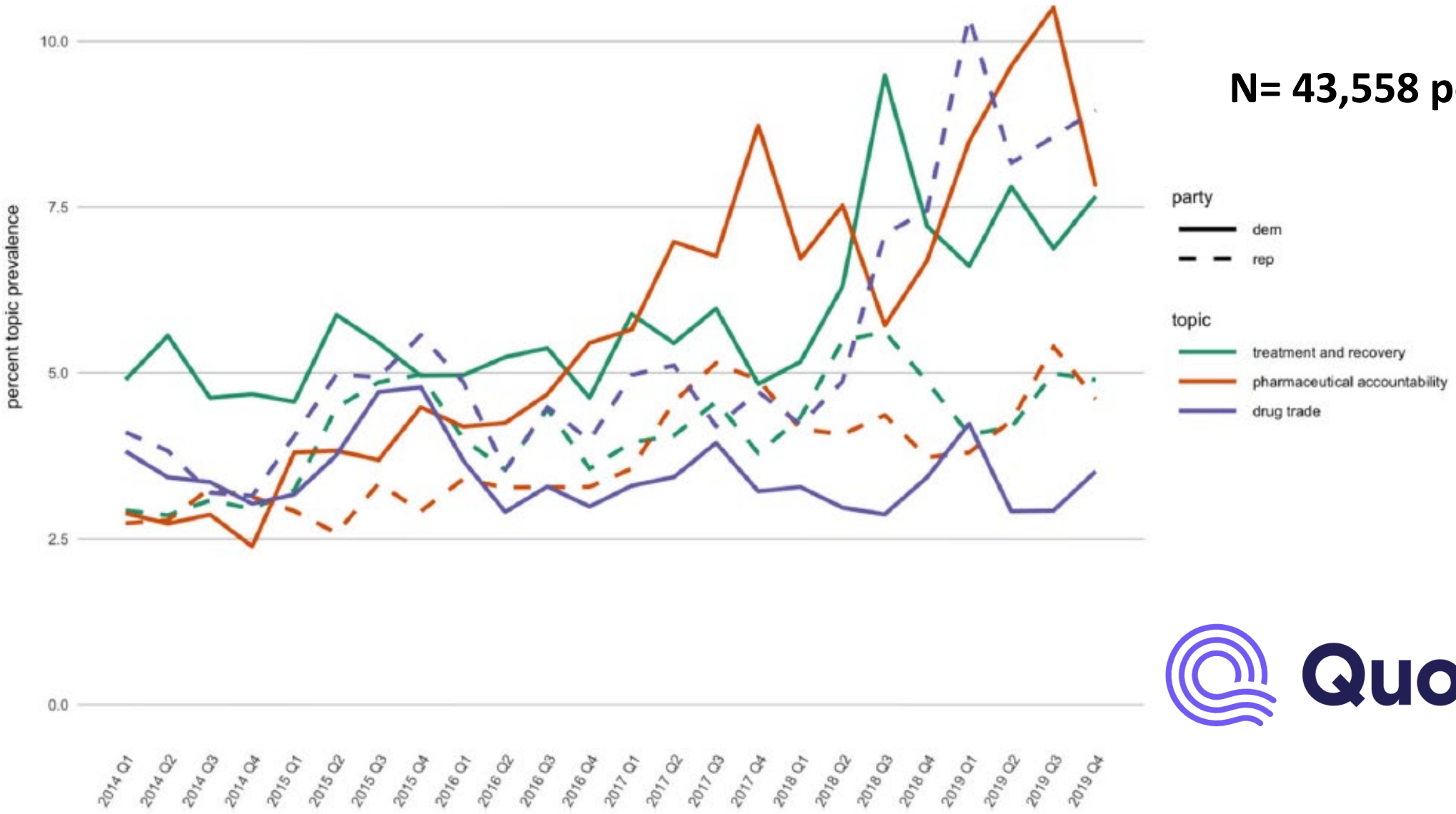
Purtle, J., Lê-Scherban, F., Wang, X.,… Brownson, RC. State Legislator Support for Behavioral Health Parity Laws: The Influence of Mutable and Fixed Factors at Multiple Levels. *The Milbank Quarterly.* 2019.

Formative Audience Research: Identifying Policymakers' Priorities

Proportion of Youth Substance Use Issues Rated as "High Priority" (4 or 5 on 5-point Scale)
State and County Substance Use Agency Officials, 2020, N= 122



Purtle, J., Nelson, K. L., Henson, R. M., Horwitz, S. M., McKay, M. M., & Hoagwood, K. E. (2021). Policy Makers' Priorities for Addressing Youth Substance Use and Factors That Influence Priorities. *Psychiatric Services.*

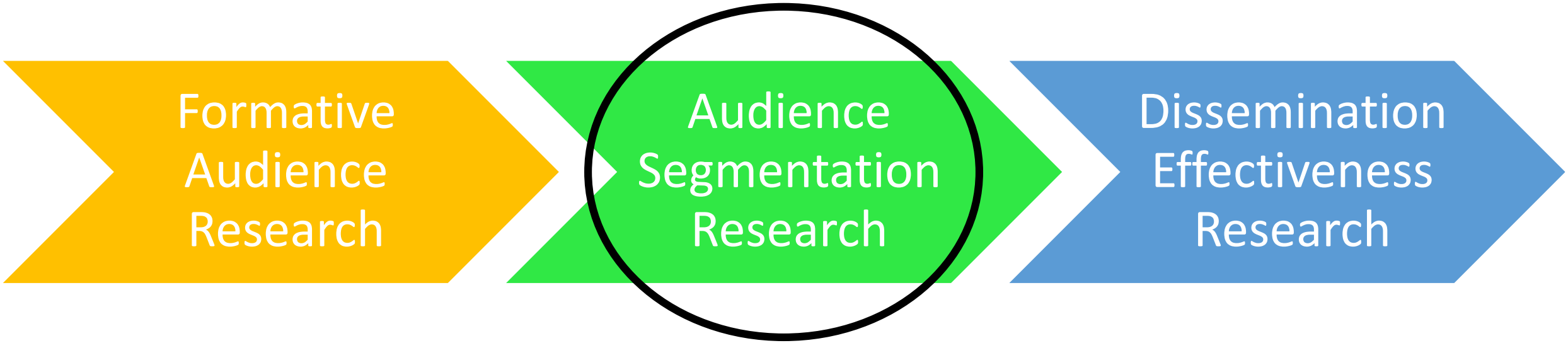


N= 43,558 posts

Quorum

Stokes, D. C., Purtle, J., Meisel, Z. F., & Agarwal, A. K. (2021). State Legislators' Divergent Social Media Response to the Opioid Epidemic from 2014 to 2019: Longitudinal Topic Modeling Analysis. *Journal of General Internal Medicine*, 1-10.

Three Stage Approach to Policymaker-Focused Dissemination Research



Purtle, J., Marzalik, J. S., Halfond, R. W., Bufka, L. F., Teachman, B. A., & Aarons, G. A. (2020). Toward the data-driven dissemination of findings from psychological science. *American Psychologist*, *75*(8), 1052.

Purtle et al. Implementation Science (2018) 13:121
https://doi.org/10.1186/s13012-018-0816-8

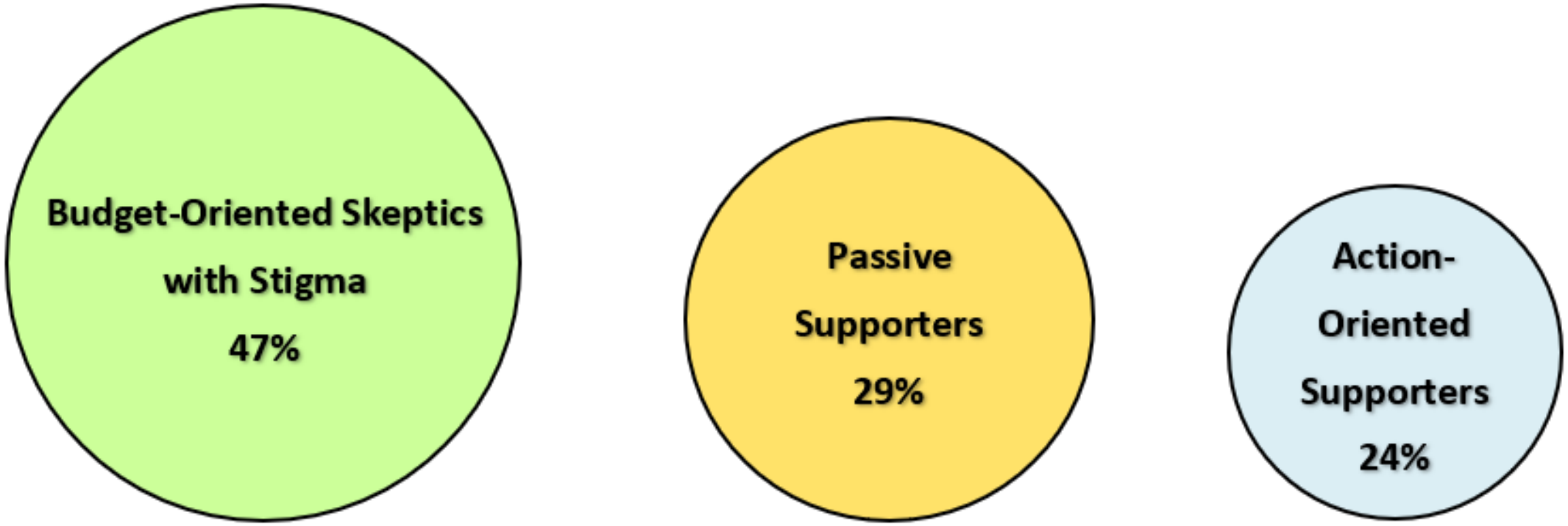
Implementation Science

RESEARCH Open Access

Audience segmentation to disseminate behavioral health evidence to legislators: an empirical clustering analysis

Jonathan Purtle[1*], Félice Lê-Scherban[2], Xi Wang[2], Paul T. Shattuck[1,3], Enola K. Proctor[4] and Ross C. Brownson[5,6]

Three Behavioral Health Audience Segments of State Legislators



Three Stage Approach to Policymaker-Focused Dissemination Research

Purtle, J., Marzalik, J. S., Halfond, R. W., Bufka, L. F., Teachman, B. A., & Aarons, G. A. (2020). Toward the data-driven dissemination of findings from psychological science. *American Psychologist*, *75*(8), 1052.

Communicating Evidence-Based Information on Cancer Prevention to State-Level Policy Makers

Ross C. Brownson, Elizabeth A. Dodson, Katherine A. Stamatakis, Christopher M. Casey, Michael B. Elliott, Douglas
Christopher G. Wintrode, Matthew W. Kreuter

Manuscript received June 13, 2010; revised November 8, 2010; accepted November 30, 2010.

Correspondence to: Ross C. Brownson, PhD, Prevention Research Center in St Louis, Alvin J. Siteman Cancer Center, Washington University

Scott *et al. Implementation Science* (2023) 18:12
https://doi.org/10.1186/s13012-023-01268-1

Implementation Science

RESEARCH **Open Access**

SciComm Optimizer for Policy Engagement: a randomized controlled trial of the SCOPE model on state legislators' research use in public discourse

J. Taylor Scott[1*], K. Megan Collier[2], Jessica Pugel[1], Patrick O'Neill[3], Elizabeth C. Long[1], Mary A. Fernandes[4], Katherine Cruz[5], Brittany Gay[1], Cagla Giray[6] and D. Max Crowley[1]

JOURNAL OF PUBLIC INTEREST COMMUNICATIONS

ISSN (online): 2573-4342

When "Tried and True" Advocacy Strategies Backfire: Narrative Mes
Can Undermine State Legislator Support for Early Childcare Policies

Liana B. Winett, Jeff Niederdeppe, Yiwei Xu, Sarah Gollust, Erika Franklin

NOTES FROM THE FIELD AJPH

Rapid-Cycle Experimentation With State and Federal Policymakers for izing the Reach of Racial Research

D, Jessica Pugel, MA, J. Taylor Scott, PhD, Nicolyn Charlot, MSc, Cagla Giray, PhD, Mary A. Fernandes, MA, PhD

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research

Cutting through the noise during crisis by enhancing the relevance of research to policymakers

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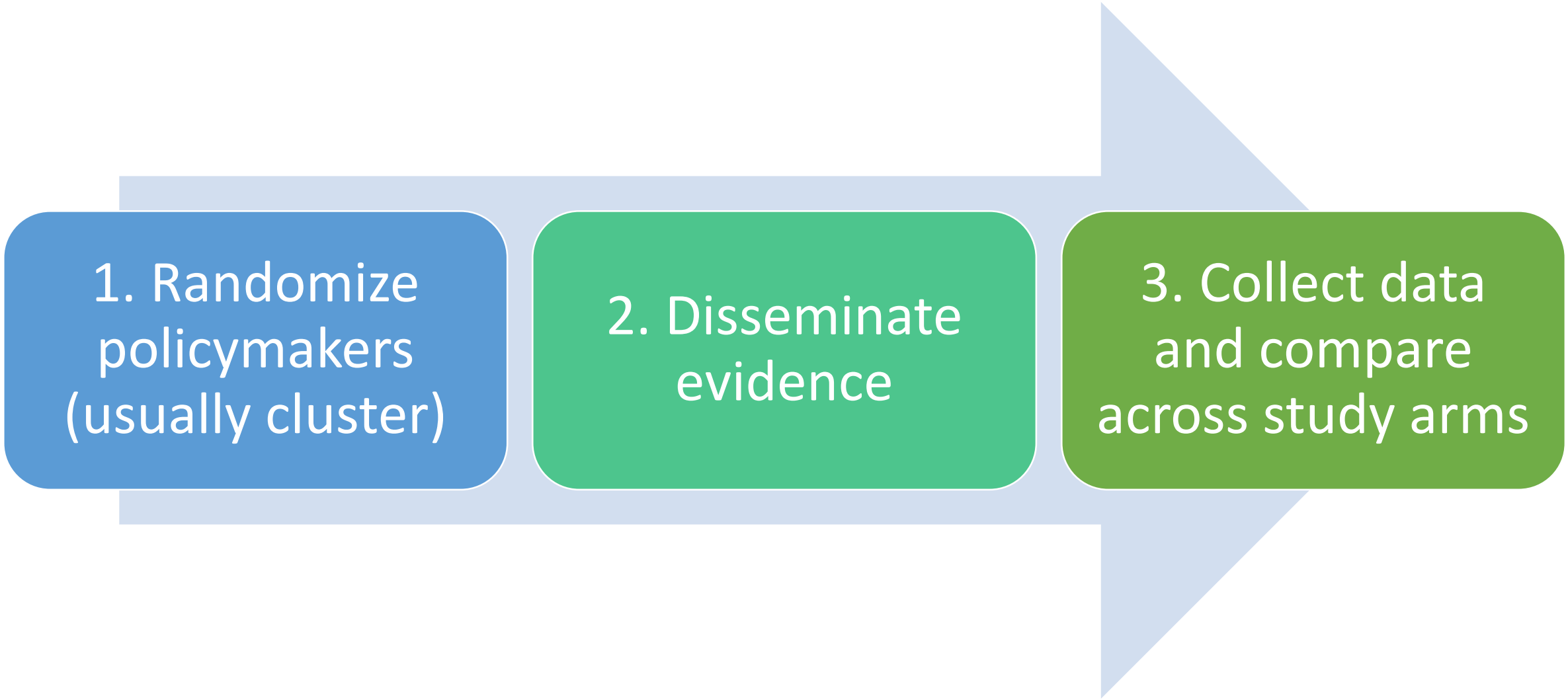
Jessica Pugel, jrp6229@psu.edu
Pennsylvania State University, USA

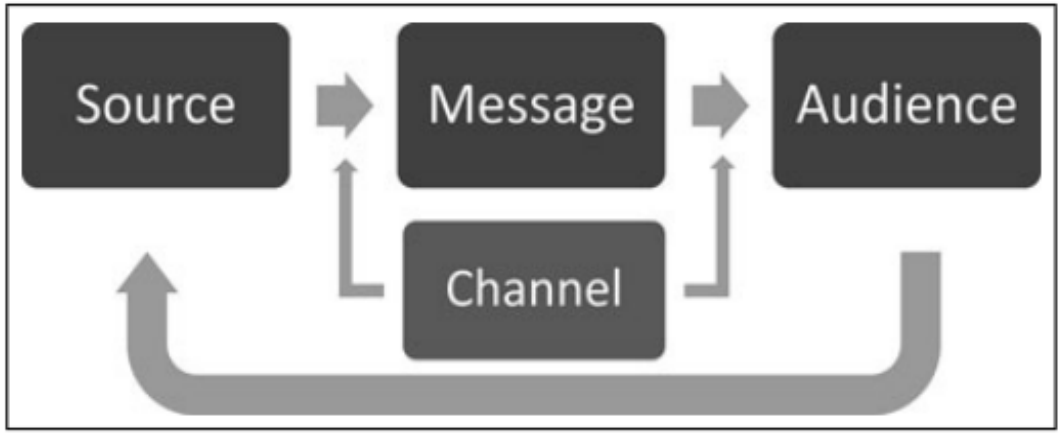
Daniel M. Butler[1] and David W. Nickerson[2]

General Procedure:



Considerations: What to experimentally manipulate?

- Source/messenger
  - E.g., academic researcher vs. advocacy organization
- Message/frame
  - E.g., emphasize narrative vs. quantitative data
- Channel/mode
  - E.g., e-mailed policy brief vs. data dashboard
- Assess effect heterogeneity between audience sub-groups



Brownson et al. (2018) Model for Dissemination Research

Considerations: Outcomes

Outcome Type	Outcome	Pros	Cons/Considerations
Engagement with disseminated evidence	E-mail views	• Directly observable, no need for surveys	• Necessarily outcomes, but not meaningful in and of themselves • Some e-mail servers block e-mail view and link click tracking
	Link clicks/website visits		
	Requests for consultation		

Example: Policymaker Dissemination Field Experiment

Purtle *et al. Implementation Science* (2022) 17:38
https://doi.org/10.1186/s13012-022-01214-7

Implementation Science

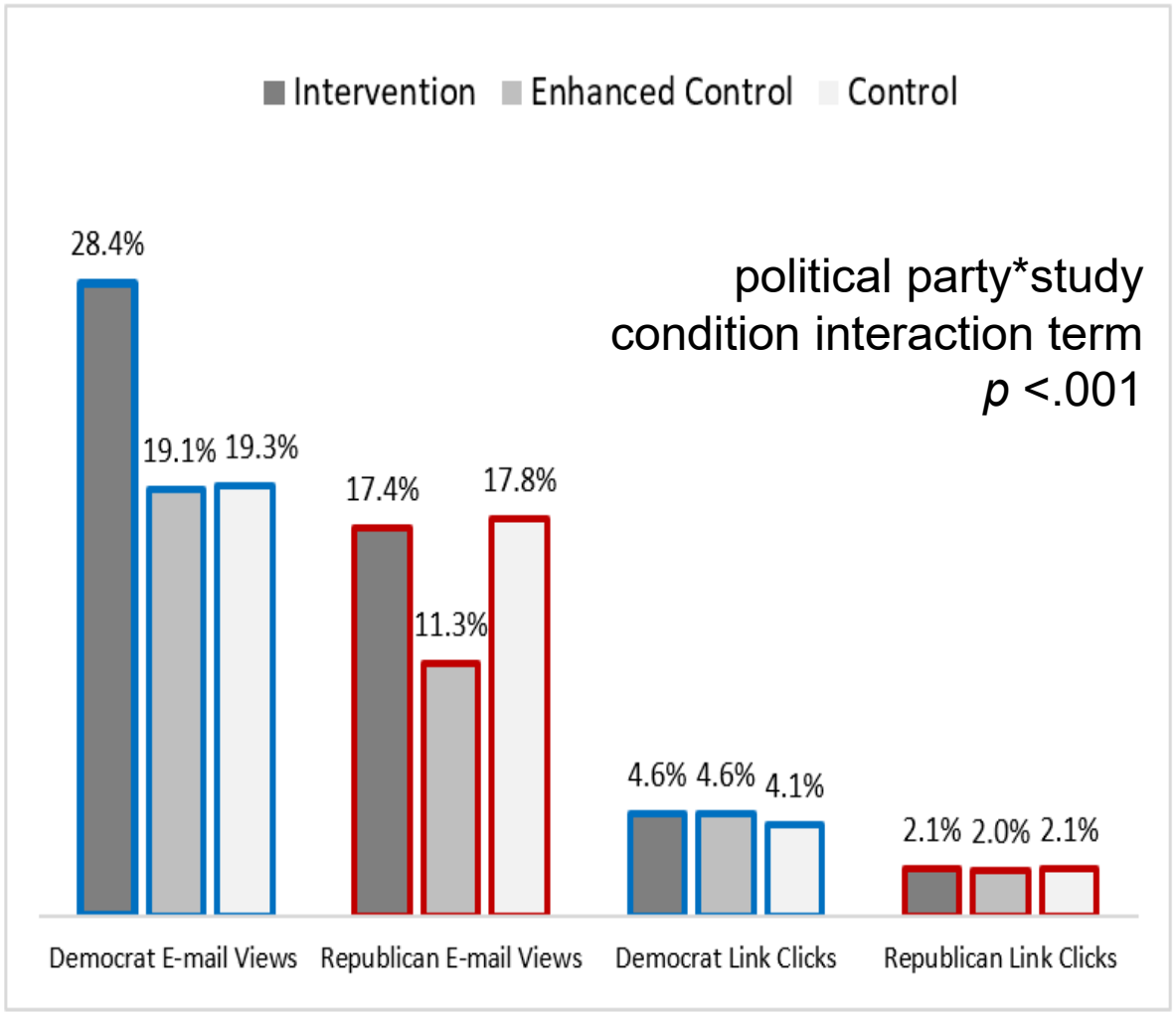
RESEARCH Open Access

Partisan differences in the effects of economic evidence and local data on legislator engagement with dissemination materials about behavioral health: a dissemination trial

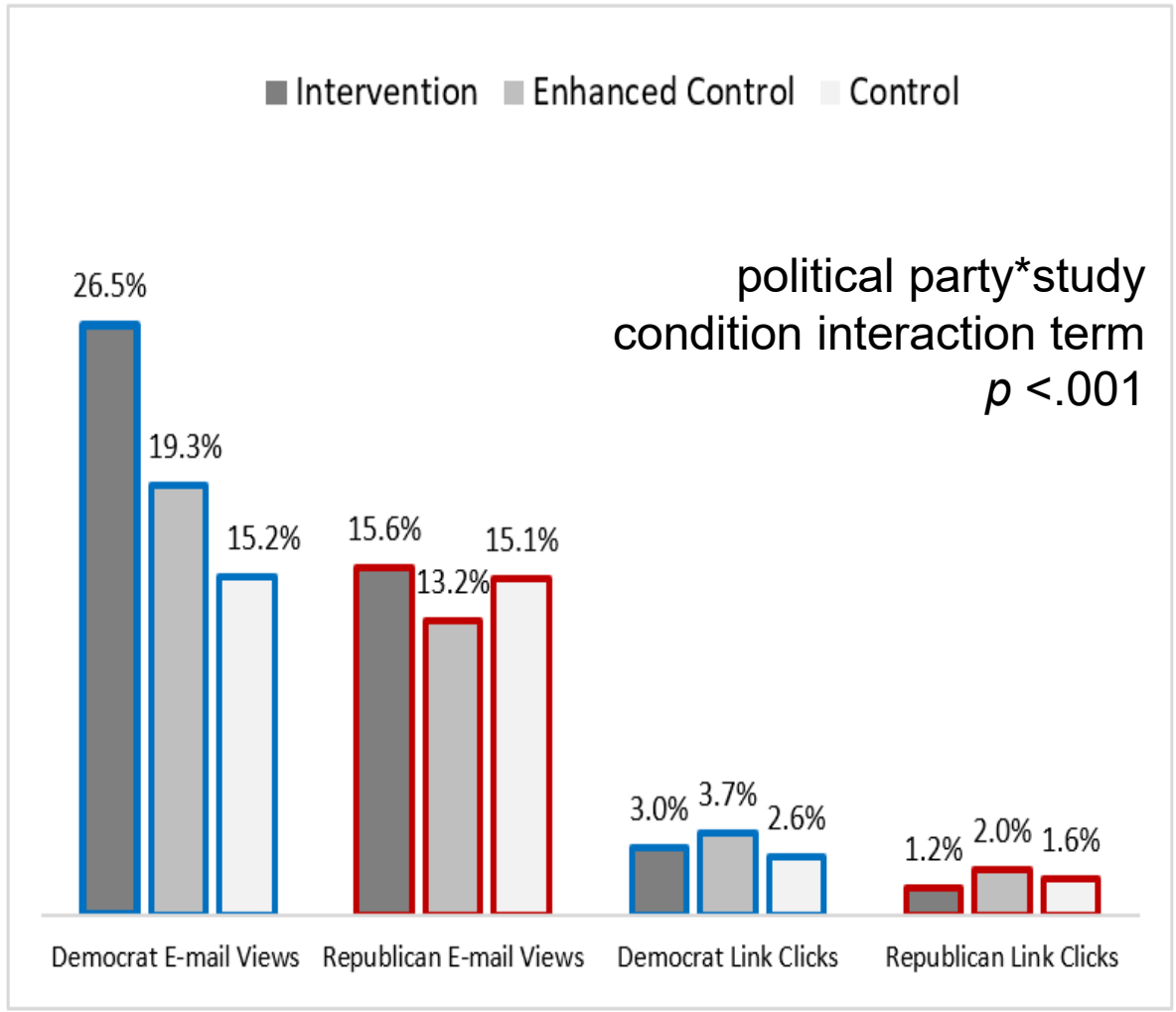
Jonathan Purtle[1*], Katherine L. Nelson[2], Luwam Gebrekristos[2], Félice Lê-Scherban[2] and Sarah E. Gollust[3]

Effects of Dissemination Materials are Moderated by Political Party Affiliation

Panel A. First Dissemination E-mail, n= 6,509



Panel B. Second Dissemination E-mail, *(n= 6,153)*



Example: Policymaker Dissemination Survey-Based Experiment

Short Report

Implementation Research & Practice

Unintended consequences of disseminating behavioral health evidence to policymakers: Results from a survey-based experiment

Implementation Research and Practice
Volume 4: Jan-Dec 2023 1–10
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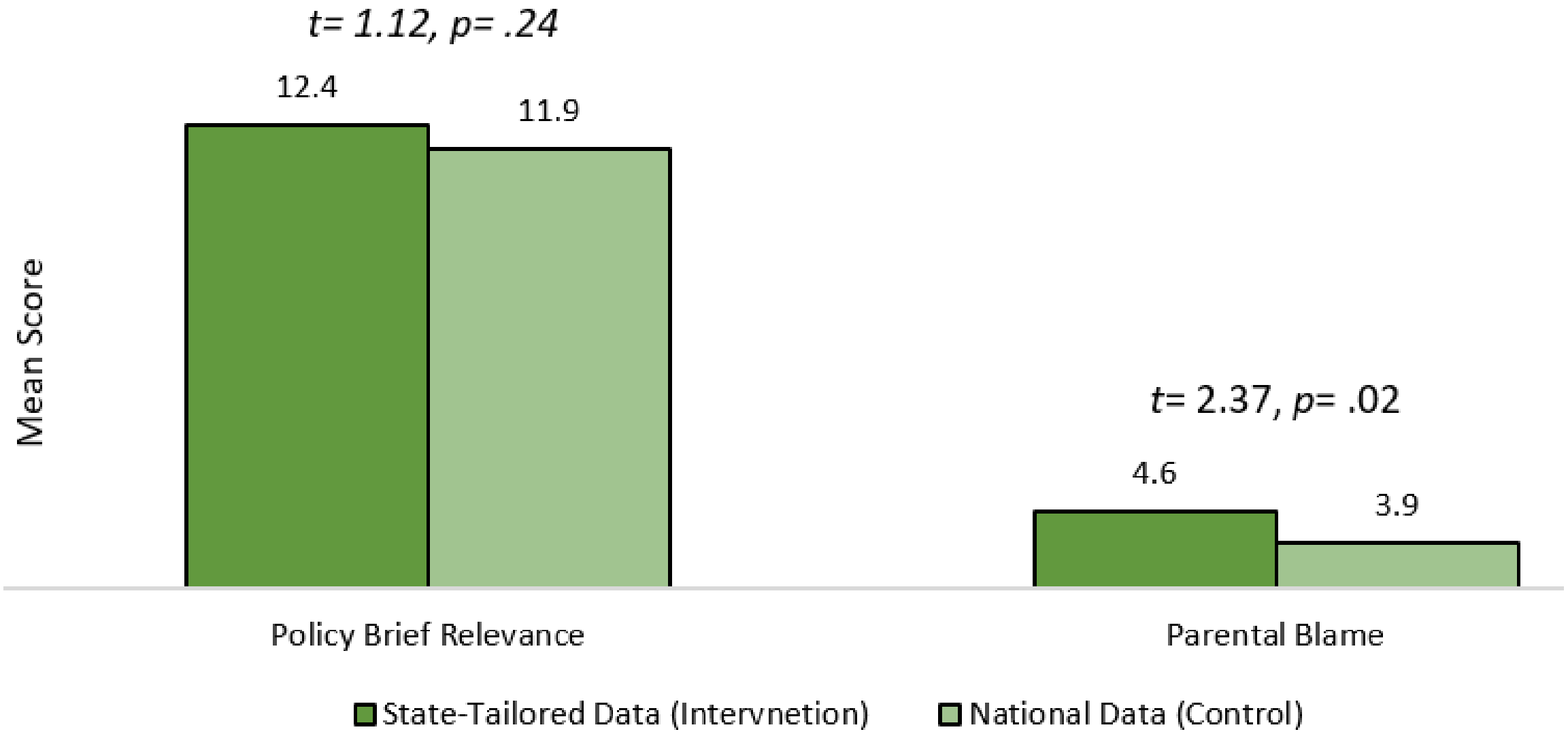
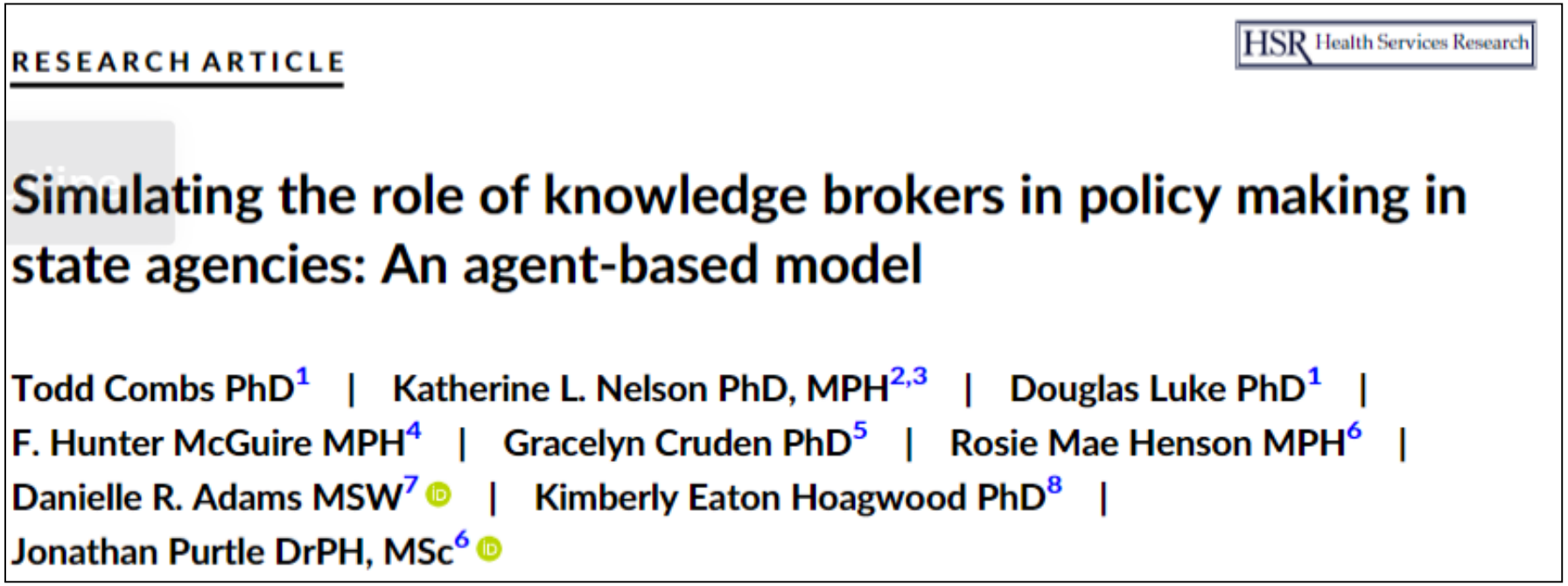
Jonathan Purtle[1], Katherine L. Nelson[2], Félice Lê-Scherban[2] and Sarah E. Gollust[3]

Main Effect Results:



Modeling Use of Research Evidence in Different Policy Contexts

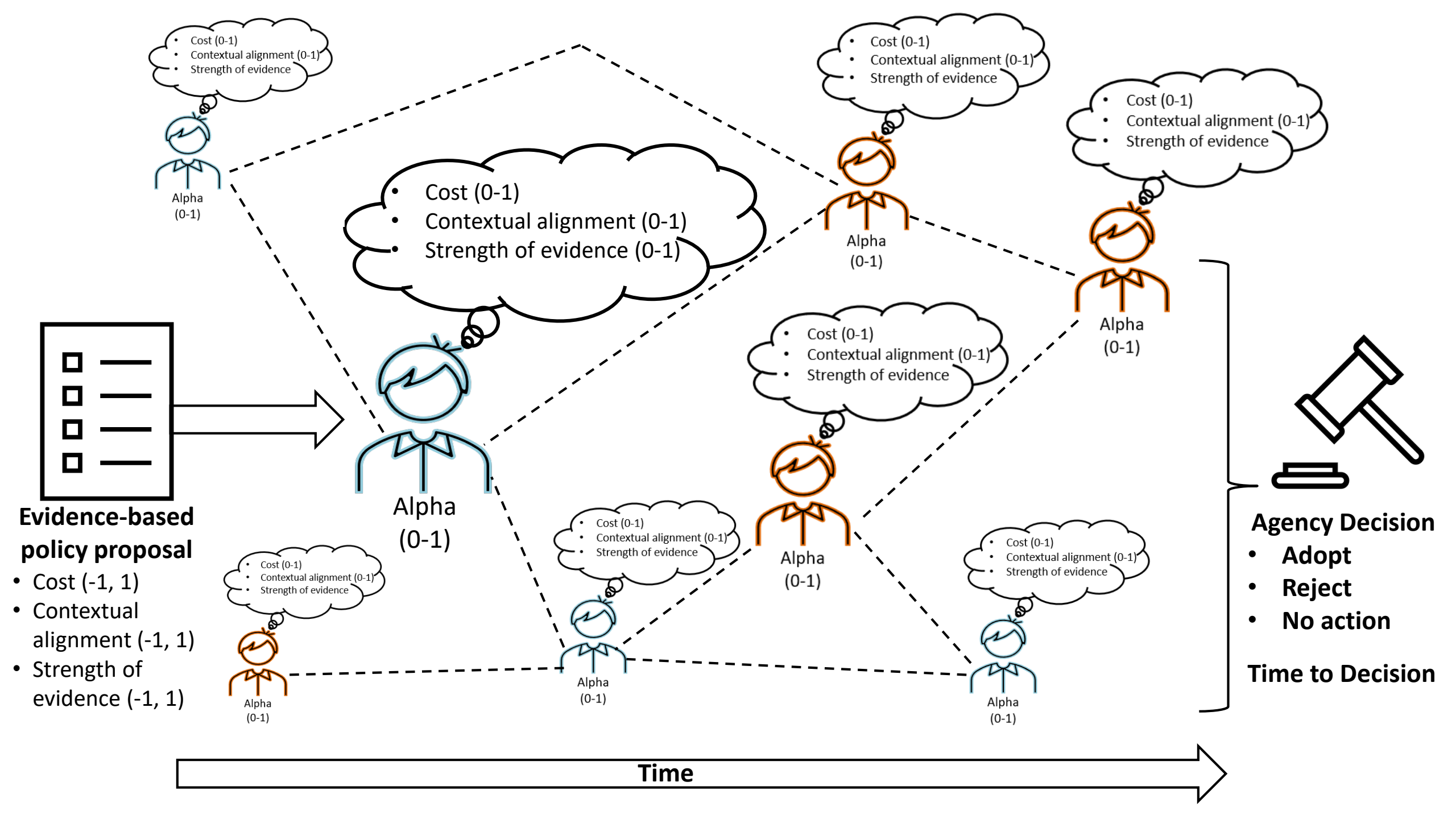


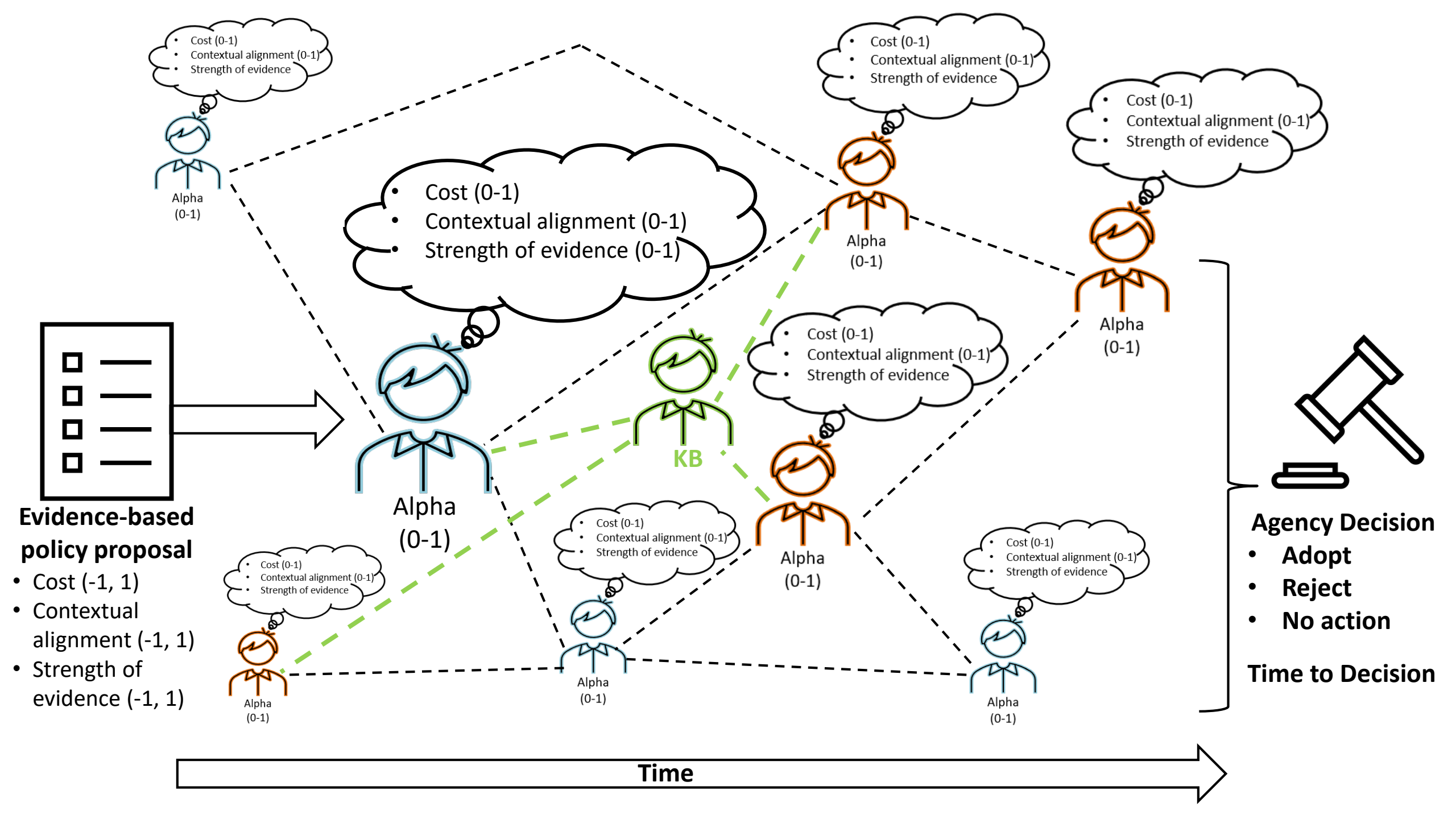
RESEARCH ARTICLE

HSR Health Services Research

Simulating the role of knowledge brokers in policy making in state agencies: An agent-based model

Todd Combs PhD[1] | Katherine L. Nelson PhD, MPH[2,3] | Douglas Luke PhD[1] | F. Hunter McGuire MPH[4] | Gracelyn Cruden PhD[5] | Rosie Mae Henson MPH[6] | Danielle R. Adams MSW[7] | Kimberly Eaton Hoagwood PhD[8] | Jonathan Purtle DrPH, MSc[6]


Cost (0-1)
Contextual alignment (0-1)
Strength of evidence
Alpha
(0-1)
Evidence-based policy proposal
Cost (-1, 1)
Contextual alignment (-1, 1)
Strength of evidence (-1, 1)
Agency Decision
Adopt
Reject
No action
Time to Decision
Time


Cost (0-1)
Contextual alignment (0-1)
Strength of evidence
Alpha
(0-1)
KB
Evidence-based policy proposal
Cost (-1, 1)
Contextual alignment (-1, 1)
Strength of evidence (-1, 1)
Agency Decision
Adopt
Reject
No action
Time to Decision
Time

“The policy making process is a political process, with the basic aim of reconciling interests in order to negotiate a consensus, not of implementing logic and truth. The value issues in policy making cannot be settled by referring to research findings.”

- Carol Weiss, 1977

3rd Annual 2 Day Virtual Training in Policy-Focused Implementation Science

- Fall 2024, Date TBD
- https://publichealth.nyu.edu/w/gcis/activities/Cultivate/Training

Additional Recent Resources

Crable *et al. Implementation Science* (2022) 17:80
https://doi.org/10.1186/s13012-022-01256-x

Implementation Science

DEBATE **Open Access**

Where is "policy" in dissemination and implementation science? Recommendations to advance theories, models, and frameworks: EPIS as a case example

Erika L. Crable[1,2,3*], Rebecca Lengnick-Hall[4], Nicole A. Stadnick[1,2,3], Joanna C. Moullin[5] and Gregory A. Aarons[1,2,3]

Additional Recent Resources

Cruden *et al.*
Implementation Science Communications (2023) 4:113
https://doi.org/10.1186/s43058-023-00492-6

Implementation Science Communications

METHODOLOGY Open Access

Who's "in the room where it happens"? A taxonomy and five-step methodology for identifying and characterizing policy actors

Gracelyn Cruden[1*], Erika L. Crable[2], Rebecca Lengnick-Hall[3] and Jonathan Purtle[4]

Additional Recent Resources

Walker *et al. Implementation Science* (2023) 18:44
https://doi.org/10.1186/s13012-023-01295-y

Implementation Science

SYSTEMATIC REVIEW **Open Access**

Strategies for enacting health policy codesign: a scoping review and direction for research

Sarah Cusworth Walker[1*†], Barbara Baquero[2†], Betty Bekemeier[3], McKenna Parnes[1] and Kashika Arora[4]

Additional Recent Resources

frontiers | Frontiers in Health Services

TYPE Perspective
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Applying hybrid effectiveness-implementation studies in equity-centered policy implementation science

Yuka Asada[1]*, Aimee Kroll-Desrosiers[2,3,4], Jamie F. Chriqui[5,6], Geoffrey M. Curran[7], Karen M. Emmons[8], Debra Haire-Joshu[9] and Ross C. Brownson[10,11]

Thank You!

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