



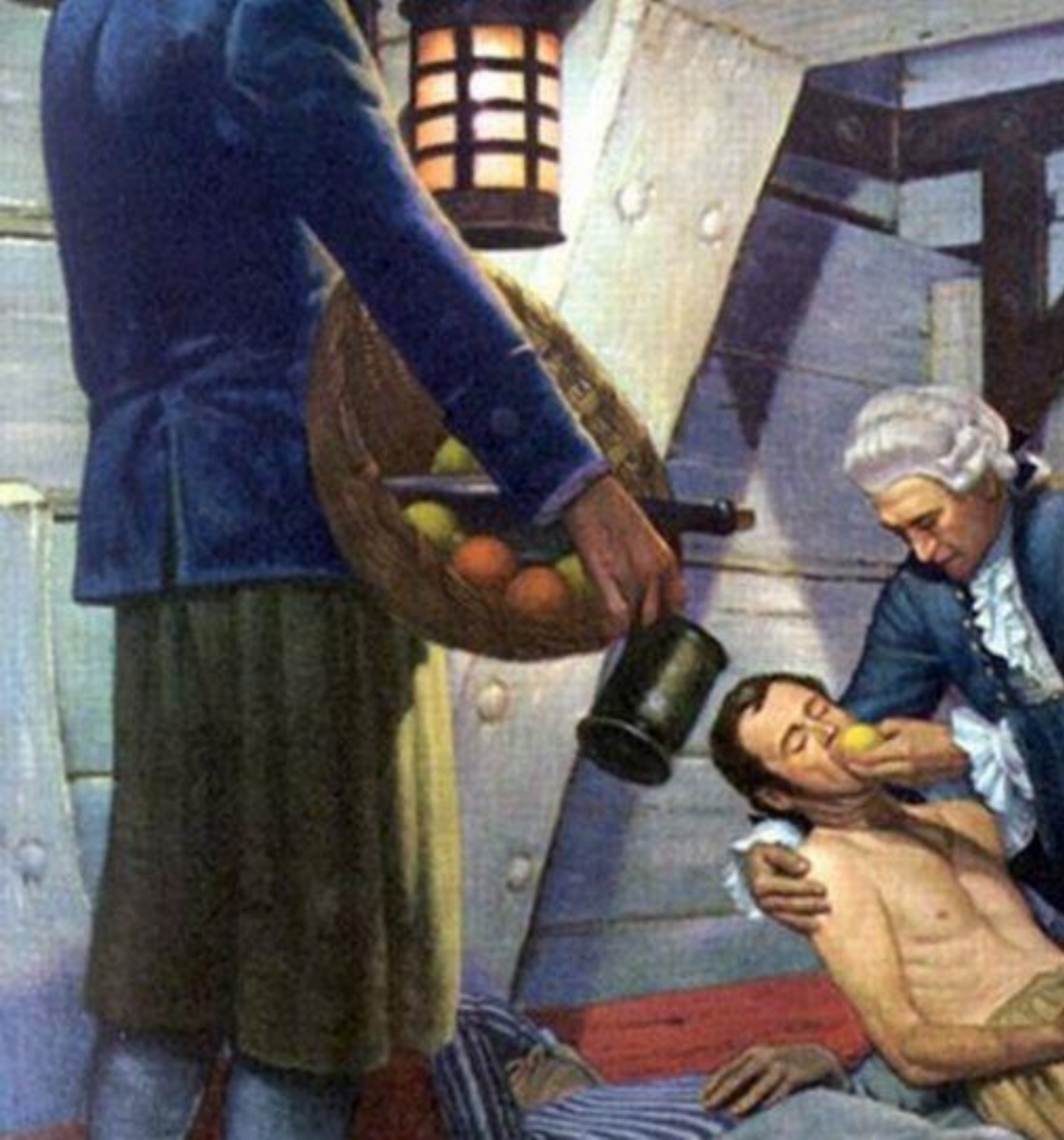
IMPACT

SWISS IMPLEMENTATION SCIENCE NETWORK

Articulating Implementation Mechanisms to Optimize for Impact, Efficiency, and Equity

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Director, Center for Dissemination & Implementation

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The “first” successful clinical trial

Elixir of Vitriol



Cider



Balsam of Peru



Vinegar



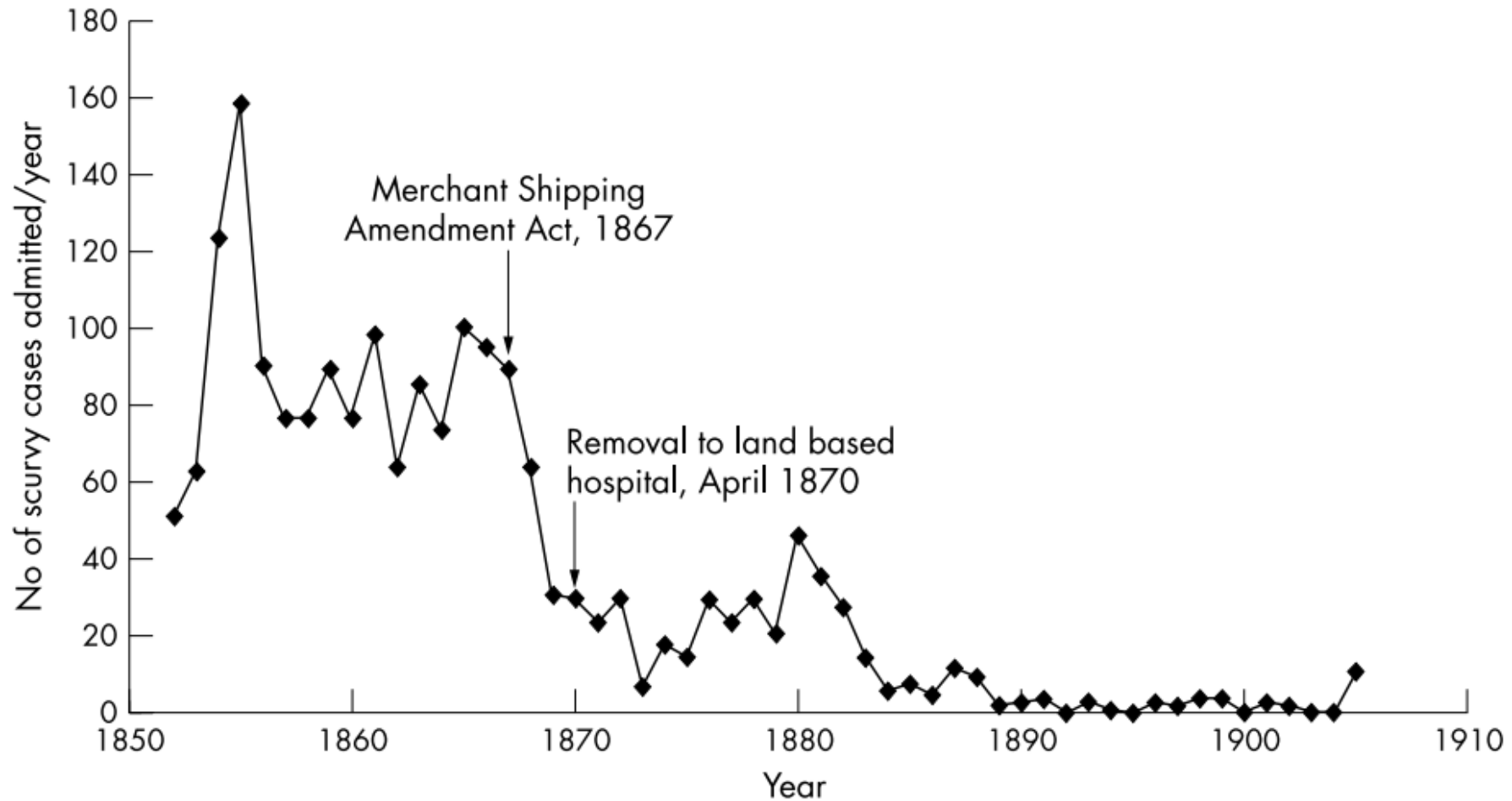
Sea Water



Citrus



The know-do gap... >100 years until uptake



A
T R E A T I S E
O N T H E
S C U R V Y .
I N T H R E E P A R T S .

C O N T A I N I N G

An Inquiry into the Nature, Causes,
and Cure, of that Disease.

Together with

A Critical and Chronological View of what
has been published on the Subject.

By JAMES LIND, M. D.

Fellow of the Royal College of Physicians in *Edinburgh*.

The SECOND EDITION corrected, with Additions
and Improvements.

L O N D O N :

Printed for A. MILLAR in the *Strand*.

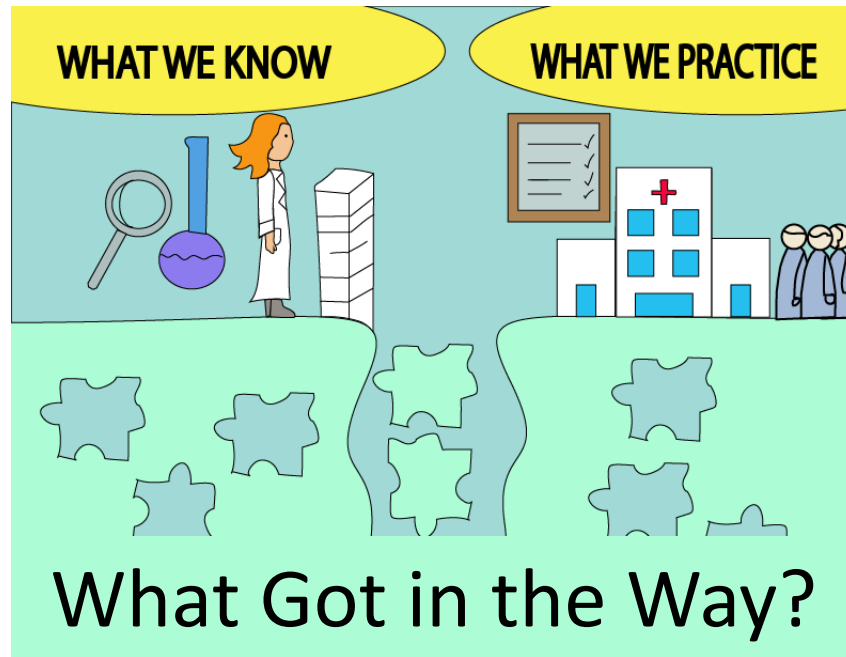
MDCCLVII:

The case for mechanisms

- Lind himself did not know the mechanism of citrus
 - Lemon juice was boiled, deactivating Vitamin C
 - Cider also worked a little...
- This is not a story of evidence that we failed to use...

...but highlights limitations of evidence revealing *whether* and not *how* something works

2000's



Implementation Science



Research article

Open Access

Fostering implementation of health services research findings into practice: a consolidated framework for advancing implementation science

Laura J Damschroder^{*1}, David C Aron², Rosalind E Keith¹, Susan R Kirsh², Jeffery A Alexander³ and Julie C Lowery¹

2010's



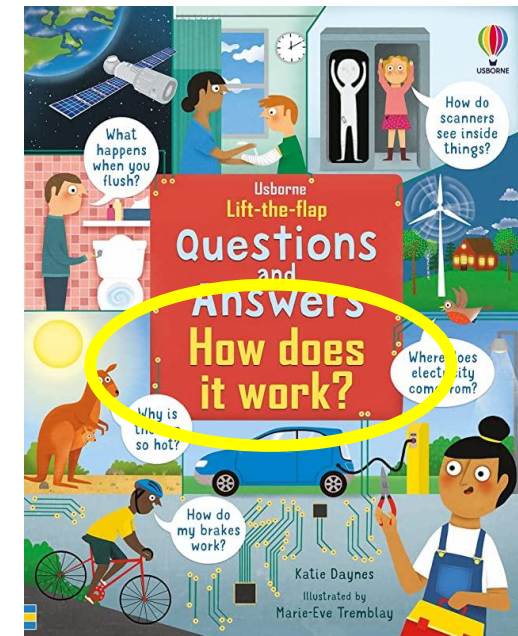
Review

A Compilation of Strategies for Implementing Clinical Innovations in Health and Mental Health

Medical Care Research and Review
69(2): 123-157
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sagepub.com/journalsPermissions.nav
DOI: 10.1177/1077558711430690
http://mcr.sagepub.com
SAGE

Byron J. Powell¹, J. Curtis McMillen², Enola K. Proctor¹, Christopher R. Carpenter³, Richard T. Griffey³, Alicia C. Bunger⁴, Joseph E. Glass¹, and Jennifer L. York³

2020's



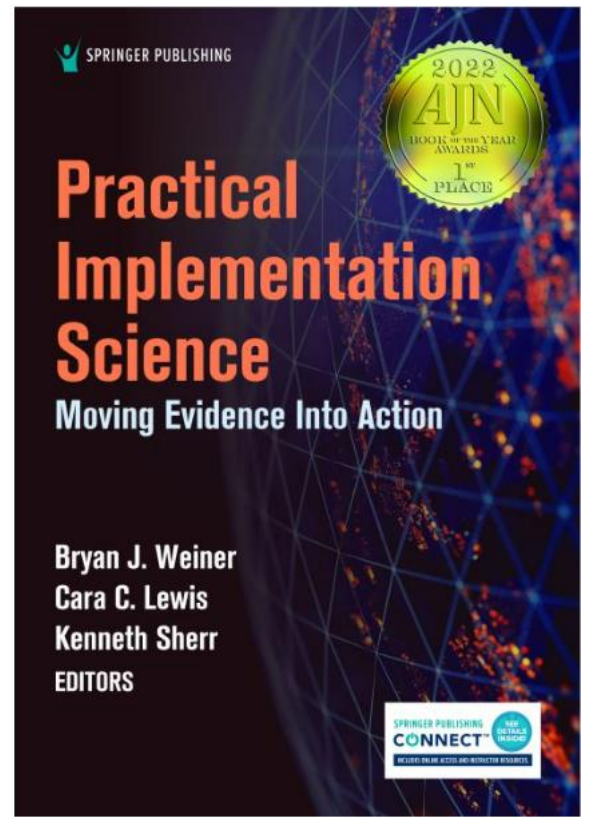
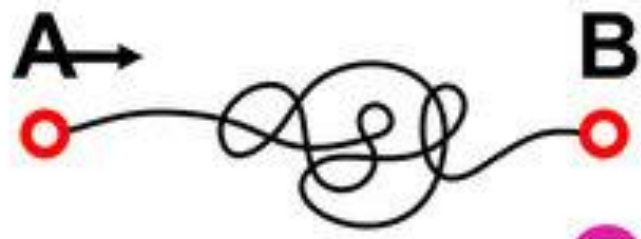
SYSTEMATIC REVIEW

Open Access

A systematic review of empirical studies examining mechanisms of implementation in health

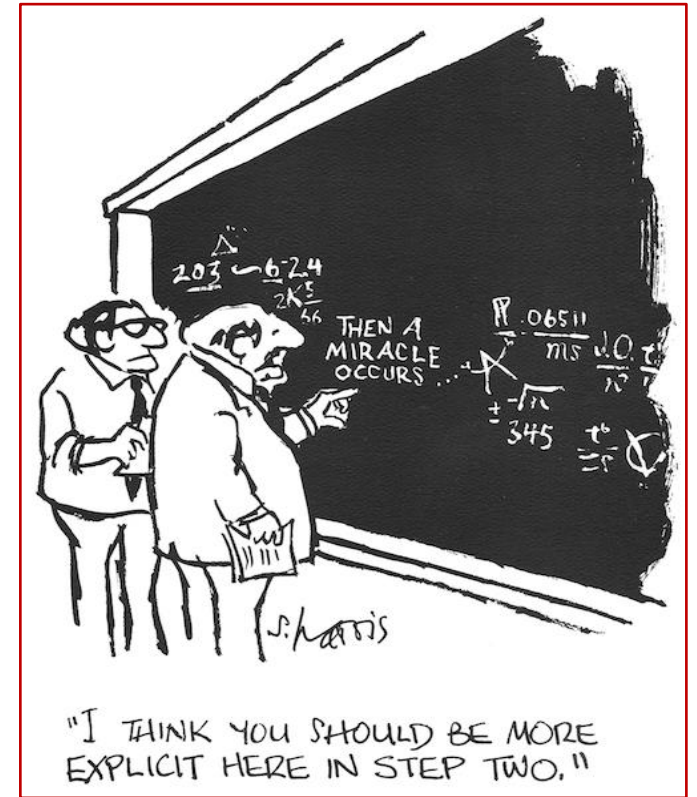
Cara C. Lewis^{1,2,3*}, Meredith R. Boyd⁴, Callie Walsh-Bailey^{1,5}, Aaron R. Lyon³, Rinad Beidas⁶, Brian Mittman⁷, Gregory A. Aarons⁸, Bryan J. Weiner⁹ and David A. Chambers¹⁰





***“This works here,
here, but not
there.”***

***“No
Implementation
without
Adaptation”***



Implementation outcomes



The effects of deliberate and purposive actions to implement new treatments, practices, and services.



Implementation outcomes

- Acceptability
- Adoption
- Appropriateness
- Costs
- Feasibility
- Fidelity
- Penetration
- Sustainability



Service outcomes

- Efficiency
- Safety
- Effectiveness
- Equity
- Patient-centeredness
- Timeliness



Client outcomes

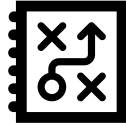
- Satisfaction
- Function
- Symptomatology

Proctor et al., 2011

**Implementation
outcome**



Implementation strategies



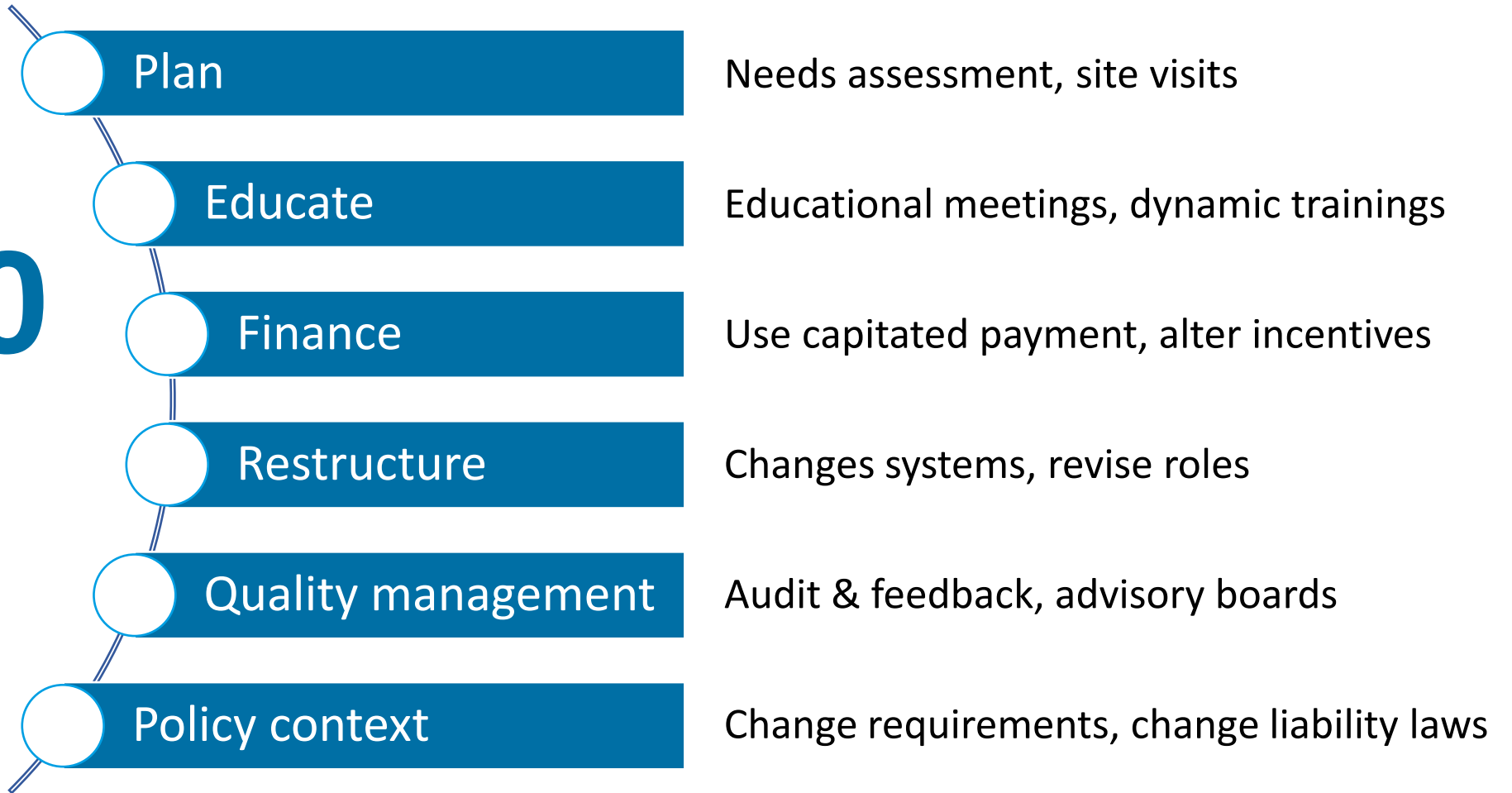
Methods or techniques used to enhance the adoption, implementation, and sustainability of clinical program or practice.





> 100

discrete
strategies



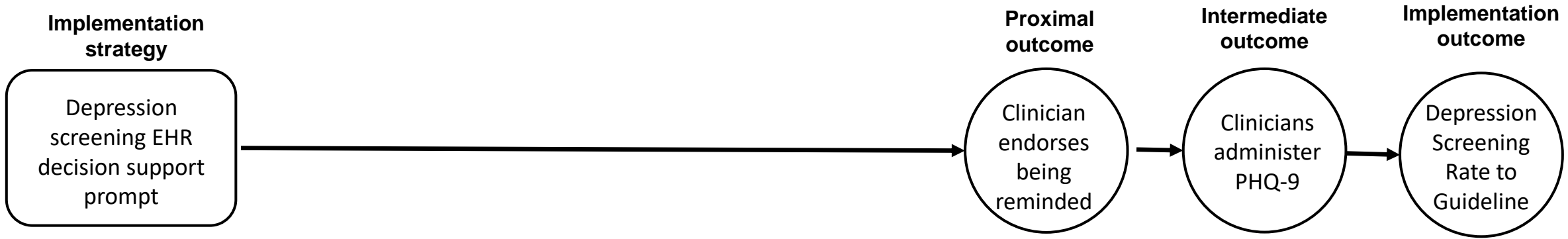
Implementation strategy

Depression screening EHR decision support prompt

Implementation outcome

Depression Screening Rate to Guideline





Determinants of practice



Factors that obstruct or enable changes in targeted professional behaviors or healthcare delivery processes.

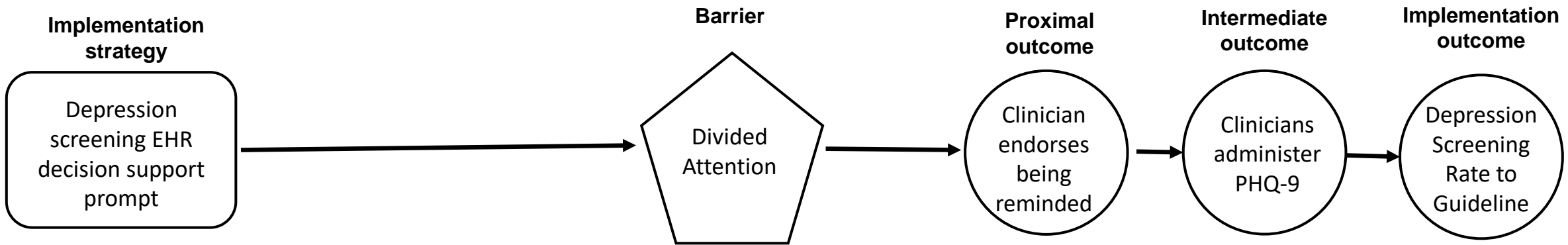


601

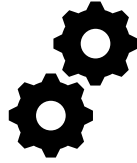


determinants
spanning multiple
domains





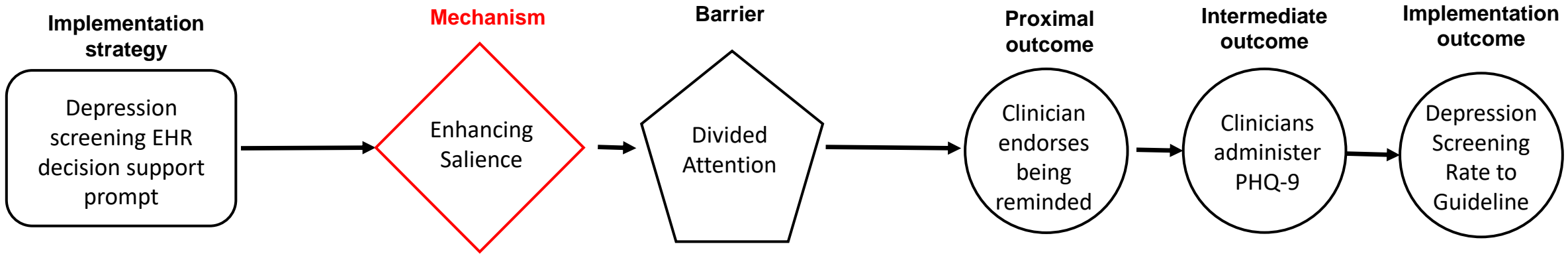
Mechanisms



The reasons why change occurred or how change came about.

It's a process.





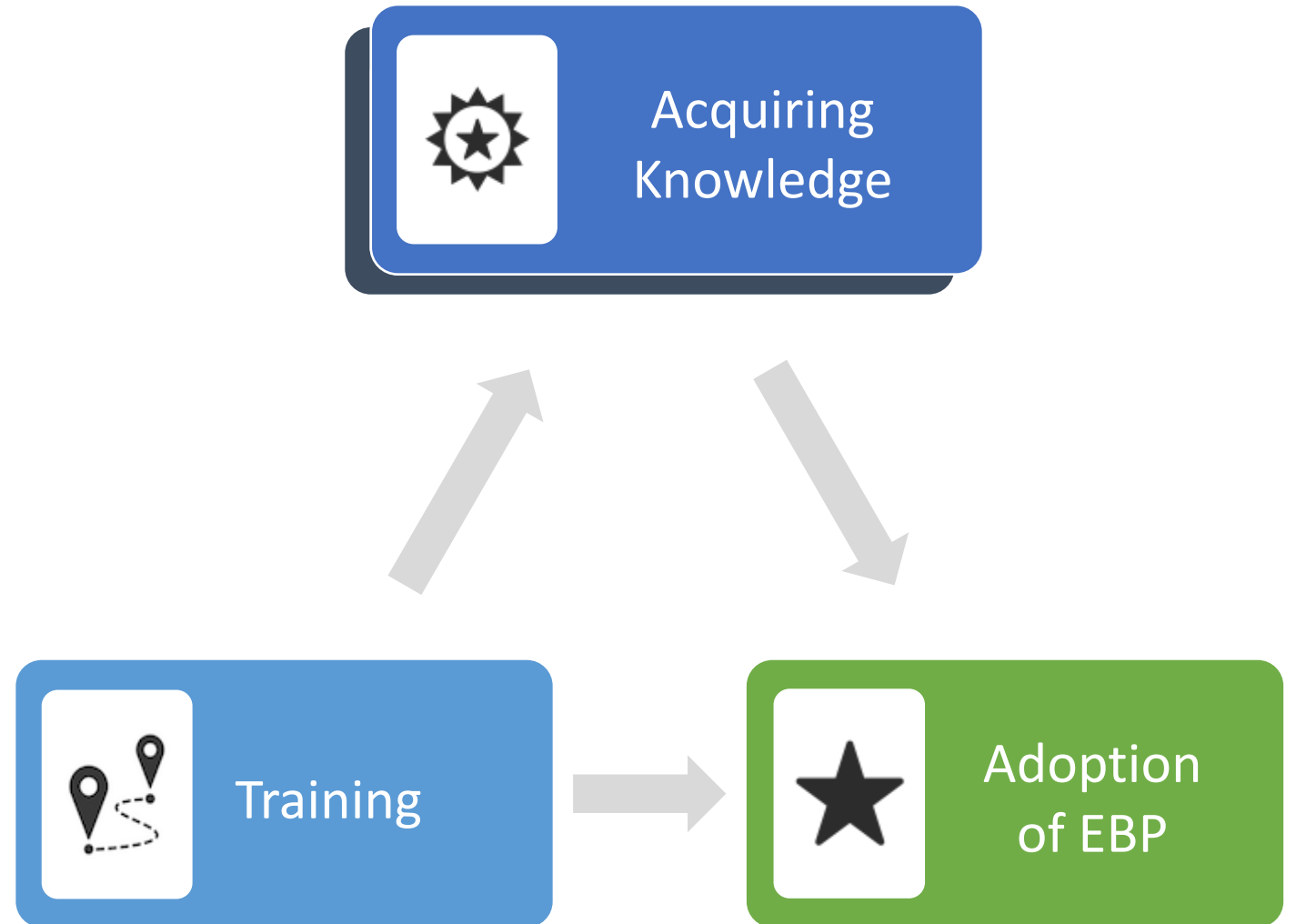
Example 1

Determinants: Knowledge,
attitudes

What is a promising strategy?



Example 1



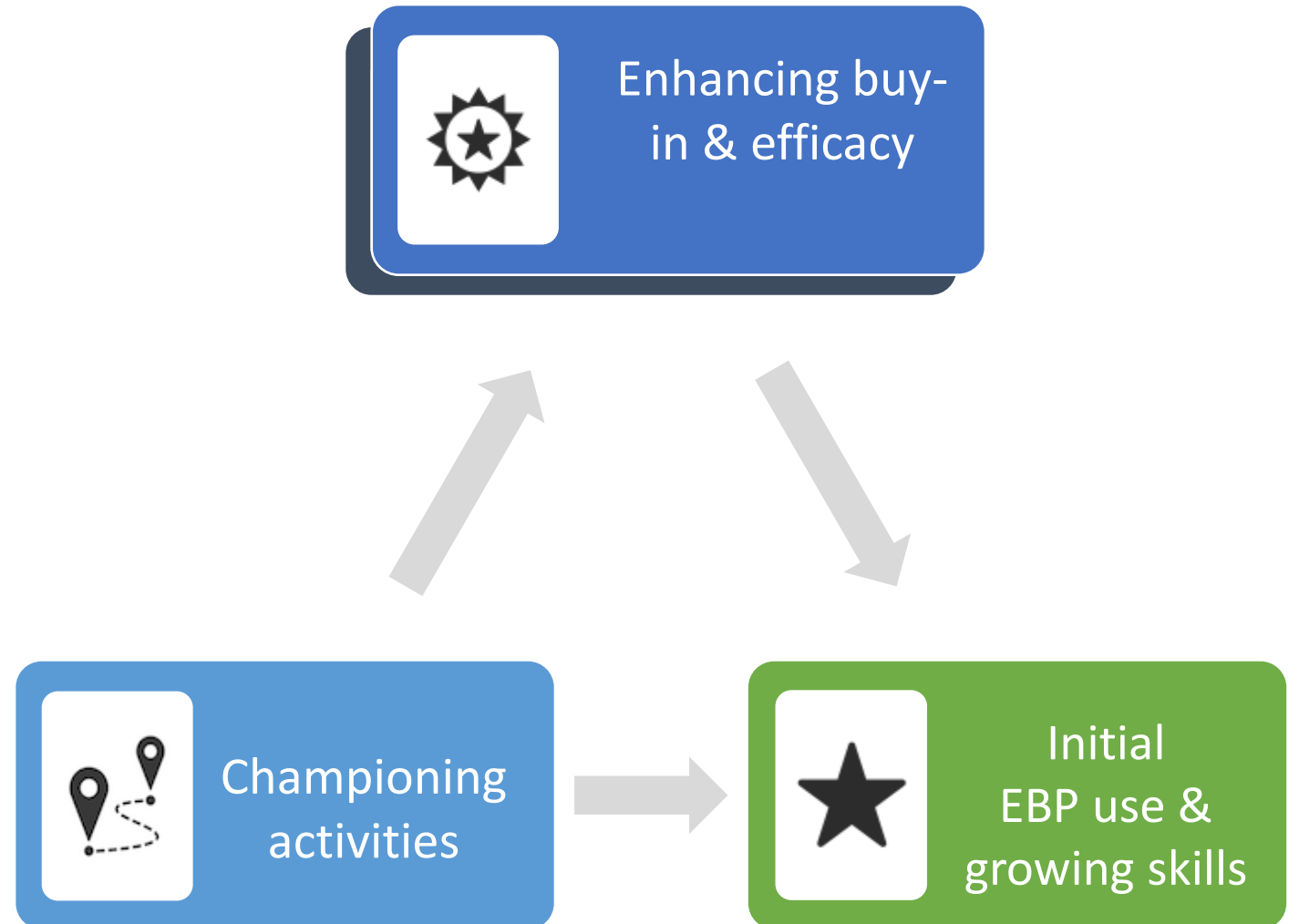
Example 2

Determinants: organizational inertia, indifference, resistance

What is a promising strategy?



Example 2



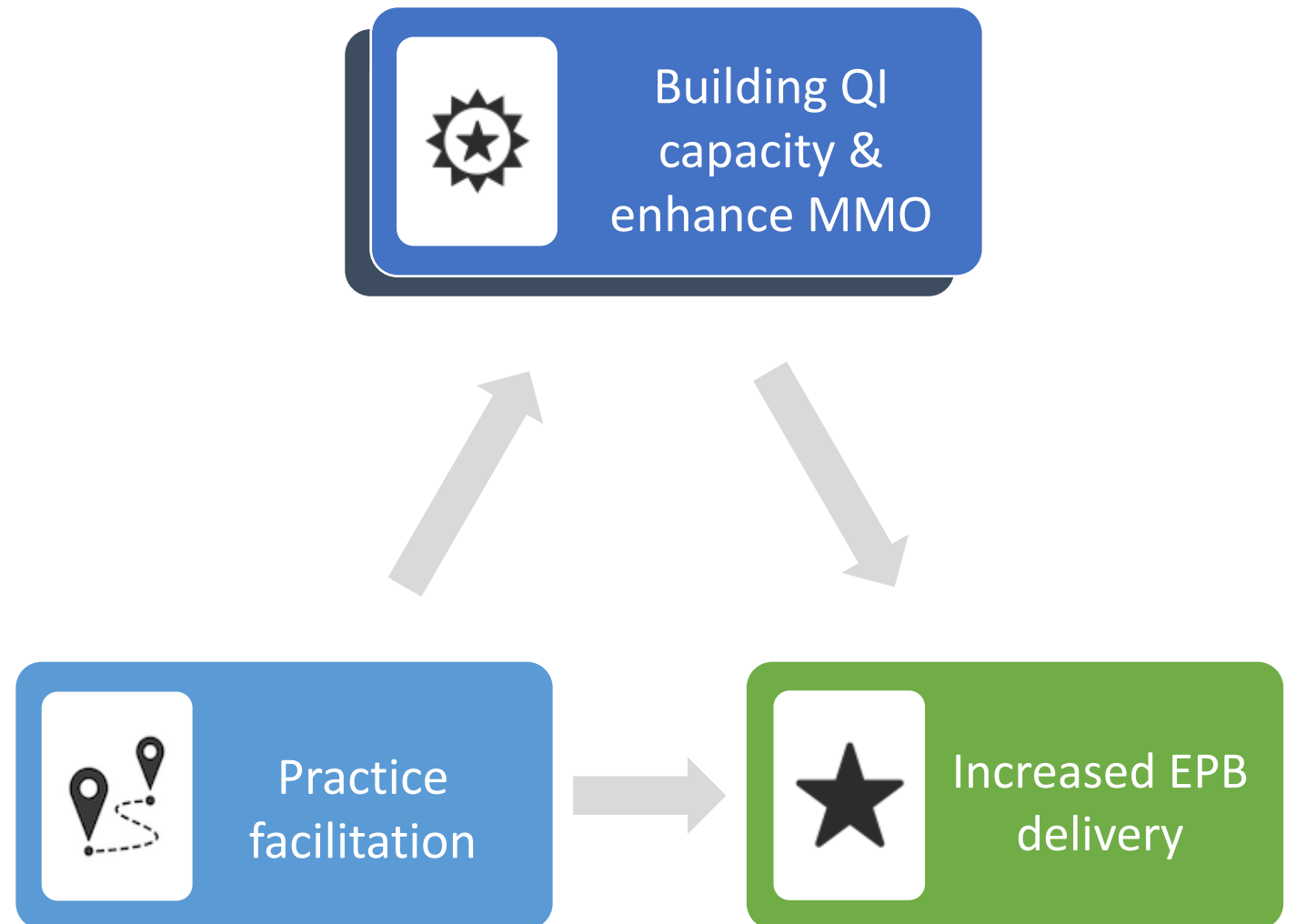
Example 3

Determinants: Low practice change capability

What is a promising strategy?



Example 3



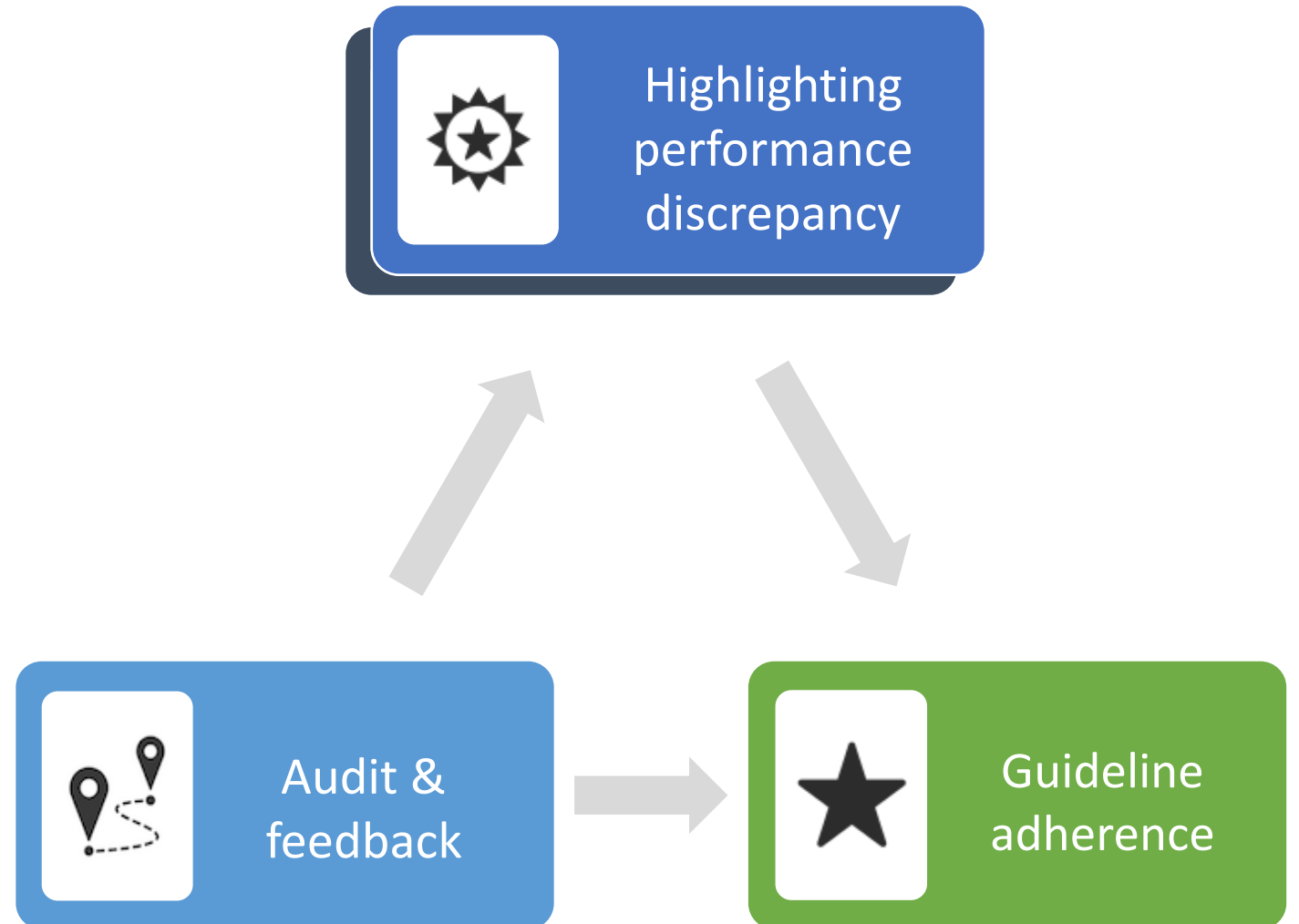
Mechanisms: Example 4

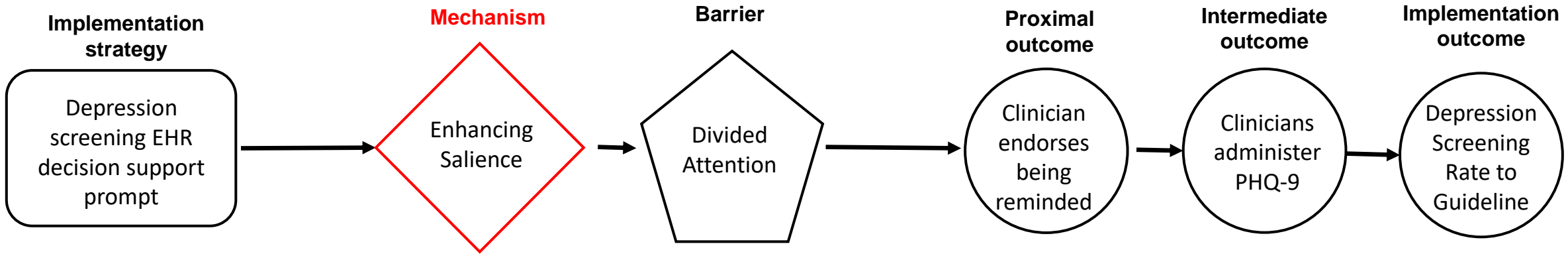
Determinants: Unknown or inaccurate perception of performance

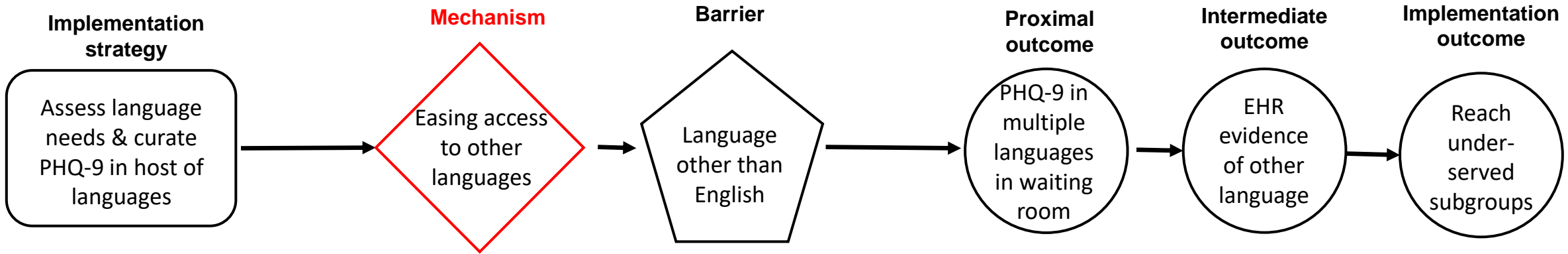
What is a promising strategy?



Example 4







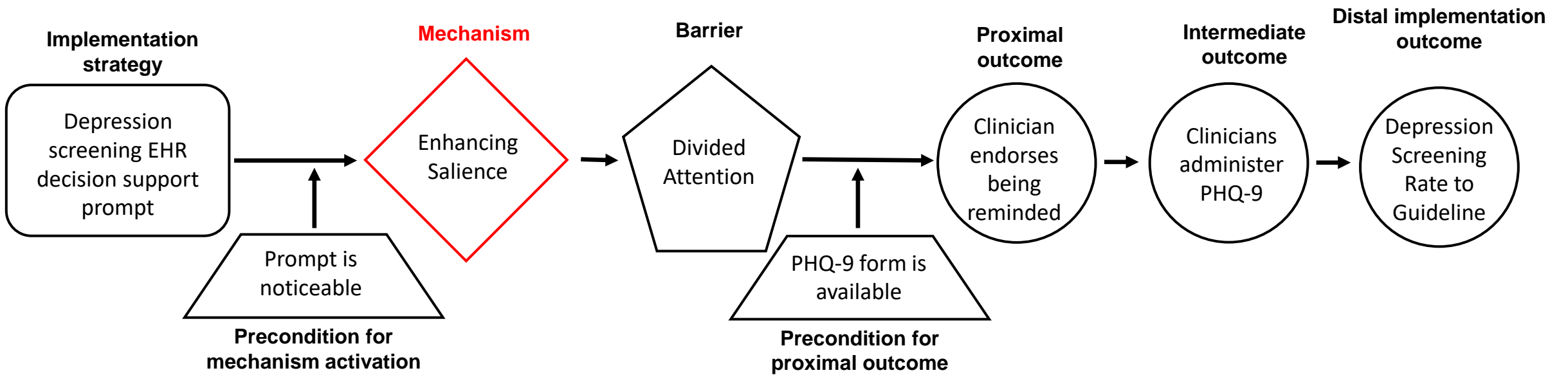
How it all fits together

Implementation Strategy	Mechanism	Determinant	Implementation Outcome
Education (provision of information)	Awareness-building, knowledge-acquisition	Provider knowledge deficit	Feasibility, acceptability, appropriateness, adoption

Precondition for mechanism activation

A factor that is necessary for the mechanism to be activated and subsequent causal events to occur.

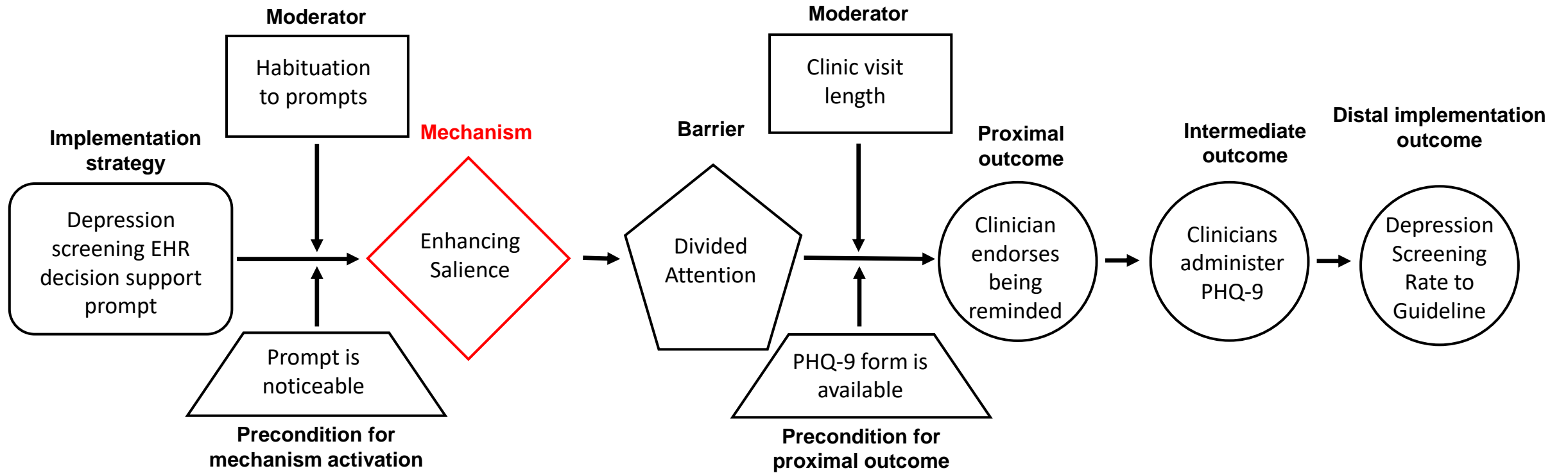




Moderator

A factor believed to strengthen or weaken the relationship between the strategy and mechanism.







From Classification to Causality: Advancing Understanding of Mechanisms of Change in Implementation Science

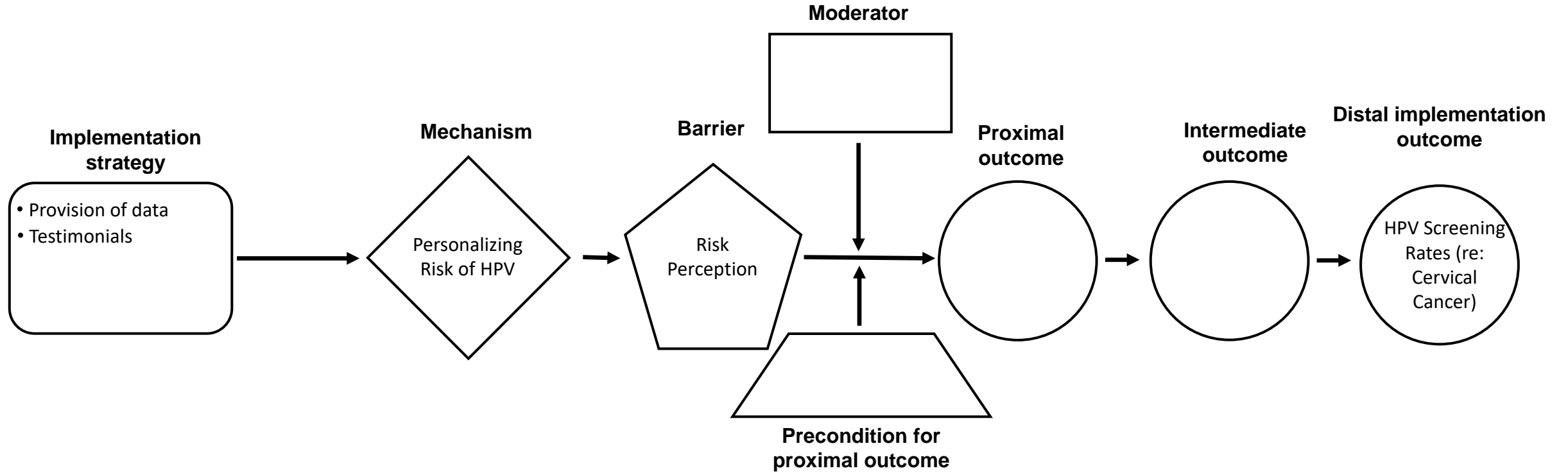
Cara C. Lewis^{1,2,3†}, Predrag Klasnja^{1†}, Byron J. Powell⁴, Aaron R. Lyon³, Leah Tuzzio¹, Salene Jones⁵, Callie Walsh-Bailey¹ and Bryan Weiner⁶*

How can mechanisms help **practical** implementation?

Select

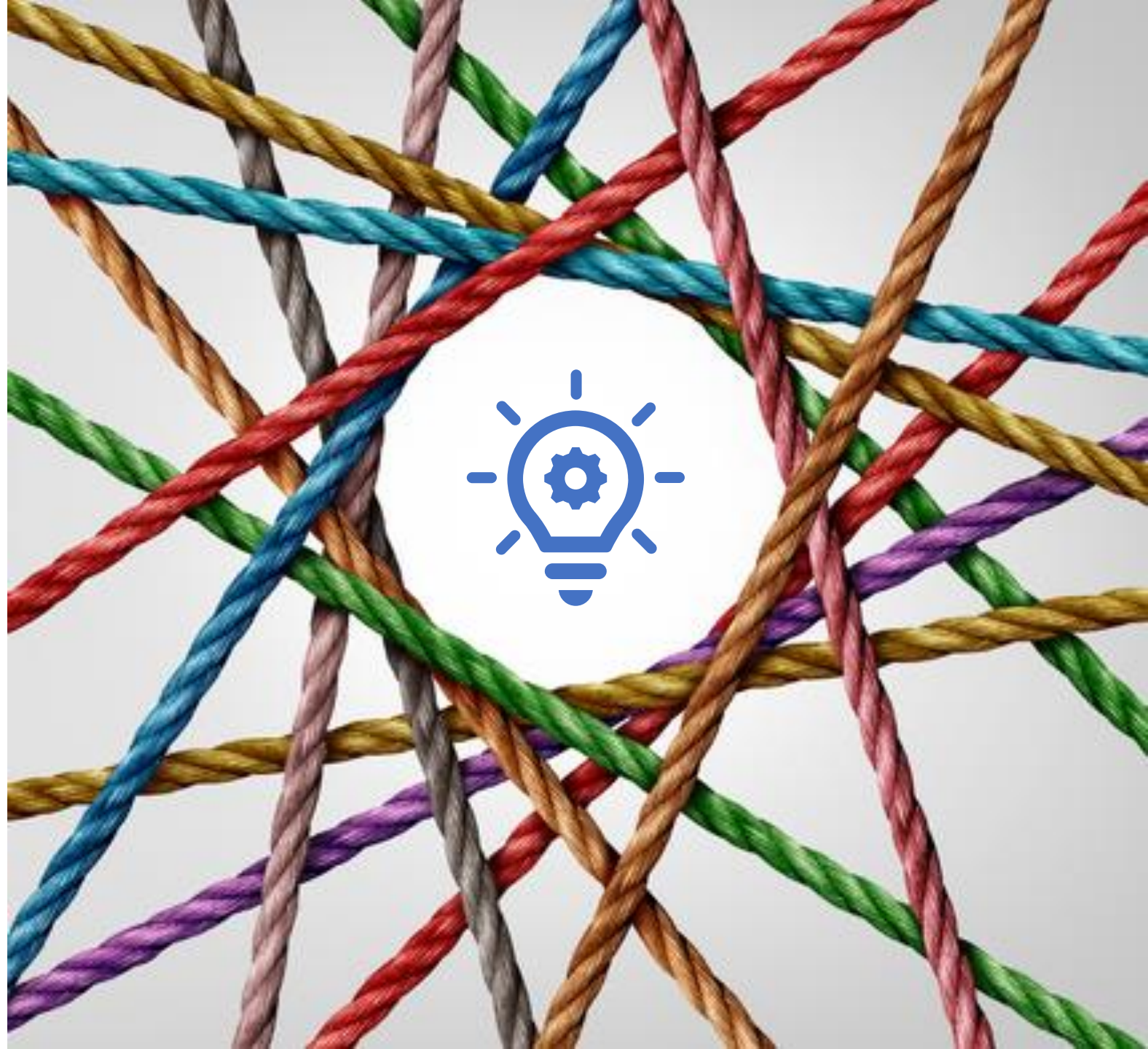


Select

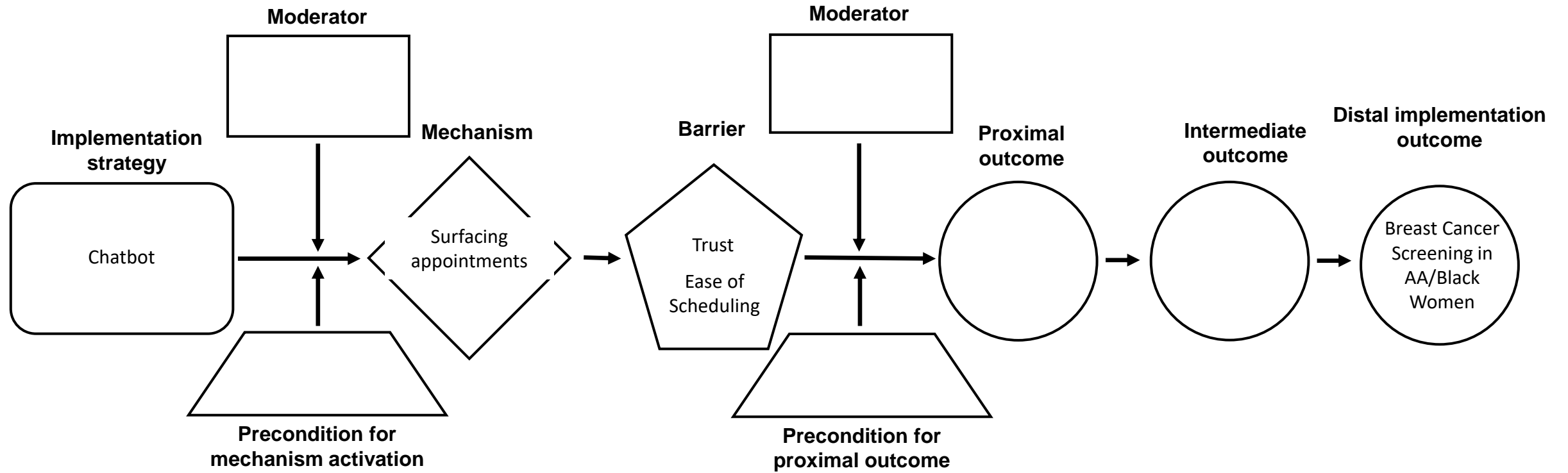


How can mechanisms help **practical** implementation?

Select
Match



Match

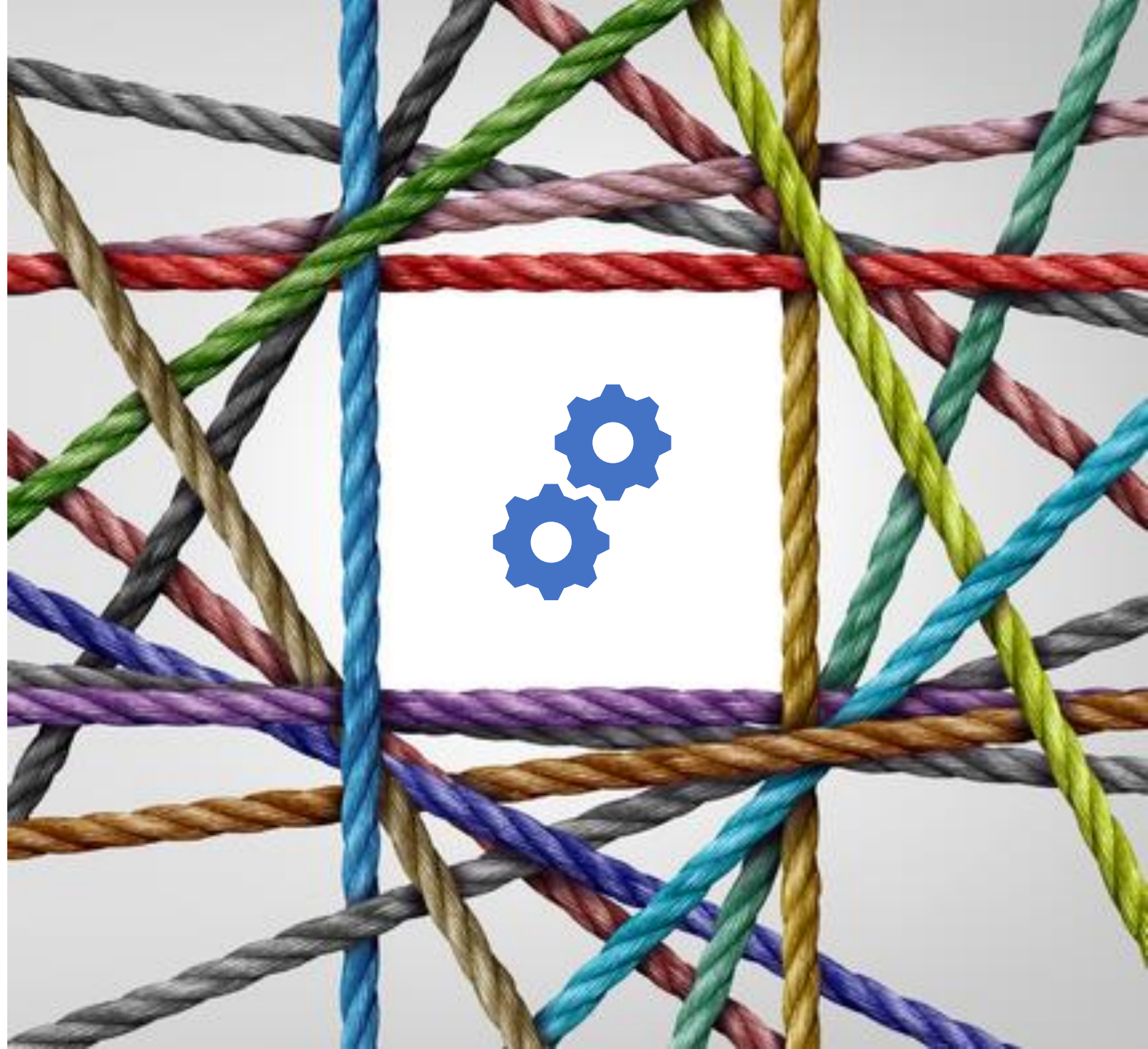


How can mechanisms help **practical** implementation?

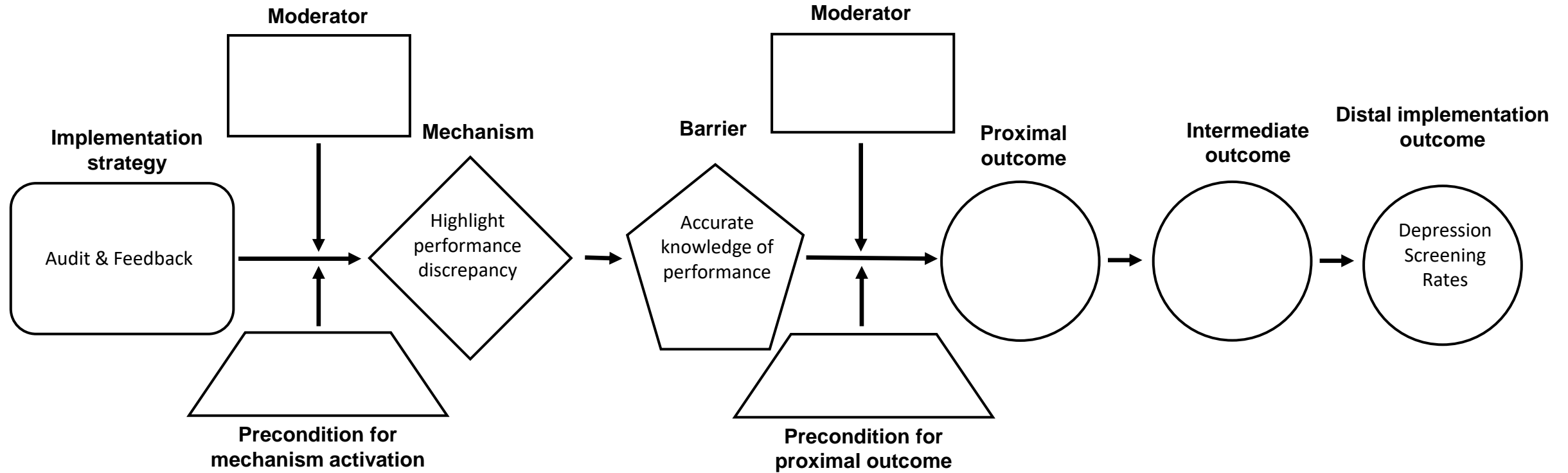
Select

Match

Tailor



Tailor



- Electronic Health Record with analyst team
- No Electronic Health Record

How can mechanisms help **practical** implementation?

Select

Match

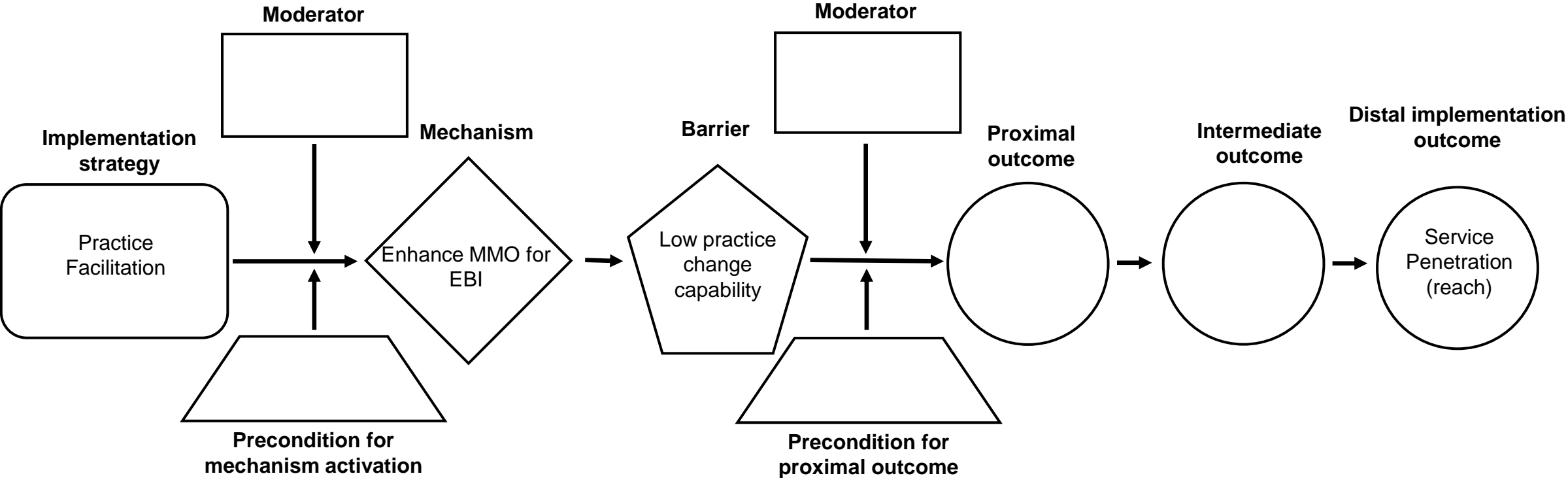
Tailor

Optimize



Optimize

- MMO=means, motives, and opportunities



- Common facilitation activities: assess performance/barriers/readiness, develop plan, redesign workflow, train in QI methods, support PDSA cycles, cultivate champions, revise professional roles (team-based care), implement HIT tools, provide interactive technical assistance



SYSTEMATIC REVIEW

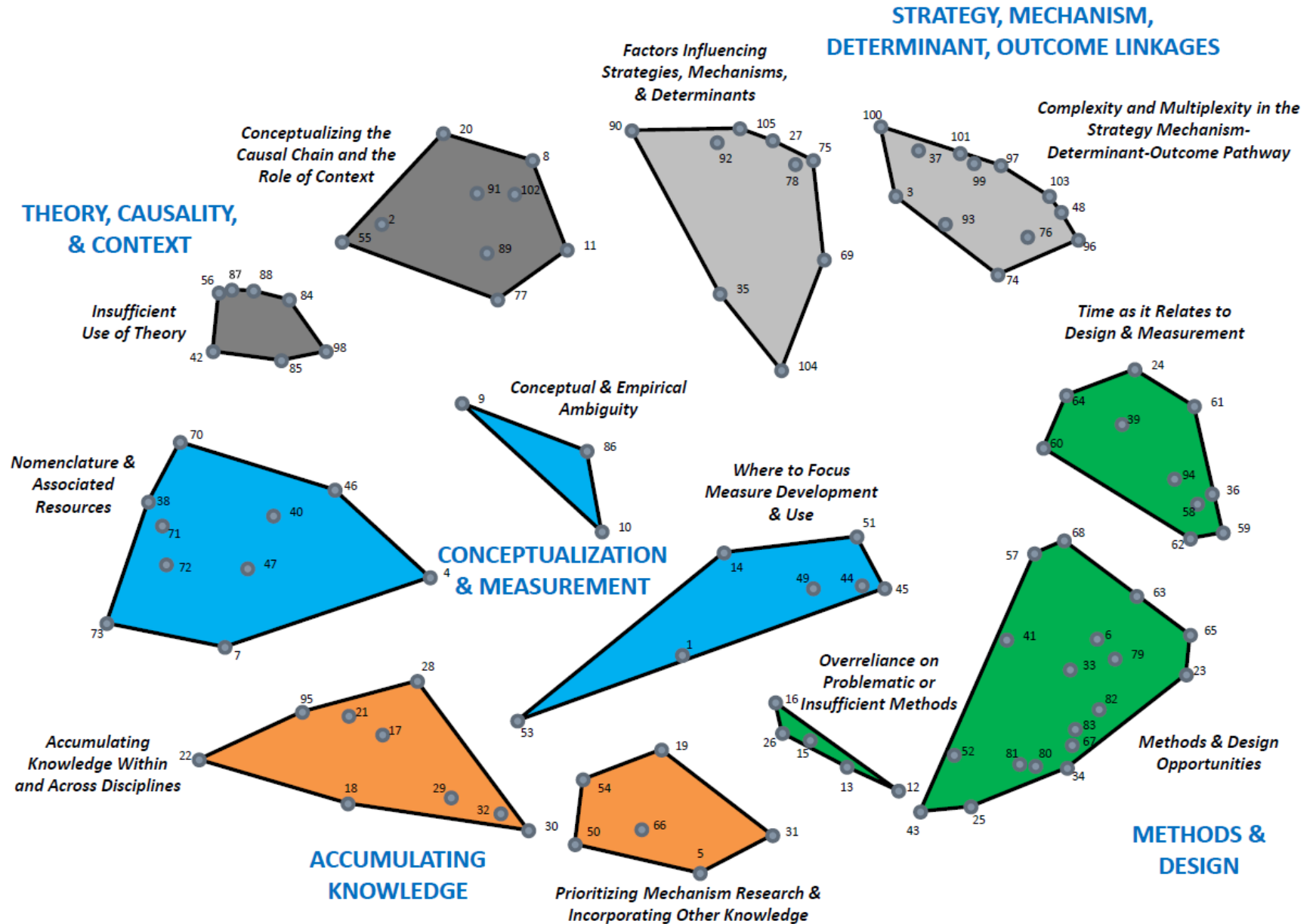
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A systematic review of empirical studies examining mechanisms of implementation in health



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Results from R13 concept mapping



THANK YOU

Acknowledgements

R01CA

P50CA

P50MH

R13