

Identifying Multilevel Contextual Factors

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What will we cover in this session?

- A brief overview of “context”
- Ways to organize our conceptualization and understanding of context using frameworks
- Practical application of a simple framework in identifying contextual factors at multiple levels relevant to implementation

A brief overview of “context”

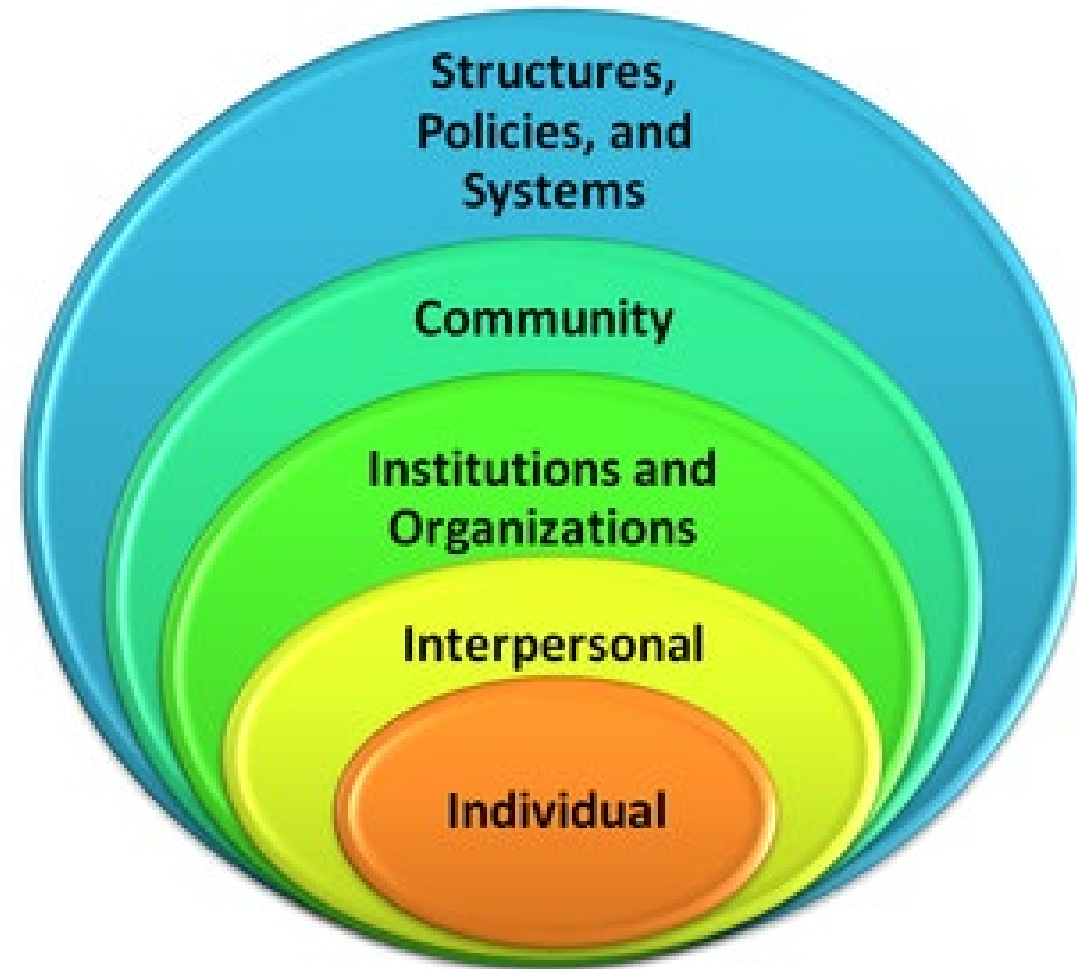
If the goal of implementation science is to facilitate the uptake of evidence-based practices/policies/pills/programs into regular use, the overarching question is:

- **When, where, how, with whom, under what circumstances, and why does *this thing* work?**
 - Policies, programs, practices, principles, procedures, pills, products...
 - Implementation strategies



A brief overview of “context”

- Multilevel
- Multiple domains
- Interactive
- Dynamic

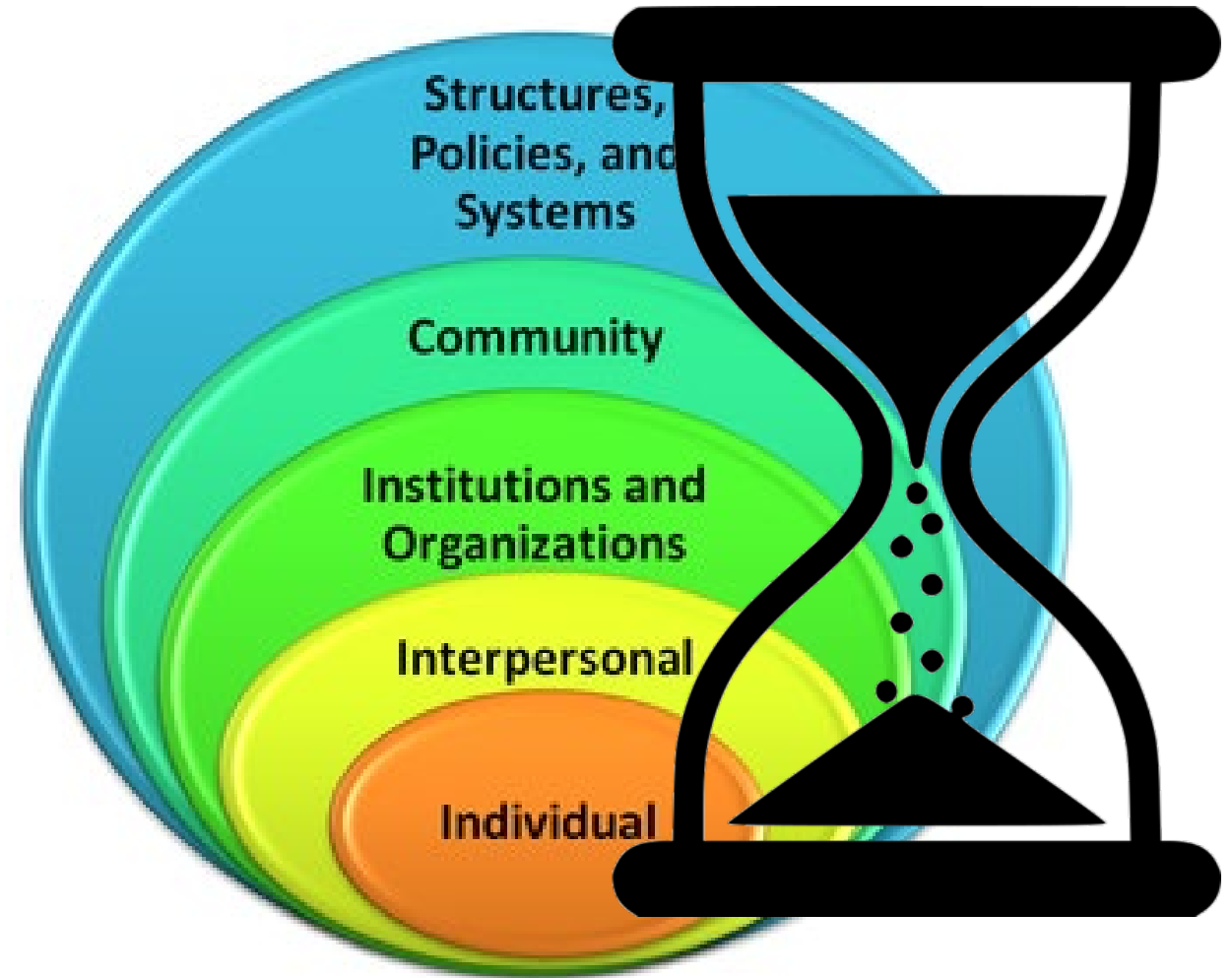


The Social Ecological Model

(see Bronfenbrenner 1977, 1986, 1989; CDC 2015; Sallis et al 2008)

A brief overview of “context”

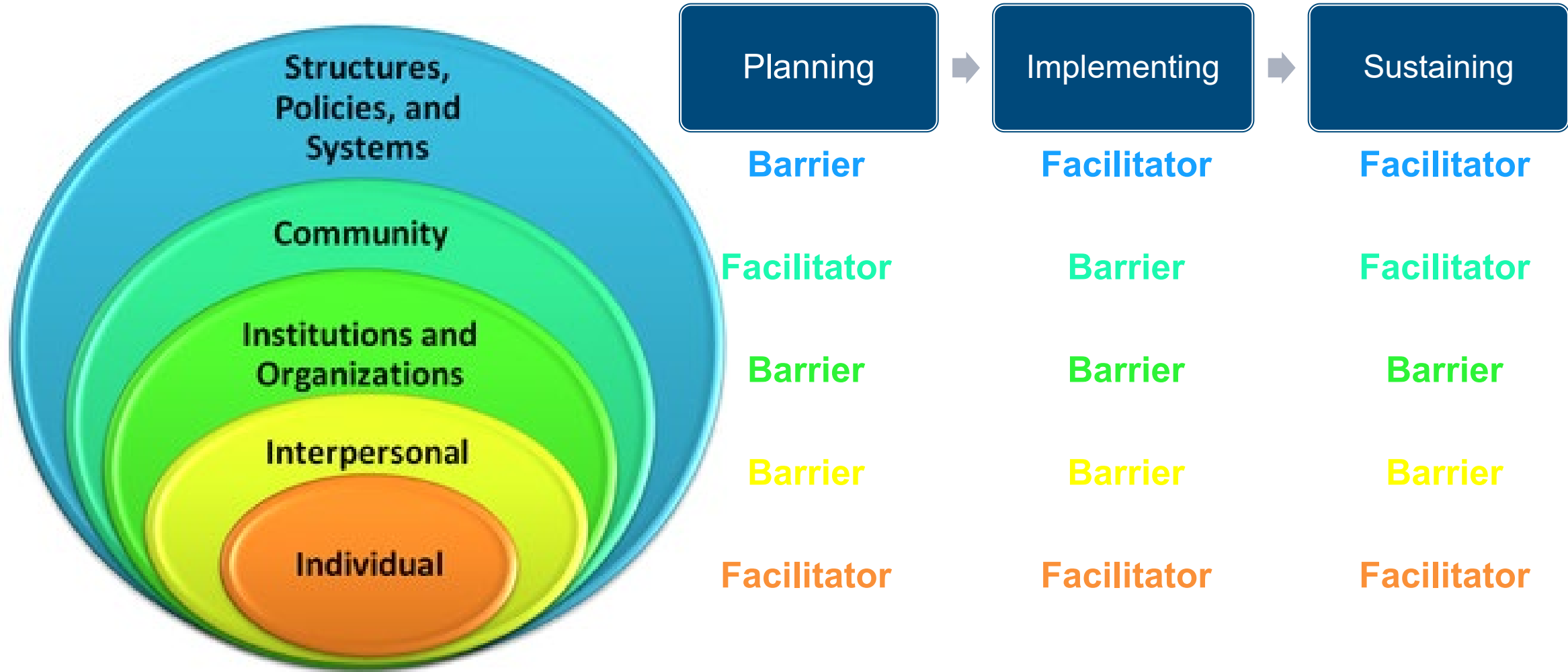
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The Social Ecological Model

(see Bronfenbrenner 1977, 1986, 1989; CDC 2015; Sallis et al 2008)

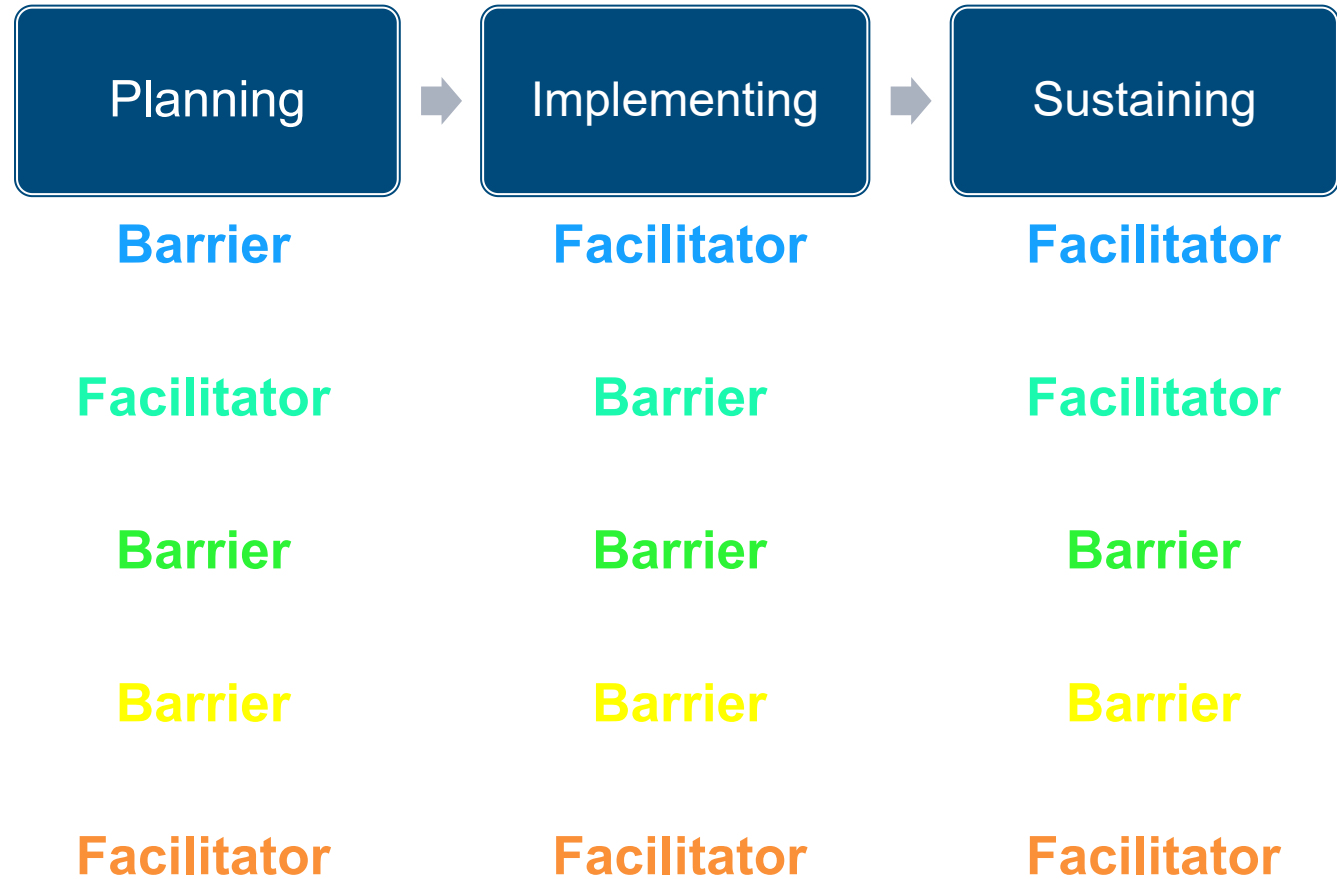
A brief overview of “context”



A brief overview of “context”



“plasticity and elasticity”
(May et al., 2016)

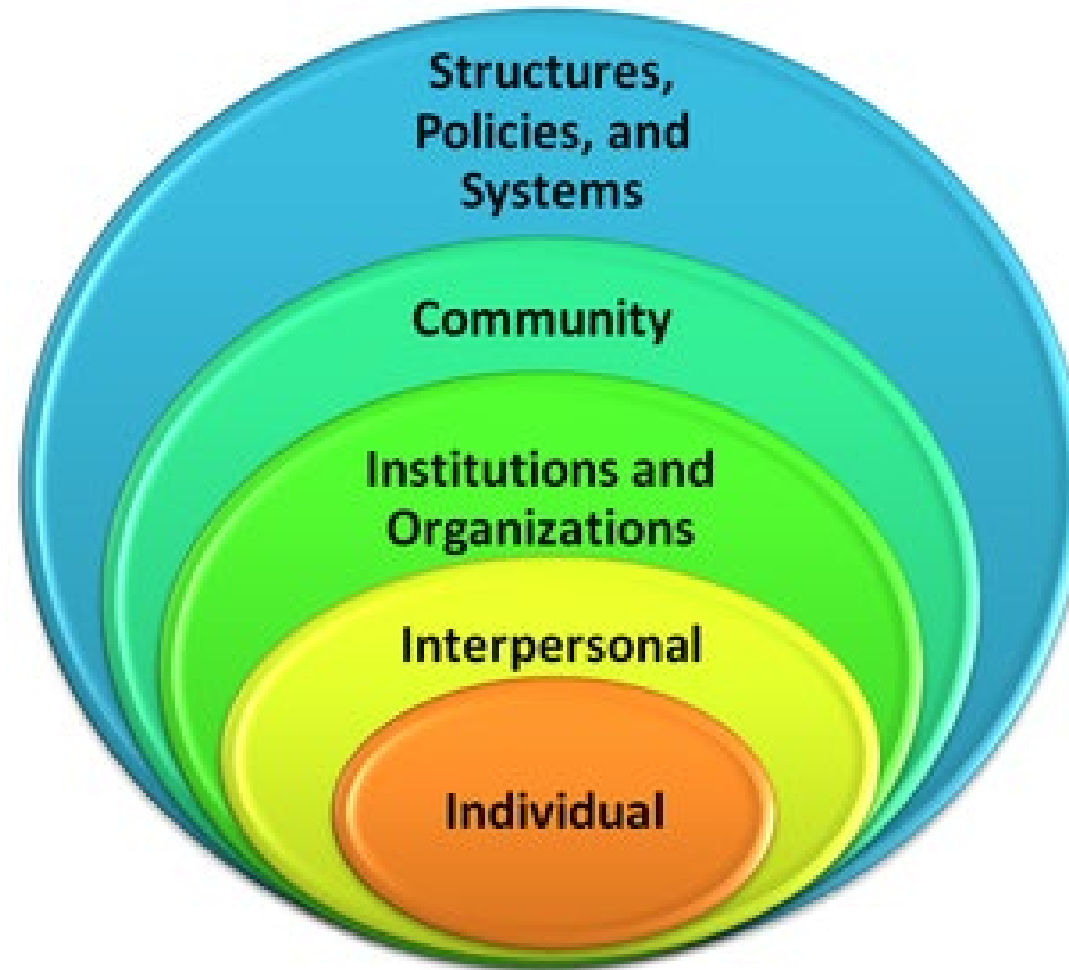


Frameworks: Organizing context

- There are many frameworks that are used to conceptualize and organize “context”
- They range from simple to complex
- They are often referred to as “contextual frameworks” or “determinants frameworks”
- They allow for contextual factors to be:
 - Multilevel
 - In multiple domains
 - Interactive
 - Dynamic

Frameworks: Organizing context

A simple framework:



Frameworks: Organizing context

A more comprehensive framework:

Diffusion of innovations in service organizations

- Greenhalgh T, Robert G, Macfarlane F, Bate P, Kyriakidou O. Milbank Q. 2004. 82:581–629
- Lobb R & Colditz GA. Annual Review of Public Health 2013 34:1, 235-251

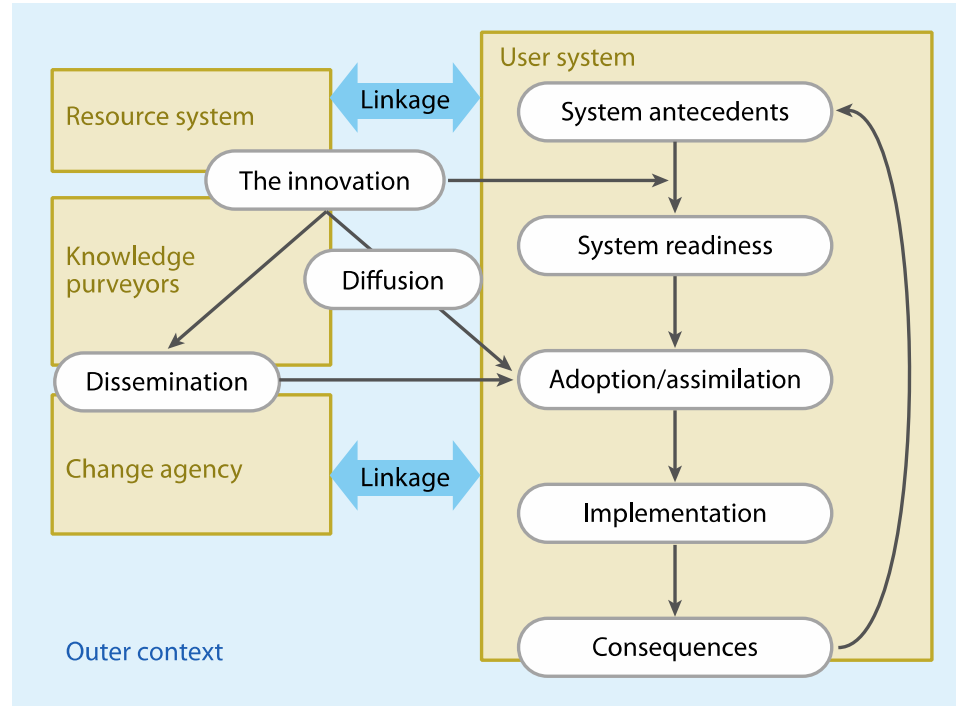
The innovation
 Relative advantage
 Compatibility
 Low complexity
 Triability
 Observability
 Potential for reinvention
 Fuzzy boundaries
 Risk
 Task issues
 Nature of knowledge required (tacit/explicit)
 Technical support

Communication and influence
 Diffusion (informal, unplanned)
 ↑ Social networks
 Homophily
 Peer opinion
 Marketing
 Expert opinion
 Champions
 Boundary spanners
 ↓ Change agents
 Dissemination (formal, planned)

Outer context
 Sociopolitical climate
 Incentives and mandates
 Interorganizational norm-setting and networks
 Environmental stability

System antecedents for innovation

Structure Size/maturity Formalization Differentiation Decentralization Stack resources	Absorptive capacity for new knowledge Preexisting knowledge/skills base Ability to find, interpret, recodify, and integrate new knowledge Enablement of knowledge sharing via internal and external networks	Receptive context for change Leadership and vision Good managerial relations Risk-taking climate Clear goals and priorities High-quality data capture
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Linkage
 Design stage
 Size/maturity
 Formalization
 Differentiation
 Decentralization
 Stack resources

Implementation stage
 Communication and information
 User orientation
 Product augmentation, e.g., technical help
 Project management support

System readiness
 Tension for change
 Innovation-system fit
 Power balances (supporters vs. opponents)
 Assessment of implications
 Dedicated time/resources
 Monitoring and feedback

Adopter
 Needs
 Motivation
 Values and goals
 Skills
 Learning style
 Social networks

Assimilation
 Complex, nonlinear process
 "Soft periphery" elements

Implementation process
 Decision making devolved to frontline teams
 Hands-on approach by leaders and managers
 Human resource issues, especially training
 Dedicated resources
 Internal communication
 External collaboration
 Reinvention/development
 Feedback on progress

Frameworks: Organizing context



Which one
should you use?

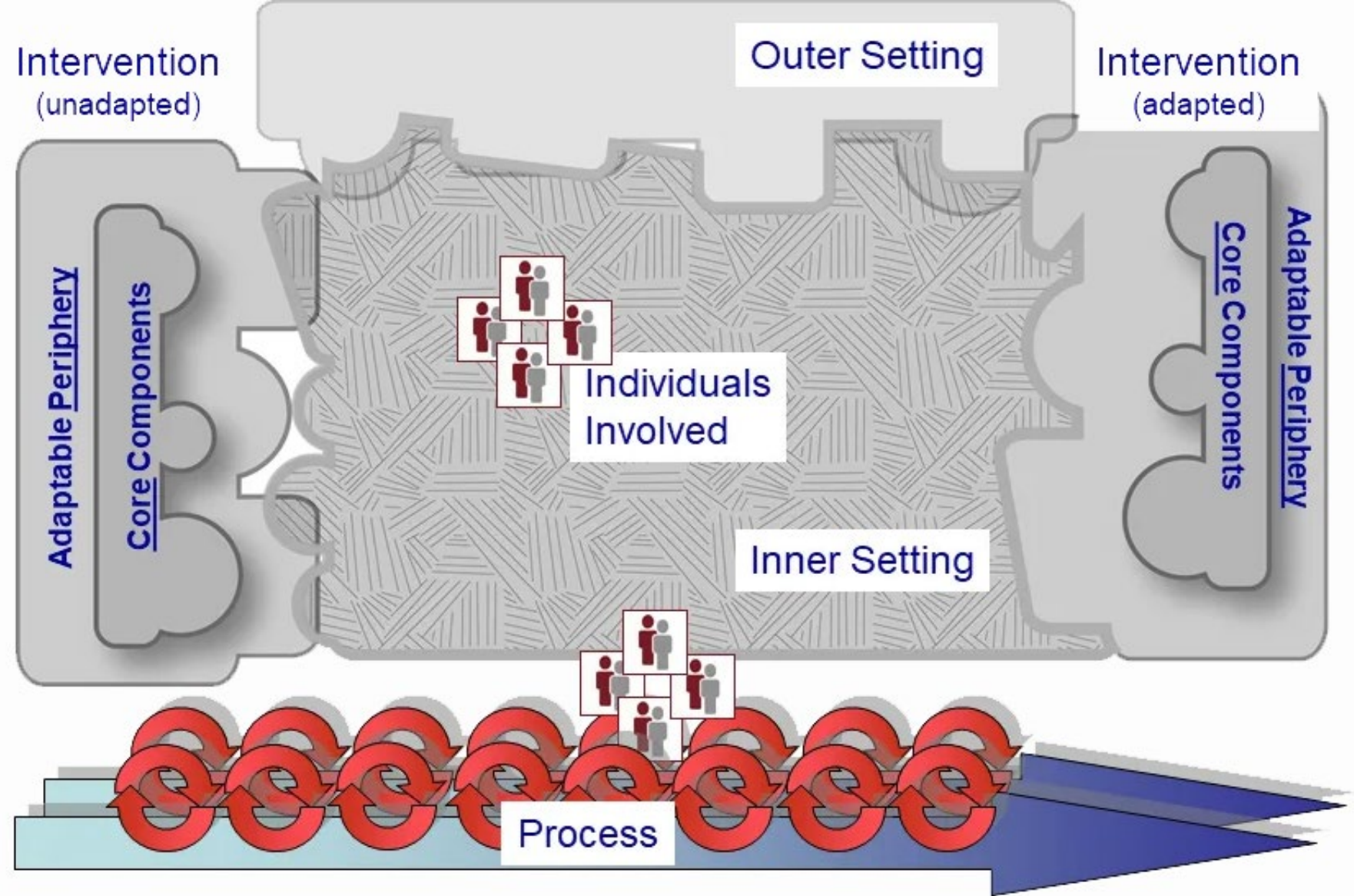
Frameworks: Organizing context

A resource to learn more about frameworks for context:

[Dissemination-implementation.org](https://dissemination-implementation.org)

- Find models
- Find constructs within models
- Rationale and process for combining and/or adapting T/M/F
- Link to NCI D&I GEM for available measures (gem-measures.org – select Workspaces – GEM-D&I)

The Consolidated Framework for Implementation Research (CFIR)



Implementation Science



Open Access

Research article

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

<https://cfirguide.org/>

<https://cfirguide.org/wp-content/uploads/2019/08/cfirconstructs.pdf>

A Practical, Robust Implementation and Sustainability Model (PRISM) for Integrating Research Findings into Practice

Adrienne C. Feldstein M.D., M.S. (Medical Liaison for Research, Northwest Permanente, Adjunct Investigator)  
 Russell E. Glasgow Ph.D. (Senior Scientist)

TBM

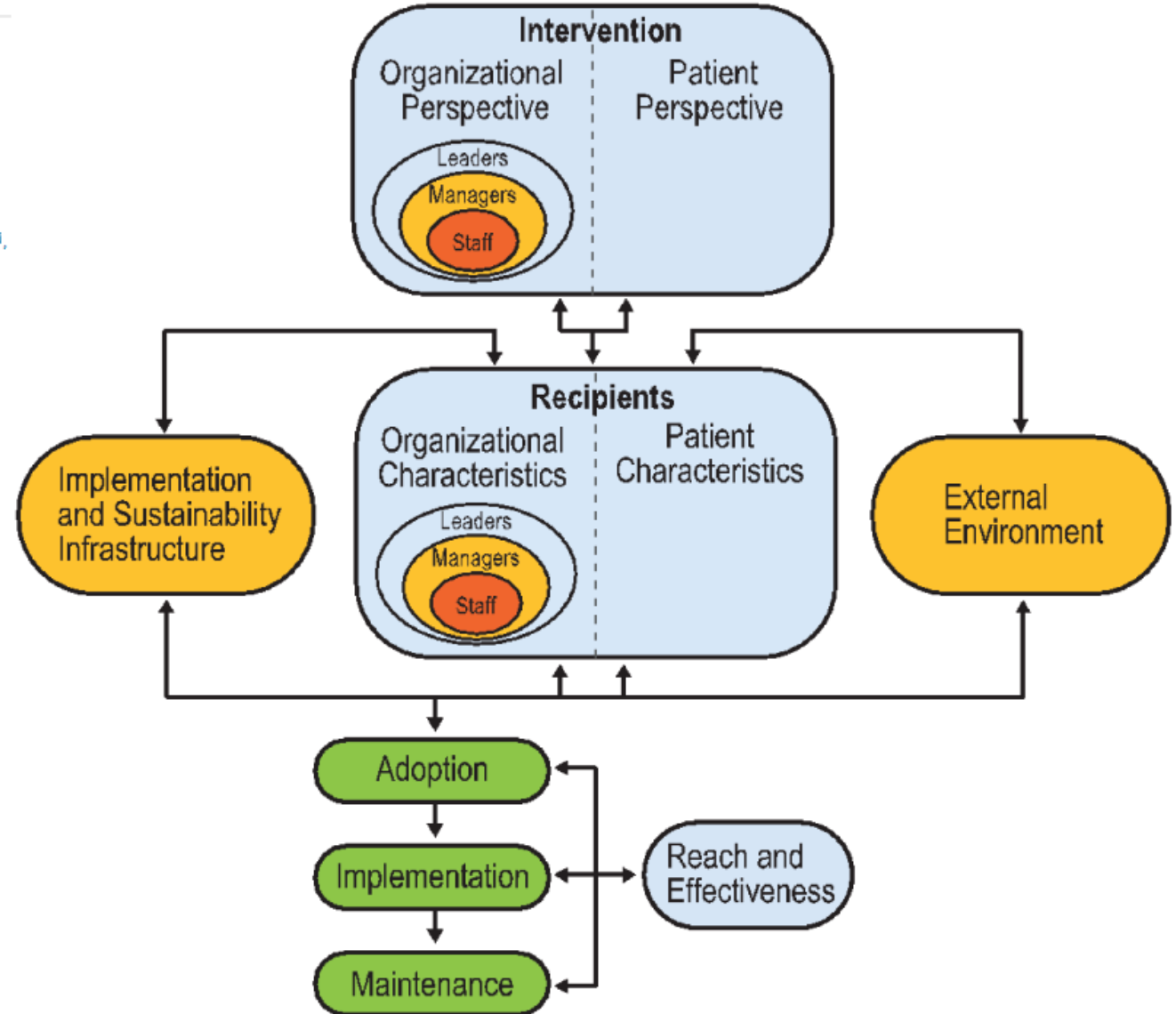
ORIGINAL RESEARCH

Using the Practical, Robust Implementation and Sustainability Model (PRISM) to qualitatively assess multilevel contextual factors to help plan, implement, evaluate, and disseminate health services programs

Marina S. McCreight,^{12,20} Borsika A. Rabin,^{13,4,5} Russell E. Glasgow,^{14,5,6} Roman A. Ayele,^{12,7} Chelsea A. Leonard,¹² Heather M. Gilmartin,^{12,7} Joseph W. Frank,^{12,8} Paul L. Hess,^{12,9} Robert E. Burke,^{10,11} Catherine T. Battaglia^{12,7}

NOTE: PRISM is coming soon to re-aim.org

PRISM

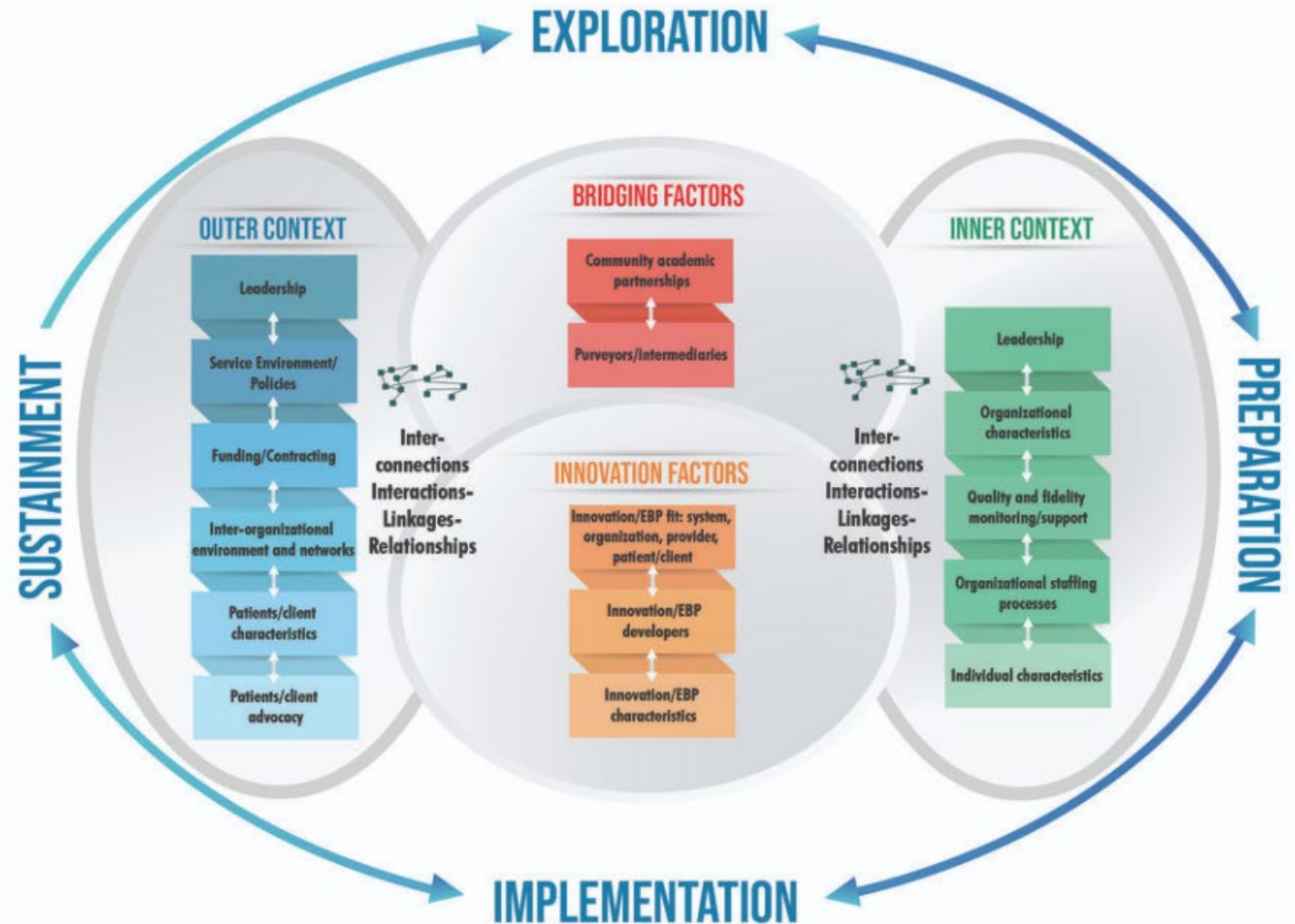


Advancing a Conceptual Model of Evidence-Based Practice Implementation in Public Service Sectors

Gregory A. Aarons · Michael Hurlburt · Sarah McCue Horwitz

<https://episframework.com/measures>

Exploration, Preparation, Implementation, and Sustainment Framework (EPIS)



What do these frameworks help you with?

As you examine/consider/assess contextual factors influencing implementation, you may:

- Verify what you expected
- Consider contextual factors and levels you may not have thought of
- Identify modifiable contextual factors you could target with implementation strategies
- Identify non-modifiable contextual factors that may necessitate adaptation to your intervention or implementation strategies
- Assess the relevance and importance of contextual factors over time
- Inform plans for implementation, sustainment, scale-up, scale-out

Let's do



AN EXERCISE!

Scenario:

- Low-dose CT lung cancer screening reduces mortality from lung cancer among individuals at high risk for developing lung cancer. Since identified as an evidence-based practice in 2015, LDCT has been inadequately adopted and implemented in community settings (i.e., mostly hospitals). Implementation research on LDCT seeks to understand contextual factors related to adoption, implementation, and eventual sustainment to increase its public health impact.
- Within each level of context organized in the Socioecological Framework, *brainstorm possible contextual factors that should be considered in the implementation of LDCT in community settings.*

Conclusions

- Context is queen
- Contextual factors at multiple levels may influence implementation and sustainment – and be modifiable or not
- Use of contextual frameworks can guide you in identifying relevant contextual factors...and which are relevant, which are barriers, which are facilitators may shift throughout the implementation process.
- These factors may be important targets for implementation strategies, conditions requiring adaptation of interventions or implementation strategies, or simply key in understanding:

When, where, how, with whom, under what circumstances, and why does *this thing* work?

Some key references and resources:

- [Dissemination-implementation.org](https://dissemination-implementation.org)
- cfirguide.org
- re-aim.org (PRISM coming soon)
- episframework.com
- [May et al. \(2016\). Implementation, context and complexity. Implementation Sci 11, 141.](#)
- [Moullin et al. \(2019\). Systematic review of the Exploration, Preparation, Implementation, Sustainment \(EPIS\) framework. Implementation Sci 14, 1.](#)
- [Damschroder et al. \(2009\). Fostering implementation of health services research findings into practice: a consolidated framework for advancing implementation science. Implementation Sci 4, 50.](#)
- [McCreight et al. \(2019\). Using the Practical, Robust Implementation and Sustainability Model \(PRISM\) to qualitatively assess multilevel contextual factors to help plan, implement, evaluate, and disseminate health services programs. Transl Behav Med 9\(6\):1002-1011.](#)
- [Nilsen & Bernhardsson \(2019\). Context matters in implementation science: a scoping review of determinant frameworks that describe contextual determinants for implementation outcomes. BMC Health Serv Res, 19\(1\):189.](#)
- [Kirk et al. \(2015\). A systematic review of the use of the Consolidated Framework for Implementation Research. Implementation Sci 11, 72.](#)