

Introduction to Implementation Research on Addictions

Kathy Bradley, MD, MPH

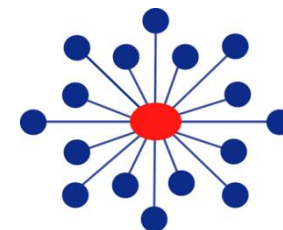
Senior Investigator GHRI

Affiliate Professor Medicine and Health Services, University of
Washington

Research Associate VA Puget Sound HSR&D



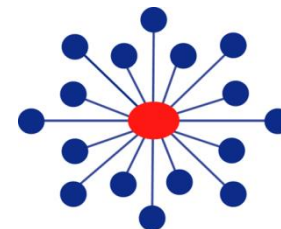
Outline



1. What is implementation research?
 - ✓ Overview
 - ✓ Example
 - ✓ Lessons learned
2. Introduction to conceptual models
 - ✓ Greenhalgh
 - ✓ Other models
 - ✓ Patient- and user-centered design
3. Training and tools...



Research Pipeline



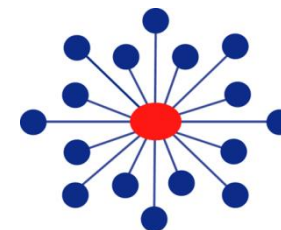


Implementation Research

Efficacy Trials	Effectiveness Trials	Implementation Trials
Internal validity	External validity	In the “real” world
Select sample		Real world sample
Detailed inclusions/exclusions	Few exclusions	No exclusions for research reasons
Research clinic	← ----- →	Real-world clinic
Interventionist hired by study	Interventionist trained as in clinical setting	Routine clinical staff provide care
Care per protocol	Trained as in the real world	Clinicians in health system Trained
+++ patient time	Minimize research time	0-small research time
Many outcomes (often pay subjects)	Few select outcomes ← ----- →	Outcomes as in clinical care (don’t pay subjects)

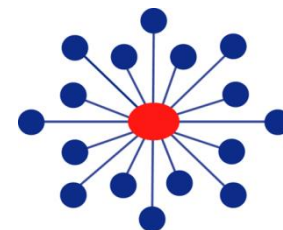


Implementation SCIENCE



“...the scientific study of methods to promote the systematic uptake of research findings ...into routine practice...”

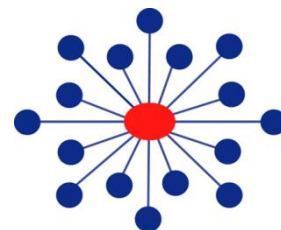
-Eccles & Mittman, Implementation Science, 2006
(Mark Bauer - 2016)



Case Study

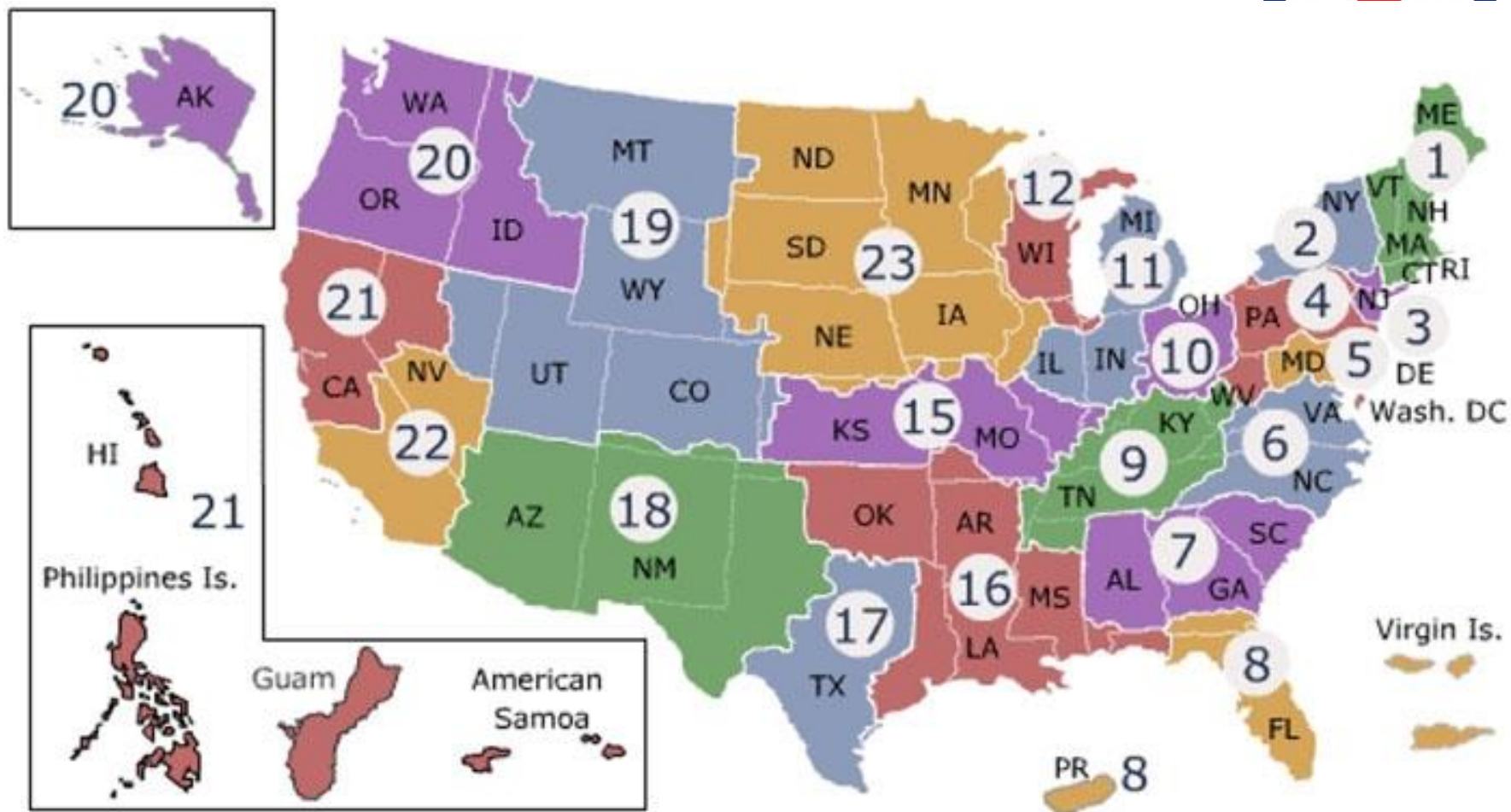
Implementation Research

→ SBI in VA Nationwide

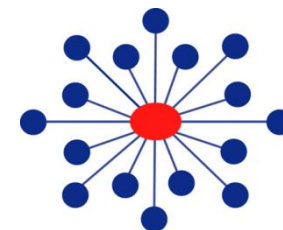


1. Screening and Brief Alcohol Interventions (SBI)
2. Initiated by QI leaders

→ VA Health Care System



→ SBI in VA Nationwide



1. Initiated by QI leaders
2. Performance measures
 - Screening 2004
 - BI 2008
3. EHR tools



EHR Clinical Decision Support

Reminder Resolution: FU Positive Alcohol Use Screen

Patients with no prior history of alcohol related problems or prior treatment for alcohol abuse or dependency who have an AUDIT-C with a score of 4-7 for men (3-7 for women) should be advised to stay within recommended drinking limits.

RECOMMENDED LIMITS:
Men: <= 14 drinks/wk and maximum of 4 drinks/occasion
Women: <= 7 drinks/wk and maximum of 3 drinks/occasion

Patients with prior alcohol problems and a positive AUDIT-C score should be considered for referral to a Substance Abuse program. These patients are at high risk of dependence.

Prior Treatment for Alcohol Use or Alcohol Dependency
 No Prior Treatment for Alcohol Use or Dependency

Does the patient drink ABOVE Recommended Limits?
Men: > 14 dr/wk or > = 5 dr/occasion
Women: > 7 dr/wk or > = 4 dr/occasion

No
 Yes

A brief intervention with the patient is indicated.

- Express concern about the patient's drinking
- Link patient's drinking to his/her health
- Advise pt to drink below recommended limits or abstain
- Offer referral as appropriate

Advise patient to abstain
 Advise to drink less than the recommended limits
 Patient's Response to Counseling

other optional interventions

- Education: Medical Problems of Alcohol Use
- Assess Alcohol Use in more Detail
- Order MH/SATP Consult if patient is interested

Clear Clinical Maint Visit Info < Back Next > Finish Cancel

FU Positive Alcohol Use Screen:
Pt has not had prior treatment for alcohol use, abuse or alcohol dependency.
Pt drinks above recommended alcohol limits.

Health Factors: ALCOHOL - ADVISE ON SAFE LIMITS, ALCOHOL - NO PRIOR TREATMENT

* Indicates a Required Field

Provider Education

Assessment & Risk Stratification

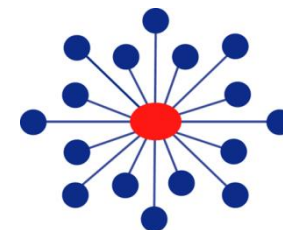
Decision Support & Education

Options for Patient Feedback and Further Assessment

Documentation in progress note

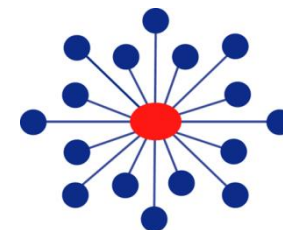


→ SBI in VA Nationwide



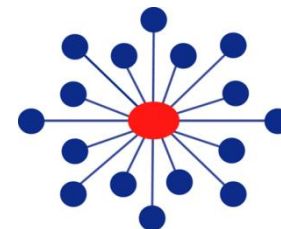
1. Initiated by QI leaders
2. Performance measures
3. EHR tools
4. Training materials available

→ SBI in VA Nationwide



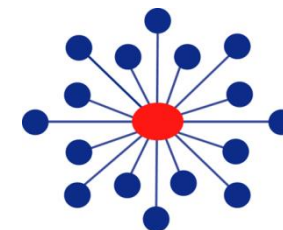
1. Screening rates: 95% immediately
2. BI increased slowly but reached 76%
3. Evaluation using clinical data

Bradley Am J Manag Care 2006;
Lapham Medical Care 2012
Bradley Addiction 2011



Some Things Didn't Not Go as Planned

→ SBI in VA Nationwide



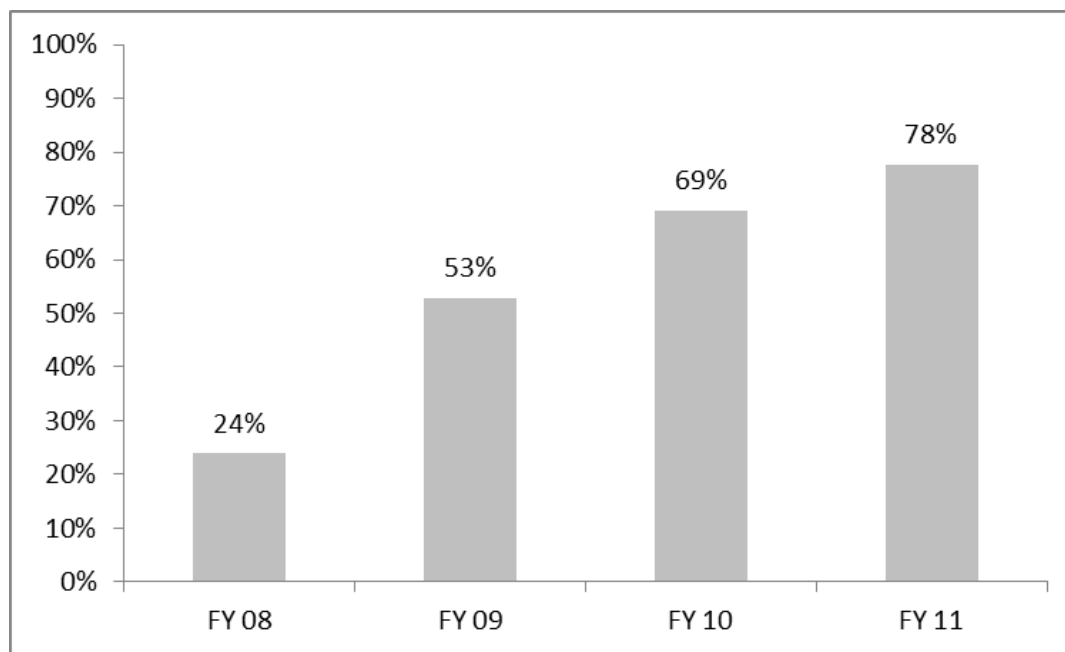
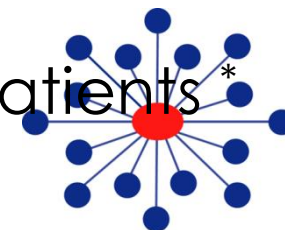
1. Prevalence of positive screens

- Low prevalence:
 - ✓ Patient survey ~25%
 - ✓ EHR ~ 11-16%
- Decreasing over time: 16% to 4-9%



SBI in VA Nationwide

Documented BI Among Screen-positive Patients

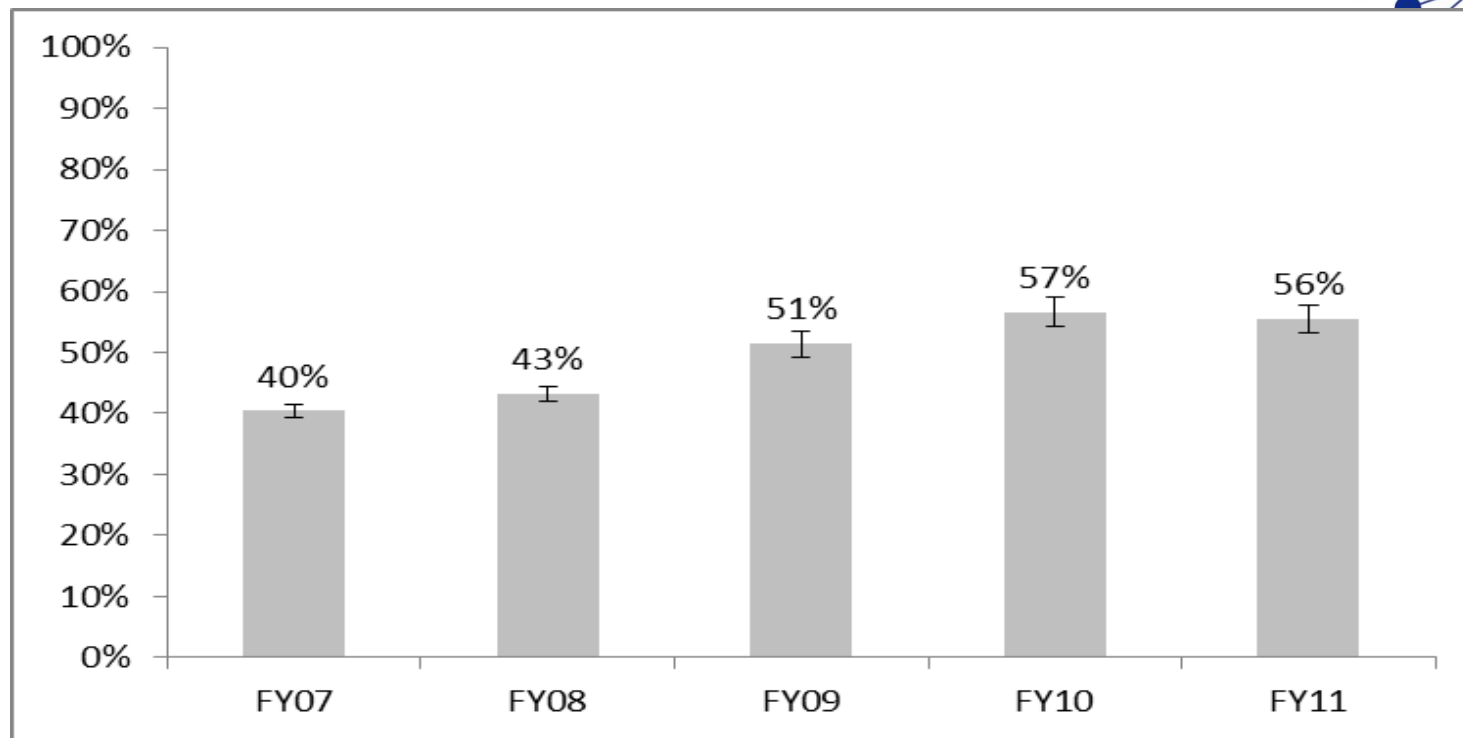
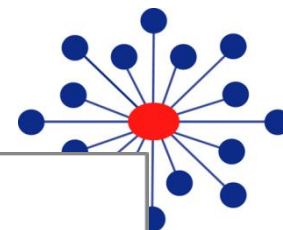


**Rates are from VA's National Performance Measure Reporting System¹²*

(Chavez, JSAD, in press)



Patient-reported Advice

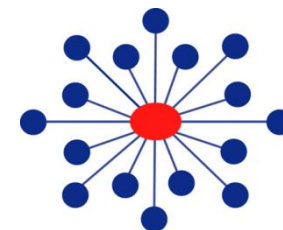


Among screen positive patients

Adjusted for age, gender, race/ethnicity, education, smoking status

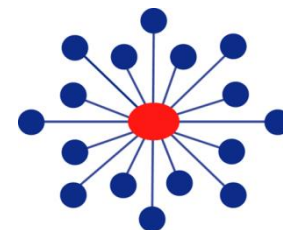
(Chavez, JSAD, 2016)

→ SBI in VA Nationwide



1. Documented advice higher than patient report?
2. Reward sites who identified fewer patients?

Bradley Psych Services 2013;
Lapham DAD 2014



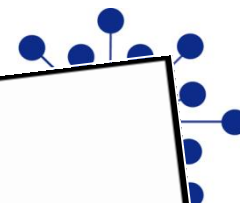
Greenhalgh Model: Designing Implementation Strategies



Greenhalgh Model



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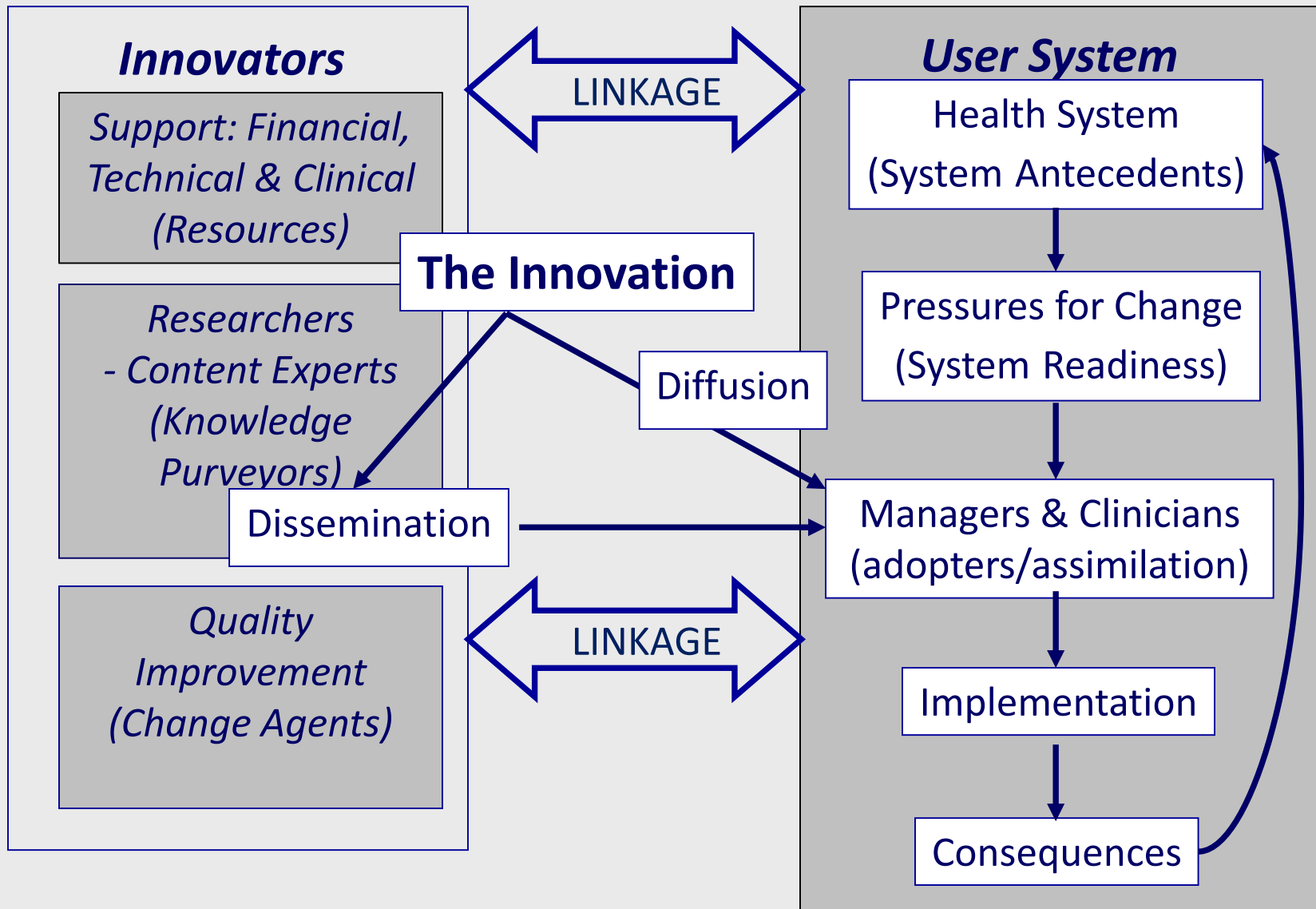
Diffusion of Innovations in Service Organizations: Systematic Review and Recommendations

TRISHA GREENHALGH, GLENN ROBERT,
FRASER MACFARLANE*, PAUL BATE,
and OLIVIA KYRIAKIDOU*

University College London; *University of Surrey

The Milbank Quarterly, Vol. 82, No. 4, 2004 (pp. 581–629)

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Innovators



Innovators

Resources

*Support: Financial
& Technical*



Innovators

Resources

*Support: Financial
& Technical*

Experts

*Researchers
- Content Experts*



Innovators

Resources

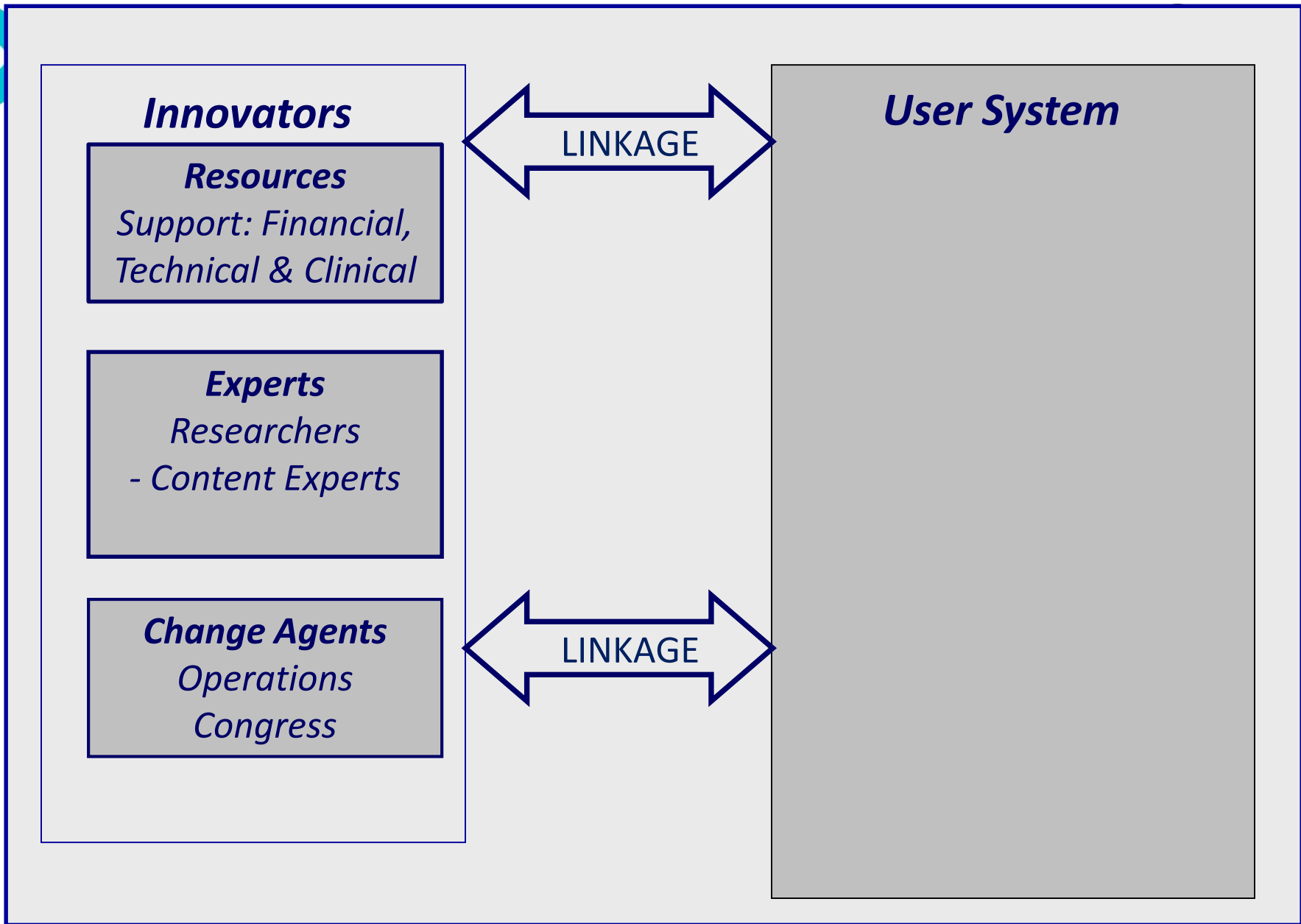
*Support: Financial
& Technical*

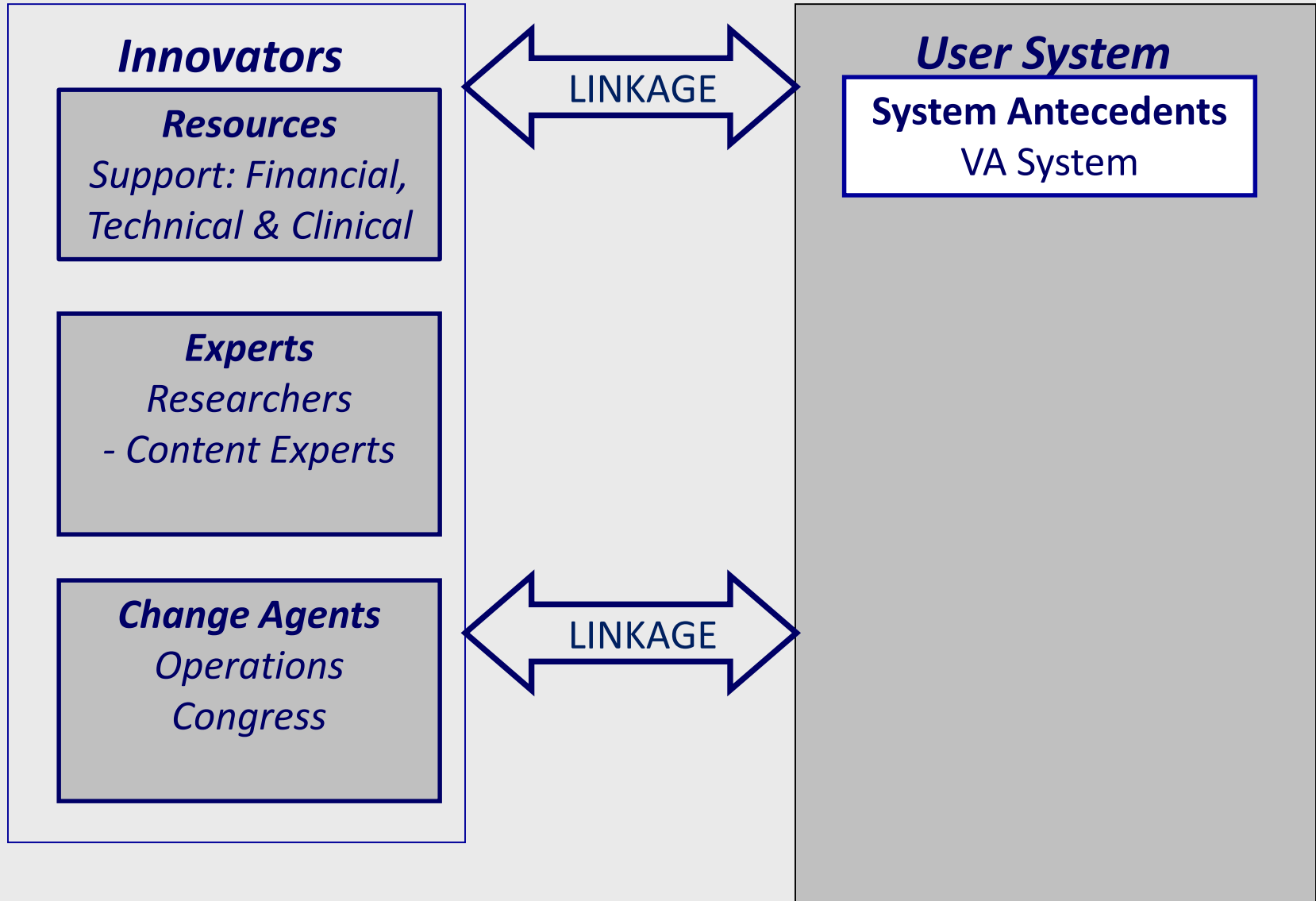
Experts

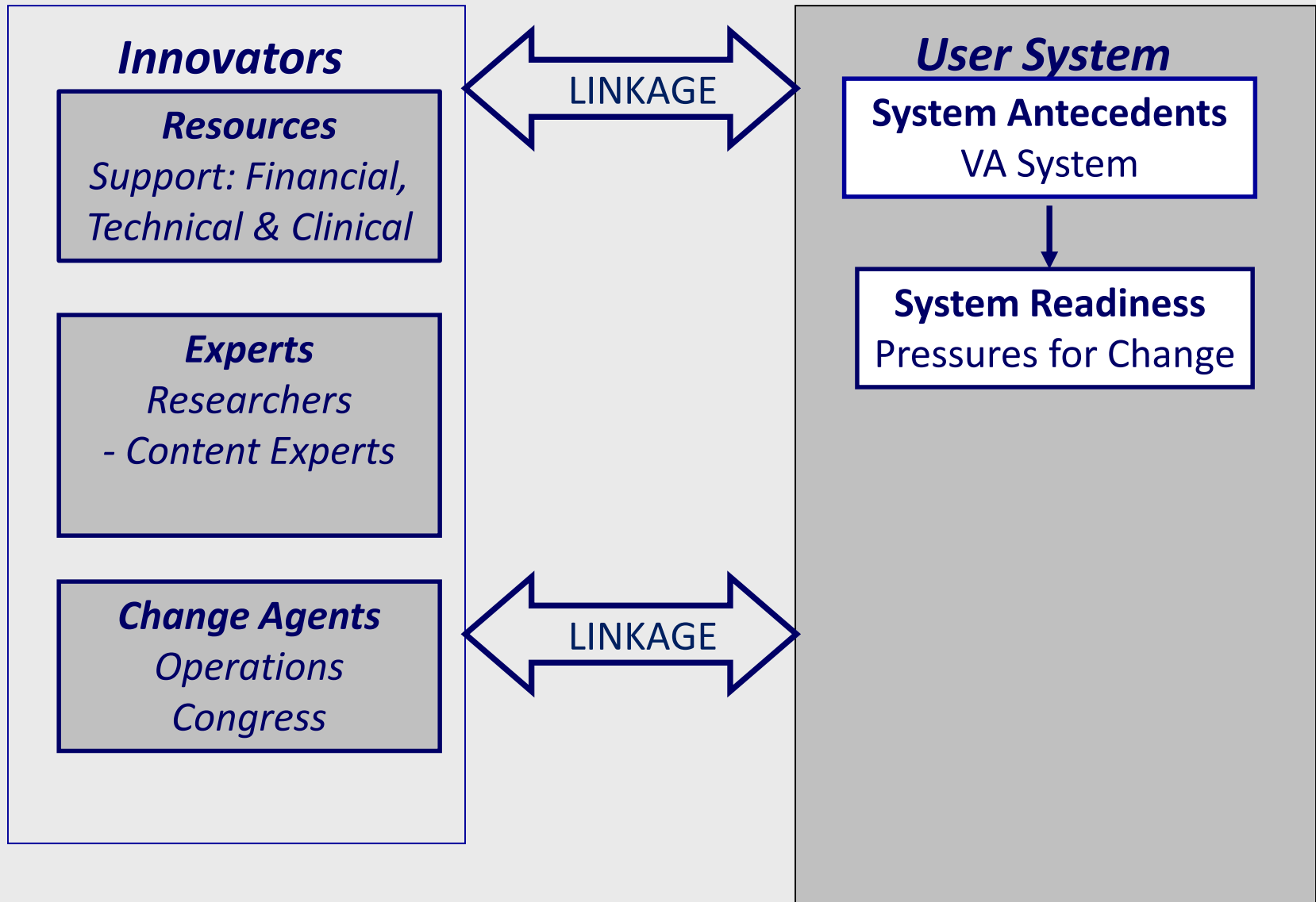
*Researchers
- Content Experts*

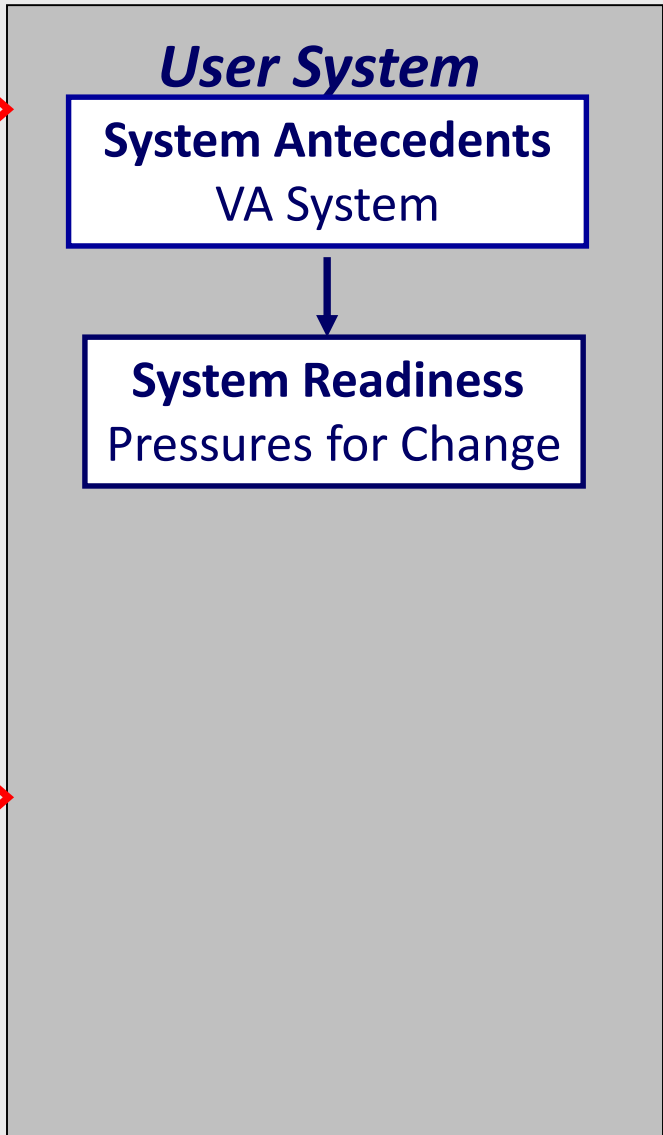
Change Agents

*Operations
Congress*



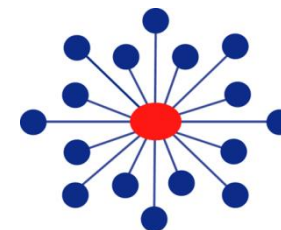






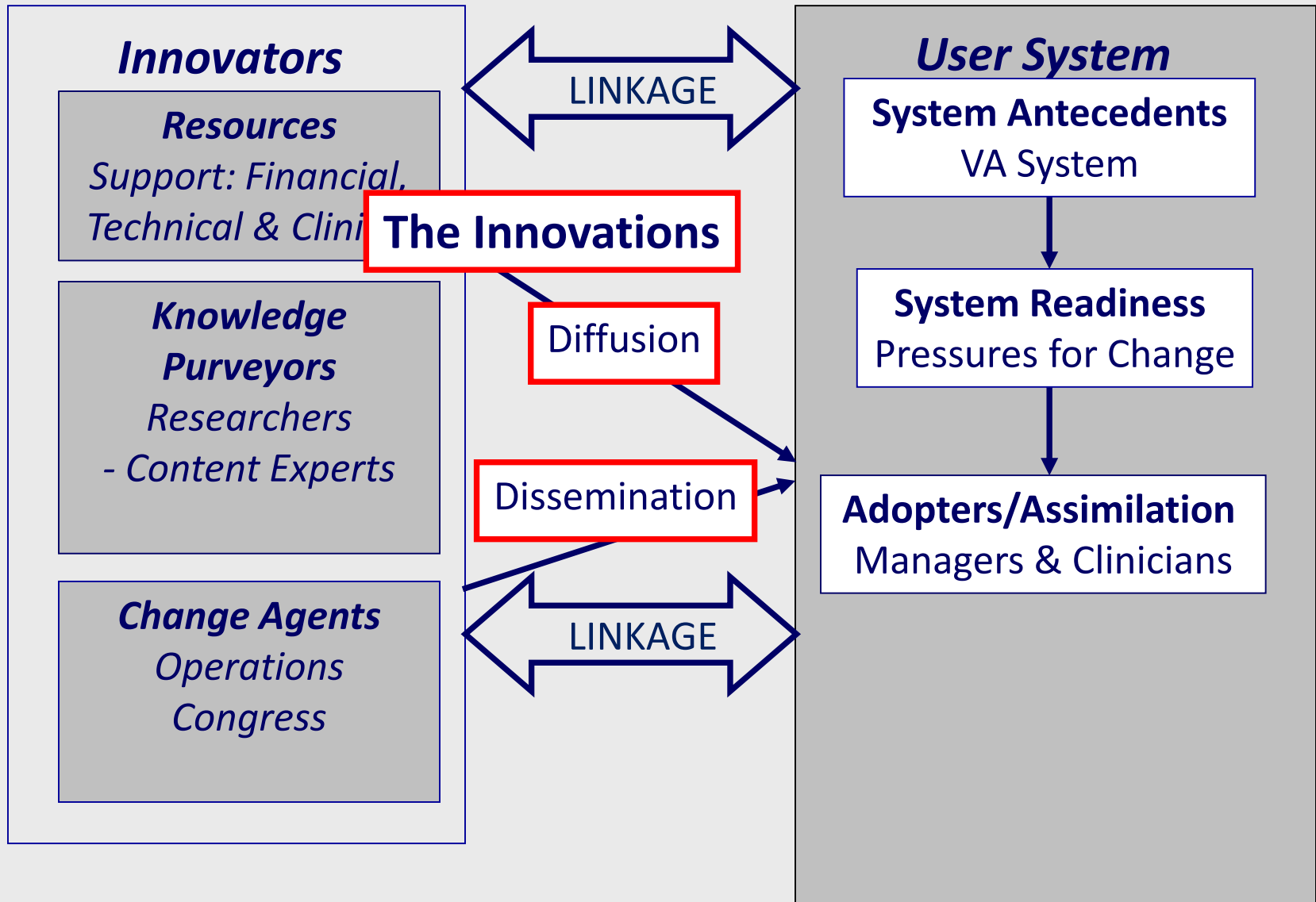


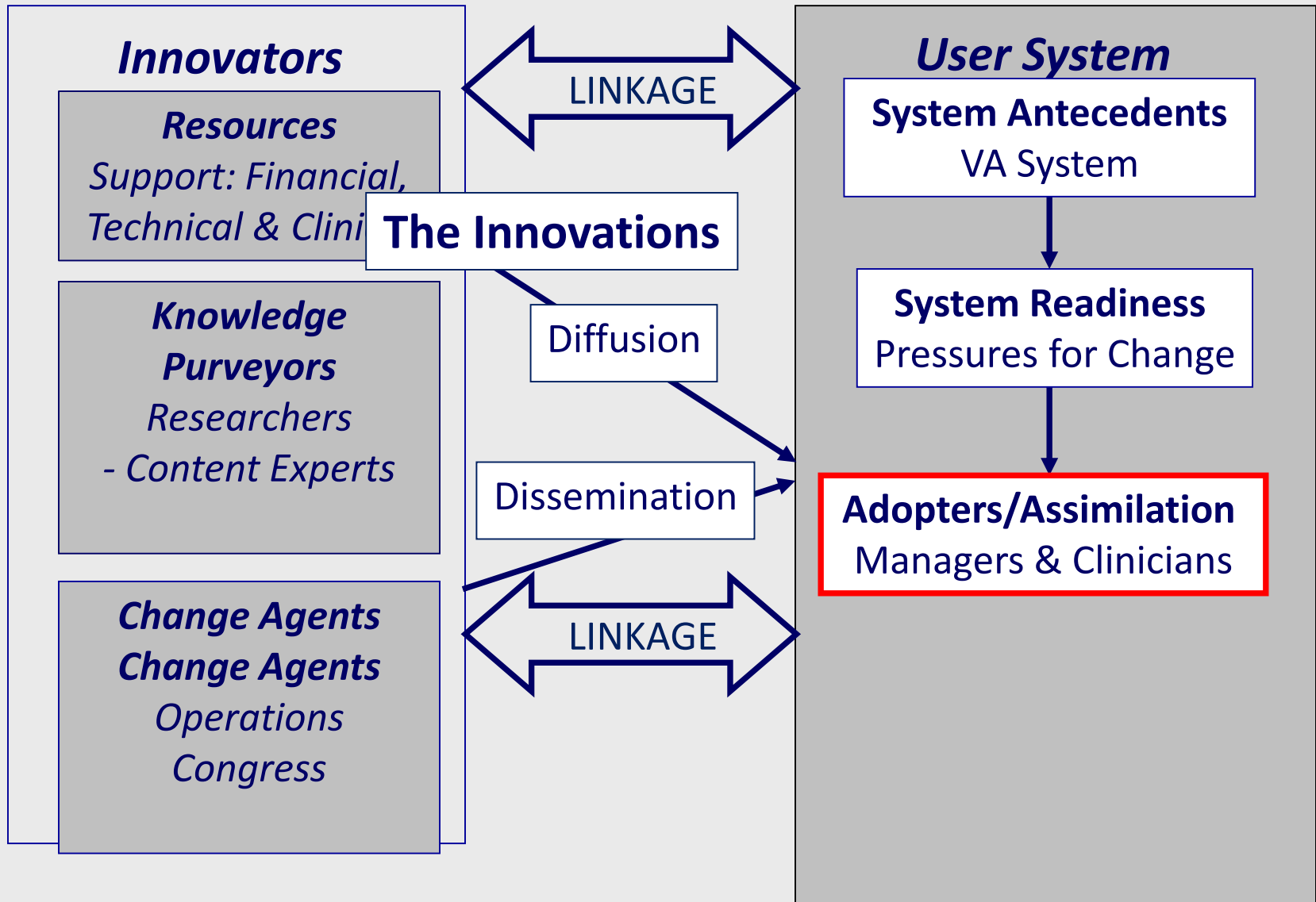
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“Implementation
research is a team sport”

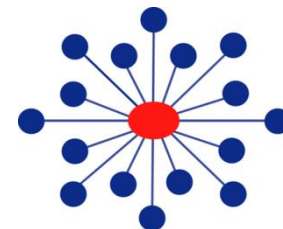
Dan Kivlahan







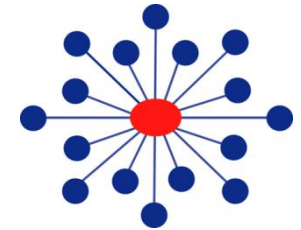
Passive Implementation of BI



We neglected “adopters”



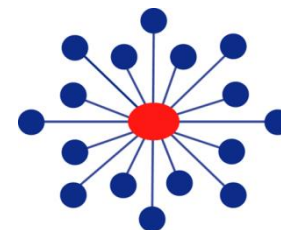
Adopter Attitudes



1. National webinar for quality managers
 - Screening
 - BI
2. After the second...



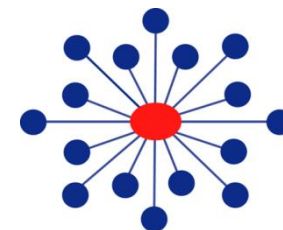
Adopter Attitudes



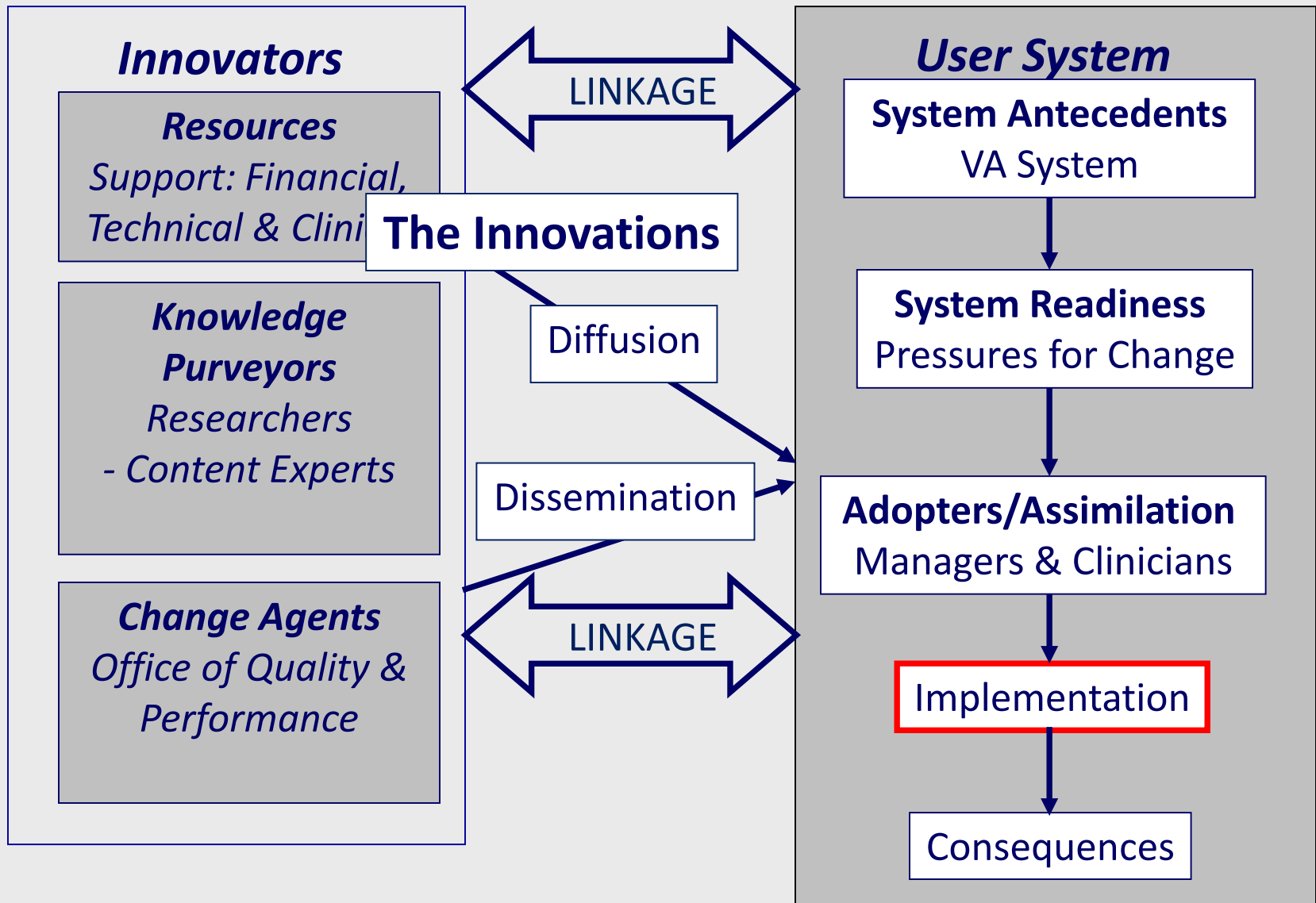
“She’s Crazy”

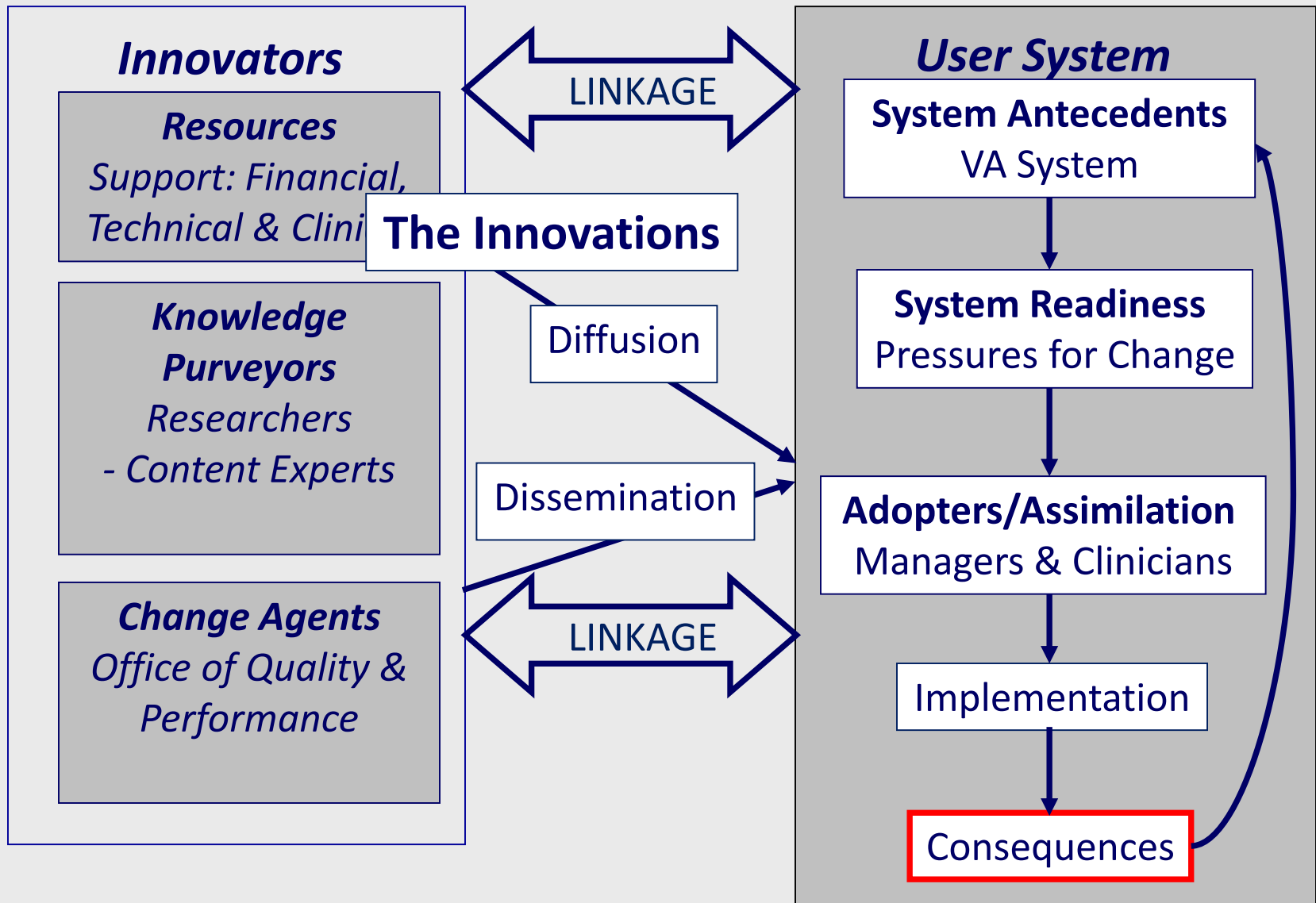


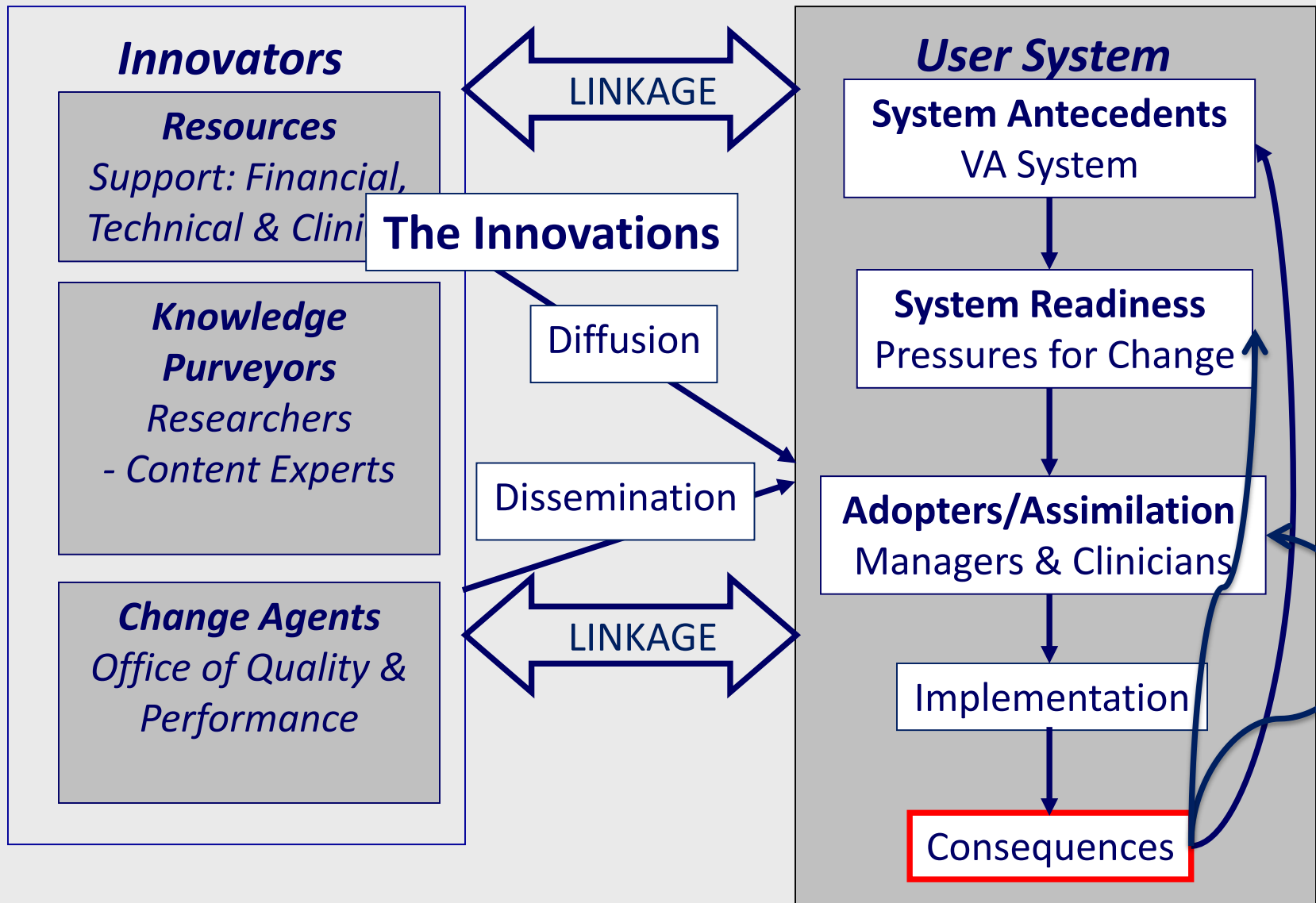
Email from PCP re EHR Tools

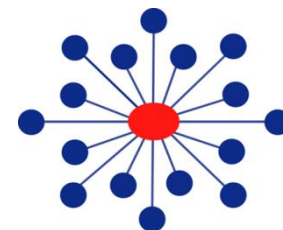


SMALL PRINT:
ALSO THE BRIDGE IS OUT AHEAD





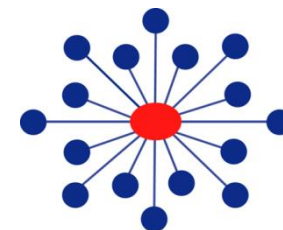




Other Implementation Research Conceptual Models



Other Conceptual Models for Implementation Research

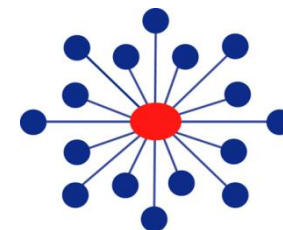


1. RE-AIM – Glasgow
2. PRISM – Feldstein and Glasgow
3. UCLA/RAND/NIMH model – Mendel
4. CFIR - Damschroder
5. Hybrid Effectiveness-Implementation Trials – Curran
 - ✓ Hybrid Type 1 Mostly effectiveness
 - ✓ Hybrid Type 2
 - ✓ Hybrid Type 3 Mostly implementation

Glasgow, Implement Sci 2011
Feldstein Jt Comm J Qual Patient Saf 2008
Mendel, Adm Policy Ment Health 2008.
Damschroder, L. J., Implement Sci 2009.
Curran MedCare 2012



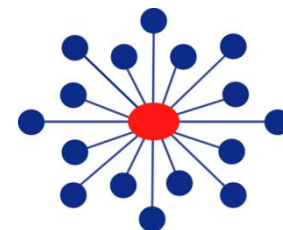
RE-AIM



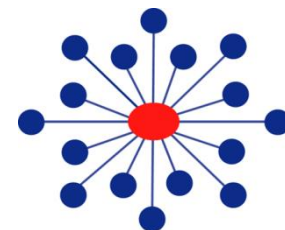
- **R**each – % patients reached
- **E**ffectiveness – Impact of implementation on outcomes
- **A**dooption – % providers (“agents”) or clinics who adopt
- **I**mplementation fidelity – evidence-based practices?
- **M**aintenance – sustained after research left?



PRISM



1. RE-AIM plus
2. Simple yet complete
3. Good for grants



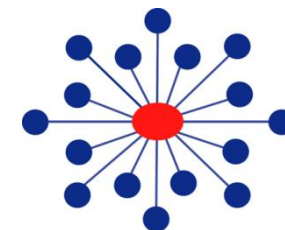
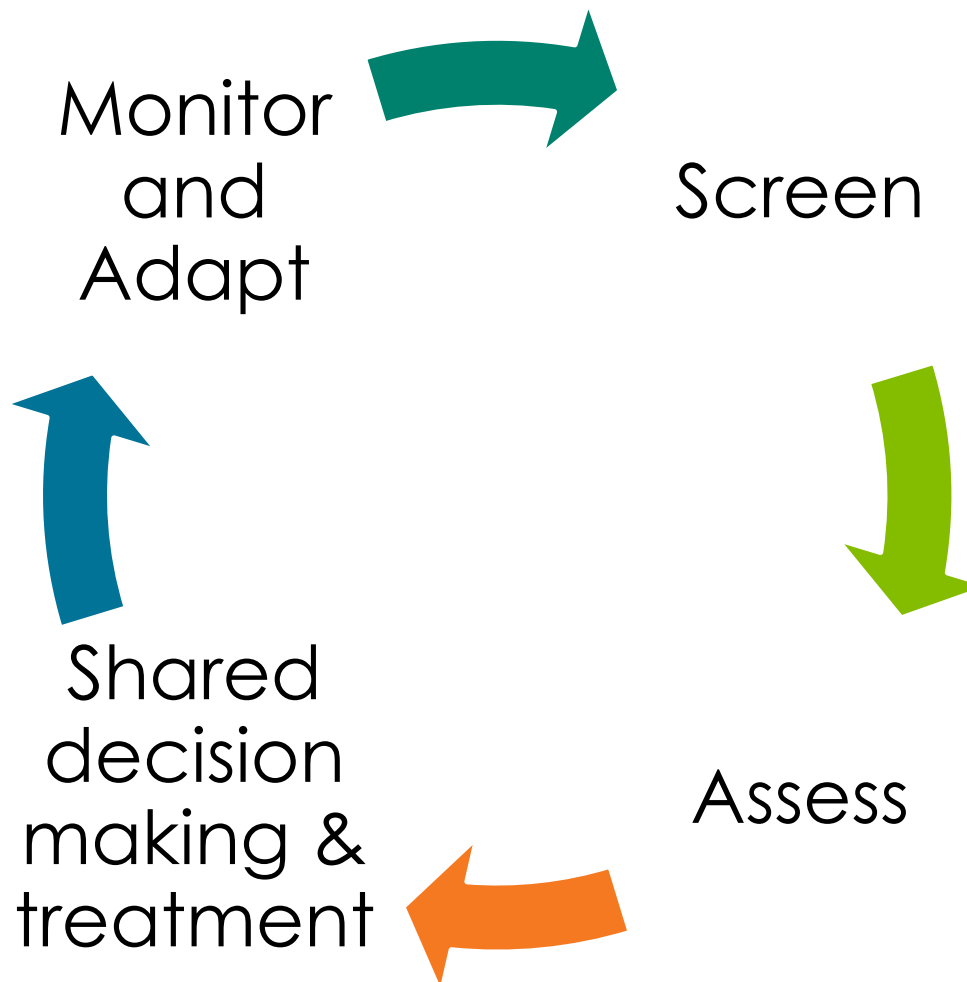
Sustained Patient-centered Alcohol-Related Care (SPARC Trial)

AHRQ R18





Ideal Alcohol-related Primary Care

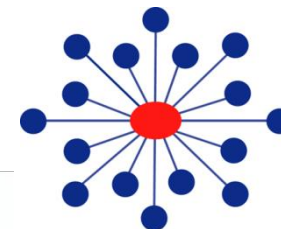




Implementation in Group Health



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Hi! I'M DR. MIKE EVANS
and TODAY'S DISCUSSION
is about...

ALCOHOL *and*
HEALTH

<https://vimeo.com/user29108320/review/119979917/b789e88c36>

www.bit.ly/drinkvideo



Goal: Improve the Quality of Behavioral Health Care



*“When I had my knees replaced my doctor gave me a video & booklet and sent me to talks at the hospitals. Then, we talked about the option that seemed best for me...
When I sought help for my addictions he just gave me a phone #...”
—GH patient*



Overview SPARC Project



Pragmatic Trial of Alcohol SBI and Shared Decision-Making for Alcohol Use Disorders

Duration: 3 12 6 6 6 6 6 6

months

Preparation

Pilot – 3 clinics

Wave 1 – 3 clinics

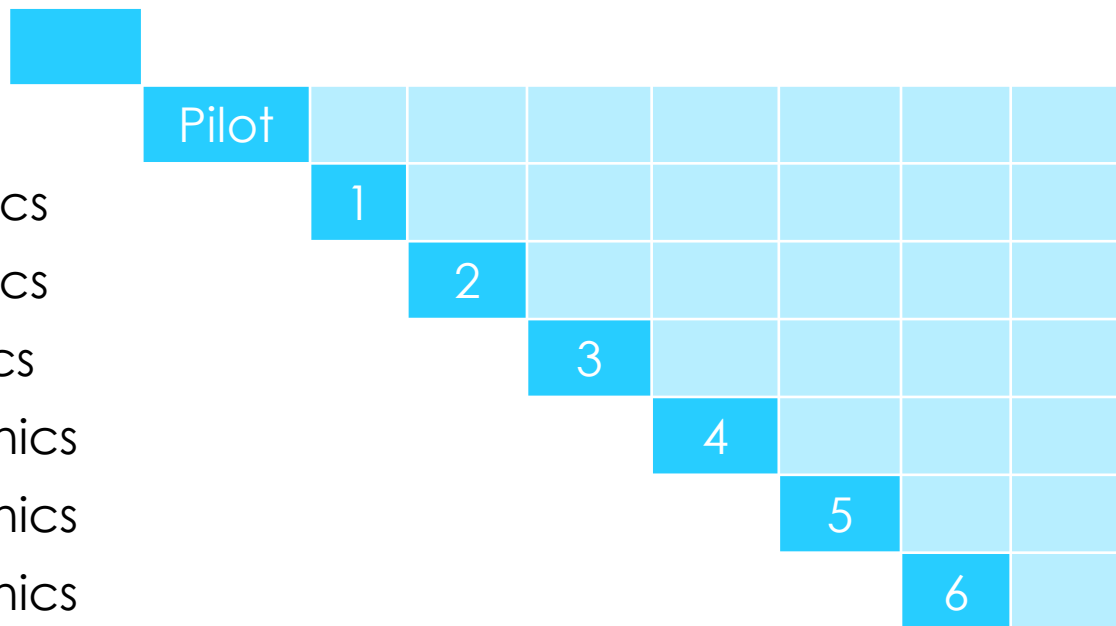
Wave 2 – 3 clinics

Wave 3 – 3 clinics

Wave 4 – 3-4 clinics

Wave 5 – 3-4 clinics

Wave 6 – 3-4 clinics





Overview SPARC Project



Pragmatic Trial of Alcohol SBI and Shared Decision-Making for Alcohol Use Disorders

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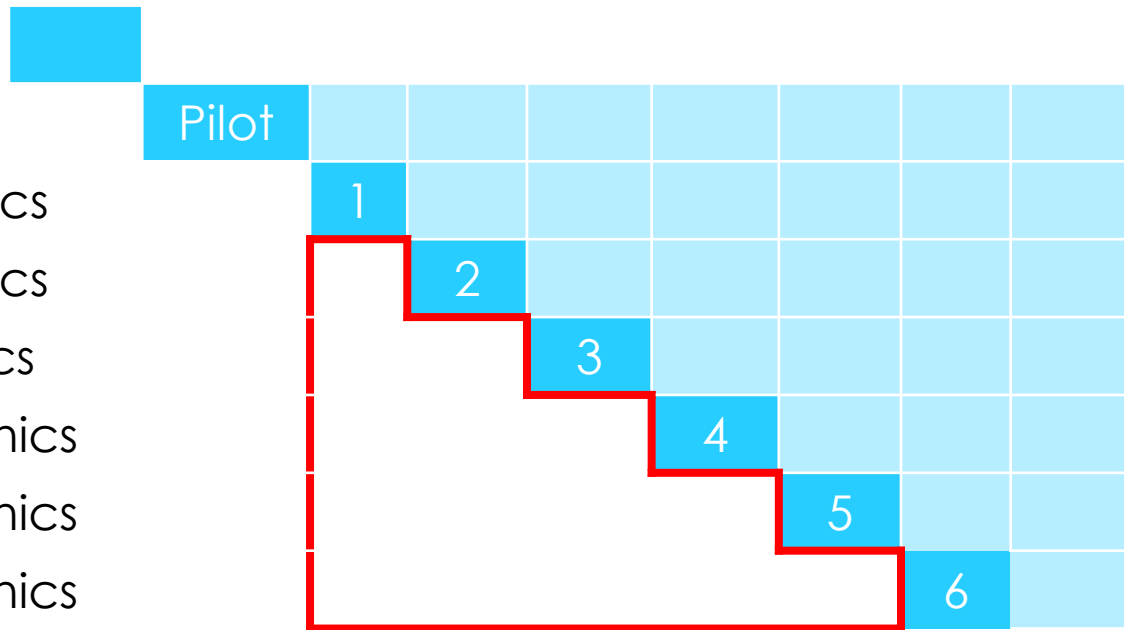
Wave 2 – 3 clinics

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Overview SPARC Project



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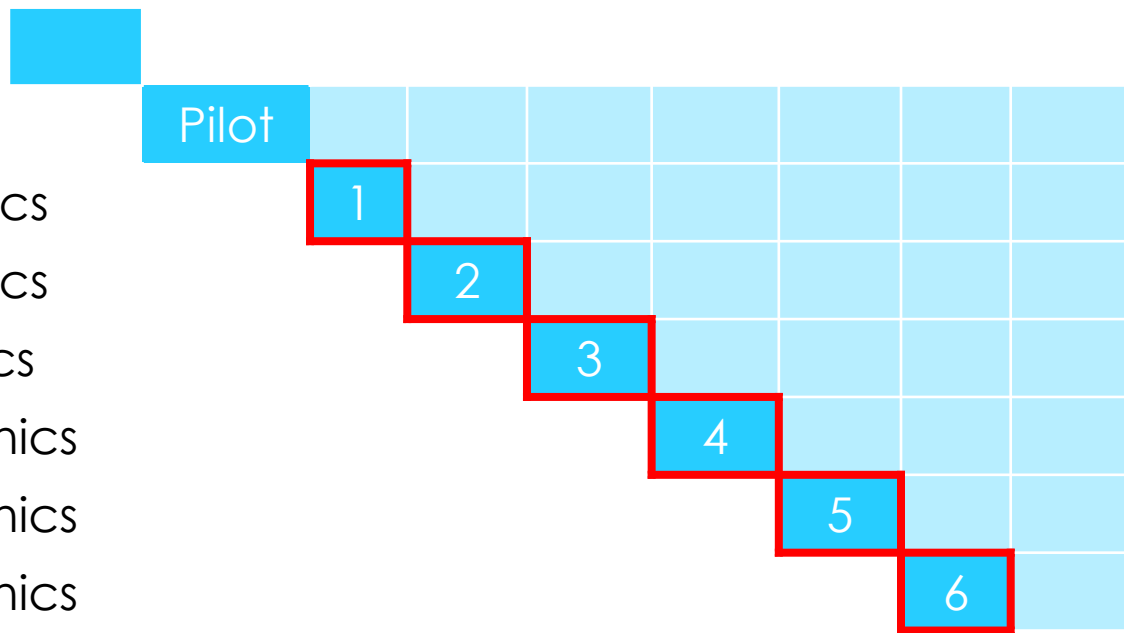
Wave 2 – 3 clinics

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Wave 6 – 3-4 clinics





Overview SPARC Project



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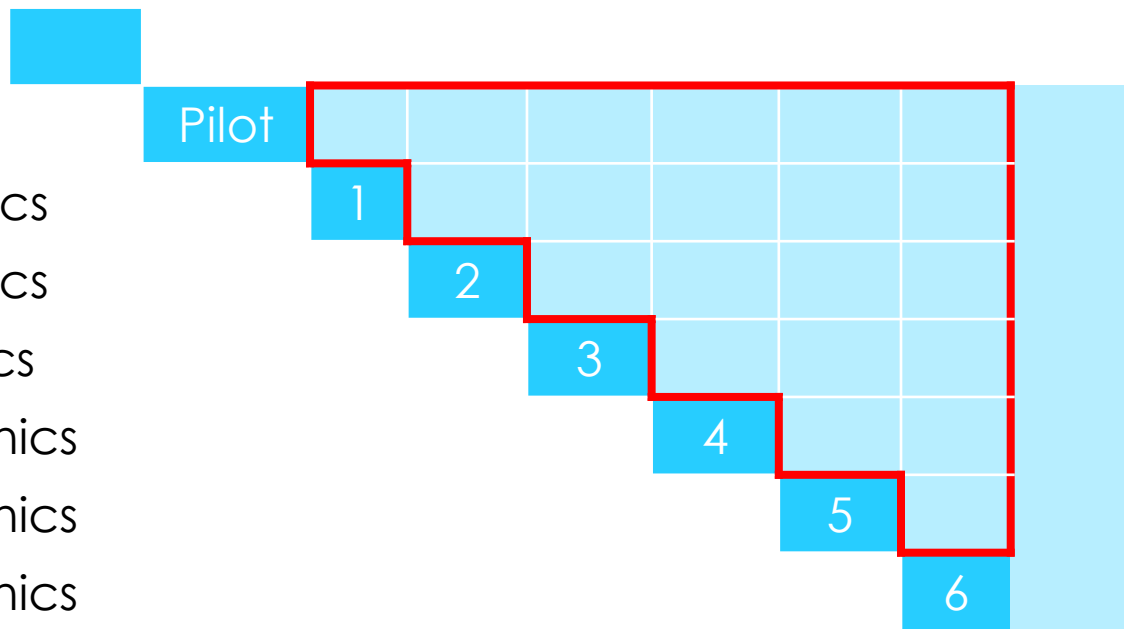
Wave 2 – 3 clinics

Wave 3 – 3 clinics

Wave 4 – 3-4 clinics

Wave 5 – 3-4 clinics

Wave 6 – 3-4 clinics



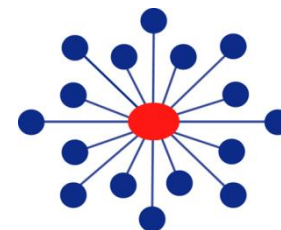


User Centered Design



User Centered Design



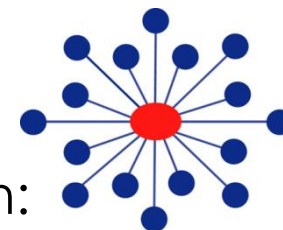


Part 4

Trainings and Tools



Trainings and Tools



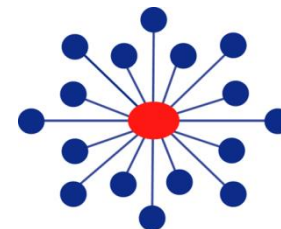
1. Implementation research institute (IRI):
<http://iristl.org/about/>
2. Society for Implementation Research Collaboration:
<https://www.societyforimplementationresearchcollaboration.org/>
3. VA Quality Enhancement Research Initiative:
<http://www.queri.research.va.gov/>
4. Prevention science and Methodology group:
<http://psmg.usf.edu/>
5. NIH Research:
http://obssr.od.nih.gov/scientific_areas/translation/dissemination_and_implementation/index.aspx
http://www.nimh.nih.gov/about/organization/dsir/service_s-research-and-epidemiology-branch/dissemination-and-implementation-research-program.shtml
6. Dartmouth Microsystems Training



Funding Implementation Research

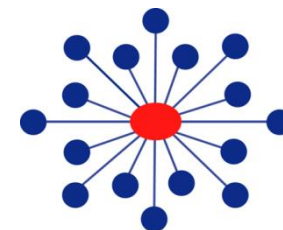


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Acknowledgements



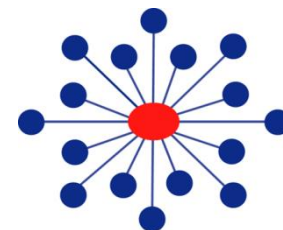
NIAAA – K24 - AA022128

NIDA CTN:

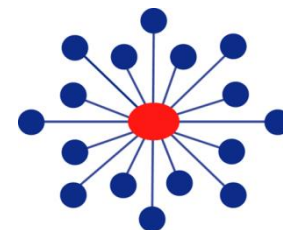
- UG1 - DA040314-01
- CTN – #0065

AHRQ – R18 HS023173

Small grants



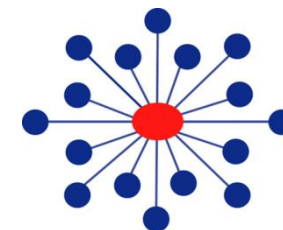
Thank You!
(References on Coversheet)



Questions?



UCLA/RAND/NIMH Model



Processes:

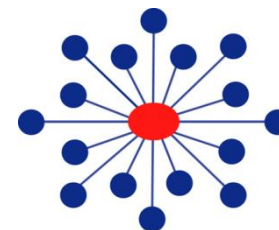
Stage 1: Capacity & needs assessment

Stage 2: Implementation & process evaluation

Stage 3: Outcome & impact evaluation



UCLA/RAND/NIMH Model

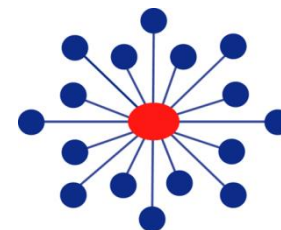


Contextual Factors

1. Norms and attitudes
2. Organizational structure and process
3. Resources
4. Policies & incentives
5. Networks and linkages
6. Media and change agents



UCLA/RAND/NIMH Model



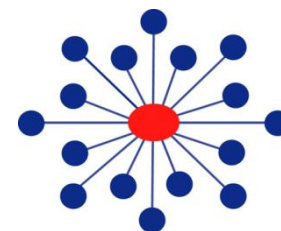
Stages of Diffusion

1. Adoption
2. Implementation
3. Sustainability

Mendel Adm Policy Mental Health 2008



UCLA/RAND/NIMH Model



Intervention Outcomes

1. Individual level

- ✓ Process
- ✓ Health status

2. Organization and system level

- ✓ Service priorities
- ✓ Reorganization
- ✓ New policies or collaborations