

Models of University Infrastructure for Dissemination and Implementation Research

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UC San Diego
HEALTH SCIENCES



The Institute for Public Health

San Diego State University
Graduate School of Public Health

MISSION

To improve population health by translating scientific discoveries into the community in full partnership with community stakeholders.

Established in 1992



Translational Research Definitions

From Discovery to Population Health

- T1.** Discovery. Basic bench science to human studies (observational studies, clinical trials, efficacy studies).
- T2.** Efficacy Evidence based guidelines, meta-analysis, scientific consensus
- T3.** Effectiveness From guidelines to health practice in specific settings, i.e. hospitals, non-profit agencies, community clinics, private practice. If it works in a controlled academic setting, will it work in practice?
- T4.** Population Health. The collective impact of different types of interventions in multiple settings to improve population health. Can you actually improve population health as measured by health indicators?

Khoury, AJE, Vol 172, 5, Aug 2010

The Institute for Public Health

GOALS

- To serve as a bridge between academics and practice
- To improve population health by promoting individual, community, and systems level changes to address complex health issues including health disparities, health inequity and social determinants of health
- To encourage the dissemination and implementation of evidence-informed practices in partnership with the community
- To accomplish these goals through community engagement

Institute for Public Health

We strongly believe that the role of universities is to conduct high-quality discovery research. But universities must also be engaged in the science of dissemination and implementation. Both are essential for improving population health.

Many Years Ago.....

We began by asking what the community needed from the university to improve their health.

Who Do We Partner With?

80% of our projects are initiated by service providers working with local populations in the community

- Hospitals, clinics and health care providers
- Primary care providers
- Private non-profit community-based organizations
- Advocacy groups/community members
- Local government agencies
 - County Health and Human Services
 - San Diego Department of Education
 - Law Enforcement
- California Department of Health Services
- Border Health Agencies
- National and International non-profit agencies

What do Our Partners Need?

- What is likely to work best in our community?
- Evidence-based best practice, translational research
- Practice-based/applied research
- Community-based participatory research
- Needs assessment
- Establishing and monitoring outcomes
- Program evaluation
- Training/professional development
- Data management
- Technical Assistance
- Distance Learning, Media and Technology
- Convening collaborations

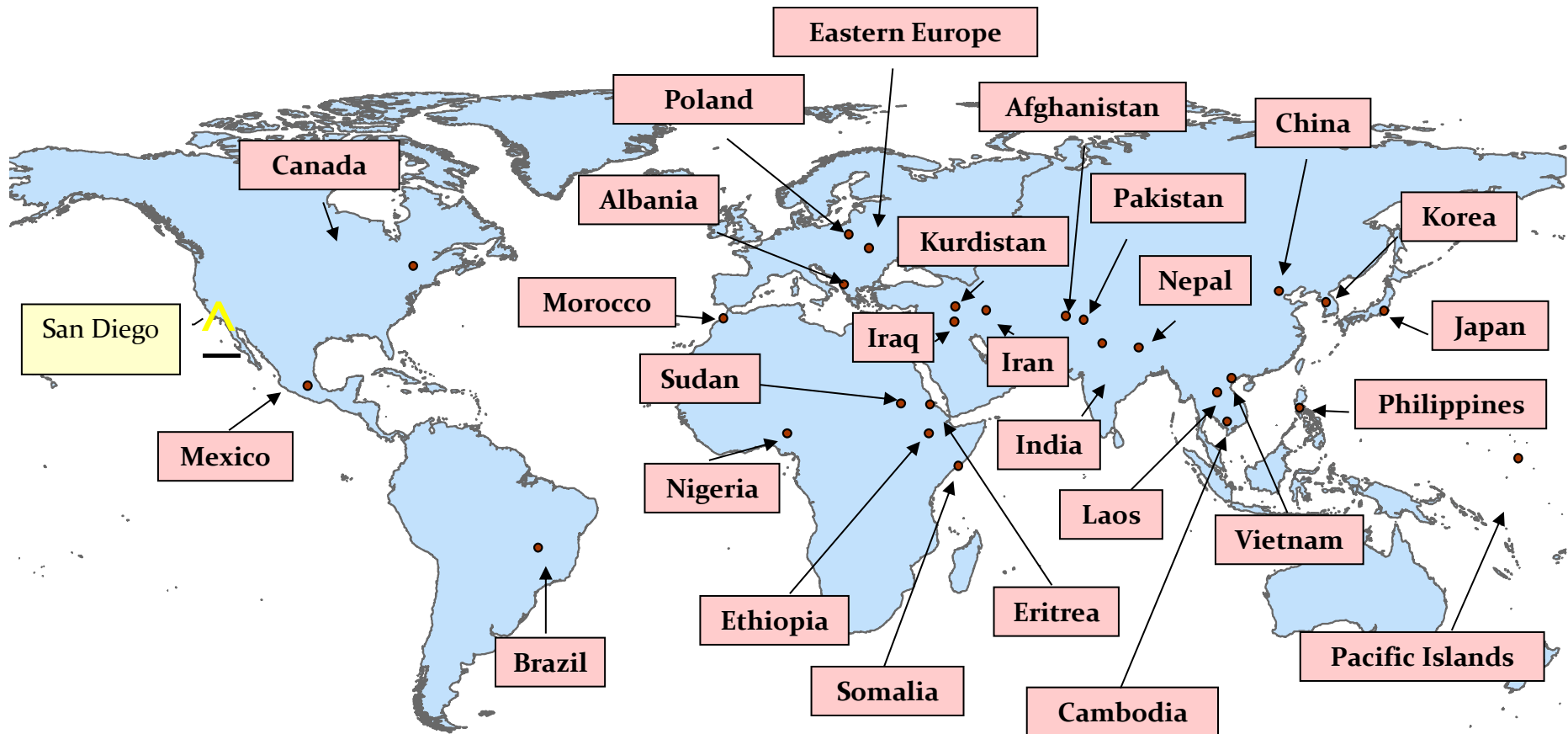
A Typical Example:

A Request from a Small Local Health Care Facility

Our small health center in a poor neighborhood primarily serves Asian Pacific Islanders. Our patients have a significant problem with obesity.

Can you help us?

Countries of Origin of Populations Served by Agencies Partnering with the IPH



Research Funding is Often Content Specific Supporting the Investigator Initiated Research Model



D&I Research is its Own Scientific Discipline

- Discovery research and D&I research use very different skill sets.
- The field of dissemination and implementation research including essential community engagement is very complex and expanding rapidly.
- We should not necessarily expect traditionally trained T1 researchers to now become T3/T4 researchers.
- We need to be specifically training T3/T4 researchers as their own academic discipline with their own infrastructure available to partner with T1 discovery experts.

Different Skill Sets

T1	T3/T4
Content Experts	D&I method experts. Methods apply to many different content areas
Often specialize in efficacy study designs (clinical trials)	Alternate study designs needed
Focus on characteristics of the intervention and internal validity.	External validity. Focus on context including politics, power, organizational structure, funding, systems, culture, literacy, etc.
Focus on effect size and fidelity.	Different populations may need to implement differently to attain the same effect size. Interventions may need to be tailored to achieve this
Academic audiences	A variety of non-scientific audiences

Levels of Change to Consider

Levels of Possible Change

Systems/Environments

The Organization

Group/Team

Individuals

Types of Interventions

Laws, reimbursement, regulations, policies

Mission, goals, structure, strategies, leadership

Procedures, forms, information sharing, collaboration, shared goals

Knowledge, behavior, compliance, health improvement

*adapted from Shortell, 2004

What do we need to consider when studying the translation from research to practice?

- **The availability of political support for adoption**
- **Funding interest and stability**
- **Quality of the partnerships we can establish and sharing of roles**
- **Organizational capacity**
- **Program Evaluation**
- **Factors Affecting the Willingness to adopt/adapt**
- **Communications**
- **Public Health Impact**
- **Strategic Planning**
- **Culture/language/interpretations of health and disease .**

Sara Schell et. al 2013
Sustainability of PH programs
Implementation Science

Why is it so challenging to translate research into practice?

- It takes a lot of scientific evidence to convince academics that something is likely to work (many expensive studies).
- Scientific evidence is often collected under “perfect” conditions while implementation can be very messy.
- The context (culture, SES, neighborhood, language etc.) in which “evidence” is discovered does not match that in which it needs to be implemented.
- Scientific evidence is often developed without the input of the communities/people who are intended to benefit from it.

Why is it so challenging to translate research into practice?

- Traditional T1 discovery research and the organizational culture in which it thrives is disease or condition centric. (diabetes, cardiovascular disease, or smoking). Innovative discoveries are made to better understand, detect, and treat specific diseases.
- There are academic traditions that are not disease specific: health disparities, social determinants of health, minority health
- The field of dissemination and implementation science is just finding its “home” in the traditional academic setting. Where is that home?

Where Do D&I Researchers Find a Home in the Typical University Infrastructure?

Some Models I have Known

Model #1: Do it all: T1 – T4

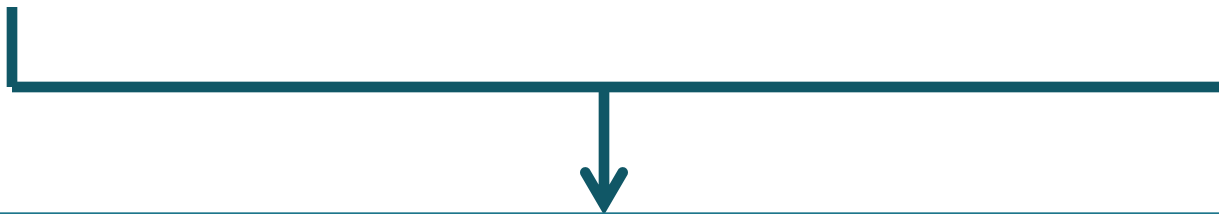
Traditional
Discovery
Research Group



Ensure sufficient
scientific evidence
to consider the
discovery a best
practice



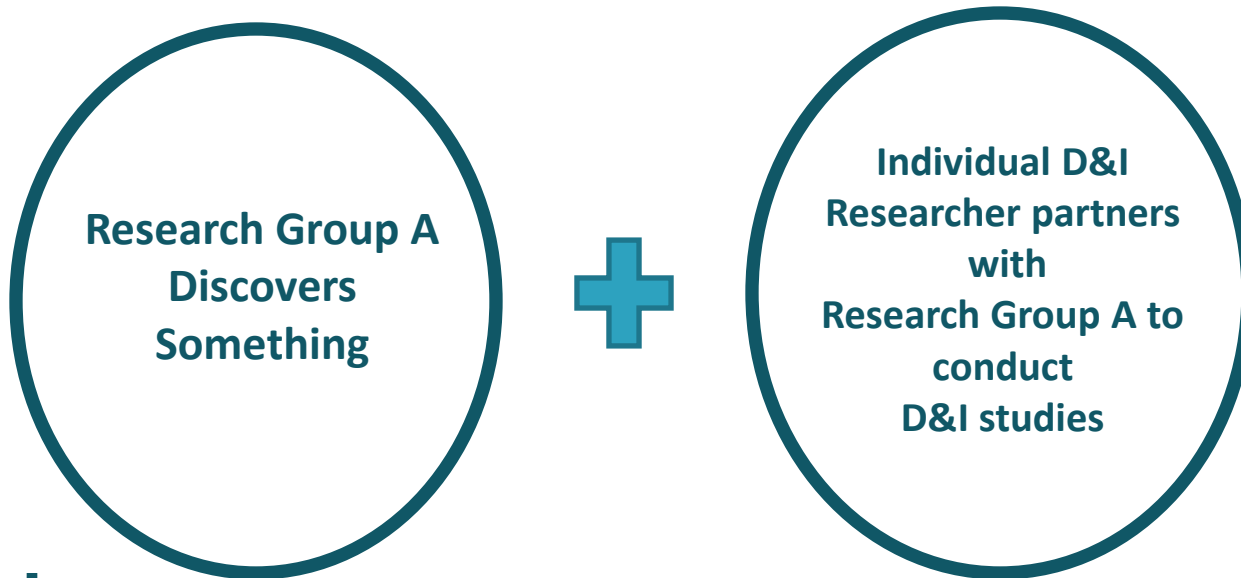
D&I studies
to examine
factors associated
with successful
implementation



Science for both efficacy and how to integrate into practice

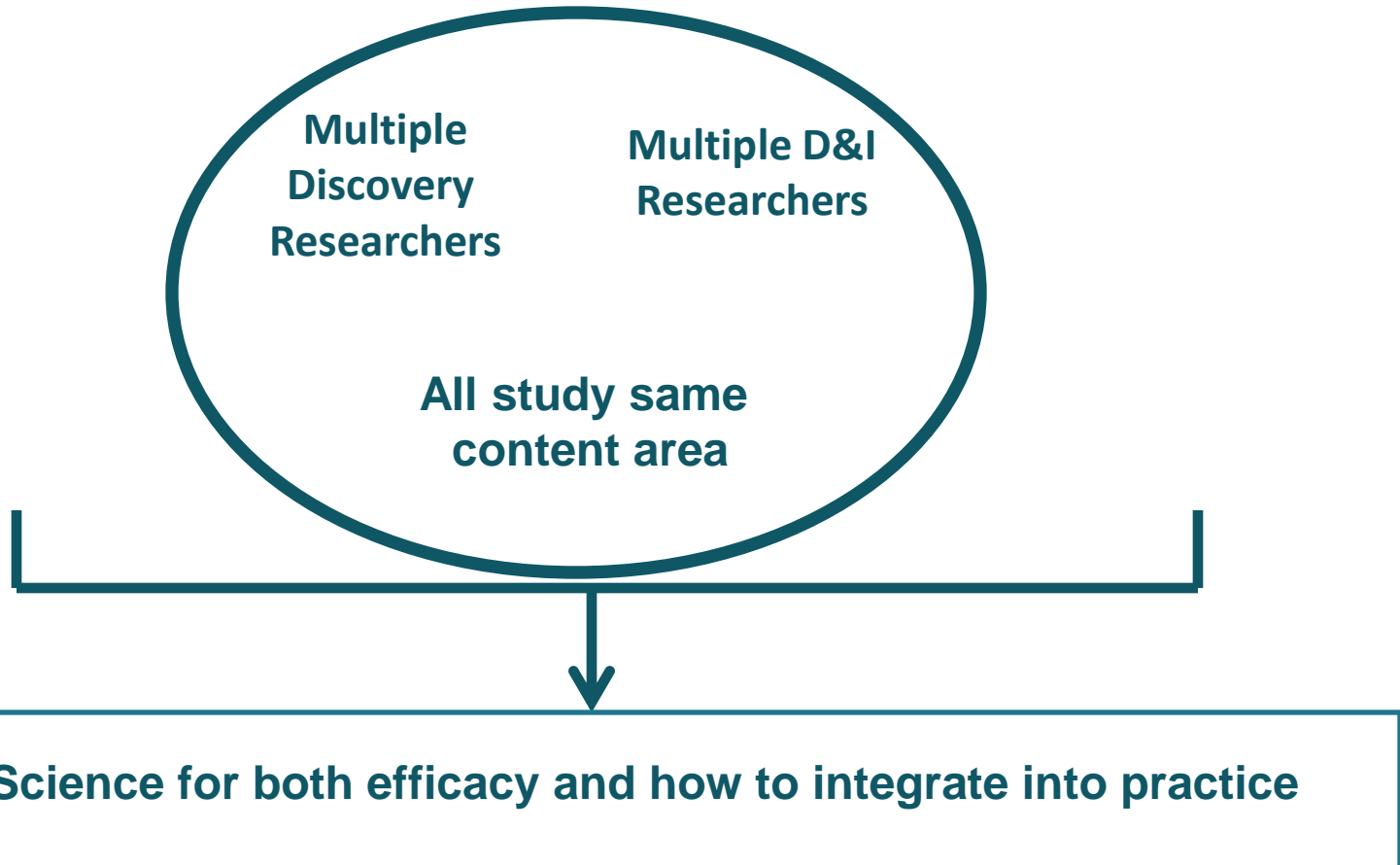
Model #2:

Research Group Partners with an Individual D&I Researcher



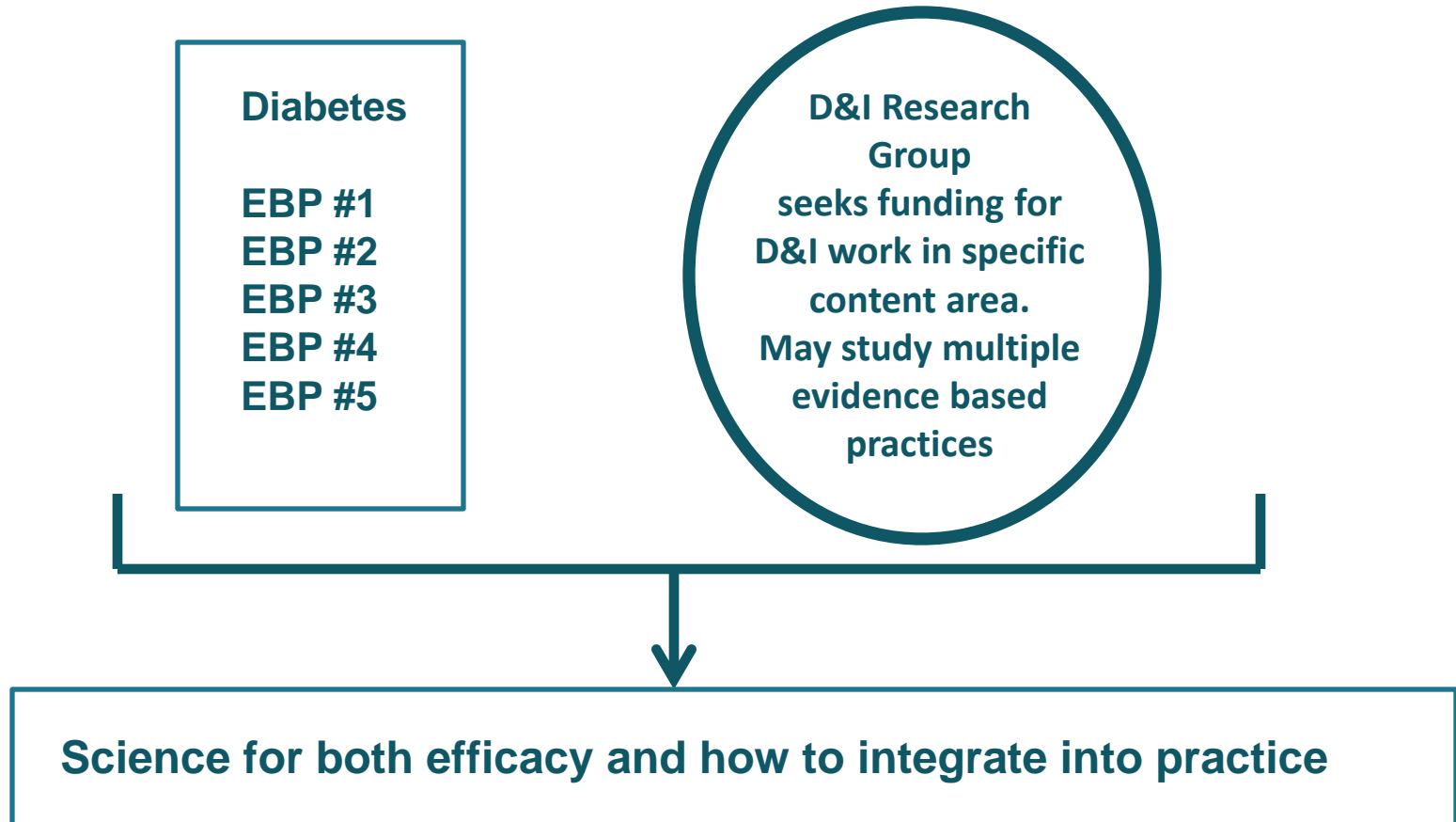
Science for both efficacy and how to integrate into practice

Model #3: D&I Researchers Join Research Group A



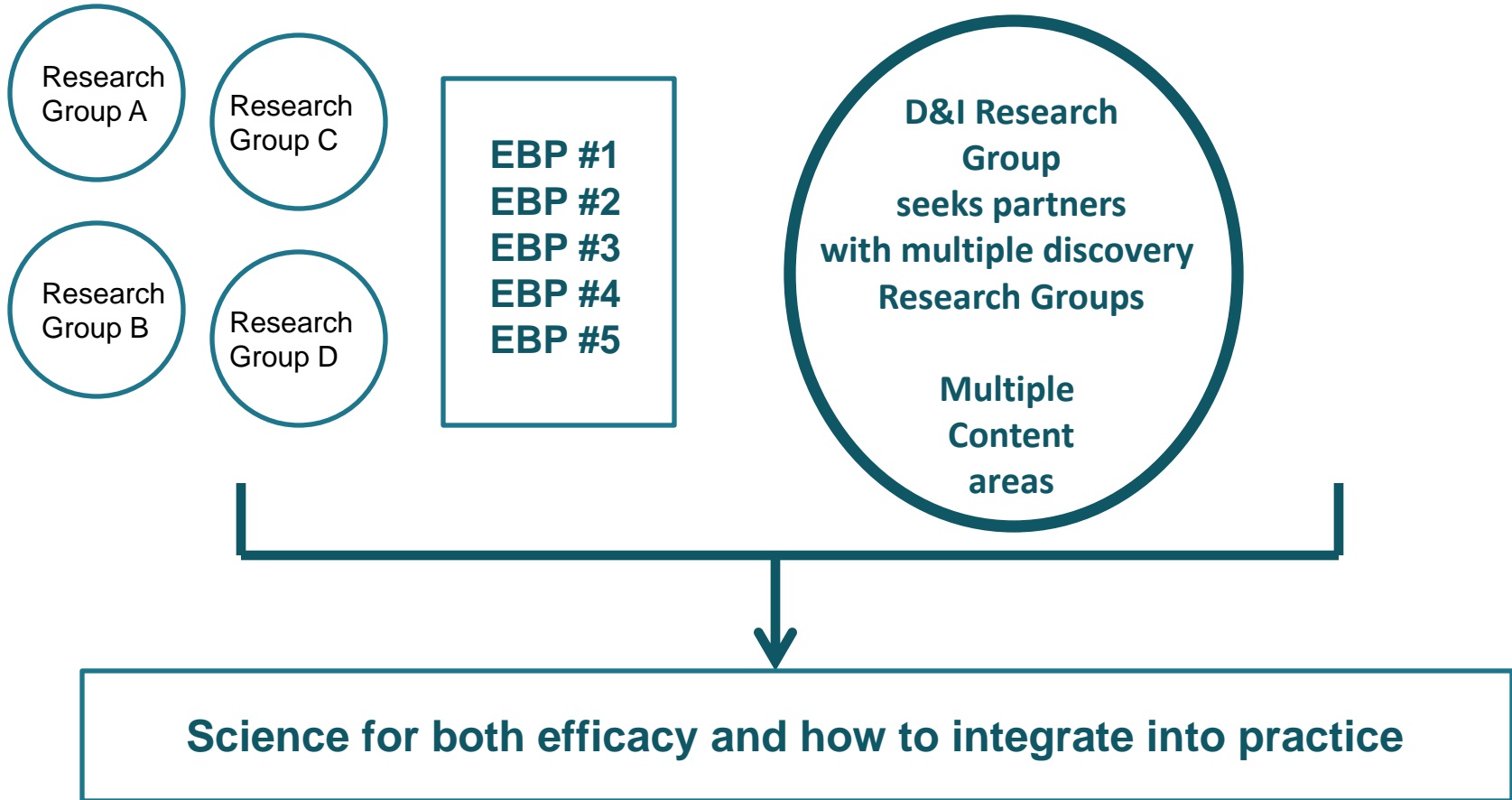
Model #4:

D&I Research Group Specializing in One Content Area



Model #5:

D&I Research Group Specializing in Methodology But Not Necessarily Content



On-going IPH Community Partners

- Asian Pacific Islander Health Network
- African American Health Collaborative
- At-risk youth service providers
- Refugee and immigrant communities
- Survivors of Torture
- Transgender Communities
- Gay and Lesbian Communities
- Neighborhood Collaboratives
- Homeless Service Providers
- Middle and High School Health Providers
- Family Support Programs
- Safe Aging Service Providers
- Syringe Exchange Providers
- Tobacco Cessation Providers
- California Department of Public Health
- California Distance Learning Health Network
- Indian Health Council
- Jewish Family Services
- Hospital Association of San Diego & Imperial County
- Head Start
- San Diego County Health and Human Services
- Violence Prevention Advocates

Content Areas of IPH Research

At-risk youth

Breast & cervical cancer

Child abuse and neglect

Childhood lead poisoning

Childhood obesity

Children with special healthcare needs

Chronic disease management

Community health measurement

Dating violence among adolescents & college students

Diabetes care & education

Domestic violence

Epidemiology of violence

Ethics as applied to public health

Health information technology

Hepatitis C

HIV

Homelessness

Human trafficking

Infant morbidity & mortality

Injury prevention among older adults

Home visiting programs

Overweight and obesity in children & adults

Pain management

Peace building & democratic processes

Physical activity measurement and promotion

Quality

Refugee & immigrant communities

Sexual & reproductive health

Sexual assault

Sexual practices & risk behaviors of young adults

Social indicators of health

IPH Funding Partners

Alliance Healthcare Foundation
American Lung Association of San Diego
& Imperial County
Asian Pacific Health Center
Awareness Inc
California Black Health Network
California Department of Health Care Services
California Department of Public Health
California Distance Learning Health Network
California Endowment
California Rural Legal Assistance
Child & Family Policy Institute of California
Children & Families Commission of
Orange Country
City Heights Wellness Center, Scripps Mercy
Community Action Partnership
Community Health Improvement Partners
Council of Community Clinics
DHHS Office of Minority Health
End Violence Against Women International
EYE Counseling & Crisis Center
Fred J. Hanson Institute for World Peace

Grossmont Community College District
Imperial Beach Health Center
Indian Health Council
Interfaith Community Services
Jacobs Center for Neighborhood Innovation
Jewish Family Service
La Mesa-Spring Valley School District
License to Freedom
Memorial Academy Healthy Start
Neighborhood House Association
North Clairemont Coalition
Operation Samahan, Inc.
ParentCare Family Recovery Center
Point Loma Nazarene University
Regional Task Force on the Homeless
Rest Haven Preventorium for Children
Roosevelt Middle School, San Diego
Salvation Army
San Diego Cancer Navigator
San Diego County Health and Human Services
San Diego County Office of Education

T2: Evidence is Abundant Jacobs, 2012

- Evidence-based Public health <http://prcstl.wustl.edu/EBPH/Pages/>
- Cancer Control P.L.A.N.E.T. <http://cancercontrolplanet.cancer.gov>
- The Community Toolbox: <http://ctb.ku.edu>
- County Health Rankings: www.countyhealthrankings.org
- CDC's Community Guide: www.thecommunityguide.org
- The Cochrane Library: www.cochrane.org
- The Campbell Collaboration: www.campbellcollaboration.org
- Healthy People 2020: <http://www.healthypeople.gov/2020/default.aspx>

Push vs Pull Strategies



Rabin, 2006

**Do we need a university infrastructure
specifically for D&I researchers?**

***Models 4 & 5 involve research groups
with a collective specialty in D&I research***

Advantages of this Infrastructure

- A specific location at the university that promotes dissemination and implementation research in partnership with the community. Community stakeholders know how to access these researchers. This relieves the stress of having to search for a specific scientist with similar interests.
- T3/T4 research is supported and recognized as a unique scientific discipline with its own academic infrastructure
- If traditional discovery researchers are interested in D&I research partnerships, they have a well resourced entity to collaborate with on campus.

Advantages of the Infrastructure

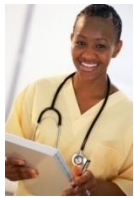
- T3/T4 scientists foster long-term relationships with multiple community stakeholders in a wide variety of content areas.
- These relationships build trust across projects and across time. They do not disappear when the funding expires.
- Linkages to community collaboratives, advocates, and patients are then available to the entire university through the D&I research group for pilot testing, cultural competency etc.

Unique Challenges for D&I Researchers

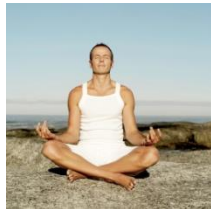
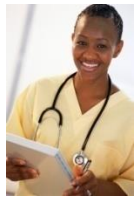
- The long tradition of investigator-initiated research. What if investigator-initiated research does not match the needs of the community?
- Could the federal government find a mechanism to encourage community-initiated research questions? Even CBPR tends to begin with the interests of the academics and their funding sources.
- Publication of results. Most journals are still seeking “new and innovative” intervention results. Little understanding of D&I results.
- Many community partners would prefer that their results are NOT published in academic journals. Alternate forms of dissemination of research results need to be recognized in faculty promotion decisions.
- Federal funding is categorized by disease. Communities categorize themselves by geography, culture/ethnicity, behavior or risk. This creates a mismatch (example of clinical trials)

Working Toward Population Health Goals

Health Care Settings: Implementing Recommendations to Improve Population Indicators



Collective Impact



The Center for Population Health and Wellness

- An interactive public use web-portal
 - Displays population health indicators geographically
 - Describes evidence based practices
 - Community resources to address indicators
 - Local researchers whose work could affect indicators
- Academic-Community partnerships to address indicators
- Training and technical assistance
- Dissemination and Implementation Research

The San Diego Health and Wellness Data Portal

Translating Scientific Evidence into Practice for Population Health Impact

Local Data

+

Evidence Based

Practices

- Actionable Indicators
- Local population social determinants of health
- Resources: Who is doing what in the neighborhood to address the indicator?
- Local researchers whose work could affect the indicator

- EBPs tested in similar local populations
- Collective Impact; multiple EBP efforts by hospitals, schools, social services, to address the same indicator
- Training in EBPs, how to find them, how to assess quality, how to adopt, adapt or tailor them
- Implementation research

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**Measurable
Local
Population
Health
Improvement**

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