Setting a Research Agenda for Population Health Improvement
Aims

• Present some basic terms/concepts that will inform discussions about research agendas

• Identify some debates that matter for the field of population health science

• Present a framework for thinking about research priorities in context of action
Key Terms

- Research Questions
- Research Design
- Research Methods
3 different types of research questions:

- **EXPLORATORY:**
  Initial research on a new topic or idea

- **DESCRIPTIVE:**
  Create deeper picture; trends; patterns

- **EXPLANATORY:**
  Establish causal relationships
EXAMPLES

• EXPLORATORY:
  • How might stable housing improve quality of life?

• DESCRIPTION:
  • What are adolescents’ most trusted sources of health information?
  • What are historical trends and patterns in prescription drug abuse?

• EXPLANATORY:
  • How does chronic social stress increase CVD risk?
  • Will a tax on SSBs reduce obesity?
Research Design

- Overall architecture of the plan for answering the research questions

- Components of a research design:
  - Purpose (to explore, describe or explain)
  - Topic (phenomenon under study)
  - Unit of analysis (micro, mezze, macro) and numbers needed
  - Time dimension (cross-sectional, longitudinal)
  - Comparisons (over time; across groups)
Research Designs for Explaining

- Experimental Designs
  - Randomized Controlled Trials
- Natural Experiments
  - Time-series designs for policy research
- Quasi-Experimental Designs

- Cost-Benefit/Cost-Effectiveness Analysis
  - Adding economic questions
Research Methods

- Within context of research design, specific ways in which data will be obtained and analyzed to answer research questions

- Research design and methods both important

- Getting data:
  - Primary data: Researcher collects
  - Secondary data: Using existing data from surveys, administrative systems, Census, etc.

- Analyzing data:
  - Statistical procedures; qualitative analysis
• Sayres Law: *In a dispute, the intensity of feeling is disproportionate to the value of issues at stake.*

• Explains why academic politics are so intense...the stakes are so low.

• However, some academic debates have some substance or otherwise matter.
Debates About Definitions

- Population
- Population Health
- Community
- Socioeconomic Status or Position
- Race
- Health
If it can’t be counted, it doesn’t count

- Quantitative versus qualitative methods remain somewhat at odds
- Significant growth in recognition of contributions of qualitative and mixed-methods
- Legitimate concerns about qualitative research that attempts to *explain* or make causal arguments
Disciplinary Differences

- Disciplines bring theoretical perspectives, conceptual frameworks, and methods to research.

- Discipline-based training allows researchers to contribute to theory, development of new understandings of phenomenon, and new methods.

- Population health science requires that a wide range of disciplines work together, learn from each other.
Amitabh Chandra @amitabhchandra2 · Aug 20

Latest garbage from epidemiology: Women who work more can't get pregnant.

mobile.reuters.com/article/us-women-employment-work-ahq...
daviesbj @daviesbj · Aug 20
@amitabhchandra2 wonder if opposite true? men who work less can not get pregnant?

Paula Lantz @paulalantz · Aug 20
@amitabhchandra2 Not defending study or ridiculous headlines, but I am noticing a recent rant against all epidemiology by economists. Why?

Amitabh Chandra @amitabhchandra2 · Aug 20
@paulalantz Because epidemiology, with few exceptions, is a train-wreck—weak designs, ideological...and consequently, irrelevant.

S Dynarski @dynarski · Aug 20
Bad epi studies like this crowd news. PR offcs at journal/unis drive hype but profs complicit, as quote in this article shows. @paulalantz

Amar Hamoudi @HamoudiAmar · Aug 20
@paulalantz @amitabhchandra2 not all epi. not every economist.
Interdisciplinary Research

Comments reveal:

- Problems with media coverage and translation of research findings
- Disciplinary differences in research design/methods
- Legitimate concerns about evidence required to establish a causal relationship

Setting a research agenda for population health involves understanding disciplinary strengths and differences, and interdisciplinary research

- Working together in ways that create new approaches and insights
## What is Needed?

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<tr>
<th>New and Better Research</th>
<th>Better Dissemination/Use</th>
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<tbody>
<tr>
<td>• New exploratory research</td>
<td>• A great deal of research exists that is not known/used</td>
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<td>• Understanding of population health phenomenon</td>
<td>• Improved translation and dissemination is needed</td>
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<td>• Evidence of policies and interventions that work</td>
<td>• Translational science: <em>Research about research translation/dissemination</em></td>
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Framework for Identifying Research Needs vs. Dissemination Needs
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<tr>
<th>State of Evidence and Consensus</th>
<th>Strong</th>
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<th>Weak</th>
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<td>Strong</td>
<td>Fluoride in H2O Seat Belts Tobacco taxation</td>
<td>Needle Exchange Child Vaccinations</td>
<td>Climate Change Gun Violence D.A.R.E.</td>
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<tr>
<td>Medium</td>
<td>Environmental tobacco smoke</td>
<td>Menu Labeling Supportive Housing</td>
<td>Early childhood trauma and health LARC education</td>
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<td>Weak</td>
<td>-----</td>
<td>Super-Utilizer Interventions</td>
<td>PRIORITY FOR RESEARCH</td>
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WHAT DO WE WANT?
EVIDENCE-BASED CHANGE
WHEN DO WE WANT IT?
AFTER PEER REVIEW