

Applying Rigorous Designs to the Evaluation of PSE Interventions

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The OPUS learning guides are designed to help professors, students, and early career researchers easily access key takeaways from the OPUS workshop series and incorporate the lessons into the classroom and applied research projects.

In this presentation, Dr. Amy Carroll-Scott discusses how social determinants of health at the community level affect health equity in urban areas, highlighting her work in West and Southwest Philadelphia. She discusses how trust building; community-based participatory research (CBPR); and policy, systems, and environmental (PSE) strategies can be used to address health disparities. She also shares practical guidance for using data to shape interventions and for building partnerships between community members and academic teams.

Building Sustainable Public Health Impact

Dr. Carroll-Scott's session highlights how PSE strategies can create public health impact that is rooted in community engagement and can be sustained over time. She argues that CBPR is important for building trust, making sure strategies are relevant to communities, and empowering residents to lead change. By combining data with community stories, public health efforts can shed light on and more effectively address health inequities. She also discusses the importance of building long-term partnerships between researchers and communities that prioritize shared power, promote collaboration, and are beneficial for all involved.

LEARNING OBJECTIVES

- Define PSE change strategies in the context of public health.
- Explain the role of community engagement and CBPR in addressing social determinants of health.
- Identify best practices for building equitable and sustainable partnerships between communities and academic teams.

Key Terms



Community-based participatory research (CBPR): A collaborative research method that equitably involves all actors impacted by the research in all phases of the research project



Policy, systems, and environment (PSE) approach: An effort to create lasting improvements in individual and community health by changing rules or laws (policy); structures or networks that influence how services are delivered or resources are allocated (systems); and physical, social, or economic environments to drive behavior and culture change at a macro level



Authentic community engagement: A participatory approach in which people and organizations in communities are not merely involved but truly empowered as experts and decision makers

Understanding PSE Approaches

PSE strategies aim to shift the structural conditions—not just the individual behaviors—that impact population health. These strategies are most effective when they are shaped by the community’s priorities and local data. Community engagement must be a starting point, not an afterthought. PSE strategies focus on:

- **Policy:** Formal rules or laws, such as calorie labeling mandates or recess requirements.
- **Systems:** Organizational practices, like linking hospitals and community health workers or doing social needs screenings during doctor visits.
- **Environmental:** Physical or social changes that support health, such as green spaces, food access initiatives, or safety improvements.

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Community-Based Participatory Research (CBPR): A Pathway to Trust

CBPR involves community members as equal partners in research. This approach helps make sure interventions are specific to the community, trusted by community members, and able to be sustained over time.

- Dr. Carroll-Scott outlines several guiding principles for CBPR: mutual respect, shared decision-making, capacity-building, and a long-term commitment to relationship-building.
- She shares real-world examples from her work in Southwest Philadelphia, where community members were engaged in data collection, analysis, and interpretation.
- Rather than stop at data collection, the process led to action, such as helping get grant funding for community-led health promotion initiatives and youth advocacy projects.
- CBPR also involves continually reflecting and responding as priorities shift or new needs emerge is another important part of CBPR.

Using Data and Community Stories to Advance Equity

Disparities are often hard to see when looking at standard public health data. By disaggregating data, i.e., separating data by race, ethnicity, age, language, or geography, researchers can highlight these differences in health outcomes and the structural inequities that drive them. Dr. Carroll-Scott discusses how data can empower communities to lead their own health improvements, using the following examples from her work in Philadelphia.

- **Quantitative data** showed the breadth of the problem, highlighting patterns in chronic disease rates, access to physical activity spaces, or food insecurity.

- **Qualitative data** offered depth, giving voice to lived experiences through storytelling, interviews, and focus groups with residents, youth, and community leaders.
- **Mixed methods** provided a richer understanding of the numbers and the systems behind them (e.g., redlining, gentrification, systemic underfunding of schools).
- This evidence base helped researchers develop **targeted, place-based interventions**, ranging from youth wellness councils to neighborhood revitalization plans.

Sustaining Community-Academic Partnerships

True partnerships extend beyond single projects and are built on equity, transparency, and accountability. Dr. Carroll-Scott models how public health professionals can support, rather than direct, community-driven change.

- Dr. Carroll-Scott describes **academic teams as guests** in community spaces and discusses the importance of showing up with humility, listening, and learning alongside community members.
- One key to long-term trust-building is to help community members see **the benefits of their involvement**, such as resources, recognition, or results.
- Academic teams must reflect on and address **power dynamics**. This includes who controls funding, decides what topics are researched, owns the data once it is collected, and receives credit for outcomes.
- **Capacity-building**—or training residents and youth to collect data, analyze results, or present findings—is important for sustainability.

Reflection Questions

1. How can public health practitioners help make sure that PSE strategies are truly community-driven?
2. What are the challenges and opportunities in using CBPR in underserved communities?
3. How can disaggregated data—or data that is separated by race, ethnicity, age, language, or geography—help public health practitioners make better, more equity-focused decisions?

Dive Deeper: Additional Readings and Resources

Community Information Exchange (CIE). CIE San Diego [Internet]. San Diego (CA): CIE San Diego; [cited 2025 May 8]. Available from: <https://ciesandiego.org/>

Compass for Community. **Compass for Community** [Internet]. [place unknown]: [publisher unknown]; [cited 2025 May 8]. Available from: <https://www.compassforcommunity.com/>

Drexel University School of Education. **West Philadelphia Promise Neighborhood** [Internet]. Philadelphia (PA): Drexel University; [cited 2025 May 8]. Available from: <https://drexel.edu/soe/resources/community/outreach/west-philadelphia-promise-neighborhood/>

Hennessy E, Economos CD, Hammond RA; **SUS Systems Map Team and the COMPACT Team.** **Integrating complex systems methods to advance obesity prevention intervention research.** Health Educ Behav. 2020 Apr;47(2):213-223.

Huang TT, Callahan EA, Haines ER, et al. **Leveraging systems science and design thinking to advance implementation science: Moving toward a solution-oriented paradigm.** Front Public Health. 2024 May 15;12:1368050

Kania J, Kramer M, Senge P. **The water of systems change** [Internet]. FSG; 2018. [cited 2024 Nov 11]. Available from: https://www.fsg.org/wp-content/uploads/2021/08/The-Water-of-SystemsChange_rc.pdf

Kelly Jr, T. **Five simple rules for evaluating complex community initiatives.** Community Investments. 2010; 22(1): 19-36.

Kumanyika S. **Getting to equity in obesity prevention: A new framework.** NAM Perspectives. 2017 Jan 18.

Lennox L, Maher L, Reed J. **Navigating the sustainability landscape: A systematic review of sustainability approaches in healthcare.** Implement Sci. 2018 Feb 9;13(1):27.

Moreland-Russell S, Jost E, Gannon J. **A conceptual model for building program sustainability in public health settings: Learning from the implementation of the program sustainability action planning model and training curricula.** Front Health Serv. 2023 Mar 29;3:1026484.

National Neighborhood Indicators Partnership. National Neighborhood Indicators Partnership [Internet]. Washington (DC): Urban Institute; [cited 2025 May 8]. Available from: <https://www.neighborhoodindicators.org>