

# Evaluating a Population Health Approach to Addressing Social Determinants in the Community

## Statement of Problem

Social determinants of health (SDOH), such as food insecurity and unstable housing, can lead to disparities in health outcomes, preventable use of health care services and increased health care costs. A growing body of research, including some of our own here at PolicyLab, suggests that screening to address SDOH within health care settings is a feasible endeavor and can lead to increased overall quality of care. There's also emerging research that if health systems and community organizations work together to implement interventions, it can lead to fewer emergency department visits and improved health outcomes.

Despite evidence suggesting that social needs critically impact patients' capacity to manage their and their child's health conditions, very few large-scale, collaborative interventions exist that utilize the health care system to connect families to community support services. For those interventions that do exist, we lack evaluations that can help us understand their true impact and inform improvements so all patients can receive care to meet their basic living needs.

## Description

Through this project with Intermountain Healthcare, Camden Coalition, and the Perelman School of Medicine at University of Pennsylvania, we evaluated a Utah-based population-level intervention that aimed to improve health outcomes and reduce health care utilization costs by aligning social services and care delivery for patients with high social and medical need. This intervention included screening patients for SDOH needs, connecting patients with community health workers and care teams, and facilitating collaboration between community organizations. Our mixed-methods approach to evaluate Intermountain Healthcare's efforts will illustrate how health outcomes and health care utilization are impacted by providing social need resources and supporting patient navigation of the health care system.

We learned from patients about their experiences with the intervention, including SDOH screening, the community health worker program and community resource referrals. Interviewing patients helped us to better understand the impact of the intervention on their medical and social needs as well important feedback for improving the intervention. We also interviewed health care and community organization stakeholders about their implementation strategies and experiences, allowing us to better understand common barriers and facilitators to successful implementation.

In order to evaluate the intervention's effect on patient-level outcomes such as health care service utilization and costs, we worked with Intermountain Healthcare to conduct a comparative-effectiveness trial within the communities that received the intervention. Our project examined how screening patients for SDOH needs and connecting patients with community health workers and/or care management impacted their health care utilization and costs.

We also sought to examine relationships among community organizations serving patients with high social and medical need as well as relationships between community organizations and health care organizations. We conducted a social network analysis to understand the dynamics of and changes in the network of health care and social care services in the communities receiving the intervention.

Finally, we sought to understand how policies and policy change could impact the sustainability of such efforts. PolicyLab, in collaboration with Intermountain Healthcare, Gardner Policy Institute, and Leavitt Partners, worked to better understand the policy landscape and best practices for developing and implementing funding for the intervention, focusing on community health worker program sustainability. We conducted interviews with state and federal policymakers and developed an analysis of Utah state policies and practices.

## **Next Steps**

Throughout our evaluation, we developed recommendations for improving the effectiveness of screening for SDOH and connecting patients to community support services through Intermountain Healthcare's intervention. We continue to work to disseminate our research findings and recommendations for policy approaches to strategically targeted audiences who can support efforts to integrate SDOH interventions into clinical practice and finance them with existing state and federal programs.

Ultimately, through this evaluation and partnership, we hope to identify how health care systems can best connect patients to community services that address their social needs. In doing so, our goal is to generate first-of-its-kind knowledge about this kind of large-scale health system intervention in order to create sustainable mechanisms to improve the health outcomes of children and adults by addressing SDOH.

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## **Suggested Citation**

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## **PolicyLab Leads**

**Doug Strane**  
**MPH**

**Research Scientist**

Doug Strane (he/him) is a research scientist at PolicyLab at Children's Hospital of Philadelphia (CHOP). Mr. Strane is experienced in mixed methods program evaluation and analysis of administrative data for

observational study designs related to child and family health. His research interests include the ways in which health systems can address social determinants of health; the changing health insurance landscape for families; and the intersection of parenting and substance use disorder. He also serves as the senior evaluation manager at CHOP's Center for Health Equity.

Mr. Strane received his Master of Public Health in Epidemiology from University of Michigan School of Public Health. He is a former Centers for Disease Control and Prevention Public Health Associate Program fellow.



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## Team

### **Meredith Matone** **DrPH, MHS**

#### **Director**

Dr. Matone's research interests include maternal and young child health, as well as family well-being. She focuses on building community and public agency research partnerships to support improvements in policies and programs that serve mothers and infants in under-resourced communities. She is experienced in large-scale program evaluation, mixed-methods research designs, and use of administrative data for observational study designs in areas of child and caregiver health.

Dr. Matone is a senior fellow at the University of Pennsylvania's Leonard Davis Institute of Health Economics, a faculty affiliate at The Field Center, and a board member of the Pennsylvania Association for the Education of Youth Children. Dr. Matone received her Doctor of Public Health, specializing in child and adolescent health and development, from Johns Hopkins Bloomberg School of Public Health. She is an alumnus of the Doris Duke Fellowship for the Promotion of Child Well-being program and a former Stoneleigh Foundation fellow.



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# **Kathleen Noonan**

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### **Co-founder**

Kathleen Noonan, JD, was a founding co-director and senior legal advisor at PolicyLab. She currently serves as the chief executive officer of the Camden Coalition, a coalition committed to elevating the health of patients facing the most complex medical and social challenges. The Camden Coalition and PolicyLab collaborate on a number of projects.

In her tenure at Children's Hospital of Philadelphia, Ms. Noonan also served as associate vice president of Board Relations. She was core faculty in the University of Pennsylvania Masters of Public Health Program, and was adjunct faculty in the Division of Pediatrics at the School of Medicine. At PolicyLab, Ms. Noonan's legal and policy analyses focused on a broad range of children's health, public health and social welfare issues. She also served as a mediator and neutral advisor in public-impact class action lawsuits concerning pediatric health and human services.

Prior to her tenure at PolicyLab, Ms. Noonan had been a clinical associate professor at the University of Wisconsin Law School, where she taught health law, and started and directed a Government Law Clinic; and a senior associate and engagement manager with Casey Strategic Consulting, the consulting arm of the Annie E. Casey Foundation. Earlier in her career, she practiced law at the Boston firm of Hill & Barlow; served as a law clerk to United States District Judge Morris E. Lasker; and worked in public policy positions in New York City with the Citizens' Committee for Children of New York, Inc., and Bank Street College of Education.

Ms. Noonan received her JD from Northeastern University School of Law, and her BA from Barnard College, Columbia University.



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# **Peter Cronholm**

## **MD, MSCE, CAQHPM, FAAFP**

### **Faculty Scholar**

Peter Cronholm is a faculty scholar at PolicyLab at Children's Hospital of Philadelphia and an associate professor, director of Community Programs and associate program director in the Department of Family Medicine and Community Health at the Perelman School of Medicine at the University of Pennsylvania. His

research interests have focused on health services regarding: 1) integration of trauma-informed care and primary prevention strategies into systems of primary care; and 2) developing novel mixed methodologies and patient-centered outcomes into research paradigms. He is an affiliate faculty member in the Graduate Program in Public Health Studies, a senior fellow in the Center for Public Health Initiatives, a senior scholar at the Leonard Davis Institute of Health Economics, an associate of the Firearm and Injury Center at Penn, an associate of the Philadelphia Collaborative Violence Prevention Center, and an affiliate of the Evelyn Jacobs Ortner-Unity Program in Family Violence at the University of Pennsylvania School of Social Policy & Practice.

Dr. Cronholm is the co-director of the University of Pennsylvania's Mixed Methods Research Lab (a University of Pennsylvania Service Center that supports investigators in the development of conceptual and methodological approaches for community-based and clinical research questions) and has content expertise in program evaluation of health services using mixed methodologies and Community-Based Participatory Research techniques. He is actively involved in community programs addressing health disparities with a focus on preventing and reducing the impact of trauma throughout the lifespan having served as a member of the Board of Directors for the Academy on Violence and Abuse, Institute for Safe Families, the Men's Resource Center, Women Organized Against Rape, and Prevention Point Philadelphia. Dr. Cronholm is an active member of the Philadelphia Adverse Childhood Experiences (ACEs) Task Force's research committee as Lutheran Settlement House's Research Advisory Board. He has collaborated closely with PolicyLab in developing programming related to early home visitation, child injury and maltreatment and building qualitative and implementation science methodologies into research strategies.



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## **Katherine Kellom**

### **Administrative Manager**

Katherine Kellom (she/they) is an administrative manager at PolicyLab and the director of the Qualitative Research Core at Children's Hospital of Philadelphia. She has worked at nationally top-ranked institutions with teams comprised of experts in their fields conducting qualitative, mixed and multi-method research for more than ten years. Beginning as a research assistant at the University of Pennsylvania's Mixed Methods Research Lab, Katherine currently serves across a variety of project teams to provide conceptual and technical support for clinical and community-based research projects. She has extensive knowledge and valuable practical experience applying qualitative research methodologies with a focus on integrating key stakeholder perspectives and goals into research designs.

Katherine leads and advises project teams using qualitative methods to achieve research aims on projects ranging from small pilots to state-wide, mixed-methods evaluations. Katherine is an expert in facilitation techniques and in the use of the qualitative data analysis tool, NVivo; she provides training in both areas. As director of the Qualitative Research Core, Katherine manages and supports staff members and qualitative team members in the Core and at PolicyLab, ensuring skillset development and access to the resources needed to

contribute high-quality work to various project teams.

Katherine received her Bachelor of Arts degree from Bryn Mawr College in 2009, majoring in psychology.



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## **Katie Wu**

### **MPH**

#### **Clinical Research Project Manager**

Katie Wu (she/her) is a clinical research project manager at PolicyLab and the Qualitative Research Core at Children's Hospital of Philadelphia. In this role, she works on qualitative and quantitative projects across many content areas with a particular interest in social determinants of health and maternal child health programs. She is passionate about applying high-quality and trauma-informed qualitative methodology to center patient, family and community voices.

Ms. Wu has qualitative expertise in program implementation and evaluation, semi-structured interviewing, and qualitative data analysis. She has experience training students and teams in qualitative data analysis methods and software. Her recent qualitative work includes a multi-method evaluation of a Utah-based social needs screening and community health worker program and a multi-method evaluation of a therapy model aiming to improve parent-child attachment for parents in substance use disorder treatment.

Ms. Wu also has experience working on population-based quantitative projects at PolicyLab, including a project examining trends in psychotropic medication prescribing to children enrolled in Medicaid. She received her bachelor's degree in biology and her Master of Public Health from the University of Pennsylvania.



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## **Xianqun Luan**

### **MS**

## Research Scientist

Xianqun Luan is a research scientist at PolicyLab at Children's Hospital of Philadelphia (CHOP). His work focuses on data engineering and statistical methods for utilizing medical and billing data in public health policy research, cost-effectiveness analysis, clinical quality improvement and clinical performance.

Xianqun has held several positions at CHOP since 2001, including biostatistician, clinical research data analysis unit technical director and clinical improvement group technical director. He is currently working in an observational research unit with Dr. Jing Huang to cooperate with PolicyLab's research team. More specifically, he is working within several research areas, including data integration and data engineering, creating algorithms for analysis cohort, statistical methods for the observational study, and time-series analysis. His research goal is to apply practical analysis approaches to assess performance and outcome with accountable data and a valid population.



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## Funders of Project

Intermountain Healthcare Foundation

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## Related Tools & Publications

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[Association of Social Determinants With Children's Hospitals' Preventable Readmissions Performance Article](#)

Apr 2016

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[Food for Thought: A Randomized Trial of Food Insecurity Screening in the Emergency Department Article](#)

Jan 2019

- [Making the Business Case for Managing Social Complexity in Pediatrics Webinars](#)

Jan 2019

#### Related Projects

[Managing the Health of Children with Asthma from the Hospital to the Community](#)  
[Population Health Sciences](#)

[The COACH Model: A Care Management Intervention to Engage and Empower Patients](#)  
[Population Health Sciences](#)