

DHEPlab Research Description and Opportunities for Collaboration

Digital Health Economics and Policy Lab
UNC Gillings School of Global Public Health
PIs: Sean Sylvia, PhD and Tara Templin, PhD

We study how people make health decisions and how digital tools, incentives, and information can improve care. Our work combines health economics, behavioral science, and computational methods, with an emphasis on practical interventions and rigorous evaluation. We welcome clinical, community, technical, and research partners.

Main areas of work

Clinical decisions and clinician learning. How do clinicians use information, learn from experience, and respond to AI advice? We study clinical reasoning, confidence, feedback, and the design of decision support and training.

Patient preferences and personalized care. How can services respond to what patients and families need and value? We study preference elicitation, demand for care, and the tailoring of prevention and family support.

Collective intelligence and health systems. How can health systems use knowledge distributed across clinicians and communities? We study expert judgment, information aggregation, incentives, and digital workflows in resource-constrained settings.



Expertise and methods

- **Experimental design and causal inference.** Randomized evaluations, causal analysis, and variation in intervention effects.
- **Behavioral and computational methods.** Preference elicitation, expert judgment, causal machine learning, and adaptive interventions.
- **Implementation research.** Mixed methods, usability, and evaluation of workflow fit in clinical and community settings.

Selected projects

Healthy Future 2.0

We study how AI-informed recommendations and family preferences can help prioritize maternal and child health home-visit content in rural China. [CareLoom](#) is our open-source platform for scheduling visits and delivering curricula.

Collaborators: Stanford University • University of Nevada, Reno

AIM AHEAD and AugMed

[AugMed](#) is a platform for running clinical case-review experiments. Our AIM-AHEAD colorectal cancer risk-assessment study examines how AI recommendations affect clinicians' judgments, screening recommendations, confidence, and attention to patient information.

Research team: UNC–Chapel Hill | Support: AIM-AHEAD

Selected projects continued

Local clinical knowledge for AI

With Gillings Innovation Lab support, we study how structured feedback from clinicians can improve AI-generated cases. Daktari-DX is the interface clinicians use to review those cases and contribute local clinical knowledge.

Collaborators: CFK Africa

Collective intelligence for curbside consultation

Our NIH NIMHD-funded Phase I STTR project develops and evaluates asynchronous peer consultation for rural clinicians. The research examines rapid skill assessment, selection of relevant reviewers, and aggregation of independent judgments, alongside feasibility and workflow fit. Clinical effectiveness remains to be established.

Collaborators: CollectiveGood · UNC–Chapel Hill

Patient preferences and diabetes prevention

With Humana Foundation support, we study how patient preferences can inform text-message nudges for Diabetes Prevention Program participation. Formative research and preference-survey development are guiding preparation for a feasibility pilot.

Collaborators: UNC Health · El Centro Hispano

Clinician training in Ethiopia

Our developing research agenda examines how case-based practice, feedback, and information presentation affect clinicians' reasoning, confidence calibration, and learning. It is intended to inform CollectiveGood's Ethiopia training effort and future evaluations with local partners.

Ethiopia effort partners: CollectiveGood · Adwa Partners · Ethiopian Ministry of Health

Information Markets for community health

We study whether incentives and market mechanisms can aggregate local observations into useful public health information. A published Ghana pilot examined the feasibility and acceptability of collective intelligence–based COVID-19 surveillance. The broader agenda concerns how to elicit, combine, and evaluate community knowledge. [Read the Ghana study](#)

Collaborators: University of Ghana · UNC Institute for Global Health and Infectious Diseases

Emerging direction in AI for academic work

We are exploring how AI can support literature review, study design, analysis, writing, and teaching while preserving researchers' understanding and judgment. This emerging agenda focuses on traceable sources, reproducible workflows, visible analytical choices, and evaluation of how assistance changes both the work and the skills of its users.

Collaborate with us

We welcome joint studies, methods collaborations, and partnerships that connect a concrete care-delivery problem with an intervention and a credible evaluation.

Sean Sylvia also co-founded CollectiveGood, a separate company developing clinician review and evidence tools for clinical AI evaluation. The lab's collaborations include the peer-consultation research described above. collectivegood.io

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