

*The NNE-CTR is an NIH-funded partnership led by co-Principal Investigators **Dr. Gary Stein (University of Vermont)** and Dr. Clifford Rosen, (MaineHealth), advancing clinical and translational investigation throughout northern New England. We are a network of researchers, clinicians, and community partners across Vermont, New Hampshire and Maine dedicated to achieving health equity through innovative, regionally-relevant research. Collaboration with other IDeA programs is a program priority.*

Northern New England Clinical & Translational Research Network

Impact of the NNE-CTR, FY22-23

The NNE-CTR provides infrastructure and capabilities to rectify limitations in access to education and resources for the prevention, early detection, treatment and survivorship of chronic diseases that include cancer, cardiovascular disease, obesity, diabetes and musculoskeletal disorders. Addiction and mental health in rural, northern New England settings have been and continue to be NNE-CTR responsibilities. Our expertise will continue to reinforce pursuit of strategic, evidence-based initiatives that are responsive to social, behavioral, structural and policy factors which are sources of rural, community-specific barriers. The NNE-CTR programs are supported by six Cores that provide integrative support and services to NNE-CTR scientists and physician investigators.

Since its inception, the NNE-CTR has actively supported several successful NIH program applications, including three COBRES, an NCI program project grant, an infrastructure grant for a new Center for Biomedical Shared Resources, and an HRSA grant to build on the unique hub-and-spoke model for opioid treatment support pioneered in Vermont. Five successful new investigator R01s were awarded and the CTR has funded 40 research projects, including 7 COVID-19 pilots and 19 technology projects to support patient care.

Importantly, the NNE-CTR partners with the Gund Institute, creating a Joint Catalyst Award to fund a 2-year pilot project grant focused on our shared interests in sustainability and health care northern New England and its impact on disparities encountered by rural populations. This past year, the NNE-CTR secured 2 major investments in data science. We continue our support and partnership with the Northern New England Cooperative Practice and Community Based Research Network and 3 of our Core Leaders serve on its governing board. We just awarded the NNE CoOp PCBRN its first pilot project. Collaboration with the Vermont Department of Health leverages community engagement.

Investigators across the region are supported by our pilot projects program. To date, 88% of pilot investigators who received pilot funding in years 1-5 have secured external funding totaling over 19 million dollars. This research has led to over 184 publications with over 800 co-authors/contributors and 135+ presentations at regional, national and international seminars and conferences. These projects have contributed to the development of new clinical databases, telemedicine services, emergency medical services protocols, and cancer screening tools.

In Vermont, medical students actively participate in our public health projects, including multiple surveys and focus groups to determine rural attitudes, best practices and best means of communications to foster health equity in our region.

Program Overview

The NNE-CTR is the academic home for clinical and translational science that is dedicated to serving all residents of northern New England, engaging clinical, community, public health and regional stakeholders in development and conduct of research relevant to our community needs. Health equity and rectifying health and health care disparities are priorities. We support research design, biostatistics, epidemiology, program development and metrics and evaluation. The significant capabilities of the NNE-CTR Community Engagement & Outreach Core are key contributors to development, implementation and sustained effectiveness of ongoing and evolving initiatives, and bi-directional communication in rural communities to maximize availability of resources to support unique limitations of rural healthcare.

Our partnerships throughout the northern New England region are what make our group so dynamic. Her in Vermont, some of our partners include:

- Vermont Department of Health
- Vermont Biomedical Research Network
- NNE CoOp PCBRN
- UVM Health Network
- UVM Center for Biomedical Innovation
- UVM Cancer Center
- UVM Center for Aging
- UVM Leahy Center for Rural Studies
- UVM LCOM Health Services Center
- Area Health Education Centers Program
- The American Cancer Society
- The Gund Institute for Environment

NORTHERN NEW ENGLAND CLINICAL & TRANSLATIONAL RESEARCH NETWORK
Health Equity through Innovative Research

UVM LCOM Dept. of BioChemistry| Given C401| Burlington, VT
(802)656-6613 | nne-ctr@med.uvm.edu| URL : https://www.med.uvm.edu/nne-ctr/home

Success Stories



NNE-CTR members are well positioned to respond to the needs of our communities. As the Covid-19 Pandemic receded, our focus turned to restoring the momentum in health care in Vermont. Our Community Engagement & Outreach Core has established a rural communications network and Community Engagement Councils through which bidirectional conversations about the needs of our communities are held. Our Professional Development Core has been selected to pilot a national ISCORE Clinical Training Program utilizing the curriculum we developed for clinicians here at the Larner College of Medicine. And our dedication to data science has never been more evident, as we laid the groundwork for successful funding for several NIH initiatives that have started in Year 7 of our grant renewal.

With our communities in mind, this past year's pilot projects addressed existing and emerging health care concerns in a myriad of subject areas. James Stafford (UVM) was funded for a project studying the ***consequences of prenatal opioid exposure on the epigenome and behavior throughout the lifespan***; and Connie VanEeghan (UVM) was funded for a project on ***Opioid Prescribing Patterns and Analysis of Secular Trends***. David Kaminsky (UVM) was funded for a project on the ***feasibility of home monitoring of lung function and symptoms in patients with COPD exposed to wood smoke at home***; Emily Belarmino (UVM) studied the ***heterogeneity in nutrition in rural and nonrural areas of northern New England***, and Seth Frietz (UVM) focused on ***the characterization of CDK12 as a breast cancer therapeutic target***.

Funding generated by NNE-CTR investigators FY22-23

Program/Grant Name	Type / Institution	FY	Cong District	Amount
IDeA Co-Funding Northern New England Clinical & Translational Research Network (NNE-CTR) Year 6 (PI: Gary Stein, #U54 GM115516	University of Vermont Dept of BioChemistry	2023	VT	$1,609,442
IDeA Co-Funding National COVID Cohort Collaborative (N3C) Year 3 (PI: Gary Stein, #AWD00001185	University of Vermont Dept of BioChemistry	2023	VT	$69,317
NIH/NCI U01RADX Award: Evidence Based Interventions to Address (PI: Jan Carney, #AWD00000884)	University of Vermont Dept of Medicine	2023	VT	$1,228,640
NNE-CTR Pilot Project: Opioid Prescribing Patterns & Analysis of Secular Trends (PI: Constance VanEeghan, AWD#00001236)	University of Vermont Dept. of General Internal Medicine	2023	VT	$77,463
NNE-CTR Pilot Project: Heterogeneity in Nutrition in Rural and Non-Rural Areas of northern New England (PI: Emily Belarmino, AWD#00001381)	University of Vermont College of Agriculture & Life Sciences	2023	VT	$36,654
NNE-CTR Pilot Project: (PI: Seth Frietz, AWD#00001380)	University of Vermont Dept. of Biomedical & Health Sciences	2023	VT	$62,400
NNE-CTR Pilot Project: Consequences of Prenatal Opioid Exposure on the Epigenome and Behavior Throughout the Lifespan (PI: James Stafford, Project or Award #)	University of Vermont Dept. of Neurological Sciences	2023	VT	$77,800
NNE-CTR Pilot Project: Feasibility of Home Monitoring of Lung Function and Symptoms in Patients with COPD Exposed to Wood Smoke at Home (PI: David Kaminsky, AWD#00000922)	University of Vermont Dept. of Pulmonary Medicine	2023	VT	$64,267
NNE-CTR Pilot Project: The Role of Cytosolic FGF2 in Treating Lung Cancer (PI: Rachael Oldinski, #AWD00000964)	University of Vermont Dept. of Mechanical Engineering	2023	VT	$77,800
			Total Funds	**$3,303,783**