



Health Equity through Innovative Research

June 2023 Edition

The *Northern New England Clinical & Translational Research Network (NNE-CTR)* provides a foundation for research impacting the health and healthcare of our unique region. Our team offers financial and research-related resources for investigators and community members who share our vision of eliminating health disparities and inequities in northern New England. From pilot project funding to professional development to research development expertise, we serve as a bridge connecting researchers, clinicians, and interested community members with the resources they need to successfully pursue meaningful and impactful clinical, translational, and community health projects.



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Our Pilot Project Program has opened a call for **Letters of Intent** to apply for our next round of research proposals. Be sure to visit our website to learn more about eligibility requirements, the timeline for submission, and research topics for funding opportunities at the NNE-CTR.

The NNE-CTR Mission

The Northern New England Clinical and Translational Research Network (NNE-CTR) is committed to health equity in communities, with a focus on rurality. Through collaborations with an expanding network engaging our academic institutions, health care organizations, and local community stakeholders, we leverage innovative strategies and technologies to address health and health care challenges. We transform research & health infrastructures to meet the needs of our region.



Administrative Core



Restoring Momentum in Northern New England Health and Healthcare

Throughout the COVID-19 pandemic, our NNE-CTR consistently provided strategic support for northern New England health and healthcare. Evidence based approaches were developed to maximize COVID-19 testing. Programs were established and operationalized to reduce vaccination hesitancy. And, Northern New England Clinical and Translational Research investigators were principal participants as well as leaders in multicenter treatment programs that were responsive to the urgent needs of New Englanders.

As we emerge from the pandemic, our Northern New England Clinical and Translational Research teams have pivoted to innovative roadmaps for addressing the persistent, COVID-related complications, and treatment related challenges encountered by COVID-19 infection. Here, multidisciplinary, and interinstitutional partnerships are more important than ever for development of blueprints that will restore the pre-pandemic momentum for prevention, early detection, treatment, and survivorship of chronic diseases including cancer, musculoskeletal disease, cardiovascular disease, diabetes, and metabolic disorders. We are committed to accelerating resolution for the addiction and mental health crises that have been exacerbated by the pandemic.

Reflecting expertise and infrastructure capabilities of the Northern New England Clinical and Translational Research Network has been instrumental in expansion of programs the emphasize community engagement. These partnerships will be instrumental in moving beyond the COVID-19 pandemic and will be reinforced by the National Institute of General Medical Sciences investment in data science, including resources to facilitate applications of Electronic Health Record data for clinical research that will advance clinical care. Combined with advances in genomic and epigenomic analyses, the Northern New England Clinical and Translational Research Network is poised to effectively capture the rapid developments in genomic medicine.

Gary & Cliff





Collaborations Lead to Funding Projects: Consider Submitting a Letter of Intent for our next Round of Pilot Projects

One of the most successful aspects of the NNE-CTR is the research funding we provide through our Pilot Project Program. Pilot Projects should be designed to be conducted over a one-year duration, produce publishable results and provide preliminary data for an external grant application. We encourage proposals that involve collaborations between IDeA-state investigators at the lead institutions (MH, UVM) and/or partnering institutions/programs (examples include University of Southern Maine, University of New England, Dartmouth, the NNE CO-OP PCBRN or other institutions in IDeA states in the region. We encourage collaborations between basic/translational scientists and clinical investigators, and between population health scientists and community practitioners.

Awards will support projects that have a highly significant impact through innovative approaches that can ultimately improve health care for at-risk populations. Such pilots could include development of novel monitoring systems, and novel assays or interventions that could impact patient awareness or health needs. Preclinical and clinical translational proposals that are aligned with the mission of the NNE-CTR are welcome. NNE-CTR encourages pilot studies addressing questions related to:

- Addiction Medicine Cancer (lung, prostate, breast, and others)
- Cardiovascular Disease (including disease affected by obesity and diabetes) •
- Chronic Diseases
- COVID-19 Impacts
- Health Equity and Health Care Disparities
- Research that addresses health care issues relevant to rural communities and our vulnerable populations.

To qualify for an NNE-CTR Pilot Project Research Award, you must meet the following criteria:

- Project will take place in and consist of partners from IDeA states (e.g., Vermont, Maine, New Hampshire). No funds from the NNE-CTR can be spent in a non-IDeA state. You may collaborate with investigators at an institution in a non-IDeA state if no grant funds are being expended there. Thus, non-IDeA state partners cannot be included in the budget and would need other sources of funding. Each collaborating institution receiving NNE-CTR funds must be incorporated in an IDeA state; branches or sites of an institution whose parent organization is NOT in the IDeA state are not eligible to serve as a site for a pilot project.
- At least one member of the team must hold a faculty or affiliation appointment at MH, UVM, or USM. Junior faculty are encouraged to apply with input from an experienced mentor.
- Project must be translational or clinical in nature; basic research projects are not eligible unless they are the research is clearly related to the diagnosis, prognosis, or targeting of disease

- The Pilot Project Lead must hold a faculty level (or equivalent) appointment at their home institution. For purposes of the Pilot Project Program, this means that the Pilot Project Lead must be eligible to apply for independent funding at their home institution.
- For experienced faculty with established research extending into clinical and translational investigation with a community-based physician, the research must be distinct from their currently funded projects.
- For community-based physicians to be eligible for Pilot Project research awards, they must have an affiliation, appointment or a collaborating partner or academic researcher from either UVM or MH.
- The Project Lead and principal members of the study team must be members of the NNE-CTR.

Please visit our website to learn more about eligibility and the timeline for submission. We encourage you to reach out to our Pilot Project Core Leads, Rob Koza and Janet Stein, to discuss any questions you may have in further detail.

ABBREVIATED TIMELINE FOR Pilot Project APPLICATION PROCESS

- **6/30 - Call for Proposals sent**
- **7/14 - General Information Session on Application Process**
- **8/01 - Letters of Intent deadline**
- **9/01 - Acceptance notification/invitation to submit full app**
- **9/29 - Q&A Workshop for applicants on budget and other forms**
- **11/01 - Full application submission deadline**
- **2/26/24 - Funding Decisions are Announced**
- **7/01/24 - Intended Project Start Date**

The Gund Institute and the Northern New England Clinical and Translational Research Network (NNE-CTR) **Joint Catalyst Award** **Call for Letters of Intent** Due August 1, 2023

The Gund Institute for the Environment and the Northern New England Clinical and Translational Research Network (NNE-CTR) are joining forces to offer a \$100,000, two-year award for research at the intersection of rural health and the natural environment. This collaboration is aimed at better understanding how environmental concerns relate to human health. The Gund Institute and the Northern New England Clinical and Translational Research Network (NNE-CTR) are the co-conveners of this **Joint Catalyst Award**.

The [Gund Institute for Environment](#) at the [University of Vermont](#) is a research center dedicated to understanding and tackling the world's most critical environmental challenges. Driven by the belief that research should inspire action, the Institute takes a cross-sector approach to solving environmental issues with stakeholders from government, business, and broader society.

The [NNE-CTR](#) is a regional consortium composed of partners at the UVM Larner College of Medicine, the MaineHealth Institute for Research, and the University of Southern Maine. The NNE-CTR is funded by the National Institute of General Medical Science (NIGMS); The NNE-CTR seeks to enhance the health of people in northern New England by fostering and coordinating clinical, translational and educational research activities that are focused on rural health across the region.

The Gund Institute's Catalyst Awards support research and scholarship that spans disciplines and addresses critical environmental and sustainability issues. The NNE-CTR funds pilot research awards that target rural health disparities in northern New England. This special **Joint Catalyst Award** will support a team of investigators to build a collaborative program with the promise to grow and attract external support or recognition. Successful programs must focus on rural health and the natural environment and will combine cutting-edge research and scholarship with real-world engagement and impact.

The first step in the process is to submit a **Letter of Intent**. We will review your letter of intent to ensure your proposed project meets our eligibility and programmatic criteria. If you are invited to submit a full proposal, we stand ready to provide you with guidance and support in developing your application. During the course of developing your LOI, please feel free to contact us for assistance in identifying collaborators to reinforce your initiative, and for assistance in developing your concept. To get started, please contact: [Sheila Clifford-Bova, Administrative Program Manager](#), NNE-CTR.

We appreciate your interest in this collaborative funding opportunity, and look forward to supporting the development of your proposal.

Meredith Niles, PhD
Acting Director
The Gund Institute

Gary Stein, PhD
Co-Principal Investigator
Northern New England Clinical
& Translational Research Network

Home is Where the Hearth Is (and Possibly Indoor Air Pollution)



*An interview with Dr. David Kaminsky, M.D.
Professor of Medicine, Pulmonary and Critical Care Medicine
University of Vermont Larner College of Medicine*

It started with an NNE-CTR flyer, and now Dr. David Kaminsky of the University of Vermont Health Network is in the latter stages of studying the effect of woodstoves on people with chronic obstructive pulmonary disease, or COPD.

In his day job, Kaminsky sees patients as a critical care and pulmonary care physician and also teaches at the Larner College of Medicine. But he's long been interested in the systems approach to human pulmonary care. Enter the NNE-CTR. That flyer for a speaker presentation brought David into the digital room with a group of people interested in indoor air quality. Kaminsky ended up applying for (and winning) a research grant from the NNE-CTR to study pollutant levels of homes with woodstoves and the lung function of COPD patients living there. What follows are excerpts from my interview with David about his project. The transcript has been edited for length and clarity.

Matt: Let's start really with the basics. What got you interested in this?

David: Well, first of all, as a pulmonologist, my interest is in physiology. How the lung works. When it comes to air pollution, that's sort of a natural interest of mine as well. I'm kind of curious and interested in sort of the biochemical nature of pollutants and how they interact with the lung. I was attending an NNE-CTR seminar about, wow, maybe two years ago now. And it was mentioned that indoor air pollution was a general interest of the group and that there was a primary care provider up near St. Albans who, in particular, was wondering about whether her patients with COPD were having any indoor air exposure to particulates from their woodstoves. When I heard that, I got very excited because that's again of natural interest to me. So I ended up looking into the possibility of putting together a study and then applied for the pilot grant through the NNE-CTR.

At roughly the same time an article was published in the Blue Journal, which is the American Thoracic Society flagship journal that was looking at the incidence of COPD in rural communities. And there was a

graph published and it showed the incidence in different rural communities around the country. But there were data missing from one area, which was northern New England. And it really struck me as, “Wow, why do we not have data from there?” One of the authors is a colleague of mine at Johns Hopkins and I contacted her and said, what's up with this? And she said, “Well, we just don't have data.

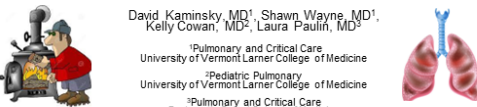
Matt: So, I imagine your life is very busy. How do you just say I want to do a study on top of this?

David: What you've just identified is one of the challenges of my existence, which is that I have lots of interests and I'm always coming up with crazy ideas. I've been very lucky to be at the University of Vermont Larner College of Medicine because it's been very supportive of physicians like me who have many different roles to play. So, you know, this idea comes along, and you do what you need to do.

Matt: What are you doing to gather data?

David: So my idea was to (see if I can) get a patient with COPD to take home a spirometrer--that's the name of the equipment to measure the lung function--during the winter when they're burning wood for fuel. At the same time, I'd be able to answer a number of questions. Number one is (and that's the main purpose of the study) feasibility. Can I actually get this to happen? The answer is yes, it's happening right now. Number two is we get some really interesting real-world data on how people are at home, not just in the artificial arena of the laboratory. And then three, we would be able to see if there's any correlation between indoor air pollution, in particular particulates, which is what we're measuring, and their lung function that particular day. I'm hoping at the end of this study I can use the data to depict a graph that shows in the morning when they light their woodstove, the particulates rise, maybe their lung function dips a little bit and then it comes back and so forth.

Feasibility of Home Monitoring in Patients with COPD Exposed to Wood Smoke

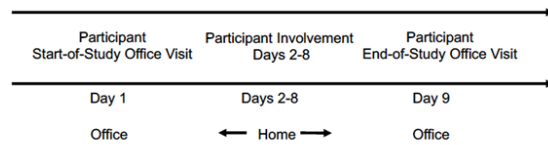


David Kaminsky, MD¹, Shawn Wayne, MD¹, Kelly Cowan, MD², Laura Paulin, MD³

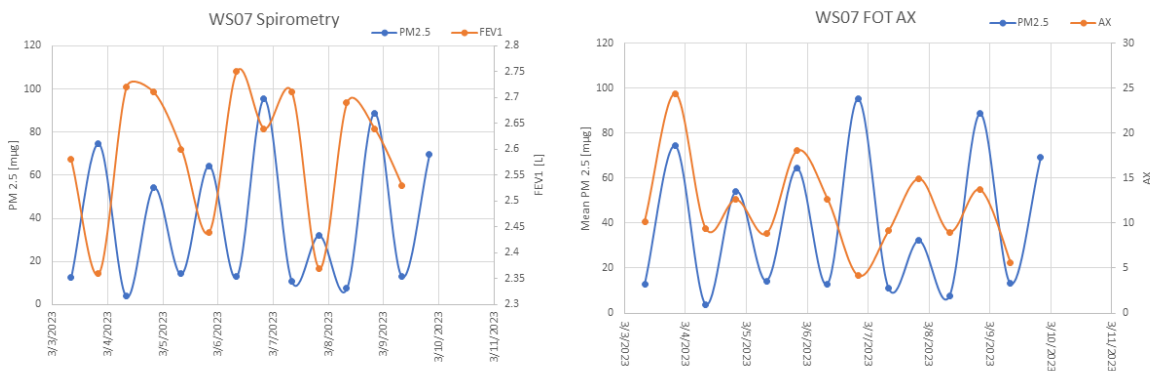
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University of Vermont Larner College of Medicine

²Pediatric Pulmonary
University of Vermont Larner College of Medicine

³Pulmonary and Critical Care
Dartmouth Geisel School of Medicine



Tracking of Daily PM2.5 and Lung Function (FEV1, left; FOT AX, right):



Matt: What's your big picture? If we move out to the 5,000-foot level, do you have anything that you'd say about either indoor air quality or to woodstove owners in particular?

David: Well, you know, the big message that I'm hoping to achieve from this study and where it leads is that if you have chronic lung disease, you need be that much more vigilant about indoor air quality.

We know once the lungs are damaged, they are susceptible to further damage. You know, most people get COPD from smoking cigarettes. Whatever's left after they've quit smoking, we want to preserve that as much as possible. And the last thing I'd hate to see is that something that we are unaware of, which is to say particulates in the air, maybe from just keeping their house warm in winter, could be further hurting their lungs. So that to me would be the public health side of this or the big, you know, 10,000-foot messages raising awareness of indoor air pollution. Once we have all the data analyzed, we'll send [all the study participants] a brief one-page summary of, "Here's what your particle levels were and here is what your lung function was and what it might mean."

Matt: That's really the public health side of it. I love to hear that. Do you have anything else to say I haven't asked about?

David: Yeah, I'll just mention, by the way, one other aspect. I love teaching, so I do have one of our fellows engaged in this project. Shawn Wayne is a current second year fellow. This is his research project. I wrote the grant and so forth, but he's taken a lot of the initiative to make phone calls, set up the appointments with patients. He'll present the findings at various research meetings. The goal is for him to have an abstract at our national meeting, which will be for this study. It will be in May of '24. If he goes into practice, this might be the end of his research experience. But if he doesn't, who knows? Maybe this will launch him into his own research career, depending on what his interests are. So, this serves as another whole layer of purpose here, too.

Being a Member of the NNE-CTR means having all the tools of our region at your fingertips.



Simply speaking, we connect people with the tools and funding needed to make a difference in the health of our communities. Our members form a wide network of scientists, clinicians, community leaders, public health officials, patients, and more who are dedicated to advancing health equity. If you have any ideas, goals, or even questions on health research in Maine, Vermont, or New Hampshire, this is the place for you. Our network is free to join, free to access, and free to engage. We look forward to learning with you and improving the health of our communities together!

Join the NNE-CTR Membership Today! [Click Here.](#)

Addressing Pain in the Midst of the Opioid Crisis



**An interview with Dr. Aurora Quaye, MD, MHIR
Attending Anesthesiologist for Spectrum Healthcare Partners,
and member of the Acute Pain and Regional Anesthesia Service at MaineHealth**

When we go under the knife, we put our expectations about pain in the hands of anesthesiologists. And freedom from pain is increasingly being referred to as a universal right by both practitioners and medical ethicists. This goal is difficult enough as it is, with reports indicating that a large majority of postoperative patients suffer from unacceptable levels of pain. Now imagine the challenge with patients who have a history of opioid use.

Dr. Aurora Quaye is a practicing anesthesiologist at Spectrum Healthcare Partners, which serves hospitals throughout Maine. She is also a faculty scientist at the Center for Interdisciplinary Population and Health Research at the Maine Health network and an assistant professor in anesthesiology at the Tufts University School of Medicine.

Dr. Quay is also a 2022 recipient of an NNE-CTR pilot project grant to learn more about the effect of buprenorphine (a formulation of which is known by its brand name Suboxone) on pain control during medical procedures and opioid use afterward. Buprenorphine is used to treat opioid use disorder. Amid an opioid epidemic, many patients facing surgery and other painful procedures show up for these procedures with a pain killer already in their systems, which can lead to concerns about pain control. Quay's research is about determining how best to manage patient pain during and after the procedure, with the goal of minimizing both pain and the risk of opioid abuse in the days and months afterward.

Following are excerpts from an interview with Aurora about her project. The transcript has been edited for length and clarity.

Matt: What drew you to this work?

Aurora: What we're trying to do is identify the best way to manage pain in patients where pain control is very difficult to manage in general. Inherently. So really figure out the best way to manage pain and opioid-tolerant patients and to also identify the best way to manage the medications that they used to treat their abuse disorder perioperatively. I really enjoy answering questions and I think that there are a lot of things that we can research in terms of anesthesia in order to be able to improve patient care.

Matt: How did you hear of the pilot project funding that's available through the NNE-CTR?

Aurora: I heard about the funding from my mentor, Dr. Dave Waters, who was the chair of the department at the time, and I was doing a lot of work on trying to understand the best ways to manage Suboxone specifically [with] patients who come in for surgery. About five years ago, the majority of providers nationwide pretty much were recommended to stop the medication in order to be able to treat. When patients came in [for] painful procedures, there was a concern that medication [used to treat opioid addiction] potentially could block the effects of the drugs that we use to treat pain.

Matt: Tell me about your results.

Aurora: Buprenorphine discontinuation leads to worsened outcomes! It's surprising that our collective practice was to discontinue buprenorphine for so long. Before I joined the staff back in 2019, the [Maine Medical Center] policy was to discontinue buprenorphine for all surgeries, even ones with minimal pain anticipated. When buprenorphine is discontinued, providers have to prescribe medications like oxycodone or Dilaudid to prevent withdrawal and these medications have high abuse potential.

Matt: Where do you see your research ultimately going? What would be a grand slam?

Aurora: Identifying a way to collaborate with more institutions and getting more data would be amazing. I think that, given the fact that as anesthesiologist, we are connected to so many different types of specialties, it will be a great way to be able to answer questions that are beneficial to like specialties across the board. I don't necessarily see myself focusing mainly on opioid use disorder and Suboxone. We're answering the question quite nicely, right? We've evolved from stopping the medication to continuing it and now we've come up with, you know, whether it's continued at full dose or low dose ... so maybe we're close to answering that question specifically.

Matt: Can you see yourself working with the NNE-CTR to get there, to partner on funding?

Aurora: I would love that and I would love to identify what my next options are for sure. Cliff (Rosen) has been wonderful in terms of being able to see where the potentials are in terms of being able to continue my research, so, yeah, I'd love to collaborate if possible.

MEET MATT DUGAN, NNE-CTR Communications Specialist



Hi, it's nice to meet you!

My name is Matt Dugan and I'm happy to have recently joined the NNE-CTR because it fits a lot of what I've done in my career. I look forward to the wide-ranging communications opportunities available to our CTR, from grants to research to telling our story to stakeholders.

Here's a bit about my background:

Since I started my career as a journalist (ahem, many years ago), my main interest has always been to use communication to create a better world. And so, I look forward to bringing the news of NNE-CTR-sponsored research to a broad audience. (If you're a researcher up to something cool, please let me know; I'd love to talk with you).

I've always had a particular interest in the idea of translating science and complex concepts for lay audiences. During my time owning a communications company (30 years!), I learned the critical importance of being able to explain what you do to the people who hold the purse strings. And at my previous position as a University of Vermont lecturer (six years in CALS in the Community Development and Applied Economics department), I worked with students on the "So, what?" of their writing, as in, "OK, now tell me why this matters to someone."

And, speaking of my former business, teaching career, and the work the NNE-CTR does, I'm also a researcher and public health communicator with a long history in working with persuasion science and evidence-based communication concepts to create and evaluate media campaigns. So, if I can supply a social-science aspect to your work, be in touch!

Since getting here, I've been deep into developing a grant proposal to raise HPV vaccination rates in northern New England. The proposal involves all my favorite areas—persuasion science, media, and public health programming.

And building on this last piece, here's something you don't hear too often: I like editing! And so I look forward to helping researchers edit their work for publication.

No matter what your field of expertise, research is an endlessly creative endeavor, spawning new ideas, new relationships, new collaborations, and new directions. True to my expectations, my first NNE-CTR newsletter has been a lot of fun. I very much enjoyed meeting and chatting with Aurora Quay and David Kaminsky (see their stories here), partly because of that whole save-the-world thing I mentioned above. I think you'll find their work extremely interesting, and it may even lift your spirits.

This is an organization that helps fertilize the seeds of research—seeds that grow into plants with the potential of one day launching new seeds of their own. And all for the good of the health of our neighbors here in northern New England and beyond.

I look forward to using this newsletter and other media outlets as well to tell people about the exciting, vital work going on at our CTR. Please contact me with your stories or if you'd like to brainstorm communication solutions. I look forward to meeting and collaborating with you (and saving the world, of course).

Did You Know?????

What is N3C?

N3C is a completely web-based platform (website) that gives users access to harmonized clinical data from hundreds of different health care organizations across the nation. See this [public dashboard](#) for a list of contributing sites and other information about the data in the N3C data enclave. What makes N3C particularly advanced is that it harmonizes all the different electronic health record data formats into one so that they can be analyzed together. Before N3C, health record data were almost always analyzed separately based on institution because of differences in software and formats.



Getting started

N3C Data is accessible to all investigators at the University of Vermont and at MaineHealth. For more information, and to get started working in N3C, contact **Jonathan Emery** at Jonathan.F.Emery@uvm.edu or **Kim Murray** at Kimberly.Murray@mainehealth.org.