



# NORTHERN NEW ENGLAND CLINICAL & TRANSLATIONAL RESEARCH NETWORK

*Health Equity through Innovative Research*

*In this issue, NNE-CTR co-PIs Cliff & Gary wanted to look back on highlights of the past 5 years & look forward to the future.*

## Looking Back, Looking Forward

### What makes the NNE-CTR unique?

*"I think the two, Vermont and Maine, are more closely linked than any of the other CTRs. Everything is done together." - Cliff*

*"We really take discovery and it leads to implementation. And we've had broad-based engagement of all the people who can contribute to addressing the CTR mission." - Gary*

### How does the CTR benefit its members?

*"The CTR provides resources that are incredibly important in terms of being able to carry out the types of initiatives our members do, whether it's public health, translational, laboratory-based, behavioral, or data science." - Gary*

*"We are bringing young investigators into a more accelerated grant-specific career pathway. There's this pilot spawning of career development that leads them into larger research projects." - Cliff*

### What is something exciting coming to the CTR?

*"We're recruiting more senior mentors. We have a lot of young investigators who are sitting on the sideline, and now we can increase the supports for them to lead to advanced career trajectories or more successful pilot projects that are directly impacting communities." - Cliff*

*"The Rural Health Communications Network is big. It's the concept that if you are going to be able to make a difference in rural northern New England, you need to know how do people listen in each area? Who do they listen to? And how do we listen to them to be able to understand their needs and how we can have a meaningful relationship with each community?" - Gary*



Dr. Clifford Rosen, MD



Dr. Gary Stein, PhD

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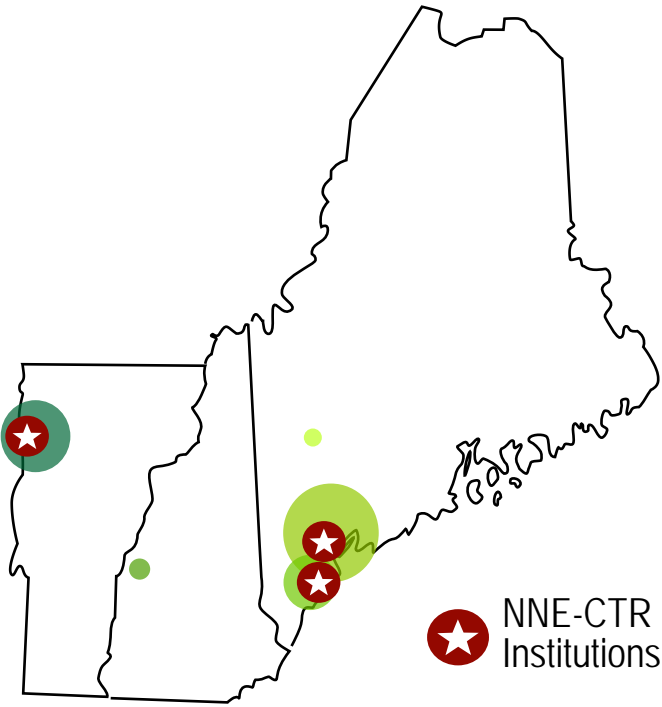
Thank you!!

**QUARTERLY  
NEWSLETTER  
DEC 2021**

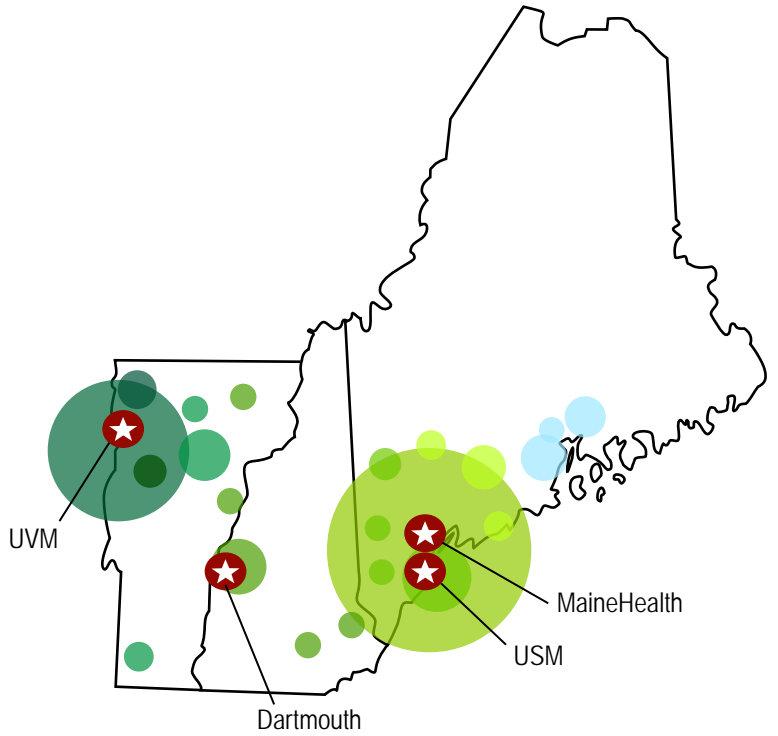
# Our Network, Then & Now

A geographical look at the NNE-CTR's growth and membership in our early years

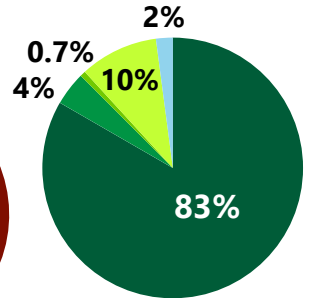
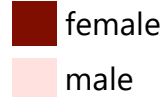
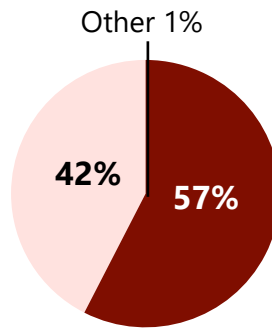
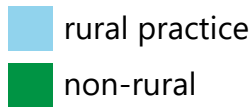
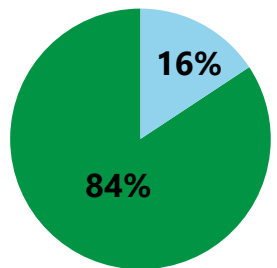
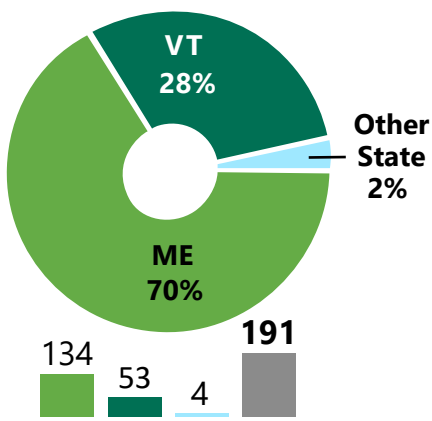
## Year 1



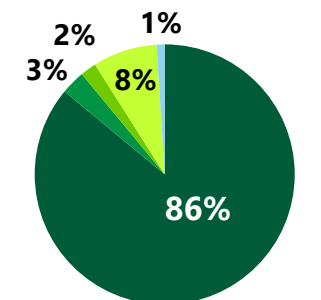
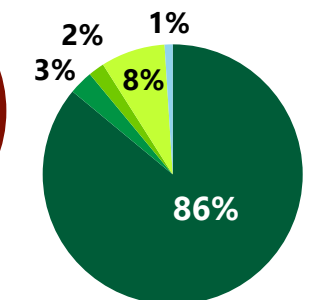
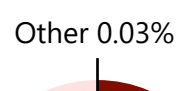
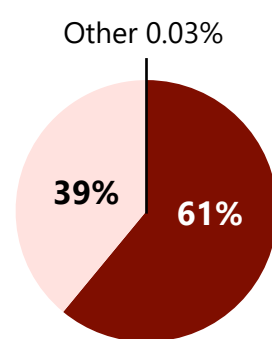
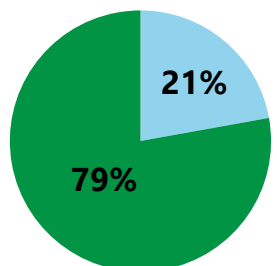
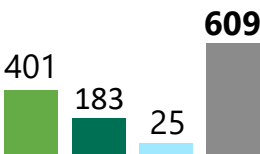
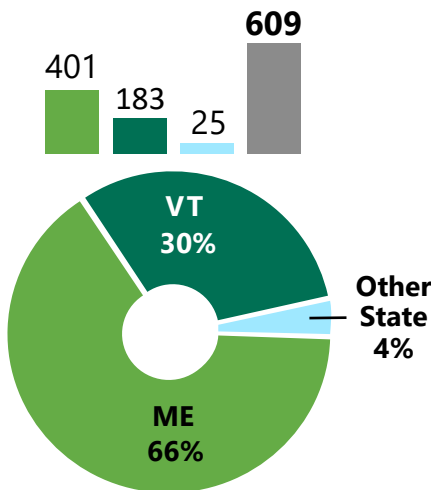
## Current



## Year 1 Membership



## Current Membership



## How Pre-Pandemic Cancer Telegenetics Foreshadowed What Physicians are Learning Now About Telemedicine

In 2018, telemedicine was not at the forefront in medicine for many, but some knew that for our rural communities, it could make a world of difference. Drs. Susan Miesfeldt of Maine Medical Center/MaineHealth and Nan Solomons of the University of New England assessed whether cancer genetic services were equally effective via telehealth consults as in-person appointments from the patient's point of view. Their resulting publication, "Examination of the Patient-Focused Impact of Cancer Telegenetics Among a Rural Population: Comparison with Traditional In-Person Services," highlighted both the need and benefits of telemedicine for remote patients far before the pandemic came into play.

*"We realized we were not reaching many of our rural cancer families."  
- Dr. Susan Miesfeldt*

Sue says rural patients face barriers to accessing the cancer genetic services her team provides at Maine Medical Center (MMC). *"In our rural communities, there are the barriers of geographic distance, often needing to get the whole day off work to travel a long way, paying a babysitter for the day, or asking a family member to take a day off to watch kids. There is a lot more that rural patients have to deal with to get to appointments."* To increase access to this critical care for rural cancer patients, through seed funding from the Maine Cancer Foundation, they leveraged telecommunication where a local regional health center would connect patients with their specialists at MMC. Technological support was provided by regional clinic staff so remote patient appointments could run as smoothly as possible, letting patients focus on their own personal questions.



**Dr. Susan Miesfeldt, MD**  
Maine Medical Center,  
MaineHealth



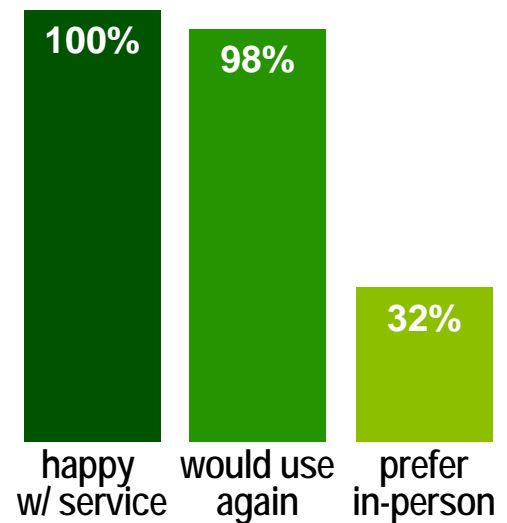
**Dr. Nan Solomons, PhD**  
University of  
New England

Nan and Sue found that 100% of remote patients were happy with their telegenetic services, and 98% said they'd use telemedicine again. *"The most important thing was the finding that satisfaction of our telecommunication patients was so high, and that a small proportion said they'd prefer to have an appointment in person,"* says Nan. They also found that patient knowledge was equal among remote and in-person patients, echoing other reports that telehealth can be an effective option for medical care. Telegenetic counseling also reduced anxiety and depression in remote patients similar to what was reported by in-person patients. These findings established telemedicine as an effective option for rural cancer genetic patients, but telehealth services aren't as simple as many might think.

*"This work really foreshadowed what we're seeing now in COVID. It gave us the framework of what needs to be done for telehealth to be effective, and it's a lot." - Dr. Nan Solomons*

**Manuscript Coauthors:**  
Amanda Lamb  
Dr. Frances Lucas  
Eileen McDonald

In their study, remote patients still traveled to a regional center where staff would provide technological support needed to connect patients with their cancer genetic providers. With the COVID-19 pandemic, even this type of telemedicine was impacted. *“We were forced to take that leap, and now almost all of our cancer genetic counseling patients are in zoom telehealth appointments from their homes or other sites, including, on occasion, their cars or work sites,”* says Sue. However, we don’t yet know whether these fully remote appointments are as effective as in-person or regional remote care provided pre-pandemic. We first have to consider how much work is needed to provide effective teleservices.



*“We need someone collecting records, interfacing with patients, patients learning about zoom, doing test calls. ... There’s a lot of preparation and a lot of human capacity needed to make sure this connection can work.” - Dr. Nan Solomons*

When asked how we can better ensure telehealth services are adequately supporting patients, Nan and Sue emphasized what physicians need to make this happen. First, they need more training on how to run an exam or engage with patients without being in the room. Beyond that, Sue says they need administrative and technology support, and sites need careful data collection and funding to support the demands of telemedicine. *“One of the pieces we needed to build our telehealth program was seed grant funding. This isn’t something that just happens, something that providers can do on their own. We learned that the infrastructure has to be carefully developed first. This can’t be left to physicians alone.”* Indeed, when Sue and Nan were developing their study, it took time to find outreach sites prepared to use telemedicine. Telehealth was newer in 2018, and providers knew how much extra support and resources would be needed to ensure it was effective. Then from the patient perspective, there’s also the issue of technology.

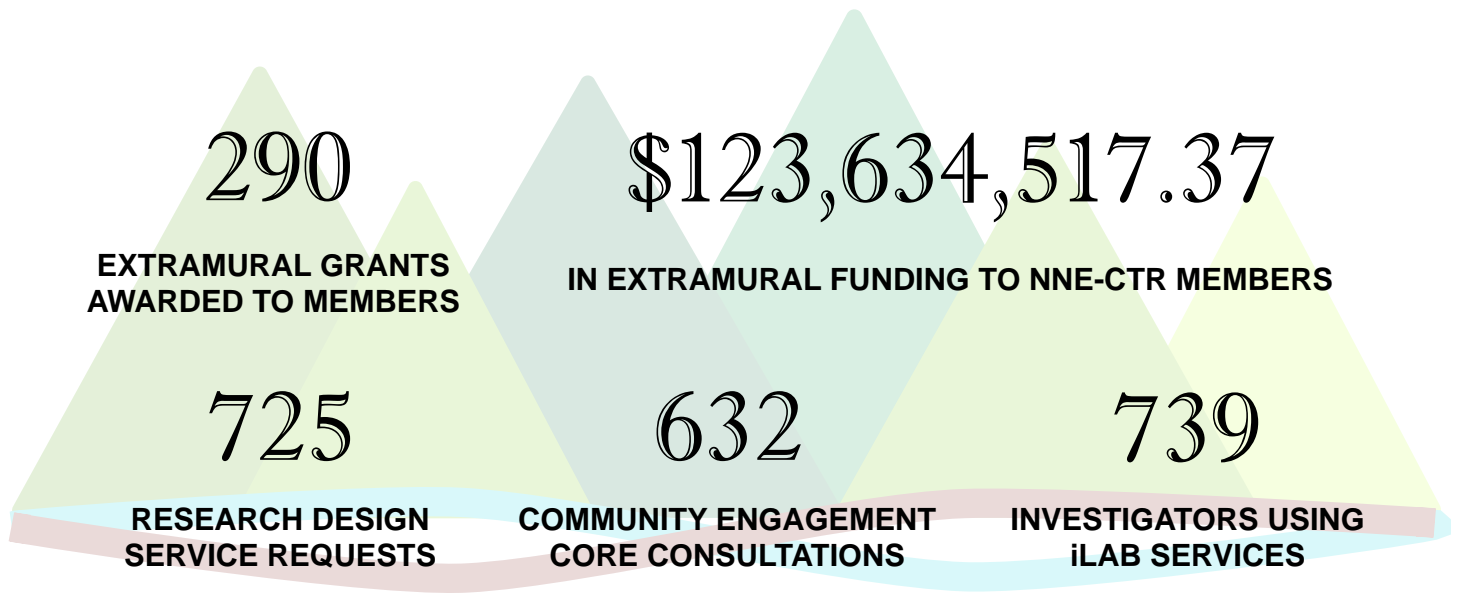
*“What we’re finding now is that the patient experience is almost always dependent on the tech and not the actual care.”  
- Dr. Nan Solomons*

In our predominantly rural region, where the majority of homes do not have the bandwidth to support multiple devices at once, this is a significant barrier. The COVID-19 pandemic has indeed highlighted the many challenges and problems with telemedicine, but Nan and Sue know that if given the necessary time and resources, telehealth services can be an effective and satisfying option for remote patients.

## READ THE PAPER:

Solomons, NM, Lamb, AE, Lucas, FL, McDonald, EF, & Miesfeldt, S (2018). Examination of the Patient-Focused Impact of Cancer Telegenetics Among a Rural Population: Comparison with Traditional In-Person Services. *Telemedicine Journal and E-Health*, 24(2), 130–138.

# The CTR in Numbers

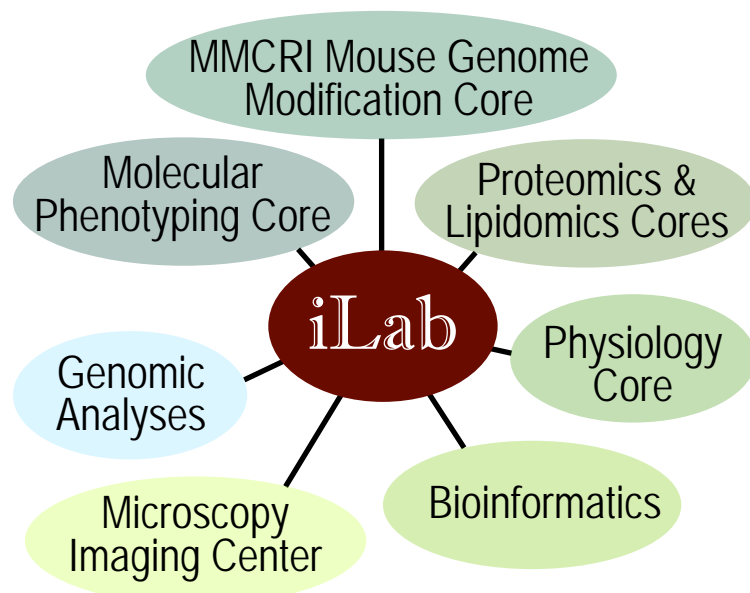


## What is iLab?

### Connecting Researchers to Services & Training

- iLab software connects investigators with cores at both the University of Vermont and Maine Medical Center.
- Through iLab, any investigator can submit requests for core services or for hands-on training using state-of-the-art technologies or analyses housed in any of the cores.
- iLab supports individualized tracking of services, trainings, consultations, and more so investigators can access all of their data, samples, and notes from each of the cores in one centralized location.

*“It’s the portal for investigators to use core facilities.”*  
- Dr. Douglas Taatjes



## Retention, Retention, Retention: How Consistent Treatment Improves Long-term Health Outcomes for Pregnant Persons with Opioid Use Disorder

Opioid use disorder (OUD) has been declared a public health crisis in the northern New England states for years, and one population requires particular care: pregnant patients. Drs. Katherine Ahrens of the University of Southern Maine and Marjorie Meyer of the University of Vermont recently published their paper, “Medication for Addiction Treatment and Postpartum Health Care Utilization Among Pregnant Persons with Opioid Use Disorder,” aimed at estimating the postpartum effects of treating persons during pregnancy for their OUD.

*“I was surprised to see that about 20-25% of women did not appear to be using medication for addiction treatment during pregnancy.” - Dr. Katherine Ahrens*

Indeed, in 2018, only about half of pregnant persons were receiving consistent treatment, while another quarter had inconsistent treatment. Increasing these numbers would be essential to supporting pregnant patients with OUD, as according to Katherine, “other evidence suggests medication for addiction treatment during pregnancy is the best option for treatment of OUD.” So what is medication for addiction treatment, and how does it help?

Medication for addiction treatment is the use of FDA-approved medications to treat addiction and has been particularly effective for the treatment of OUD. These medications are often used in combination with counseling or other behavioral therapy. Katherine and Marjorie found that pregnant patients consistently engaged in this type of treatment had lower rates of hospitalization or emergency department visits in their first year postpartum.

*“Medication for addiction treatment use during pregnancy, particularly consistent use, also appears to lower the risk of acute care encounters in the first year postpartum. This suggests that women using this treatment have fewer events requiring this level of emergency care, indicating more stable health.” - Dr. Katherine Ahrens*



**Dr. Katherine Ahrens, PhD**  
University of Southern Maine



**Dr. Marjorie Meyer, MD**  
University of Vermont

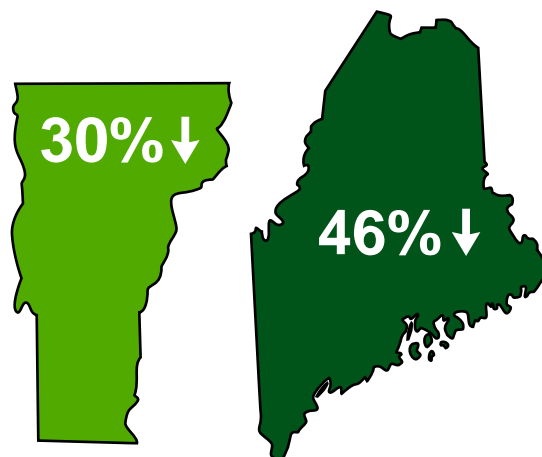
**Coauthors:**  
Dr. Carole McBride  
Dr. Alane O'Connor

*This spotlight is continued on the next page.*

In Maine, consistent use of this treatment was associated with up to 46% lower rates of emergency department visits, while there was a 30% decrease in rates for patients in Vermont. These findings highlight substantial and long-term health benefits for pregnant OUD patients.

However, clinicians are still struggling to engage these patients in consistent treatment programs. In addition to only approximately half of pregnant patients with OUD in Maine and Vermont consistently engaging in medication for addiction treatment, many end up leaving within the first year postpartum.

### Emergency Department Visit Rates with Consistent Treatment



*“They stay in treatment through pregnancy, so just treatment is not the issue. Do they choose to leave, or are the demands of treatment—counseling, visits, compliance—too challenging for new moms and we need to rethink that?” - Dr. Marjorie Meyer*

Beyond the demands of parenting, other factors may be influencing patients’ desire to remain in treatment. For example, over the course of this study, Vermont began to increase use of methadone in treatment as opposed to buprenorphine, while Maine did the opposite. Medication options and changes may influence whether an individual would want to partake in treatment, but researchers are still in the beginning of exploring the factors surrounding medication for addiction treatment during pregnancy.

*“I have a lot of questions I could not really pursue without these data outlining that there is an issue with retention after delivery and we have to look carefully at treatment programming and options.” - Dr. Marjorie Meyer*

Now, they have many new directions and projects to pursue. *“We have so much more information with both states here than either state alone,”* says Marjorie. Katherine also agrees that they are far from finished, and many more projects and initiatives are in the works. Katherine also highlighted that *“the skills I gained from the NNE-CTR pilot project have certainly helped me acquire funding and build my analytic abilities.”* The NNE-CTR provided financial support to collect and analyze the data reported in this paper and hopes to continue supporting research addressing addiction and maternal health in our region, with Katherine and Marjorie’s work as one integral piece of this larger goal.

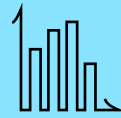
### READ THE PAPER:

Ahrens, KA, McBride, CA, O'Connor, A, & Meyer, MC (2021). Medication for Addiction Treatment and Postpartum HealthCare Utilization Among Pregnant Persons With Opioid Use Disorder. *Journal of Addiction Medicine*.

# Looking Forward

## *Who is the NNE-CTR?*

Professional  
Development



Tracking &  
Evaluation

Biostatistics,  
Epidemiology,  
& Research  
Design



*Health Equity  
through  
Innovative Research*



Pilot Project  
Program

Community  
Engagement  
& Outreach



Translational  
Research  
Technologies

## *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.

### *Collaborative Research*

- Expanding pilot project opportunities while prioritizing multi-institutional teams
- Promoting rural & community participation by leveraging Rural Navigators and Community Engagement Councils
- Strengthening relationships with our partners by sharing state-of-the-art technologies

### *Regional Health Equity*

- Building a bi-directional communication network to meet rural communities via their preferred local channels
- Ongoing evaluation of trends in regional health needs & delivery post-covid
- Evaluating NNE-CTR projects to ensure our healthcare solutions represent the diversity of our populations

### *National Impact*

- Engaging with NIH & IDeA network initiatives, such as N3C, RECOVER, & RADx-Up
- Supporting national clinical trials, such as ACTIV-6, through our community health networks
- Developing and sharing innovative clinical tools to meet local, national, & international health needs



# Membership Corner

*Because we value our members, we've enhanced our services to better meet your needs. Each newsletter issue will highlight some of these new services, so be sure to check in.*

**Want to become a member or update your status?**

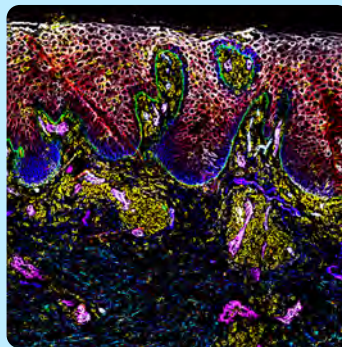
Join from our webpage: <http://www.med.uvm.edu/nne-ctr/home>



## Sharing New Technologies: CODEX

*CODEX Multispectral Imaging*

- Identify & visualize up to 40 proteins in cell & tissue sections
- Capture the representation & localization of many proteins
- Identify determinants of phenotype, biology, & pathology
- Coming soon: NanoString spatial transcriptomic technology for robust spatial omics analysis



## Expanding Pilot Project Opportunities



- Pilot Research Awards:** supporting pilot research projects
- Rural Physician Awards:** supporting rural clinicians who want to engage in research
- Small Public Health Awards:** supporting regional public health initiatives
- Translational Development Initiatives:** supporting hands-on tech & analysis training
- Review Request Awards:** supporting extramural grant preparation

## Upcoming Events

### Virtual Seminar Series

- Feb 4:** *The Changing Landscape of Telehealth for Health Consultants*
- Mar 4:** *Trends in Translational Research Technologies*
- April 2:** *COVID Testing Advances & Breakthroughs*
- May 6:** *Social Determinants of Rural Health Initiatives Relative to Community Engagement*
- TBD:** *Tri-State Cancer Plan Updates*

## A Thank You

*Reflecting on 2021, we are immensely appreciative of your contributions to the effectiveness of our network in strategically responding to challenges of northern New England health and healthcare.*

*We look forward to a new year with opportunities for collaboratively expanding initiatives that will reduce the regional burden of acute and chronic disease.*

*We very much hope that the holidays will be enjoyable and rewarding.*

**Gary & Cliff**

