NORTHERN NEW ENGLAND
CLINICAL & TRANSLATIONAL
RESEARCH NETWORK

Health Equity through Innovative Research

Learning from Communities

A message from the PIs: Community engagement – bidirectional dialog with members of our communities – is not an option, but a responsibility and necessity for our CTR to understand and address the local challenges of health and healthcare. Community members help us develop effective communication strategies that align with unique regional preferences. Appreciating that a single approach for community engagement is not realistic, we have been developing Pilot Projects that utilize local preferences for communication to provide a decisive difference in effectiveness at making acute and chronic life-threatening diseases preventable and treatable. Success stories include increased capabilities in addressing COVID, infant mortality, addiction, vaccination hesitancy, cardiovascular disease, stroke, and cancer, as well as treatment-related complications. We are poised to expand engagement with local initiatives to accelerate advances in the prevention, early detection, treatment, and survivorship with chronic diseases experienced by northern New Englanders. We are confident that our NNE-CTR commitment to community engagement will increase the effectiveness of health care providers, support the quality of life in underserved communities, and contribute to equity in health and healthcare across our region.

Dr. Clifford Rosen, MD

Dr. Gary Stein, PhD

IN THIS ISSUE:

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NNE-CTR Quarterly Newsletter

ACTIV-6

activ6study.org

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Can we find medications that can be easily given at home to treat people with COVID19? The NIH ACTIV-6 study aims to provide answers to help people feel better faster.

Find out more at https://activ6study.org

Rural Stroke Care: How EMS Changed Overnight

Emergency Medical Services in Vermont, Maine, and New Hampshire have joined forces to revolutionize how EMTs respond to stroke in the field. But to appreciate the significance of their work, we first must understand the history of stroke care.

"When I tell the story, I start with the true story," says Dr. Daniel Wolfson, Vermont State EMS Medical Director and emergency medicine physician at UVM Medical Center. *"When I was a kid, my grandfather had a stroke. It was one of the really bad strokes that left you pretty debilitated, and there was nothing you could do for it. Those folks got put in a hallway somewhere, eventually just put up in a bed in the hospital. There was really no treatment. Then they came out with tPA."*

TPA is a drug given intravenously that can help remove or dissolve blood clots, but it has to be administered within 3.5-4.5 hours after stroke onset for any chance of efficacy.

"So now there's this small little window of treatment when you could potentially use tPA and reverse stroke symptoms, but it was just so short. … Then they came out with thrombectomy, and now if you've missed that tPA window, you could go in and mechanically retrieve the clot."

Dr. Daniel Wolfson, MD
Vermont State EMS Medical Director
Emergency Medicine Physician
UVM Medical Center

Thrombectomies are highly effective surgical procedures where the clot is physically removed from the larger blood vessels in the brain, dramatically reversing symptoms in cases that would have previously been some of the most severe types of strokes. *"So there's some light at the end of the tunnel,"* Dan continues, *"but that used to only be good for up to six hours. But then, in 2018 when the New England Journal published a couple articles on extending thrombectomy to 24 hours, that was it."*

"That changed the landscape of stroke care, and the story is how EMS responded."

Dan says that with this new 24-hour window, the job of EMS had to change overnight. *"Before, we would call a stroke alert, and that would alert the hospital that we were bringing in a suspected stroke patient. And then we felt like our job from the EMS side of things, the pre-hospital setting, was done."* When the new guidelines came out, it became clear that identifying the severity of the stroke as soon as possible was critical, but there were two important considerations.

First, thrombectomies are only used when patients have passed that 3-4 hour deadline for tPA and have a high stroke severity score, meaning patients with less severe types of strokes wouldn't qualify for this procedure. *"There's no reason to divert to a stroke center if you can still get tPA nearby or if you're not going to qualify,"* Dan explained. *"It's much better to keep those patients closer to home."*

Second, only a handful of hospitals in the northern New England region offer thrombectomies, and with so many of our communities located in rural areas, that means patients were often unable to be transported to these few and far between centers in time. With this new 24-hour window, it was suddenly possible to make that happen. Taken together, it was clear that stroke severity needed to be measured early, and that means doing so in the field.

This spotlight is continued on the next page.

Rural Stroke Care: continued

To meet this new opportunity for better stroke care, Dan began a pilot project with the NNE-CTR aimed at testing whether an app could help rural EMTs effectively calculate the FAST-ED score, a score that measures the stroke's severity right there in the field. The JoinTriage app, developed by ALLM, Inc., takes information supplied by the responding EMT and calculates the FAST-ED stroke severity score, identifies the nearest medical center offering the treatment best suited for that individual patient, and provides the route from their location to that center. Dan and his team set out to educate every EMS agency in the state of Vermont in the use of the app and test whether the app's calculated score in the field matched the score calculated at the hospital. The hope was that through training rural EMS personnel in the use of this tool, they could provide more equitable stroke care even in our remote areas that experience geographical barriers to accessing treatment.

But they didn't stop there. Leveraging the resources provided by the NNE-CTR, Dan helped cultivate a team across Vermont, Maine, and New Hampshire that included all three State EMS Medical Directors, emergency physicians and neurologists at each thrombectomy-providing hospital, research technicians, and project managers. Together, they were able to add FAST-ED training to the official protocols for EMS education and procedures, and now all three states calculate the FAST-ED score in the field. Now, this large team is creating the first research consortium focused on a rural region, collecting data on the scores, response times, patient outcomes, and so much more to analyze exactly how they can provide the best care for stroke patients in all of our rural and urban communities.

"Northern New England, we're a pretty unique place," says Dan. *"We're largely rural and widespread. This was an amazing opportunity for us to collaborate with our other northern New England partners and do something like this. What we've set up, we hope will lead to research on other rural EMS questions. So. That's a pretty good story."*

Many thanks to the full NNE FAST-ED team:

Vermont:
Daniel Wolfson, MD
Miles Kittell, BS, EMT
Jenna Wydra, BSN, RN, SCRN
Christopher S. Commichau, MD
Samantha Schneider, BS, AEMT

New Hampshire:
Shannon L. Shannon, MSN, RN
Timothy G. Lukovits, MD
Thomas W. Trimarco, MD
Joey Scollan, DO
Shawna Malynowski, MBA, BSN, RN

Maine:
Jane G. Morris, MD
Kate Zimmerman, DO
Matt Sholl, MD
Ashley M. Levesque, MPH
Debra Wright
Deborah Gregoire, RN, MSN, CCRN-K, SCRN

RADx-UP: Bringing COVID Testing to Underserved Communities

Over the past two years, we've heard a lot about quarantines and vaccinations, but there's a critical aspect of the pandemic response that doesn't get its equal share of the spotlight: testing. To address this, the National Institutes of Health (NIH) launched the RADx program to support research that expands testing accessibility.

"Rapid response. That's what they [NIH] wanted; something fast regarding testing and any barriers to COVID testing." ~ Dr. Yvonne Jonk

Since its launch in 2020, around 100 RADx projects across the country have been funded, including the development of different types of COVID test kits. More recently, our NNE-CTR members have received funding through this program for multiple projects focused not only on effective testing protocols, but how to get tests to the underserved and vulnerable populations unique to our region. In this issue, we're spotlighting two of these projects.

Bringing Testing to Rural Communities

Drs. Adam Atherly of the University of Vermont and Yvonne Jonk of the University of Southern Maine were recently awarded RADx-UP funding to pursue their collaborative project on expanding testing access in our rural areas. *"What we're trying to do is understand barriers to testing,"* says Adam, *"and the real focus for RADx-UP is vulnerable communities. This is a RADx-UP project, and the 'UP' stands for 'underserved populations.'"*

Dr. Adam Atherly, PhD
University of Vermont

Dr. Yvonne Jonk, PhD
University of Southern Maine

Of course, serving these rural populations requires knowledge of the communities themselves, so the first step is to learn what the barriers people face really are. Collaborating closely with the state Departments of Health for both Maine and Vermont, Adam and Yvonne are forming a partnership with rural communities to work together to pinpoint these barriers.

"There might be some cultural differences between urban and rural areas in terms of where people get information about testing and how valid that information is. … We need to understand the perceptions of the efficacy and safety of getting tested, and then we need to know how accessible those tests are in rural areas. Typically, travel barriers are a big deal. Missing work to even get the test is also a big deal, and these are only a few examples." ~ Yvonne

Throughout the pandemic, Vermont and Maine have had different approaches to testing, and Adam and Yvonne plan to examine the two and see how these approaches influenced whether people got tested, as well as who was getting tested. With the barriers identified and these two systems to compare, they can then begin to identify exactly what policies need to change to expand testing accessibility for rural areas.

"We can think about individual level factors: my individual risk, income, insurance coverage. We can think about community level factors: whether people can take time off work, distance to testing locations, languages. Then we have the structural factors in terms of how the state is providing testing. So the question is how much of what's going on can we explain through those different levels? And which ones do we focus on to improve testing in the future?" ~ Adam

This spotlight is continued on the next page.

The next step, then, is to change testing procedures and assess whether these changes effectively address those barriers. Using testing and population data, Adam and Yvonne can statistically measure how much testing behavior changes by, say, moving testing centers closer or communicating testing messages via locally trusted sources. The final step is to make sure that policy or testing changes align with the needs of our rural communities.

***"You need to make sure the advice you're giving is something that's actually actionable by the people in their lives."* ~ Adam**

Of course, while northern New England is a predominantly rural region, rural communities are not our only underserved populations. To meet the needs of some of our vulnerable, urban groups, Dr. Kathleen Fairfield of MaineHealth was awarded RADx-UP funding for her project on providing testing to immigrant, low-income, and unhoused populations around Portland, Maine.

Bringing Testing to Underserved Urban Communities

Dr. Kathleen Fairfield, PhD
MaineHealth

"We have a diverse immigrant population from all over the world, and many of them are essential workers. They were out doing work during the early days of the pandemic. We have a large unhoused community, and we have people who access care through public health services like the Portland Community Free Clinic." ~ Kathleen

In order to identify the barriers immigrant and unhoused populations face with getting access to COVID testing, Kathleen and her team leveraged the expertise of community programs that were already providing important services for these specific groups. They set up interviews with people who worked for these programs, as well as with individuals from each of the populations of interest to pinpoint exactly what challenges they faced with regards to testing. *"One of the really fascinating things about this project is that the community partners are making a lot of key observations and sharing them with our research team,"* says Kathleen. *"They understood many of the reasons patients would be frightened or reluctant to get tested."* From these interviews, the study team was able to identify some of the major barriers and hesitations regarding testing so they could start coming up with solutions.

"Some of the immigrant populations have jobs without sick pay, so even if they had access to tests, they may not want to get tested because it means they would lose income. In the early days, testing included a deep nasal swab. That was very frightening to some people. And with most testing centers, people have to schedule online, and for unhoused or non-English speakers, that's very difficult." ~ Kathleen

There was also the question of what happens when you test positive? For many, that means losing work. It also could mean struggling to find safe housing for those with higher risk in their multi-generational homes. For the unhoused population, testing positive could mean being removed from the shelter which may be where all of their friends and supports are. After being removed from the shelter, individuals could go to a quarantine hotel but were unclear what that meant, so this also became frightening. *"In the beginning, it felt like they did not have a choice,"* Kathleen explains. *"They were brought there, and they didn't know they could leave or how it would impact access to services."*

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Kathleen and her team have conducted dozens of interviews and are running problem and solution workshops to begin addressing these identified barriers. It's at this stage where yet again, their community partnerships are helping the project thrive. Several low-barrier walk-up clinics are held each week in Portland, and other programs have already launched to provide equitable access to COVID testing. Kathleen says it's the community leaders who are helping to make this happen.

"We set up these walk-up clinics in places that are familiar, and having one of our community partners be there to assist the clinic and answer questions is really great. If a client is unhoused, they know [Partner] and they see [Partner], and they're less scared." **~ Kathleen**

Team at the first walk-up testing clinic. Hina Hashmi, research intern & UNE medical student; Swapnika Mallipeddi, research intern & incoming UNE medical student; Ambia Ahmed, MD, research associate

RADx® Underserved Populations (RADx-UP) is a consortium of more than 125 research projects studying COVID-19 testing patterns in communities across the United States and its territories as well as Tribal Nations.

RADx-UP represents a significant investment by the National Institutes of Health (NIH) to help speed innovation in the development and implementation of COVID-19 testing. Learn more about the RADx initiative here.

Connect With Us

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

Service: Rural Research Navigation

Rural Research Navigators support, facilitate, and encourage research that engages communities.

- Conduct community needs assessments
- Connect researchers, clinicians, & communities with shared interests
- Educate communities about clinical & translational research
- Educate researchers about community priorities
- Facilitate collaboration between communities & institutions

Click HERE to Check out our New Website!

- Access our membership benefits and sign-up form
- Connect with other researchers, clinicians, and community members in our region
- Explore our services & resources
- Get updates on career opportunities, funding announcements, and events
- Read the latest news or be spotlighted yourself!

Upcoming Events

Virtual Seminar Series

Apr 8: *COVID Impacts on Child Health Services*

Apr 22: *Cooperative Extensions: Meeting the Challenges of the Pandemic*

May 6: *Addressing Social Determinants of Health through Community-Engaged Research*

May 13: *Communication Strategies for Rural Health Equity & Vaccine Hesitancy*

May 27: *Telehealth Impacts on Health Care Delivery*

Jun 3: *RADx Impacts and Projects in Our Communities*

Jun 10: *Trends in Translational Research Technologies*

Have a seminar topic you'd like to see?

Email Sheila.Clifford-Bova@med.uvm.edu with your ideas!