NORTHERN NEW ENGLAND CLINICAL & TRANSLATIONAL RESEARCH NETWORK

Investing in Maine Research

The **Northern New England Clinical and Translational Research** (NNE-CTR) Network inspires great ideas to improve the health of people living in our region through innovative and actionable research. Our initiative is part of the NIH IDeA Clinical and Translational Research Program, and it offers resources and support to investigators who are committed to addressing critical health-related research on challenges faced by our population. The program provides:

- Individualized one-on-one research navigation support
- Mentorship for new and emerging researchers
- Career development programs and training
- Partnership opportunities to align with community needs and priorities
- Tools and expertise to support research

Maine Numbers

500+ Registrants engaged

100+ Researchers served or trained

200+ Research navigation services provided

25+ Pilot project awardees supported

Additionally, the NNE-CTR's Pilot Projects Program awards seed funding for innovative research projects. **For every $1 invested in Maine pilot awardees, researchers secured $26 in additional grant funding.** Following the completion of their pilot projects, principal investigators were awarded $12+ million to continue supporting their research. This demonstrates a strong return on investment.

Real World Impacts

Improved health outcomes and care delivery in rural areas

Preventing diabetes-related blindness through primary care screenings. Diabetic retinopathy is the leading cause of preventable blindness and many rural practices in Maine do not meet the federal benchmarks for screening. A rural primary care office in Maine sought to address this problem by piloting an Artificial Intelligence (AI) screening for digital retinopathy for their patients, resulting in a 39% **increase in screening rates**. The use of this technology also led to referrals with eye care specialists for those who had a positive screening, with a patient follow-up rate of 74%. The **use of this AI technology has been expanded across Maine,** and **24 additional primary care practices** now have access to these in-office screenings.

Improving care delivery for newborns with possible brain injury. Assessing the need for **immediate access to life-saving newborn treatment** known as therapeutic hypothermia (TH) is critical for infants born with signs and symptoms of brain injury. However, about 75% of the infants who need this therapy are born in community hospitals where on-site experts are not readily available. Researchers tested a **novel telemedicine consult approach** and they found that this model resulted in teleconsultations that occurred at a median of 98 minutes after birth, and nearly 5 hours earlier than newborn infants requiring transportation for expert assessment. This research demonstrated an effective, feasible, and **time-sensitive approach for triaging newborns** who may need timely access to specialized care.

Exploring differences in cardiac care outcomes. Understanding the **factors that impact cardiac arrest outcomes in rural areas** is important for patient health, treatment guidelines, and future interventions. Researchers found that patients with non-opioid related cardiac arrest had higher odds of surviving to hospital admission and are more likely to be in less rural areas. Efforts from the Post Cardiac Arrest Learning Community identified specific challenges for rural emergency departments, including low volume of post-cardiac arrest patients, delayed transfers, and infrastructure.

Real World Impacts

Expanding clinical guidelines and community programs

Recommendations to improve patient care. Maine has been particularly hard hit regarding the **number of patients with opioid use disorder** (OUD), yet there are **no consistent clinical practice guidelines** for treating perioperative patients with a history OUD. Researchers **conducted a study to identify ways to effectively treat** these patients when they are admitted to the hospital. For patients that are on medication assisted treatment for OUD, it is especially important that hospital practices do not destabilize their regimens.

Supporting access to community programs. Maine has seen an **increase in injection drug use (IDU)-associated infections**. However, there has been a lack of research documenting the utilization of **overdose and infection prevention community programs.** Researchers conducted a study among patients with IDU-associated infections to learn about attitudes and experiences with infection prevention techniques, as well as factors associated with overdose and infection prevention community program utilization. This **initial research has now expanded** and received additional funding **to support community programming**, including naloxone distribution, infectious disease testing, linking patients to care, and implementing drug checking.

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