



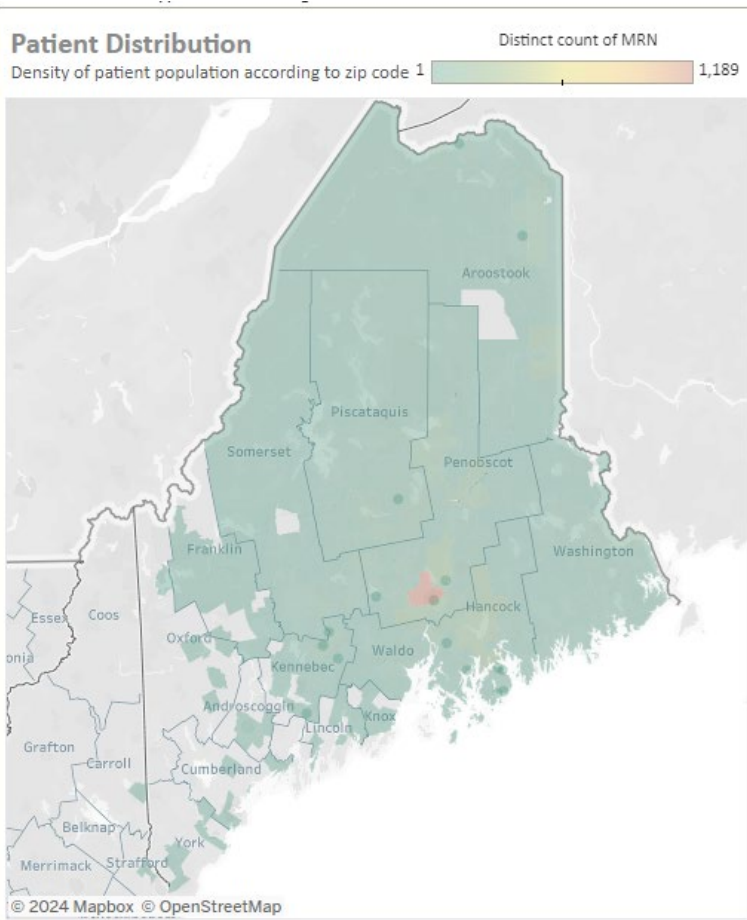
Needs Assessment for Rural Maine Vascular Care

Current resources and challenges of patient care

Access to Vascular Care in Rural Maine

Peripheral vascular disease (PVD) effects more than 10 million people in the United States and is a significant predictor of morbidity and mortality.² The population of the State of Maine is aging and has a disproportionate amount of vascular disease. The distribution of vascular surgeons in the state is limited primarily to the urban centers. As a result, significant health care access issues in concert with the social determinants of health are affecting Mainers with PVD and decreasing the overall health of the population.⁴ These health disparities effect stroke rates, hemodialysis permanent access rates, carotid interventions, and aneurysm rupture risk. New and model strategies will be necessary to improve vascular care in the future.

Geographic Determinants of Care



Recommendations

Improve screening in the Primary Care setting

Move the basics of vascular care closer to the patient. This will allow for early detection of disease and decrease the need for invasive surgical care.

Improve Transportation Access

Transportation limitations are a significant throughout the state due to a host of geographical, financial, and physician distribution factors. Significant increase in morbidity and mortality is seen due to an inability for our emergency services to reach patients and in many cases for patients to reach a facility in a timely manner.

Improve Patient Education

With specific knowledge and guidance patients can modify lifestyle and diet choices to help manage their disease.

Figure 1. Northern Light Vascular Care Patient Distribution

Current State

- Northern Light Health provides primary and tertiary care to communities throughout central, eastern, and northern Maine.
- Northern Light Vascular care provides comprehensive peripheral vascular care to over 10,000 Mainers a year
- More than 1600 of those patients traveled greater than 60 miles to receive vascular care in Bangor.
- Transportation and access remain significant factors in patient outcomes.
- Due to these issues, the level and volume of disease is significantly increasing and we are seeing worse outcomes including limb loss, stroke, and death.

Background

National physician shortages have been a concern for the health care system, as well as policy makers, for more than two decades.^{1,2,3} The increasing age and consolidation of geographic location of practitioners are just two of the factors leading to a decrease in access and untreated progression of disease within the United States. In parallel to the growing shortage of providers there has been advancement of medical and surgical technology whose availability has not been widened to our more rural regions of the country. This all happening within a context of Americans becoming older and being diagnosed with more chronic disease than previously seen.

Northern Light Health and its member hospitals are tasked with providing emergent, urgent, and elective care in the hospital setting, as well as primary care in our communities from Waterville to Madawaska, and from Dover-Foxcroft to Lubec. Northern Light Vascular Care (NLVC) provides comprehensive peripheral arterial and venous care to this expansive region throughout our state. Arterial disease, to include atherosclerotic disease and aneurysms of the arterial tree, as well as superficial venous insufficiency, thoracic outlet syndrome, and a myriad of vascular pathologies are managed through NLVC.

In many cases, progression of disease is monitored in the ambulatory setting by Primary Care providers around the state through regular screenings. Comprehensive vascular care and the ability to provide high level surgical care depends on consistent monitoring for advanced disease and the ability for our patients to access our center before their disease process has become critical.^{2,3}

A plethora of research exists that demonstrates the underuse, misuse, and overuse of medical care within the health care setting. Inequitable and ineffective payment models, issues with access, availability of technology, geography, and first and foremost the social determinants of health all play a role in patient outcomes.^{7,8} Within the Northern Light system, as with many health systems throughout the nation, the ability to provide surgical care in the tertiary hospital setting is only available at few centers within the system.⁶ This is dictated by specialized equipment and a shortage of vascular surgeons.⁶ This creates increased need for primary care monitoring of disease as well as significant access issues once it is determined surgical care is necessary. Patient transport remains a significant hinderance to care, specifically in the more rural regions of our state.

Data shows that these disparities leads to higher stroke risk, higher limb loss, higher rates of aneurysm rupture, and increased risk of death.¹

These issues, along with a host of economic, policy, and logistical drivers are affecting patient outcomes in the State of Maine.⁵ Significant changes in how and where we treat patients and a willingness to adopt new health care delivery strategies will be necessary to combat the challenges around health care utilization and access to care.

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