

Medtronic Population Health Initiative

Goal of the Engagement: Deliver Value and Quality Patient Outcomes through a Comprehensive Lung Health Program

Provider Profile

The Hospital is an 1100-bed, teaching institution located in the southern part of the United States. With over 1,750 affiliated physicians and 36,000 in-patient visits per year, the Hospital is one of the largest private, nonprofit, academic medical centers in the nation. It is also the flagship facility for the Hospital System, a nonprofit healthcare organization comprised of six acute care hospitals, a research institute, an out-patient center, and multiple emergency care and imaging centers.

The Hospital's thoracic surgery department is comprised of two thoracic surgeons and one physician assistant. One of the surgeons in particular, joined the organization with the intention of developing a comprehensive lung health program, including a minimally invasive thoracic surgery program.

Provider Opportunity

In an effort to increase the quality of patient outcomes more cost-effectively, one of the thoracic surgeons at the Hospital, with Medtronic, began a partnership driven by the desire to create a comprehensive lung health program. This process started with the development of their minimally invasive surgery capabilities. In partnership with the Medtronic clinical educational team, the doctor attended minimally invasive surgery (MIS) training courses, gained a level of proficiency in video-assisted thoracoscopic surgery (VATS) lobectomy and began to increase the percentage of resections done through this minimally invasive approach.

The second phase in developing the Lung Health Program was gaining multi-disciplinary alignment across the patient care continuum. The goal of aligning pulmonology, thoracic surgery, and oncology was to reduce the time from diagnosis to treatment and create continuity of care for the patient.

The third phase of the process was centered on the development of a lung cancer screening program. Using the National Comprehensive Cancer Network (NCCN) guidelines to identify high-risk patients, a community awareness and an outreach program was established to drive high risk patients in for low-dose computed tomography (CT) scans. The goal of this program was to identify lesions in their earliest stages, increasing the team's ability to intervene and cure the patient's disease.

The final phase of this comprehensive program was to develop a marketing communication program, both internally at the Hospital, and externally to their served patient population. The goal of this phase was to increase the awareness around lung cancer, the importance of wellness checks and screening, as well as the benefits of minimally invasive surgical interventions. The communications focused on the Hospital as a "destination center" for patients that have disease of the lung.

Medtronic Collaboration

Medtronic played an integral part in nearly all of the phases to develop a comprehensive lung health program with the Hospital. The Medtronic expertise in the thoracic surgical space assisted the Hospital to create a best-in-class minimally invasive thoracic surgery training curriculum, aimed at educating surgeons and staff on the techniques and benefits of performing VATS lobectomy. The clinical education team provided a three-stage journey to ensure a high level of proficiency and procedural adoption by attending surgeons.

In phase two, Medtronic brought together the clinical and operational pathways for the patient to get easy access to all of these physicians. In collaboration with clinical and administrative stakeholders, Medtronic helped to align physicians across the care continuum providing the framework for a Lung Health Destination Care Model (see the Lung Health Destination Care Model diagram at the end of this paper) based on similar experiences with other health systems. The goal of reducing the time between diagnosis and treatment, and to enhance the patient experience revolved around collaboration and the ability to create clinical pathways that are integrated and connected across multiple-disciplines, and focused on delivering high quality, cost-effective care for the patient.

In phase three, Medtronic involvement was two-fold. The first element was to assist in the creation of clinical protocols and guidelines for a lung cancer screening program following NCCN guidelines. The second element was the implementation of an Electromagnetic Navigational Bronchoscopy® (ENB)™ procedure through the Medtronic superDimension® lung navigation system.

This procedure aids in the diagnosis of peripheral lesions. ENB was recently validated by the American College of Chest

Physicians and is now recommended in the *Diagnosis and Management of Lung Cancer, 3rd edition; American College of Chest Physicians Evidence-Based Clinical Practice Guidelines*.

The final phase of the program was focused on patient and primary care awareness. Using the Medtronic experience in minimally invasive technologies, awareness and educational tools, focused on the clinical benefits of VATS lobectomy, as well as the overall benefits of earlier intervention for the patients, were provided through outreach programs.

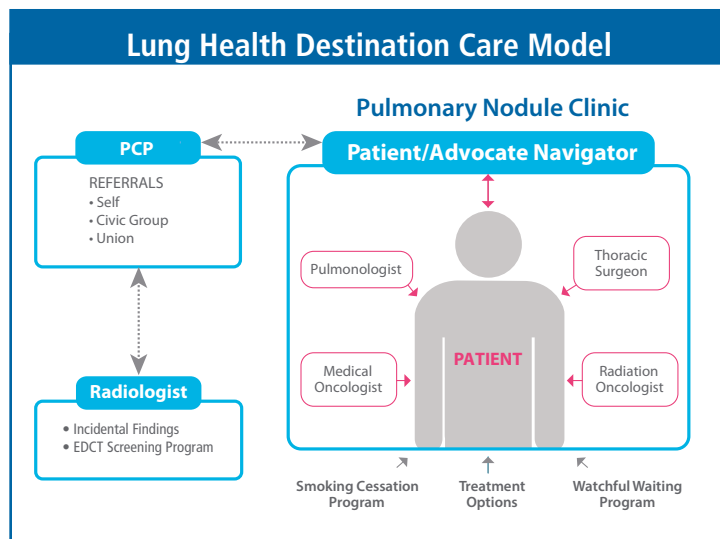
Now, with a growing number of lung health program engagements across the country, Medtronic is able to bring forth a number of best practices to help other health systems drive internal and external awareness around the benefits of this comprehensive care approach.

Provider Outcomes

The results from the partnership with the Hospital have been positive on numerous fronts. Programmatically, the thoracic department has evolved to a multi-disciplinary clinic with a dedicated team across radiology, oncology, pathology, pulmonology, and surgery (see the Lung Health Destination Care Model diagram). Clinically, the time from diagnosis to treatment for patient's presenting positive scans has been reduced to less than one week, and the overall patient satisfaction scores associated with this department have increased. In addition, with the creation of a lung cancer screening program and implementation of an ENB program, the Hospital has reduced the number of patients presenting with Stage 3 and 4 cancers, allowing them to successfully intervene with those patients through chemo, radiation, and/or surgery. Lastly, having shifted from 10% to 90% of

their lobectomy procedures to VATS, the department has successfully reduced their patients' post-operative length of stay.

Having created a Comprehensive Lung Health Program, not only has the Hospital been successful in reducing the total cost of care for patients presenting with lung cancer they've changed the way the Hospital is caring for lung cancer patients. Bringing together all of the program elements, the Hospital in collaboration with Medtronic, has moved one step closer to delivering quality and value through a comprehensive lung health program.



Medtronic Health Systems Advantage

The Medtronic Health Systems Advantage team delivers comprehensive solutions to identify and address a broad set of clinical, operational and economic matters that translate to improved quality of outcomes and increased value for providers, payers and employers.

Backed by deep clinical and surgical expertise and an understanding of the hospital environment, the Medtronic Health Systems Advantage team ensures credible and accurate diagnosis and implementation for sustained change management. The team is committed to collaborating with customers for long term, tangible benefits and shared results.

Medtronic is the global leader in medical technology - alleviating pain, restoring health, and extending life for millions of people around the world.

Transform challenges into opportunities.

Contact Medtronic Health Systems Advantage or visit www.medtronic.com

Headquarters

Medtronic
710 Medtronic Parkway
Minneapolis, MN 55432-5604
USA
Toll-free: 800.255.8522
Tel: 763.514.4000
Fax: 763.514.4879
US140250a