Implementing High Quality Lung Cancer Prehabilitation at Mary Washington Healthcare, Fredericksburg, VA

Standard/Eligibility Number: E11--Rehabilitation

Overview

Mary Washington Healthcare (MWHC) is a fully integrated, regional medical system in Virginia that provides inpatient and outpatient care through Mary Washington Hospital, a 437-bed regional medical center in Fredericksburg and Stafford Hospital, a 100-bed community hospital in Stafford. Beginning in 2012, we identified a system-wide need to develop more comprehensive cancer-specific rehabilitation services and elected to undergo STAR Program certification. This certification is aligned with and supports our health system values that are focused on five pillars: quality, safety, service, growth and finance.

During the initial certification process the training helped our team to focus on quality and safety for our oncology patients. We had identified a significant problem with access to care, and our service mission meant that we were dedicated to implementing procedures that would improve referrals for cancer rehabilitation services to our patients that would benefit from this care. Improving access to care was aligned with our growth and financial pillars. We have focused on the important goals of improving patient outcomes and satisfaction while making our services value based by being more efficient and effective. Our STAR Program cancer rehabilitation service-line includes both prehabilitation and rehabilitation and has been an important factor in differentiating our oncology services in the market. Moreover, there is considerable alignment with the CoC and other accreditations.

Because of our team’s commitment to high quality oncology care, we were selected to participate in a STAR Program Prehab lung cancer prehabilitation pilot. As part of this pilot, we identified a physician champion who is a thoracic surgeon committed to improving the care for our surgical lung cancer population.

Lung Cancer Surgical Prehabilitation Pilot

Cancer prehabilitation is part of a high quality cancer rehabilitation service-line and is defined as “[A] process on the cancer continuum of care that occurs between the time of cancer diagnosis and the beginning of acute treatment and includes physical and psychological assessments that establish a baseline functional level, identify impairments, and provide interventions that promote physical and psychological health to reduce the incidence and/or severity of future impairments.”¹

The STAR Program Prehab Lung Cancer Pilot is a multimodal prehabilitation protocol that includes both physical and psychological components. It is important to note that this patient population tends to be elderly with multiple co-morbidities and they are often moderate to high risk surgical candidates. Therefore, it’s essential to have a multidisciplinary team of clinical specialists including but not limited to physical therapists, who are trained in cancer rehabilitation and to ensure that the prehabilitation protocols are evidence-based and best practices and take into account numerous precautions to ensure the safety of these medically complex patients. Moreover, it’s important to be aware of the evolving field of prehabilitation that has moved away from an “exercise only” model to a multi-modal model due to concerns about safety and the risk of decreasing the physiologic reserve of patients prior to the stress of surgery.² These concerns focus on how exercise alone, without other supportive measures, may theoretically increase the risk of surgical complications in some patients.

Lung Cancer Surgical Prehabilitation Results

The first patient enrolled was a moderate to high risk surgical candidate that our physician champion was concerned about. He recommended prehabilitation, and she had a very successful
outcome—demonstrating increased physical performance prior to surgery and post-operatively with a decreased hospital length of stay (3 days versus the usual 5 days). We reported her as a case study that was presented at the Academy of Oncology Nurse and Patient Navigators (AONN+) annual conference in the fall of 2014.3

Encouraged by this early success, we continued with the pilot and then did a retrospective analysis comparing the average length of stay (LOS) in our physician champion’s group of thoracic oncology patients who received prehabilitation services (n=6) to the average length of stay (LOS) for this population in the cancer registrar’s database (n=339). The average hospital LOS for patients undergoing surgery for lung cancer is 5 days based on cancer registry data from 2009-2014. The average thoracic oncology patient receiving prehabilitation demonstrated a 3 day LOS. Our retrospective review of LOS demonstrated that patients enrolled in the STAR prehabilitation lung cancer program had a decreased hospital LOS by 40%. We concluded that in this group of surgical lung cancer patients the prehabilitation demonstrated a positive impact on length of stay, and the patients were physically stronger and better mentally prepared prior to surgery. They also healed faster after surgical intervention. We reported these results at the Oncology Nursing Society Congress in the spring of 2015.4

In addition to publishing our early results on high quality lung cancer prehabilitation, our STAR Program team was recognized by our healthcare system with the 2014 President Award. In 2015, we also received the Association of Community Cancer Centers (ACCC) Innovator Award that is given to institutions that advance “the goals of improving access, quality, and/or cost-effectiveness of cancer care”.

Lung Cancer Prehabilitation Supports New Lung Screening Guidelines

Lung cancer is the leading cause of cancer-related deaths in the United States. Currently, the majority of lung cancer patients are diagnosed at an advanced stage. In an effort to diagnose patients earlier and therefore increase the opportunity for surgery and potential for a cure, in early 2015, Medicare beneficiaries began to receive coverage for lung cancer screening with low-dose CT scans if they meet certain criteria.5 To qualify for this annual benefit the patients must be 55 to 77 years old. Additionally, Medicare beneficiaries must also meet these criteria:

- currently smoke tobacco products or have quit within the past 15 years,
- have smoked an average of one pack of cigarettes a day for 30 years, and
- have a physician or other health care professional's written order requesting the test.

The Centers for Medicare & Medicaid Services (CMS) explained the national coverage determination that provides for Medicare coverage of Screening for Lung Cancer with Low Dose Computed Tomography (LDCT), with coverage that was effective immediately, in a press release on February 5, 2015. This excerpt from the press release helps to explain:

“This is the first time that Medicare has covered lung cancer screening. This is an important new Medicare preventive benefit since lung cancer is the third most common cancer and the leading cause of cancer deaths in the United States,” said Dr. Patrick Conway, chief medical officer and deputy administrator for innovation and quality for CMS...Medicare coverage includes a visit for counseling and shared decision-making on the benefits and risks of lung cancer screening. The [National Coverage Determination] also includes required data collection and specific coverage eligibility criteria for radiologists and radiology imaging centers, consistent with the National Lung Screening Trial protocol, U.S. Preventive Services Task Force recommendation, and multi-society multi-disciplinary stakeholder evidence-based guidelines. “We believe this final decision strikes an appropriate balance between providing access to this important preventive service and ensuring, to the best extent possible, that
Medicare beneficiaries receive maximum benefit from a lung cancer screening program,” Conway said.6

These new guidelines and coverage for LDCT will undoubtedly increase the number of patients that are surgical candidates. However, the median age of a lung cancer diagnosis is 70 years. Moreover, many of these patients have multiple co-morbidities and may be moderate to high risk surgical candidates. Therefore, providing evidence-based cancer prehabilitation is likely to decrease the risks associated with surgery and improve outcomes. Our future work will continue to focus on improving patient outcomes in this population.

Improving the integration of rehabilitation services into our system is an ongoing process. We will continue to work with the STAR Program Advisory Team and aim to improve our outcomes for every diagnosis and stage throughout the oncology care continuum.


4 Messina Corder, RN, MBA, BSN; Regina Kenner, RN; J. Timothy Sherwood, MD, FASC; Chris Kusmirczyk, PT, DPT, MPT; Kathy Duval, MS, CCC-SLP. Prehabilitation Demonstrates Decreased Hospital Length of Stay in a Small Sample of Thoracic Oncology Patients. Oncology Nursing Society Congress 2015. Abstract/Poster presentation.
