A Model Symptom Management Clinic

Aims to Improve Patient Satisfaction & Reduce Hospitalizations

BY CATHERINE BRADY-COPERTINO, BSN, MS, OCN;
MADELAINE BINNER, MBA, CRNP, DNP;
SUSANNE TAMERIS; BARRY MEISENBERG, MD;
LYNN GRAZE, RN, MSN, OCN

The future of cancer care faces many challenges, including an increase in patients due to an aging population, a shrinking oncology workforce, funding reductions, spiraling costs, and high patient expectations. In a 2013 publication, the Institute of Medicine (IOM) concluded "that meeting these challenges will require stronger core competencies for clinicians, team-based models of care, more effective communication with patients, and new payment models."[1] Economic, social, and ethical imperatives are driving the U.S. to reduce the unsustainable growth of its healthcare spending, while ensuring its citizens receive high quality, evidence-based care. Common areas that adversely affect oncology cost and quality include:

- Lack of compliance with evidence-based, cost-effective guidelines
- High cost of drug regimens with lack of transparency
- A high reliance on emergency room and hospital admissions for care.

While solutions may be found under the Affordable Care Act's episode-based or bundled payment methodology or through the organizational structure of accountable care organizations (ACOs), healthcare systems themselves must look for innovative and progressive models to meet these challenges. Community-based oncology practices and hospital-based cancer programs have a significant opportunity and obligation to lead meaningful change and demonstrate the ability to work together.

Improvement Needed

In January 2010, Anne Arundel Medical Center (AAMC), Annapolis, Md., purchased the private hematology-oncology practice, AAMC Oncology & Hematology. The practice relocated its offices to AAMC's main campus. Infusion and laboratory staff were employed and housed in AAMC's hospital-based outpatient infusion center at the Geaton and JoAnn DeCesaris Cancer Institute (DCI), while the physician practice was housed in the adjacent pavilion. The telephone triage functions shifted to the hospital outpatient department, while a 1.0 registered nurse and all other administrative staff remained in the physician pratice. The capacity of AAMC's outpatient infusion center grew overnight from 12 infusion chairs to 42. The physical separation of the infusion nurse triage functions from the practice itself was quickly identified as a quality issue by multiple stakeholders, including physicians, patients, and nurses.

> Our experience demonstrated that patients needed education on the importance of early recognition of acute symptoms related to their disease and/or associated therapies requiring urgent or emergent intervention.

The culture change from a private practice to a hospital-based program brings a number of changes—not the least is a willingness on the behalf of physicians to participate in numerous quality improvement (QI) initiatives. These QI initiatives require focused attention and time to measure, report, and implement change for a number of accrediting bodies, such as the American College of Surgeons Commission on Cancer (CoC) and The Joint Commission (TJC), and for various other QI initiatives, including the American Society of Clinical Oncology's (ASCO) Quality Oncology Practice Initiative (QOPI), ASCO/Oncology Nursing Society (ONS) Chemo Safety Standards, P4 Pathways, and Magnet nursing, as well as the implementation of electronic health records (EHRs) and Meaningful Use measures. In addition, the relocation of the practice to the hospital campus brought a 10 percent increase in new patient volume as patients reacted favorably to the sense of being involved in a community comprehensive cancer center.

This increased patient volume, coupled with the sequential introduction of a new ambulatory EHR and chemotherapy ordering system, increased the workload and expectations of physicians. As a result, physician schedules were quickly booked to capacity, making it difficult to respond quickly to nurse inquiries and patient messages, which were often related to symptom

management issues. The majority of these calls waited until the end of the day for a response—after business hours. This, in turn, delayed return calls to patients until the next business morning. Other times, patients who could not reach their physicians were forced to call multiple individuals, including the on-call physician, oncology nurse navigators, outpatient infusion nurses, or other providers, to have their concerns addressed. Lack of timely communications can often result in medical complications, worsening patient conditions, and decreased patient satisfaction. Further, the literature finds that unrelieved symptoms lead to a decline in performance status, physical state, and increased suffering in patients.[2] This delay in response often left a local emergency department (ED) as the only viable choice for patients with urgent needs. Research has found that patients who go to the ED for symptom management have more than a 50 percent likelihood of being admitted for hospitalization.[3] Studies have also found that systematic nursing assessment and targeted interventions can reduce patient trips to the ED for symptom management.[4]

Studies have also found that systematic nursing assessment and targeted interventions can reduce patient trips to the ED for symptom management.[4]

Barriers to Symptom Management

Several barriers can prevent cancer patients from receiving high-quality care for symptom management. A significant barrier is patients themselves; patients often hesitate to call physicians about symptoms for fear of bothering them. Another barrier is the patient's belief that physicians and nurses will know when the symptoms are likely to appear and will intervene at the appropriate time.[5]

Lack of availability of physician appointments and/or transportation issues can also create barriers to effective symptom management. Patients who work need appointments in the early morning or late afternoon, when physician schedules are typically full. Elderly oncology patients prefer early morning to midday appointments. Repeatedly missing work for physician appointments or not keeping physician appointments can contribute to both poor clinical outcomes and financial distress. At AAMC, lack of same-day physician appointments was a significant barrier to effective symptom management. Same-day physician appointments were not readily available, resulting in care coordination managed via telephone or by referring the patient to the ED.

Lack of transportation is an important and often overlooked aspect of quality cancer care. It is reported that 13 to 14 percent of cancer patients have significant transportation difficulties.[6] Consequently, symptom management issues may escalate while patients struggle to coordinate transportation to multiple appointments.

Finally, we found that lack of patient education regarding symptoms and symptom management was a barrier. Our experience demonstrated that patients needed education on the importance of early recognition of acute symptoms related to their disease and/or associated therapies requiring urgent or emergent intervention.

Table 1. Oncology Nurse Practitioner Symptom Management Clinic Patient Symptom List

1	Fever greater than 100.4°
2	Chills with or without fever after receiving recent chemotherapy
3	New shortness of breath/dyspnea on exertion
4	New bleeding (nose, tarry stools, urine)
5	Mouth sores making it difficult to eat or drink
6	Uncontrolled nausea and vomiting (not responding to home medications)
7	Diarrhea not controlled by home medications (unresponsive to Imodium/Lomotil)
8	New abdominal pain with or without constipation
9	New swelling in arms or legs
10	Redness or tenderness of port site
11	Swelling, pain, redness at peripheral IV site
12	New rash
13	Need for increased pain management or new site of bone pain
14	Dysuria or urinary frequency
15	Excessive fatigue
16	Excessive thirst
17	Dizziness or vertigo
18	Weakness of arms or legs
19	Neuro issues (double vision, headache)

Development & Implementation of a Symptom Management Clinic

Oncology physicians and nursing leadership recognized the need to be creative when developing an improved business and practice model that would provide value and benefit to patients by ensuring their needs were met. Research has demonstrated the importance of symptom management and the optimization of the health and comfort of patients undergoing cancer therapy, resulting in improved function and quality of life (QOL). Excellent symptom management also leads to improved quality metrics, such as utilization of medical care, patient and/or caregiver comfort and productivity, and family cohesion.[7]

Recognizing the difficulty of implementing multiple changes simultaneously, these accountable leaders chose a more manageable approach and prioritized the development of an evidence-based Symptom Management Clinic. Our early goals were to improve symptom management and patient satisfaction, and to reduce the number of ED visits and hospital admissions. In 2012, the Medical Oncology Executive Committee, which includes physicians representing the medical oncology physician practice, and medical, nursing, and executive oncology leadership, developed a plan for a Symptom Management Clinic.

That same year, AAMC's Symptom Management Clinic was embedded in the medical oncology practice and managed by 2.0 FTE telephone triage nurses and a 1.0 FTE oncology nurse practitioner (NP). Telephone triage nurses were experienced infusion nurses who rotated regularly from the hospital-based outpatient infusion department to the Symptom Management Clinic. The rotation provided patient-centered continuity of care, as the infusion nurses were already familiar with individual patients.

The NP worked with AAMC's oncology nurses to develop:

- Symptom criteria (Table 1, above)
- Standard protocols of care

(continued on page 27)

Figure 1. Symptom Management Clinic NP Evaluation Preventing ED Visits

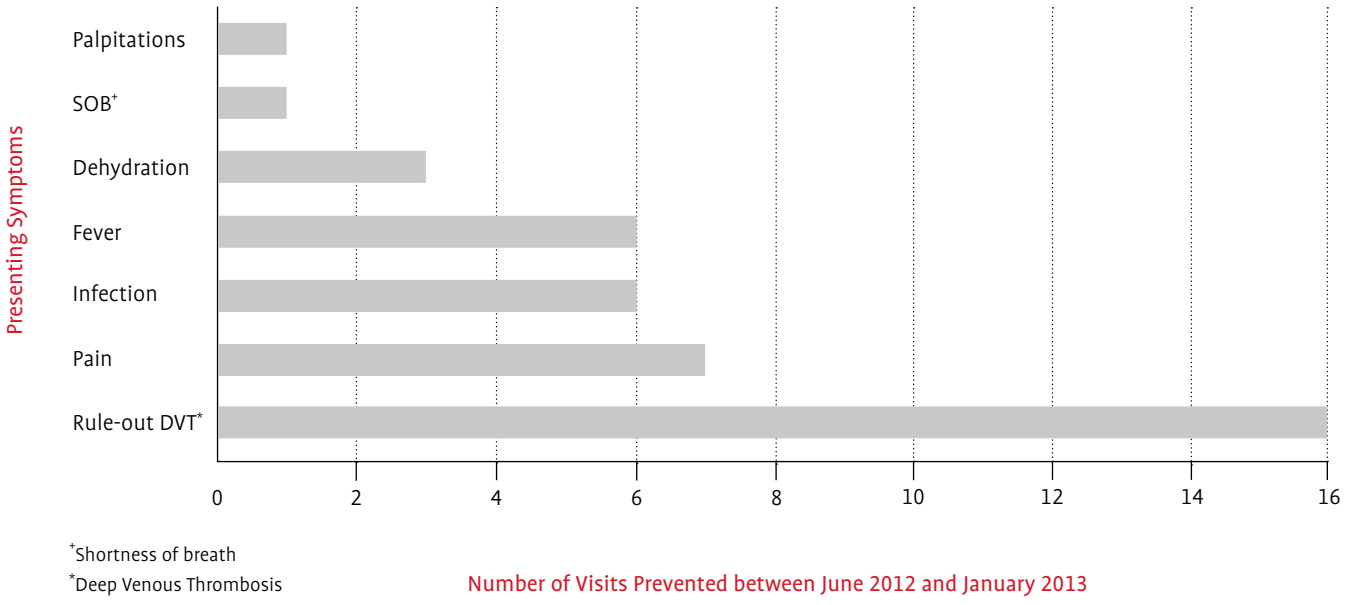
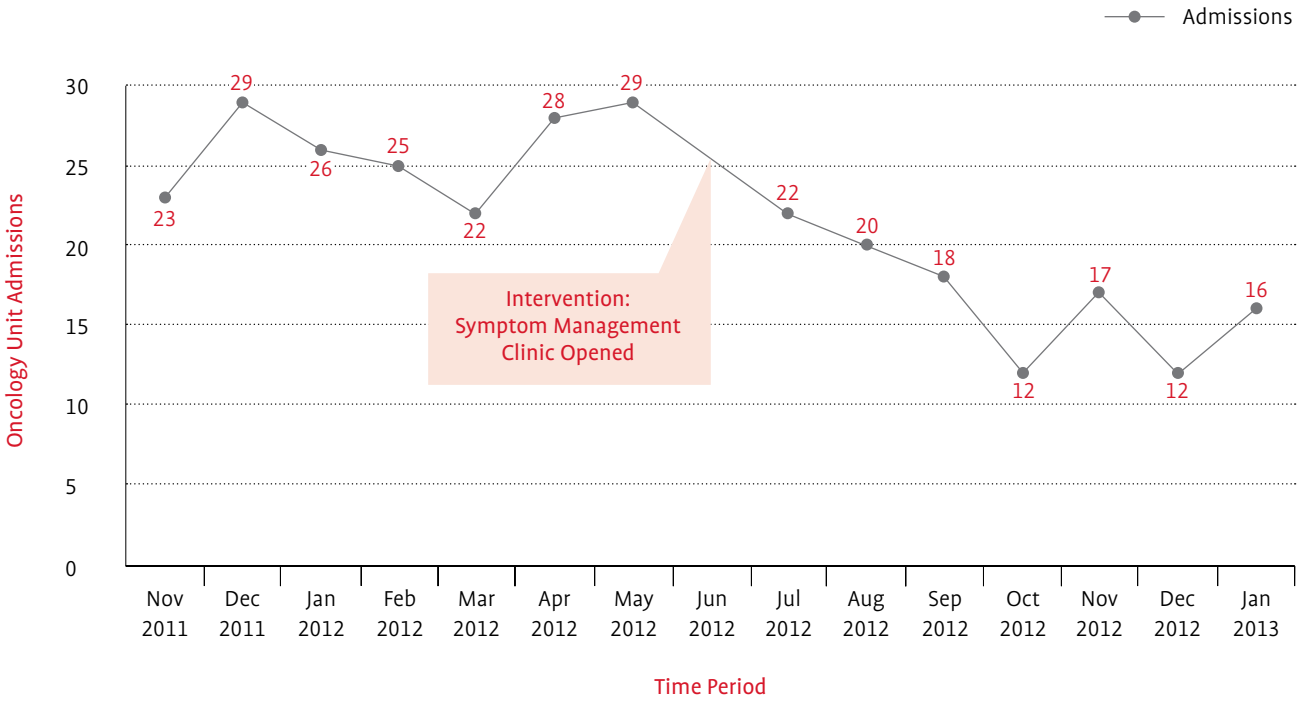


Figure 2. Oncology Unit Admissions Related to Symptoms of Pain and Weakness



(continued from page 25)

- Hours of operation
- A scheduling process
- Patient and caregiver education materials.

If a patient met the criteria, triage nurses would automatically prioritize and schedule an appointment with the NP. The office phone lines were opened 30 minutes prior to office hours, allowing for early patient calls and appointments in the Symptom Management Clinic.

Our Results

Data from the first eight months of AAMC's Symptom Management Clinic, July 2012 to February 2013, demonstrated effective interventions. On average, the clinic saw 41 patients per month. The most commonly treated symptoms were pain, weakness, nausea, vomiting, diarrhea, swelling, and fever. Due to effective and efficient triage, the Symptom Management Clinic did not manage any life-threatening emergencies. Based on clinical appropriateness, 65 percent of the patients were seen the same day, 25 percent were seen the next day, and the remaining 10 percent were seen in two or more days. Oncology ED visits associated with pain and weakness were reduced from 26 per month to 17, a 35 percent reduction. Out of 337 patients evaluated by the NP at the Symptom Management Clinic:

- 284 patients (84%) were sent home including 4 patients (1%) who were referred to hospice as a result of the visit
- 42 patients (12%) were referred to the outpatient infusion center for fluids or blood transfusions
- 11 patients (3%) were directly admitted to the hospital
- 3 patients (<1%) were sent to the emergency department.

Figure 1, left, shows ED visits prevented by presenting symptom. Figure 2, left, shows oncology unit admissions related to symptoms of pain and weakness.

Hospital readmissions are viewed as indicators of poor quality of care.[8] Indeed, a recent chart review of AAMC oncology readmissions suggested that 29 percent (unpublished observation)

Our Program At-a-Glance

Founded in 1902, Anne Arundel Medical Center is a 384-bed regional referral center located on a 57-acre campus in Annapolis, Md. It has a medical staff of more than 1,000 providers, including a 245 health system-employed provider medical group. AAMC includes the not-for-profit hospital with more than 30,000 inpatient admissions, 95,000 ED visits, and 100,000 outpatient visits annually, and a mental health and substance abuse center. AAMC serves an area of more than one million people and is the state's third busiest hospital, based on inpatient discharges. AAMC operates five diagnostic imaging facilities that together perform 159,000 imaging studies annually. Five regional pavilions with multispecialty services, including medical oncology, are strategically located throughout the market.

AAMC's Geaton and JoAnn DeCesaris Cancer Institute is a comprehensive community cancer program and includes a breast center, a four-vault radiation oncology center, a 42-chair outpatient infusion center, nurse navigation, a survivorship clinic, and psychosocial programs. Since 2007 there has been steady growth in the primary and extended market in medical, radiation, and surgical oncology. More specifically, over the past seven years, the number of new cases evaluated at the DeCesaris Cancer Institute has increased 50 percent to a total of 1,800 with over 300 ambulatory patients treated in the institute each day, making it one of the largest cancer programs in Maryland.

AAMC is the recipient of numerous awards and certifications, including an ACCC 2012 Innovator Award for its Rapid Access Chest and Lung Assessment Program, an ACCC 2014 Innovator Award for the Symptom Management Clinic described in this article, and Magnet® recognition by the American Nurses Credentialing Center in 2014.

Table 2. Ambulatory Care RN Role Dimensions for Healthcare	
1	Work with established evidence-based care management protocol (EBP).
2	Lead or participate in development and refinement of EBPs.
3	Collaborate on development of process and outcome indicators for EBPs.
4	Monitor (assessment and evaluation) current status of patients, often using telehealth modalities.
5	Make adjustments to treatment plan with specified EBP parameters.
6	Collaborate and communicate with healthcare team regarding patient status and needs.
7	Document all patient encounters in the EHR.
8	Refer patients who are out of alignment to MD/NP.
9	Maintain a long-term supportive relationship with patients and families.
10	Act as a resource and advocate for patients and families.
11	Collaborate on measurement of patient and family outcomes of care.
12	Find resources in the community.

were potentially preventable. One primary reason: crisis admissions that could have been anticipated and avoided with improved symptom management. Early data from primary care medical homes suggest that about 50 percent of hospital readmissions and 50 to 69 percent of ED visits can be prevented with even more comprehensive programs.[9,10]

Conclusion & Discussion

While the literature describes similar Symptom Management Clinics, these clinics are often based at academic programs, for single tumor types, offer weekly not daily appointments, and lack telephone triage nurses. Since 2012, a handful of oncology pioneers are participating in accountable care transformative models; however, there is a stunning lack of data on their patient-reported outcomes.

Research has demonstrated that improved symptom management benefits patients through:[11]

- Fewer dose modifications
- Fewer delayed treatments
- Increased access to supportive care
- Increased education exchanges for patients and caregivers
- Improved medication adherence
- Earlier treatment of symptoms
- Improved quality of life.

Haas and Hackbarth have identified 12 ambulatory care RN dimensions (Table 2, above) that allow nurses to be successfully integrated into ACOs and Patient-Centered Medical Homes (PCMHs).[12] Our oncology nurses are poised to lead and implement innovative strategies to deliver high-quality, lower-cost healthcare. They manage complex, chronic, and acute symptoms, as well as coordinate and serve as the patient advocate and communication link with the multispecialty team. Nurses must assume additional leadership responsibilities, identify processes for efficient resource utilization, and implement and track quality improvement, thereby increasing safety and potential value to patient-centered care.

Research suggests that systematic nursing assessments and interventions for patients result in better patient outcomes and increased quality of life.[13,14] For the concept to succeed, the entire management team must take responsibility for the comprehensive care of the oncology patient. The need to identify a system-wide approach to proactively reach out to high-risk patients must be developed.

The DeCesaris Cancer Institute is focusing on additional quality metrics and program development to support the value proposition, including:

- Financial and psychosocial distress management
- Transparency and cost awareness of drug regimens
- Expansion of its patient portal
- Reporting and tracking of patient-reported outcomes
- Advance care planning
- Survivorship care planning
- Expansion of triage hours for 24/7 coverage.

Results from AAMC's Symptom Management Clinic represent the first step towards a value-based model. To be comprehensive, both clinical and administrative changes must take place within the practice and hospital, as well as within our community providers. The oncology nurse is well-positioned to help guide us to this value-based model through enhanced use of major ambulatory care roles and skills such as advocacy, telehealth, patient education, care coordination, transitional care, and community outreach. OI