

A Multidisciplinary Model for Cancer Care Management

Patricia Strusowski, BS, RN

Christiana Care Health System (CCHS), which traces its roots to 1888, is one of the largest not-for-profit healthcare providers in its region, serving people in Delaware, Maryland, Pennsylvania, and New Jersey. CCHS operates two hospitals in northern Delaware, provides long-term and transitional care services, and facilitates an extensive range of outpatient and home-health services. The 60,000-square-foot building that houses the Helen F. Graham Cancer Center opened in the spring of 2001 and is located on the campus of Christiana Hospital. More than 60,000 patient visits were recorded during its first year of operation. The services that are essential to providing comprehensive cancer care are offered under one roof and include radiology, radiation oncology, laboratory services, pharmacy, multidisciplinary care centers, private physician offices, conference rooms, a library, an outdoor garden, and a boutique.

The purpose of this article is to describe the implementation of a care management approach that reflected CCHS's philosophy of providing patients with cancer with the best possible multidisciplinary care along the entire illness trajectory.

Process

Prior to 2001, patients with cancer were treated in a variety of settings, including

physician offices, hospital departments, and outpatient clinics scattered throughout CCHS. As a result of a fragmented approach to cancer care, patients often had to wait as long as three weeks to undergo diagnostic procedures and visit appropriate specialists. A lack of coordination among departments in the system resulted in multiple patient admissions problems that might have been prevented (e.g., dehydration, pain management, infection). Inefficiencies in discharge planning led to untoward consequences for CCHS and for patients. For patients, they included missed appointments, inadequate pharmacy services, and a lack of coordinated follow-up after discharge from the hospital. For CCHS, the inefficiencies meant decreased patient satisfaction with services and financial losses.

As part of an ongoing evaluation process, a multidisciplinary panel developed a survey to evaluate patients' satisfaction with CCHS. Results of the survey indicated that patients wanted a healthcare team that communicated clearly with them about their disease management. The sentiment was particularly prevalent in patients with cancer who often required long-term courses of treatment and follow-up visits to a variety of specialists. Based on the feedback, administrators established a Cancer Care Management

Department in 2000. The new department's mandate was to implement a fluent approach to care that coordinated patient needs and medical requirements and helped patients navigate through the healthcare system from start to finish and across the healthcare continuum. The staff members of the newly formed department used recommendations set forth by the Delaware Advisory Council on Cancer Incidence and Mortality (Delaware Department of Public Health, 2002) to guide their steps toward implementation. The council's recommendations included the following.

- Provide care that is patient focused, coordinated, and efficient.
- Arrange timely referrals to specialists and support services.
- Decrease waiting times to see specialists and to obtain test results.
- Increase the number of patients enrolled in clinical trials.
- Streamline the insurance reimbursement process.
- Market programs and services to physicians and community agencies.

Different types of cancer require individualized treatment regimens and follow-up. To provide patients with the best treatment available, the Helen F. Graham Cancer Center houses 14 multidisciplinary centers (MDCs) under one roof. Each MDC focuses care on a site-specific cancer and has designated hours each week (see Figure 1). A patient diagnosed with cancer is referred

Leadership & Professional Development

This feature provides a platform for oncology nurses to illustrate the many ways that leadership may be realized and professional practice may transform cancer care. Possible submissions include but are not limited to overviews of projects, interviews with nurse leaders, and accounts of the application of leadership principles or theories to practice. Descriptions of activities, projects, or action plans that are ongoing or completed are

welcome. Manuscripts should clearly link the content to the impact on cancer care. Manuscripts should be six to eight double-spaced pages, exclusive of references and tables, and accompanied by a cover letter requesting consideration for this feature. For more information, contact Associate Editor Paula Klemm, DNSc, RN, OCN®, at klemmpa@udel.edu or Associate Editor Paula T. Rieger, RN, MSN, CS, AOCN®, FAAN, at ptrieger@pdq.net.

Patricia Strusowski, BS, RN, is the director of cancer care management at the Helen F. Graham Cancer Center in the Christiana Care Health System in Newark, DE. Mention of specific products and opinions related to those products do not indicate or imply endorsement by the Oncology Nursing Forum or the Oncology Nursing Society.

Digital Object Identifier: 10.1188/06.ONF.697-700

	Monday		Tuesday	Wednesday		Thursday	Friday
7 am							
8 am	Head and neck (8–10 am)		Thoracic and esophageal (8 am–3 pm)	Gastric and melanoma ^a (8–10 am)		Cancer pain consult (8 am–noon)	Breast (8–9:30 am)
9 am				Thoracic and esophageal (9 am–3 pm)	Sarcoma ^a (9–11:30 am)		
10 am						Young adult ^a (10–11 am)	
11 am							
Noon							
1 pm	Rehabilitation center (1–4 pm)	Breast (1–2:30 pm)			Rehabilitation center (1–3 pm)	Rehabilitation center (1–3 pm)	Gynecology (1–3 pm)
2 pm							
3 pm		Genitourinary (3–5 pm)	Hepatobiliary and pancreatic (3–5 pm)				
4 pm			Head and neck (4–6 pm)		Neuro-oncology (4–5 pm)		
5 pm		Rectal and anus (5–6 pm)					
6 pm							

^a Schedules are weekly with the following exceptions. Gastric and melanoma is scheduled for the first and third Wednesdays of the month, and sarcoma is scheduled for the second and fourth Wednesdays of the month. Young adult is available on the first Friday of the month.

Figure 1. Schedule of the Helen F. Graham Cancer Center Multidisciplinary Centers

to the appropriate MDC (e.g., head and neck, breast) by an attending physician or a specialist or is self-referred. Once referral is made to an appropriate site-specific MDC, a patient sees a medical oncologist, radiation oncologist, and surgeon. The physicians review the medical records and results of diagnostic procedures and discuss the best treatment plan with the patient and family.

Patients in the cancer center encounter many different healthcare providers during the screening process, at diagnosis, while undergoing treatment, at recurrence of disease, and when planning end-of-life care. To create a uniform approach to patient care across specialties, a multidisciplinary team was formed. The team, composed of individuals with distinct responsibilities, provides integrated patient services to each of the MDCs. The team includes eight oncology-certified RNs or master's-prepared nurses referred to as cancer care coordinators (CCCs). The other members include four social workers, two genetic counselors, a health psychologist, registered dietitian, clinical trials nurse, financial assistant, and support personnel (e.g., clerical, technical). The CCCs and social workers are assigned to MDCs based on patient volume. For example, a single CCC is assigned to provide service to the large number of patients with breast cancer, whereas another CCC covers several MDCs with smaller patient loads. Other members of the team (e.g., health psychologist, dietitian, financial assistant) are used as needed. All self-paying patients are assigned to a

financial assistant, who determines their eligibility for Medicaid, Medicare, and indigent pharmaceutical programs. The cancer care management team meets daily in the cancer center to receive updates on the status of current patients and new admissions. Specific dispositions of discharged patients (home care, hospice, infusion services, or rehabilitation) also are reviewed. In addition, the team sometimes uses part of the meeting time to brainstorm challenging cases.

Although the CCC role is multifaceted, its primary focus is on the care and support of individual patients with cancer. The CCCs integrate all aspects of patient care, including education, symptom management, financial assistance, transportation, medication, counseling, and insurance assistance. In addition, the CCCs develop standing order sets, patient education materials, and discharge instruction sheets (see Figure 2). Initially, a CCC meets with the physician team in the site-specific MDC to discuss and document patient treatment plans. Next, the CCC meets with the multidisciplinary team and guides it through a comprehensive needs assessment of each patient to determine whether additional healthcare services (e.g., dietary, social services) are necessary. Then, appropriate team members are assigned to track patient progress through the system, ensure that proposed services are assessable, and handle any problems that may arise. Designated members of the team maintain contact with the patient and family for as long as three months after completion of

treatment. The average active caseload for each MDC management team is 100–125 patients, who are followed for a period of six to nine months.

Additionally, CCCs are responsible for documenting physician recommendations for treatment at the multidisciplinary tumor conferences at the cancer center. The monthly (sometimes weekly) conferences provide a forum for the discussion of treatment options in concert with National Comprehensive Cancer Network guidelines. The conferences

- Develop and coordinate a plan of care with physicians and staff.
- Schedule and coordinate appointments, tests, and procedures.
- Disseminate patient information to physicians.
- Provide education to patients and their family members related to treatment.
- Participate in discharge planning.
- Assist in patient education regarding clinical trials.
- Assist patients and family members to access support groups in the community.
- Provide information about and access to community and Internet resources.
- Communicate with lay caregivers throughout the treatment process.
- Provide post-treatment follow-up to patients and family members.
- Conduct staff education as indicated.

Figure 2. Responsibilities of the Cancer Care Coordinator

are an important mechanism for the continuing professional education of physicians, nurses, and other healthcare professionals. The CCCs also educate patients regarding clinical trials and make referrals to the clinical trials nurse. The role and responsibilities of the other members of the multidisciplinary care management team are listed in Table 1.

As new treatment technologies become available at the cancer center, CCCs are assigned administrative oversight to ensure accessibility for eligible patients. Currently, the technologies include the high-dose, interleukin-2 treatment program for metastatic melanoma and renal cell carcinoma; GliSite® (Cytoc Corporation, Marlborough, MA) radiation therapy for recurrent brain cancer; selective internal radiation (SIR-Spheres™, SIRTeX Medical Inc., Lake Forest, IL) therapy for liver tumors; and cytoreductive surgery with intraperitoneal hyperthermic chemotherapy perfusion for gastrointestinal carcinomatosis.

Evaluation

Provide care that is patient focused, coordinated, and efficient: Staff members in the Cancer Care Management Department have provided more than 150,000 services to more than 10,000 patients since 2000. Satisfaction among patients, their families, and participating physicians has been tremendous. The reasons for the success may appear obvious in hindsight but, until recently, had been overlooked or discounted when using traditional approaches to cancer care. One indicator of patient satisfaction with the MDC

management team approach is the 2004 patient satisfaction survey distributed to all patients seen and treated in the MDCs. Of the 30% of patients who responded to the survey, the highest ratings (5 on a scale of 1–5) were given consistently to the following: concern for my questions throughout my care, treated with dignity and respect, recommending this service to others, concern for my privacy, degree to which staff addressed emotional needs, overall satisfaction with program, care coordinator support, staff concern to keep my family informed, and instructions for caring for myself at home.

MDC teams provide all patients with personal journals, which can be used to organize appointments, list medications, keep track of laboratory values and diagnostic tests, and write down questions for healthcare providers. The journal includes a glossary of medical terms and individualized educational information on treatment and side effects. Patients who used their journals on a regular basis reported that they were better organized with regard to their medical appointments and had a better understanding of their medications. Patients also reported that they felt more in control of their treatment process and that they approved of the cancer care management process. Family members and caregivers often are involved in discussions and decision making about patients' plans of care. They reported that their involvement provided emotional support as well as practical assistance in scheduling their time and locating community resources.

Members of the MDC teams reported a greater sense of continuity and less duplication of effort and information. Staff retention is high, with only one staff member leaving the department (to pursue an interest in cancer research) since 2000. The Cancer Care Management Department consistently scores at least 25 points above CCHS performance benchmarks. In the past year, 12 members of the department were nominated by patients to receive CCHS's highest award for "unsurpassed excellence" in the performance of their duties. Another unexpected benefit is that members of the highly specialized multidisciplinary teams are seen as the experts in care coordination at the facility.

The new approach to coordinated care has reduced financial losses and increased revenue for CCHS. During a recent nine-month period, 70 Medicaid applications were initiated and all were approved. In addition, the clerical staff works with the discharge planner to verify benefits and arrangements for home care, durable medical equipment, and infusion therapy needs. Revenue-generating procedures are performed in MDCs, thereby reducing admission-related costs. The procedures include IV hydration, thoracentesis, bone marrow biopsy, fine needle aspiration, and laryngoscopy.

Arrange timely referrals to specialists and support services: With input from the multidisciplinary teams, an electronic medical history form was developed in 2004 to decrease duplication of medical information and to streamline the information gathering process. The form can be reviewed by physicians and other authorized personnel throughout CCHS. Patients can verify information on the form online, and staff can add new or updated information online as needed without completion of new paperwork. The availability of patient-related information has helped to streamline the referral process as well.

Decrease waiting times to see specialists and to obtain test results: "Best practice" standard order sets, developed by the CCCs, are in regular use by the multidisciplinary teams of cancer care providers. Standard order sets provide timelines for carrying out routine patient care, including appropriate laboratory and diagnostic tests. In addition, breast and thoracic surgical teams block out time in operating rooms, which facilitates more efficient scheduling. As a result, length of stay for inpatients with cancer has decreased by one day, and intervals between appointments and procedures have decreased from a mean of 21 days to 7–10 days.

Increase the number of patients enrolled in clinical trials: The number of patients enrolled in clinical trials has increased by 10% since 2000.

In addition, CCHS's cancer program has exceeded American College of Surgeon certification requirements by having almost 20% of all analytical cases and more than 90% of

Table 1. Responsibilities of Multidisciplinary Care Management Team Members

Staff Position	Responsibilities
Social worker	<ul style="list-style-type: none"> • Provide psychosocial assessment and counseling. • Provide connections to support groups and hospice care. • Facilitate placement in skilled-nursing facilities. • Evaluate transportation needs. • Provide information about support groups. • Act as a liaison to community resources. • Assist with end-of-life issues and bereavement follow-up.
Health psychologist	<ul style="list-style-type: none"> • Provide individual and group counseling. • Provide psychological services (e.g., individual therapy, couple and family therapy, psychological assessment, cognitive screening). • Provide bereavement services.
Genetic counselor	<ul style="list-style-type: none"> • Conduct risk assessments. • Facilitate assessment for genetic testing. • Provide genetic counseling. • Discuss strategies for risk reduction.
Financial assistant	<ul style="list-style-type: none"> • Complete financial aid or medical applications. • Evaluate patients for Medicaid and Medicare eligibility. • Locate appropriate community resources. • Conduct assessments for special-needs or good samaritan grant funding. • Provide information about community assistance programs. • Provide insurance benefit verification and authorization. • Assess patients for eligibility for pharmaceutical indigent programs.
Registered dietitian	<ul style="list-style-type: none"> • Provide group and individual counseling.

prospective cases come before their respective tumor boards in 2004–2005. Although CCCs educate patients regarding clinical trials, the increase in accrual resulted primarily from the efforts of the cancer research department.

Streamline the insurance reimbursement process: Some of the benefits of a coordinated cancer care management approach can be quantified, whereas others are perceived anecdotally. Staff members believe that the insurance reimbursement process is less complicated and more efficient for patients. The financial assistants walk patients through paperwork, confirm authorizations, and explain coverage. The service has been extremely successful in transferring self-paying patients with no healthcare benefits to Medicaid. The financial assistants also help patients prepare pharmaceutical applications to ensure that they are able to obtain the medications needed to be compliant with their care. The Cancer Care Management Department also is very fortunate to have a special-needs fund and a good samaritan grant at its disposal. Special-needs funds are used to defray the costs of a number of necessary medical and nonmedical services. For example, special-needs funds have enabled the department to provide transportation to radiation therapy and physician visits to more than 500 patients in two years.

Market programs and services to physicians and community agencies: The Cancer Care Management Department has partnered with community agencies to expand the number of programs available to patients with cancer and their families. New programs (e.g., spiritual wellness, breast cancer roundtable) were initiated after input from those using services at the cancer center. Each month, staff members in the department mail more than 2,600 copies of an events calendar to community agencies, physicians, radiation oncologists, inpatient oncology units, and others who request it. The events calendar provides a listing of programs and activities such as “Look Good, Feel Better”; nutrition classes; cancer-specific support groups; care-

giver groups; and spiritual wellness classes. The information also can be accessed on the CCHS Web site (www.christianacare.org).

In 2003, the health psychologist initiated a new idea called the Cancer Companion program after several newly diagnosed patients with cancer requested to talk with someone who had the same disease. The program was designed to offer telephone support to newly diagnosed patients with cancer. A volunteer who has had the same type of cancer as the patient and has completed his or her treatment makes telephone contact. Cancer Companions often are sources of support and encouragement to patients and can provide answers to questions about treatment.

Barriers

Initiating care coordination at the facility encountered several significant barriers. Initially, many physicians did not perceive the benefits that a coordinated care program might provide. Territorial issues arose when several nurses and physicians thought that the CCCs were taking over some of their job responsibilities. The Cancer Care Management Department met with staff members (e.g., nurses, receptionists, medical assistants) and physicians to discuss how to best meet the needs of patients and families. With time, they began to realize that the role of coordinators was designed to complement their care, not usurp it.

Another barrier that was identified early in the program was a lack of clarity with regard to individual multidisciplinary team member roles. In general, the staff looked forward to their expanded roles, but they experienced some anxiety with the new undertaking as well. To address the ambiguity, a great deal of time was spent discussing and refining specific roles and responsibilities. For example, in the old system, the social workers were responsible for discharge planning. The new system required that the social workers provide additional services under their scope of practice. The additional responsibilities included counseling, coordinating community resources, and referring patients to hospice.

Facilitators to Success

The program has been successful because of the commitment of the highly professional and cohesive cancer care management team. Each team member has shown respect for the talents and expertise of peers. Such an attitude fosters the best possible care and services for patients. The staff is passionate about helping patients and their families. The staff consistently queries patients about what else can be done to help them during treatment and then strives to exceed expectations. Administrators at the cancer center have been extremely supportive of the cancer care management personnel. Without the backing of the administration, the program could not have been initiated, nor would it have flourished as it has.

Conclusion

The cancer care management program was designed to provide a coordinated plan of care based on the needs of patients and their families and to help them navigate through the healthcare system. Five years after the program was conceived, the benefits are obvious. First and foremost, patients and their families have expressed appreciation for the guidance that is provided throughout their treatment. Second, staff members see that a coordinated approach to patient care is both time and resource efficient. In addition, members of the multidisciplinary team are regarded by their peers as expert practitioners. Finally, CCHS has benefited from a decrease in staff turnover and an increase in revenue.

Author Contact: Patricia Strusowski, BS, RN, can be reached at pstrusowski@christiana.org, with copy to editor at ONFEditor@ons.org.

Reference

Delaware Department of Public Health. (2002). *Turning commitment into action: Recommendations of the Delaware Advisory Council on Cancer Incidence and Mortality*. Dover, DE: Author.