The Symptom Management Clinic (SMC) at University Hospital in Cincinnati, OH, was established to meet identified needs of patients with cancer seen in an outpatient setting. The initial step in the formation of the SMC consisted of the development of a business plan and the presentation of that business plan to the hospital administration. The development of clinic procedures using the creation of a guideline for pain management as an example is presented, as are medication reconciliation and patient teaching. Implications for clinical practice include the essential nature of collaborative relationships among medical oncologists, nursing, pharmacy, and administrative staff members. Interdisciplinary collaboration among the staff of the SMC facilitated referral to appropriate services within the institution and community.

Cancer remains a leading cause of death with an age-adjusted death rate of 183.8 per 100,000 for men and women per year (National Cancer Institute, 2010). The Barrett Cancer Center (BCC) at University Hospital is committed to providing a broad spectrum of high-quality services for patients with cancer and to being an educational resource for patients, physicians, health professionals, and the community. Cancer-screening programs at BCC are actively supported in partnership with the American Cancer Society. Breast, melanoma, and lung are the three most frequent cancers diagnosed and treated at BCC. Multidisciplinary clinics staffed by surgical oncologists, medical oncologists, radiation therapists, radiologists, oncology nurses, and clinical pharmacists collaborate to evaluate and treat patients. Innovative clinical research is supported by active protocols sponsored by cooperative programs through the National Cancer Institute as well as investigator-initiated studies and studies funded by private pharmaceutical companies.

At a Glance

- Collaborative relationships among oncologists, nurses, and pharmacy and administrative staff led to the establishment of the Symptom Management Clinic (SMC) for patients with cancer treated in an outpatient setting.
- Staffing and monetary goals were set at SMC’s inception and met in the allotted time period.
- A focus of the SMC treatment plan was medication reconciliation, which improves patient safety by reducing medication discrepancies and possible drug-drug interactions.

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Symptom Management Clinic

The multidisciplinary, collaborative SMC was designed to receive referrals from oncologists for the management of cancer-related symptoms. The focus of the clinic was initially on symptoms of pain and fatigue; additional symptoms were addressed as the need arose. Symptom management was delivered within the guidelines developed by the SMC nursing staff and approved by the medical advisor of the SMC. Once a referral was made for a cancer-related symptom, that symptom was managed solely by the SMC. The plan of care and outcomes were documented in the patient’s medical record and compiled in a database. Referrals from the clinic were made for additional services offered at University Hospital or the College of Medicine at the University of Cincinnati as needed.

The SMC was designed to (a) provide multidisciplinary, collaborative, and comprehensive management of cancer-related symptoms; (b) develop a sustainable patient care service; and (c) provide a clinical setting for multidisciplinary students to experience collaborative practice. The SMC has a cadre of experienced professionals available to respond to referrals for assistance in the management of cancer-related symptoms. Because of the uniqueness and complexity of the symptoms experienced by patients with cancer, oncologists welcomed the aid of a referral service as they faced increasing numbers of patients. Cancer-related symptoms are addressed using the full range of services offered by University Hospital and the colleges of Medicine, Nursing, and Pharmacy at the University of Cincinnati. The SMC offers assistance in meeting the challenges of managing cancer-related symptoms in an expeditious manner and also coordinates and facilitates any additional need for consultation or referral.

Development of the Clinic

The idea of establishing the SMC originated with an oncology nurse, a clinical pharmacist, and an oncologist as they observed situations of unmet needs for symptom management in patients with cancer. Following a survey of patient needs, a survey of BCC physicians was performed to determine whether they would refer patients to the SMC once it was established; 94% stated that they would. Both surveys were developed to address the unique issues at the center.

Existing clinics within the area (Ohio, Indiana, and Kentucky) were identified; however, they only addressed individual symptoms in patients with cancer. To the authors’ knowledge, the SMC is the first multidisciplinary and collaborative clinic within the tristate area that addresses cancer-related symptoms as presented by the patient. The SMC is distinguished in that cancer-related symptoms are addressed using the full range of services within the institution. The initial marketing objective was to secure $20,000 from patient and insurance payments for services during the first year of operation, a figure based on the projection of at least five patient visits per week and at a facility cost of $95 per visit. This would result in revenue of at least $24,700. Services offered by the clinic include, but are not limited to, assessment of specific cancer-related symptoms, development and implementation of an interdisciplinary plan of care, and outcome evaluation of the plan of care.

A very practical benefit for these services is relief of suffering and improved patient satisfaction with the care received. The preference of the SMC staff is to work collaboratively with healthcare providers within University Hospital and the University of Cincinnati. A long-term goal is to develop partnerships with community healthcare agencies.

Communication Plan

The SMC relies on patient referrals made by oncologists at the BCC. The SMC does not accept self-referrals from patients, but will assist patients in identifying an appropriate oncologist at the BCC. A key aspect of the SMC’s communication strategy is the respect and commitment by SMC staff to work constructively with all healthcare providers.

Periodic e-mails are sent to patients participating in the SMC and the referring oncologists as an update of services rendered. The plan of care and progress in controlling presenting symptoms is routinely communicated to the referring physician, and this communication becomes part of the medical record. Once the patient’s symptoms are controlled, patients are discharged from the SMC and returned to the referring physician for continuation of the symptom management plan. The SMC maintains a high profile within the healthcare arena. Members of the SMC staff often are asked to give presentations at national meetings, and results of the initial needs survey have been presented and published (Whitmer, Braun, Wilhelm, Pruemer, Nahleh, Akbik, et al., 2006; Whitmer, Braun, Wilhelm, Pruemer, Nahleh, Hammam, et al., 2006; Whitmer, Braun, Wilhelm, Pruemer, Nahleh, & Jazieh, 2006).

Research

One purpose of a volunteer SMC consultant on staff is to gather information about patient outcomes at the SMC and to identify additional symptom management needs. In addition, patient outcome data are gathered on an ongoing basis to evaluate the success of the SMC.

The SMC’s administrative board is led by the medical director. The board also includes all members of the SMC staff and invited members with appropriate expertise to continue SMC development. The administrative board meets monthly to facilitate communication among the many interdisciplinary members involved and to address administrative issues of the SMC. In addition, the administrative board evaluates outcomes of services rendered and organized professional development for all SMC staff members. Activities include meetings to discuss the plan of care for patients who present with challenging cancer-related symptoms and to explore in-depth emerging practices in symptom management.

Performance Milestones

Business milestones included compensating staff for percent of effort to the SMC by the second year of operation, achieving financial break-even after the third year of operation, and employing an advanced oncology clinical nurse specialist (AOCNS®) by the fourth year of operation.

Patients and referring physicians are surveyed on a regular basis to measure satisfaction and to gain feedback. The number of referrals made per oncologist per year is noted as well as oncologist satisfaction with the care their patients have received. Patient satisfaction is assessed by a satisfaction survey unique to patients attending the SMC and developed by the SMC staff.
Management

The oncology nurse, clinical pharmacist, and AOCNS® exercise considerable autonomy in assessing, planning, and implementing a plan of care to manage cancer-related symptoms (Oncology Nursing Society, 2008). Symptom management guidelines approved by the medical director at SMC are used to facilitate plans of care. Key personnel for the function of the SMC include a medical director, who provides medical oversight for the clinic; a clinical pharmacist, who provides expertise in planning, implementing, and evaluating a medicinal plan of symptom management; an AOCNS®, who performs physical, psychosocial, and functional assessments, develops a comprehensive plan of care, and provides patient education; and two nurses certified in oncology nursing, who perform assessments and implement and evaluate care given. A nurse administrator oversees the administrative function of the BCC and SMC. The nurse administrator and clinical pharmacist alternate being on call 24 hours per day, seven days per week. The interdisciplinary team initially included oncologists, certified oncology nurses, and clinical pharmacists; social workers and dietitians joined the staff on an as-needed basis to meet patient needs. The roles of the SMC staff are described in Table 1.

Staffing

The staff is composed of healthcare professionals with a vast array of skills and talents, all of which complemented each other. The collaborative effort of an oncologist, an oncology nurse, and a clinical pharmacist launched the SMC. Healthcare professionals who staff the SMC are already part of the organization, so their roles are expanded to include the SMC and they function in the extended roles with release time from usual activities. An AOCNS® joined the staff during the third year.

The SMC provides practicum experience for graduate nursing students, and pharmacy students and residents find the SMC to be a valuable learning experience as they are able to provide medication information to patients firsthand. As students from multiple disciplines participate in the care given at the SMC, they observe the valued outcome of collaborative practice in terms of patient outcomes and their own professional development.

Financial Plan

Operating revenue, expenses, cash-flow patterns, and application of nonoperating funding were expected to be sensitive to variations in projected levels of revenue and staffing. The clinical pharmacist and AOCNS® explored the potential to bill for services. Revenue obtained from Medicare is based on a facility charge. The only charge for services is when the physician examines the patient. Reimbursement for professional services for the clinical pharmacist, oncology nurses, and AOCNS® have been explored. The current operating loss is absorbed by University Hospital as a service provided to the community.

Clinic Procedures

After a referral is made by a physician at BCC, the clinical services coordinator schedules an appointment for the patient. All appointments are spaced 20 minutes apart with a total of 8–12 patient visits per morning. The actual time a patient is seen in the SMC is much longer than 20 minutes; members of the multidisciplinary team see the patient independently and, consequently, multiple patients can be accommodated simultaneously. Patient contact information, insurance information, and identification are obtained during registration. Patients are taken to the clinical area, where vital signs and weight are obtained and the patient is given assessment forms to complete. The oncology nurse then reviews the patient self-assessment forms. During the first visit to the SMC, a pain management agreement is reviewed with the patient and signed by the nurse and patient. A quality-of-life form (the Functional Assessment of Cancer Therapy-General version) is completed and evaluated at the first visit and every three months after (Fairclough & Cella, 1996). This nursing assessment of the patient is followed by a review from the clinical pharmacist or pharmacy resident/student of current medications with the patient and a focused physical examination and comprehensive assessment of identified pain and symptom complaints with the AOCNS®. When indicated, the social worker or dietitian assess the patient. Once all of the assessments are completed, the team comes together and reviews the findings. The pharmacist and AOCNS®, with input from the oncology nurses, make a recommendation for treatment. The plan is then presented to the medical director. The medical director occasionally assesses the patient but, more commonly, provides consultation. Urine drug screens are randomly conducted, particularly if drug diversion is suspected. The plan for treatment is reviewed with the patient by the AOCNS® or clinical pharmacist and prescriptions are given to the patient during all visits. Education about medication is provided by the clinical pharmacist and the oncology nurses. The AOCNS® or clinical pharmacist complete written medication instructions, which are then given to the patient and a copy is placed in the medical record. A follow-up appointment is made based on the clinical assessment and patient’s response to treatment. If the visit is a patient’s first to the SMC, an information packet is given to that patient containing a pamphlet on pain control in the ambulatory setting, information about constipation, contact information for the clinic, a copy of the completed pain contract, and a pamphlet about fatigue, depression, and other cancer-related symptoms. At the end of each visit, the clinical services associate places a copy of the progress note in the referring oncologist’s mailbox (or sends via fax).

The on-call oncology nurse or clinical pharmacist are available to handle urgent patient requests during nonbusiness hours. Changes in treatment occasionally need to be made prior to the follow-up appointment. The need for communication among team members, during and after clinic visits, as well as during and after normal business hours, is important for the success of the clinic and for patient outcomes.

The treatment goal for patients is to reduce cancer-related symptoms and is determined in collaboration with the patient. Once that goal is obtained, the patient is referred back to the treating oncologist with the recommended plan of care. Patients occasionally are discharged from the SMC either by their own choice or because the patient violated the pain contract by obtaining...
Table 1. Roles of the Symptom Management Clinic (SMC) Staff

<table>
<thead>
<tr>
<th>TITLE</th>
<th>RESPONSIBILITIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administrator</td>
<td>Facilitate staffing of the SMC. Address administrative issues. Consult with referring physician and SMC staff as indicated. Receive patient calls and consult with referring physician and SMC staff. Participate on the advisory board.</td>
</tr>
<tr>
<td>Advanced Oncology Clinical Nurse Specialist (AOCNS®)</td>
<td>Perform focused physical examination. Provide comprehensive assessment of functional status, pain, and symptoms as reviewed with RN. Develop plan of care with the medical director and clinical pharmacist. Document plan of care in the medical record. See patient in follow-up.</td>
</tr>
<tr>
<td>Consultant</td>
<td>Gather information about patient outcomes and satisfaction. Facilitate quality monitoring of services provided. Plan for continued development of the SMC. Advocate for the SMC. Seek external funding. Participate on the administrative board.</td>
</tr>
<tr>
<td>Medical assistant</td>
<td>Review patient history in the medical record. Verify medications and allergies in the medical record.</td>
</tr>
<tr>
<td>Medical director</td>
<td>Provide consultation. Order additional diagnostic workup as indicated. Prescribe medication as appropriate. Discuss overall patient findings and plan of care with SMC staff.</td>
</tr>
<tr>
<td>Receptionist</td>
<td>Schedule the SMC appointment. Obtain appropriate referrals. Remind patients of appointment time one to two days prior. Schedule any additional referrals and follow-up appointments.</td>
</tr>
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Guideline Development

The staff of the SMC follow collaborative practice protocols when managing the symptoms of patients with cancer treated within the SMC. The protocols consist of algorithms based on evidence-based literature to provide structure for the management of patients’ symptoms. A thorough search of the literature was performed, including a search for any nationally recognized guidelines for the management of cancer pain (American Pain Society, 2008; National Comprehensive Cancer Network, 2010). Guidelines were reviewed, assessed, and adapted to the needs of the patients in the SMC. In addition, formulary issues were taken into consideration as the treatment guidelines were developed. The first treatment guideline developed was for the management of chronic cancer-related pain. Additional treatment guidelines were similarly developed for depression, hot flashes, fatigue, nausea and vomiting, diarrhea, constipation, and insomnia.

Medication Reconciliation and Patient Teaching

The Joint Commission (2011) identified medication reconciliation across the continuum of care as a National Patient Safety Goal. Not only does medication reconciliation improve patient safety by reducing medication discrepancies and possible drug interactions, it can serve to provide patients with a coherent understanding of their medication regimens. From inception, the staff at SMC recognized the importance of reviewing and reconciling all current medications at each visit. Providers review all medications (prescribed and over the counter) with the patient at the beginning of each visit, taking special care to clarify when and how each medication is being taken. Once a symptom management plan is formulated, the patient is provided with a written list of all medications, including the route, dose, amount, times, and specific instructions.

Even with a comprehensive, evidence-based pain management regimen, the effectiveness of treatment largely depends on the patient’s understanding of how medication works and how to properly take medication. Providing patients with written and verbal information about their medication promotes safety and allows clinicians to better evaluate responses to the pain regimen.

Opioid medications are frequently prescribed in the SMC because patients with complex pain management needs often are among the referrals. Because of legitimate concerns about the abuse
and diversion of opioid medication (Olsen & Alford, 2006), clear communication about behavior expectations and careful monitoring for aberrant behaviors is part of the pain management plan. Gourlay, Heit, and Almahrezi (2005) recommended that a universal precaution approach be used (i.e., requiring the same precautions for all patients to reduce mistrust between patients and providers and, by avoiding assumptions, provide a more effective mechanism for identifying abuse in all patients). For this reason, the SMC requires that all patients read and sign a pain management agreement, which outlines behavior expected from patients and providers, risks of treatment, methods of monitoring for abuse, and consequences of inappropriate behavior. In addition, all patients are asked to submit urine for toxicology testing at the first visit and randomly thereafter. A key component of urine toxicology testing is to gather a detailed medication history, including the date and time of the last dose taken. Although urine toxicology testing has limitations, such as the possibility of false-positive results, a careful medication history and repeated testing can help determine whether patients are taking prescribed and not illicit medications.

Conclusion

The SMC is much like a three-legged stool in that all three legs needed to be intact and functional to provide support and patient care. The three legs of the SMC are the support services provided by the medical director, the oncology nursing and pharmacy staff, and the administration. Dedicated physician involvement in the SMC is critical for the medical oversight of the clinic. In addition, the medical director facilitates physician referrals to the clinic. Referring oncologists appreciate the responsiveness of the SMC; assistance with time-consuming, complex management of patient symptoms; and real-time communication of the plan of care. The oncology nursing and pharmacy staff are devoted to quality of patient care and the sustained functioning of the SMC. The structure of the SMC provides patients with the full benefit of an interdisciplinary team by tapping into the unique skills and competencies of the oncology-certified RN, the AOCNS®, and the pharmacist within each discipline’s scope of practice. The interdisciplinary team is on the front line of developing needed treatment guidelines and providing individualized patient care to a diverse population. Symptoms not routinely addressed (e.g., sleep, anxiety, depression) in a typical oncology visit are identified and treated in the SMC and, therefore, are included in the guidelines.

The administration has focused on cost effectiveness: The SMC was not profitable but did provide service to the community in keeping with the mission of the BCC; service to the community of pharmacy, nursing, and social work students learning how care can be provided collaboratively; and service to the institution by offering expertise to support members of the healthcare team. The SMC has evolved as the cost effectiveness was addressed by the administration. To date, a physician or resident examines each patient to bill for services rendered.

The outcome of the SMC is patient satisfaction with the management of their referred cancer-related symptoms. The collaborative and interdisciplinary approach facilitates referral to appropriate services within the institution and community.

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