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Models of Telephone Triage; The Use of
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Assessments

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Preface

Cancer therapy is ever changing. Clinical research has provided additional agents to the cancer treatment armamentarium. However, with the promise that these new agents bring, they also bring a number of adverse events requiring close patient management to provide maximal patient benefit. Nursing research and emerging evidence-based nursing practice guidelines are available to enhance patient outcomes from nursing care. Oncology nurses are challenged to keep abreast of the changes to ensure quality patient care.

Additionally, technologic improvements with the introduction of video telecommunication via handheld smartphones or Internet communication sites such as Skype™ will introduce a new dimension to telephone triage. The ability to view the patient during a telephone call can enhance the nurse’s ability to assess the patient’s problem. It is the opinion of the editors that video and voice triage will become commonplace in the years to come. However, in 2011 this technology has not been routinely embraced and is not discussed in this second edition.

This second edition has been expanded to include new chapters addressing antibiotic therapy problems, bone loss, and hemoptysis. This textbook is a result of efforts of professional nurses from across the United States who synthesized the most up-to-date scientific information related to triaging patient problems. The authors of each chapter have carefully reviewed the literature and updated the content from the first edition. Importantly, the chapters have been updated to incorporate evidence-based nursing practice and the latest in nursing policy regarding telenursing and cross-state licensure concerns. The information in this textbook will provide the professional oncology nurse with updated tools to improve patient care through quality telephone triage.
Acknowledgments

A special thank you to all of the nurses who contributed their efforts in updating the telephone triage protocols provided in this text. The time, energy, and expertise provided by each and every contributing author exemplifies their dedication to ensuring quality patient care, their collegiality, and their willingness to advance oncology nursing practice. A special thank you to Susie Newton for her collaboration on this text and for her ongoing dedication to the profession of nursing and her drive to educate oncology nurses with her eye always on improving patient care.

Barbara Sigler from the Oncology Nursing Society (ONS) was my first nursing mentor and continues to encourage me to strive further. She was instrumental in the launch of the telephone triage nursing texts for oncology and for otorhinolaryngology nurses. Without Barb’s ongoing support and the outstanding support and guidance of the ONS team, especially Lisa, Judy, and Amy, this second edition would not be possible.

I would like to thank my family—Kenny, the love of my life, and our children and grandchildren—my love for them has led me to realize that the actions of one affect many and inspired me to work on projects such as this text. I hope this textbook will help professional oncology nurses take another step to improve their care to patients and their families.

—Margaret (Margie) Hickey

A very special thank you to my husband, Jack, who supports me and motivates me no matter how stressed and grumpy I become. To our three boys, Alex, Casey, and Jackson, all of whom, in their own ways, inspire me and are patient through my many hours in the office. Also thanks to my mom, Dolores Maloney, who taught me to persevere and always cheers me on.

ONS has a wonderful, hard-working editorial staff that makes our work look fantastic and pulls it all together. Special thanks to Barb, Lisa, Judy, and Amy for their guidance and for making the second edition a reality. And to all of the nurses who assess and manage patients’ problems and concerns over the telephone. You are in a unique position to positively affect patients’ outcomes and their lives. Keep up the good work!

—Susan Newton
Trends in healthcare financing and changes in care delivery have shifted care from inpatient to outpatient settings. This has resulted in a demand for RNs in the ambulatory care setting. The U.S. Department of Health and Human Services’ 2008 registered nursing survey found that while 62% of RNs work for hospital employers, 17% of RNs work in ambulatory settings either for hospital employers or others (U.S. Department of Health and Human Services, 2010). Although this shift in care delivery settings is a general healthcare trend, it also clearly reflects today’s setting for care of patients with cancer.

This change of patient care delivery setting has challenged the traditional nursing role. The inpatient setting continues to be the primary location of basic nursing education, yet during their career, many nurses find themselves practicing in the outpatient setting. Nurses often transition to ambulatory care expecting to use the same knowledge and skill set learned in their acute care practice. Although some competencies may be transferable, the expertise and skills needed by acute care nurses and ambulatory nurses are not the same (Swan, 2007). Nursing care in the outpatient setting allows limited time with the patient, and the focus shifts from the nursing-based model of practice to the medical model.

The telephone is an essential and effective means of communicating and sharing information and is an important tool for the ambulatory care nurse. Since the invention of the telephone in 1876, it has been used as a tool to seek healthcare assistance. Some accounts of Alexander Graham Bell’s first recorded telephone call claim it was for medical help after he spilled sulfuric acid on himself (WGBH Educational Foundation, n.d.). Telephone triage and providing telephone advice are essential skills for the ambulatory nurse and are a new skill set for nurses moving into the ambulatory setting. Regardless of the nursing specialty (e.g., pediatrics, otolaryngology, oncology), nurses in outpatient clinics often find themselves performing assessments and providing triage and advice over the telephone. Telephone calls from patients are a major component of oncology outpatient nursing practice. The work of responding to the telephone calls of patients and families must be considered when establishing nursing roles and responsibilities, as well as when developing a budget for the outpatient/ambulatory center.

Telephone assessments and triage have become an integral component of ambulatory care delivery, improving appropriate access to care as well as a means to control healthcare costs. One large study completed in 2004 explored the impact of an after-hours pediatric call center in Denver, Colorado, surveying 8,980 callers. Results showed that 49% of the callers would have sought emergent care prior to their call, but only 13.5% of these callers were identified by the call center as needing urgent disposition. Furthermore, 15% of cases in which the parents would
have stayed at home were given an urgent disposition by the nurses. Provided the advice was followed, the estimated savings based on local costs was $42.61 per call. This study illustrates the importance of telephone triage and advice in improving patient care by assisting callers in making the appropriate decision to seek emergent care when needed and the resulting financial savings to the healthcare system (Bunik et al., 2007).

The care provided needs to be individualized for the types of calls received and the patient and his or her problem. Mastery of telephone triage is a difficult yet necessary skill for the outpatient nurse. Office triage nurses must quickly become knowledgeable about the patient, including his or her current and past medical history and social situation. Telephone assessments require the nurse to be experienced in the nursing specialty with an expert knowledge base of the usual disease states or conditions and treatment regimens. The nurse must possess excellent communication skills that will allow quick establishment of rapport and completion of an accurate patient assessment that is limited to auditory clues alone (Derkx, Reithans, Knotntnerus, & Ram, 2007).

Oncology nurses are especially challenged in meeting their patients’ needs over the telephone. A nursing assessment of a patient with a cancer diagnosis can be quite complicated. The primary diagnosis, as well as side effects from treatment, can result in a variety of symptoms. The nurse may be taken off guard by the patient’s telephone call, as it can occur at any time. The patient’s medical record with the complete medical and cancer history and treatment plan may not be available when the nurse first responds to the call. (Tip: Have the secretary/receptionist locate the medical record prior to transferring the call to the triage nurse.) The complex patient assessment is made even more difficult when the assessment is performed over the telephone because the nurse is unable to visually observe or examine the patient. This is a significant challenge, as visual messages and nonverbal communication account for up to 55% of the impact in a face-to-face patient assessment (Car & Sheikh, 2003).

Nurses are direct care providers. They are educated and practice in settings where they use their senses when assessing and caring for patients. As nurses gain more experience, they assimilate and process information through their senses so rapidly that they often are unaware of individual thought processes. This is commonly described as intuition or a gut feeling. Regardless of how the nurse defines this ability, the thorough nursing assessment, including sensory observations, allows the expert nurse to make prompt and accurate decisions. This intuition often is lost when the assessment is performed on the telephone because of the lack of sensory input. The nurse cannot see, touch, or smell and must rely solely on verbal and listening skills. Furthermore, the nurse may be communicating with a family member or friend who is attempting to describe the patient’s complaint.

It is not surprising that telephone triage can be a daunting task for an oncology nurse unless the nurse is well prepared. A systematic process, including written protocols or guidelines, complete and concise documentation, and processes within the busy practice setting, allows the nurse to give the required time and attention to the patient’s call. Preparedness requires an in-depth understanding of on-
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cology diagnoses, treatments and their side effects and management, and excellent assessment and telephone communication skills. Nurses with years of experience and skill in telephone assessment and communication may develop a “telephone intuition” that allows them to ask a few pointed questions to quickly get to the root of the problem. They are able to hone in their assessment with both their knowledge of the specialty and their knowledge of the patient. These nurses will listen “between the lines,” focusing not only on the patient’s words but also the tone of voice. The expert telephone nurse can quickly identify the patient’s anxiety, pain, or other symptoms, such as shortness of breath. However, for nurses who have not yet gained these skills, few resources are available.

The goal of this book is to provide useful tips for oncology nurses as they develop telephone triage or telephone nursing practices in their clinical settings. To date, no other text has addressed the special needs of patients with oncology problems or the special skills required by the oncology telephone triage nurse. The authors hope this book will help both expert and less experienced nurses.

The purpose of this text is to provide “how-to” tips for telephone assessment, communication, and documentation, as well as for the telephone triage process, including a discussion of legal concerns and sample models of practice. The telephone guidelines and protocols are symptom based and were selected to address the common complaints of patients with cancer. These protocols offer a basic structure for handling telephone calls in an outpatient setting while providing continuity of care for the patient with cancer.

This text is designed to be a resource for oncology nurses who are learning the telephone nursing role. The expert nurse will find this text a valuable resource to be used when educating newer nurses and as a guide in how to develop a formalized telephone nursing practice in the clinic. The symptom-related protocols will assist the expert nurse as calls arrive with complaints that he or she has not handled in the past.

The following chapters will provide tips to improve telephone communication and a systematic approach to performing a telephone nursing assessment; information on legal issues and concerns; a discussion of telephone triage practice models; and an exploration of the history of telephone triage. Symptom-focused telephone protocols or guidelines are included to direct oncology nurses in the development of guidelines in their practice settings. It is essential that these protocols are not implemented without the review and approval of the physician or physicians who manage the patients in the practice. These telephone protocols are written to serve as a guide to nurses to meet the specific needs of their oncology patient population.

Oncology nurses from across the United States have contributed these protocols in an effort to help other nurses and improve patient care. Each protocol is credited to the nurse or nurses who were responsible for submitting a protocol that was used, at least in part, in the development of the published protocol. Thanks to each of these nurses who were so kind to share their expertise. This text could not have been accomplished without the sharing spirit and collegiality of oncology nurses dedicated to improving the care of patients with cancer.
INTRODUCTION

REFERENCES


Overview

Margaret Hickey, RN, MSN, MS, CORLN

Telemedicine describes the provision of medical care across distance using electronic means. Historically, telemedicine centered on consultation or other situations in which a licensed physician is in direct contact with another licensed physician. Telenursing is a subset of telemedicine. The National Council of State Boards of Nursing (NCSBN, 1997) defined telenursing as “the practice of nursing over distance using telecommunications technology” (p. 1). The International Council of Nursing (ICN) further expanded the definition of telenursing to refer to the “use of telecommunications technology in nursing to enhance patient care. It involves the use of electromagnetic channels (e.g., wire, radio, and optical) to transmit voice, data, and video communications signals. It is also defined as distance communications, using electrical or optical transmissions, between humans and/or computers” (ICN, 2009).

The most typical pattern of telenursing is where the nurse is in direct telephone contact with the patient or caregiver. Telephone nursing care involves the establishment of a nurse-patient relationship and is facilitated by the nursing process. The nursing process is an interactive problem-solving process used to give organized and individualized patient care. The nursing process involves assessment with data collection, identification of the problem, planning, implementation, and evaluation.

Telephone nursing can be divided into two services: health advice and health information. Telephone triage is a means to provide health advice. The nurse addresses the caller’s needs, such as symptom management, medications, or wound management, and provides specific health advice. Communication is initiated to provide triage (i.e., referral and/or recommendations to help address the caller’s healthcare needs). Health information is nursing care provided to help the caller obtain information about a health issue, such as availability of health promotion programs or community services. Communication is initiated with a focus on empowering the caller to self-manage his or her health (Association of Registered Nurses of Newfoundland and Labrador, 2002).

Nauright, Moneyham, and Williamson (1999) held two focus groups of nurses involved in telephone triage and consultation. The goals of the focus groups were to examine the evolving role of nurses in telephone triage and consultation, identify and describe issues that affect their practice, and discuss the implications of this emerging role on nursing practice, education, and research. The focus group included nurses who staffed health maintenance organization (HMO) and hospital call-in advice lines from two states. They were asked to describe what they did in their role as telephone triage nurses. These nurses described the three major activities of telephone triage as educating patients, advocating for patients, and connecting patients with needed resources. Note that they did not describe their role...
in the true sense of triage (i.e., sorting patients into urgency categories based on their injuries or symptoms) but rather as nursing care provided through a new venue—the telephone. The nurses included in these focus groups did not come from oncology offices; however, oncology nurses would most likely describe their role in much the same way.

Telephone nursing has evolved over the decades. Telenursing first came onto the healthcare scene during the 1960s. During that decade and the next, telephone nurses became gatekeepers for several HMOs. Nurses screened calls hoping to eliminate unnecessary office visits and to encourage self-care at home. Telephone triage protocols and on-the-job training often were provided in this setting, where call volume was typically very high.

In the 1980s, fierce competition arose among hospitals, forcing public relations with the community to become a major marketing strategy. Healthcare marketers saw the potential for “Call a Nurse” initiatives to provide a community service while enhancing the hospital’s image. These nurse call lines usually had toll-free numbers that were extensively marketed. Telenursing in these call centers provided health information rather than triage and advice. The call centers also served as a means of increasing referrals to in-house programs, services, and physicians. The nurses provided health information and assisted patients with referrals and maneuvering through the healthcare system.

The era of managed care arrived in the 1990s and has continued into the 21st century. Although managed care has taken much of the blame for the problems in today’s healthcare system, the concepts of care management and telephone triage have emerged as a means to provide service and maximize patient access to care. Access and appropriate use of healthcare resources are two of the critical focuses inherent to managing patient care. Access to care includes not only clinic visits, diagnoses, and treatments but also advice, health information, and counseling. Telephone nursing and telephone triage have emerged as a means to provide services that use new technologies to accommodate and maximize access. Today, nurses act as gatekeepers, and they provide advice and information to educate and empower patients via telephone. Telenursing has become a common practice for nurses in today’s healthcare delivery system.

The efforts of health plans to balance service quality with cost control also have spurred rapid growth in telephone nursing advice services. It was during this era of managed care that the term telephone triage began to appear in MEDLINE® indexes, giving credence to this new subspecialty.

The term triage is derived from the French verb trier, which means “to sort.” Medical triage refers to the act of “sorting” patients into urgency categories based on their injuries or symptoms. The concept of medical triage began during World War I in France. It was designed to save the wounded and to not waste resources on the soldiers with fatal injuries. The NATO Standardization Agency (2009) defined triage as “the evaluation and classification of wounded for purposes of treatment and evacuation. It consists of the immediate sorting of patients according to type and seriousness of injury, and likelihood of survival, and the establishment of priority for treatment and evacuation to assure medical care of the greatest ben-
efit to the largest number” (p. 2-T-8). More commonly today, face-to-face triage is performed not on the battlefield but in emergency departments (EDs). Triage skills and the term *triage* extend to the telephone in EDs and ambulatory clinics across the country.

EDs receive calls and visits that encompass all levels of acuity and a full spectrum of problems. Triage occurs in the ED both face to face and on the telephone. Although similarities exist between the triage process occurring in a face-to-face visit in EDs and on the telephone, there are several differences. The goal of the ED triage assessment, such as the triage assessment performed on the battlefield, is to determine how quickly the patient needs to be treated by the ED staff. ED triage physically occurs in the direct care setting. The nurse uses the nursing process to guide triage decisions. The nurse’s assessment is aided by the ability to interview the patient and/or family member and examine the patient. The nurse is able to see, touch, listen, and smell during the examination. Additionally, in the ED setting, the nurse is able to record key physical parameters, such as temperature, pulse, respirations, and blood pressure. Telephone triage lines often are managed and staffed by ED employees and located in or near the department. Emergency nurses possess a broad knowledge base and are skilled in rapid patient assessment. They are accustomed to triaging children and adults who have a wide variety of healthcare problems and cultural differences. On the telephone, the ED nurse is challenged with making decisions regarding the patient acuity and disposition based only on the spoken word.

Telephone triage characterized the expanded role for nurses as an important tool for patient education and advocacy. Telenursing has drawn the attention of the state boards of nursing. NCSBN (1997) addressed telephone nursing practice in a position paper, which conclusively stated that telenursing constitutes nursing practice. The argument by opponents of telenursing was that telenursing does not include hands-on care and that telephone triage nurses commonly use physician-approved protocols for reference; therefore, telenursing was, in fact, not nursing practice. Nurse practice acts in all states define nursing more broadly than just hands-on care, and a consensus was reached by the boards of nursing that a nurse using the knowledge, skill, assessment, judgment, and decision making inherent in nursing education and licensure is, indeed, practicing nursing. The American Academy of Ambulatory Care Nursing (AAACN) has recognized the professional nurse (RN) as the appropriate provider of telehealth nursing services (AAACN, 2007). The nursing process is clearly demonstrated in the provision of patient care over the telephone. AAACN (2007) has developed telehealth nursing practice standards; standard IV focuses on the use of the nursing process in telehealth nursing practice.

Today, telephone triage is a systematic process designed to screen the patient’s symptoms for urgency and to guide the patient to the appropriate level of care in the appropriate time frame based on a verbal telephone interview alone—listening to and talking with the patient or patient surrogate. The nurse must form an estimate of the problem and identify a working diagnosis or impression. He or she then provides the patient or surrogate with direction to either seek care at an ED.
or clinic or remain at home. If the patient is advised that he or she does not need urgent care, clear instructions are given on how to treat and continue to monitor the problem at home, as well as when to call again or seek immediate care. The nurse may find it necessary to make referrals to other services and community resources. The term telephone triage has come to encompass the broader concepts of telephone health advice. The key component of telephone triage is to triage the call. However, the nurse also provides advice, information, and patient education. The advice given may include recommendations for care to be provided at home, instructions regarding when to seek medical help, and referral to the appropriate healthcare facility.

Much of the literature and research to date has focused on triage nursing as it is practiced in freestanding call centers or in EDs. This explains the common use of the term telephone triage to describe telephone nursing. Wilson and Hubert (2002) described telephone triage nursing as “telephone-mediated care.” The authors believed this term better described the nursing care provided by nurses to patients, including advice, homecare instructions, psychosocial support, and making referrals and appointments. All of these tasks facilitate continuity of care and the nurse-patient relationship.

Telephone medicine as part of the healthcare system has been the object of study since its inception. Multiple researchers have examined the volume of patient telephone calls to physicians both during and after hours. To date, these studies have been conducted in ambulatory settings, including EDs, family practice clinics, pediatric clinics, and obstetrics-gynecology clinics. Regardless of the settings, the findings have been uncannily similar. Researchers repeatedly have found that telephone calls account for a large volume of work for physicians and their staff in outpatient clinics. Telephone calls may account for 10%–26% of all patient contacts by physicians (Hannis et al., 1996; Mendenhall et al., 1978; Perkins, Gagnon, & DeGruy, 1993). Mendenhall et al. (1978) identified approximately 45% of the calls to be symptom related, and about half of these calls could be managed over the telephone. Other researchers studied after-hours calls and found that up to 99% of all pediatric population and 83% of all mixed patient population calls could be managed over the telephone (Greenberg, 2000). A study by Hildebrandt and Westfall (2002) collected after-hours calls to a family practice clinic for one year. In this study, 69% of the calls were for clinical issues. Of these, 15% of the concerns were regarding medications, and 2.8% were about laboratory results. The remaining calls dealt with patient complaints or symptoms. The calls came not only from the patients (33%) but also from family members or caregivers (31%) or from other parties, such as a nurse, pharmacist, or unidentified party (36%). Although these studies have been conducted in family practice clinics, the results are similar to the call patterns in other outpatient settings.

Multiple researchers have examined the quality of telephone care because of the high volume of telephone medicine calls and the integral role of the telephone triage nurse in an ambulatory setting. Many of these studies, which were published around the same time (Johnson & Johnson, 1990; Margolis et al., 1987; Sloane, Egelhoff, Curtis, McGaghie, & Evens, 1985; Wood, Littlefield, & Foulds, 1989;
Yanovski, Yanovski, Malley, Brown, & Balaban, 1992), noted that when physicians performed telephone medicine, more time was spent giving instructions than listening to the patient. Overall, the conclusions from these studies were similar in that assessments were inadequate because of insufficient talk time.

Telephone communication is limited by the lack of nonverbal cues, which account for at least 55% of nurses’ face-to-face assessments. This limitation combined with time pressures and abbreviated talk time create significant challenges (Car & Sheikh, 2003). These are only a few of the trials and tribulations facing today’s busy medical clinics.

Malpractice costs are soaring. Good communication can be essential in limiting malpractice cases. Negative patient outcomes combined with poor physician-patient communication are the two key ingredients for a malpractice suit. One study found that primary care physicians who never had a malpractice suit spent an average of 3.3 minutes more with their patients compared with primary care physicians who had faced a lawsuit (Cascardo, 2002). Although increased time spent with a patient on the telephone or in the office is not a guarantee to preventing lawsuits, this study provides food for thought regarding a potential link between the time shared with patients and families and lawsuit prevention.

As physicians and other healthcare providers struggle to manage their time while providing adequate care for each patient, the volume of telephone calls during and after clinic hours can be overwhelming. The time demand of telephone calls has been described in multiple studies of physician practices. Physicians have been dissatisfied with the extra time pressures associated with the volume of calls during regular clinic hours and after hours (Fosarelli & Schmitt, 1987; Pitts & Whitby, 1990). It seems that physicians are faced with a conundrum: time spent engaged on the telephone seems to improve patient satisfaction, but time that physicians spend on the telephone distracts them from the time they are able to spend with patients in the clinic, which also improves patient satisfaction.

The volume of telephone calls during clinic hours is significant. One specialty headache clinic reported three calls for every clinic hour scheduled (Loder & Geweke, 2002). As noted earlier, most of the calls are legitimate, and many of them are focused on patient clinical concerns. These calls account for repeated interruptions of the physician and pull the physician away from the time he or she is able to spend with patients who have scheduled appointments. Another reason for physician dissatisfaction is that managing patient complaints over the telephone removes the physician and staff from providing billable services to patients in the office. Fee-for-service reimbursement for telephone encounters is not available from most third-party payers. Major payers specifically exclude telephone, e-mail, and fax communications from reimbursement.

Weymier (2003) recommended that physicians limit the number of interruptions from patient telephone calls during clinic hours by delegating telephone triage to the nursing staff. A sensible rule of thumb is to delegate tasks to medical personnel with a lesser salary than physicians but with enough medical expertise to perform the work safely and effectively. Nurses are capable of providing telephone advice and triage, applying the nursing process to the patient’s complaints. Not only
is this solution economically wise, but telephone nursing complements nursing responsibilities as well. Communication, patient education, and patient advocacy are nurses’ strengths. Pertin and Goodman (1978) compared telephone call management performed by pediatric nurse practitioners, pediatric house officers, and pediatricians and examined history taking, disposition, and interview skills. The pediatric nurse practitioners outscored both house officers and pediatricians and had significantly higher scores (p < 0.001) for interviewing skills.

This match is eloquently demonstrated in many settings. RNs have gravitated to the role of telephone patient management in response to patients’ needs rather than a planned role expansion. For the past 20 years, patients with cancer have been treated in outpatient settings with limited face-to-face contact—a drastic change from the prolonged inpatient stays of yesteryear. The patient with cancer and the family have multiple needs associated with the diagnosis, treatment, and psychosocial assessment that must be addressed. Telephone nursing or telephone triage is not an expanded role for nurses in the ambulatory setting; rather, it has become a role expectation.

Telephone nursing has been identified as a successful cost-reduction strategy. Greenberg (2000) studied telephone nursing in a pediatric clinic following up on 90 telephone calls to the clinic. Through surveys of the callers and the telephone nurses who handled the calls, Greenberg identified an estimated dollar savings of $2,360 for one month, with an estimated gross savings per call of $26.20. These savings were calculated from the actual dollars spent on health care less the estimated dollars that would have been spent. These estimated dollars were calculated from the healthcare expenditures that would have occurred based on the patients’ and nurses’ estimations if the patient had not interacted with the nurse on the telephone. As described in the Introduction chapter, a study of 8,980 calls to an after-hours pediatric call center found that telephone triage and advice resulted in estimated savings of $42.61 per call (Bunik et al., 2007). This study illustrates the financial savings to the healthcare system when the appropriate advice is provided by RNs via the telephone. However, perhaps more important is the advice that was given to the 15% of callers who did not believe the medical need was urgent when in fact the appropriate action was to seek emergent care (Bunik et al., 2007).

Patient satisfaction with telephone triage managed by nurses has been very good. In surveys of patients who called with clinical complaints, satisfaction with the telephone triage nurses in multiple clinical settings ranged from 87%–90% (Delichatsios, Callahan, & Charlson, 1998; Katz, Pozen, & Mushlin, 1978; Moore, Saywell, Thakker, & Jones, 2002; O’Connell, Stanley, & Malakar, 2001). Moore et al. (2002) and Greenberg (2000), in separate studies, identified the most common reason for patient dissatisfaction as the length of time it took to make contact with the nurse. Moore et al. (2002) also described a correlation between patient satisfaction and patient compliance to the instructions given. In this study, 88.2% of the patients were compliant with advice given, and the satisfied callers were four times more likely to be compliant than those who were dissatisfied with the results of their telephone call.
It is encouraging that numerous studies have found that patients are satisfied with nurse telephone triage. However, the success of telephone triage does not depend solely on patient satisfaction. It is imperative that the patient assessment is thorough and the information provided is reliable. Knowles and Cummins (1984) described the telephone calls that came to the ED as ranging from requests for information to calls concerning patient symptoms. The reasons for the calls varied, with 15% of phone contacts being administrative calls (e.g., requests for laboratory results) and 36% concerning routine obstetrics–gynecology, respiratory, and gastrointestinal symptoms. Requests for first aid information or questions regarding over-the-counter medications encompassed 25% of the calls. Forty-eight percent of calls were for minor problems, and only 1% of calls to the ED were for true emergencies.

Although only a small number of the calls were emergent, most of the calls were for legitimate health problems. Nonetheless, the ED nursing staff considered these calls to be interruptions to the more important work of direct patient care. The advice provided was informal, given without the use of protocols, and based only on experience. Interestingly, the reasons for telephone calls in this study were similar to the reasons identified by Hildebrandt and Westfall (2002) in their yearlong study of after-hours calls to a family practice clinic. The calls to the family practice clinic were for diverse clinical reasons, including requests for medication refills, for laboratory results, and to report patient-specific complaints. Although Hildebrandt and Westfall looked at family practices, and other studies examined the calls received in EDs, in the author’s experience, these types of calls are no different than the sort of calls received by the oncology nurse. Although some patient calls may be urgent, where the patient needs to be seen immediately, many of the calls are for prescription refills, to check on laboratory results, or to review home-care instructions following a recent cycle of chemotherapy.

A study reported by Isaacman, Verdile, Kohen, and Verdile (1992) examined the advice that ED nurses provided. A research assistant selected and telephoned 46 EDs for advice and presented a scenario that reasonably could have been interpreted as a patient experiencing myocardial ischemia. The research assistant called the ED reporting that her father was having “bad indigestion and heartburn.” If any questions were asked, she described the pain as a squeezing sensation in the chest associated with nausea and sweating. Nine percent of the calls were answered and managed only by ED unit secretaries. Fifty-six percent of the respondents failed to ask the caller any questions about the patient or the chief complaint. Only four ED respondents instructed the caller to call 911 and have the patient brought to the ED. The data suggested that telephone advice given by some EDs is not standardized and may be inadequate to the point of jeopardizing the welfare of the patient. Isaacman et al. (1992) recommended a formal training program and use of guidelines or protocols addressing the most common complaints to ensure appropriate triage of calls.

The next study was completed in a setting where protocols or guidelines were available, and yet problems still existed. Belman, Murphy, Steiner, and Kempe (2002) studied pediatric call nurses, exploring the consistency and reliability of
telephone advice provided. They studied 15 nurses and provided each one with 15 scenarios in which written guidelines were established. The telephone calls were tape recorded. The reliability of triage disposition was calculated: The mean agreement on triage disposition was 83% (range, 64%–100%) among nurses for individual scenarios; similarly, there was an 81% (range, 33%–100%) mean agreement between the disposition provided by the nurses and protocol dispositions.

When the audiotapes were reviewed to determine the reasons that the nurses erred by misinterpreting an urgent call as a nonurgent one, two disturbing themes emerged. The first was that the nurse did not follow the protocol when assessing the patient and did not elicit the necessary information to make the correct disposition. The second reason was that the information was available for the correct disposition but ignored by the nurse. Belman et al. (2002) concluded that even when written guidelines or protocols are available, it is key to develop quality assurance processes that monitor nurses’ communication skills and protocol adherence.

After reviewing the results of these studies, it is not surprising that researchers stress the importance of development of formal training in telephone management, written guidelines, and continued quality assurance to monitor this new role in nursing care. It is clear that nursing experience and observation of telephone triage are insufficient preparation. Nurses can telephone triage effectively and safely if they are well instructed, have access to high-quality protocols, and have performance evaluations monitoring the quality of the telephone communication and adherence to the protocols.

Systematic patient assessment is critical to the nurse performing telephone triage. An experienced nurse skilled in assessing patients and managing patient care may find the assessment process alien once the telephone is the only vehicle for patient management. The nurse continues to use the familiar nursing process; however, the approach to employing the process may change.

Assessment. The assessment is based on the telephone interview. The nurse must identify relevant information and recognize problems even when the patient is being evasive. Information available in the medical record, such as allergies, medications, and medical history, is integral in data collection. This information needs to be verified in the interview, as there may have been changes since the last visit. Although the caller is the patient one-third of the time (Hildebrandt & Westfall, 2002), it is recommended that the nurse speak directly with the patient regardless of who initiated the call. This gives the nurse an opportunity to listen to breathing and voice cues, such as slurred speech or signs of confusion. The nurse’s identification of the problem, working diagnosis, or conclusion is derived from the history, interview, and any objective symptoms.

Plan. Once the problem is identified, the urgency of the problem and the appropriate disposition are determined. The most effective decision makers consider the whole situation and not just the symptoms. Other factors such as age, gender, illness, recent treatment, and distance from care must be considered. The process needs to be interactive so that the nurse can determine the patient’s willingness and ability to comply with advice. For example, a nurse identifies a 32-year-old woman’s complaint of severe abdominal pain as requiring urgent care and rec-
ommends that the patient go to the nearest ED. The nurse failed to elicit that the woman has a three-year-old child at home, and no one is available to care for the child. Subsequently, the patient disregards the advice.

**Implementation.** Once the urgency is determined and referral is made, the nurse needs to work with the patient to set up an appointment and arrange appropriate transportation if it is necessary for the patient to receive a medical evaluation. The nurse must provide instructions to the patient, regardless of whether the problem requires the patient to be seen today or to monitor symptoms at home.

**Evaluation.** Before the call has ended, the nurse should review the plan with the patient and evaluate the caller’s understanding of the instructions and the patient’s intended compliance with the advice (Rutenberg, 2000). If it is deemed necessary, the nurse should schedule a follow-up call to evaluate the status of the patient.

Multiple authors, nursing organizations such as the American Nurses Association, and state boards of nursing repeatedly emphasize the importance of using guidelines or protocols for telephone triage. Standard protocols provide written guidance of questions that best elicit information from patients, as well as advice and disposition instructions for the patients.

This text provides examples of protocols designed to address common complaints of patients with oncologic conditions. Protocols do not stand alone; rather, they complement and support established policies and procedures. These protocols are designed to be a guide and should be closely reviewed by the experts in the department, including the RNs, nurse practitioners, and physician team responsible for the practice, and edited as needed to meet the needs of the patients seen in the oncology ambulatory center.

Policies required include telephone call processing and instruction in directing patients’ calls. Appropriate documentation of the calls needs to be outlined, and documentation forms should be developed to streamline the process and ensure that the needed information is captured. Policies and procedures need to be written to outline the actions to be taken by the nurse and physician and should include the communication process between the two. Finally, policies must ensure that patient confidentiality is maintained.

Protocols and policies improve the telephone nursing process. However, they do not guarantee quality telephone triage and improved patient outcomes. Telephone protocols are only as good as the nurses who use them. These protocols will never replace sound clinical judgment and critical-thinking skills. It is essential that while assessing a patient and the patient’s situation, nurses gather adequate information from the patient’s medical record, the patient, and other resources as needed. Telephone protocols serve as guidelines for nurses, especially less experienced oncology nurses, to aid them in the nursing process and decision making.

Telenursing has evolved over the years, and it will continue to change with the explosion of communication technology. The scope of telenursing is multifaceted, addressing triage, health advice, and information. The number of nurses practicing telenursing is increasing annually, as is the number of patients using the services available.
REFERENCES


Models of Telephone Triage

Susan Newton, RN, MS, AOCN®, AOCNS®

Although nurses have been utilizing the telephone to assist patients for many years, very little is available in terms of specific models of care for telephone nursing, referred to in this book as telephone triage. Telephone triage is a component of telephone nursing care; however, when the processes involved are discussed in this manual, they are collectively being referred to as telephone triage. Another term commonly used is telehealth nursing, which encompasses all types of telecommunication technology including the Internet, faxing, videoconferencing, and the telephone (Espensen, 2009). The practice of telephone triage is still in its infancy stages, and this is particularly true within the field of oncology (Anastasia, 2002).

The concept of triage originated during World War I. It was used to not waste resources on victims with fatal injuries. The concept of using the telephone to obtain medical advice dates back to around the same time the telephone was invented (Wheeler, 1993). Health maintenance organizations (HMOs) instituted telephone advice services in the early 1970s. A hospital emergency department (ED) initiated the first 24-hour telephone advice program. Since then, telephone triage has become a sophisticated practice and a common duty for nurses (Wilson & Hubert, 2002). However, the triage system used in an ED is quite different from what typically takes place in an oncology office or facility. Nurses performing telephone triage must be skilled in communicating, critical thinking, clinical skill and expertise, patient assessment, and evaluation.

Two recent studies have examined the scope of oncology calls received by outpatient oncology centers. Lucia, Decker, Israel, and Decker (2007) recorded the volume and topics of calls received. In a one-week period, this medical oncology office received 337 patient-related calls regarding 266 patients. Of note, the triage nurse was able to resolve the caller’s concern without further intervention in 87% of the calls. The study results also provided information on patient cost savings that are incurred due to avoiding office visits, ED visits, and symptom management–related visits, as these are primarily nurse-managed tasks and yet are not reimbursed.

In a study by Flannery, Phillips, and Lyons (2009), patient telephone calls were tracked over a four-month period in an outpatient oncology office. The sample included 5,283 calls received from 1,486 different individuals. This study found that for every 10 scheduled clinic appointments, 7 telephone calls were either made or received, demonstrating the importance of a designated telephone triage nurse and the need for experienced nurses performing this task.

Several theories or systems for performing triage are discussed in the nursing literature. These include
- The nursing process
- Problem-oriented system
• OLD CART assessment
• A communication model
• Informal systems or procedures developed by individual institutions or practices.

THE NURSING PROCESS

The nursing process is the model that the American Academy of Ambulatory Care Nursing (AAACN) recognizes as its model of choice. The steps include assessment, analyzing and planning, implementation, and evaluation.

Assessment is the first step of the nursing process. To perform an assessment on the telephone, the nurse should assess the entire situation, including not only what patients are saying but also how they are saying it (psychological status), how they are communicating (mental status), and what the environment is like (background noise). Let the caller explain in detail the purpose of his or her call. Assessment is the step in which data are collected to implement the triage process (Espensen, 2009).

Analyzing and planning are the next phases of the nursing process. They include utilizing the appropriate guidelines and resources, including discussions with physicians and other members of the healthcare team.

Intervention or implementation follows analyzing and planning. This includes applying actions such as teaching, coordinating resources, scheduling follow-up appointments, providing support, and any other necessary actions as they relate to using problem-solving skills to come to the correct solution for the patient.

Does the patient understand the plan that has been proposed? This is part of the final step, which is evaluation. Other questions to ask are whether the patient will comply with the plan and whether the patient is satisfied with the resolution of the concern. Determine what type of follow-up is necessary, and communicate this to the patient and/or the caregiver.

PROBLEM-ORIENTED SYSTEM

In the problem-oriented system, a series of questions are asked using the alphabetical nomenclature PQRST: the provoking factor (P), the quality (Q), the region (R), the severity (S), the time (T), and the treatment (T) for each symptom that the patient is reporting (Seidel et al., 2010). Specific assessment questions related to each topic may be

• P (provoking factors): What makes the symptom better? What makes it worse?
• R (region): Is the symptom focused in one area? Where is it located? Is it radiating to or from another region?
MODELS OF TELEPHONE TRIAGE

• S (severity): Use a 0–10 scale to have the patient rate the severity of the symptom. For example, if pain is the symptom being reported, then 0 is no pain and 10 is the worst pain the patient can imagine.
• T (time): When did the problem start? Is this the first time it has occurred? How long has it been happening?
• T (treatment): What has been done so far to treat the symptom? Has it been effective?

A system such as this makes it easy to remember what to ask the caller. In addition, it covers the full range of questions that allow for a thorough assessment.

OLD CART ASSESSMENT

A similar assessment system is a form of patient interview using the mnemonic OLD CART (Seidel et al., 2006). The letters stand for the following.
• O (onset of symptoms): When did it first occur? Have you experienced it before?
• L (location): Where on the body is the symptom occurring?
• D (duration): How long has the symptom been present? Does it come and go or is it constant?
• C (characteristics): Describe what the symptom feels like.
• A (associated factors): Are there any other signs and symptoms that occur with the problem?
• R (relieving factors): Is there anything that makes it feel better or decreases its severity?
• T (treatments tried): What have you tried to relieve the symptom? Has anything worked?

Similar to the problem-oriented system, this assessment helps the nurse remember what questions to ask by using a mnemonic. If this system is used, it may be helpful to post the mnemonic along with the questions to ask by the telephone as a reminder for the triage nurse.

COMMUNICATION MODEL

Effective communication is critical in telephone triage. The following are some proposed models of communication that can be useful in phone conversations (Wheeler, 1993).

Data collection phase: The nurse gathers data and listens while the patient states the problem. The nurse clarifies and asks open-ended questions to encourage the patient to further explain his or her symptoms.

Confirmation phase: This is when the protocol or algorithm is implemented. The nurse reiterates and states a nursing diagnosis in terms that the patient can understand. The patient confirms and redefines the symptoms if necessary.
**Disposition phase:** The nurse makes a disposition and gives advice. The solution is stated and explained. The patient listens and agrees to the plan. This entire process should average approximately five to eight minutes per call. Utilizing a communication model of practice, the nurse focuses on actively listening and asking open-ended questions.

**INFORMAL SYSTEMS OR PROCEDURES**

Many clinics institute their own policies and procedures for telephone triage. The necessity for such policies and procedures became apparent with the creation of nurse-managed telehelp lines or medical call centers. These phone services, typically offered by hospitals, are of benefit to the entire community. Anyone can call in with his or her symptom and be given advice as to how to handle the situation (Briggs, 2006).

Various resources are available to help facilities set up telephone triage services. Manuals also are available that contain a full range of protocols that can be used to assist patients who are experiencing various health-related problems (Dawson, Hickey, & Newton, 2011; Long & McMullen, 2010; Wheeler, 2009). It is imperative that nurses performing telephone triage assessments have the specific resources, protocols, and experience to adequately care for patients in their unique practice setting, such as otorhinolaryngology, obstetrics and gynecology, or general adult populations.

On an oncology-specific note, many of these services are offered by cancer centers. While outpatient oncology offices vary considerably as to how telephone triage is performed, larger cancer centers are more formalized, with training programs, job descriptions, competency assessments, and specific forms or documentation procedures. Appendix A shows an example of a comprehensive policy for telehelp service, and Appendix B is another example of a hospital’s policy. Appendix C provides sample telephone triage documentation forms.

**SUMMARY**

Several models of telephone triage are used in practice today. The nursing process is the best documented model, as it is the one recognized by AAACN. The problem-oriented system is less formalized. It focuses on specific questions used to assess the patient’s symptoms. The OLD CART mnemonic is similar in that it gives the nurse a way to remember how to fully assess the patient’s problem. Finally, the communication model suggests a method of collecting information in terms of phases of the communication process. It is important that each oncology office or physician practice selects a method or model that works best and that all nurses performing telephone triage are familiar with the model being used.
REFERENCES


The Use of Guidelines

Susan Newton, RN, MS, AOCN®, AOCNS®

Decision support tools are the guidelines that nurses use to make sound clinical decisions (Espensen, 2009). Various terms are used to describe the decision support tools. Guidelines, protocols, and algorithms are the most frequently used terms. Some may use the terms interchangeably; however, differences exist between each of these words.

Guidelines are what the term implies—a guide. Merriam-Webster defines a guideline as “an indication or outline of policy or conduct” (“Guideline,” 2011). It determines a future action. In telephone nursing practice, guidelines are the most flexible. They provide a foundation for how and what the nurse should investigate about the symptom that the patient is reporting. Guidelines can, and should, be adapted to the patient’s needs and individual reports.

By contrast, protocols are specific and meant to be followed exactly as written with no deviation (Wheeler, 1993). Protocols can be helpful when the steps to be followed for a specific symptom are clear and do not require modification. For example, if a patient calls reporting painful urination and a urine culture verifies a urinary tract infection, there may be a protocol to follow to treat this symptom. Protocols can be limiting for a broad range of symptoms; therefore, they may be used only for those symptoms where it is very clear what needs to take place every time that the symptom is reported.

Finally, algorithms use a step-by-step approach to solve a particular patient problem. They assume an “if this, then that” system (Wheeler, 1993). Problems associated with the use of algorithms include the assumption that the nurse has made the correct assessment to begin the algorithm and continues to assess the situation appropriately to arrive at the next step. In addition, algorithms are written with specific directions that are not meant to be varied or altered. For the purposes of this manual, symptoms will be addressed by the use of guidelines, which enable the most flexibility and adaptability for use in a broad range of practice settings (American Academy of Ambulatory Care Nursing, 2007).

The Agency for Healthcare Research and Quality (AHRQ) is the federal agency responsible for enhancing the quality, appropriateness, and effectiveness of healthcare services and access to such services. In carrying out this mission, AHRQ conducts research that develops and presents evidence-based information on healthcare outcomes, quality, cost, use, and access. Included in AHRQ’s legislative mandate is support of syntheses and widespread dissemination of scientific evidence, including dissemination of methods or systems for rating the strength of scientific evidence. These research findings and syntheses assist providers, clinicians, payers, patients, and policy makers in making evidence-based decisions regarding the quality and effectiveness of health care (AHRQ, 2011).
The National Guideline Clearinghouse (NGC) is an initiative of AHRQ. AHRQ originally created the NGC in partnership with the American Medical Association and the American Association of Health Plans (now America’s Health Insurance Plans). NGC’s mission is to provide physicians and other health professionals, integrated delivery systems, purchasers, and others an accessible mechanism for obtaining objective, detailed information on clinical practice guidelines and to further their dissemination, implementation, and use (NGC, n.d.).

NGC’s inclusion criteria rely on the Institute of Medicine’s definition of clinical practice guidelines: “Clinical practice guidelines are systematically developed statements to assist practitioner and patient decisions about appropriate health care for specific clinical circumstances” (Field & Lohr, 1990, p. 38). NGC has numerous guidelines to aid clinicians in clinical decision making when assisting patients with various clinical complaints over the telephone.

The Institute of Medicine (www.iom.edu) and AHRQ (www.ahrq.gov) have developed a list of criteria that guidelines should encompass to ensure quality guideline development.

1. Validity: If the guideline is followed, it will lead to expected outcomes or results.
2. Reliability and reproducibility: If given the same scenario, another set of nurses would produce the same results.
3. Clinical applicability: The guideline specifically states the populations to which it applies.
4. Flexibility: The guideline identifies exceptions to the recommendations.
5. Clarity: Clear language is used, as well as defined terms, with an easy-to-follow method of presentation.

Referral to the use of a guideline can be an important component of the nurse’s documentation of a patient’s call. The nurse may note, “Patient called reporting xerostomia. Followed xerostomia guideline. Patient to call the office tomorrow to follow up on progress.” The intervention and information needs to be clearly documented for each patient call and should be placed in the patient’s medical record. A process should be in place for verifying that follow-up has occurred.

When documenting a telephone patient encounter, the use of jargon and unclear abbreviations should be avoided. For example, LOC may be understood as “level of consciousness” or “laxative of choice.” An approved abbreviation list may be helpful in properly communicating the situation (Seidel et al., 2011).

Appropriate personnel within the office or institution, such as the physicians, nurses, and other parties involved, should approve guidelines. Guidelines should be updated as accepted practices change and as new data are considered standard practice. A review of guidelines should occur at predetermined intervals, such as annually. The date that updates or edits were made should be recorded on the guideline.

Some facilities have a policy that the patient’s physician signs each telephone documentation form that has been completed for a patient encounter. This system needs to be considered on an individual practice level. Some physicians may want to be informed of each patient encounter, and others may leave it up to the nurse.
to decide which encounters need to be reported. If the physician gave specific orders or instructions, the physician should sign off on the documentation form or make a notation within the electronic medical record.

Another common practice within individual offices is to create check-off sheets out of the guidelines that are used. The guideline is typed with check boxes at the end of each step to demonstrate that the step has been completed (Anastasia, 2002). There is room to add comments for specific information about the encounter. Appendix D illustrates an example of an after-chemotherapy follow-up guideline that assesses the patient’s tolerability of the treatment. Storage space and cost of printing are two issues to consider when evaluating the use of such forms. Online access to the checklists is an option to cut down on the storage space of printed forms.

Most oncology centers are using electronic medical records (EMRs). There should be a consistent method of recording telephone encounters if an EMR system is in use. Typically, the EMR includes either an “ambulatory care note” section or a “chemotherapy note/phone message” section where telephone encounters are recorded.

Decision support tools such as guidelines are an integral piece in performing telephone triage. The guidelines themselves should be evidence based and approved by the clinicians who will use them. If advice given to a patient varies from the guideline, this variance should be documented, and appropriate clinicians should be consulted.

Exactly how guidelines are used will vary from each clinic or healthcare facility. However, policies should clearly state how guidelines will be used and followed by those working in that particular practice setting. It may be helpful to have a needs assessment of the patient in each chart so that general questions about the patient are listed. An example of such a guideline is in Appendix E. In addition, appropriate personnel training should be implemented and documented so that each nurse performing telephone triage is clear on the process and deemed to be proficient.

The benefits of using decision support tools include having a standardized structure for telehealth assessment, assisting in sound decision making on behalf of the nurse performing telephone triage, and legal protection, as the guidelines should be created based on standard-of-care evidence that is available for specific clinical conditions. Nurses performing telephone triage should always use decision support tools available regardless of their level of comfort or familiarity of the condition being reported.

REFERENCES


Tips on Performing Telephone Triage

Susan Newton, RN, MS, AOCN®, AOCNS®

GENERAL TIPS

The following tips may help the nurse to more effectively perform telephone triage.

1. Listen carefully to the caller. Do not assume that after a few sentences you are able to infer a differential diagnosis. The symptom should be heard in its entirety prior to formulating a plan of action.

2. Ask open-ended questions. This not only gives you the subjective information that you need, but it also allows you to assess the cognitive function of the person on the phone.

3. Collect enough information. The sample guidelines in this book will assist you in asking the proper questions based on the symptoms the caller is reporting.

4. Talk directly to the patient whenever possible. It is more accurate to obtain information directly from the patient versus a family member or friend.

5. Hear all of what the person is trying to say. Do not cut him or her off from explaining the reason for the call. Begin asking questions after the caller has explained the reason for the call.

6. Keep in mind that assessing a patient over the telephone is very different from examining a patient in person. Remember to ask specific, nonleading questions. Avoid the use of yes-or-no questions. Have the patient describe the symptom to you.

7. Because you cannot visualize the symptom, have the patient help you to “see” it. For example, have the patient measure the degree of swelling or the amount of drainage on a dressing. Also, determine if the symptom is new or worse than usual.

8. Because you cannot auscultate the patient’s lungs, have the patient cough for you over the phone if the symptom involves the respiratory tract.

9. Some patients may keep comprehensive records at home. Ask the patient if he or she has results of tests or information that you may not have access to. Be sure to ask if other specialists are involved in the patient’s care and if other specialists have been contacted in regard to this particular problem.
10. Assess for polypharmacy, including any over-the-counter medications and herbal remedies that the patient may be taking (Espensen, 2009).
11. Older adults may need more time on the phone to explain their problem and consider the questions that you are asking. They may need more time to process the information and formulate their response.
12. Avoid medical terminology or jargon. Be sure that you are speaking on a level that the patient can understand.
13. Some patients or family members may be calling for reassurance. These are important calls and need to be addressed.
14. Provide timely callbacks to the patient. You may want to establish an appointment time for a call or the best time of the day to call for routine needs.
15. If you must put the caller on hold, ask the caller’s permission to do so. In some cases, such as in an emergency or when using a cell phone, the caller may not give permission to be put on hold.
16. Do not eat, drink, or chew gum when talking on the phone. It is rude and disruptive to the caller’s concentration. Speak loudly and clearly enough to allow the patient to hear what you are saying.
17. Ensure that there is a private area in which to communicate with patients on the telephone. Patient confidentiality is critical. Not only is it an ethical and a legal responsibility, but if patients in the office see and hear you discussing other patients’ problems, they will be unlikely to call when they have a problem.
18. Summarize the content of the telephone encounter by asking the patient, “Please repeat back to me what we have discussed on this phone call.” This ensures that the patient understands and allows for clarification of any misunderstandings.
19. Ask the patient, “Is there anything that would keep you from doing what we have agreed upon?” This allows the patient to voice any concerns or may uncover barriers to implementing the planned action. For example, if the action is to call in a prescription for the patient, but the patient cannot afford to pay for the prescription, then you need to continue to problem solve.
20. Document clearly the events of the telephone communication. A nurse’s best defense against a malpractice claim is accurate, clear, and concise documentation (Espensen, 2009).
21. Ensure that a system is in place for evaluating the competency of each nurse who will be performing telephone triage. Reassess this competency annually (American Academy of Ambulatory Care Nursing, 2007).

**TIPS FOR TELEPHONE COMMUNICATION**

The telephone, although an important communication tool, limits communication significantly. Communication is the end result of the spoken word and nonverbal cues. According to the well-accepted Mehrabian communication model (Chapman, n.d.), effective communication is the result of verbal and nonverbal messag-
es. The majority of communication, 55%, is based on nonverbal cues, such as facial expressions, gestures, and eye contact. Thirty-eight percent is based on the way in which the words are spoken, such as the tone of voice and pitch. Only the remaining 7% of what is understood is taken from the actual words that are spoken.

When a nurse assesses a patient over the telephone, effective communication is challenged. Based on the aforementioned Mehrabian communication model (Chapman, n.d.), the nurse loses 55% of the message (i.e., the nonverbal cues), if not more because the nurse may not have the benefit of speaking directly to the patient. Frequently, it is not the patient who calls but rather a family member or caretaker who provides the information, making it more difficult for the nurse to assess the patient’s problem.

A common communication issue arises when patients use the telephone for constant interaction. Sometimes these patients are referred to as “frequent flyers.” It is important to assess the reason for the constant calls to the office and intervene appropriately. Is it an education issue? Does the patient or family need emotional support? Are they in need of socialization? It may be helpful to set limits on how much time you will spend on the phone with the person. For example, say, “John, I have 10 minutes right now to address all of your concerns.” You also may want to give the patient a specific time of day to call when you are typically less busy.

Be careful not to miss an important change in condition by assuming that the patient is calling again with no particular problem or issue. You may miss the one time that the patient is truly in distress (Espensen, 2009). Keep in mind that some patients may benefit from the services of a home health nurse or a visiting nurse if they are particularly uncertain about how to care for themselves.

**INTERVIEWING SKILLS**

Active listening is the key to a successful interview over the telephone. The nurse is at a disadvantage on the phone because the patient’s body language cannot be seen. Because of this disadvantage, the nurse must concentrate on what the patient is saying, ask pertinent questions, and resist jumping to conclusions.

The use of open-ended questions is critical when interviewing patients. When a question must be answered with more than a “yes” or “no” response, the nurse can gather more detailed information about the problem. In addition, the patient feels listened to, and trust and empathy are built between the nurse and the caller.

Encouraging the patient to share more information can help the nurse to better understand the essence of the problem. “Tell me more about the pain you are experiencing” or “describe your pain to me” are examples of requesting that the patient expand on the information he or she has reported. Ask the patient to describe the symptom that he or she is experiencing.

Restating is another tool used in effective communication. The nurse repeats back to the patient what he or she heard the patient say. For example: “It sounds as if you are in a great deal of pain because you rate it as an 8 on a scale of 1–10.” When using this technique of restating, the patient can recognize the nurse’s de-
sire to understand what he or she is experiencing, and the nurse can clarify information that he or she may have misunderstood.

Avoid using ambiguous words such as *often, sometimes, usually, and a lot.* The use of these terms may not give the nurse the precise information that is necessary. The goal is to obtain specific information about the symptom that the patient is experiencing without the use of leading questions. The following chart illustrates examples.

<table>
<thead>
<tr>
<th>Instead of:</th>
<th>Try:</th>
</tr>
</thead>
<tbody>
<tr>
<td>“Do you experience this pain often?”</td>
<td>“When was the last time you experienced this pain?”</td>
</tr>
<tr>
<td>“Are you sometimes nauseated after you eat?”</td>
<td>“What times of day do you tend to be nauseated?”</td>
</tr>
<tr>
<td>“Is there a lot of blood present?”</td>
<td>“How many times have you had to change the dressing? Is it completely saturated?”</td>
</tr>
</tbody>
</table>

It is important to recap the details of the call and to confirm the actions that will ensue as a result of the information that was gathered. Have the patient repeat the recommended intervention. Appropriate closure to the telephone call completes the encounter. To ensure that all of the patient’s concerns have been addressed, the nurse should ask, “Is there anything else that I can help you with today?”

**HANDLING ABUSIVE CALLERS**

If a situation arises where a patient or other caller becomes belligerent or abusive, the following steps may be taken.

1. Attempt to determine the nature of the problem.
2. Explain to the caller that you can better assist the individual if he or she is calm.
3. If the abusive behavior continues, tell the caller that you will discontinue the call.
4. Prior to discontinuing the call, instruct the caller that you are hanging up. Indicate that the call can be resumed when everyone is calm and appropriate behavior is resumed.
5. Notify the attending physician of the situation.
6. Document in the medical record the nature of the call and the action taken.

**PRIVACY ISSUES**

Nurses should attempt to verify the identity of the person with whom they are speaking on the telephone. There are several ways to do this. One method is to
specify a password on the patient’s record. Patients give a password on the initial visit, and the password is recorded in the their medical record. Each time a call is transferred to the office to discuss information that may be confidential, the password must be supplied. Family members and significant others who have been designated by patients as able to receive information on their behalf must be ready to supply the password before information will be given. Other methods of maintaining privacy are to have patients supply personal information such as their birth date, Social Security number, or mother’s maiden name prior to confidential information being shared.

Upon the patient’s initial visit, the chart should be marked as to whether the patient allows for information to be left on an answering machine or voice mail. A secondary number such as a cell phone number or emergency contact number should also be listed. Messages should never be left with children younger than the age of 18. If children consistently answer the phone and the patient is not available, the next of kin from the history record or admission form should be contacted.

Insurance companies and other providers frequently ask for confidential patient information. These requests should be submitted in writing, via fax or mail, using the company’s letterhead.

SUMMARY

Not every nurse will be effective at performing telephone triage. Typically, nurses either enjoy working with patients over the phone or they do not like it at all. One has less control over a situation where a patient cannot be seen or touched.

Effective triage over the telephone requires a superb communicator. The nurse not only needs to possess excellent clinical expertise but also needs to be able to listen carefully to the patient, decide what needs to be done, and carry through with the advice so that the patient is clear with the instructions. The tips listed in this chapter may be helpful; however, being a good communicator is the ultimate key to success in performing telephone triage.

REFERENCES


Performing Telephone Assessments

Susan Newton, RN, MS, AOCN®, AOCNS®

It has been noted that for every patient who is seen by a physician, four phone calls ensue (American Academy of Ambulatory Care Nursing [AAACN], 2007). This adds up to a large number of phone calls! It is important to educate patients about the types of problems for which they should call the office. An example of this would be giving patients who are receiving chemotherapy instructions to call the office if they have a temperature higher than 101°F (38.3°C). Effective use of telephone triage can increase patient adherence with their treatment plans and eliminate unnecessary visits to the clinic or emergency department (ED) and potential hospitalization.

Patients should be given a number to call to report symptoms or ask questions. They need to be informed of the process for calling the office after hours and on weekends. In addition, the nurse should clarify the types of calls that should be directed to the oncology office versus calls that should be directed to the patient’s primary care physician or another specialist.

Information needs to be collected about the patient and the symptom. Unlike ED triage nurses, oncology triage nurses are at an advantage because they already know their patients (Wilson & Hubert, 2002). Telephone calls to or from patients usually fall into one of three categories (Espensen, 2009):

1. Consultative
2. Follow-up

Consultative telephone calls involve giving information to patients or family members regarding laboratory results or results from procedures or scans. Included in these calls is the action plan, or what needs to take place as a result of the information given. Keep in mind all Health Insurance Portability and Accountability Act (HIPAA) regulations when giving this type of information. Patients must give permission for family members to receive information about them and should specify their names. A list of names of people who can receive such private information should be recorded in the patient’s medical record.

The nurse usually initiates follow-up calls to assess the patient’s progress or status. They may be performed after a test or procedure, a surgical operation, or the first course of chemotherapy that the patient receives. Follow-up calls can be made to check progress or effectiveness of previous interventions. Because of the volume of calls that an office receives, it may be more effective to instruct the patient to call back if the problem does not resolve.
**Surveillance** involves a review of the patient’s status. This is the category of the majority of phone calls received. An example is a patient or family member calling to report a particular symptom that the patient is experiencing. Active listening is critical for the triage nurse to fully assess the situation. Guidelines, such as those included in this book, are helpful to direct the conversation and ensure that appropriate assessment questions are asked.

It is important to note that licensed professional nurses should perform telephone assessments. The term *licensed nurse* is used rather than *RN* because of the large number of licensed practical nurses and licensed vocational nurses employed in outpatient physician offices. However, both AAACN and the American Nurses Association recommend that a registered professional nurse perform telehealth nursing services (AAACN, 2007). This is discussed in more detail in the Legal Concerns chapter of this book. Nurses performing telephone triage should be familiar with what their particular state board of nursing allows in terms of performing assessments.

Ideally, outpatient oncology offices that see a large number of patients with cancer should employ a nurse to primarily manage telephone calls from patients. If the volume of calls each day does not keep a full-time nurse consistently answering and triaging calls, this nurse could perform other duties in addition to answering phone calls. These duties may include teaching patients who are in the clinic, giving injections, reviewing laboratory results and radiology reports, and perhaps mixing chemotherapy. The volume of telephone calls to triage in some settings or offices may be high enough to justify more than one triage nurse.

If there is a full-time position for a nurse to perform telephone triage, this does not mean that the same nurse must be responsible for this activity every day. This duty is often rotated among each of the RNs employed by the clinic. There are pros and cons to the way this duty is assigned. In some offices, none of the nurses may wish to be the telephone nurse every day; however, they may enjoy the change of pace that this role offers. In other practices, a nurse may be pregnant or breast-feeding and may not wish to work in the chemotherapy area. In this case, telephone triage offers a safer alternative. Still other offices may have a nurse who enjoys the consistency of performing telephone triage every day of the week. The highest patient satisfaction is reported in the situation where the same nurse is triaging calls each day.

Clerical employees usually are the first to answer the telephone in an outpatient office. These personnel have minimal, if any, medical expertise and therefore should refrain from giving any advice over the phone. In the rare circumstance that the clerical employee has a medical background, this person is not being employed in such a capacity and should refrain from giving advice. For example, a receptionist who is trained as a medical assistant must only perform receptionist duties.

To streamline the large number of phone calls that are made to an outpatient oncology office, a clerical employee may screen the calls. When a patient or family member is calling with a particular symptom to report, the clerical employee should record general information such as

- Date and time the call is received
- Whether the call is an emergency and needs assistance as soon as possible or is nonurgent
• Name of the patient
• Name of the caller and relationship to the patient
• Phone number where the call should be returned and how long the caller will be at this number (making a note if it is a cellular phone number in case the call is disconnected)
• The patient’s physician
• The patient’s diagnosis
• Reason for the call (using the caller’s own words).

Having a standard triage form on which to record information is helpful. See examples of telephone documentation forms in Appendix B. Clerical employees should be cognizant of the time frames required for collecting this information. It is recommended that the first person the patient speaks to informs him or her of the approximate time in which to expect a return call. Patient satisfaction often improves when a realistic time frame is provided for when to expect a return call.

The triage form, along with the patient’s medical record, should be taken to the triage nurse. If electronic medical records are used in the office, the triage nurse should have access to a telephone and a computer to access patient information (Towle, 2009). Easy access to the patient’s medical record is imperative because the nurse may not know the particular patient who is calling.

The triage nurse should review the information sheet and triage the call in order of priority to other calls. For example, a patient calling for a prescription refill would be lower on the triage priority list than a patient calling about severe pain. Such a complaint would necessitate an immediate return phone call. The process of triaging calls is a continuous one. The nurse should review each call that comes in or each medical record that is brought for review.

**METHODS OF ASSESSMENT**

A variety of procedures are used in an outpatient office to triage phone calls received. A few of the most common procedures are explained here.

1. If a clerical employee is taking the initial information (Towle, 2009)
   a. The clerical person receives the call and takes general information from the patient.
   b. The clerical person delivers the general information sheet and the medical record (if necessary) to the triage nurse.
   c. The triage nurse prioritizes the call according to the patient’s reported symptoms.
   d. The triage nurse returns calls according to highest priority symptom.

2. If an answering device records all incoming calls
   a. A prompt should state that if it is a medical emergency, call 911.
   b. An option should allow the patient to choose to talk to a person in the office.
   c. A system should be in place where callers are directed to leave a message for (1) questions regarding appointment times or scheduling, (2) prescription refills, (3) laboratory and radiology results, or (4) a nurse to call back.
3. If a voice mail system is used to answer and screen calls according to physician
   a. There should be instructions to call 911 if it is an emergency.
   b. The nurse working with that particular physician returns all of the patient calls.
   c. The nurse should periodically listen to messages left throughout the day.
   d. The same prioritization should occur as in earlier processes.

   It is important to note that although it is common to have a telephone system
   that electronically screens and directs calls, it is vital that the caller hear information as to what to do in case of an emergency. In addition, the caller should have the option to speak to someone in the office if the reason for the call does not fit into one of the listed prompts.

4. If there is no designated triage nurse (Towle, 2009)
   a. The clerical person should record the initial information and take it to a designated nursing area. It should be left in a visible area, restricted from other patients’ view. The nurses should be notified that a chart has been left and the patient requires a return call.
   b. Ideally, the nurse who administered the patient’s chemotherapy or the nurse with whom the patient has had the most contact should return the patient’s call.
   c. It may be helpful to designate a specific time of day for nonurgent phone calls to be returned (e.g., 2–4 pm).

**PROCESS OF ASSESSMENT**

The next step in the process is for the nurse to return the patient’s call. In some instances, there may be a direct phone line to reach the nurse. This makes it slightly more difficult to properly triage the order of calls (because the nurse is taking them as they come in); however, it eliminates the time it takes for the clerical person to document a summary of the problem and deliver the medical record and the initial assessment form to the nurse.

The nurse should use one of the assessment methods described earlier in the Models of Telephone Triage chapter. When the symptom has been adequately assessed, the nurse describes the appropriate recommendation to the patient. The nurse must assess the patient’s understanding of the intervention. It should be documented on the triage form that the patient verbalizes understanding of the information provided. The final question that the triage nurse should ask prior to ending the conversation is, “Is there anything that would keep you from doing the intervention that we’ve just discussed?” Sometimes the patient agrees to the solution but is unwilling or unable to comply. Asking this final question makes it easy for patients to discuss any barriers they may have.

**On average, how long should it take to address a patient’s symptom over the phone?** Between 3 and 10 minutes is the average range (Espensen, 2009). If it takes more than 10 minutes to address the patient’s problem, he or she probably needs to...
be seen in person. If it takes less than three minutes to assess the issue, the nurse probably has not thoroughly assessed the problem. Jumping to a conclusion about the patient’s problem before adequately assessing the situation, in essence, stereotypes the caller and can lead to an inaccurate nursing diagnosis.

Many patients will require a follow-up telephone call to assess the effectiveness of the intervention. To streamline the process and because of the high volume of calls received each day, it may be beneficial to request the patient to call the office back within 24–48 hours to give an update on his or her condition.

What should the nurse do if the patient refuses to follow the advice or instructions that are offered? One method of preventing this occurrence is to obtain the patient’s agreement during the conversation. Statements such as “How does that sound?” involve the patient in the decision-making process. In addition, the nurse should determine the reason for the patient’s nonadherence. For example, if the patient is instructed to go to the ED and the patient refuses, ask why. If it is because she has three small children at home with no assistance, the nurse can help her to problem solve.

If the patient refuses to follow the nurse’s advice despite an open, collaborative conversation, the nurse has a responsibility to communicate the potential consequences that may occur. For example, a patient calls to report a temperature of 102°F (38.9°C), is unable to eat or drink, and received chemotherapy 10 days ago. The protocol may involve instructing the patient to go to the ED for evaluation. If the patient refuses to go to the ED, ask, “What would you prefer to do?” Also, the patient should be informed of the consequences of this refusal or nonadherence. In this example, the nurse’s response may be, “You may have an infection that your body is unable to fight due to a low white blood cell count from your chemotherapy. If it is not treated, you could become sicker and could possibly die from an overwhelming infection.” If the patient still refuses, appropriate communication to the physician in charge is in order, the conversation should be clearly documented, and a follow-up call should be placed to the patient. Every effort should be made to facilitate adherence of the patient (Wheeler, 1993).

In conclusion, one of the best questions to ask to evaluate compliance or adherence to the plan is, “Is there anything that will keep you from doing what we’ve just discussed?” Often, if the patient is not going to adhere to the plan, this opens the door for further discussion and possible resolution.

**ELECTRONIC COMMUNICATION**

In this age of e-mail, texting, and instant messaging, many patients prefer to avoid the use of the telephone altogether to communicate their nonurgent questions. However, most clinicians are hesitant to communicate with patients in this manner. Concerns about the use of electronic communication include

- Difficulty with patient identification
- Lengthy messages
- Messages containing urgent issues, such as a severe symptom
- Firewalls blocking the message

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• The need for transcription to document the concern into the electronic medical record
• No response is given if the receiver is out of the office.

A patient portal is a Web application that allows patients to interact with clinicians and avoids these issues (Rodriguez, 2010). Memorial Sloan-Kettering Cancer Center in New York City has successfully integrated such a portal, allowing patients timely access to information about their health care in a secure and safe environment.

REFERENCES


Legal Concerns of Telephone Triage

Margaret Hickey, RN, MSN, MS, CORLN

This section discusses general legal issues related to telephone nursing. Laws vary from state to state, and this section does not attempt to, nor can it, address all questions regarding the legalities of telephone nursing practice. Nurses should consult their state board of nursing and their institution’s or practice’s legal counsel regarding specific questions.

STANDARDS OF CARE

Nursing standards can be defined as a written value statement defining a level of performance or a set of conditions determined to be acceptable by some authority (Smith Marker, 1988). Nursing standards determine expectations for nursing performance. By developing telephone nursing practice standards, the responsibilities and accountabilities of the clinical practitioners and administrators responsible for providing telephone care are clearly defined. Established standards provide guidelines to practitioners, help to define nursing practice, and can assist in removing barriers. Standards should be reflected in every telephone delivery model. Standards can be found in a variety of formats, including policies, job descriptions, performance standards, procedures, protocols, guidelines, and written standards of care developed specifically for each center.

The following are six types of standards (Espensen, 2009).

- **Personal standards** include the actions and decisions of a reasonable ordinary person based on community beliefs, morality, and ethics.

- **Legal standards** include applicable state and federal laws. Each state has a board of nursing that defines the nurse’s scope of practice within that state. The telephone can provide an avenue to easily cross over state lines. The nurse may not only be required to hold a nursing license in the state where he or she is physically located but also may need a license from the state in which the patient resides. Nurses must be aware of current and any new state or federal laws that address emerging concerns regarding telemedicine.

- **Professional standards** from professional organizations address telephone triage, telenursing, and telemedicine. Professional organizations that have issued statements or guidelines addressing telephone triage include the American Academy of Ambulatory Care Nursing (AAACN, 2007) and the Emergency Nurses...
LEGAL CONCERNS OF TELEPHONE TRIAGE

Association (ENA, 2010). In some cases, these statements may overlap or contradict. The American College of Emergency Physicians issued a policy statement recommending that emergency departments should not attempt medical assessment or management by telephone (American College of Emergency Physicians, 2006). ENA’s position statement, revised and approved in July 2010, recognized that sophisticated telephone triage programs provide quality healthcare assessment opportunities that enhance quality health care within a community. ENA outlined the essential qualities of a telephone advice program and stated if a telephone triage program is not in place, no advice should be given over the telephone. The emergency nurse should inform the person that the problem cannot be diagnosed over the phone, and the patient should either see or confer with a healthcare provider or come to the emergency department. AAACN (2007) published practice standards for telehealth nursing to help refine and enhance telehealth nursing practice.

- **Regulatory standards** are developed by agencies and organizations charged with reviewing and maintaining healthcare systems. These standards are created by local and state health departments, the Joint Commission, the Occupational Safety and Health Administration, the Americans with Disabilities Act, and the National Committee for Quality Assurance, among others. Many of the standards written affect telenursing even when it is not directly stated.

- **Structural standards** reflect the conditions, equipment, and materials needed to reliably operate a call center. Written policies should be developed to outline the manner in which wait times, follow-up calls, and calls in a queue are managed.

- **Process standards** define how the nurse will provide care and specify the type or quality of care. Process standards can be reflected in policies and procedures that outline the requirements for the nurse’s knowledge, skills, behavior, and actions. Written protocols or guidelines serve to outline the process a nurse should take in response to a caller’s symptom or complaint.

NURSING PRACTICE ISSUES

Role of State Boards of Nursing

The scope of healthcare professional practice within the United States is determined by state nurse practice acts, state medical boards, and other professional organizations that provide guidelines for appropriate roles of physicians and nurses.

The first step in addressing nursing practice concerns about telephone nursing and telephone triage is to address if this practice constitutes nursing care. The National Council of State Boards of Nursing (NCSBN) answered this with a resounding “yes” in its position paper on telenursing (NCSBN, 1997). The delivery of nursing services by telephone constitutes the practice of nursing. In this position statement, *telenursing* was defined as the practice of nursing over distance using telecommunications technology. *Nursing practice* was described to go beyond hands-on care. NCSBN stated that when a nurse uses the knowl-
edge, skill, assessment, judgment, and decision making fundamental to nursing education and licensure, then, indeed, the nurse is practicing nursing (NCSBN, 1997). NCSBN recognizes telephone triage as nursing practice; therefore, boards of nursing regulate telephone nursing practice. Telephone nursing care is a legitimate means of nursing practice and brings forward new situations and challenges to the boards of nursing and nurse regulators. As stated by the NCSBN in its position statement, “Telecommunications is advancing at such a rapid rate that its application to healthcare delivery and nursing practice will continue to emerge and evolve” (NCSBN, 1997, p. 3). Likewise, the challenges and regulations related to this practice are likely to continue to emerge and evolve.

One of the challenges that NCSBN and individual state boards of nursing are addressing is that the reach of the telephone breaches distance and can easily link a nurse in one state with a patient in another state. Licensure and the state-based regulatory system in the United States were established with the Tenth Amendment to the U.S. Constitution, the states’ rights amendment. This principle facilitated state development of the regulatory system to protect the public in each state. Each state has established legislation authorizing nursing practice within the geographical boundaries of the state issuing the license. States do not have the ability to grant a nurse authority to practice in other states. With telenursing, it is unclear whether the care occurs at the location of the patient or the location of the healthcare provider (Hutcherson, 2001). When the nurse provides telephone triage and advice to out-of-state patients, the question remains as to where the nurse is required to have a license: the state in which the nurse is employed or the state in which the patient resides? NCSBN has identified a potential resolution for this problem related to telephone nursing and other nursing practices that are blurring the state boundaries through technology. NCSBN (2011b) has developed a mutual recognition model and interstate compact, which is a mechanism to implement mutual recognition of nurse licensure among states that sign onto the compact. States that approve the compact agree to allow a nurse to hold one license in the state where the nurse resides. The nurse can practice in other states covered by the compact using physical or electronic methods subject to each state’s practice laws and regulations. The nurse must meet the home state qualifications for licensure and comply with all current laws. NCSBN currently supports only the single state and the mutual recognition (Nurse Licensure Compact [NLC]) models of nurse licensure. As of July 2011, 24 states have enacted the RN and licensed practical nurse (LPN)/licensed vocational nurse (LVN) NLC (see Figure 1). Six additional states are considering the NLC legislation. NCSBN keeps an up-to-date list of states that have enacted and implemented the compact on its Web site (www.ncsbn.org).

Despite this effort, until all 50 states join the compact, variations in state nurse practice acts continue to carry challenges. For the sake of example only, the position statements of three state boards of nursing are addressed in this section: Arkansas, California, and Nevada.

The ever-evolving practice of telephone nursing is reflected in the position statements written by the Arkansas State Board of Nursing (2000). The current Arkansas position statement on telenursing was adopted in 2000. In this position state-
ment, the Arkansas State Board of Nursing clearly describes when a professional nurse (RN) may practice telenursing. These include the following.

1. The professional nurse has an established relationship with the client and appropriate documentation.
2. A licensed physician and nurse must approve protocols annually.
3. Protocols clearly outline the basic information that must be documented.
4. A deviation from a protocol requires an order from the practitioner and is documented.
5. Protocols shall not include prescription drugs.
6. The professional nurse is required to follow the Arkansas Position Statement 98-6 Decision Making Model.

This position statement does not directly address crossing state borders, although the first statement requires an established relationship with the patient. In the case of the oncology nurse responding to calls in the cancer clinic, the patient should, at the least, have been examined in that clinic.

The California telenursing statement followed enactment of a state law in January 2000 titled “Telephone Medical Advice Services.” The definition provided by the statement is that “telephone medical advice means a telephonic communication between a patient and a healthcare professional, wherein the healthcare professional’s primary function is to provide the patient a telephonic response to the patient’s questions regarding his or her or a family member’s medical care or treatment” (California Board of Registered Nursing, 2011, “Definition” section). The California Board of Registered Nursing requires a California RN license for in-state or out-of-state RNs to provide telephone medical advice services to residents with California addresses.

The Nevada State Board of Nursing (2002) has established the following practice guidelines.

1. Only RNs currently licensed in the state of Nevada may practice telenursing in relation to patients in Nevada.
2. The nurse practicing telenursing must identify himself or herself by name and title and state of licensure.
3. After completion of a nursing assessment of the patient, the nurse practicing telenursing may provide advice based on the use of written physician protocols (which may include over-the-counter medications), published reference guides, or software protocols approved by the medical staff.

4. All telenursing interactions, including, but not limited to, the collection of demographic data, health history, assessment of chief complaint, protocols followed, referrals, and follow-ups, must be electronically recorded.

As illustrated in the practice decisions by these three states, the issue of telephone nursing is being addressed on a state-by-state basis. Not only are some boards of nursing defining the scope of practice to include state licensure issues when the caller and nurse reside in different states, but they also are defining what constitutes appropriate telenursing interactions. It is imperative that all nurses practicing telephone triage or telephone nursing review the decisions and regulations outlined by their state board of nursing and stay abreast of the continued changes to regulations in this ever-evolving nursing practice.

**SCOPE OF PRACTICE**

Defining the scope of nursing practice is the role of individual state boards of nursing. It is important for nurses to be familiar with their home state’s nurse practice act. The nurse practice act is dynamic, as the boards of nursing address issues in this healthcare environment, including the evolution of telephone nursing or triage. For example, the California Nurse Practice Act regulates that the formulation of a nursing diagnosis is a two-step approach: (1) observation of the patient’s physical condition and (2) interpretation of the information obtained from the patient and others including the health team (California Nurses Association, 1998). Therefore, the use of electronic communication technologies to provide nursing care in community-based settings without an assessment based on observation contradicts the principles of the state’s nurse practice act.

It is imperative that nurses, regardless of the state in which they are licensed, avoid practicing medicine by diagnosing patients or prescribing treatment. The difference between a medical and nursing diagnosis is a point of law in the state of Pennsylvania. Pennsylvania statute defines a nursing diagnosis as the “identification of and discrimination between physical and psychosocial signs and symptoms essential to effective execution and management of the nursing regimen” (Kabala, 1998, para. 5). The statute does not define a medical diagnosis, but Merriam-Webster (“Diagnosis,” 2011) defines _diagnosis_ as the identification of a disease based on its signs and symptoms.

It is within the nursing scope of practice for professional nurses to independently perform telephone assessments, apply clinical judgment, and use decision-making skills in establishing nursing diagnoses and performing telephone triage. Additionally, they can educate patients, analyze outcomes, and coordinate patient care. Telephone triage must be limited to assessing symptoms and offering information related to the symptoms.
The nurse needs to use care and follow policies, procedures, and professional standards. These standards should outline when the physician or another provider must be consulted to assist in handling the call or responding to the caller’s concerns. The nurse may vary from the provided guidelines only when acting directly under the supervision of a physician. If the physician is not directly overseeing the interaction, the nurse is limited to employing the nursing process.

The nursing process used during telephone triage is the same nursing process the nurse employs when providing direct patient care. The steps include assessment: appropriate assessing, prioritizing, and initiating the triage process, including an often complex telephone interview; planning: choosing appropriate guidelines, following them correctly, and collaborating with the patient and other healthcare providers while referencing resources used; implementation: effectively solving problems and intervening, which includes appropriate disposition of care, teaching, counseling, coordinating resources, and facilitating follow-up care; and evaluating: documenting the interaction thoroughly, communicating with others, and analyzing outcomes.

Professional nurses (RNs) must be aware that their license may enable them to supervise LPNs/LVNs or assistive personnel (AP). This is of particular concern in telephone triage. As clearly stated by the Nevada State Board of Nursing (2002) and other regulatory bodies, telephone nursing is a function of professional nurses. In informal call practices, such as in a physician’s office, AP may have years of experience in obtaining medical information from patients or dispensing advice on a physician’s behalf under the supervision and direction of the physician. In some circumstances, when an RN supervises an AP, the AP is acting under the nurse’s license. In these circumstances, the RN would be violating the nurse practice act if telephone advice were delegated to AP or LPNs/LVNs, particularly in states such as Arkansas, California, Nevada, and others that identify telephone triage as a function of a professional nurse. Personnel such as medical assistants and receptionists can gather basic information only; they cannot assess, triage, or make independent decisions on care or disposition. LPNs/LVNs cannot independently assess and triage; however, they can collect general information about the patient and present those data to the RN or physician for analysis or triaging. They also cannot independently educate patients, but they can provide general information as directed by the professional nurse or physician.

Professional nurses should be wary of situations in which physicians ask them to exceed the limits of a state nurse practice act by asking them to independently provide treatment information. The nurse should provide treatment information only under specific direction of the physician and approved guidelines. It is helpful to develop job descriptions that clearly outline the roles of RNs, LPNs, and AP in relation to managing patient calls. Job descriptions should accurately reflect the scope of practice, including minimum qualifications to perform telephone triage (such as professional nurse with three years of experience), accountability for outcomes, and how the outcomes will be measured.
TELEPHONE TRIAGE LIABILITY

Every time a nurse picks up the telephone, a relationship is created with the caller. This relationship holds risks for three reasons. The first risk is that nurses are expected to maintain the same level of care as that provided in face-to-face nursing. This presents particular challenges, as nurses must assess symptoms and offer advice without ever examining the patient. They may have limited information available in the medical record and must rely on the caller’s cooperation to monitor compliance and follow-up care. Second, the nurses operate in a work setting under different working conditions and with varied levels of awareness of professional standards among employers. Third, nurses are responsible to stay informed and potentially to educate their employer about current standards, legal risks, and new information regarding laws and licensure.

What Constitutes Liability?

Liability is used to describe responsibility for duties that an individual or organization is legally bound to fulfill. Nurses or healthcare organizations can be found negligent in performing duties and held responsible, or liable, for their actions. Any individual who alleges negligence must prove that the accused failed to act reasonably when they had the duty to do so and that the failure resulted in an injury that can be related to that breach of duty. Malpractice is negligence committed by a professional in the performance of professional duties that results in injury, loss, or damage (“Malpractice,” 2011).

Four elements must be satisfied to prove negligence (Dernovsek, Espensen, & Massengale, 2001).

1. The nurse had a duty to provide care to the patient following an accepted standard of care.
2. The nurse failed to adhere to this standard of care.
3. The nurse’s failure to adhere to the standard of care was the cause of the patient’s injuries.
4. The patient suffered some type of hurt or injury that resulted from the nurse’s negligent actions.

AAACN (2006) established in its course on telephone triage that once the call is answered, the nurse has a duty to provide care. The standard of care that the nurse must adhere to is the level of care that would be given by a reasonable, prudent nurse under the same or similar circumstances. It is important that nurses stay abreast of standards in the nursing literature (some have been mentioned earlier in this chapter). In addition to the published standards to which a nurse can be held, unpublished standards based on the testimony of an expert witness also may be used against the nurse.

The following are five areas that potentially can increase liability for nurses (Espensen, 2009).

• Failure to ensure patient safety. Examples include inappropriate assessment and triage, not following guidelines as written, and lack of follow-up as needed.
• **Failure to communicate.** The nurse always must listen to the patient and avoid jumping to conclusions or leading the caller. The nurse should convey information in a manner the caller can understand, clarify information, and verify that the information is understood. Documentation of the interaction and any follow-up calls is essential.

• **Failure to follow policies and procedures.** The nurse must be familiar with and understand the policies and procedures. These should be updated regularly to match current practice and standards.

• **Failure to act on professional judgment.** Abandoning professional judgment just to follow a guideline or protocol is not appropriate. The nurse must be able to show that professional judgment was used in every call.

• **Failure to document.** Careful, clear documentation is required that would allow the nurse to recreate the call if needed for medical or legal reasons.

The best way for nurses to protect themselves from legal risk is to carefully follow their facility’s policies and procedures, which should be based on current standards of practice, including clinical practice guidelines, nurse practice acts, and any state laws related to telephone triage. Even if the facility does not have a formal telephone triage program, patients will continue to call looking for advice and information, and nurses often will find themselves giving advice over the telephone. It is not practical for nurses to believe they can deny this service to their patients. Buppert (2009), nurse and attorney at law, recommended that clinicians not provide telephone care unless the patient has been seen by the practice and the patient’s medical record is at hand with a recorded medical history, baseline examination, and current contact information. It is important to realize that this does not deny the nurse’s duty to respond to the patient once the call is answered but rather that telephone advice should not be provided. It would not be reasonable to do so without any knowledge of the patient. The patient should be referred to a local emergency department or family physician, or a clinic appointment should be made. Buppert emphasized that the advice given should be documented along with the patient’s complaint and history. This should be completed before the end of the day. Finally, the patient should be given an appointment for follow-up. It is imperative that the nurse direct the patient immediately to call 911 for emergency situations, such as chest pain or dyspnea. Figure 2 provides a summary of 12 guidelines to help ensure safe telephone triage practice in the ambulatory setting.

**Strategies to Minimize Liability**

Nurses can reduce their legal risk even before they answer a call. These measures involve development of appropriate policies, procedures, and guidelines. There should be a clear statement of the purpose and goals of telephone triage. This should include the limits of services, as well as the goals the telephone triage nurse is expected to meet. The job description should accurately explain the role of the nurse in telephone triage, describe the scope of practice, and include minimum qualifications (the telephone triage industry standard is a minimum of three years of RN experience in an applicable clinical area prior to telehealth nursing).
<table>
<thead>
<tr>
<th>Figure 2. Guidelines for Safe Telephone Triage Care</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Take seriously the responsibility of taking telephone calls. When you accept a call, you are liable for the advice given, as well as advice called for (based on the patient complaint) but not provided.</td>
</tr>
<tr>
<td>2. Know the “red flag” complaints. For example, if a patient describes new onset of severe pain, the patient should be evaluated face to face.</td>
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<tr>
<td>3. Obtain enough information to give informed advice.</td>
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<tr>
<td>4. Provide advice based on the worst-case scenario. Nurses performing triage should be experienced and aware of the worst-case scenarios in oncology.</td>
</tr>
<tr>
<td>5. If the call is about a previous problem or unresolved problem, revisit the problem until it is resolved. Schedule an appointment for a face-to-face evaluation rather than repeatedly telling the patient to call back in a few days.</td>
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<tr>
<td>6. Document history taken and advice given by telephone promptly, ensuring that documentation is thorough.</td>
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<tr>
<td>7. Adopt policies and practices for addressing telephone calls, including who may give advice to a patient, what credentials or education the telephone triage nurse must complete, protocols for specific complaints, and who can vary from the protocol. Review and update the policies and protocols every year. Circulate the policies and protocols and have staff sign and date, acknowledging that they have reviewed them.</td>
</tr>
<tr>
<td>8. Develop and use a triage documentation form, which should be reviewed by the oncologist and filed in the patient record. Some basic components of the form should include</td>
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<tr>
<td>• Name of patient, date and time of call</td>
</tr>
<tr>
<td>• Call handled by [insert name]</td>
</tr>
<tr>
<td>• Patient telephone number</td>
</tr>
<tr>
<td>• Chief complaint and history of present illness</td>
</tr>
<tr>
<td>• Current medications</td>
</tr>
<tr>
<td>• Allergies</td>
</tr>
<tr>
<td>• Disposition, including advice given</td>
</tr>
<tr>
<td>• Prescriptions called in, if any, and time called in.</td>
</tr>
<tr>
<td>9. Triage should be performed by professionals (registered nurses) who are the experienced experts in oncology rather than the least experienced.</td>
</tr>
<tr>
<td>10. Set conditions for telephone advice, including</td>
</tr>
<tr>
<td>a. That the caller is/has been seen at the office/center in the past.</td>
</tr>
<tr>
<td>b. That the chart is available to the nurse giving the advice. If the chart is unavailable, a full history should be completed.</td>
</tr>
<tr>
<td>11. Do not give advice without the opportunity for follow-up.</td>
</tr>
<tr>
<td>12. Beware when the caller is not the patient. There may be confidentiality issues or translation issues, both of which increase the risk level of the triage.</td>
</tr>
</tbody>
</table>

Note. From “Guidelines for Telephone Triage,” by C. Buppert, 2009, Dermatology Nursing, 21, p. 41. Copyright 2009 by Jannetti Publications. Adapted with permission of the publisher, Jannetti Publications, Inc., East Holly Avenue, Box 56, Pitman, NJ 08071-0056; Phone 856-256-2300; Fax 856-589-7463; www.dermatologynursing.net.
written with unattainable expectations, such as that all telephone calls will be answered within three rings or that every patient is seen within 24 hours. Policies and procedures are guidelines that direct the nurse’s practice.

To further reduce risk, policies should be developed to manage anticipated problem situations, and these should delineate the procedures to be used. Depending on the setting, policies should be developed to cover the following issues (list is not all-inclusive).

- Communication with minors
- Noncompliant callers
- Angry or obscene callers
- Inability to contact patient or caller
- Anonymous callers
- Third-party callers—neighbors or others calling on behalf of the patient with or without the patient’s permission
- Conversations with the caller instead of with the patient
- Calls from caregivers
- The patient’s refusal to provide medical history
- Language barriers, including how to manage hearing-impaired patients
- Backup technology (computer and telephone lines)
- Access to emergency medical service
- Referrals to providers and services
- Confidentiality of the call and documentation
- Out-of-state calls
- Out-of-country calls
- Prioritizing calls by type and severity
- Types of calls to accept (e.g., triage, prescription)
- Patients who call who are not your patients
- Multiple symptom calls and which clinical guidelines to use
- Overriding guidelines
- Symptoms that do not fit any of the institution’s written protocols
- Providing over-the-counter medication dosages
- New prescriptions and refills
- Laboratory test ordering and disclosing results
- Elderly abuse/neglect
- Child abuse/neglect
- Ingestions and poisoning
- Suicide or psychiatric calls
- Chronic callers

In addition to policy and procedure development, other measures can be taken to minimize risk in developing telephone triage within your practice. The following section discusses some of these strategies.

Select, maintain, and rely on protocols or guidelines. Guidelines are not “cookbook” medicine but rather a guide to manage the telephone call in a manner that is safe and congruent with nursing and physician practice. AAACN (2007) has established standards that outline the use of written guidelines. A court of law may
find informal telephone triage to be unacceptable when the nurse provides information “off the top of his or her head.” Guidelines should be developed and/or adopted from another source. The appropriate physician should approve and regularly review all guidelines and changes. The physician has the ultimate responsibility for the care of patients, and his or her input should be sought and valued. Remember, although the physician oversees the guidelines, these are developed for the professional nurse and are not to be used as diagnostic tools. These guidelines should include when a caller should be referred for immediate services, such as a call to 911 or instructions to the patient to proceed immediately to a local emergency department, or emergent services so that a physician sees the patient the same day the call is received.

When a nurse applies a guideline, it is extremely important to document the guideline used as a source and to read the information during the call rather than relying on memory. This enhances the quality of the communication by improving adherence to the established guidelines. It also decreases liability because if the information were challenged in court, it would be easy to recreate the response and defend the action that was taken. Calls should be documented in a manner that makes it possible to recreate the call. Documentation should include, but not be limited to, protocols used, the patient’s complaint in the patient’s words, the information the nurse gleaned from the assessment interview, a detailed description of the information given to the patient, including when and how to seek care, the resources used, referrals made and reason for the referrals, confirmation that the patient demonstrated understanding of the information/instructions, and that the patient found the advice acceptable. Brief narrative notes may not be adequate. A standardized form may assist the nurse in establishing cues to complete documentation. Checking boxes for specific phrases can strengthen the documentation. The nurse should make notes throughout the call and complete the documentation record immediately following the conclusion of the call.

Managing telephone calls can consume hours of each working day, yet the call volume can fluctuate from hour to hour and day to day. The call volumes should be monitored to ensure that appropriate staff is available to respond in a timely fashion. The practice should define adequate staffing levels for peak and off-peak calling times. Symptom-based calls should never be left until the next day, as this could be considered abandonment of care.

The telephone triage nurse must be knowledgeable in the specialty and have additional resources necessary, such as reference materials, published standards of practice, and facility policies, procedures, and guidelines. If the office is paperless and the medical record and/or guidelines are available in a computer, a backup plan should be developed for times when the computer is not available.

Risk may be reduced when the patient is satisfied with the telephone call; a satisfied patient is less likely to sue. The greatest complaint in surveys that looked at telephone triage was the length of time it took the caller to connect with the nurse (Moore, Saywell, Thakker, & Jones, 2002). Notifying callers immediately that they may have to wait to speak to a nurse enhances caller satisfaction and may reduce the risk of a lawsuit. If the triage nurse needs to return the call, it is best to
provide the caller with an estimate of when the call will be returned. This estimated time should be accurate based on the limits of the staff in the practice, and the caller should find it acceptable. If the caller states it is an emergency, he or she should be instructed to hang up and call 911. Always inform the patient that you are a nurse and cannot diagnose or prescribe. If the patient is insistent on speaking to a physician, this should not be denied. Avoid empty promises such as “everything will be all right” because this will only worsen the situation in the event of a negative outcome.

A follow-up telephone call may be necessary to check on patient status, compliance, or understanding of instructions. Clear, written policies should be in place to identify who should receive follow-up phone calls. A nurse may be inclined to make follow-up phone calls on a favorite patient. This favoritism raises legal risk because it can be interpreted as providing a different level of service to certain patients.

Quality assurance programs should be implemented to monitor interactions with patients and improve performance. Skill validations may include evaluation of the nurse’s ability to complete a thorough assessment, triage a call, communicate, and document. If the quality assurance program includes taping of calls, the caller must be informed and permission granted before the recording begins.

Patient Confidentiality

Patient confidentiality must be protected at all times. The patient has the same rights to protection of privacy and confidentiality over the telephone as he or she does when seen in the office. All policies and procedures designed to meet privacy standards, including Health Insurance Portability and Accountability Act (HIPAA) requirements, that are used in the office need to extend to telephone services.

The HIPAA Privacy Rule (U.S. Department of Health and Human Services, 2003) has created national standards to protect individuals’ medical records and other personal health information. It allows patients to have more control over their health information; it sets boundaries on the use and release of health records; it establishes appropriate safeguards that healthcare providers and others must follow to protect the privacy of health information; and it holds violators accountable with civil and criminal penalties. The HIPAA rule permits healthcare providers to communicate with patients regarding their health care. Many practices have written policies and procedures to address these HIPAA requirements.

These policies and procedures should outline with whom, if anyone, in addition to the patient, the nurse may discuss the patient’s care. Some oncology practices require the patient to sign a form designating, if desired, any other specific individual to which the patient’s medical information may be provided. If the patient has not provided permission, no information would be shared with anyone but the patient.

Some practices take additional measures to ensure the identity of a caller. The patient and anyone else with permission to discuss the patient’s care are provided with a password. This helps to verify the caller’s identity over the phone.

Follow-up calls from the nurse to check on the status of the patient, to monitor patient compliance, or to provide the patient with information raise new is-
sues with caller identification (ID) systems and answering machines/voice mail. The HIPAA rule does not prohibit leaving messages for the patients on their answering machines or voice mail or with family members. However, it does require that reasonable safeguards are taken to protect the individual’s privacy, and the information left should be limited, for example, to only the name and number of the physician or nurse calling and the information necessary to confirm an appointment or a return call.

Policies should be written to address appropriate use of caller ID displays, answering machines, voice mail, e-mail, and fax. In some clinics, patients are asked to sign an authorization allowing the healthcare providers to leave information on a work or home answering machine or to correspond via fax or e-mail.

It is important that others do not overhear the conversation the nurse has with the patient. An appropriate workspace or office should be available for the telephone triage nurse. This is to ensure that patients and others do not overhear confidential information. The HIPAA rule does not require soundproof walls or structural changes to facilities; however, it requires that appropriate administrative, technical, and physical safeguards be taken to protect the privacy of patients’ health information.

The record of the telephone call and interaction is confidential whether it is on paper or computerized and should be protected in the same manner as the medical record. It is ideal to place all documentation on the call in the patient’s medical record immediately and not to leave it lying about for others to see.

COMMUNICATING WITH SPECIAL POPULATIONS

Some populations have inherent barriers that nurses must overcome to communicate effectively. It is the nurse’s responsibility to overcome barriers by communicating in a manner that the patient can understand regardless of age, mental ability, language barriers, domestic disturbances, or lack of access to an adult.

Minors

Minor callers pose a special challenge because they have special needs related to communication and consent. Legal definitions of minors vary from state to state. Nurses should verify policies and practices with their state’s laws. Minors may call for several reasons. They could call with their own symptoms, on behalf of a peer or family member, or as a spokesperson for a family member who does not speak English. Policies should be developed to define what types of calls are accepted from minors and the information that can be provided.

Language Barriers

Nurses should be prepared to manage calls from patients with a language barrier, including those who do not speak English, have limited English, or are hearing impaired. If a practice does not have access to a translator for the non-
English-speaking or a telecommunications device for the deaf (TDD), the office should inform the patients with this special need on their first visit. Attempting to provide telephone services to these patients may be inappropriate without the proper support.

To reduce legal risks of misinterpretation, a translator service that understands medical terms should be used. When a family member or employee from down the hall is used to interpret, the information shared may need to be restricted, and there is no assurance that the information was portrayed accurately. When an informed consent is required, a translator service should be used to avoid legal risk. This holds true not only in translation of a foreign language but also for a sign translator if the patient is hearing impaired. If the office is equipped with a TDD, the staff should be instructed on and competent in its use.

**Cultural and Socioeconomic Differences**

Social taboos may prevent discussion of certain health problems or bar direct communication with certain family members. Some cultures will restrict discussion directly with the patient and require that the husband speak for the wife. Strategies need to be developed to address these and other challenges, including ones to help patients who have poor vocabulary skills, cultural taboos that may make it difficult to talk about bodily functions, and how to manage patients with limited access to telephones, transportation, and healthcare support.

**Calls to Be Handled With Caution**

If a patient’s friend or family member calls seeking advice, adhere to the policies related to which callers the nurse can provide telephone advice. Remember, a friendly neighbor today may not be so friendly in court if given the wrong information. Advise the family member or friend to contact their family healthcare provider or call 911 if it is an emergency.

Parents of ill children often are anxious over even the smallest of maladies and, in contrast, are sometimes unconcerned by potentially dangerous conditions. These attitudes can lead to misinformation. Parents of a child with cancer are more likely to suffer these feelings. They may call over every ache and pain or ignore a potentially life-threatening event, such as a temperature elevation. It is important to provide straightforward instructions without being judgmental.

Older adults are more susceptible to comorbidities complicating their cancer care. A thorough medical history that is verified with the patient to ensure it is up to date is key to managing this call. Often older adults are reluctant to share information or seek help. They do not want to “bother” the physician or nurse, or they may feel their illness or complaint is a threat to their continued independence. When an older adult patient calls, it is imperative that the nurse provides time and attention to the caller, communicating an unhurried attitude to encourage the patient to share important information. Also, as many older adults experience some hearing loss, it is important that the nurse ensures that he or she can be heard and
understood. Asking open-ended questions and being alert for the appropriateness of the answer can aid this.

Triage nurses may find themselves lacking patience with the frequent, chronic, or repeat caller. They must be aware of this inclination because a patient who calls often may call one day with a serious malady, and it may be missed. The nurse should listen to each call seriously prior to making any conclusions. If a patient calls repeatedly in one day with the same complaint, it is a good practice to bring that patient in to see the physician. If the symptom is not so acute to warrant a same-day appointment, certainly the anxiety it is causing the patient is.

If the assessment portion of the triage call is too short or too long, a red flag should go up in the nurse’s mind. If the assessment portion of the call goes on for more than 10 minutes, this should be a warning that this patient should be seen. If the assessment is less than three minutes, the nurse and caller have not shared enough information for the nurse to adequately assess the situation and triage appropriately (Espensen, 2009).

CLINICAL COMPETENCY

In general, the competencies required to provide safe and effective telephone triage mirror the competencies required of the professional nurse. The telephone triage nurse should have competencies related to the technologies being used and determine whether these technologies are appropriate for the patient. It may not be appropriate to provide a follow-up telephone assessment of a patient who is hearing impaired if a TDD is not available or to e-mail patient instructions if the patient does not have ready access to and competency with a computer and the Internet. The hearing-impaired patient will need an appointment to be seen in the office, or the patient instructions will need to be faxed or mailed rather than e-mailed. In addition to technical knowledge, the professional nurse must have refined communication skills, an appropriate level of clinical expertise, and good assessment skills.

Formal education of nurses, including orientation and continuing education, will strengthen their telephone triage skills. Orientation should include aspects of assessing a patient without face-to-face contact, triaging using the clinical guidelines, communication skills, and documentation requirements and pitfalls. The industry average orientation period for a telephone triage nurse is two to four weeks (Espensen, 2009). The orientation process, continuing education, and competency evaluation should be documented in the nurse’s personnel record. This is a requirement for accrediting bodies such as the Joint Commission.

The College of Registered Nurses of Nova Scotia (2008) has identified requisite competencies for RNs to practice in the arena of telehealth. These competencies are in addition to those for all RNs, which require clinical competence and assessment skills in the specialty area of practice and an understanding of the scope of service. It is evident in the following competencies that the scope of telenursing extends beyond the use of telephone triage. However, these core competencies to telenursing can be applied to the elementary practice of telephone triage in an
ambulatory setting. These additional key competencies identified by the College of Registered Nurses of Nova Scotia state that the RN should possess

- The attitudes that will facilitate their involvement and advance the telehealth program, which include a positive attitude, open-mindedness toward technology, and good people skills
- The knowledge and ability to navigate the technology system and environment
- A clear understanding of the limitations of the technology being used and the ability to recognize when telehealth approaches are not appropriate for a patient’s needs
- The ability to modify clients’ care plans based on the previously noted assessments
- An awareness of patient risks associated with telehealth and willingness to develop backup plans and safeguards
- The knowledge, understanding, and application of telehealth operational protocols and procedures
- A competency in enhanced communication skills
- Appropriate video/telephone behaviors
- An awareness of the evidence base for their practice and areas of practice in need of research
- The ability to deliver competent nursing services by regularly assessing their own competence, identifying areas for learning, and addressing knowledge gaps in relation to the area of practice and relevant decision-based software and technology.

As identified in these competencies, it is key that telephone triage nurses continue to seek avenues to ensure that their clinical and technical competencies are current. In this ever-growing subspecialty of nursing care, professional nurses need to pay particular attention to the changing legal environment of telephone nursing, including state board practice decisions and licensure issues.

As an emerging field, telenursing may require additional education to support competent practice. However, few formal educational programs are available. AAACN has published *Telehealth Nursing Practice Administration and Practice Standards* (2007) and offers a variety of reference and educational materials concerning telehealth nursing practice. The materials are designed to meet the needs of nurses practicing telephone nursing in telephone triage centers. However, the information is general, and much of it can be applied to the oncology nurse. More information regarding the standards, the course, and the manual is available on the AAACN Web site (www.aaacn.org). More information about the certification can be found on the National Certification Corporation Web site (www.nccnet.org).

**CONCLUSION**

In the 1800s, two individuals changed the world of nursing care when they introduced their innovations. Florence Nightingale brought reform to the nursing profession, bringing to it dignity and science while across the sea; Alexander Graham Bell made his first call on his new invention—the telephone. Most likely neither of them could foresee that the telephone would someday become a tool for nurs-
es, a tool that permits increased access to patients and allows nurses to apply the nursing process from a distance.

Triage, a process first employed at the battlefield to allocate limited resources, is now a process employed in emergency departments and clinics everywhere. Oncology nurses use telephone triage not only to evaluate the critical nature of a patient’s complaint and provide appropriate disposition advice, but also to listen to and assess patient complaints and provide emotional support and homecare education.

Telephone nursing has created new challenges in oncology nursing. Nurses have been educated in clinical settings, allowing full use of their five senses, whereas the telephone limits sensory input. Communication challenges include how to elicit the most information in a clear and concise manner without leading the caller. Process challenges exist within the busy clinic setting. The volume and nature of telephone calls are unpredictable. It is important to provide time and attention to the caller, but how is that best balanced with the time and attention needed for the patients who are physically present? Models of telephone triage vary significantly depending on the size of the clinic and staffing patterns. Legal challenges include those related to state licensure issues. When the call is initiated beyond state borders, in which state should the nurse hold licensure? A number of processes and tips can help in limiting legal liabilities, including the appropriate use of telephone triage policies, guidelines or protocols, and documentation.

This text has provided an overview of telephone triage or telephone nursing as it exists today in cancer clinics across this nation. It has sought to address communication tips and suggestions for triage processes. It discussed legal concerns and dynamic issues that will require nurses’ ongoing vigilance of state and national regulations. Additionally, suggestions on ways to limit liability were addressed. The next section contains sample telephone protocols focusing on common complaints of patients with cancer. These protocols result from a review of the current nursing literature and contributions of protocols used by nurses from across the United States. It is imperative that all telephone protocols used in each unique clinic setting be reviewed and approved by the supervising physician in the practice.

Oncology nursing is a dynamic process focused on providing care to patients with cancer and their families. We hope that this text will assist our nursing colleagues in their quest to provide quality care in today’s fast-moving, technologically advanced world.

REFERENCES


Legal Concerns of Telephone Triage


Alopecia

PROBLEM

Loss of hair. Hair growth has three phases: anagen (the active growth phase), catagen (hair is no longer growing and the hair follicle moves closer to the surface of the skin), and telogen (the resting phase). Scalp hair is in the anagen growth phase for two to six years. Approximately 85%–90% of scalp hairs are in the anagen phase at any one time (Nail & Lee-Lin, 2010). Because the scalp has the highest percentage of hair in the anagen phase, the effects of systemic therapy on hair loss will occur in scalp hair sooner than other places on the body.

ASSESSMENT CRITERIA

1. What is the cancer diagnosis and treatment?
   a. Hair loss (alopecia) is a transient but often psychologically devastating consequence of cancer chemotherapy. It is the hallmark sign that someone has cancer. For some patients, the emotional trauma may be so severe that it leads to discontinuing or refusing treatment.
   b. Many cancer treatments work by targeting rapidly growing cancer cells. This action is responsible for most cancer treatment side effects. Hair follicles are among the many fast-growing healthy cells in the body.
   c. Certain chemotherapy drugs and radiation therapy attack rapidly dividing cells in the body, including hair cells. This can result in hair loss by either of two mechanisms: thinning of the hair shaft at the time of maximal chemotherapy effect, and as a result the hair may break at the follicular orifice (upper portion); or if matrix is severely inhibited, the hair may separate at the bulb (lower portion) and shed (Payne, 2011).

2. What medications is the patient taking? Obtain drug history. Chronic use of other drugs, such as steroids, also causes thinning of hair.

HOMECARE INSTRUCTIONS

When Will Hair Loss Occur?

Chemotherapy

The ability of individual agents to cause hair loss depends upon the route, dose, and schedule of drug administration.
High-dose, intermittent, IV chemotherapy regimens are associated with a high incidence of complete alopecia.

Low-dose therapy, oral administration, and weekly regimens are less likely to induce total or complete alopecia (Payne, 2011).

The scalp may hurt at first, and then the patient may lose his or her hair, either a little at a time or in clumps. It takes about one week for all of the hair to fall out (National Cancer Institute, 2007).

It may take from three to six months after therapy is completed for hair to begin to regrow, or it may start growing back while the patient is still receiving chemotherapy. The “new” hair may have a slightly different color, texture, or curl (Cleveland Clinic Foundation, 2005).

**Radiation Therapy**

Radiation therapy uses high-energy radiation to kill cancer cells by damaging their DNA. Radiation can damage normal cells as well as cancer cells. A patient may receive radiation therapy before, during, or after surgery. Some patients may receive radiation therapy alone, without surgery or other treatments. Some patients may receive radiation therapy and chemotherapy at the same time. The timing of radiation therapy depends on the type of cancer being treated and the goal of treatment (cure or palliation). Radiation may be delivered by a machine outside the body (external beam), or it may come from radioactive material placed in the body near cancer cells (brachytherapy). Radiation side effects are caused by damage to rapidly dividing normal cells in the area being treated. These effects include skin irritation or damage at regions exposed to the radiation beams. An example would be hair loss when the head or neck area is treated.

**Tips When Anticipating or During Hair Loss**

(National Cancer Institute, 2007)

- Visit a hair stylist prior to treatment. Hair loss often is better managed by cutting the hair short prior to treatment.
- If you shave your head, use an electric shaver rather than a razor to prevent cutting the scalp.
- Shop for a wig in advance of hair loss. It is best to shop for a wig before hair is lost in order to match hair color, style, and texture. It is important to have some sort of head covering to protect the skin from sun and wind.
- Use a sunscreen on exposed scalp or cover completely to protect skin from the sun’s harmful rays.
- Sleep on a soft, satiny pillowcase or try wearing a soft scarf or turban to minimize friction.
- Treat hair gently. Keep hair clean by shampooing with a gentle, pH-balanced shampoo. Avoid vigorous toweling and blow-drying any remaining hair.
- Use a soft-bristle brush or a wide-toothed comb.
- Avoid hair treatments such as bleaching, permanent waves, hair dye, and hairspray that can cause dry or brittle hair.
• Try not to braid hair or put in a ponytail.
• It may help to join a support group to talk with others whose hair has fallen out during cancer treatment.

Report the Following Problems

• If your scalp becomes irritated
• If you experience prolonged sun exposure
• If scalp area is red, itchy, or swollen

REFERENCES


Linda Bracks-Madison, MS, RN
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University of Texas MD Anderson Cancer Center
Houston, Texas
Alterations in Sexuality

PROBLEM

Inability to enjoy sexual activity (Bruner & Berk, 2004). All aspects of cancer and cancer treatment may affect human sexuality (Krebs, 2006). Changes in body image, reproductive function, and sexual function can affect patients before, during, and after treatment. Sexual dysfunction can persist for a long time.

ASSESSMENT CRITERIA

Assessment of sexual health is the first part of problem identification (Julien, Thom, & Kline, 2010). Oncology nurses need to be aware of their own attitudes and knowledge about sexuality to avoid missing opportunities to discuss concerns. Initially, start with less sensitive questions and move toward more sensitive ones (Krebs, 2006). Provide the patient with a confidentiality statement concerning the conversation. Advise the patient that he or she may choose not to answer sensitive questions.

1. What is the history of cancer and subsequent cancer treatment?
2. What are the coexisting variables?
   a. Gender
   b. Age
   c. Educational background
   d. Socioeconomic status
   e. Cultural or ethnic background
   f. Concurrent medical or psychiatric disorders
   g. Current prescription and over-the-counter medication use
3. How has the diagnosis or cancer treatment changed the patient’s sexual function and feelings about his or her body?
4. Has the patient’s role with his or her partner changed since the patient was diagnosed with or treated for cancer? If yes, how has the role changed?
5. Use the ALARM or PLEASURE model to assess sexual function (Krebs, 2006; Mick, 2007).

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<tr>
<th>ALARM Model</th>
<th>PLEASURE Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activity</td>
<td>Partner</td>
</tr>
<tr>
<td>Libido/desire</td>
<td>Lovemaking</td>
</tr>
<tr>
<td>Arousal and orgasm</td>
<td>Emotions</td>
</tr>
<tr>
<td>Resolution</td>
<td>Attitude</td>
</tr>
<tr>
<td>Medical history</td>
<td>Symptoms</td>
</tr>
<tr>
<td></td>
<td>Understanding</td>
</tr>
<tr>
<td></td>
<td>Reproduction</td>
</tr>
<tr>
<td></td>
<td>Energy</td>
</tr>
</tbody>
</table>
The following items are examples of questions used to assist in the assessment process.

a. How frequent are the current sexual activities?
b. Are other forms of physical affection, such as hugging or kissing, being communicated?
c. How has your desire and interest for sexual activity changed, either in initiating or responding to your partner?
d. When sexually excited, does the penis become erect or vagina lubricated, followed by ejaculation or vaginal contractions?
e. Following sexual activity, is there a release of sexual tension and a satisfaction with sexual life?
f. Are there any acute or chronic disorders that may interfere with sexual activity, such as diabetes, hypertension, substance abuse, or psychiatric disorders?

HOMECARE INSTRUCTIONS

Action and approach are dependent on patient response to assessment questions. Several models are available for nurses to use in providing sexual information (Kaplan & Pacelli, 2011). The PLISSIT model uses a four-step approach to deal with sexual concerns: permission, limited information, specific suggestions, and intensive therapy. The majority of sexual problems related to cancer can be managed without referral for intensive therapy. The BETTER model was designed for oncology nurses and uses a six-step method to discuss with and educate patients about sexual function (Mick, Hughes, & Cohen, 2004).

- Bring up the topic.
- Explain that concern for quality-of-life issues includes sexual health.
- Tell the patient you will find resources to address concerns.
- Timing should be when the patient is ready to discuss concerns.
- Educate the patient about how side effects of treatment may affect sexual function.
- Record the results of assessment and interventions in the medical record.

The nurse can suggest interventions for the specific problems identified through the assessment process. The methods for dealing with altered sexual health include suggesting new ways of sexual expression, new sexual positions, optimal timing for sexual expressions, and new communication patterns. The American Cancer Society (www.cancer.org) offers various resources to facilitate coping with sexual changes related to cancer or its treatment.

Report the Following Problems

Notify the physician if no improvement has occurred. A referral for more intensive therapy may be indicated. Providers for more intensive therapy may include a surgeon, gynecologist, urologist, social worker, psychologist, psychiatrist, or sex therapist.

64 •••••• Telephone Triage for Oncology Nurses (Second Edition)
REFERENCES


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Anorexia

PROBLEM

An aversion to food, associated with significant weight loss. When the daily physiologic demands exceed the person’s dietary consumption, the body’s reserves are used to meet energy and protein needs (Brown, 2002). Approximately 50% of newly diagnosed patients with cancer experience the symptom; however, the incidence of anorexia can be as high as 70%–80% in patients with advanced cancer (Adams et al., 2009).

Anorexia is closely linked to cachexia, which is a profound wasting syndrome usually seen in patients with end-stage or metastatic cancer (Granda-Cameron & Lynch, 2010). Primary anorexia-cachexia is a metabolic syndrome caused by the cancer. Secondary anorexia-cachexia represents a combination of factors including impaired oral intake, impaired gastrointestinal function, loss of proteins through body fluids, catabolic states unrelated to cancer, and loss of muscle mass resulting from inactivity.

ASSESSMENT CRITERIA

1. What is the cancer diagnosis and treatment? Is the person in an advanced stage of the disease (Cope, 2002)?
2. What medications is the patient taking? Obtain drug history.
3. Ask the patient to describe symptoms in detail (total amount of weight loss over what period of time).
4. Assess quantity of patient’s weight loss as well as patient’s current weight as it compares to ideal body weight (Granda-Cameron & Lynch, 2010). Ideal body weight should take into consideration height, weight, and age of the person being measured.
5. Obtain history, including
   a. Precipitating factors: weight patterns, gain and loss cycles, nutritional intake patterns, and whether weighed on a single scale or on several different scales
   b. Onset and duration
   c. Relieving factors
   d. Any associated symptoms such as nausea and vomiting, weakness, fatigue, amenorrhea, polyuria, or cold intolerance
   e. The patient’s social and cultural beliefs toward food.
6. Past medical history (e.g., eating disorders)
7. Changes in activities of daily living/functional status
# ANOREXIA

## Signs and Symptoms

<table>
<thead>
<tr>
<th>Lack of nutritional intake for several days</th>
<th>Seek urgent care within two to four hours.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orthostatic hypotension (dizziness when standing)</td>
<td>Obtain appointment to see medical professional within 48–72 hours.</td>
</tr>
<tr>
<td>Significant dehydration</td>
<td></td>
</tr>
<tr>
<td>Weight loss greater than 5% of baseline in one month</td>
<td></td>
</tr>
<tr>
<td>Minimal nutritional intake for several days</td>
<td></td>
</tr>
<tr>
<td>Continual loss of weight despite adherence to instructions and ingestion of supplements and prescribed appetite stimulants</td>
<td></td>
</tr>
<tr>
<td>Weight loss greater than 10% of baseline in six months</td>
<td>Yes—Obtain appointment to see medical professional within a week. No—Continue nutritional program, supplements, appetite stimulants, and other homecare instructions.</td>
</tr>
</tbody>
</table>

Cross references: Depressed Mood, Dysphagia, Nausea and Vomiting, Xerostomia

## HOME CARE INSTRUCTIONS

- Avoid strong food odors or foods that are not appetizing.
- Try cold foods, such as vitamin-enhanced smoothies, sandwiches, and yogurt.
- Eat several small meals per day.
- Fortify milk by adding powdered milk.
- Add protein supplements or powdered milk to casseroles, smoothies, etc.
- Sip on nutritious drinks, such as fruit juices, when thirsty.
- Eat the most when you feel the hungriest, regardless of the time of day.
- Eat nutritious high-protein foods, such as fish, lean meat, eggs, and nuts.
- Add supplements such as Ensure® or ProSure®, two cans per day.
- Consult dietitian or homecare instruction sheet for recipes and suggestions.
- Take an appetite stimulant, such as Marinol® or Megace®, or corticosteroids if prescribed.
- Take antiemetics, if prescribed, for nausea.
- Remain as active as possible, utilizing mild exercise such as walking or swimming to increase muscle mass, muscle strength, and level of physical functioning.
- Practice relaxation exercises 30 minutes before meals to decrease stress.
- The nurse should encourage the patient and caregivers to establish a system of eating. Often patients feel as though caregivers are pushing food on them and they are being nagged to eat, while the caregivers are constantly trying to find new ways to make them eat. A system should be worked out between the patient and the caregiver.
ANOREXIA

Report the Following Problems

- Continued lack of appetite with little or no food ingestion
- Continued weight loss
- Uncontrolled nausea that interferes with the ability to eat

Seek Emergency Care Immediately if the Following Occurs

- Fainting when changing from a sitting to a standing position

REFERENCES


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The authors would like to acknowledge Pat Reymann, RN, MSN, AOCN®, for her contribution to this chapter that remains unchanged from the first edition of this book.
Telephone Triage
Antibiotic Therapy Problems

PROBLEM

The patient is experiencing difficulty in taking an antibiotic or side effects with use.

ASSESSMENT CRITERIA

(Fairbanks, 2007; Gilbert, Moellering, Eliopoilos, & Sande, 2006; Lucente & Har-El, 1999; see Pain guideline)

1. What problem is the patient experiencing with the antibiotic?
2. What is the name of the antibiotic the patient is taking? Obtain prescription information including dose, scheduling, and duration. (If necessary, have the caller read the directions for use from the bottle or prescription.)
3. How many doses of the antibiotic has the patient taken?
4. Obtain specific symptom history including
   a. Detailed description of complaint
   b. Onset and duration
   c. Relieving factors and aggravating factors such as sunlight exposure
   d. Other associated symptoms (e.g., fever, nausea, vomiting, diarrhea, rash, redness, lesions, itching, wheezing, difficulty breathing, bleeding, dizziness).
5. What is the patient’s diagnosis and treatment?
6. Has the patient had a recent procedure or surgery?
7. Is the patient on any other medications? Obtain drug and allergy history.
8. Does the patient have any other comorbidities or illnesses such as diabetes, hypertension, HIV infection, or kidney or liver disease? Obtain past medical history.
9. Has the patient experienced any change in daily activities?

<table>
<thead>
<tr>
<th>Signs and Symptoms</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Chest pain and difficulty breathing</td>
<td>Seek emergency care.</td>
</tr>
<tr>
<td>• Black or profusely bloody stools or emesis</td>
<td></td>
</tr>
<tr>
<td>• Profuse watery diarrhea and severe weakness</td>
<td></td>
</tr>
<tr>
<td>• Acute skin changes and associated systemic symptoms such as itching, hives, throat swelling, wheezing, nausea, vomiting, racing heart, chest pain, or eye involvement</td>
<td></td>
</tr>
<tr>
<td>• Sense of overwhelming anxiety or impending doom</td>
<td></td>
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</tbody>
</table>

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### Signs and Symptoms

<table>
<thead>
<tr>
<th>Action</th>
<th>Signs and Symptoms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seek emergency care.</td>
<td>Persistent nausea, vomiting, and dehydration (e.g., decreased urination; sunken eyes; loose, dry skin; excessive thirst; dry mouth)</td>
</tr>
<tr>
<td>Seek care within 24 hours.</td>
<td>Toxic epidermal necrolysis: temperature above 101.5°F (38.6°C) with malaise followed by diffuse erythema or skin lesions with erythematous macules, patches, or blistersing with or without mucous membrane erosions and crusting</td>
</tr>
<tr>
<td>Follow homecare instructions. Notify physician if no improvement.</td>
<td>Skin pain</td>
</tr>
<tr>
<td></td>
<td>Nonbloody diarrhea for longer than three days; lower abdominal cramping</td>
</tr>
<tr>
<td></td>
<td>Sore mouth or tongue, loss of taste, pain on eating and swallowing, white coating on tongue or in mouth</td>
</tr>
<tr>
<td></td>
<td>Vaginal itching, discharge, or erythema</td>
</tr>
<tr>
<td></td>
<td>Unable to swallow the pill</td>
</tr>
<tr>
<td></td>
<td>Bitter taste in mouth when taking antibiotic</td>
</tr>
<tr>
<td></td>
<td>Headache</td>
</tr>
<tr>
<td></td>
<td>Hearing loss</td>
</tr>
<tr>
<td></td>
<td>Dizziness</td>
</tr>
</tbody>
</table>

*Cross references: Dyspnea, Pain*

*Note. Based on information from Fairbanks, 2007; Gilbert et al., 2006; Lucente & Har-El, 1999.*

### HOMECARE INSTRUCTIONS

(Fairbanks, 2007; Gilbert et al., 2006; Lucente & Har-El, 1999)

- It is important to complete antibiotic therapy as prescribed, including finishing the full course even if you are feeling better.
- If any of the problems occur as listed in Report the Following Problems section, notify the prescribing provider.
- Take antibiotic with 8 oz of water. Different antibiotics require taking with food or on an empty stomach. Ask the pharmacist to provide specific dietary instructions related to the antibiotic used.
- If you miss a dose, take it as soon as you remember—unless it is almost time for your next dose. In that case, skip the dose you missed. Do not double up or double dose your medication.
- Do not take someone else’s antibiotics.
- While on antibiotics, avoid sunlight and use sunscreen protection.
- Eat yogurt with active cultures such as Activia® to prevent yeast infections.
- Some antibiotics leave a bitter or metallic taste in the mouth. Eating bread after taking the pill may help.
Report the Following Problems

- Worsening or continuing stomach pain
- Generalized body rash with or without wheals or hives
- Cramps or tenderness in the abdomen
- Diarrhea, nausea, or vomiting
- Hearing loss
- Unusual bleeding or bruising
- Yellow eyes or skin

Seek Emergency Care Immediately if Either of the Following Occurs

- Chest pain or difficulty breathing
- Severe abdominal pain, profuse watery diarrhea, or bloody stool

REFERENCES


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Anxiety

PROBLEM

Apprehension or uneasiness accompanied by restlessness, tension, and sense of insecurity unattached to a clearly identifiable stimulus. Psychological, social, and spiritual factors may exacerbate physical and emotional suffering (Economou, 2009).

ASSESSMENT CRITERIA

<table>
<thead>
<tr>
<th>Signs and Symptoms</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assessment</td>
<td>Establish trust by reassuring the patient that you are there to help. Conduct the interview in a calm and nonjudgmental manner. Allow self-expression without the patient feeling rushed, and assist with thought processes if the patient is unable to recall events in a logical manner. Utilize distress thermometer scale (National Comprehensive Cancer Network, 2010): 0 = no distress to 10 = extreme distress. Scores above 4 need ongoing evaluation.</td>
</tr>
<tr>
<td>• Determine if the patient is experiencing anxiety or long-term depression. – Physical symptoms: Shortness of breath, palpitations, dry mouth, sweating, restlessness, flushing of the face, dizziness, tingling, trembling, sleep disturbance, headache, abdominal muscular tension, elevated blood pressure and heart rate, past cardiac history</td>
<td></td>
</tr>
<tr>
<td>– Psychological symptoms: Feeling of apprehension, comorbid depression, panic, excessive worry, inability to control, inability to relax, fear of losing control, fear of dying, inability to think clearly, cognitive over-arousal, irritability, avoidance or agoraphobia, repetitive behaviors (pacing, rubbing hands)</td>
<td>Ask about the patient’s perception of general health, pain, disability level, or immediate danger. Have these perceptions recently changed? Is the anxiety related to a recent event or a general sense of foreboding? What have we not addressed? What is causing you the most discomfort right now and in the future? What is the meaning of illness?</td>
</tr>
<tr>
<td>• Determine if the patient can receive intervention safely via telephone for the interim.</td>
<td>Call 911 if the patient or others are in immediate danger. Ask: Do you feel nervous? What are you worrying about? Otherwise, have the patient take prescribed anxiolytics. Ask what coping mechanisms have helped in the past, and suggest methods such as biofeedback, relaxation techniques, soft music, and/or deep breathing. If applicable, initiate a supportive counsel consult or a clinic visit and/or notify MD.</td>
</tr>
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<table>
<thead>
<tr>
<th>Signs and Symptoms</th>
<th>Action</th>
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<tbody>
<tr>
<td>Determine sources of support.</td>
<td>Activate the support system by talking with a family member, if one is with the patient, or call an identified support person or counselor. If needed, initiate a supportive counsel consult or a clinic visit and/or notify MD.</td>
</tr>
<tr>
<td>- Is a family member present or readily accessible?</td>
<td></td>
</tr>
<tr>
<td>- Is the patient established with a counselor?</td>
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</tr>
<tr>
<td>Determine medicine/substance-related factors.</td>
<td>Assess whether the drug can produce paradoxical or sympathetic responses. If so, explain the link between anxiety and physiologic response to medications. Some examples are benzodiazepines (lorazepam, alprazolam, clonazepam, diazepam, temazepam, and flurazepam), antihistamines (hydroxyzine and diphenhydramine), phenothiazines (promethazine and prochlorperazine), dopaminergic antagonists (metoclopramide and haloperidol), steroids, and psychostimulants such as methylphenidate.</td>
</tr>
<tr>
<td>- Has the patient recently started new medications that can cause restlessness or anxiety?</td>
<td></td>
</tr>
<tr>
<td>- Has the patient recently changed intake of alcohol, caffeine, nicotine, or illicit drugs?</td>
<td></td>
</tr>
<tr>
<td>- Does the patient use anxiogenic, thyroid, or psychostimulant medications, herbal remedies, or diet medications?</td>
<td></td>
</tr>
<tr>
<td>Determine preexisting conditions that can elicit anxiety.</td>
<td>Assess if symptoms can be alleviated safely with telephone intervention. If unable to intervene successfully over the phone, refer the patient to appropriate medical intervention (e.g., page MD, go to emergency department, call 911 or ambulance service).</td>
</tr>
<tr>
<td>- Does the patient’s diagnosis increase risk for neurocognitive changes, such as cardiac history, pulmonary problems (hypoxia or dyspnea), comorbid depression, diabetes/hypoglycemia, intracranial metastases, uncontrolled pain, history of substance abuse, or history of panic/anxiety attacks?</td>
<td>Allow the patient time for self-expression and provide supportive counseling. Assist with problem solving and provide numbers for counseling services. Communication should be empathetic and not hurried.</td>
</tr>
<tr>
<td>- Is the patient experiencing new stressors, such as social issues, insomnia, new medical diagnoses, disease progression, or grief/loss issues?</td>
<td>Notify MD and set up a clinic visit. Communicate an appointment time to the patient as soon as possible.</td>
</tr>
<tr>
<td>- Does the patient have a history of major depression, post-traumatic stress disorder, schizophrenia, or generalized panic/anxiety attacks?</td>
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<thead>
<tr>
<th>Signs and Symptoms</th>
<th>Action</th>
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<tbody>
<tr>
<td>Always make a follow-up phone call and arrange a clinic visit if the patient has responded to the telephone assistance. If unable to diminish anxiety, notify the physician, and arrange a clinic visit within the next 24 hours. If necessary, have the patient go to the nearest emergency department.</td>
<td></td>
</tr>
</tbody>
</table>

Note. Based on information from McGrandles & McCaig, 2010; National Cancer Institute, 2010; National Comprehensive Cancer Network, 2010; Pasacreta et al., 2006; Swanson et al., 2009.

HOMECARE INSTRUCTIONS

(Economou, 2009)
- Continue any current medications, especially medications prescribed for anxiety.
- Seek available support systems.
- Find methods to deal with increased anxiety (e.g., music/art therapy, exercise).
- Identify what may trigger feelings of anxiety.
- Learn relaxation breathing.
- Keep a written journal or calendar, noting times of anxiety and its onset, duration, and aggravating/alleviating factors. Share with healthcare provider (Vogel, Wilson, & Melvin, 2004).

Report the Following Problems
- Continued symptoms of anxiety despite use of medications and relaxation techniques
- Feelings of overwhelming sadness

Seek Emergency Care Immediately if Either of the Following Occurs
- Severe physical symptom uncontrolled with standard medication
- Feelings of loss of control with thoughts of suicide

REFERENCES

ANXIETY


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The author would like to acknowledge Julie Snider, RN, BSN, OCN®, for her contribution to this chapter that remains unchanged from the first edition of this book.
Ascites

PROBLEM

Ascites is the accumulation of fluid that contains cancer cells within the abdomen (National Cancer Institute, 2011). It occurs when there is a disruption of the formation and absorption of peritoneal fluid. Ascites is classified as exudate or transudate. It can result directly from a malignant process or secondary to an unrelated comorbidity.

ASSESSMENT CRITERIA

(Kammula, 2008; Rogers, 2006; Winkelman, 2004)

1. What is the cancer diagnosis and treatment?
   Malignant ascites occurs commonly with intra-abdominal malignancies such as ovarian, colon, stomach, liver, fallopian tube, and pancreatic cancers and lymphoma and mesothelioma. It may also occur as a result of metastatic disease to the liver.

2. What medications (e.g., diuretics) is the patient taking?

3. Ask the patient to describe symptoms in detail.
   a. Abdominal or low back pain
   b. Abdominal fullness, pressure, or distension
   c. Urinary frequency or urgency
   d. Shortness of breath
   e. Decreased appetite or early satiety
   f. Weight gain
   g. Nausea
   h. Lower extremity edema

4. Obtain history, including
   a. Precipitating factors
   b. Onset and duration
   c. Relieving factors
   d. Any associated symptoms.

5. Past medical history
   a. Concurrent disease (e.g., liver disease)
   b. Presence of medical devices or procedures for draining (e.g., indwelling peritoneal catheter, peritoneovenous shunt, transjugular intrahepatic portosystemic shunts)

6. Changes in activities of daily living: What is the impact on the patient as a result of this excess fluid?
<table>
<thead>
<tr>
<th>Signs and Symptoms</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Severe shortness of breath</td>
<td>Seek emergency care. Call an ambulance immediately.</td>
</tr>
<tr>
<td>Acute abdominal pain</td>
<td></td>
</tr>
<tr>
<td>Temperature higher than 100.4°F (38°C) with neutropenia</td>
<td></td>
</tr>
<tr>
<td>Unresponsiveness</td>
<td></td>
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<tr>
<td>Difficulty breathing</td>
<td>Seek urgent care within 24 hours.</td>
</tr>
<tr>
<td>Abdominal discomfort</td>
<td></td>
</tr>
<tr>
<td>Weight gain of more than five pounds in past two days</td>
<td></td>
</tr>
<tr>
<td>Uncontrolled nausea and vomiting for more than 24 hours</td>
<td></td>
</tr>
<tr>
<td>Changes in mental status (increased somnolence)</td>
<td></td>
</tr>
<tr>
<td>Inability to perform activities of daily living (e.g., dressing, feeding, grooming, bathing, toileting)</td>
<td></td>
</tr>
<tr>
<td>Malfunction in drainage device or catheter</td>
<td></td>
</tr>
<tr>
<td>Swelling of ankles</td>
<td>Seek care within 24–48 hours.</td>
</tr>
<tr>
<td>Inability to eat or drink fluids for 24 hours</td>
<td></td>
</tr>
<tr>
<td>Weight gain of more than five pounds in past week</td>
<td></td>
</tr>
<tr>
<td>Decrease in ability to perform activities of daily living (e.g., dressing, feeding, grooming, bathing, toileting)</td>
<td></td>
</tr>
<tr>
<td>Inability to sleep or rest because of shortness of breath or abdominal discomfort</td>
<td></td>
</tr>
<tr>
<td>Lack of bowel movement for more than three days beyond usual bowel elimination pattern</td>
<td></td>
</tr>
<tr>
<td>Increased tightness of clothing in the abdominal area</td>
<td>Follow homecare instructions. Notify MD if no improvement.</td>
</tr>
<tr>
<td>Abdominal fullness, bloating, heaviness, or tightness</td>
<td></td>
</tr>
<tr>
<td>Indigestion</td>
<td></td>
</tr>
<tr>
<td>Increased frequency of voiding</td>
<td></td>
</tr>
<tr>
<td>Nausea or vomiting</td>
<td></td>
</tr>
</tbody>
</table>

**Note.** Based on information from Rogers, 2006; Thomas & von Gunten, 2007; Winkelman, 2004.

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**HOMECARE INSTRUCTIONS**

(Kammula, 2008; Rogers, 2006; Thomas & von Gunten, 2007; Winkelman, 2004)

**Diet**

- Eat six small, high-protein, high-caloric meals per day.
- Sit up for 30 minutes after each meal.
- Maintain fluid intake (3,000 ml per day).
- Follow a salt-restricted diet (less than 2 g per day).
Comfort
- Avoid wearing clothing that restricts the abdomen.
- Elevate head with pillows to ease work of breathing.
- Elevate lower extremities to reduce edema.
- Position for comfort.
- Use pressure-reduction devices, such as a mattress or heel protectors.

Activities of Daily Living
- Use assistive devices for picking up objects or ambulation.
- Use energy conservation techniques.
- Seek assistance from support care provider network as needed.

Monitor for Critical Changes
- Weigh every other day.
- Take temperature once a day.
- Monitor urine output for changes in color (darker) or volume (decreased).
- Monitor for changes in skin over the abdomen and buttocks (increased redness, breakdown).
- Report any redness or leakage around peritoneal tunneled catheter exit site.

Report the Following Problems
- Lack of improvement in or presence of new signs and symptoms
- Acute changes in severity of signs and symptoms
- Decrease in ability to perform activities of daily living
- Inability to drain ascitic fluid from peritoneal tunneled catheter

Seek Emergency Care Immediately if Any of the Following Occurs
- Severe shortness of breath
- Acute abdominal pain
- Temperature greater than 100.4°F (38°C)
- Unresponsiveness

REFERENCES


Jane Clark, PhD, RN, AOCN®, GNP-C
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PROBLEM

Bleeding can occur secondary to injury or disease, including problems with coagulation resulting from use of anticoagulants or thrombocytopenia. It can be a life-threatening event if massive blood loss is allowed to occur.

ASSESSMENT CRITERIA

1. What is the cancer diagnosis and treatment?
   Bleeding can be caused by tumor invading surrounding structures or blood vessels, or the cancer may cause disseminated intravascular coagulation. Bleeding can also be secondary to thrombocytopenia. Thrombocytopenia, or a decreased number of platelets, can result from the cancer or from disorders associated with splenomegaly, including non-Hodgkin lymphoma, chronic lymphocytic leukemia, chronic liver disease, infection, or bone marrow injury secondary to the cancer, chemotherapy, and radiation therapy.

2. What medications is the patient taking? Obtain drug history, including over-the-counter medications and herbal remedies.

3. Obtain history of any active bleeding, including
   a. Precipitating factors—innjury related or spontaneous.
   b. Onset and duration—when did bleeding start, and how long has it persisted?
   c. Estimated amount of blood loss—describe how many feminine pads per hour (if vaginal bleeding), how many bandages used.
   d. Relieving factors—is bleeding stopped or slowed with direct pressure or other homecare measures?
   e. Any associated symptoms, such as light-headedness, pale skin color, cool or moist skin, thirst, or rapid pulse.

4. Ask the patient to describe symptoms in detail.
   a. If active bleeding, is it slow and steady or spurting?
   b. If active bleeding from a wound, describe the wound.
   c. Petechiae—usually seen when platelet count drops below 20,000/mm³ in dependent regions and over bony prominences (Lynch & Rogers, 2006).
   d. Bruising
   e. Hemorrhagic vesicles inside the mouth or other mucous membranes
   f. Hematuria
   g. Gastrointestinal bleeding—melena, hematemesis
5. Past medical history (in addition to cancer history and therapy)
   a. Use of anticoagulants
   b. Bleeding disorder
   c. New drugs used or exposure to toxic chemicals
6. Changes in activities of daily living

### Signs and Symptoms

<table>
<thead>
<tr>
<th>Signs and Symptoms</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Penetrating wound with difficulty controlling bleeding</td>
<td>Seek emergency care. Call an ambulance immediately.</td>
</tr>
<tr>
<td>• Unconsciousness</td>
<td></td>
</tr>
<tr>
<td>• Signs of shock</td>
<td></td>
</tr>
<tr>
<td>– Light-headedness</td>
<td></td>
</tr>
<tr>
<td>– Skin that is pale, cold, or moist</td>
<td></td>
</tr>
<tr>
<td>– Thirst</td>
<td></td>
</tr>
<tr>
<td>– Rapid pulse</td>
<td></td>
</tr>
<tr>
<td>• Blood spurting from wound and cannot be controlled with direct pressure</td>
<td></td>
</tr>
<tr>
<td>• Exposed bone or deformity at injury site</td>
<td></td>
</tr>
<tr>
<td>• Persistent bleeding longer than 10 minutes following direct pressure to wound</td>
<td>Seek emergency care.</td>
</tr>
<tr>
<td>• Use of one or more feminine pads per hour</td>
<td></td>
</tr>
<tr>
<td>• Gaping bleeding wound</td>
<td></td>
</tr>
<tr>
<td>• History of bleeding disorder or taking anticoagulant with bleeding</td>
<td></td>
</tr>
<tr>
<td>• Suspected thrombocytopenia with bleeding</td>
<td></td>
</tr>
<tr>
<td>• New bruises without significant trauma</td>
<td>Follow homecare instructions.</td>
</tr>
<tr>
<td>• Petechial-appearing rash; little red or purple spots on the skin</td>
<td>Notify MD if no improvement.</td>
</tr>
</tbody>
</table>

*Note. Based on information from Briggs, 2002.*

### HOMECARE INSTRUCTIONS

- To control active bleeding (Damron et al., 2009; Rodriguez & Gobel, 2011)
  - Stay calm.
  - Apply direct pressure at least for five minutes. Maintain pressure until bleeding stops. If bandage is saturated, do not remove; apply additional bandages on top. Try not to dislodge a clot.
  - Lay the patient down and elevate injured part above head (or above heart level).
  - Apply an ice pack, which helps to control bleeding.
- For epistaxis
  - Have the patient sit upright.
  - Apply gentle pressure to nares.
  - Apply cold compress.
To Reduce Risk of Bleeding Due to Thrombocytopenia
(Rodriguez & Gobel, 2011)

• Avoid trauma, contact sports, and falls.
• Avoid sharp objects and tools.
• Avoid lifting heavy objects.
• Avoid intramuscular injections.
• Avoid medications that contain aspirin or ibuprofen.
• Avoid dental work, floss, toothpicks, and water picks.
• Avoid alcoholic beverages.
• Avoid forceful coughing, sneezing, vomiting, and nose blowing.
• Avoid constipation and enemas.
• Avoid sex, vaginal douches, or tampons if platelet count is less than 50,000/mm³.
• Use an electric razor instead of a razor blade.
• Use a nail file instead of nail clippers.
• Use a soft toothbrush.
• Use moisturizer on skin.

Report the Following Problems

• Swelling or bleeding occurring more than 24 hours after bleeding is under control
• Signs of infection, increased pain, drainage, fever, swelling, pus, streaks, or redness
• Blood in urine, vomit, or stool
• Prolonged bleeding or bleeding that does not stop
• Excessive pad count during menstruation

Seek Emergency Care if Any of the Following Occurs

• Signs of shock
• Light-headedness
• Visual changes
• Pale, cold, or moist skin
• Excessive thirst
• Rapid pulse
• Uncontrolled bleeding with suspected thrombocytopenia
• Sudden, severe headache, mental confusion, or changes in mood

REFERENCES


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Bone Loss

PROBLEM

Osteopenia is a reduction in bone mass that commonly occurs in postmenopausal women and both older adult men and women as a result of hormone imbalances. Osteoporosis is a reduction in bone mass with poor bone quality, which increases the risk of fracture. Contributing factors include poor nutrition, prolonged pharmacologic intervention, disease, and decreased mobility. Because patients with cancer and cancer survivors experience many of these factors, they are often predisposed to osteopenia and osteoporosis (Schwartz, Winters-Stone, & Gallucci, 2007).

ASSESSMENT CRITERIA

(Gass & Dawson-Hughes, 2006; Marrs, 2005; Maxwell & Viale, 2005; National Osteoporosis Foundation, 2011; Yamamoto & Viale, 2009)

1. What is the cancer diagnosis and treatment?
   a. Breast and prostate cancer, lymphoma, and Hodgkin disease prior to menopause
   b. Surgical removal of gonadal organs
   c. Hormone therapy
   d. Certain chemotherapy
   e. Radiation therapy to bones
   f. Bone marrow transplant or peripheral blood stem cell transplant

2. What medications is the patient taking? The following may interfere with nutrient absorption and/or bone remodeling.
   a. Prolonged steroid therapy
   b. Heparin
   c. Proton-pump inhibitors
   d. Aluminum-containing antacids
   e. Phenytoin and phenobarbital

3. Review past medical history.
   a. Age older than 65 years
   b. Body mass index less than 20 kg/m²
   c. Bone mineral density (T-score) less than –1.5
   d. Personal or family history of fragility fractures
   e. Those of Asian or Caucasian ethnicity and females who experience menopause before age 45 have a higher risk.
   f. Comorbid diseases increase the risk, including
i. Rheumatoid arthritis
ii. Diabetes
iii. Liver or kidney disease
iv. Hyperthyroidism
v. Hyperparathyroidism
vi. Inflammatory bowel disease
vii. Cushing disease
viii. Multiple sclerosis.

4. Assess nutrition history.
   a. Excessive weight loss
   b. Low calcium and vitamin D intake
   c. Caffeine intake greater than 330 mg daily
   d. Alcohol intake greater than seven drinks per week

5. Assess lifestyle and activities of daily living.
   a. Lack of exercise
   b. Prolonged bed rest
   c. Cigarette smoking
   d. Lack of exposure to natural sunlight

6. Ask the patient to describe the symptom in detail.

7. Obtain history of symptoms.

<table>
<thead>
<tr>
<th>Category</th>
<th>T-Score</th>
<th>Management</th>
<th>DEXA Hip +/- Spine</th>
<th>Monitoring</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low risk</td>
<td>Any T-score</td>
<td>Lifestyle advice</td>
<td>Not recommended</td>
<td>Annual history for risk status</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Calcium and vitamin D</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High risk</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Normal</td>
<td>–1.0 and above</td>
<td>Lifestyle advice</td>
<td>Recommended</td>
<td>Annual BMD test</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Calcium and vitamin D</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Low bone mass (osteopenia)</td>
<td>Between –1.0 and –2.5</td>
<td>Lifestyle advice</td>
<td>Recommended</td>
<td>Annual BMD test</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Calcium and vitamin D</td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Osteoporosis</td>
<td>Below –2.5</td>
<td>Lifestyle advice</td>
<td>Recommended</td>
<td>Annual BMD test</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Calcium and vitamin D</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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(Continued)

<table>
<thead>
<tr>
<th>Category</th>
<th>T-Score BMD (SDs below young normal adult)</th>
<th>Management</th>
<th>DEXA Hip +/- Spine</th>
<th>Monitoring</th>
</tr>
</thead>
<tbody>
<tr>
<td>Severe osteoporosis</td>
<td>Below –2.5</td>
<td>Lifestyle advice</td>
<td>Recommended</td>
<td>Annual BMD test</td>
</tr>
<tr>
<td></td>
<td>Has had one or more low-impact fragility fractures</td>
<td>Calcium and vitamin D</td>
<td>Begin bisphosphonate or raloxifene*</td>
<td></td>
</tr>
</tbody>
</table>

BMD—bone mineral density; DEXA—dual energy x-ray absorptiometry; SDs—standard deviations

*Raloxifene, a selective estrogen receptor modulator, is not recommended in patients who have taken tamoxifen.

Note: Based on information from National Osteoporosis Foundation, 2011; Wickham, 2010.

HOMECARE INSTRUCTIONS

(Maxwell & Viale, 2005; National Institutes of Health Osteoporosis and Related Bone Diseases National Resource Center, 2011)

- **Lifestyle modifications to reduce risk if not contraindicated:**
  - Increase dietary sources of calcium: low-fat dairy products, green leafy vegetables, nuts, fortified orange juice, fatty fish, and beans.
  - Increase vitamin D: fatty fish, egg yolks, liver, natural sunlight.
  - Limit caffeine intake to less than 330 mg/day.
  - Limit alcohol intake to one drink or less per day.
  - Stop smoking.
  - Maintain a healthy weight.
  - Increase weight-bearing physical activity: climbing stairs, jumping rope, walking, hiking, dancing, low-impact aerobics, light weight training or resistance (no sudden or hard pulling).
- **If documented calcium deficiency, discuss with physician:** calcium supplements 600–1,200 mg/day divided into two doses. Calcium citrate is easier to absorb and is preferred if patient takes medication to reduce stomach acid.
- **If documented vitamin D deficiency, discuss with physician:** vitamin D supplements 400–1,000 IU/day. D₃ (cholecalciferol) is easier to absorb.
- **Studies of soy isoflavones containing phytoestrogen do not show evidence of benefit.**
- **Potential pharmaceutical interventions that may be perscribed by the physician**
  - Short-term female hormone replacement therapy with estrogen or estrogen plus progesterone may be an option if the patient does not have a hormone-sensitive type of cancer.
  - Male testosterone replacement therapy may be considered but is not yet documented to reduce fractures.
BONE LOSS

- Bisphosphonate therapy
- RANKL (receptor activator of nuclear factor kappa-B ligand) inhibitor therapy

- Visit educational Web sites such as National Osteoporosis Foundation (www.nof.org) and National Institutes of Health Osteoporosis and Related Bone Diseases National Resource Center (www.osteo.org).

REFERENCES


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Confusion/Change in Level of Consciousness

PROBLEM

Confusion, or cognitive dysfunction, is a symptom or description of a person’s mental state with many subjective symptoms and objective behaviors. The patient may not be oriented to person, place, or time, or the patient’s behaviors or responses may be inappropriate. A change in level of consciousness can be described as agitation, restlessness, sleepiness or somnolence, or the patient may be difficult or unable to arouse (Blecher, 2009).

ASSESSMENT CRITERIA

1. What is the cancer diagnosis and treatment?
   Confusion or a change in the level of consciousness can result from multiple causes. These include but are not limited to cancer (e.g., glioma, astrocytoma, brain metastasis), cerebral hemorrhage secondary to thrombocytopenia, metabolic disorder (e.g., dehydration, abnormal ammonia level), or electrolyte disorder (e.g., hypo- or hypernatremia, hypomagnesemia, hyper- or hypoglycemia) (Blecher, 2009).

2. What medications is the patient taking?
   Obtain drug history, including over-the-counter medications and complementary or “natural” therapies (American Society of Clinical Oncology, 2009; Blecher, 2009).

3. Ask patient or family member to describe symptoms in detail (Blecher, 2009).
   a. Is the patient as awake as usual? If not, describe.
   b. Is the patient restless or agitated? Paranoid or delusional?
   c. Is the patient confused about time, place, and person or just one or two of these variables?
   d. Is the patient oriented, yet inappropriate?

4. Obtain history, including
   a. Precipitating factors
   b. Onset and duration: Has this ever happened before?
   c. Relieving factors
   d. Any associated symptoms, such as headache, recent fall, or seizure.

5. Past medical history
   a. Diabetes mellitus
   b. Cardiac history
   c. Psychiatric history

6. Changes in activities of daily living
### Confusion

<table>
<thead>
<tr>
<th>Signs and Symptoms</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Unconsciousness</td>
<td>Seek emergency care. Call an ambulance immediately.</td>
</tr>
<tr>
<td>• Unable to arouse</td>
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<tr>
<td>• Seizure</td>
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<tr>
<td>• Altered level of consciousness and any of the following</td>
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<tr>
<td>– Severe headache</td>
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<tr>
<td>– Chest pain or discomfort</td>
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<tr>
<td>– Rapid heartbeat</td>
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<tr>
<td>– Diabetic; unresponsive to homecare measures</td>
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<tr>
<td>– Severe abdominal pain</td>
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<tr>
<td>– Pain worsens on sitting or standing</td>
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<tr>
<td>• Altered level of consciousness, aroused, with any of the following:</td>
<td>Seek emergency care.</td>
</tr>
<tr>
<td>– Headache, fever, or stiff and painful neck</td>
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<tr>
<td>– Recent head injury or trauma</td>
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<tr>
<td>– Persistent fever</td>
<td></td>
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<tr>
<td>– Suspected thrombocytopenia</td>
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<tr>
<td>• New or increased confusion</td>
<td>Seek urgent care within 24 hours.</td>
</tr>
<tr>
<td>• Change in level of alertness</td>
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<tr>
<td>• Mood changes, irritable, tearful, agitated</td>
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<tr>
<td>• Change in vision</td>
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<tr>
<td>• Loss of movement in limbs</td>
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<tr>
<td>• Dizziness</td>
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<tr>
<td>• Lethargy</td>
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<tr>
<td>• Tremors/shakiness</td>
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<tr>
<td>• Not able to ambulate</td>
<td></td>
</tr>
<tr>
<td>• Difficulty swallowing</td>
<td></td>
</tr>
<tr>
<td>• Sleeplessness</td>
<td>Follow homecare instructions. Notify MD if no improvement.</td>
</tr>
<tr>
<td>• Numbness and tingling (see Paresthesia)</td>
<td></td>
</tr>
<tr>
<td>• Change in energy level (see Fatigue)</td>
<td></td>
</tr>
</tbody>
</table>

Cross references: Depressed Mood, Dizziness, Fatigue, Headache, Paresthesia

Note. Based on information from Briggs, 2002.

### Homecare Instructions

- Follow homecare instructions for sleep disturbance, fatigue, or paresthesia as appropriate.
- Employ comfort measures such as a quiet, well-lighted room (American Society of Clinical Oncology, 2009).
- Create safety measures to reduce the risk of falls or self-injury.
- Refer to hospice if appropriate.
CONFUSION

Seek Emergency Care Immediately if Any of the Following Occurs

- Unconscious
- Unable to arouse
- Seizure
- Altered level of consciousness

REFERENCES


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The author would like to acknowledge Margaret Hickey, RN, MSN, MS, CORLN, for her contribution to this chapter that remains unchanged from the first edition of this book.
PROBLEM

Constipation is the passage of hard, dry stools with difficulty or discomfort or a decrease in frequency of defecation. Bowel function is dependent on the state of intestinal motility and fluid absorption and secretion (Grande, 2009).

ASSESSMENT CRITERIA

(National Cancer Institute, 2011; National Institutes of Health, National Institute of Diabetes and Digestive and Kidney Diseases, 2007; Thomas, 2006)

1. What is the cancer diagnosis and treatment?
   a. Constipation is a common problem in patients with cancer, occurring in about 50% of patients on therapy and 90% of patients receiving opioids (Thomas, 2006).
   b. It can be a result of dietary changes, including a decrease in fluid and fiber and a decrease in mobility and exercise. Constipation can be caused by obstruction or compression of the bowel lumen by tumor or ascites. Surgical anastomosis may lead to narrowing of the colon lumen from scar tissue or tumor obstruction. Metabolic changes causing constipation include dehydration, hypokalemia, and hypocalcemia.

2. What medications is the patient taking? Obtain drug history. Constipation is the most common side effect of opioid therapy and a potential problem in individuals receiving
   a. Chemotherapy (e.g., any agent that can cause autonomic nervous system changes, such as vinca alkaloids, platins, taxanes, and thalidomide)
   b. Anticholinergic preparations (e.g., gastrointestinal antispasmodics, antiparkinsonian agents, antidepressants)
   c. Phenothiazines
   d. Calcium- and aluminum-based antacids
   e. Diuretics
   f. Nutritional supplements (e.g., iron, calcium)
   g. Tranquilizers and sleeping medications
   h. General anesthesia.

3. Ask the patient to describe symptoms in detail.
   a. Date of last bowel movement
   b. Was it normal in size, color, and firmness?
   c. Was there a distinct odor change?
   d. Was blood present in the stool?
e. Have you had diarrhea?
f. Was the stool difficult to pass?

4. Obtain history, including
   a. Precipitating factors
   b. Onset and duration
   c. Relieving factors
      i. What have you tried, and what have been the results?
      ii. What have you done in the past if you experienced constipation, including previous laxative, enema, or suppository use and its effect?
   d. Any associated symptoms such as abdominal fullness, bloating, nausea, vomiting, excessive gas, or cramping?

5. Past medical history (any new medication or treatments)
6. Changes in activities of daily living, including decrease in exercise and activity
7. Dietary history
   a. Decrease in food/fluid consumption
   b. Decrease in dietary fiber intake

<table>
<thead>
<tr>
<th>Signs and Symptoms</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Severe abdominal pain, swelling, or vomiting</td>
<td>Seek emergency care.</td>
</tr>
<tr>
<td>• Vomiting brown, yellow, or green bitter-tasting emesis</td>
<td></td>
</tr>
<tr>
<td>• Significant rectal bleeding with no history of hemorrhoids or bleeding with constipation</td>
<td>Seek urgent care within 24 hours.</td>
</tr>
<tr>
<td>• No bowel movement in five to seven days, unresponsive to homecare measures</td>
<td></td>
</tr>
<tr>
<td>• Recent surgery or injury</td>
<td></td>
</tr>
<tr>
<td>• History of diverticulitis and fever</td>
<td></td>
</tr>
<tr>
<td>• Fever for 24–48 hours with unknown cause</td>
<td></td>
</tr>
<tr>
<td>• Inability to pass gas</td>
<td></td>
</tr>
<tr>
<td>• Dry, hard stools</td>
<td>Follow homecare instructions.</td>
</tr>
<tr>
<td>• Pain with bowel movements</td>
<td>Notify MD if no improvement.</td>
</tr>
<tr>
<td>• Recent change in stools or bowel habits</td>
<td></td>
</tr>
<tr>
<td>• Recent decrease in activity</td>
<td></td>
</tr>
<tr>
<td>• Recent decrease in dietary intake (fiber) and fluids</td>
<td></td>
</tr>
</tbody>
</table>

*Cross references: Anorexia, Diarrhea*

**HOMECARE INSTRUCTIONS**

(Engelking, 2008; Grande, 2009; National Institutes of Health, National Institute of Diabetes and Digestive and Kidney Diseases, 2007)

Prevention of constipation is the goal.
• Establish a daily exercise routine.
• Drink 8–10 glasses of clear liquid daily; carry a water bottle to sip from throughout the day.
• Include high-fiber foods in daily diet, such as wheat bran, whole-grain breads, oatmeal, peanut butter, beans, fruits, and vegetables. Be cautious if taking opioids or if a structural blockage is suspected.
• Drink hot beverages 30 minutes before defecation. Limit caffeinated drinks because they can act as diuretics.
• Establish a regular time for daily bowel movement; after breakfast is ideal, when the contractions in the intestines are the strongest.
• Initiate a prophylactic bowel regimen per provider with chronic opioid use or in chemotherapy regimens containing vinca alkaloids.
• Take stool softeners or laxatives as recommended by provider.

Report the Following Problems
• Persisting or worsening of constipation
• Homecare measures ineffective
• Abdominal pain or cramping
• Vomiting
• Fever

Seek Emergency Care Immediately if Any of the Following Occurs
• Rectal bleeding
• Passing black-tarry stool
• Severe abdominal pain and swelling
• Vomiting brown, yellow, or green bitter-tasting emesis

REFERENCES

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The author would like to acknowledge Kathy Fister, RN, OCN®, for her contribution to this chapter that remains unchanged from the first edition of this book.
Cough

PROBLEM

Cough is defined as a pulmonary protective reflex that serves as a defense mechanism to clear the airways from both secretions and inhaled particles. The term pathologic cough is used to describe a cough resulting from a disease process (Tyson, 2006).

ASSESSMENT CRITERIA

1. What is the cancer diagnosis and treatment?
   a. Cough can result from many malignant processes, including lung tumors, pleural or pericardial effusions, and carcinomatosis (Bonneau, 2009).
   b. Radiation therapy lowers the production of surfactant in the lung, which can lead to cough. Long-term side effects of radiation therapy include pneumonitis and fibrosis, which frequently lead to cough.
   c. Cough can be a symptom of cardiac dysfunction, which can occur from anthracycline exposure.
2. What medications is the patient taking? Obtain drug history—both prescription and over the counter.
   a. Approximately 5%–35% of patients on angiotensin-converting enzyme inhibitor therapy develop cough within the first few weeks of beginning therapy (Dicpinigaitis, 2006).
   b. Cough may result from complications from bleomycin and cyclophosphamide therapy (Bonneau, 2009).
3. Review past medical history.
   a. Comorbid lung conditions such as asthma or chronic obstructive pulmonary disease, pneumonia, bronchitis, recent upper or lower respiratory tract infection, or tuberculosis
   b. Underlying cardiac disease including congestive heart failure or cardiomegaly
   c. Gastroesophageal reflux disease
   d. Obesity
   e. Tobacco use/abuse
   f. Allergies
4. Ask the patient to describe symptoms in detail.
   a. Productive versus nonproductive cough: If productive, qualify and quantify sputum production (amount, color, with or without blood).
   b. Associated wheezing or rhonchi (ask to speak to the patient and listen to directly, if possible)
c. Associated chest pain, dyspnea, or fever
d. Elevated respiratory and pulse rate
5. Obtain history of symptoms: Acute versus chronic.
6. Assess for changes in activities of daily living.

<table>
<thead>
<tr>
<th>Signs and Symptoms</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Sudden, unexpected increase in dyspnea at rest</td>
<td>Seek emergency care immediately.</td>
</tr>
<tr>
<td>• Frothy pink sputum or gross hemoptysis</td>
<td></td>
</tr>
<tr>
<td>• Facial swelling</td>
<td></td>
</tr>
<tr>
<td>• Change in mental status</td>
<td></td>
</tr>
<tr>
<td>• Increasing dyspnea with activity</td>
<td>Seek medical care within 24 hours.</td>
</tr>
<tr>
<td>• Fever</td>
<td></td>
</tr>
<tr>
<td>• Increased edema or swelling</td>
<td></td>
</tr>
<tr>
<td>• Change in cough or sputum production</td>
<td></td>
</tr>
<tr>
<td>• Uncontrollable cough</td>
<td></td>
</tr>
<tr>
<td>• Wheezing, rhonchi, or crackles</td>
<td></td>
</tr>
<tr>
<td>• Chronic cough, lasting more than 2–3 weeks</td>
<td>Follow homecare instructions and seek medical care if no improvement within 24–48 hours.</td>
</tr>
</tbody>
</table>

Cross reference: Dyspnea
Note. Based on information from Joyce, 2010; Tyson, 2006.

HOME CARE INSTRUCTIONS

• Ensure compliance with medical therapy (e.g., antibiotics, antitussives, bronchodilators, opioids, proton pump inhibitors), respiratory treatments, and oxygen, as prescribed.
• Drink plenty (1–2 L) of fluids (unless restricted because of cardiac dysfunction) to help thin out secretions (unless underlying congestive heart failure is present).
• Avoid precipitating factors that worsen cough, such as perfumes, tobacco smoke, and dry air. Consider use of warm humidifier (cold humidified air may lead to bronchospasm).
• Monitor for fever or any sign of infection and avoid contact with people who are sick.

Report the Following Problems

• Fever (temperature above 101.5°F [38.6°C], or 100.5°F [38.1°C] if receiving chemotherapy)
• Change in sputum production (color, hemoptysis)
• Swelling of the feet or hands
• Unrelieved heartburn symptoms, if applicable
Seek Emergency Care Immediately if Any of the Following Occurs

- Worsening dyspnea, especially accompanied by chest pain or gross hemoptysis
- Increased work of breathing (elevated respiratory or heart rate)

REFERENCES


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The author would like to acknowledge Susan Newton, RN, MS, AOCN®, AOCNS®, for her contribution to this chapter that remains unchanged from the first edition of this book.
Deep Venous Thrombosis

PROBLEM

Partial or complete occlusion of blood flow in deep veins caused by a thrombus (clot), which may lead to a life-threatening event (Murphy, 2009).

ASSESSMENT CRITERIA

(Bauer & Lip, 2011; Murphy, 2009)

1. What are the cancer diagnosis, treatment, and comorbid conditions?
   Deep venous thrombosis is most commonly seen in patients with cancer of the lung, pancreas, stomach, brain, breast, ovary, prostate, bladder, or colon, or multiple myeloma or acute promyelocytic leukemia. Risk factors for deep venous thrombosis include sepsis, presence of a venous access device, cardiac disease, obesity, thrombocytosis, lupus, polycythemia vera, and recent surgery (Wilmot Cancer Center, n.d.).

2. What medications is the patient taking? Obtain drug history.

3. Ask the patient to describe symptoms in detail.
   a. Pain, tenderness, or a feeling of tightness in the calf, especially when walking
   b. Vein distension in lower legs
   c. Tenderness or warmth over the involved vein
   d. Fever
   e. Swelling or discoloration in the calf

4. Obtain history, including
   a. Precipitating factors
   b. Onset and duration
   c. Relieving factors
   d. Any associated symptoms, such as chest pain and shortness of breath.

5. Past medical history (increased risk): History of deep venous thrombosis, phlebitis or pulmonary embolism. Complex medical illness: Liver, cardiac, or renal disease.

6. Changes in activities of daily living, immobility

7. Recent joint replacement surgery, major surgery, trauma or recent fracture, application of a cast, peripheral vascular disease

<table>
<thead>
<tr>
<th>Signs and Symptoms</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chest pain or shortness of breath</td>
<td>Seek emergency care. Call an ambulance immediately.</td>
</tr>
</tbody>
</table>

(Continued on next page)
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<table>
<thead>
<tr>
<th>Signs and Symptoms</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>• History of the following risk factors: Immobility; recent surgery; presence of a venous access device; current smoker; infection; joint replacement or fracture; cast application; kidney, cardiac, or liver disease; peripheral vascular disease; active treatment for cancer and diagnosis of acute promyelocytic leukemia or cancer of the lung, pancreas, stomach, brain, colon, prostate, ovary, breast, or bladder</td>
<td>Seek emergency care.</td>
</tr>
<tr>
<td>• Past episode of deep venous thrombosis, peripheral vascular disease, recent injury, cellulitis, obstructive lymphadenopathy, or currently on anticoagulant therapy with symptoms of</td>
<td></td>
</tr>
<tr>
<td>– Dull ache</td>
<td></td>
</tr>
<tr>
<td>– Tight feeling of flank pain in the calf, worse with walking, better with elevation</td>
<td></td>
</tr>
<tr>
<td>– Tenderness, warm to touch, redness, or visible blueness or discoloration of any extremity or palpable cord of swollen vein</td>
<td></td>
</tr>
<tr>
<td>– Fever (low grade)</td>
<td></td>
</tr>
<tr>
<td>– Palpable vein at tender site</td>
<td></td>
</tr>
<tr>
<td>– Visible swelling to pitting edema on affected site (or upper arm of venous access device site, calf swelling of 3 cm in symptomatic leg, unilateral swelling)</td>
<td></td>
</tr>
<tr>
<td>– Positive Homan sign (pain on dorsiflexion of foot with knee bent in 30° of flexion)</td>
<td>Seek urgent care within two hours.</td>
</tr>
<tr>
<td>• Any or all of the emergency risk factors listed above with</td>
<td>Seek urgent care within 24 hours.</td>
</tr>
<tr>
<td>– No shortness of breath or chest pain</td>
<td></td>
</tr>
<tr>
<td>– Local tenderness with increased discomfort with movement or ambulation</td>
<td></td>
</tr>
<tr>
<td>– Slight redness or warmth at the affected site</td>
<td></td>
</tr>
<tr>
<td>– Fever may or may not be present.</td>
<td></td>
</tr>
<tr>
<td>– Positive Homan sign may or may not be present.</td>
<td></td>
</tr>
<tr>
<td>• Risk factor of cancer diagnosis and treatment with</td>
<td>ANY PATIENT WHO IS SYMPTOMATIC SHOULD SEEK MEDICAL EVALUATION IN 24 HOURS OR BE CONTACTED FOR FOLLOW-UP OR CURRENT STATUS.</td>
</tr>
<tr>
<td>– A sense of tightness or tenderness in the affected site</td>
<td></td>
</tr>
<tr>
<td>– No evidence of swelling</td>
<td></td>
</tr>
<tr>
<td>– Slight warmth in the affected site</td>
<td></td>
</tr>
<tr>
<td>– Negative Homan sign</td>
<td></td>
</tr>
<tr>
<td>• Patient is symptomatic.</td>
<td></td>
</tr>
</tbody>
</table>

*Note. Based on information from Landaw & Bauer, 2011.*
HOME CARE INSTRUCTIONS

(Qaseem et al., 2007)

- Elevate leg.
- Reduce ambulation until seen by a physician.
- Do not rub the affected site.
- Do not apply ice or heat unless instructed by the physician.
- Report changes in condition immediately.
- Do not cancel office appointments for any reason.
- Seek medical attention immediately if the symptoms worsen or recur, even if they are in an opposite limb.

Seek Emergency Care Immediately if Any of the Following Occurs

- Shortness of breath (sudden onset)
- Crackles/wheeze, rales
- Chest pain (increased with deep breathing)
- Hemoptysis (late symptom)
- Cough, diaphoresis, or syncope
- Unexplained back or abdominal pain
- Fever (low grade)
- Tachypnea (more than 24 breaths/minute)
- Anxiety, apprehensiveness, or restlessness

REFERENCES


Mary Murphy, RN, MS, AOCN®, ACHPN
Vice President of Care
Oncology Clinical Nurse Specialist
Hospice of Dayton
Dayton, Ohio
Depressed Mood

PROBLEM

A feeling of sadness, disappointment, or upset that may affect energy level, appetite, and sleep patterns.

ASSESSMENT CRITERIA

1. What is the cancer diagnosis and treatment?
   Recent diagnosis or diagnosis of recurrence, treatment failure, advanced disease, unrelieved symptoms (particularly pain), and body image issues following recent disfiguring surgery, such as mastectomy or head and neck surgery, may be associated with depressed mood (Barsevick & Much, 2004).

2. What medications is the patient taking? Obtain drug history.
   Many common medications (e.g., interferon, analgesics, steroids, hormones, anxiolytics, anticonvulsants, antihypertensives) prescribed for patients with cancer can have depression as a side effect.

3. Obtain history, including
   a. Precipitating factors
   b. Onset and duration
   c. Relieving factors
   d. Any associated symptoms, such as sadness, teariness, insomnia, change in appetite, change in sleep pattern, and suicidal tendencies.

4. Past medical history
   a. Age (younger people seem to adapt more poorly than older people)
   b. History of depression or substance abuse
      i. Include history of sadness lasting more than two weeks that was unrelated to illness or a major life event.
      ii. Ask the questions “Over the past two weeks, have you felt down, depressed, or hopeless?” “Over the past two weeks, have you felt little interest or pleasure in doing things?” (Löwe, Kroenke, & Gräfe, 2005).
      iii. Family history of depression or substance abuse
   c. History of myocardial infarction, surgical procedures
   d. Recent body image changes
   e. Hypothyroidism
   f. Addison disease, Cushing disease
   g. Diabetes mellitus
   h. Metabolic abnormalities (electrolytes, calcium, vitamin B₁₂, folate) (Valentine, 2006)

5. Social history (use of alcohol, illicit drugs, and tobacco)
6. Changes in activities of daily living
7. Frequent somatic complaints (frequent calls, office visits, and emergency department visits)
   a. More than five visits per year
   b. Multiple unexplained symptoms
   c. Irritable bowel syndrome
   d. Poor adherence or recent changes in adherence to treatment recommendations and self-care (Culpepper, 2010)
8. Work, family, or other relationship problems
9. History of postpartum mood disorders
10. Perimenopausal status (Freeman, Sammel, Lin, & Nelson, 2006)
11. Spouse with depressive illness (Hippisley-Cox, Coupland, Pringle, Crown, & Hammersley, 2007)
12. Recent bereavement or loss (e.g., death, divorce)
13. Low income status or financial duress (Lorant et al., 2003)

<table>
<thead>
<tr>
<th>Signs and Symptoms</th>
<th>Action</th>
</tr>
</thead>
</table>
| **A** | Are five or more of the following signs or symptoms present most of the day, nearly every day, during the same two-week period?  
- Loss of interest or pleasure in activities*  
- Depressed mood, feeling sad, empty*  
- Hopelessness  
- Insomnia or hypersomnia  
- Significant weight loss or decrease or increase in appetite  
- Psychomotor agitation or retardation (as observed by others)  
- Fatigue or loss of energy  
- Decreased or no interest in sexual activities  
- Feelings of worthlessness or excessive or inappropriate guilt  
- Diminished ability to think or concentrate or indecisiveness  
- Recurrent thoughts of death, suicidal ideation with or without a plan, or suicide attempt or specific plan | Yes—Go to B.  
No—Go to C. |
| **B** | Not accounted for by  
- Bereavement  
- General medical condition or treatment | Yes—Go to D.  
No—Go to C. |
| **C** | Are any of the symptoms attributable to side effects of treatment?  
- Describe signs or symptoms related to treatment (e.g., fatigue, difficulty sleeping, poor appetite). | Yes—Provide homecare instructions  
No—Go to D. |

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DEPRESSED MOOD

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<table>
<thead>
<tr>
<th>Signs and Symptoms</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>D</td>
<td>Yes—Seek emergency care immediately. May need to call an ambulance. May need to pursue voluntary or involuntary admission to hospital.</td>
</tr>
<tr>
<td>• Is the patient suicidal?</td>
<td>Yes, but no plan—Continue talking and call prescriber.</td>
</tr>
<tr>
<td>• What plans for suicide does the patient have?</td>
<td>No—Schedule an appointment with a mental health provider.</td>
</tr>
<tr>
<td>• How lethal are the plans?</td>
<td></td>
</tr>
<tr>
<td>• Is there a gun in the house?</td>
<td></td>
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<tr>
<td>• Lethal medication available?</td>
<td></td>
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<tr>
<td>• Social isolation?</td>
<td></td>
</tr>
<tr>
<td>• Amputation?</td>
<td></td>
</tr>
<tr>
<td>• Emotional and physical exhaustion?</td>
<td></td>
</tr>
<tr>
<td>• Sensory loss?</td>
<td></td>
</tr>
<tr>
<td>• Inability to eat or swallow?</td>
<td></td>
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<tr>
<td>• Loss of bowel or bladder control?</td>
<td></td>
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<tr>
<td>• Impulsive?</td>
<td></td>
</tr>
<tr>
<td>• Poor prognosis?</td>
<td></td>
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<tr>
<td>• Use of alcohol or substances?</td>
<td></td>
</tr>
<tr>
<td>• Psychotic (hear voices telling them what to do)?</td>
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</tr>
<tr>
<td>• Males are at higher risk.</td>
<td></td>
</tr>
</tbody>
</table>

*At least one of these has to be present.

Cross references: Anxiety, Fatigue, Menopausal Symptoms


HOMECARE INSTRUCTIONS

- Educate the patient that with treatments for depression, it may take weeks to months to notice improvement.
- Educate the patient that depression can recur. Knowing the symptoms helps to recognize it.
- Written materials and referral to support groups may be helpful.
- If applicable, provide referral to grief counseling.
- Encourage the patient to draw on strengths and use cognitive strategies.

Sources for Support Groups and Information

American Cancer Society
www.cancer.org
800-227-2345 (800-ACS-2345)

American Psychosocial Oncology Society
www.apos-society.org
Help line: 866-APOS-4-HELP (866-276-7443)

CancerCare
www.cancercare.org
800-813-4673
Cancer Information Service  
http://cis.nci.nih.gov  
800-422-6237 (800-4-CANCER)

Depression and Bipolar Support Alliance  
www.dbsalliance.org  
800-826-3632

National Alliance for the Mentally Ill  
www.nami.org  
703-524-7600 or 888-999-NAMI

National Foundation for Depressive Illness  
www.depression.org  
800-239-1265

National Mental Health Association  
www.nmha.org  
800-969-6642 (800-969-NMHA)

U.S. Department of Health and Human Services  
www.hhs.gov  
202-619-0257 or 877-696-6775

REFERENCES


Mary K. Hughes, MS, RN, CNS, CT  
Clinical Nurse Specialist  
Psychiatry Department  
University of Texas MD Anderson Cancer Center  
Houston, Texas
Diarrhea

PROBLEM

Diarrhea is an abnormal increase in the quantity, frequency (four or more stools per day over baseline, or a mild increase in ostomy output), or liquidity of stool that is different from the usual pattern of elimination. Diarrhea may be accompanied by a sense of bloating, cramping abdominal pain, or inability to control defecation. Diarrhea may be caused by chemotherapy regimens, radiation therapy, or surgery. Other causes include anxiety, medications, and nutritional intake. Diarrhea also can result from bowel disorders, including Crohn disease, irritable bowel syndrome, partial bowel obstruction, and bacterial and viral infections, including Clostridium difficile (Abramson Cancer Center of the University of Pennsylvania [ACCUP], 2009; Held-Warmkessel, 2006; National Cancer Institute Cancer Therapy Evaluation Program, 2009).

ASSESSMENT CRITERIA

(ACCUP, 2009; Held-Warmkessel, 2006; Muehlbauer et al., 2009; Polovich, Whitford, & Olsen, 2010)

1. What is the cancer diagnosis and treatment?
Diarrhea is a common side effect of cancer and cancer therapy, including surgery, chemotherapy, and radiation therapy. The prevalence of treatment-induced diarrhea is 50%–80% (Muehlbauer et al., 2009). Chemotherapy drugs affect the lining of the intestinal tract and can induce diarrhea. Radiation therapy may induce diarrhea when the treatment area includes the pelvis, abdomen, lower thoracic, or lumbar spine. Radiation seed implants for prostate cancer may cause diarrhea. Cancers of the gastrointestinal tract (e.g., stomach, colon, rectum) often cause diarrhea. Neuroendocrine tumors and malignancies that produce hormones also may cause diarrhea.

2. What medications is the patient taking? Obtain drug history.
Medications contributing to diarrhea include antibiotics, IV chemotherapy (5-fluorouracil, irinotecan, interleukin-2), oral chemotherapy (erlotinib, lapatinib, dasatinib, sunitinib), laxatives, diuretics, antihypertensives, antiemetics, sorbitol medications (or foods), magnesium-based antacids, and cyclooxygenase-2 inhibitors.

3. Obtain history of bowel habits.
   a. Frequency
   b. Liquid versus formed stool
   c. Color, odor, presence of undigested food or fat
   d. Presence of mucus or blood

4. Ask the patient to describe symptoms in detail.
   a. Number of stools in 24 hours
b. Color and consistency of stools  
c. Weight loss  
d. Urine output and character  
e. Signs of dehydration  
5. Obtain history, including  
a. Precipitating factors  
b. Onset and duration  
c. Relieving factors  
   i. What remedies has the patient tried, and what have been the results?  
   ii. What has the patient done in the past for diarrhea management, and what was the effect?  
d. Any associated symptoms, such as abdominal pain or cramps, fever, weight loss, stool incontinence, nausea or vomiting, or decreased urine output  
6. Past medical history (any new medications or treatments)  
7. Changes in activities of daily living  
8. Diet history  
a. Food intolerance  
b. Aversions  
c. Allergies  
d. Consumption of well water  
e. Ingestion of unpasteurized milk or its products  
f. Consumption of raw seafood  
9. Social history  
a. Recent travel abroad  
b. Exposure to farm animals or animal feces  

<table>
<thead>
<tr>
<th>Signs and Symptoms</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Grossly bloody stool</td>
<td>Seek emergency care.</td>
</tr>
<tr>
<td>• Signs of severe dehydration</td>
<td>Call an ambulance immediately.</td>
</tr>
<tr>
<td>– Severe lethargy or weakness</td>
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</tr>
<tr>
<td>– Heart palpitations</td>
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<tr>
<td>– Decreased urine output</td>
<td></td>
</tr>
<tr>
<td>– Sunken eyes</td>
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<tr>
<td>– Orthostatic hypotension</td>
<td></td>
</tr>
<tr>
<td>– Dizziness</td>
<td></td>
</tr>
<tr>
<td>• Excessive thirst, dry mouth</td>
<td>Seek urgent care within 24 hours.</td>
</tr>
<tr>
<td>• Fever with temperature above 100.4°F (38°C)</td>
<td></td>
</tr>
<tr>
<td>• Diarrhea for more than five days</td>
<td></td>
</tr>
<tr>
<td>• More than six stools above baseline per day for two days</td>
<td></td>
</tr>
<tr>
<td>• Swollen or painful abdomen</td>
<td></td>
</tr>
<tr>
<td>• More than 10 stools per day</td>
<td></td>
</tr>
<tr>
<td>• Weight loss of more than five pounds since diarrhea began</td>
<td></td>
</tr>
<tr>
<td>• Continued diarrhea despite antidiarrheal treatment</td>
<td></td>
</tr>
<tr>
<td>• Decreased turgor, pinched skin does not spring back</td>
<td></td>
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</tbody>
</table>

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### Signs and Symptoms

<table>
<thead>
<tr>
<th>Signs and Symptoms</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Less than six stools per day</td>
<td>Follow homecare instructions. Notify</td>
</tr>
<tr>
<td>• Chronic diarrhea</td>
<td>MD if no improvement.</td>
</tr>
<tr>
<td>• Other family members with diarrhea</td>
<td></td>
</tr>
<tr>
<td>• Recent travel to a foreign country</td>
<td></td>
</tr>
<tr>
<td>• New prescription</td>
<td></td>
</tr>
</tbody>
</table>

**Cross references: Nausea and Vomiting, Pain**

*Note. Based on information from Abramson Cancer Center of the University of Pennsylvania, 2009; Held-Warmkessel, 2006; Oncology Nursing Society, 2008; Polovich et al., 2010.*

### HOME CARE INSTRUCTIONS

*(ACCUP, 2001; Grande, 2009; Oncology Nursing Society, 2008; Polovich et al., 2010)*

1. Replace fluid losses with one cup of water per diarrhea episode.
   - a. Drink six to eight glasses of fluids per day, such as water, diluted cranberry juice, sports drinks, or decaffeinated tea or coffee.
   - b. Eat foods high in soluble fiber, such as bananas, oatmeal, applesauce, skinned turkey or chicken, rice, and toast.
2. Consider foods containing pectin. Pectin is a natural fiber that decreases diarrhea. Foods include beets, peeled apples, white rice, bananas, baked potatoes without skin, white bread, plain pasta, avocados, and asparagus tips.
   - a. Eat foods high in protein, calories, and potassium that are easy to digest.
   - b. Cook all vegetables well. Raw vegetables are difficult to digest.
   - c. Eat small, frequent meals. Do not eat large meals.
   - d. Eat foods at room temperature, as hot and cold temperature foods may instigate diarrhea.
3. Avoid foods and products that can aggravate diarrhea.
   - a. Avoid foods high in insoluble fiber, such as raw fruits and vegetables, skins, seeds, and legumes.
   - b. Avoid milk and dairy products.
   - c. Avoid caffeine, alcohol, sucrose, and sorbitol.
   - d. Avoid greasy, fatty, spicy, and fried foods and foods containing olestra.
   - e. Refrain from taking fiber supplements.
   - f. Do not smoke cigarettes.
4. Implement rectal skin care routine.
   - a. Clean perineal area well with mild soap and water or aloe-based baby wipes, and apply barrier ointment for protection.
   - b. Sitz baths may add comfort.
   - c. Examine rectal area for red, scaly, or broken skin. If present, report to healthcare provider.
   - d. Record the frequency, quality, and volume of stools during course of treatment.
e. If the diarrhea lasts more than 24 hours, notify your healthcare provider.
f. Consult healthcare provider before taking any over-the-counter antidiarrheal medications. These can be very effective but may not be appropriate for this particular situation.
g. If prescribed, keep track of medications administered—type, amount, and frequency.

**Report the Following Problems**

(ACCUP, 2009; Held-Warmkessel, 2006)

- Unable to keep fluids down for 24 hours
- Urine becomes dark yellow in color, or no urine is produced.
- More than six bowel movements above baseline per day for two days in a row
- Dizziness
- Rectal bleeding
- Temperature above 100.4°F (38°C)
- Swollen or painful abdomen
- Red, scaly, or broken skin of the rectal area

**REFERENCES**


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*The author would like to acknowledge Kathy Fister, RN, OCN®, for her contribution to this chapter that remains unchanged from the first edition of this book.*

114 ········ Telephone Triage for Oncology Nurses (Second Edition)
Difficulty or Pain With Urination

PROBLEM

Difficulty or pain with urination.

ASSESSMENT CRITERIA

1. What is the cancer diagnosis and treatment?
   Urinary discomfort (frequency, urgency, and lower pelvic pain) may be a result of bacillus Calmette-Guérin treatment for bladder cancer. Hemorrhagic cystitis is a complication associated with ifosfamide and cyclophosphamide chemotherapy. Urinary tract infection may cause dysuria, and radiation therapy to the prostate area may result in prostatitis with urinary tract symptoms. Pelvic irradiation can cause radiation cystitis. Urinary retention can result from spinal cord injury caused by bone metastasis or tumor extension such as spinal cord compression (Berry, 2004).

2. What medications is the patient taking? Obtain drug history.
   a. Currently on chemotherapy?
   b. When was last chemotherapy?
   c. Alpha-adrenergics, anticholinergics, pseudoephedrine, and phenylpropanolamine may cause urinary retention (Wheeler, 2009).

3. What was the oral intake for the past 24 hours?

4. Is the patient pregnant?

5. Ask the patient to describe symptoms in detail.
   a. Discomfort or pain on urination
   b. Frequency of urination
   c. Feeling that the bladder is not fully emptying
   d. Time of last urination
   e. Color of urine
   f. Odor of urine

6. Obtain history of urinary discomfort, including
   a. Precipitating factors
   b. Onset and duration
   c. Ability to start and end urine stream
   d. Presence or absence of lower back pain
   e. Relieving factors
   f. Any associated symptoms such as blood, discharge, or fever.

7. Past medical history (Wheeler, 2009)
   a. Recent urinary catheterization
   b. History of urinary tract infections
c. History of sexually transmitted diseases (date of last intercourse; protected or unprotected)
d. Prostate disease
e. Changes in activities of daily living

<table>
<thead>
<tr>
<th>Signs and Symptoms</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urinary retention</td>
<td>Seek emergency care.</td>
</tr>
<tr>
<td>Acute flank or back pain</td>
<td></td>
</tr>
<tr>
<td>Severe abdominal or groin pain</td>
<td></td>
</tr>
<tr>
<td>Lower extremity weakness</td>
<td></td>
</tr>
<tr>
<td>Temperature above 101.5°F (38.6°C) without neutropenia</td>
<td>Seek urgent care within 24 hours.</td>
</tr>
<tr>
<td>Temperature above 100.4°F (38°C) with suspected neutropenia</td>
<td></td>
</tr>
<tr>
<td>Chills, malaise</td>
<td></td>
</tr>
<tr>
<td>Hematuria (see Hematuria)</td>
<td>Seek urgent care within 24 hours.</td>
</tr>
<tr>
<td>Dysuria</td>
<td></td>
</tr>
<tr>
<td>Burning on urination</td>
<td></td>
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<tr>
<td>Frequent urination, nocturia</td>
<td></td>
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<tr>
<td>Cloudy or malodorous urine</td>
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<tr>
<td>Suprapubic tenderness</td>
<td></td>
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<tr>
<td>Unable to urinate for more than eight hours</td>
<td></td>
</tr>
<tr>
<td>Flu-like symptoms lasting more than 72 hours</td>
<td></td>
</tr>
<tr>
<td>If prior bacillus Calmette-Guérin (BCG) treatment: joint pain, cough, or rash</td>
<td>Follow homecare instructions. Notify MD if no improvement.</td>
</tr>
</tbody>
</table>

Recent BCG treatment
- Dysuria
- Frequent urination
- Burning on urination
- Difficulty voiding
- Slow stream
- Dribbling
- Sense of incomplete voiding
- Urgency
- Nocturia

**Cross references:** Fever With Neutropenia, Hematuria

**Note.** Based on information from Berry, 2004; Gulanick & Myers, 2007; MedlinePlus, 2008; Wheeler, 2009.

**HOMECARE INSTRUCTIONS**

- Drink 10 eight-ounce glasses of fluid each day (unless contraindicated).
- Drink cranberry juice.
- Avoid caffeinated and acidic beverages.
- Cleanse the genital area from front to back.
DIFFICULTY OR PAIN WITH URINATION

• Urinate frequently.
• Urinate after intercourse.
• Take showers instead of tub baths.
• Monitor urinary output.
• Practice pelvic floor exercises.
• Use of a voiding diary may be helpful.

Seek Emergency Care Immediately if Any of the Following Occurs

• Difficulty breathing
• Loss of consciousness
• Temperature elevation that persists 48–72 hours after treatment
• Development of chills

REFERENCES


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The author would like to acknowledge Denise Dearing, RN, BSN, OCN®, for her contribution to this chapter that remains unchanged from the first edition of this book.
PROBLEM

Dizziness is the third most common complaint among outpatients. In 80% of these cases, the dizziness is severe enough to require medical intervention (Tusa, 2008). If patients cannot describe the symptoms, ask if the symptom feels like it is a problem in their head or a problem with their balance (Tusa, 2008). Vertigo, a symptom of dizziness, feels as if the room is spinning around the person. Dizziness may be an inner ear problem: the balance mechanism is not functioning properly for some unknown reason (Cleveland Clinic Foundation, 2005).

Dizziness without vertigo can be described as faintness or a sensation of passing out. Dizziness with vertigo includes the sense of either the patient moving or objects moving, often accompanied by nausea and vomiting. There are two types: central, when the cause of the vertigo is a lesion involving the brain, which has a higher incidence if the lesion is located in the brain stem or cerebellum; and peripheral, when the cause is a disturbance in the inner ear or a problem with the vestibular nerve, which connects the inner ear to the brain stem (Healthwise, 2011).

Some precipitating causes of dizziness in patients with cancer can include dehydration (from nausea and vomiting, poor nutrition, or diarrhea), anemia, hypotension, possible new-onset brain metastasis, and side effects from certain chemotherapy (e.g., cisplatin, cytarabine, ifosfamide).

ASSESSMENT CRITERIA

(Gholtz, 2009; Schuring, 2011)

1. What is the cancer diagnosis?
   a. Cancer diagnoses prone to brain metastasis include breast, prostate, lung, kidney, melanoma, head and neck, soft tissue sarcomas, and testicular cancers.
   b. Dizziness with vertigo may result from lesions in the inner ear, cranial nerve VIII, brain stem, or cerebral cortex.
2. What treatment regimen is the patient undergoing? Review the chemotherapy, both infusional and oral.
3. Define the onset: gradual or acute? Define the duration of the dizziness.
4. Is any specific activity associated with dizziness, such as quickly standing or changing position (orthostatic hypotension)?
5. What medications is the patient taking? Obtain drug history. Medications that can cause dizziness include barbiturates, anti-inflammatory drugs, diuretics, antibiotics, cisplatin, cardiac agents, and sunitinib (Miksad et al., 2009).
6. Ask the patient if he or she is experiencing any symptoms that would suggest dehydration, such as decreased fluid intake, dry mouth, nausea and vomiting, or diarrhea.

7. Ask the patient to describe symptoms in detail using specific terms to assist in differentiating between nonvertiginous dizziness and vertigo. Have the symptoms been an acute attack of dizziness (three days or fewer) or chronic dizziness (more than three days) (Tusa, 2008)?
   a. Nonvertiginous dizziness is commonly described as a sensation of the head spinning (light-headed, floating, swimming) while the room remains still.
   b. Vertigo is commonly described as a spinning outside of the head with a sense that the room or the patient is moving.

8. Obtain history of dizziness, including
   a. Precipitating factors
   b. Onset and duration (nonvertiginous dizziness tends to be continuous, whereas vertigo tends to be episodic)
   c. Any relieving factors
   d. Any associated symptoms such as tinnitus, hearing loss, positional changes, nausea, vomiting, and diaphoresis
   e. Any gait changes, falls, or resulting injuries.

9. Has the patient had any double vision, loss or change of visual fields, facial numbness or drooping, or trouble moving one side (hemiparesis)?

10. Does anything make it better or worse?

11. Does the patient have a history of cardiac or vascular disease, diabetes, or blood sugar abnormalities? Does the patient take any medications for hypertensive disease (Cleveland Clinic Foundation, 2005)?

12. Does the patient have a history of recent upper respiratory infection or ear infections?

<table>
<thead>
<tr>
<th>Signs and Symptoms</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Chest pain</td>
<td>Seek emergency care. Call an ambulance immediately.</td>
</tr>
<tr>
<td>• Difficulty breathing</td>
<td></td>
</tr>
<tr>
<td>• Incontinence of bowel or bladder</td>
<td>Seek emergency care.</td>
</tr>
<tr>
<td>• Hemiparesis</td>
<td></td>
</tr>
<tr>
<td>• Facial numbness</td>
<td></td>
</tr>
<tr>
<td>• Double vision, loss of visual fields</td>
<td></td>
</tr>
<tr>
<td>• Nausea or vomiting (unexplained, not secondary to vertigo)</td>
<td>Seek urgent care within 24 hours.</td>
</tr>
<tr>
<td>• Headache or ear pain</td>
<td></td>
</tr>
<tr>
<td>• Known diabetic</td>
<td></td>
</tr>
<tr>
<td>• Evidence of gastrointestinal bleeding</td>
<td></td>
</tr>
<tr>
<td>• Temperature above 101°F (38.3°C)</td>
<td></td>
</tr>
</tbody>
</table>

(Continued on next page)
DIZZINESS

Signs and Symptoms | Action
--- | ---
Recent chemotherapy, pain medication, or anxiolytic medication | Follow homecare instructions. Notify MD if no improvement.
Spinning feeling | 
Nausea | 

Cross references: Dyspnea, Fever Without Neutropenia, Headache, Nausea and Vomiting

HOME CARE INSTRUCTIONS

- If possible, have a family member stay with you if you are experiencing dizziness.
- Sit with legs elevated or lie down.
- If vertigo is positional, move slowly and address safety issues to prevent injury or falls. Rise from a sitting position slowly, and remove any obstacles on your floor such as throw rugs. If needed, walk along the wall and brace yourself as you slowly move forward.
- Do not drive or operate any machinery, such as an automobile or tractor, until dizziness is gone.
- Report to physician within 72 hours for evaluation if symptom continues.

REFERENCES


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The author would like to acknowledge Denise Dearing, RN, BSN, OCN®, for her contribution to this chapter that remains unchanged from the first edition of this book.
Dysgeusia

**PROBLEM**

Alteration in taste.

**ASSESSMENT CRITERIA**

(Steinbach et al., 2009; Strasser et al., 2008)

1. What is the cancer diagnosis and treatment?
   Taste changes can result from surgical changes, radiation therapy to the head and neck area, and chemotherapy. These alterations include salty, bitter, sweet, or sour taste changes, decreased taste sensations, and metallic tastes. Commonly reported changes include a decreased threshold for bitter foods and an increased threshold for sweet foods. Salty taste is usually the most altered.

2. What medications is the patient taking? Obtain drug history, including prescription and over-the-counter medication.
   a. Vitamin supplements: zinc deficiency
   b. Besides chemotherapeutic agents (e.g., cisplatin), some antibiotics (e.g., metronidazole), analgesics (e.g., auranofin), bisphosphonates (e.g., zoledronic acid), antidepressants (e.g., amitriptyline), antihypertensives (e.g., nifedipine), bronchodilators (e.g., albuterol), muscle relaxants (e.g., baclofen), and anticonvulsants (e.g., phenytoin) may alter taste.

3. Ask the patient to describe symptoms in detail.
   a. Sweet or sour aversions
   b. What tastes are affected?
   c. Is dietary intake affected?

4. Obtain history, including
   a. Precipitating factors
   b. Onset and duration
   c. Aggravating and relieving factors
   d. Any associated symptoms, such as weight loss, nausea, xerostomia, poor food or fluid intake, stomatitis or mucositis, oral thrush, pain, dental carries, and difficulty chewing or swallowing.

5. Past medical history
   a. Dental care
   b. Diabetes mellitus
   c. Depression
6. Changes in activities of daily living
7. Diet history of typical 24-hour day prior to cancer diagnosis or treatment and current diet history

<table>
<thead>
<tr>
<th>Signs and Symptoms</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Swollen or bleeding gums, inability to swallow, or severe oral pain</td>
<td>Seek emergency care.</td>
</tr>
<tr>
<td>Stomatitis, glossitis (raw tongue), atrophic lingua (sick tongue), or weight loss</td>
<td>Seek urgent care within 24 hours.</td>
</tr>
<tr>
<td>Patient reports food tasting like cardboard or metal; food tastes too salty, sweet, sour, or bitter</td>
<td>Follow homecare instructions. Notify MD if no improvement.</td>
</tr>
</tbody>
</table>

Cross references: Oral Mucositis, Pain, Xerostomia (dry mouth)

**HOMECARE INSTRUCTIONS**

(Hong et al., 2009; Rehwaldt et al., 2009; Soares et al., 2010)

- The only intervention proven helpful in ameliorating taste alterations is home preparation techniques.
- Increase your fluid intake to two to three liters a day. Drink nonirritating liquids, such as apple juice, grape juice, and sports drinks. Keep your mouth moist by spraying with water, artificial saliva, or saline.
- Tart foods such as oranges and lemonade are more appealing (unless you have mouth sores).
- Suck on sugar-free sour candies to stimulate saliva production.
- Eat small, frequent meals.
- Use plastic utensils if food tastes metallic.
- Eat in pleasant surroundings with family and friends for distraction.
- Add fats and sauces to foods.
- Eat sugar-free mints, chew sugar-free gum, or chew ice to mask a bitter or metallic taste.
- Substitute poultry, fish, eggs, tofu, peanut butter, beans, and dairy products for red meats.
- Marinate meats in sweet fruit juices, wines, salad dressing, barbeque sauce, or sweet and sour sauces.
- Flavor foods with seasonings such as salt, oregano, basil, rosemary, cinnamon, sugar, and lemon.
- Cold or frozen food typically is more acceptable than warm food.
- Frozen fruit (melon balls, grapes, etc.) is a good snack.
- Reduce consumption of bitter- or metallic-tasting foods such as coffee, chocolate, and red meat.
- Do not eat one to two hours before chemotherapy or radiation therapy and up to three hours after therapy.
- Brush your teeth before and after each meal.
- Avoid cigarette smoking.
- Control noxious odors in the environment.
- If possible, have someone else prepare the food.
- In 2010, the American Society of Clinical Oncology presented preliminary analysis from a pilot study on Synsepalum dulcificum, or “miracle fruit,” which is a powerful taste alteration product (alters sour or bitter to taste sweet). The study concluded that it is safe to use in patients undergoing chemotherapy, and the results are encouraging (Soares et al., 2010).

**Report the Following Problems**
(Bernhardson, Tishelman, & Rutqvist, 2007)
- Weight loss
- Depression
- Nausea and vomiting
- Stomatitis or mucositis

**Seek Emergency Care Immediately if Any of the Following Occurs**
- Uncontrolled bleeding from mouth
- Inability to swallow
- Severe pain in mouth

**REFERENCES**


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Dysphagia

PROBLEM

Dysphagia is defined as difficulty swallowing, which prevents the normal passage of food and liquid. Swallowing difficulty can negatively affect not only a person’s ability to maintain an adequate nutrition status but also the person’s quality of life, as limited food choices and prolonged or altered eating times affect one’s level of comfort with social interactions (Hayward & Shea, 2009). An interdisciplinary team approach to managing dysphagia, including a physician, nurse, registered dietitian, and speech-language pathologist, can optimize the patient’s plan of care and treatment outcome. Rosenthal, Lewin, and Eisbruch (2006) reported that successful swallowing before treatment is associated with successful swallowing following treatment and that the use of swallowing exercises during and after treatment can improve the patient’s outcome.

ASSESSMENT CRITERIA

1. What is the cancer diagnosis and treatment?
   Cancers of the head and neck region can promote dysphagia due to tumor obstruction or surgery, or the dysphagia may be the result of definitive treatment with chemoradiotherapy. Chemoradiotherapy improves tumor control but can result in an increased incidence and severity of life-threatening swallowing-related toxicities, such as dysphagia, aspiration, progressive weight loss, and feeding tube dependence (Agarwal et al., 2011). This can contribute to further complications such as increased risk of infection and treatment interruptions, thus decreasing treatment effectiveness and prolonging recovery time.

2. Obtain past medical history.
   a. Cerebrovascular accident, gastroesophageal reflux disease, or pneumonia
   b. Altered nutritional status
   c. Weight loss (more than 5% over one month or more than 10% over six months)
   d. Infections of the oral, pharyngeal, or esophageal mucosa
   e. Alcohol or tobacco use
   f. Placement of nasogastric tube or other invasive procedures of the esophagus
   g. Gastrostomy tube or percutaneous endoscopic gastrostomy tube placement


4. Ask the patient to describe symptoms (Carr, 2011; Grant & Kravits, 2000).
   a. Precipitating factors: Coughing with liquids/choking
b. Early: “lump” in the throat with or without swallowing; always trying to clear throat

c. Dry throat: “food gets stuck,” the need to swallow food several times before it goes down

d. Burning sensation of the substernal area with or without swallowing

e. Coughing or choking with foods or liquids leaking from the nose

f. Difficulty or pain with swallowing

g. Choking or vomiting as a result of inability to pass food or fluid

h. History of dysphagia

i. Onset and duration: Intermittent with mealtimes or continuous (solids versus liquids)

j. Relieving factors (dietary modifications)

k. Treatment of oral infections

l. Current diet and fluid intake

5. Assess for nutritional plan of care.

All patients should receive a complete nutrition evaluation by a registered dietitian, preferably one who specializes in oncology, prior to the initiation of therapy and weekly thereafter. Recommendations include calorie and protein requirements, food consistency options, vitamin and mineral replacement, and the use of supplements. Recommendations may include enteral support, with the gastrointestinal tract being the preferred method of support.

6. Evaluate the patient’s nutritional needs, weight history, and pain management needs once or twice a week at minimum.

7. Consult with a speech-language pathologist for evaluation and treatment to decrease risk for muscle atrophy for swallowing and choking. Swallowing exercises as prescribed by a speech-language pathologist during and after treatment can improve overall outcomes (Hayward & Shea, 2009).

<table>
<thead>
<tr>
<th>Signs and Symptoms</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inability to swallow with increasing pain, swelling, or compromised airway</td>
<td>Seek emergency care. Call an ambulance immediately.</td>
</tr>
<tr>
<td>Choking or vomiting from inability to pass foods or liquids (or aspiration suspected)</td>
<td></td>
</tr>
<tr>
<td>Change in level of consciousness</td>
<td></td>
</tr>
<tr>
<td>Temperature above 100.4°F (38°C); chills with suspected neutropenia</td>
<td></td>
</tr>
<tr>
<td>Increased difficulty swallowing; unable to eat or drink</td>
<td>Seek urgent care within 24 hours.</td>
</tr>
<tr>
<td>Increase in vomiting or pain</td>
<td></td>
</tr>
<tr>
<td>If feeding tube is present, report nausea or vomiting, indigestion, or diarrhea.</td>
<td></td>
</tr>
<tr>
<td>Feeding tube becomes clogged or there is redness, pain, swelling, or leakage from the insertion site</td>
<td></td>
</tr>
<tr>
<td>Decreased urine output that is cloudy or dark</td>
<td></td>
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<tr>
<td>Dizziness, increased weakness or fatigue</td>
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<table>
<thead>
<tr>
<th>Signs and Symptoms</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Lump in throat or sore throat</td>
<td>Follow homecare instructions.</td>
</tr>
<tr>
<td>• Difficulty swallowing</td>
<td></td>
</tr>
</tbody>
</table>

Cross references: Esophagitis, Fever With Neutropenia, Fever Without Neutropenia, Oral Mucositis

**HOMECARE INSTRUCTIONS**

- Follow the nutrition plan as developed by registered dietitian.
- Follow exercise/safety plan as developed by speech-language pathologist.
- Take medications as directed.
- Sit upright to maximize swallowing.
- Prevent aspiration: Remain sitting for 30 minutes after meals; sleep at a 45° angle.
- Take analgesics as ordered for pain relief to improve intake. If swallowing pills becomes difficult, notify healthcare provider. Not all pills can be crushed.
- Do not smoke or use alcohol.
- Avoid mouth rinses that contain alcohol.
- Perform daily mouth care as instructed, including after meals.

**Seek Emergency Care if Any of the Following Occurs**

- Inability to swallow with increasing pain, swelling, or compromised airway
- Choking or vomiting from inability to pass foods or liquids (or aspiration suspected)
- Change in level of consciousness
- Temperature above 100.4°F; chills with suspected neutropenia

**REFERENCES**


DYSPHAGIA

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Dyspnea

PROBLEM

*Dyspnea* is a term used to describe difficult or labored breathing. It is a subjective sensation that is both abnormal and uncomfortable (LeGrand, Khawam, Walsh, & Rivera, 2003).

ASSESSMENT CRITERIA

1. What is the cancer diagnosis and treatment?
   a. Dyspnea is most common in patients with chest malignancies, affecting up to 60% of patients with non-small cell lung cancer (Beckles, Spiro, Colice, & Rudd, 2003). It is common in patients with metastatic disease resulting in endobronchial lesions, pleural effusions, hepatomegaly, or ascites. Cardiac complications due to malignancy, such as pericardial effusion or superior vena cava syndrome, also can lead to dyspnea.
   b. Some causes of dyspnea are related indirectly to a diagnosis of cancer, including paraneoplastic syndromes, electrolyte imbalances, cachexia, fatigue, and pulmonary emboli (Dudgeon, Kristjanson, Sloan, Lertzman, & Clement, 2001).
   c. Following lung resection surgery, dyspnea is common as a result of decreased lung capacity.
   d. Dyspnea can result after radiation therapy because of fibrosis or pneumonitis.
   e. Patients receiving certain types of chemotherapy can experience dyspnea as a short- or long-term side effect of their medication. These include medications such as bleomycin and gemcitabine. Anthracyclines are associated with cardiac toxicity, which can lead to heart failure, causing dyspnea. Some medications (such as tamoxifen) also can increase the risk of thromboembolic disease and can result in pulmonary embolism.

2. What medications is the patient taking? Obtain drug history, both prescription and over the counter.

3. Review past medical history.
   a. Comorbid lung conditions such as asthma or chronic obstructive pulmonary disease, pneumonia, bronchitis, or recent upper or lower respiratory tract infection
   b. Underlying cardiac disease including congestive heart failure or cardiomegaly
   c. Anemia
   d. Tobacco use
4. Ask the patient to describe symptoms in detail.
   a. Elevated respiratory and pulse rate
   b. Associated wheezing, cough, or rhonchi (ask to speak to the patient and listen to directly, if possible)
   c. Associated chest pain, cough, or fever
   d. Associated cyanosis or pallor
5. Obtain history of symptoms.
   a. Acute versus chronic
   b. Assess for any change in mental status (somnolence, restlessness, confusion).
6. Assess for changes in activities of daily living.

<table>
<thead>
<tr>
<th>Signs and Symptoms</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Sudden, unexpected increase in dyspnea at rest</td>
<td>Seek emergency care. Call an ambulance immediately.</td>
</tr>
<tr>
<td>• Chest pain</td>
<td></td>
</tr>
<tr>
<td>• Gross hemoptysis</td>
<td></td>
</tr>
<tr>
<td>• Facial swelling</td>
<td></td>
</tr>
<tr>
<td>• Change in mental status</td>
<td></td>
</tr>
<tr>
<td>• Increasing dyspnea with activity</td>
<td>Seek medical care within 24 hours.</td>
</tr>
<tr>
<td>• Fever</td>
<td></td>
</tr>
<tr>
<td>• Increased edema or swelling</td>
<td></td>
</tr>
<tr>
<td>• Change in cough or sputum production</td>
<td></td>
</tr>
<tr>
<td>• Uncontrollable cough</td>
<td></td>
</tr>
<tr>
<td>• New-onset wheezing</td>
<td></td>
</tr>
<tr>
<td>• Cough</td>
<td>Follow homecare instructions and seek medical care if no improvement within 24–48 hours.</td>
</tr>
<tr>
<td>• Shortness of breath</td>
<td></td>
</tr>
</tbody>
</table>

Cross references: Anxiety, Cough, Deep Venous Thrombosis

Note. Based on information from Joyce, 2010; Tyson, 2006.

**HOMECARE INSTRUCTIONS**

• Ensure compliance with medical therapy (e.g., opioids, cough suppressants), respiratory treatments, and oxygen, as prescribed.
• Schedule activities that require more exertion (such as bathing) around periods of rest.
• Promote adequate sleep and rest.
• Drink plenty (1–2 L) of fluids (unless restricted due to cardiac dysfunction) to help thin out secretions (unless underlying congestive heart failure is present).
• Avoid precipitating factors that worsen dyspnea, such as anxiety, perfumes, tobacco smoke, and cold air. Stay inside on days where the air quality is poor.
• Monitor for fever or any sign of infection, and avoid contact with people who are sick.
• Sitting upright and pursed-lip breathing can lessen dyspnea, as can relaxation training.

Report the Following Problems
• Fever (temperature above 101.5°F [38.6°C], or 100.5°F [38.1°C] if receiving chemotherapy)
• Change in sputum production (color, hemoptysis)
• Swelling of the feet or hands

Seek Emergency Care Immediately if Any of the Following Occurs
• Worsening dyspnea, especially if accompanied by chest pain or gross hemoptysis
• Swelling of the face
• Increased work of breathing (elevated respiratory or heart rate)
• Changes in mental status (somnolence, restlessness, confusion)

REFERENCES

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The author would like to acknowledge Denise Dearing, RN, BSN, OCN®, for her contribution to this chapter that remains unchanged from the first edition of this book.
Esophagitis

PROBLEM

Esophagitis is an inflammatory response of the mucosal lining of the esophagus. As with oral mucositis, esophagitis can be measured by severity, including erythema, swelling, ulceration, infection, and possible hemorrhage (Camp-Sorrell, 2011). Dysphagia (difficulty swallowing) occurs in up to one-half of patients with head and neck cancer and is commonly associated with odynophagia (painful swallowing) and esophagitis (Hayward & Shea, 2009). Odynophagia is the hallmark, resulting in multiple swallowing problems, nutritional deficits, fatigue, and poor quality of life.

ASSESSMENT CRITERIA

1. What is the cancer diagnosis and treatment?
   Esophagitis is common in patients with head and neck cancers, lung cancer, lymphomas of the chest, or other diseases that include the mediastinum. Chemotherapy and radiation therapy destroy rapidly dividing cells, such as the epithelial cell layer. Cell death decreases the renewal rate of basal epithelium, which results in mucosal atrophy, ulceration, and initiation of the inflammatory response (Shafi & Bresalier, 2010). Esophagitis is a multifactorial symptom that can create major functional impairment, such as pain and swallowing difficulties. The result is a decreased quality of life that has an impact on intake and therefore can result in increased fatigue, dehydration, and malnutrition (Hayward & Shea, 2009). The patient’s treatment plan can further result in an increased risk of infection and treatment interruptions, thus decreasing treatment effectiveness and prolonging recovery time.

2. Obtain past medical and social history (Hayward & Shea, 2009).
   a. History of altered nutritional status and review of pertinent laboratory values (prealbumin, albumin)
   b. History of weight loss (more than 5% over one month or more than 10% over six months) and current weight
   c. History of oral hygiene regimen
   d. Typical and recent dietary intake
   e. History of alcohol or tobacco use
   f. Gastrostomy tube or percutaneous endoscopic gastrostomy tube placement

3. What medications is the patient taking? Obtain drug history.
   a. Include date of last chemotherapy, as nadir in the presence of esophagitis may predispose the patient to local or systemic infections.
b. Identify prolonged use of broad-spectrum antibiotics.
c. Assess for use of proton pump inhibitors and antacids.

4. Evaluation of symptoms affecting nutritional status (nausea, vomiting, diarrhea, mucositis)
   a. “Lump” in the throat with or without swallowing
   b. Dry throat—“food gets stuck”
   c. Burning sensation of the substernal area with or without swallowing
   d. Epigastric pain
   e. Difficulty or pain with swallowing
   f. Choking or vomiting as a result of food becoming lodged

5. History of esophagitis
   a. Precipitating factors
   b. Onset and duration: Intermittent with mealtimes or continuous
   c. Relieving factors (topical anesthesia, systemic analgesia, dietary modifications)
   d. Treatment of oral Candida
   e. Current diet and fluid intake

6. Assess for nutritional plan of care.
   Patients should receive a complete nutrition assessment by a registered dietitian, preferably one who specializes in oncology, prior to the initiation of therapy and weekly for ongoing follow-up during treatment. Recommendations include calorie and protein requirements, food consistency options, vitamin and mineral replacement, and the use of supplements. Recommendations may include enteral support, with the gastrointestinal tract being the preferred method of support.

7. Evaluate the patient’s nutritional needs, weight history, and pain management needs once or twice a week at minimum.

<table>
<thead>
<tr>
<th>Signs and Symptoms</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Presence or sudden increase in frank blood with cough</td>
<td>Seek emergency care. Call an ambulance immediately.</td>
</tr>
<tr>
<td>Persistent fever with temperature above 100.4°F (38°C),</td>
<td></td>
</tr>
<tr>
<td>chills with suspected neutropenia</td>
<td></td>
</tr>
<tr>
<td>Inability to swallow with increasing pain, swelling,</td>
<td></td>
</tr>
<tr>
<td>or compromised airway</td>
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<tr>
<td>Choking or vomiting from inability to pass foods or</td>
<td></td>
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<tr>
<td>liquids</td>
<td></td>
</tr>
<tr>
<td>Chest pain</td>
<td></td>
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<tr>
<td>Change in level of consciousness</td>
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## ESOPHAGITIS

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<table>
<thead>
<tr>
<th>Signs and Symptoms</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral assessment indicates increase in inflammation, white patches, or coated tongue.</td>
<td>Seek urgent care within 24 hours.</td>
</tr>
<tr>
<td>Unable to drink fluids</td>
<td></td>
</tr>
<tr>
<td>Decreased urine output that is cloudy or dark</td>
<td></td>
</tr>
<tr>
<td>Dizziness, increased weakness or fatigue</td>
<td></td>
</tr>
<tr>
<td>Increasing difficulty swallowing or sore throat</td>
<td></td>
</tr>
<tr>
<td>Sore throat or lump in throat</td>
<td>Follow homecare instructions.</td>
</tr>
<tr>
<td>Difficulty swallowing</td>
<td></td>
</tr>
</tbody>
</table>

Cross references: Dysphagia, Fever With Neutropenia, Fever Without Neutropenia, Nausea and Vomiting, Oral Mucositis

## HOMECARE INSTRUCTIONS

(Camp-Sorrell, 2011)

- Follow nutrition plan as developed by a registered dietitian.
  - Eat soft-textured, nonfibrous, nonacidic foods.
  - Limit hot food and beverages.
  - Drink high-calorie/high-protein milkshakes or liquid nutrition supplements.
  - Follow feeding tube recommendations (Cranganu & Camporeale, 2009).
- Increase fluid intake to 2–3 liters/day or as recommended by dietitian.
- Take topical anesthetics as ordered (30 minutes prior to meals).
- Take antacids and proton pump inhibitors as directed.
- Perform daily mouth care as instructed, including after meals.
- Inspect the oral cavity daily for changes in inflammation, presence of white or yellow patches, and coating of the tongue.
- Take analgesics as ordered for pain relief to improve intake. If swallowing pills becomes difficult, notify healthcare provider. Not all pills can be crushed.
- Take temperature daily.
- Do not smoke or use alcohol.
- Avoid mouth rinses that contain alcohol.
- Add humidity to room air and during sleeping to promote moisture (50%–60% household humidity).

## Seek Emergency Care Immediately if Any of the Following Occurs

- Presence or increase in frank blood with cough
- Change in level of consciousness
- Inability to swallow with increasing pain, swelling, or compromised airway
- Persistent fever with temperature above 100.4°F (38°C), chills with suspected neutropenia
REFERENCES


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Registered Licensed Dietitian
Nutrition Services Manager
Atrium Medical Center
Middletown, Ohio
Fatigue

PROBLEM

Patient’s perceived sensation of tiredness, weariness, or lack of energy (National Library of Medicine, National Institutes of Health, 2011).

ASSESSMENT CRITERIA

1. What is the cancer diagnosis and treatment?
   Fatigue is a common symptom with multiple etiologies, which include but are not limited to cachexia, the cancer itself, recurrence of the cancer, depression, fluid or electrolyte imbalance, hypoxia, pain, anemia, infection, and a side effect of cancer therapy (chemotherapy and radiation) (Cope, 2006; Mitchell, 2011; National Comprehensive Cancer Network [NCCN], 2010). Note: Fatigue may remain long after cancer therapy has been completed (Janaki et al., 2010; NCCN, 2010).

2. What medications is the patient taking? Obtain drug history. Common medications associated with fatigue include analgesics, antihypertensives, diuretics, and antidepressants.

3. What is the past medical history?
   a. Comorbid diseases such as cardiovascular disease, chronic obstructive pulmonary disease, or endocrine dysfunction (NCCN, 2010; National Library of Medicine, National Institutes of Health, 2011)
   b. Depression or anxiety (NCCN, 2010)

4. What is the family history?
   a. Depression (Mitchell, 2011)
   b. Recent losses

5. Ask the patient to describe symptoms in detail, including the impact on activities of daily living (Cope, 2006).

6. Obtain history of presenting symptoms, including
   a. Precipitating factors
   b. Level of fatigue severity on a scale of 1–10 (lowest to greatest level of fatigue) (Nail, 2004; Young-McCaughan & Nail, 2008)
   c. Onset, pattern, and duration (NCCN, 2010)
   d. Change over time (NCCN, 2010)
   e. Relieving factors
   f. Any associated symptoms, such as sleep disturbances (e.g., sleep apnea, restless legs syndrome [NCCN, 2010]), continual sadness, or loss of appetite (Nail, 2004).
## Signs and Symptoms

<table>
<thead>
<tr>
<th>Signs and Symptoms</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Unable to wake up</td>
<td>Seek emergency care. Call an ambulance immediately.</td>
</tr>
<tr>
<td>• Severe fatigue that is disabling; patient is bedridden.</td>
<td>Seek emergency care.</td>
</tr>
<tr>
<td>• Temperature above 100.4°F (38°C) with suspected neutropenia</td>
<td></td>
</tr>
<tr>
<td>• Adverse reaction to psychostimulant (e.g., methylphenidate, modafinil, prednisone, dexamethasone, others) (Hinkel, 2009)</td>
<td></td>
</tr>
<tr>
<td>• Severe fatigue or loss of ability to perform some activities</td>
<td>Schedule office visit in 24–48 hours. Set priorities and establish a schedule of activities at peak energy times to see if this helps in changing the dynamics of the fatigue.</td>
</tr>
<tr>
<td>• Dizziness</td>
<td></td>
</tr>
<tr>
<td>• Temperature above 100.4°F without suspected neutropenia</td>
<td></td>
</tr>
<tr>
<td>• Moderate fatigue or difficulty performing some activities of daily living</td>
<td>Follow homecare instructions. Maintain healthy diet; limit naps to less than one hour; consider consult with nutritionist or rehabilitation.</td>
</tr>
<tr>
<td>• Increased fatigue over baseline but not altering daily lifestyle</td>
<td>Follow homecare instructions. Notify MD if no improvement.</td>
</tr>
</tbody>
</table>

Cross references: Fever With Neutropenia, Fever Without Neutropenia

Note. Based on information from Lin, 2001; Mitchell, 2011; Nail, 2004; National Comprehensive Cancer Center, 2010; Young-McCaughan & Nail, 2008.

## HOMECARE INSTRUCTIONS

(Cope, 2006; Mitchell, 2011; Mitchell, Beck, Hood, Moore, & Tanner, 2009; Nail, 2004; NCCN, 2010; Sarhill et al., 2001; Young-McCaughan & Nail, 2008)

- Perform moderate exercise several times per week (Mitchell et al., 2009).
- Practice energy conservation.
- Prioritize daily schedule; plan activities.
- Practice sleep promotion, including
  - Cognitive-behavioral therapy intervention
  - Limiting caffeine and alcohol intake
  - Avoiding long or late afternoon naps and limiting time in bed to actual sleep time
  - Establishing a routine before going to sleep (e.g., keep an hour to relax prior to going to sleep)
  - Going to bed and waking up at a regular time
  - Taking psychostimulants, if prescribed, on schedule.
- Balance work with rest periods.
Follow a balanced diet with adequate intake of fluid, electrolytes, calories, protein, carbohydrates, fat, vitamins, and minerals (Mitchell et al., 2009).

**Report the Following Problems**

- Blood in urine or stool
- Weight loss
- Fever (temperature above your normal or baseline temperature)
- Inability to perform activities of daily living
- Inability to conceptualize thoughts

**Seek Emergency Care Immediately if Any of the Following Occurs**

- Fainting
- Unconsciousness
- Temperature above 100.4°F (38°C) may occur with suspected neutropenia.

**REFERENCES**


Anne Invernale, RN, BSN
Consultant
New York, New York
Fever in a neutropenic patient is defined as three oral temperatures above 100.4°F (38°C) in a 24-hour period or one temperature above 101.3°F (38.5°C).

Febrile neutropenia is a potentially life-threatening emergency (Nirenberg et al., 2006) and can lead to treatment delays and dose reductions (Shelton, 2011).

**ASSESSMENT CRITERIA**

1. What is the cancer diagnosis and treatment?
   - The risk of infection is directly related to the degree and length of neutropenia (National Comprehensive Cancer Network [NCCN], 2011). More than 60% of patients with neutropenia will develop an infection. Neutropenia can be secondary to malignancies that involve bone marrow infiltration, such as leukemia, and to chemotherapy and radiation therapy. A neutropenic patient cannot mount a normal response to infection, and fever is often a late sign of an infectious process and could be life threatening (Shelton, 2011). Mortality rates are 70% within 48 hours if antibiotics are not initiated (National Cancer Institute, 2011).

2. What medications is the patient taking? Obtain drug history.

3. Ask the patient to describe symptoms in detail.
   - Maximum temperature in 24 hours
   - Evidence of any other signs of infection (symptoms listed later) (Shelton, 2011)

4. Obtain history, including
   - Precipitating factors, including exposure to others with infections (especially tuberculosis), pets, travel, or recent blood product administration (NCCN, 2011)
   - Onset and duration, including temperature spikes and time that temperature was elevated
   - Relieving factors, including any antipyretic medications taken prior to the call
   - Any associated symptoms, such as open lesions or sores that are red, draining, or tender; mucositis; diarrhea; central venous exit site is red, draining, or tender; sore throat; cough; pain or discomfort with urination; or chills (Shelton, 2011).

5. Past medical history
   - Exposure to others with upper respiratory infection or flu (Shelton, 2011)
   - Review the patient’s latest complete blood count (CBC) and absolute neutrophil count (ANC) and prior CBCs and ANC during other chemotherapy cycles.
c. Most common cause of neutropenia is chemotherapy, and the timing of neutrophil nadir is predictable and can be estimated based on the agent given.
   i. Always identify chemotherapy agents given and when.
   ii. Review the patient’s prior ANC with prior chemotherapy cycles. This helps to predict the degree of neutropenia, as neutropenia typically worsens with each course of therapy if not treated with a growth factor.

6. Changes in activities of daily living

<table>
<thead>
<tr>
<th>Signs and Symptoms</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Temperature above 100.4°F (38°C)</td>
<td>Seek emergency care.</td>
</tr>
<tr>
<td>• Change in mental status: Restlessness, irritability, confusion, or somnolence</td>
<td>Call an ambulance immediately.</td>
</tr>
<tr>
<td>• Rapid breathing, difficulty swallowing, or wheezing</td>
<td></td>
</tr>
<tr>
<td>• Signs of dehydration</td>
<td></td>
</tr>
<tr>
<td>– Decreased urine output</td>
<td></td>
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<tr>
<td>– Sunken eyes</td>
<td></td>
</tr>
<tr>
<td>– Excessive thirst, dry mouth</td>
<td></td>
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<tr>
<td>– Pinched skin does not spring back</td>
<td></td>
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<tr>
<td>• Signs of shock</td>
<td></td>
</tr>
<tr>
<td>– Light-headedness</td>
<td></td>
</tr>
<tr>
<td>– Pale, cold, or moist skin</td>
<td></td>
</tr>
<tr>
<td>– Thirst</td>
<td></td>
</tr>
<tr>
<td>– Rapid pulse</td>
<td></td>
</tr>
<tr>
<td>• Signs and symptoms of infection</td>
<td>Seek urgent care within 24 hours.</td>
</tr>
<tr>
<td>• Temperature of 100.4°F (38°C)</td>
<td>Follow homecare instructions.</td>
</tr>
<tr>
<td></td>
<td>Notify MD if no improvement.</td>
</tr>
</tbody>
</table>

*Cross references: Difficulty or Pain With Urination, Fever Without Neutropenia, Oral Mucositis*

**HOMECARE INSTRUCTIONS**

- Take your temperature anytime you feel hot or chilled and repeat every four hours.
- Follow neutropenic precautions if ANC is less than 1,000/mm³.

**Neutropenic Precautions**

(Shelton, 2011)

- Maintain good personal hygiene, including washing hands after using the bathroom.
• Practice preventive oral care, including brushing your teeth with a soft toothbrush twice daily and flossing daily. Use an oral rinse with salt water after each meal.
• Avoid crowds and exposure to anyone with signs of infection.
• Do not change cat litter or clean up animal excreta.
• Use nothing per rectum.
• Use daily stool softeners to avoid constipation.

Report the Following Problems
(National Institutes of Health, 2008)
• Temperature of 100.4°F (38°C)
• Chills with or without fever
• New cough with or without sputum or worsening cough
• Burning on urination
• Pain at site of port or catheter
• New sore throat or mouth
• Any area with redness or swelling

Seek Emergency Care Immediately if Any of the Following Occurs
• Changes to level of consciousness
• Shortness of breath
• Signs of shock
• Temperature above 100.4°F (38°C)

REFERENCES

Victoria Wochna Loerzel, PhD, RN, OCN®
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University of Central Florida
Orlando, Florida
Fever Without Neutropenia

PROBLEM

Temperatures one degree or more above normal constitute a fever. For temperature taken using an oral thermometer, normal body temperature is 98.6°F (37°C). Fevers can be described as low grade (temperatures up to 101°F [38.3°C]) or high grade (temperatures of 102°F [38.9°C] or greater that are unresponsive to fever-reducing medicine).

ASSESSMENT CRITERIA

1. What is the cancer diagnosis and treatment?
   a. Fever can be associated with a flu-like syndrome, which accompanies biologic response modifiers, and usually peaks between 102°F–104°F (38.9°C–40°C) and often spikes after a rigor. Fever can result from an infection or from the tumor itself.
   b. It is important to rule out possible neutropenia. If the patient is currently receiving cancer therapy or is diagnosed with leukemia, suspect neutropenia and follow the guideline for Fever With Neutropenia, as a low-grade fever can be a medical emergency.
2. What medications is the patient taking? Obtain drug history.
3. Ask patient to describe symptoms in detail.
   a. Maximum temperature in 24 hours
   b. Evidence of any other signs of infection (symptoms listed later)
4. Obtain history, including
   a. Precipitating factors
   b. Onset and duration, including temperature spikes and time that temperature was elevated
   c. Relieving factors, including any antipyretic medications taken prior to the call
   d. Any associated symptoms, such as open lesions or sores that are red, draining, or tender; mucositis; diarrhea; central venous exit site is red, draining, or tender; sore throat; cough; pain or discomfort with urination; or chills (Shelton, 2011).
5. Past medical history (the following place the patient at high risk)
   a. Diabetes
   b. Steroid use
   c. AIDS
   d. Cardiac problems
   e. Liver or kidney disease
f. Chronic medical conditions
g. Exposure to others with upper respiratory infection or flu
6. Changes in activities of daily living

<table>
<thead>
<tr>
<th>Signs and Symptoms</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Change in mental status: Restlessness, irritability, confusion, or somnolence</td>
<td>Seek emergency care. Call an ambulance immediately.</td>
</tr>
<tr>
<td>• Signs of dehydration in an older adult or immunocompromised person</td>
<td></td>
</tr>
<tr>
<td>– Decreased urine output</td>
<td></td>
</tr>
<tr>
<td>– Sunken eyes</td>
<td></td>
</tr>
<tr>
<td>– Excessive thirst, dry mouth</td>
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<td></td>
</tr>
<tr>
<td>– Thirst</td>
<td></td>
</tr>
<tr>
<td>– Rapid pulse</td>
<td></td>
</tr>
<tr>
<td>• Temperature above 103°F (39.4°C) and unresponsive to fever-reducing measures</td>
<td></td>
</tr>
<tr>
<td>• Rapid breathing, difficulty swallowing, or wheezing</td>
<td></td>
</tr>
<tr>
<td>• Headache, neck stiffness, or photophobia</td>
<td>Seek urgent care within 24 hours.</td>
</tr>
<tr>
<td>• Temperature above 101°F (38°C) in a high-risk patient, such as patients with HIV, with leukemia, or using steroids</td>
<td></td>
</tr>
<tr>
<td>• Fever that persists longer than 72 hours with no known cause</td>
<td></td>
</tr>
<tr>
<td>• Shortness of breath</td>
<td></td>
</tr>
<tr>
<td>• Cough with green or yellow sputum</td>
<td></td>
</tr>
<tr>
<td>• Frequent or painful urination</td>
<td></td>
</tr>
<tr>
<td>• Rash</td>
<td></td>
</tr>
<tr>
<td>• Earache, sore throat, or swollen glands</td>
<td></td>
</tr>
<tr>
<td>• Recent surgical procedure</td>
<td></td>
</tr>
<tr>
<td>• Congestion, sneezing, and body aches</td>
<td>Follow homecare instructions. Notify MD if no improvement.</td>
</tr>
<tr>
<td>• Other family members are ill</td>
<td></td>
</tr>
<tr>
<td>• Fever responsive to self-care measures</td>
<td></td>
</tr>
</tbody>
</table>

Cross references: Difficulty or Pain With Urination, Fever With Neutropenia, Oral Mucositis

**HOMECARE INSTRUCTIONS**

(National Cancer Institute, 2011)

- Increase fluid intake (unless contraindicated).
- Rest.
- Take usual medications for fever and aches (acetaminophen or ibuprofen) following instructions on label.
• Take a lukewarm sponge bath or bath soak; do NOT use alcohol rubs or alcohol in water soaks as it causes increased discomfort.
• Check temperature every two to four hours or following chills. If no improvement, notify physician.

**Report the Following Problems**

- Temperature above 103°F (39.4°C)
- Fever persists more than 24 hours with no known cause
- Rash
- Frequent urination, blood or pain with urination
- Signs of dehydration
- Abdominal pain

**Seek Emergency Care Immediately if Any of the Following Occurs**

- Seizure
- Change in level of consciousness
- Difficulty breathing
- Signs of shock

**REFERENCES**


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*The author would like to acknowledge Margaret Hickey, RN, MSN, MS, CORLN, for her contribution to this chapter that remains unchanged from the first edition of this book.*
PROBLEM

A cluster of symptoms that may include fever, chills, headaches, rigors, myalgia, and malaise. Fever results when pyrogens cause an increase in the body’s thermoregulatory set point. Chills and rigors result when muscle contractions generate heat to raise the body temperature to the new higher set point (Muehlbauer, 2010).

Biologic response modifiers, such as interferon and interleukin, and colony-stimulating factors frequently cause flu-like symptoms. In addition, treatment for bone metastasis and osteoporosis, such as IV bisphosphonates or injectable monoclonal antibodies, are also associated with a similar cluster of symptoms (Gralow et al., 2009; Rogers, Camp-Sorrell, & Hawkins, 2010; Rogers, Hawkins, & O’Regan, 2010; Yamamoto & Viale, 2009).

ASSESSMENT CRITERIA

1. What is the cancer diagnosis and treatment?
   Verify if the patient is receiving chemotherapy and/or biotherapy and/or treatment for bone metastasis or osteoporosis and when the last dose was given.
2. What medications is the patient taking? Obtain drug history.
3. When was the last time the patient had blood work done? What laboratory?
4. Ask the patient to describe symptoms in detail, including how long and how often he or she has been experiencing each one.
   a. Fever—Does the patient know what his or her temperature is?
   b. Chills
   c. Nausea or vomiting
   d. Myalgia
   e. Malaise
   f. Diarrhea
   g. Headache
5. Obtain history of flu-like symptoms, including
   a. Precipitating factors
   b. Onset and duration
   c. Relieving factors
   d. Any associated symptoms, including exposure to viruses or illnesses.
6. Medical history, including comorbidities
   a. Heart disease
   b. Lung disease
   c. Diabetes
**FLU-LIKE SYMPTOMS**

d. Anemia
e. Hypertension

7. Changes in activities of daily living

<table>
<thead>
<tr>
<th>Signs and Symptoms</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Neutropenic due to chemotherapy with temperature above 100.4°F (38°C)</td>
<td>Seek emergency care.</td>
</tr>
<tr>
<td>• Temperature above 103°F (39.4°C) without suspected neutropenia</td>
<td></td>
</tr>
<tr>
<td>• Significant change in blood pressure or pulse</td>
<td></td>
</tr>
<tr>
<td>• Change in mental status</td>
<td></td>
</tr>
<tr>
<td>• Symptoms unrelieved by current methods as described in homecare instructions</td>
<td>Seek urgent care within 24 hours.</td>
</tr>
<tr>
<td>• If flu-like syndrome is expected from the current therapy</td>
<td>Follow homecare instructions. Notify MD if no improvement.</td>
</tr>
</tbody>
</table>

*Cross references: Cough, Diarrhea, Fever With Neutropenia, Headache, Myalgia/Arthralgia, Nausea and Vomiting*

**HOMECARE INSTRUCTIONS**

(Muehlbauer, 2010; Shelton, 2004)

Treat individual symptoms.

- **Fever**
  - Take acetaminophen if not contraindicated.
  - Try tepid soaks, and apply ice packs.
  - Drink fluids (water, bouillon, Gatorade®, Pedialyte®). The nurse should specify minimum/maximum amounts if necessary.
  - Monitor temperature regularly. The nurse should specify intervals and parameters for contacting MD.

- **Chills**
  - Keep the environment warm; use blankets.
  - Apply hot water bottles (use with caution).

- **Myalgia/arthralgia**
  - Get rest and relaxation.
  - Use warm or cold packs.

- **Headache**
  - Take analgesics.
  - Keep the environment dark and quiet.
  - For frontal headaches secondary to sinus congestion, try a decongestant or warmth and steam.
  - For headache in back of head, apply heat and massage.
- Malaise/fatigue: Give yourself rest periods and limit activities.
- Cough and congestion: Take antihistamines and cough suppressants (if upper respiratory).

Seek Emergency Care Immediately if Any of the Following Occurs
- Temperature remains elevated for more than three days
- Vomiting
- Seizure activity
- Change in mental status

REFERENCES


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The author would like to acknowledge Nan Lawary, RN, BSN, OCN®, for her contribution to this chapter that remains unchanged from the first edition of this book.
Hand-Foot Syndrome

PROBLEM

A cutaneous toxicity involving primarily the palms of the hands and soles of the feet, but it can occur in other areas, especially pressure-prone areas. It is associated with numbness, tingling, pain, pruritus, erythema, and swelling and can lead to ulceration, blistering, and moist desquamation. Some patients may describe it as a rash, and some may develop hyperpigmentation (Anderson et al., 2009; Grenon & Chan, 2009; Saif & Elfiky, 2007; Swenson & Bell, 2010).

ASSESSMENT CRITERIA

1. What is the cancer diagnosis and treatment?
   Hand-foot syndrome (HFS), also known as palmar-plantar erythrodysesthesia, is a side effect of some chemotherapeutic agents including 5-fluorouracil, doxorubicin, capecitabine, and pegylated liposomal doxorubicin, as well as resulting from targeted multikinase inhibitor (MKIs) therapies such as sorafenib or sunitinib. When HFS occurs, a dose reduction or schedule adjustment is in order. The doctor or nurse practitioner may use the National Cancer Institute Cancer Therapy Evaluation Program’s Common Terminology Criteria for Adverse Events to determine dose modification or delay in treatment (Anderson et al., 2009; Escudier et al., 2007; MacIntyre, 2007; Swenson & Bell, 2010). Redness of hands and feet with peeling also may result from Streptococcus or other infectious or viral processes.

2. What medications is the patient taking? Obtain drug history, including allergies.

3. Ask the patient to describe symptoms in detail.
   a. Location
   b. Appearance
   c. Discomfort rated on the numeric rating scale of 0–10 with 0 = no pain and 10 = worst possible pain (Curtiss, 2010).

4. Obtain history, including
   a. Precipitating factors
   b. Onset and duration
   c. Relieving factors
   d. Any associated symptoms such as fever, blistering, pain, skin peeling, paresthesias or dysesthesias, or skin discoloration.

5. Past medical history
   a. Recent infection
   b. Exposure to infection

6. Changes in activities of daily living
### HAND-FOOT SYNDROME

**Signs and Symptoms**

| • Skin changes (redness, warmth, swelling, dryness, blisters, peeling, drainage, odor, itching, discoloration) with pain interfering with activities of daily living | Stop taking medications known to cause HFS, such as capecitabine, sorafenib, and sunitinib. |
| • Presence of tingling or numbness | Do not wait to see if symptoms improve; call MD. |
| • Patient is taking medications at home known to cause HFS | Seek emergency care. |
| • Fever | |

| • Skin changes (redness, warmth, swelling, dryness, blisters, peeling, drainage, odor, itching, discoloration) with pain interfering with activities of daily living | Stop taking medications known to cause HFS, such as capecitabine, sorafenib, and sunitinib. |
| • Presence of tingling or numbness | Do not wait to see if your symptoms improve; call MD. |
| • Patient is taking medications at home known to cause HFS | Seek urgent care within 24 hours. |
| • No fever | Follow homecare instructions. Notify MD if no improvement. |

**Cross references:** Fever With Neutropenia, Fever Without Neutropenia, Pain, Rash

### HOMECARE INSTRUCTIONS

(Cancer.Net, 2009; Roche Laboratories, 2006; Saif & Elfiky, 2007; Son, Lee, Lee, Yun, & Chun, 2009; Wilkes & Barton-Burke, 2011)

- Avoid injury to feet and hands, tight-fitting clothing, and pressure or prolonged heat to hands or feet.
- Avoid contact with harsh chemicals (laundry detergent, household cleaning products, etc.).
- Avoid wearing dishwashing gloves, as the rubber traps heat.
- Avoid activities that cause friction or put pressure on your skin (such as kneeling for long periods or leaning on your elbows, power walking, aerobics, or using hand tools).
- Take pain medication as directed by physician or nurse, if ordered.
- Apply alcohol-free emollient cream (Aveeno®, Bag Balm®, Lubriderm®, or Udderly Smooth®) liberally and frequently to hands and feet if skin is intact. At night, after cream is applied, put on cotton gloves or socks to

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help the cream to be absorbed. If skin is not intact, consult with the nurse or doctor.

- Use cold compresses for comfort. Do not apply ice directly on the skin.
- Elevate extremities to reduce swelling.
- Monitor for and report signs of infection (e.g., increased redness, pain, drainage, odor).
- Practice good personal hygiene, use mild soap, and do not rub. Keep showers and bathwater cool or tepid.
- Wear comfortable, loose-fitting clothing and shoes.
- Use sunscreen on all exposed skin when going outside.
- Discuss the use of topical anesthetics, diphenhydramine-containing creams, and taking vitamin B₆ with your doctor.

Report the Following Problems

- Temperature above 100.4°F (38°C) with or without signs of infection
- Uncontrolled pain
- Drainage or odor from open areas
- Inability to perform normal daily functions
- Sudden or gradual onset of numbness or tingling

Seek Emergency Care Immediately if Any of the Following Occurs

- Blister formation, desquamation (peeling of skin—dry or moist), and infectious complications
- Temperature above 100.4°F (38°C) if suspected neutropenia

REFERENCES


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Headache

PROBLEM

Acute or chronic pain in the head. May be attributable to but not limited to

- Nonemergent causes: Stress, sinus congestion or infection, aseptic (chemical) meningitis, flu, or flu-like syndrome
- Emergent causes: Increased intracranial pressure (IICP), intracranial hemorrhage, infectious meningitis (bacterial, fungal, or viral), or pituitary apoplexy.

ASSESSMENT CRITERIA

1. Does the patient have a cancer diagnosis that can cause infiltration or compression of brain structures or otherwise lead to IICP accompanied by pain (Chidel, Suh, & Barnett, 2000; Franges, 2006)?
   a. Primary malignancies of the brain, such as glioma (astrocytoma, oligodendroglioma, ependymoma, mixed glioma; 65% of all primary brain tumors) and meningioma
   b. Metastasis to the brain or leptomeninges (15%–20% of all patients with cancer): Acute leukemia, non-Hodgkin lymphoma, melanoma, breast and lung cancer
   c. Complications of malignancy (e.g., central nervous system infection, syndrome of inappropriate antidiuretic hormone secretion in patients with small cell lung cancer) can cause IICP and pain.
   d. Has the patient recently undergone a diagnostic procedure that can lead to headache (e.g., lumbar puncture, craniotomy with cerebrospinal fluid leak)?

2. Is the patient receiving any treatments that might cause IICP and headache (Camp-Sorrell, 2006; Goldlust, Graber, Bossert, & Avila, 2010; Vogel, 2006)?
   a. Chemotherapy agents with platelet toxicity: Review time to nadir and recent platelet count; assess possible trend for thrombocytopenia and central nervous system hemorrhage.
   b. Agents that may induce flu-like symptoms include dacarbazine, bleomycin, fludarabine, topotecan, temozolomide, thalidomide, vincristine, erythropoetin, interferons, interleukins, monoclonal antibodies (alemtuzumab, bevacizumab, cetuximab, rituximab, trastuzumab), tumor necrosis factor, imatinib, bisphosphonates, antibiotics (e.g., amphotericin B, vancomycin), and corticosteroid withdrawal (rebound edema).
   c. High-dose cranial irradiation can increase edema and IICP.
   d. Headache may be a side effect of intrathecal chemotherapy.

3. Review the patient’s medications, including prescription and over-the-counter agents. See point 2b regarding onset of headache within a few hours of anticancer agent administration.
4. Ask the patient to describe symptoms in detail.
   a. How severe is the pain on a 0–10 scale (0 is no pain and 10 is worst imaginable pain) or other numeric or descriptive scale?
   b. Where is the pain located?
      i. Headaches associated with flu-like symptoms may be accompanied by retrobulbar (behind the eyeballs) pain.
      ii. Sinus congestion may cause frontal headaches.
      iii. Stress and muscle tension often lead to pain in the back of the head or neck.

5. Obtain history (Franges, 2006; Mathew & Garza, 2011; Wilkes, 2004).
   a. Precipitating factors: Has the patient experienced any trauma (e.g., a fall or blow to the head) that preceded the headache or pain?
   b. Onset and duration
      i. Is the headache worse at night (and wakes the patient) or in the morning; does it increase with coughing or sneezing (signs of IICP)?
      ii. “Thunderclap headache” (sudden onset of a severe headache with maximal intensity of one minute or less, accompanies subarachnoid or other brain hemorrhage, ischemic stroke, hypertensive crisis, etc.) is a medical emergency.
      iii. Orthostatic headaches are worse with standing and may occur with cerebrospinal fluid leak.
      iv. Brief headaches during coughing, sneezing, or with Valsalva may be related to IICP or cerebrospinal fluid leak.
   c. Relieving factors
   d. Any associated symptoms, such as nausea and vomiting (may occur with lesions in the posterior fossa), syncope, photophobia, or visual changes

6. Changes in level of consciousness, orientation, personality, strength, or gait; any focal/partial (accompanied by tremor in an extremity, staring, or speech arrest) or generalized seizures

7. Changes in activities of daily living

<table>
<thead>
<tr>
<th>Signs and Symptoms</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Headache following head trauma</td>
<td>Seek emergency care.</td>
</tr>
<tr>
<td>Sudden severe pain described as “the worst headache I have ever had”</td>
<td></td>
</tr>
<tr>
<td>Headache accompanied by</td>
<td></td>
</tr>
<tr>
<td>- Seizures</td>
<td></td>
</tr>
<tr>
<td>- Syncope and visual changes</td>
<td></td>
</tr>
<tr>
<td>- Known or suspected grade IV thrombocytopenia</td>
<td></td>
</tr>
<tr>
<td>- Uncontrolled or labile hypertension</td>
<td></td>
</tr>
<tr>
<td>- Stiff neck (nuchal rigidity) and fever</td>
<td></td>
</tr>
<tr>
<td>- Drowsiness</td>
<td></td>
</tr>
<tr>
<td>- Change in consciousness, orientation, personality, strength, or gait</td>
<td></td>
</tr>
</tbody>
</table>
HEADACHE

(Continued)

<table>
<thead>
<tr>
<th>Signs and Symptoms</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Headache worse in the morning and not associated with sinus congestion or fullness</td>
<td>Seek urgent care within 24 hours.</td>
</tr>
<tr>
<td>• Awakens the patient from sleep</td>
<td></td>
</tr>
<tr>
<td>• Pain uncontrolled by current analgesic regimen</td>
<td></td>
</tr>
<tr>
<td>• Pain interferes with activity</td>
<td></td>
</tr>
<tr>
<td>• Headache with flu-like symptoms</td>
<td>Follow homecare instructions. Notify MD if no improvement.</td>
</tr>
<tr>
<td>• Pain in facial area over sinuses</td>
<td></td>
</tr>
<tr>
<td>• Pain or soreness of shoulders and neck</td>
<td></td>
</tr>
<tr>
<td>• History of temporomandibular joint dysfunction or pain in joint</td>
<td></td>
</tr>
<tr>
<td>• History of grinding of teeth (bruxism)</td>
<td></td>
</tr>
<tr>
<td>• Recently stopped drinking coffee, eating chocolate, or smoking</td>
<td></td>
</tr>
</tbody>
</table>

Cross references: Flu-Like Symptoms, Pain

Note. Based on information from Camp-Sorrell, 2006; Wilkes, 2004.

HOME CARE INSTRUCTIONS

• Observe for any change in headache or head pain status.
• Drink clear liquids sparingly until the reason for headache is determined.
• Rest in a dark, quiet room.
• Apply ice pack or heat, depending on preference, to head and neck.
• Take analgesics as instructed by the physician or nurse.

Seek Emergency Care Immediately if Any of the Following Occurs

• Loss of or altered consciousness, including restlessness and drowsiness
• Vomiting
• Temperature above 101°F (38.3°C)
• Seizure activity

REFERENCES


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The author would like to acknowledge Denise Dearing, RN, BSN, OCN®, for her contribution to this chapter that remains unchanged from the first edition of this book.
Hematuria

PROBLEM

Blood in the urine (National Cancer Institute, 2011).

ASSESSMENT CRITERIA

1. What is the cancer diagnosis and treatment?
   Hematuria is commonly associated with bladder cancer and sometimes a drug-induced inflammation of the urothelium. Associated agents include chemotherapy, such as cyclophosphamide, ifosfamide, and bacillus Calmette-Guérin, and biologic therapy, including interleukin-2 and leuprolide acetate. Hematuria can result from radiation therapy to the pelvic area or from invasive procedures such as catheterization, cystoscopy, and renal or prostate biopsy. Problems with the urinary tract can cause hematuria, including urinary tract infection, glomerulonephritis, and kidney stones (Berry, 2004). Hematuria is the most common clinical presentation of urothelial cancer (Droller, 2001). Gross hematuria, although painless and intermittent, occurs in 80%–90% of patients who are ultimately diagnosed with bladder cancer (Shelton, 2011).

2. What medications is the patient taking? Obtain drug history. Anticoagulants, aspirin, nonsteroidal anti-inflammatory drugs, methotrexate, cyclophosphamide, and ifosfamide may cause hematuria (Shelton, 2011; Wheel er, 2009).

3. Ask the patient to describe symptoms in detail.
   a. Amount of blood in the urine—Describe by color: pink, red, dark red.
   b. Presence of clots
   c. Frequency of urination
   d. Pattern of urination
   e. Presence/absence of fever
   f. Back/flank pain
   g. Pain on urination

4. Obtain history, including
   a. Precipitating factors
   b. Onset and duration
   c. Relieving factors
   d. Any associated symptoms, such as inability to urinate or pain with urination.

5. Past medical history
6. Changes in activities of daily living
# Hematuria

<table>
<thead>
<tr>
<th>Signs and Symptoms</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Massive bleeding from urinary tract</td>
<td>Seek emergency care. Call an ambulance immediately.</td>
</tr>
<tr>
<td>• Persistent bright-red blood or clots in urine</td>
<td>Seek emergency care.</td>
</tr>
<tr>
<td>• Urinary or clot retention</td>
<td></td>
</tr>
<tr>
<td>• Temperature above 100.4°F (38°C) with suspected neutropenia or above 103°F (39.4°C) without suspected neutropenia</td>
<td></td>
</tr>
<tr>
<td>• Decreased or absent urinary output</td>
<td></td>
</tr>
<tr>
<td>• Dizziness or light-headedness</td>
<td></td>
</tr>
<tr>
<td>• Low-grade fever without suspected neutropenia</td>
<td>Seek urgent care within 24 hours.</td>
</tr>
<tr>
<td>• Frequent urination</td>
<td></td>
</tr>
<tr>
<td>• Pain or burning on urination</td>
<td></td>
</tr>
<tr>
<td>• Retention</td>
<td></td>
</tr>
<tr>
<td>• Decreased urinary output</td>
<td></td>
</tr>
<tr>
<td>• Intermittent burning (associated with decreased fluid intake)</td>
<td>Follow homecare instructions. Notify MD if no improvement.</td>
</tr>
<tr>
<td>• Bladder spasms</td>
<td></td>
</tr>
<tr>
<td>• Mild hematuria following therapy for bladder cancer or invasive procedure without suspicion of infection</td>
<td></td>
</tr>
<tr>
<td>• Frequency known to be associated with noninfectious therapy—post-transurethral resection of bladder tumor, biopsy, or other procedure</td>
<td></td>
</tr>
</tbody>
</table>

Cross references: Difficulty or Pain With Urination, Fever With Neutropenia, Pain

Note. Based on information from Berry, 2004; Shelton, 2011; Wheeler, 2009.

---

## Homecare Instructions

- Increase fluid consumption. Drink 8–10 eight-ounce glasses of water (unless contraindicated).
- Reinforce normal symptoms (e.g., spasms) to the patient that are associated with surgery, genitourinary procedures, or drugs.
- Limit activities and encourage rest.
- Consult with the physician regarding a prescription for antispasmodic medication.
- Consult with the physician regarding urinalysis or urine culture for dysuria or fever.

## Report the Following Problems

- Dysuria
- Fever
- Decreased urinary output
- Urinary or clot retention
HEMATURIA

- Persistent bright-red blood or clots in urine
- Any bleeding not associated with menses or known urinary procedure

Seek Emergency Care Immediately if Either of the Following Occurs

- Unresponsiveness
- Massive bleeding or hemorrhage

REFERENCES


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The author would like to acknowledge Terri Armen, RN, for her contribution to this chapter that remains unchanged from the first edition of this book.
Hemoptysis

PROBLEM

Hemoptysis is defined as the expectoration of blood from the respiratory tract, a spectrum that varies from blood-streaking of sputum to coughing up large amounts of pure blood (Weinberger & Lipson, 2008).

Alternative names for hemoptysis are coughing up blood or bloody sputum originating in the respiratory tract. Coughing up blood is not the same as bleeding from the mouth, throat, or gastrointestinal tract. Blood that is associated with a cough may appear to have bubbles because it is mixed with air and mucus. It is usually bright red but may be rust colored. Mucus may contain only streaks of blood. A number of conditions, diseases, and medical tests may cause hemoptysis (MD Consult, n.d.; Weinberger & Lipson, 2008).

ASSESSMENT CRITERIA

(Merck Sharp & Dohme Corp., 2009)

1. Determine the onset of the problem.
   a. When did this problem begin?
   b. Did it begin suddenly?
   c. Has the patient had similar problems in the past?

2. Determine the quantity of blood.
   a. Ask the patient to estimate the amount of blood produced (teaspoon, cupful, etc.).
   b. Is the patient coughing up large amounts of blood (massive hemoptysis)?
   c. Can the patient see blood when he or she coughs up something?
   d. How many times has the patient coughed up blood?

3. Determine the quality of the symptom. Is there blood-streaked mucus (phlegm)?

4. Establish a time pattern.
   a. Has it increased recently?
   b. How many times has this occurred today, yesterday, and in the past week?

5. Determine aggravating factors.
   a. Has the patient been sick?
   b. Does the patient have any lung or pulmonary problems?
   c. Does the patient use alcohol?
   d. Does the patient smoke?
   e. Does the patient have a history of allergies?
   f. Did the patient have recent surgery or a procedure on the mouth or throat?

6. What other symptoms is the patient experiencing?
   a. Shortness of breath
b. Fever
c. Malaise
d. Cough
   i. How many weeks has the cough lasted?
   ii. Is the cough worse at night?
e. Dysphagia
f. Has the patient been vomiting? (Rule out hematemesis.)
g. Has the patient lost weight?

7. Obtain the patient’s medication history.
   a. What medications does the patient take? Blood thinners?
   b. What over-the-counter treatments or supplements does the patient use?
   c. Does the patient have any allergies?

8. Obtain a brief medical history.
   a. Is the patient being treated for any medical problems?
   b. Has the patient had any significant illness in the past (e.g., stroke, cancer, tuberculosis, hypertension)?
   c. What surgeries has the patient had in the past?
   d. Has the patient traveled outside the United States recently?
   e. Do any family members or close contacts have tuberculosis?

<table>
<thead>
<tr>
<th>Signs and Symptoms</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Cough produces large amounts of blood</td>
<td>Seek emergency care.</td>
</tr>
<tr>
<td>• Unexplained coughing up of more than a few teaspoons of blood</td>
<td></td>
</tr>
<tr>
<td>• Chest pain and shortness of breath</td>
<td>Seek urgent care within 24 hours.</td>
</tr>
<tr>
<td>• Cyanosis</td>
<td></td>
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<tr>
<td>• Mental changes</td>
<td></td>
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<tr>
<td>• Signs of blood loss</td>
<td></td>
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<tr>
<td>• Dizziness</td>
<td></td>
</tr>
<tr>
<td>• Thirst</td>
<td></td>
</tr>
<tr>
<td>• Blood in urine</td>
<td></td>
</tr>
<tr>
<td>• Temperature above 101.5°F (38.6°C)</td>
<td></td>
</tr>
</tbody>
</table>

Cross references: Dysphagia, Dyspnea

Note. Based on information from MD Consult, n.d.; Weinberger & Lipson, 2008.

**HOMECARE INSTRUCTIONS**

(Duke et al., 2001; MD Consult, n.d.)

Treatment for hemoptysis consists of treating the underlying disease process, for example, antibiotic therapy for infectious etiologies. The patient may need to be referred for further diagnostic evaluation. Otherwise, the treatment is nonspe-
Hemoptysis

cific. The exception to this is when massive hemoptysis is present. For an event of hemoptysis that is not massive, advise the patient to do the following.

- Rest.
- Use warm or cold humidification.
- Maintain hydration: The rule of 8 x 8 is drinking eight glasses (8 oz each) of water a day (Mayo Clinic, 2010).

**Report the Following Problems**

- Signs of blood after coughing
- Dizziness
- Light-headedness
- Thirst
- Blood in the urine
- Fever

**Seek Emergency Care Immediately if Any of the Following Occurs**

- Unexplained coughing up of blood (more than a few teaspoons)
- Cough produces large volumes of blood
- Chest pain
- Shortness of breath
- Change in skin color
- Change in mentation

**REFERENCES**


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PROBLEM

Hiccups are sudden spasmodic contractions of the diaphragm, inspiratory, and intercostal muscles accompanied by sudden closing of the vocal cords. Hiccups occur because of abnormal stimulation of the vagal, phrenic, or dorsal sympathetic nerve and lead to repetitive, spasmodic inspiratory sounds (Strickland & Berlin, 2009). The rate of hiccups is 4–60 hiccups per minute, and bouts may range from minor and transient to persistent and even intractable. Uncontrolled hiccups cause significant morbidity and can affect conversation, concentration, and oral intake and can lead to fatigue, insomnia, depression, gastroesophageal reflux disease, weight loss, wound dehiscence, aspiration pneumonia, dyspnea, cardiac arrhythmias, and bilateral carotid dissection (Marinella, 2009; Smith, 2009; Tegeler & Baumrucker, 2008). Men have a fivefold greater risk of hiccups than women (Smith, 2009). Numerous causes of hiccups in cancer exist, including the following (Gilbar & McPherson, 2009; Marinella, 2009; Smith, 2009).

- The cancer itself (esophageal, gastric, colon, lung, renal, or pancreatic cancer; hepatoma or liver metastasis; leukemia)
- Abdominal problems (e.g., erosive esophagitis, gastric distention, neoplasm, abscess, gastric outlet or small bowel obstruction, ascites)
- Central nervous system pathology (e.g., encephalitis or meningitis, primary or metastatic brain tumors, stroke, hemorrhage)
- Metabolic problems (e.g., hyponatremia, hypokalemia, renal failure, uncontrolled diabetes, uremia)
- Drugs (steroids, especially dexamethasone; chemotherapy agents [cisplatin, carboplatin, cyclophosphamide, docetaxel, etoposide, gemcitabine, irinotecan, paclitaxel, vindesine, vinorelbine]; opioid analgesics; antibiotics; barbiturates)
- Cardiothoracic (e.g., myocardial infarction, pericardial or pleural effusion, pneumonia)
- Other: Psychogenic (e.g., stress reaction), surgical (general anesthetic, epidural injection with local anesthetic)

Initial treatment often aims to alleviate the cause, if possible, and reduce gastric distension, which often sparks sporadic bouts of hiccups, by using an anti-gas drug (e.g., simethicone) and prokinetic agent (e.g., metoclopramide) (Smith & Busracamwongs, 2003). Other agents are added for intractable hiccups (Jacobs, 2003).

ASSESSMENT CRITERIA

1. What is the patient’s cancer diagnosis and treatment?
2. What medications is the patient taking (particularly new medications that seem to be related to onset of hiccups)?
3. Ask the patient to describe symptoms in detail.
4. Obtain history, including
   a. Onset and duration
      i. Acute—48 hours or less
      ii. Persistent—more than 48 hours
      iii. Intractable—more than one or two months
   b. Severity—A scale of 0 (no hiccups) to 10 (worst possible hiccups) has been used where a score above 7 is considered severe (Porzio et al., 2010).
   c. Precipitating factors
   d. Any associated symptoms.
5. Past medical history
   a. Recent abdominal, thoracic, or neurologic surgery
   b. Recent emotional problems
6. Changes in activities of daily living

<table>
<thead>
<tr>
<th>Signs and Symptoms</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Respiratory distress</td>
<td>Seek emergency care.</td>
</tr>
<tr>
<td>• Aspiration</td>
<td>Call an ambulance immediately.</td>
</tr>
<tr>
<td>• Chest pain</td>
<td></td>
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<tr>
<td>• Dyspnea or difficult breathing</td>
<td></td>
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<tr>
<td>• Perioral cyanosis or mottled skin</td>
<td></td>
</tr>
<tr>
<td>• Postsurgical wound dehiscence</td>
<td></td>
</tr>
<tr>
<td>• Unrelenting hiccups for 48 hours or more with accompany-</td>
<td></td>
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<tr>
<td>ing exhaustion or dyspnea</td>
<td>Seek urgent care within two hours.</td>
</tr>
<tr>
<td>• The patient reports signs or symptoms that require</td>
<td></td>
</tr>
<tr>
<td>medical evaluation (e.g., hiccups lasting for more</td>
<td>Seek urgent care within 24 hours.</td>
</tr>
<tr>
<td>than 24 hours with fatigue, loss of appetite, insomnia)</td>
<td></td>
</tr>
<tr>
<td>• The patient reports signs and symptoms that can be</td>
<td>Follow homecare instructions. Notify MD if no</td>
</tr>
<tr>
<td>managed at home (e.g., hiccups for less than 24 hours,</td>
<td>improvement.</td>
</tr>
<tr>
<td>heartburn)</td>
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</tbody>
</table>

Cross reference: Dyspnea

**HOMECARE INSTRUCTIONS**

(Ge, Ryan, Giaccone, Hughes, & Pavletic, 2010; Jacobs, 2003; Marinella, 2009; Smith, 2009; Smith & Busracamwongs, 2003)

- Nonpharmacologic (folk) measures for hiccups lasting less than 24 hours: Hold breath or breathe into a paper bag (increases partial pressure of carbon dioxide [pCO₂])
in the blood), eat a spoonful of granulated sugar or peanut butter, stimulate palate
with cotton applicator, gargle or sip ice water or peppermint water, bite a lemon
wedge or drink lemon juice, pull knees to chest and bear down (Valsalva maneuver).
• Take medications, as ordered by physician.
  – Potential orders may include oral medications: Simethicone 15–30 ml every
    four hours, metoclopramide 10 mg every six hours, chlorpromazine 25 mg four
    times a day, a proton pump inhibitor, and gabapentin 300 mg three times a day.
  – Other medications that may be considered are sertraline, baclofen, amitripty-
    line, clonazepam or phenytoin, nifedipine, or valproic acid.
  – Phrenic nerve block and acupuncture may be used to alleviate persistent or
    intractable hiccups.
• Monitor for exhaustion/fatigue (e.g., insomnia, anorexia/weight loss, depres-
  sion), and contact physician’s office.
• Monitor for acute symptoms (e.g., dyspnea, aspiration), and seek emergency
  care as appropriate.

Report the Following Problems
• No improvement or condition worsens
• Suspected side effects from medications

Seek Emergency Care Immediately if Any of the Following Occurs
• Shortness of breath
• Aspiration of food
• Blueness around lips or mouth
• Inability to swallow

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of Supportive Oncology, 7,* 128–129.
HICCUPS


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*The author would like to acknowledge Christy Erikson, RN, MSN, NP, AOCN®, for her contribution to this chapter that remains unchanged from the first edition of this book.*
Lymphedema

PROBLEM

An accumulation of lymph fluid in the interstitial spaces caused by an increase in production of lymph fluid or an obstruction of the lymphatic drainage system. Primary lymphedema occurs with no obvious etiology. Secondary lymphedema is more common and can develop as a result of surgery, radiation, infection, or trauma. If lymph nodes are removed, there is always a risk of developing lymphedema. Secondary lymphedema can develop immediately, postoperatively, or weeks, months, or even years later (National Lymphedema Network, 2005).

ASSESSMENT CRITERIA

1. What is the cancer diagnosis and treatment? Was a lymph node dissection performed? What site is affected? The most common sites of obstruction are the pelvic, inguinal, and axillary nodes.
2. What medications is the patient taking, including any vitamins or supplements? Obtain drug history.
3. Review past medical history and activities prior to occurrence of lymphedema.
4. Ask the patient to describe symptoms in detail, such as pain, onset and extent of edema, skin changes, exercise patterns, and range of motion. Specifically, ask about any heaviness, swelling, or tightness in the areas at or near where the patient had cancer treatment. This is critical because these symptoms may present before visible swelling occurs (Ridner, 2008).
5. Obtain history of symptoms, including
   a. Severity
   b. Precipitating factors: May occur after an injury, infection, excessive physical exertion, or airplane travel
   c. Onset and duration: Onset may be sudden or gradual.
   d. Relieving factors
   e. Any associated symptoms. Other early indications of lymphedema include self-reported sensations of heaviness, swelling, tingling, fatigue, or aching (Armer, Radina, Porock, & Culbertson, 2003). Assess for Stemmer sign, in which the skin on the dorsum of the fingers and toes cannot be lifted or can only be lifted with difficulty (Mulcahy, 2009).
   f. Risk factors, including lymph node dissection, radiation therapy to areas of lymph nodes, infections, and age. Address comorbid conditions that may increase risk such as obesity, diabetes, and hypertension.
6. Changes in activities of daily living
### Signs and Symptoms

- Redness/erythema (including redness traveling up and down limb) and heat to affected area
- Pain or soreness that is in one area or appeared suddenly
- Swelling—Question whether swelling is relieved with elevation.
- Sudden increase in edema in an extremity
- Tightness of clothing or rings, numbness, or pain.

<table>
<thead>
<tr>
<th>Actions</th>
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</thead>
<tbody>
<tr>
<td>Seek urgent care within 24–48 hours.</td>
</tr>
<tr>
<td>Seek care within one week.</td>
</tr>
</tbody>
</table>

*Cross reference: Deep Venous Thrombosis*

*Note. Based on information from Cope, 2006.*

### HOMECARE INSTRUCTIONS

(Kalinowski, 2004; Thiadens, 2002)

- Lymphedema can develop in any part of the body or limbs. Signs and symptoms of lymphedema include a full sensation in the limb or limbs; skin feeling tight; decreased flexibility in the hand, wrist, or ankle; difficulty fitting into clothing in one specific area; or ring/wristwatch/bracelet tightness.
- Venipuncture and blood pressure measurements may increase the risk of lymphedema (Greene, Borud, & Slavin, 2005). Patients who have undergone lymph node dissections should always avoid blood draws, injections, IV placement, and blood pressure monitoring in the affected extremity. Use extra precautions to avoid injury to the affected extremity. Avoid using automated blood pressure devices at home on affected or at-risk limbs.
- The treatment program depends on the cause of the lymphedema. For example, if the initial signs and symptoms of swelling are caused by infection (redness, rash, heat, blister, or pain), antibiotics will need to be prescribed first. Treating an infection often reduces some of the swelling and discoloration. At least a 14-day course of antibiotic therapy is recommended after an acute episode has responded clinically (Lymphoedema Framework, 2006). It may take one to two months of therapy for symptoms to completely resolve in some patients. Recurrent infections occur in almost 25% of patients with lymphedema who experience an episode of initial cellulitis (Bernard, 2008; Indelicato et al., 2006). For patients with lymphedema who have had two to three infections per year, daily prophylaxis should be considered with careful evaluation of risks and benefits (Bernard, 2008; Lymphoedema Framework, 2006).
- If the lymphedema is not caused by infection, depending on the severity of the lymphedema, the recommended treatment plan should be determined using an approach based on complete decongestive therapy (CDT) methods. CDT is a two-phase therapy: an intensive phase in which the limb volume is reduced during treatment by a therapist (National Lymphedema Network Medical Adviso-
ry Committee, 2011), and a maintenance phase in which the patient is instructed in self-management.

– The intensive phase comprises five components or modalities (Poage, Singer, Armer, Poundall, & Shellabarger, 2008).
  * Manual lymph drainage: Compression applied through short-stretch compression bandages
  * Compression garments (garments should be individualized for each patient)
  * Meticulous skin and nail care (patients at risk for lymphedema should use neutral pH soaps and emollient creams) (National Lymphedema Network Medical Advisory Committee, 2011)
  * Remedial exercises
  * Education in self-care

– The maintenance phase consists of simple lymphatic drainage, nightly compression bandaging, daytime use of compression garments, skin care, and exercise (Poage et al., 2008).

• Avoid extremes of temperature: Avoid exposure to extreme cold, which can be associated with rebound swelling or chapping of skin. Avoid prolonged (greater than 15 minutes) exposure to heat, particularly hot tubs or saunas (Rich, 2007).

**Report the Following Problems**

• Painful swelling, erythema, and heat to affected area (suspect cellulitis)
• Sudden onset of severe pain, swelling, tenderness, area is warm to touch, obvious blueness or other discoloration, increased pain with dorsiflexion (suspect deep vein thrombosis) (Cope, 2006)

**REFERENCES**


LYMPHEDEMA


Kirsten Singleton, RN, BSN
Oncology Nurse Educator
Bethesda, Maryland

The author would like to acknowledge Susan Newton, RN, MS, AOCN®, AOCNS®, for her contribution to this chapter that remains unchanged from the first edition of this book.
Menopausal Symptoms

PROBLEM

Menopause is the end of menstruation for at least 12 months as the result of the loss of ovarian function. Cytotoxic therapy may cause permanent damage to the ovaries resulting in premature menopause. However, drug-induced damage to the ovaries may precipitate a temporary amenorrhea, potentially lasting for years before menses resume. Hormonal therapies also may induce either early menopause or temporary amenorrhea (Cormier, 2006; Ganz, Litwin, & Meyerowitz, 2005).

In the perimenopausal period, women may experience an array of symptoms including hot flashes, sweats, mood changes, insomnia, pain symptoms, cognitive symptoms, or vaginal dryness (Cray, Woods, & Mitchell, 2010).

ASSESSMENT CRITERIA

(Cormier, 2006)

1. What is the cancer diagnosis and treatment?
   Oophorectomy, pelvic radiation, and certain chemotherapy and hormonal therapy agents place a woman at risk for early menopause.
2. What medications is the patient taking? Include prescription, over-the-counter, and complementary and alternative methods to manage menopausal symptoms.
3. Review medical history, including menstrual status.
4. Have the patient describe the symptom in detail, including
   a. Onset and duration
   b. Frequency
   c. Precipitating and alleviating factors
   d. Severity
   e. Associated symptoms (hot flashes, night sweats, insomnia).
5. Has the patient experienced changes in activities of daily living?

<table>
<thead>
<tr>
<th>Signs and Symptoms</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chest pain or shortness of breath</td>
<td>Seek emergency care. Call an ambulance immediately.</td>
</tr>
</tbody>
</table>

(Continued on next page)
MENOPAUSAL SYMPTOMS

(Continued)

<table>
<thead>
<tr>
<th>Signs and Symptoms</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Severe headache</td>
<td>Seek emergency care.</td>
</tr>
<tr>
<td>• Pain in calf (women on hormone therapy or estrogen replacement therapy)</td>
<td></td>
</tr>
<tr>
<td>• Heavy vaginal bleeding present (soaking more than one pad an hour or bleeding accompanied by weakness or dizziness)</td>
<td></td>
</tr>
<tr>
<td>• Panic attacks, self-destructive behavior, delirium or disorientation, suicidal ideation or plan, or any life-threatening symptoms</td>
<td></td>
</tr>
<tr>
<td>• Breast lump or tenderness</td>
<td>Seek urgent care within 24 hours.</td>
</tr>
<tr>
<td>• Postmenopausal vaginal bleeding</td>
<td></td>
</tr>
<tr>
<td>• Persistent nausea or vomiting</td>
<td></td>
</tr>
<tr>
<td>• Sleep disruption</td>
<td>Follow homecare instructions. Notify MD if no improvement.</td>
</tr>
<tr>
<td>• Comorbid medical conditions may affect sleep quality (e.g., anxiety/depression, gastroesophageal reflux disease, nocturia, thyroid dysfunction, pain, sleep apnea, restless legs syndrome, fibromyalgia). Discuss associated symptoms with MD, physician’s assistant, or advanced practice nurse.</td>
<td></td>
</tr>
<tr>
<td>• Mood changes, difficulty making decisions</td>
<td></td>
</tr>
<tr>
<td>• Hot flashes and night sweats</td>
<td></td>
</tr>
<tr>
<td>• Vaginal dryness or itching</td>
<td></td>
</tr>
<tr>
<td>• Headaches</td>
<td></td>
</tr>
</tbody>
</table>

Cross references: Anxiety, Bleeding, Deep Venous Thrombosis, Depressed Mood, Headache

Note. Based on information from Cormier, 2006; Joffe et al., 2010; Moore, 2004.

HOMECARE INSTRUCTIONS

Hot Flashes

(Asch-Goodkin, 2001; Loprinzi, Wolf, Barton, & Laack, 2008; Moore, 2004; Park, Parker, Boardman, Morris, & Smith, 2011; Rada et al., 2010; Walker et al., 2010)

• Estrogen reduces the incidence of hot flashes by 80% (Loprinzi et al., 2008). However, estrogen is contraindicated in patients with hormone-sensitive tumors. Studies have shown that progesterone also reduces the incidence of hot flashes. However, its safety in patients with cancer is unknown. Follow your healthcare provider’s recommendations.

• Keep a diary of menopausal symptoms. This diary can be used to help identify triggers for hot flashes. Common triggers include hot drinks, caffeine, alcohol, spicy foods, stress, and smoking.

• Lower your thermostat; use fans and air conditioning.

• Dress in layers.
• Wear absorbent clothing, such as cotton. Avoid wool and synthetics.
• Keep a glass of ice water on hand.
• Talk to your healthcare provider about over-the-counter remedies. Many herbal products contain estrogen-like substances that may be contraindicated in patients with hormone-sensitive tumors.
• Relaxation therapy has been shown to reduce both the incidence and severity of hot flashes.
• Acupuncture has been proposed as a complementary therapy for hot flashes. Although additional research is needed, Walker et al. (2010) reported that acupuncture was as effective as venlafaxine in the treatment of hot flashes in one study.
• Some patients may benefit from nonhormonal medications to treat hot flashes.
  – Clonidine
  – Selective serotonin reuptake inhibitors, serotonin and norepinephrine reuptake inhibitors
  – Gabapentin
  – A pilot study reported by Park et al. (2011) showed a reduction in hot flashes with magnesium supplements. Further research is needed.

**Vaginal Dryness/Itching**
(Cormier, 2006; Moore, 2010; Polovich, Whitford, & Olsen, 2009)
• Engage in regular intercourse or use of vaginal dilator to decrease risk of atrophy and maintain acidic pH.
• Perform Kegel exercises for muscular and vascular tone.
• Wear cotton underwear; avoid tight-fitting pants, synthetic fabric, and pantyhose.
• Avoid products that may increase dryness or irritation, such as perfumes, soaps, deodorants, bubble bath, oil-based lubricants, such as petroleum jelly or baby oil, douches, spermicide, antihistamines, and excess caffeine or alcohol intake.
• Use water-based lubrication products.
  – K-Y® Jelly
  – Astroglide®
  – Replens®
  – Lubrin®
  – Lubafax®
• For severe dryness
  – Crème de la Femme
  – Australian Melaleuca oil
  – Vitamin E oil
  – Estrogen vaginal ring, tablets, or cream (may be contraindicated in patients with hormone-sensitive tumors)

**Insomnia**
(Asch-Goodkin, 2001; Cormier, 2006; Joffe, Massler, & Sharkey, 2010; Moore, 2004)
• Practice regular aerobic exercise.
• Practice relaxation techniques (e.g., yoga, deep breathing, meditation).
• Avoid alcohol and caffeine.
• Keep a regular bedtime schedule and routine. The nurse should refer the patient to one of the numerous online resources regarding sleep hygiene, such as www.sleepfoundation.org.
• Eat a light dinner.
• Problem solve any environmental disturbances (e.g., snoring partner, cell phone, levels of ambient noise and light).
• Treating nocturnal hot flashes often improves sleep quality.
• If appropriate, discuss prescribing a hypnotic with collaborating physician or nurse practitioner. Zolpidem and eszopiclone have been shown to effectively treat sleep disturbances in perimenopausal women. Additionally, although not studied in this population, benzodiazepines, trazadone, melatonin, and over-the-counter sleep aids such as diphenhydramine may also provide some benefit.
• Consider a referral to a healthcare professional trained in cognitive-behavioral therapy.

Seek Emergency Care Immediately if Any of the Following Occurs
(Moore, 2004)
• Chest pain
• Severe dyspnea
• Calf pain (women taking hormone or estrogen-replacement therapy)
• Hemoptysis
• Severe headache
• Severe vaginal bleeding
• Suicidal ideation

REFERENCES


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The authors would like to acknowledge Shirley Williams, RN, CS, AOCN®, and Rita Mahaffey, RN, BSN, OCN®, for their contributions to this chapter that remain unchanged from the first edition of this book.
Myalgia/Arthralgia ("Hurts All Over")

PROBLEM

Generalized muscle and joint pains. Tissue damage causes the release of bradykinin, which stimulates muscle nociceptors.

ASSESSMENT CRITERIA

1. What is the cancer diagnosis and treatment?
   Arthralgia and myalgia can be caused by a number of factors, including chemotherapy and biotherapy. A contributing list of potential causes for diffuse arthralgia and myalgia includes the following (Ferri, 2011; Martin, 2004; Shelton, 2004; Verstappen, Heimans, Hoekman, & Postma, 2003; Wilkes & Barton-Burke, 2011; Winters, Habin, & Gallagher, 2010).
   a. Drug-induced—chemotherapy agents including taxanes (paclitaxel, docetaxel), biotherapy (interferon, interleukin), aromatase inhibitors, tyrosine kinase inhibitors, colony-stimulating growth factors, statins, bisphosphonates, withdrawal from antidepressant therapy, and some antibiotics
   b. Systemic infection—viral, bacterial, and spirochetal diseases (e.g., influenza or intercurrent viral or viral-like syndromes, HIV, dengue fever, Lyme disease, cytomegalovirus syndrome)
   c. Overuse syndromes—the most common cause of localized myalgia
   d. Endocrine/metabolic—prolonged or sudden withdrawal of corticosteroid therapy, electrolyte disturbances, diabetes mellitus, vitamin D deficiency, thyroid disease
   e. Autoimmune—rheumatic disease, especially polyrheumatica and inflammatory myopathy; lupus
   f. Neoplastic/hematologic—initial presentation of certain malignancies (e.g., lymphoma, leukemia) or paraneoplastic syndromes
   g. Psychiatric—somatic manifestations, stress, anxiety, tension
   h. Other—fibromyalgia, chronic fatigue syndrome, silicone implant syndrome (most have fibromyalgia), vasculitis
2. What medications is the patient taking? Obtain drug history.
3. Ask the patient to describe symptoms in detail.
   a. Character and location of pain
   b. Fever
   c. Chills
   d. Edema
   e. Fatigue
f. Headache
g. Muscle weakness

4. Obtain history, including
   a. Recent treatment and type (e.g., chemotherapy, biologic response modifier)
   b. Recent strenuous exercise or overuse
   c. Precipitating factors
   d. Onset and duration
   e. Relieving factors
   f. Any associated symptoms, such as fever
   g. Previous trauma

5. Past medical history (fibromyalgia, diabetes, neuromuscular disease)

6. Changes in activities of daily living

7. Changes in sleep patterns

<table>
<thead>
<tr>
<th>Signs and Symptoms</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Acute injury, paralysis, pending respiratory failure, or other</td>
<td>Seek emergency care. Call an ambulance immediately.</td>
</tr>
<tr>
<td>life-threatening symptoms, including</td>
<td></td>
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<tr>
<td>– Sudden onset of severe, unrelenting pain</td>
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<tr>
<td>– Inability to ambulate</td>
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<tr>
<td>– Extremity or joint swelling with chest pain</td>
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<td>– Acute joint deformity</td>
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<tr>
<td>• Difficulty breathing</td>
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<tr>
<td>• Cyanosis—Skin, extremity, or lips turning blue</td>
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<tr>
<td>• Temperature above 100.4°F (38°C) associated with suspected neutropenia</td>
<td>Seek urgent care within two hours.</td>
</tr>
<tr>
<td>• Recent onset of neurologic manifestations</td>
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<tr>
<td>• New or sudden onset of inability to ambulate or bear weight</td>
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<tr>
<td>• Unexplained difficulty breathing or rapid breathing</td>
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<tr>
<td>• Swelling in one extremity and a recent history of immobility or a history of</td>
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<td>blood clots in legs</td>
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<tr>
<td>• Jaundice and dark urine</td>
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<tr>
<td>• Progressive symptoms associated with temperature above 100.4°F (38°C)</td>
<td>Seek urgent care within 24 hours.</td>
</tr>
<tr>
<td>• Unexplained symptoms associated with patient history of bone marrow or organ</td>
<td>Consider consultation with infectious disease</td>
</tr>
<tr>
<td>transplant, recent dental or surgical procedure, recent history of travel to</td>
<td>specialist, neurologist, rheumatologist, or</td>
</tr>
<tr>
<td>tropical areas within two weeks of the onset of symptoms</td>
<td>endocrinologist, as indicated.</td>
</tr>
<tr>
<td>• Constitutional symptoms (symptom indicating a systemic effect of a disease)</td>
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<tr>
<td>(e.g., weight loss, night sweats, anorexia, general malaise)</td>
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<tr>
<td>• New headache</td>
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<tr>
<td>• Diffuse muscular weakness</td>
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<tr>
<td>• Recent history of insect or tick bite associated with</td>
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<td>– Visual symptoms</td>
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<td>– Bilateral symptoms</td>
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MYALGIA/ARTHRALGIA

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<table>
<thead>
<tr>
<th>Signs and Symptoms</th>
<th>Action</th>
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<tbody>
<tr>
<td>– Claudication</td>
<td></td>
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<tr>
<td>– Rash</td>
<td></td>
</tr>
<tr>
<td>– Regional and generalized lymphadenopathy or other unexplained localized joint redness, swelling, or hyperthermia</td>
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</tr>
<tr>
<td>– New prescription medicine</td>
<td>Follow homecare instructions. Notify MD if no improvement. Consult with MD regarding tapering of corticosteroids as indicated.</td>
</tr>
<tr>
<td>– Recent onset without fever or with low-grade fever and non-progressive symptoms</td>
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<tr>
<td>– Onset to symptoms is associated with intercurrent viral or viral-like syndrome.</td>
<td></td>
</tr>
<tr>
<td>– Onset to symptoms is drug induced, such as chemotherapy or targeted agents (including taxanes, tyrosine kinase inhibitors), biologic agents (including interferon, interleukin, hematopoietic growth factors, and immunotoxin), aromatase inhibitors, bisphosphonates, or the recent withdrawal of corticosteroids (including dexamethasone or prednisone).</td>
<td></td>
</tr>
<tr>
<td>– Symptoms associated with recent extensive physical workout</td>
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</tr>
</tbody>
</table>

Cross references: Fever With Neutropenia, Fever Without Neutropenia, Flu-Like Symptoms, Headache, Nausea and Vomiting

Note. Based on information from Ferri, 2011; Shmerling, 2011; Wilkes & Barton-Burke, 2011.

HOMECARE INSTRUCTIONS

- When the cause cannot be readily identified, patients should be closely observed and treated symptomatically.
- In the absence of specific contraindications, and as recommended by the physician, empiric treatment may include heat, rest, acetaminophen, nonsteroidal anti-inflammatory drugs, and/or muscle relaxants or other analgesics as prescribed per label instructions for fever and generalized achiness (Pinals, 2011; Shmerling, 2011).
- Increase fluid consumption if not contraindicated.
- Limit activity; rest.
- Additional instructions: Treat symptomatically; apply heat if not contraindicated, and practice relaxation.

Report the Following Problems

- No improvement or condition worsens
- Fever that persists for 24 hours with unknown cause
- Symptoms are progressive or persistent (more than one week)
- Increasing pain unrelieved by acetaminophen or ibuprofen as recommended by the physician
Seek Emergency Care Immediately if Any of the Following Occurs

- Chest pain
- Unresponsiveness
- Difficulty breathing

REFERENCES


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Nausea and Vomiting

PROBLEM

Nausea is an unpleasant sensation described as the need to vomit or queasiness that may occur before, with, or without vomiting (emesis) (Murphy-Ende, 2006). Vomiting is the expulsion of gastric or intestinal contents through the mouth. Vomiting is often preceded by nausea, tachycardia or irregular heartbeat, diaphoresis, dizziness, and retching (Tipton, 2009). Retching is gastric and esophageal vomiting motions without expulsion of emesis and is commonly called “dry heaves” (National Cancer Institute, 2011).

Patterns of nausea and vomiting in patients receiving chemotherapy include the following (Grande, 2009).
- Anticipatory: conditioned response that occurs prior to receiving chemotherapy
- Acute: onset occurs quickly after chemotherapy administration and resolves in 24 hours
- Delayed: onset occurs 24 hours following chemotherapy and reaches maximal intensity at 48–72 hours after therapy
- Breakthrough: occurs despite antiemetic therapy

ASSESSMENT CRITERIA

(Murphy-Ende, 2006; Tipton, 2009; Wickham, 2004)

1. What is the cancer diagnosis and treatment?
   The causes of nausea and vomiting can be related to the therapy (chemotherapy and radiation therapy) or the disease. The incidence of chemotherapy-induced nausea has been reported in 70% of patients and vomiting in 9% of patients in the era of modern antiemetics (Grunberg et al., 2004).

2. What medications is the patient taking? Obtain drug history, including date of recent therapy.

3. Ask the patient to describe symptoms in detail.
   - Nausea with or without vomiting
   - Any frank blood or coffee-ground emesis
   - Oral intake of food and liquids
   - Urinary frequency
   - Constipation
   - Pain
   - Viral symptoms such as malaise, myalgia, arthralgia, headache, fever, rhinitis, or cough (or a family member with these symptoms)
4. Obtain history of nausea and vomiting, including
   a. Precipitating factors
   b. Onset and duration
      i. Frequency of vomiting episodes
      ii. Length of time nausea and/or vomiting has been occurring
   c. Relieving factors
   d. Any associated symptoms, such as increased salivation, diaphoresis, tachycardia, diarrhea, retching, dysphagia, and thirst.
5. Past medical history, including family history

<table>
<thead>
<tr>
<th>Signs and Symptoms</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Chest pain, difficulty breathing, palpitations, or sweating</td>
<td>Seek emergency care.</td>
</tr>
<tr>
<td>• Decreased level of consciousness</td>
<td>Call an ambulance immediately.</td>
</tr>
<tr>
<td>• Fainting</td>
<td>Seek emergency care.</td>
</tr>
<tr>
<td>• Recent injury to head or abdomen and vomiting</td>
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<tr>
<td>• Blood or coffee-ground-appearing material in emesis</td>
<td></td>
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<tr>
<td>• Severe stomach pain while vomiting</td>
<td></td>
</tr>
<tr>
<td>• Temperature above 100.4°F (38°C) or chills with suspected neutropenia</td>
<td></td>
</tr>
<tr>
<td>• Nausea with no significant intake for more than 24 hours</td>
<td>Seek urgent care within 24 hours.</td>
</tr>
<tr>
<td>• Vomiting, more than six episodes in 24 hours</td>
<td></td>
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<tr>
<td>• Projectile vomiting</td>
<td></td>
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<tr>
<td>• Weakness, dizziness along with nausea/vomiting</td>
<td></td>
</tr>
<tr>
<td>• Nausea and vomiting persisting after 24 hours with antiemetic therapy</td>
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</tr>
<tr>
<td>• Nausea but able to eat</td>
<td>Follow homecare instructions. Notify MD if no improvement.</td>
</tr>
<tr>
<td>• Vomiting, one episode in 24 hours</td>
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<tr>
<td>• Diarrhea or constipation</td>
<td></td>
</tr>
<tr>
<td>• Other household members who have been or are ill</td>
<td></td>
</tr>
<tr>
<td>• Recent addition of antibiotic, analgesic, or other new medication</td>
<td></td>
</tr>
</tbody>
</table>

Cross references: Anorexia, Fever With Neutropenia, Fever Without Neutropenia

Note. Based on information from Murphy-Ende, 2006; Tipton, 2009; Wickham, 2004.

HOME CARE INSTRUCTIONS

(Friend et al., 2009; Grande, 2009; Murphy-Ende, 2006; Wickham, 2004)

- Continue or begin antiemetics as prescribed by physician.
  - Antiemetic therapy should be continued at least four days following completion of chemotherapy regimen.
  - Take antiemetics prior to meals to maximize benefit during and after meals.
- Acupressure, acupuncture, and acustimulation may be effective.
• Guided imagery, music therapy, and relaxation techniques may be effective.
  • Dietary recommendations include
    – Avoid odors and stress when eating.
    – Avoid foods that are spicy, fatty, or salty.
    – Eat small, frequent meals throughout the day.

**Report the Following Problems**
(Grande, 2009; Wickham, 2004)
• Headache
• Dizziness
• Back pain
• Tinnitus
• Jaundice, itching
• Abdominal pain, swelling, or heartburn
• Temperature above 100.4°F (38°C)
• Red or brown emesis (coffee-ground appearance)
• Severe vomiting—Restrict diet to clear liquids.

**Seek Emergency Care Immediately if Any of the Following Occurs**
(Wickham, 2004)
• Sudden projectile vomiting
• Blurred vision
• Confusion

**REFERENCES**


NAUSEA AND VOMITING

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The author would like to acknowledge Kimberly Morrison, BSN, MN, AOCN®, ARNP, for her contribution to this chapter that remains unchanged from the first edition of this book.
**Oral Mucositis**

**PROBLEM**

Administration of chemotherapy or radiation therapy for certain cancer diagnoses can lead to adverse effects, one of which is mucositis. Mucositis affects the mucous membranes that line the gastrointestinal tract and can manifest as inflammation and/or ulceration, both of which cause pain. If the inflammation or ulcerations occur in the mouth or oropharynx, it is referred to as oral mucositis, which affects 40% of patients with cancer (Brown & Wingard, 2004; Dodd, 2004; Lalla, Sonis, & Peterson, 2008), with incidence rates up to 99% for patients with head and neck cancer (Elting et al., 2008; Nonzee et al., 2008).

**ASSESSMENT CRITERIA**

(Eilers & Epstein, 2004; Harris & Knobf, 2004; Jaroneski, 2006)

1. What is the cancer diagnosis and treatment?
   a. Mucositis can develop as a side effect of the following.
      i. Some chemotherapeutic agents (within five to seven days of administration, but the myelosuppressive effects of chemotherapy may not occur for as many as 10–12 days following treatment)
      ii. Radiation therapy to the oral cavity (within 7–10 days)
      iii. Bone marrow transplantation
      iv. Recent oral surgery
      v. Poor oral hygiene
   b. Oral mucositis usually begins with asymptomatic erythema of the oral mucosa that may cause patients to complain of burning or tingling in the mouth. Patchy erythema and edema can develop that can progress to confluent erythema, edema, and white patches, which can eventually progress into painful ulcers, leading to active bleeding and necrosis in some patients (Dodd, 2004; Sonis et al., 2004). The mouth is the most frequently documented source of infection in patients who are immunocompromised.

2. Obtain medication history. What medications is the patient taking?

3. Assess nutritional intake.
   a. Current diet
      i. Oral intake (e.g., liquid diet, soft diet, regular diet)
      ii. Tube feedings
   b. Any recent weight loss

4. Ask the patient to describe symptoms in detail, including location (e.g., lips, tongue, mucous membranes, gingiva [gums], teeth, denture-bearing area) of any of the following.
a. Erythema
b. Ulcerations
c. Blisters
d. White patches or sticky white film
e. Pain (If present, is it all of the time or only with oral intake?)
f. Difficulty swallowing
g. Hoarseness
h. Taste alterations
i. Fever
j. Decreased oral intake
k. Sore throat

5. Obtain history regarding the following.
   a. Current oral hygiene practices
   b. Social history of tobacco and alcohol use

6. Is the patient’s condition stable or worsening?

7. Are any relieving factors effective?
   a. Ice chips
   b. Cold water rinses
   c. Local or systemic analgesics

8. Has the patient experienced any changes in activities of daily living or function?

<table>
<thead>
<tr>
<th>Signs and Symptoms</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Uncontrolled bleeding</td>
<td>Seek emergency care.</td>
</tr>
<tr>
<td>• Difficulty breathing</td>
<td>Call an ambulance immediately.</td>
</tr>
<tr>
<td>• Temperature above 100.4°F (38°C) or chills with suspect-</td>
<td></td>
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<tr>
<td>ed neutropenia</td>
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<tr>
<td>• Severe ulceration and unable to take nutrition orally or</td>
<td>Seek emergency care.</td>
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<tr>
<td>swallow</td>
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<tr>
<td>• Bleeding from gums, oral cavity, or mouth (that does not</td>
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<td>stop within 5–10 minutes of applying pressure)</td>
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<tr>
<td>• Signs of dehydration</td>
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<tr>
<td>– Decreased urine output</td>
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<td>– Sunken eyes</td>
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<td>– Pinched skin that does not spring back</td>
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<tr>
<td>– Excessive thirst or dry mouth</td>
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<tr>
<td>– Light-headedness</td>
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<tr>
<td>• Painful erythema, edema, or ulcers that make swallow-</td>
<td>Seek urgent care within 24 hours.</td>
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<td>ing difficult</td>
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<tr>
<td>• White patches (or sticky white film) in the mouth</td>
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<tr>
<td>• Pain unrelieved by acetaminophen or previously pre-</td>
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<tr>
<td>scribed pain relievers</td>
<td></td>
</tr>
<tr>
<td>• Inability to eat soft foods</td>
<td></td>
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<tr>
<td>• Foul odor coming from mouth</td>
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<tr>
<td>• Worsening of symptoms</td>
<td></td>
</tr>
</tbody>
</table>

(Continued on next page)
(Continued)

<table>
<thead>
<tr>
<th>Signs and Symptoms</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Temperature above 100.4°F (38°C)</td>
<td>Follow homecare instructions. Notify MD if no improvement.</td>
</tr>
<tr>
<td>• Painful erythema, edema, ulcers, or white patches but still able to eat and swallow</td>
<td></td>
</tr>
<tr>
<td>• Painless ulcer, white patches, erythema, or mild soreness without lesions</td>
<td></td>
</tr>
</tbody>
</table>

Note. Based on information from Bensinger et al., 2008; Brown & Wingard, 2004; Dodd, 2004; Eilers, 2004; Harris & Knobf, 2004; Rubenstein et al., 2004.

**HOMECARE INSTRUCTIONS**

(Bensinger et al., 2008; Eilers, 2004; Harris, Eilers, Harriman, Cashavelly, & Maxwell, 2008; Harris & Knobf, 2004; Keefe et al., 2007; McGuire, Correa, Johnson, & Wienandts, 2006; Morton et al., 2008; Multinational Association of Supportive Care in Cancer & International Society for Oral Oncology, 2005; Rubenstein et al., 2004)

• Inspect mouth daily and call if changes occur, including sores, swelling, bleeding, pain, or white patches (sticky white film).
• Monitor temperature daily and call healthcare provider for fever (temperature above 100.4°F [38°C]).
• Practice good oral hygiene.
  – Use a soft toothbrush, and brush teeth at least twice a day using a pea-size (or smaller) amount of Biotène® toothpaste.
  – Good technique is critical when brushing.
    * Brush for about two minutes.
    * Use a gentle rotating/circular motion.
    * Hold the toothbrush at a 45° angle to the tooth surface.
    * Rinse the brush well using warm water.
    * Allow the toothbrush to air dry between uses.
    * Do not cover or cap toothbrush.
    * Change toothbrush at least every three months.
  – For babies or patients without teeth, care of the gums includes using a moistened gauze pad or clean washcloth two to three times a day to clean the gums. (If in the home setting, paper towels can be used, but do not use facial tissue.) Moisten the gauze, washcloth, or paper towel with tap water. Begin using a toothbrush to brush gums and tooth when the first tooth erupts. Biotène toothpaste may be used on the gums.
  – For adults without teeth, it might be helpful to secure clean gauze on the end of a tongue blade and gently use it to clean the gums.
  – Toothettes® may be used, but they are not as effective in removing debris as a soft toothbrush or moistened gauze, washcloth, or paper towel.
ORAL MUCOSITIS

- Encourage daily flossing with waxed floss if platelet count is greater than 50,000 cells/mm³ and white blood cell count is greater than 1,000 cells/mm³; avoid any areas of the gums that are sore or bleeding.
- Pediatric patients should begin flossing when teeth are touching.
- Complete lip care at least twice a day with lanolin (Lansinoh® or other lanolin, USP ointments). Some other options include Aloe Vesta® skin protectant, Radiablock™ lip balm, Biotène lip moisturizer gel, Aquaphor®, and Eucerin®.
  - Lanolin-based creams and ointments are more effective in moisturizing and protecting against damage than petrolatum-based products (Schubert, Peterson, & Lloid, 1999; Semba, Mealey, & Hallmon, 1994).
  - Avoid use of ChapStick®; occlusive lip balms, such as petrolatum, may promote microbial growth (Barker, Barker, & Gier, 2000).
- Use oral rinses (rinse and gargle for 15–30 seconds or as tolerated; do not swallow) at least four times a day, especially after meals, if erythema or bleeding is present. Oral rinse options include the following.
  - Salt and baking soda (one-fourth teaspoon regular table salt mixed with one-half teaspoon baking soda in four ounces of water)
  - Salt water (one teaspoon regular table salt mixed in four cups of water)
  - Baking soda rinse (one teaspoon baking soda mixed in eight ounces of water)
  - Plain water
- Avoid use of any mouthwashes that contain alcohol, including chlorhexidine with alcohol. Acceptable mouthwashes include Biotène dry mouth mouthwash, Biotène PBF mouthwash, SmartMouth™ mouthwash, and Oasis®.
- For patients with dry, thick secretions, frequent oral rinses should be encouraged. Consider arranging portable suction to help remove secretions in the back of the throat as needed.
- Clean dentures with a denture brush or toothbrush and regular toothpaste at least once a day or after meals.
  - Clean denture storage container at least once a week.
  - Wear dentures only when eating foods that need dentures if they are irritating the oral mucosa.
  - Avoid use of dentures if mouth sores are present under them.
  - Do not use denture adhesives.
  - Do not wear loose dentures.
- Maintain oral fluid intake to help maintain hydration and decrease viscosity of secretions.
- Follow a high-protein, high-calorie diet, if applicable.
- Eat small high-protein, high-calorie meals often (six to eight small meals each day).
  - Add extra calories and protein to food (e.g., add powdered milk to soups and casseroles).
  - Add extra fats such as butter, oil, and cream.
- Choose soft, easy-to-chew food. If mouth sores are present or the oral mucosa is sore, encourage patients to take acetaminophen or other prescribed pain medications 30–60 minutes before eating.
• Avoid the following foods and drinks:
  – Foods with sharp edges
  – Hot foods
  – Very spicy, sour, or acidic foods and drinks
  – Sugary foods and drinks
  – Foods that will stick to teeth
  – Alcohol.
• Avoid smoking and using chewing tobacco.
• Add humidification as needed.

**Report the Following Problems**
• Pain not relieved by medications
• Signs of dehydration
• Bleeding gums
• Temperature above 100.4°F (38°C)
• Foul odor coming from the mouth
• Mouth sores
• White patches
• Difficulty eating
• Worsening symptoms

**Seek Emergency Care Immediately if Any of the Following Occurs**
• Severe ulceration and unable to eat or swallow
• Uncontrolled bleeding
• Difficulty breathing
• Signs of dehydration
• Temperature above 100.4°F (38°C) or chills with suspected neutropenia

**REFERENCES**


with radiotherapy with or without chemotherapy: Demonstration of increased frequency, severity, resistance to palliation, and impact on quality of life. *Cancer*, 113, 2704–2713. doi:10.1002/cncr.23898


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The authors would like to acknowledge Dolores Tanner, RN, OCN®, Lisa Feldsien, RN, BSN, OCN®, and Nancy Lange, RN, OCN®, for their contributions to this chapter that remain unchanged from the first edition of this book.
Pain

PROBLEM

Pain is common in patients with cancer. It is a result of the tumor itself 65%–85% of the time. Cancer-related procedures and treatment affect 15%–25% of patients. Three percent to 10% of patients with cancer may experience pain from conditions unrelated to their cancer (Garofalo, Gatchel, & Baum, 2007).

ASSESSMENT CRITERIA

1. What is the cancer diagnosis and treatment?
2. What medications is the patient taking? Obtain medication history.
   a. Nonopioids (e.g., acetaminophen, nonsteroidal anti-inflammatory drugs)
   b. Adjuvant analgesics (e.g., antidepressants, anticonvulsants, muscle relaxants)
   c. Opioids (e.g., morphine, oxycodone, fentanyl, hydromorphone)
      i. Long-acting (e.g., MS Contin®, OxyContin®, Duragesic®, Exalgo®)
      ii. Short-acting (e.g., Percocet®, Vicodin®, Nucynta®)
   a. Location of pain
      i. Where is your pain?
      ii. Is there more than one site?
   b. Intensity
      i. On a scale of 0–10, with 0 being no pain and 10 being the worst pain you can imagine, how would you rate your pain right now?
      ii. What is your pain rating at its worse? What is your pain rating at its best?
   c. Quality of pain
      i. What does your pain feel like?
      ii. What words would you use to describe your pain (e.g., sharp, burning, stabbing, aching)?
   d. Onset, duration, and variations
      i. When did the pain start?
      ii. Is it constant?
      iii. Is the pain episodic?
         (1) How often does it occur?
         (2) Is there a time of day it is better or worse?
      iv. Does anything make your pain better or worse?
   e. Previous treatments
      i. What types of treatments have you tried to relieve your pain?
      ii. Did these treatments help?
f. Effects of pain, insomnia, depression, or anxiety
g. Any associated symptoms, such as fever, swelling, or redness

4. Past medical history (e.g., hypertension, gastrointestinal ulceration, renal impairment, sleep apnea) (American Pain Society, 2008)

5. Changes in activities of daily living (i.e., Does the pain affect your physical and social function?)

<table>
<thead>
<tr>
<th>Signs and Symptoms</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Describes signs/symptoms of acute injury, spinal cord compression, pathologic fracture, or other life-threatening problem</td>
<td>Seek emergency care. Call an ambulance immediately.</td>
</tr>
<tr>
<td>• Sudden onset of severe weakness or unrelenting localized pain; inability to ambulate or decreased sensation in extremities; loss of control of bowel or bladder</td>
<td>Seek medical care within two to four hours.</td>
</tr>
<tr>
<td>• Chest pain</td>
<td></td>
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<tr>
<td>• Sudden onset of moderate to severe pain</td>
<td></td>
</tr>
<tr>
<td>• Pain not responsive to current medication regimen</td>
<td></td>
</tr>
<tr>
<td>• Pain that interferes with mobility</td>
<td></td>
</tr>
<tr>
<td>• Mild to moderate pain that has been increasing</td>
<td></td>
</tr>
<tr>
<td>• Pain that is not controlled by current regimen</td>
<td></td>
</tr>
<tr>
<td>• Pain that is interfering with activity or sleep</td>
<td></td>
</tr>
<tr>
<td>• Mild to moderate aches and pains</td>
<td>Follow homecare instructions. Notify MD if no improvement.</td>
</tr>
</tbody>
</table>

**HOMECARE INSTRUCTIONS**

- Take acetaminophen, aspirin, or ibuprofen per label instructions for mild pain as recommended by physician.
- Take prescription analgesics as prescribed.
- Maintain activity as tolerated.
- Keep a pain diary, including description of the pain, quality, intensity, and location; interventions taken; nonpharmacologic and pain medication taken; and evaluation of response to interventions.
- Complementary therapies: Physical or cognitive-behavioral therapy can help reduce pain by involving the body (Vanni & Rehm, 2010).
  - Relaxation techniques
  - Heat or cold
  - Distraction therapy using music, humor, or hobbies
  - Visualization
  - Guided imagery
  - Massage
Report the Following Problems

- No improvement in pain
- Pain that does not subside with interventions
- Other side effects, such as sedation, nausea, or constipation

Seek Emergency Care Immediately if Either of the Following Occurs

- Excruciating pain
- Immobility

REFERENCES


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Paresthesia (Peripheral Neuropathy)

PROBLEM

Paresthesia is characterized by numbness and tingling and is a common symptom of peripheral neuropathy. Peripheral neuropathy is a disturbance in the peripheral nervous system that results in sensory, motor, autonomic, or cranial nerve dysfunction. Associated symptoms include dysesthetic pain, loss of temperature sensation, loss of position sense, loss of vibratory sense, weakness, and ataxia. Neuropathy may be caused by physical injury, infection, toxic substances, disease, or medications (Armstrong & Grisdale, 2006; National Cancer Institute, 2008, 2011; Wilkes, 2004).

ASSESSMENT CRITERIA

(Armstrong & Grisdale, 2006; Nielsen & Brant, 2002; Sweeney, 2002; Tipton, 2009; Tofthagen, McAllister, & McMillan, 2011; Wilkes, 2004)

1. What is the cancer diagnosis and treatment?
   Peripheral neuropathy may result from direct damage from neurotoxic chemotherapy agents, including vinca alkaloids, platinum compounds (e.g., cisplatin, oxaliplatin), taxanes, epothilones, angiogenesis agents, and proteasome inhibitors. Indirect damage can occur from compression of a nerve associated with metastasis or compression fracture. Other risk factors include age (older than 60 years old), concurrent use of neurotoxic drugs, radiation therapy to spinal fields, diabetes mellitus, malnutrition with vitamin deficiency (B complex), and alcohol abuse.

2. What medications is the patient taking? Obtain drug history.

3. Ask the patient to describe symptoms in detail.
   a. Sensations
      i. Burning pain
      ii. Sharp stabbing or electric type of pain
      iii. Muscle weakness and loss of dexterity
      iv. Extreme sensitivity to touch
   b. Any associated symptoms

4. Obtain history, including
   a. Precipitating factors
   b. Onset and duration: Symptoms occurring for years suggest hereditary cause; symptoms occurring from weeks to months suggest drug-related toxicity or metabolic cause; and symptoms occurring for days suggest chemotherapy toxicity or Guillain-Barré syndrome.
   c. Relieving factors
   d. Any associated symptoms, such as inability to move, pain, constipation, abdominal distress, incontinence, or urinary retention.
5. Past medical history
   a. Diabetes mellitus
   b. Malnutrition
   c. Alcohol abuse
   d. Peripheral vascular disease
   e. Arthritis or other connective tissue disease
   f. HIV/AIDS
   g. Chemical exposures
   h. Previous neurotoxic chemotherapy

6. Changes in activities of daily living, such as difficulty handling keys, tying shoes, or buttoning shirt, or tripping.

<table>
<thead>
<tr>
<th>Signs and Symptoms</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Complete loss of feeling and movement</td>
<td>Seek emergency care. Call an ambulance immediately.</td>
</tr>
<tr>
<td>- Pain with and without movement</td>
<td></td>
</tr>
<tr>
<td>- Bedridden</td>
<td></td>
</tr>
<tr>
<td>- Paresthesia interfering with activities of daily living</td>
<td>Seek urgent care within 24 hours.</td>
</tr>
<tr>
<td>- Pain with activities</td>
<td></td>
</tr>
<tr>
<td>- Unable to distinguish temperature sensations</td>
<td></td>
</tr>
<tr>
<td>- Unilateral paresthesia</td>
<td></td>
</tr>
<tr>
<td>- Paresthesia including tingling and loss of deep tendon reflexes but interfering with less than 25% of function and not interfering with activities of daily living (Sweeney, 2002)</td>
<td>Follow homecare instructions. Notify MD if no improvement.</td>
</tr>
</tbody>
</table>

Cross references: Constipation, Difficulty or Pain With Urination, Pain

**HOMECARE INSTRUCTIONS**

(Armstrong & Grisdale, 2006; Blecher, 2009; National Cancer Institute, 2008; Sweeney, 2002; Visovsky, Collins, Hart, Abbott, & Aschenbrenner, 2009; Wilkes, 2004)

- Use assistive devices (cane, orthotic braces, or splint) as directed.
- Wear socks and shoes to protect feet.
- Apply nonskid surfaces on floors and tubs.
- Continue walking or other mild exercise.
- Use a potholder or oven mitts when cooking.
- Use gloves when washing dishes or gardening.
- Inspect skin for cuts, abrasions, and burns daily. Use a mirror to inspect the bottom of your feet.
- Keep rooms well lighted.
- Use handrails on stairs.
- Use a thermometer to check temperature of bath water. Avoid extreme temperatures. Ask someone to check the temperature before you shower or bathe.
• Use caution when driving and operating machinery.
• Vitamin B₆ may improve symptoms if prescribed by physician.
• Avoid alcohol consumption.
• Avoid repetitive activities that may place stress on a nerve, such as playing golf or tennis or typing on a computer keyboard.

Report the Following Problem
• Worsening of numbness, tingling, pain, or loss of function

Seek Emergency Care Immediately if Any of the Following Occurs
• Burns
• Uncontrolled bleeding from injuries
• Infection of wounds
• Unrelieved pain
• Sudden loss of function or sensation

REFERENCES


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The author would like to acknowledge Patricia I. Geddie, RN, MS, AOCN®, for her contribution to this chapter that remains unchanged from the first edition of this book.
Phlebitis

PROBLEM

Inflammation of a vein, often a complication of IV therapy; can be caused by infection, injury, or irritation (National Cancer Institute, 2011).

ASSESSMENT CRITERIA

1. Is the patient currently being treated with IV therapy?
2. Does the patient currently have a peripheral IV catheter/peripherally inserted central catheter (PICC)?
3. Did the patient recently receive irritant medications or solutions?
4. Location of problem—old IV site, current IV site, central catheter site
5. Ask the patient to describe symptoms in detail.
   a. Onset and duration
   b. Appearance of the site
      i. Hard cord-like area along the vein
      ii. Warmth, redness, or tenderness
      iii. Swelling along vein
   c. Discomfort or pain
   d. Fever
   e. Appearance of the affected limb
6. Complications to rule out
   a. Infection—fever and/or purulent drainage
   b. Infiltration—burning, tightness, cool skin, swelling, or blanching
   c. Extravasation—initial symptoms resemble infiltration; blistering, tissue sloughing
7. History
   a. What is the cancer diagnosis and treatment?
   b. What medications is the patient currently taking?
   c. Contributing factors
      i. Trauma occurring during catheter insertion
      ii. Prolonged use of same IV site
      iii. History of phlebitis or blood clots
      iv. Any associated symptoms such as redness, swelling, ulceration, drainage, or fever
      v. Recent dehydration (Dehydration may contribute because of increase in blood viscosity.)
8. Changes in activities of daily living
PHLEBITIS

<table>
<thead>
<tr>
<th>Signs and Symptoms</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Sudden chest pain or shortness of breath</td>
<td>Seek emergency care. Call an ambulance immediately.</td>
</tr>
<tr>
<td>• Ulceration or purulent drainage from site</td>
<td>Seek urgent care within 24 hours.</td>
</tr>
<tr>
<td>• Red streak migrating from area of concern</td>
<td></td>
</tr>
<tr>
<td>• Limb swollen outside of area of concern</td>
<td></td>
</tr>
<tr>
<td>• Presence of fever</td>
<td></td>
</tr>
<tr>
<td>• Redness, tenderness, and swelling at an IV site</td>
<td>Follow homecare instructions. Notify MD if no improvement.</td>
</tr>
<tr>
<td>(current or in the past)</td>
<td></td>
</tr>
</tbody>
</table>

Cross references: Deep Venous Thrombosis, Dyspnea, Fever With Neutropenia, Fever Without Neutropenia

Note. Based on information from Camp-Sorrell, 2006.

HOMECARE INSTRUCTIONS

• If peripheral IV catheter is present, the patient should come to the clinic for device removal.
• Apply warm, moist soaks or packs.
• Elevate the affected area for 72 hours.
• For pain, take acetaminophen and nonsteroidal anti-inflammatory drugs as prescribed by physician.
• If phlebitis from PICC continues or worsens after 72 hours, consider having the catheter removed.

Report the Following Problems

• A red streak develops, moving upward from site.
• Ulcer or wound develops at site.
• Limb becomes swollen.
• Symptoms worsen.
• No relief is seen within 48–72 hours.
• Fever develops.

Seek Emergency Care Immediately if Either of the Following Occurs

• Sudden chest pain
• Shortness of breath

Addendum

According to the 2011 Infusion Nurses Society Standards of Practice:
• An incident of phlebitis should be reported as an adverse event.
• Phlebitis shall be documented using a uniform standard scale for measuring grade or severity.
It is recommended that any incident of phlebitis at grade 2 or more be reported as an unusual occurrence.

<table>
<thead>
<tr>
<th>Grade 0—No symptoms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade 1—Erythema at access site with or without pain</td>
</tr>
<tr>
<td>Grade 2—Pain at access site with erythema and/or edema</td>
</tr>
<tr>
<td>Grade 3—Pain at access site with erythema and/or edema, streak formation, palpable venous cord</td>
</tr>
<tr>
<td>Grade 4—Pain at access site with erythema and/or edema, streak formation, palpable venous cord greater than 1 inch in length; purulent drainage</td>
</tr>
</tbody>
</table>


REFERENCES


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*The author would like to acknowledge Margaret Hickey, RN, MSN, MS, CORLN, for her contribution to this chapter that remains unchanged from the first edition of this book.*
**Pruritus (Itch)**

**PROBLEM**

Excessive itching of the skin, with or without visible skin lesions or rash.

**ASSESSMENT CRITERIA**

(Economou, 2009; Lester, 2006; National Cancer Institute, 2011)

1. What is the cancer diagnosis and treatment?
   a. Pruritus is more common in the following cancers.
      i. Hematologic malignancies
         (1) Lymphoma, particularly Hodgkin disease
         (2) Leukemia
         (3) Multiple myeloma
      ii. Sarcomas
      iii. Visceral tumors
      iv. Carcinoid
      v. Any tumor with cutaneous metastases
      vi. Hematologic disorders such as polycythemia vera or iron-deficiency anemia
      vii. AIDS, AIDS-related Kaposi sarcoma, and AIDS-related opportunistic infections
   b. Treatments that may cause pruritus include
      i. Cytotoxic chemotherapy (see chart below)
      ii. Monoclonal antibodies/targeted therapies, especially the epidermal growth factor receptor inhibitors (see chart below)
      iii. Biologic response modifiers (most commonly interferon or hematopoietic growth factors)
      iv. Opioid narcotics
      v. Antibiotics
      vi. Radiation therapy
      vii. Graft-versus-host disease as a result of bone marrow or stem cell transplant.

<table>
<thead>
<tr>
<th>Cytotoxic Chemotherapies Most Likely to Cause a Pruritic Hypersensitivity Reaction</th>
<th>Targeted Therapies Most Likely to Cause Pruritus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doxorubicin</td>
<td>Panitumumab</td>
</tr>
<tr>
<td>Daunorubicin</td>
<td>Cetuximab</td>
</tr>
</tbody>
</table>

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PRURITUS

(Continued)

<table>
<thead>
<tr>
<th>Cytotoxic Chemotherapies Most Likely to Cause a Pruritic Hypersensitivity Reaction</th>
<th>Targeted Therapies Most Likely to Cause Pruritus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cytarabine</td>
<td>Sorafenib</td>
</tr>
<tr>
<td>L-asparaginase</td>
<td>Erlotinib</td>
</tr>
<tr>
<td>Paclitaxel</td>
<td>Sunitinib</td>
</tr>
<tr>
<td>Cisplatin</td>
<td>Pazopanib</td>
</tr>
</tbody>
</table>

Note. Based on information from National Cancer Institute, 2011.

2. Is the patient experiencing side effects of treatment such as the following?
   a. Lymphedema
   b. Xerosis (associated with advanced patient age or treatments listed previously)
   c. Infection
   d. Liver complications or liver disease

3. What medications is the patient taking? Obtain drug history. Consider allergic reaction, epidermal growth factor receptor inhibitors, monoclonal antibodies, cytotoxic chemotherapy, opioids, antibiotics, and contraceptives.

4. Ask the patient to describe symptoms in detail.
   a. Is the pruritus localized or generalized? If localized, where is it located?
   b. Is there a skin change or rash? If so, where is it located? Describe the skin change.
   c. Pruritus can be graded to capture the degree of severity; see the Common Terminology Criteria for Adverse Events grading on the next page.

5. Obtain history, including
   a. Onset and duration: What is the timeline of the pruritus?
   b. Precipitating factors: New medications, lotions, soaps, detergents, exposure to animals, or change in environment. Does applying heat or taking hot showers make it worse?
   c. Relieving factors: Does the patient find that using cool wet cloths, bathing in cool water, applying topical ointments, or other measures provide relief?
   d. Any associated signs or symptoms such as inflammation, dry skin, rash, pustules, fever, or jaundice.

6. Collect past medical history, including
   a. Liver disease
   b. Infection
   c. Hypothyroidism/hyperthyroidism
   d. Shingles
   e. Any difficulty breathing, wheezing, or feeling of overwhelming anxiety—This is an emergency; see Signs and Symptoms/Action table on the next page.

7. Is the patient experiencing changes in activities of daily living and levels of stress?
### Common Terminology Criteria for Adverse Events Grading of Pruritus

<table>
<thead>
<tr>
<th>Grade</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Mild or localized</td>
</tr>
<tr>
<td>2</td>
<td>Intense or widespread; intermittent; skin changes from scratching (e.g., edema, papulation, excoriations, lichenification, oozing/crusts); oral medication indicated; limiting instrumental activities of daily living</td>
</tr>
<tr>
<td>3</td>
<td>Intense or widespread; constant; limiting self-care activities of daily living or sleep; oral corticosteroid or immunosuppressive therapy indicated</td>
</tr>
<tr>
<td>4</td>
<td>–</td>
</tr>
<tr>
<td>5</td>
<td>–</td>
</tr>
</tbody>
</table>

*Note. From Common Terminology Criteria for Adverse Events [v.4.03], by the National Cancer Institute Cancer Therapy Evaluation Program, June 14, 2010. Retrieved from http://evs.nci.nih.gov/ftp1/CTCAE/About.html*

### Signs and Symptoms

<table>
<thead>
<tr>
<th>Signs and Symptoms</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Difficulty breathing</td>
<td>Seek emergency care. Call an ambulance immediately.</td>
</tr>
<tr>
<td>Chest tightness or pain</td>
<td></td>
</tr>
<tr>
<td>Sense of overwhelming anxiety or impending doom</td>
<td></td>
</tr>
<tr>
<td>Generalized body rash with wheals or hives, with or without generalized itching</td>
<td></td>
</tr>
<tr>
<td>Generalized rash with or without generalized itching but no difficulty breathing</td>
<td>Seek urgent care within two hours.</td>
</tr>
<tr>
<td>Localized rash with or without localized itching but rash is spreading</td>
<td></td>
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<tr>
<td>Fever</td>
<td></td>
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<tr>
<td>Pustules or lesions with exudate</td>
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<tr>
<td>Pustules along a nerve track</td>
<td></td>
</tr>
<tr>
<td>Bleeding</td>
<td></td>
</tr>
<tr>
<td>Jaundice</td>
<td></td>
</tr>
<tr>
<td>Pain</td>
<td></td>
</tr>
<tr>
<td>Introduction of a new medication or complementary therapy within the past 24 hours</td>
<td></td>
</tr>
<tr>
<td>Localized rash with or without localized itching</td>
<td>Seek urgent care within 24 hours.</td>
</tr>
<tr>
<td>Scaling</td>
<td></td>
</tr>
<tr>
<td>Cracking</td>
<td></td>
</tr>
<tr>
<td>Scratch marks or breaks in skin</td>
<td></td>
</tr>
<tr>
<td>Inflammation</td>
<td></td>
</tr>
<tr>
<td>Scabies or lice</td>
<td></td>
</tr>
<tr>
<td>White or red patches on skin</td>
<td></td>
</tr>
<tr>
<td>Exposure to a new animal, plant, or chemical within the past two days</td>
<td></td>
</tr>
</tbody>
</table>

*(Continued on next page)*
(Continued)

<table>
<thead>
<tr>
<th>Signs and Symptoms</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Itching without other symptoms (xerosis is the most common cause)</td>
<td>Follow homecare instructions. Notify MD if no improvement.</td>
</tr>
</tbody>
</table>

Cross reference: Rash

**HOMECARE INSTRUCTIONS**

(Burtness et al., 2009; Eaby, Culkin, & Lacouture, 2008; Lester, 2006; National Cancer Institute, 2011)

- Increase fluid intake to improve skin hydration.
- Use mild soaps or soaps made for sensitive skin. Oatmeal baths or soap may provide relief.
- Avoid perfumed soaps or bubble baths.
- Bathe only once a day in lukewarm or cool water. Limit bath to a half-hour. Avoid long, hot showers.
- Apply skin emollients or lotions immediately after bathing while skin is still damp and then one or two times throughout the day. Do not use baby powder.
- Avoid lotions containing alcohol. Lotions and emollients recommended for sensitive skin include Eucerin®, Aquaphor®, Alpha Keri®, Lubriderm® or Nivea®.
- Avoid tight, irritating clothing. Wear loose, soft, cotton garments.
- Use mild laundry detergents, such as those designed for infants, when washing clothing and bed linens.
- Maintain a humid environment with a humidifier.
- Protect skin from the sun with sunscreen (sun protection factor of 30 or greater) applied each morning. Wear protective clothing such as long-sleeved shirts and broad-brimmed hats at times of direct sun exposure.
- Application of a cool washcloth or ice over the site of itching may be helpful. Rubbing, pressure, or vibration also may provide relief.
- Note: If you determine that the patient has epidermal growth factor receptor–induced rash with pruritus, refer to the Rash guideline for more detailed instructions.

**Report the Following Problems**

(Lester, 2006; National Cancer Institute, 2011)

- Itchiness that continues for more than 48 hours after the aforementioned measures have been implemented
- Development of a rash, scaling, cracking, bleeding, redness, white patches, or blisters
- Temperature above 100.4°F (38°C)
Seek Emergency Care Immediately if Any of the Following Occurs

- Chest tightness
- Difficulty breathing
- Generalized body rash with wheals or hives

**ADDENDUM**

**Suggested Pharmacologic Agents for the Treatment of Pruritus:** Treatment should progress from topical to systemic therapy, or a combination of the two.

<table>
<thead>
<tr>
<th>Therapy</th>
<th>Dosing</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Topical Therapy</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Menthol and phenol</td>
<td>1%–2% cream, apply to affected area (AAA) PRN for pruritus</td>
<td>May be compounded at specialty pharmacies or bought over the counter (Example: Vicks VapoRub®, calamine lotion)</td>
</tr>
<tr>
<td>Capsaicin cream</td>
<td>0.025% or 0.075%, AAA TID–QID PRN for pruritus</td>
<td>May cause burning or stinging sensation for the first few days</td>
</tr>
<tr>
<td>Antihistamine cream</td>
<td>Diphenhydramine cream, 2%</td>
<td></td>
</tr>
<tr>
<td>Corticosteroid cream</td>
<td>1% or 2.5% cream, AAA TID–QID PRN for pruritus</td>
<td>Do not use in fields of radiation. Best for local itching and short-term use only.</td>
</tr>
<tr>
<td>Regenecare® or Re-</td>
<td>AAA TID</td>
<td>Useful for dry, itching, or painful skin/rash or wound.</td>
</tr>
<tr>
<td>genecare HA®</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Olivamine® creams</td>
<td>AAA daily</td>
<td>Purchase from Medline (see Resources) or drugstores.</td>
</tr>
<tr>
<td>(Remedy Skin Repair</td>
<td></td>
<td></td>
</tr>
<tr>
<td>or Remedy Nutrashield)</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Systemic Therapy</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H&lt;sub&gt;1&lt;/sub&gt; antihistamines&lt;sup&gt;a&lt;/sup&gt;</td>
<td>Diphenhydramine® 25–50 mg PO/IV every 4–6 hours PRN for pruritus</td>
<td>Effective particularly in Hodgkin disease and polycythemia vera</td>
</tr>
<tr>
<td></td>
<td>Hydroxyzine 25–50 mg PO TID–QID PRN for pruritus</td>
<td></td>
</tr>
<tr>
<td>H&lt;sub&gt;2&lt;/sub&gt; antihistamines</td>
<td>Famotidine 20 mg PO BID</td>
<td></td>
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</tbody>
</table>

(Continued on next page)
**Systemic Therapy (cont.)**

<table>
<thead>
<tr>
<th>Therapy</th>
<th>Dosing</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Corticosteroids</strong></td>
<td></td>
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</tr>
<tr>
<td>Prednisolone 30–60 mg</td>
<td>PO/IV every day</td>
<td>Consider for palliative treatment in Hodgkin lymphoma.</td>
</tr>
<tr>
<td>Dexamethasone 0.5–8 mg</td>
<td>PO every day, divided BID–QID</td>
<td></td>
</tr>
<tr>
<td>Methylprednisolone(^b) 10–250 mg IV</td>
<td></td>
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</tr>
<tr>
<td><strong>Neurokinin-1 receptor antagonists</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aprepitant 80–125 mg</td>
<td>PO, every other day to every day</td>
<td>No randomized controlled trials (RCTs) exist supporting its effectiveness in treatment of pruritus. Anecdotal reports of relief of chronic itching in patients with solid tumors, cutaneous T-cell lymphoma, and erlotinib-induced pruritus.</td>
</tr>
<tr>
<td><strong>Selective serotonin reuptake inhibitors(^a)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paroxetine 5–20 mg</td>
<td>PO every day</td>
<td>Typically a rapid benefit occurring within 1–3 days. Effects may wear off after 4–6 weeks. May cause nausea and vomiting.</td>
</tr>
<tr>
<td>Mirtazapine 7.5–30 mg</td>
<td>PO every day (higher dose more effective)</td>
<td>No RCTs exist supporting its effectiveness in treatment of pruritus. Has antihistamine and serotonin antagonism activity. Causes less nausea and vomiting than paroxetine. Effective in 1–7 days. May also treat insomnia, anorexia, and depression.</td>
</tr>
</tbody>
</table>

\(^a\) May have sedative effects

\(^b\) Common agents for acute hypersensitivity reactions

*Note. Based on information from Davis et al., 2003; Duval & Dubertret, 2009; Hundley & Yosipovitch, 2004; Krajnik & Zylicz, 2001; National Cancer Institute, 2011; Purdy-Lloyd et al., 2007; Reddy, 2008; Shaw et al., 2007; Twycross et al., 2003; Vincenzi et al., 2010; Zylicz et al., 1998.*

Table developed by Jennifer Piper, PA-C, & Jennifer S. Webster, MN, MPH, RN, AOCN\(^a\), at Georgia Cancer Specialists, Atlanta, GA.

**REFERENCES**


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Georgia Cancer Specialists
Atlanta, Georgia
Rash

PROBLEM

An eruption or alteration in skin or nail bed (Dunne, 2010).

ASSESSMENT CRITERIA

1. What is the cancer diagnosis and current treatment regimen?
   A rash can result from a number of factors in a patient with cancer, including the following.
   a. Biologic targeted therapies, including epidermal growth factor receptor inhibitors (cetuximab, erlotinib, gefitinib, panitumumab, and lapatinib); multitargeted agents (sorafenib and sunitinib); other targeted agents (imatinib and ipilimumab).
   b. Drug induced from chemotherapy agents (capecitabine, bortezomib, thalidomide, lenalidomide, doxorubicin, leucovorin, mechlorethamine, cyclophosphamide, bleomycin, cyclophosphamide, chlorambucil, methotrexate, melphalan, thiopeta, asparaginase, aldesleukin, interferon, and 5-fluorouracil) (Wilkes, 2011)
   c. Radiation: dermatitis or burn or a radiation recall reaction
   d. Infection: candidiasis, cellulitis, chicken pox, erythema multiforme, herpes simplex, herpes zoster (shingles), impetigo, measles, rubella, scabies, Lyme disease
   e. Allergic: antibiotic allergy, other drug allergy, atopic dermatitis, angioedema, contact dermatitis
   f. Environmental: sunburn, chemical irritant, overwashing or overdrying of skin, plant or animal exposure
   g. Autoimmune: cutaneous lupus, erythema nodosum, dermatomyositis, systemic lupus erythematosus, thrombocytopenic purpura, petechiae
   h. Malignancy associated: abdominal/gastrointestinal tumors, adrenocorticotropic hormone–producing tumors, basal cell and squamous cell carcinoma, carcinoid, colon cancer, cutaneous T-cell lymphoma, Kaposi sarcoma, leukemia, melanoma, neurofibroma
   i. Psychiatric: stress, anxiety, tension

2. What medications is the patient taking? Obtain drug history and allergy history.

3. Ask the patient to describe symptoms in detail.
   a. Onset of rash
   b. Location where rash first started
   c. Areas where rash has spread
d. Conjunctival involvement
e. Color
f. Texture: raised, flat, or blistered
g. Change in character of rash with time
h. Associated symptoms, such as itching, burning, numbness, or pain
i. Aggravating factors, such as sunlight
j. Alleviating factors and treatments tried
k. Other associated symptoms, including fever, headache, malaise, arthralgia, and conjunctivitis
l. Contact with those who have a similar rash
m. Recent travel
n. Insect bites or stings
o. New skin products used, such as lotion, soap, or laundry detergent
p. New medications
q. Radiation therapy
r. Pruritus
s. Crusting of skin
t. Pain, redness, warmth, or tingling
u. Drainage or “weeping”

4. Obtain history, including
   a. Precipitating factors
   b. Onset and duration
   c. Relieving factors
   d. Any associated symptoms, such as allergic reactions, infections, or systemic conditions.

5. Collect past medical history, including
   a. Exposure to people with a similar rash
   b. Diabetes
   c. Kidney disease
   d. Skin diseases, such as psoriasis or eczema.

6. Is the patient experiencing changes in activities of daily living?

<table>
<thead>
<tr>
<th>Signs and Symptoms</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Acute skin changes and associated systemic symptoms such as swelling of throat,</td>
<td></td>
</tr>
</tbody>
</table>
  stridor, wheezing, dyspnea, chest pain, severe headache, eye involvement, desqua- |
  mation, high fever, or mottled skin below the waist                               |
|                                                                                   | Seek emergency care. Call an ambulance immediately for acute |
|                                                                                   | respiratory symptoms.                                        |
| • Dermatomal pain, itching, burning, paresthesia or hyperesthesia, rash over cranial |
  nerves (herpes zoster pattern)                                                    |
| • Stevens-Johnson syndrome: sudden eruption of erythematous macules, papules,     |
  vesicles, or bullae                                                              |
|                                                                                   | Seek urgent care within 24 hours.                             |

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<table>
<thead>
<tr>
<th>Signs and Symptoms</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Infection: drainage from lesion</td>
<td>Notify MD if no improvement or if condition worsens. Follow homecare instructions.</td>
</tr>
<tr>
<td>• Uncontrolled pruritus</td>
<td></td>
</tr>
<tr>
<td>• History of new drug (suspected drug-induced rash in absence of respiratory symptoms)</td>
<td></td>
</tr>
<tr>
<td>• Systemic symptoms associated with infections or viral syndrome, such as fever, myalgias, or arthralgias</td>
<td></td>
</tr>
<tr>
<td>• Chemotherapy-related or biologic targeted therapy rashes</td>
<td></td>
</tr>
<tr>
<td>– Hand-foot syndrome</td>
<td></td>
</tr>
<tr>
<td>– Papulopustular rash (often on the face and chest)</td>
<td></td>
</tr>
<tr>
<td>– Mild pruritus</td>
<td></td>
</tr>
<tr>
<td>– Mild pain/discomfort from skin alteration</td>
<td></td>
</tr>
<tr>
<td>– Nonprogressive symptoms</td>
<td></td>
</tr>
</tbody>
</table>

Cross references: Pruritus, Hand-Foot Syndrome

**HOMECARE INSTRUCTIONS**

- Report changes in itching or rash to nurse.
- Report presence of drainage from skin lesions.
- Apply cool compresses to area.
- Apply topical medication as prescribed.
- Take oral medication as prescribed, and notify nurse of side effects. Expect drowsiness from antihistamines, and take safety precautions.
- Wear loose-fitting cotton clothing.
- Keep fingernails cut short, and wear soft mittens at night to avoid scratching.
- Avoid hot baths and showers.
- Avoid sun exposure and use sunscreen protection.
- Hand-foot syndrome: Avoid friction and pressure to hands and feet, wear loose-fitting shoes or slippers and avoid constrictive shoes, moisturize with a urea-containing cream on hands and feet, avoid skin irritants such as perfumes or cleaning agents, avoid extreme hot or cold temperatures, wear rubber gloves when doing dishes, and avoid getting a sunburn (Swenson & Bell, 2010). Refer to Hand-Foot Syndrome guideline.
- Radiation dermatitis: Wash hair and skin with a mild soap and shampoo. Apply a hydrogel or hydrocolloid dressing, sucralfate, or corticosteroid topical agent as prescribed by clinician (Wickline, 2004).
- Biologic targeted therapy rash: Moisturize with fragrance-free cream, apply topical steroid or antibiotic cream as ordered by clinician, take oral antibiotics or oral steroids as prescribed, avoid extreme temperatures and direct sunlight, and keep nails clean and trimmed while on therapy to avoid paronychia (Eaby, Culkin, & Lacouture, 2008).
Report the Following Problems

- Rash progression
- No improvement over the next three days
- Fever that persists for 24 hours
- Increasing pain or uncontrolled pruritus

Seek Emergency Care Immediately if Any of the Following Occurs

- Severe headache
- Difficulty breathing
- Chest pain
- High fever
- Eye involvement

REFERENCES


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The author would like to acknowledge Kathleen Murphy-Ende, RN, PhD, AOCN®, for her contribution to this chapter that remains unchanged from the first edition of this book.
Seizures

PROBLEM

An episode of neurologic dysfunction caused by abnormal neuronal activity that results in a sudden change in behavior, sensory perception, or motor activity (Pillow, Doctor, & Howes, 2011). Seizures are characterized by sudden, abnormal, and excessive electrical discharges from the brain that can alter function, behavior, and consciousness (Armstrong, Baumgartner, & Min, 2006).

Seizures may be classified as the following (Armstrong et al., 2006; Pillow et al., 2011).
1. Generalized
   a. Tonic-clonic (grand mal)
   b. Absence (petit mal)
2. Partial
   a. Simple partial seizures—no change in mental status
   b. Complex partial seizures—some degree of impaired consciousness

ASSessment CRITERIA

1. What is the cancer diagnosis and treatment?
   Does the patient have a brain tumor or a cancer that commonly metastasizes to the brain? Of patients with a brain tumor, 20%–45% will develop seizures at some point during their disease. Common causes of seizure in patients with cancer include mass lesions (primary brain tumor, metastasis), central nervous system (CNS) hemorrhage, carcinomatous/lymphomatous meningitis, CNS infection (bacterial, viral, fungal, parasitic), encephalitis, hepatic encephalopathy, hypoxemia, metabolic abnormalities (hypoglycemia, hypomagnesemia, hyponatremia, hypernatremia, hyperosmolar states, hypocalcemia, uremia), or drug overdose (Glantz & Batten, 2008).

2. What medications is the patient taking? Obtain drug history.
   a. Is the patient taking antiepileptic drugs? Have serum drug levels been monitored? Has the patient been compliant with medication?
   b. Seizures may occur from toxic effects of drug therapy, such as from opioids, antidepressants, antipsychotics, insulin, cyclosporine, tacrolimus, etoposide, ifosfamide, cisplatin, imipenem, or levofloxacin (Glantz & Batten, 2008; Paice, 2011).

3. Review past medical history, including history of epilepsy, mental retardation, head trauma, HIV, or recent infection (Armstrong et al., 2006).
4. Ask the patient or significant other to describe symptoms in detail. Ascertain whether the following occurred: aura or change in consciousness prior to the event; an unusual feeling or smell prior to the seizure; a postictal state characterized by somnolence, confusion, or headache following the seizure; or amnesia following the event.

5. Obtain history of symptoms, including
   a. Severity—When did the seizure begin? How did it proceed?
   b. Precipitating factors: Seizures may be provoked by states that reduce the seizure threshold, such as fever, fatigue, stress, alcohol intake, and certain medications.
   c. Onset and duration—Was the onset abrupt? How long did the seizure last?
   d. Relieving factors
   e. Any associated symptoms—changes in muscle tone, posture, and muscle movement, aura prior to seizure activity, postictal somnolence.

6. Changes in activities of daily living

7. Special considerations (Pillow et al., 2011)
   a. Eclampsia
   b. Trauma
   c. Intracranial hemorrhage
   d. Alcohol withdrawal or medication withdrawal
   e. Drug-induced seizures

<table>
<thead>
<tr>
<th>Signs and Symptoms</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Sudden grand mal seizure activity, with or without loss of consciousness, loss of bowel or bladder control, and confusion</td>
<td>Seek emergency care. Call an ambulance immediately.</td>
</tr>
<tr>
<td>• Seizure unrelieved by usual measures</td>
<td></td>
</tr>
<tr>
<td>• Seizure accompanied by fever, bleeding, or new neurologic symptoms, such as headache, visual changes, or focal weakness</td>
<td></td>
</tr>
<tr>
<td>• Any injury sustained as a result of the seizure</td>
<td></td>
</tr>
<tr>
<td>• Seizure lasting longer than 5 minutes or multiple seizures in a row</td>
<td></td>
</tr>
<tr>
<td>• Skin rash, which may indicate an autoimmune response to seizure medication.</td>
<td></td>
</tr>
<tr>
<td>• Patient has a known seizure disorder and experiences a typical event with recovery.</td>
<td>Seek care within 24 hours.</td>
</tr>
<tr>
<td>• Signs that suggest other clinical conditions that may have provoked the seizure, such as fever, intracranial hemorrhage, or fluid and electrolyte disturbance</td>
<td></td>
</tr>
<tr>
<td>• New neurologic symptoms, such as headache, visual changes, focal weakness, sensory changes, or cognitive disturbance, that suggest recurrence or progression of tumor</td>
<td></td>
</tr>
</tbody>
</table>

(Continued on next page)
Signs and Symptoms | Action
---|---
• Simple partial seizure: focal neurologic event with no impairment of consciousness | Seek care within 24–48 hours.
• Absence seizures (formerly called petit mal) that are brief and have no obvious motor symptoms | 

Cross reference: Confusion/Change in Level of Consciousness

Note. Based on information from Armstrong et al., 2008; Lovely, 2009.

### HOMECARE INSTRUCTIONS

• Avoid alcohol while taking anticonvulsants.
• Seizure medications may be teratogenic; practice birth control.
• Antiepileptic drugs should not be discontinued abruptly because seizure frequency may increase. If anticonvulsants are to be withdrawn, each drug is tapered over two to four weeks.
• Do not drive a car or operate complex machinery until you have gained sufficient experience with the effects of an antiepileptic drug to gauge whether it affects your mental or motor performance adversely.
• State laws vary regarding driving restrictions for patients who have had seizures. Some states require healthcare providers to report patients with seizures to the division of motor vehicles, and some states require a seizure-free period of a specified length before the patient can drive again.
• Referral to an epilepsy center may be helpful for patients who have persistent seizures despite use of anticonvulant medications.
• Patients on an antiepileptic drug should have a complete blood count and serum chemistries, including liver enzymes, obtained at regular intervals to monitor for hematopoietic, renal, or hepatic dysfunction.
• Antiepileptic drug levels should be monitored at intervals and whenever the patient reports symptoms that may suggest subtherapeutic or supratherapeutic blood levels.

### Seek Emergency Care Immediately if Any of the Following Occurs

• Tonic-clonic seizure activity lasting longer than five minutes, multiple seizures occurring without recovery and consciousness does not return, or complex partial seizure lasting longer than 30 minutes
• Bruising
• Bleeding
• Rash
• Abdominal pain
• Vomiting
• Jaundice
SEIZURES

- Lethargy
- Coma
- Marked increase in seizure frequency

Helpful Web Sites
(Lovely, 2009)
- American Brain Tumor Association: www.abta.org
- Epilepsy Foundation: www.epilepsyfoundation.org
- The Epilepsy Therapy Project: www.epilepsy.com
- National Brain Tumor Society: www.braintumor.org

REFERENCES

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The author would like to acknowledge Sandra A. Mitchell, CRNP, MScN, AOCN®, for her contribution to this chapter that remains unchanged from the first edition of this book.
Venous Access Device Problems

PROBLEM

Patient notes a problem with tunneled central venous catheter, peripherally inserted central catheter (PICC), or implanted port.

ASSESSMENT CRITERIA

When a patient or infusion nurse reports a problem, ask about the history of the problem including precipitating factors, onset, duration, relieving factors, and associated symptoms. Here are some useful assessment questions.

1. What type of catheter does the patient have, and when was it placed? How many lumens does the catheter have?
2. Does the patient have adequate supplies to care for the catheter at home? How often is it dressed? How often is it flushed? Who is flushing and dressing the catheter (home health nurse, infusion nurse, family member)?
3. What chronic illnesses does the patient have?
4. Is a known infection present? Does the patient have a known risk factor for catheter-associated infection, such as longer duration of catheter placement, catheter placed during an emergency, administration of parenteral nutrition through catheter, cancer, renal failure, or presence of chest tube while catheter was used in the hospital (Gorski, Perucca, & Hunter, 2010)?
5. Does the patient have a condition associated with venous thrombosis such as cancer, diabetes, irritable bowel syndrome, coagulation disorder, or end-stage renal disease?
6. Is the patient on oral contraceptives, or has the patient recently had surgery (Infusion Nurses Society [INS], 2011)?
7. What is the catheter being used for? Antineoplastic therapy—vesicant, irritant, or nonvesicant? IV fluid administration?
8. What type of antineoplastic therapy (chemotherapy or biotherapy) is the patient receiving?
9. When was the patient’s last treatment?
10. What was the last white blood cell count, neutrophil count, and platelet count? Could the patient’s counts be low?
11. Does the patient have any fever or chills? If so, when, and what was the temperature?
12. Is the patient’s port accessed? Who accessed the port last, and was it flushed after access?
13. Has anyone ever had difficulty getting a blood return from the port? When?
14. Has anyone ever had difficulty flushing the port? When?
15. Has the patient ever received treatment to declog or declot the port? If so, when? Who gave the treatment?
16. Is there a problem with one or more lumens of the catheter, the side of the port, or the site where the catheter was placed? What problem is the patient having with the catheter now?
   a. Is the catheter exit site red, wet, stinging, painful, or swollen?
   b. Is there a streak from the exit site along the vein where the catheter is inserted?
   c. Is there any change in the color of the skin over the port? Is the site where the Huber needle is inserted leaking? Is a former puncture site leaking?
      i. How much leakage is there?
      ii. When did it start?
      iii. Does anything make it worse?
      iv. Does anything make it stop?
      v. What color is the leakage—clear, the color of the chemotherapy drug, bloody, serosanguinous?
      vi. What color is the fluid in the Huber needle tubing?
   d. Is the port pocket area fluctuant or boggy? Does it hurt? Does it look bruised?
   e. Is there a break or crack in the catheter, port needle, or cap?
   f. Is there a change in the ability to infuse fluids or flush? Is there an odd sensation, such as
      i. Arm, shoulder, or chest pain
      ii. Gurgling in the neck or vague back discomfort when the catheter is flushed.
   g. Does the patient have any swelling in the arms, neck, or chest? Is a “fluid wave” visible in the arms, neck, or chest?
17. Has there been a recent change in the patient’s activities of daily living, increase in activity in the limb where the catheter is present, or trauma to the port pocket?

<table>
<thead>
<tr>
<th>Signs and Symptoms</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Line open to air and patient is short of breath with or without palpitations,</td>
<td>Seek emergency care. Call an ambulance immediately. Stop the infusion,</td>
</tr>
<tr>
<td>arrhythmias, dyspnea, cough, or thoracic pain</td>
<td>clamp the catheter, place the patient on left side in Trendelenburg</td>
</tr>
<tr>
<td>• Site is painful, burning, swollen, leaking, or red with absence of blood return.</td>
<td>position, and call 911 (Gorski et al., 2010).</td>
</tr>
<tr>
<td>• Port dressing is very moist and a vesicant is infusing.</td>
<td>Seek emergency care. Stop the infusion. Clamp the catheter. Elevate</td>
</tr>
<tr>
<td>• Huber needle has dislodged from port site or port pocket is swollen and vesicant</td>
<td>site. Vesicant antidotes for some drugs must be given in less than 6</td>
</tr>
<tr>
<td>is infusing.</td>
<td>hours.</td>
</tr>
</tbody>
</table>

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### Signs and Symptoms

<table>
<thead>
<tr>
<th>Signs and Symptoms</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Difficulty flushing with strange gurgling sensation in the neck; arm or shoulder pain; vague back discomfort; or paresthesia (Gorski et al., 2010)</td>
<td>Seek emergency care. Stop the infusion, clamp the catheter, and seek radiologic evaluation to validate proper catheter placement.</td>
</tr>
<tr>
<td>Catheter can only be flushed in certain positions (Mirza et al., 2004).</td>
<td></td>
</tr>
<tr>
<td>Face, neck, chest, port pocket, or exit-site swelling, redness, induration, cellulitis, tenderness, drainage or streaks at the catheter site (Camp-Sorrell, 2011) with or without fever, chills, diaphoresis, fatigue, generalized weakness, joint aches, hypotension, dizziness, tachypnea, delirium or other mental status change, or vomiting (Camp-Sorrell, 2011; INS, 2011).</td>
<td>Seek emergency care. Stop the infusion and clamp IV tubing. Blood cultures from the venous access device, port pocket, and peripheral sites may be indicated (Mermel et al., 2009).</td>
</tr>
<tr>
<td>Pain, edema, and decreased range of motion in extremity adjacent to catheter with or without pain in shoulder, chest wall, neck, or chest (INS, 2011)</td>
<td>Seek emergency care. Stop the infusion.</td>
</tr>
<tr>
<td>Engorged peripheral veins may be present.</td>
<td></td>
</tr>
<tr>
<td>Line fell out or dislodged with or without bleeding.</td>
<td>Seek emergency care. Stop the infusion. Apply pressure if bleeding is occurring. Compare amount of PICC exiting the skin to measurements taken after placement (Gorski et al., 2010).</td>
</tr>
<tr>
<td>Dacron cuff of tunneled catheter is showing at edge of exit site or is completely visible.</td>
<td></td>
</tr>
<tr>
<td>Noncoring needle has dislodged from port.</td>
<td></td>
</tr>
<tr>
<td>Line is broken or leaking.</td>
<td>Seek urgent care within 24 hours. Clamp above broken or leaking portion of catheter with plastic, noncoring Kelly clamp. Go to emergency department or oncologist's office for evaluation and possible catheter repair or removal. Provide the name and type of device so repair kit can be ordered. Advise physician office, clinic, or emergency department of potential need for port repair kit for patient's device.</td>
</tr>
<tr>
<td>Inability to flush, infuse fluid, or draw blood, or sluggish blood return or flushing</td>
<td>Seek urgent care within 24 hours. Cap line. Do not forcefully flush. Requires evaluation or declotting before next medication is due (Camp-Sorrell, 2011). Declotting may be done in emergency department, depending on setting.</td>
</tr>
</tbody>
</table>
VENOUS ACCESS DEVICE PROBLEMS

(Continued)

<table>
<thead>
<tr>
<th>Signs and Symptoms</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Port has eroded through skin.</td>
<td>Seek urgent care within 24 hours unless the patient is neutropenic. If neutropenic, contact physician immediately or go to emergency department.</td>
</tr>
<tr>
<td>• Headache related to infusions</td>
<td>Seek urgent care within 24 hours. Stop the infusion. Clamp IV tubing.</td>
</tr>
<tr>
<td>• Unsure whether PICC or subcutaneous implantable port is power injectable</td>
<td>Recommend that patient present wallet identification card for catheter or port. If wallet card is not available, search medical record for device identification sticker with serial number placed in patient record at the time of placement. Brief scan of port may be done to look for markings but may not clearly identify port as power injectable. Ask about appearance of PICC and compare to models of power injectable PICCs made by manufacturer.</td>
</tr>
</tbody>
</table>

HOMECARE INSTRUCTIONS

• Advise the patient and family members to always keep a wallet identification card for the access device with them. Instruct them to present the card to caregivers and offer it if a problem occurs with the device.
• Ensure that the patient and family members are aware of signs and symptoms to report (as listed in the Signs and Symptoms table).
• If appropriate, teach the patient or family member and require a return demonstration of
  – Proper antisepsis of hands and dressing area before catheter care
  – Proper daily hygiene (including showering if possible) (Gorski et al., 2010)
  – What parts of the catheter remain sterile and should not be touched
  – How to avoid air emboli
  – Signs and symptoms of infection, air emboli, extravasation, infiltration, malpositioned catheter, or catheter that has migrated
  – What to look for when checking the dressing and catheter daily (INS, 2011)
  – How to protect the site while showering
  – Avoidance of immersing the catheter
  – Safe time frame to start swimming and types of water to avoid
  – How to flush and dress the catheter, including use of catheter securement device
  – How to change needleless system device or positive-pressure end cap
  – How to dress without pulling out catheter or noncoring port needle
  – How to prime IV tubing and administer IV medications at home
– Activities to avoid while port or catheter is in place
– How to prevent dislodgment of PICC or noncoring port needle; avoidance of Twiddler syndrome (INS, 2011)
– Immediate actions to take if catheter breaks (INS, 2011)
– How to turn off ambulatory infusion pump (Gorski et al., 2010)
– Importance of wallet identification cards for central venous catheters and when to present card.

• Arrange long-term plan for family to obtain dressing and flushing supplies for catheter.
• Ensure that home infusion nurse, clinic, home health agency, patient, and family members are aware of schedule and responsibility for flushing the line and dressing changes as needed.

Seek Emergency Care Immediately if Any of the Following Occurs
• Site is painful, burning, swollen, leaking, or red.
• Port needle dislodges.
• Line falls out, is broken, or is leaking.
• Medication (especially chemotherapy) is leaking.

REFERENCES


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The author would like to acknowledge Margaret Hickey, RN, MSN, MS, CORLN, for her contribution to this chapter that remains unchanged from the first edition of this book.
PROBLEM

Xerostomia, or hyposalivation, is dryness of the mouth. It can be a frequent complaint among older adults, individuals with systemic diseases such as diabetes, and patients undergoing radiation therapy for head and neck cancers or total body irradiation, and it is a side effect of multiple medications. A reduction in saliva enhances the growth of microorganisms in the oral cavity, increases the incidence of periodontal disease, and alters a patient’s sensation of taste and swallowing, thus decreasing optimal nutritional status as evidenced by decreased oral intake and involuntary weight loss (Hayward & Shea, 2009). Berk, Shivnani, and Small (2005) further reported on the significance of the long-term effects of xerostomia, noting that decreased or loss of salivary function, swallowing problems, and taste changes are the sequelae of radiation therapy that patients report as having the most severe impact on their quality of life. In addition, in immunosuppressed patients, the oral mucosa is the most frequently documented source of infection (Strohl & Camp-Sorrell, 2006).

ASSESSMENT CRITERIA

(Hayward & Shea, 2009; Strohl & Camp-Sorrell, 2006)

1. What is the cancer diagnosis and treatment?
   Xerostomia can be a result of radiation therapy or direct extension of the tumor. It can result from chemotherapy and other medications. As a side effect of radiation therapy for head and neck cancers, xerostomia is not only reported while the patient is receiving treatment but is also the most significant late effect, lasting several months (Hayward & Shea, 2009). The goal of symptom management includes maintaining mucosal integrity and minimizing oral or systemic infection. Prior to initiating radiation therapy to the head and neck area or chemotherapy that induces oral cavity changes, a dental consult should be obtained.

2. What medications is the patient taking? Obtain drug history.
   Xerostomia is a side effect of antidepressants, antihistamines, diuretics, anticholinergics, and opioids, as well as others. Chemotherapeutic agents that can cause xerostomia include 5-fluorouracil, doxorubicin, vincristine, vinblastine, methotrexate, and cytarabine.

3. Obtain past medical history, including:
   a. Comorbidities, such as diabetes
   b. Nutritional status
   c. Oral hygiene regimen
d. Previous oral or dental disease (increased candidiasis, herpes simplex virus).

4. Ask the patient to describe symptoms.
   a. Quality of saliva (thin and watery versus thick and ropy)
   b. Dryness and/or coating on the lips, mucosa, or tongue
   c. Degree of mucositis: erythema, ulceration, or hemorrhage of the gums or mucosa
   d. Dysarthria (difficulty articulating words)
   e. Dysgeusia (disorder of the sense of taste)
   f. Burning or pain of the oral mucosa or tongue
   g. Sensitivity of teeth and gums
   h. Swallowing difficulty or pain with swallowing

5. Obtain history of xerostomia, including
   a. Precipitating factors (medications, hot foods, wearing dentures)
   b. Onset and duration
   c. Relieving factors (frequent mouth care, sips of water throughout the day, moistened foods, sugarless gum or candy)
   d. Use of salivary substitutes or salivary gland stimulants
   e. Ability to wear dentures and rating of comfort with eating.

6. Assess for nutritional plan of care.
   Patients should receive a complete nutrition evaluation by a registered dietitian prior to the initiation of therapy and ongoing follow-up during and after treatment for optimal recovery. Recommendations include calorie and protein requirements, food consistency options, vitamin replacement, and the use of supplements. Assess laboratory results for albumin, prealbumin, and transthepin. Recommendations may include enteral support, with the gastrointestinal tract being the preferred method of support.

<table>
<thead>
<tr>
<th>Signs and Symptoms</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Temperature above 100.4°F (38°C) or chills with neutropenia</td>
<td>Seek emergency care. Generally, xerostomia is not an emergent condition.</td>
</tr>
<tr>
<td>• Oral assessment indicates increase in inflammation or presence of ulceration (white patches, confluent patches).</td>
<td>Seek urgent care within 24 hours.</td>
</tr>
<tr>
<td>• Dizziness, increased weakness or fatigue</td>
<td></td>
</tr>
<tr>
<td>• Decreased urine output that is cloudy or dark</td>
<td></td>
</tr>
<tr>
<td>• Increased difficulty swallowing</td>
<td></td>
</tr>
<tr>
<td>• Oral assessment indicates dry lips and mucous membranes with thick secretions</td>
<td>Follow homecare instructions. Notify MD if no improvement.</td>
</tr>
<tr>
<td>• Difficulty swallowing</td>
<td></td>
</tr>
</tbody>
</table>

Cross reference: Oral Mucositis
**XEROSTOMIA**

**HOMECARE INSTRUCTIONS**

(Hayward & Shea, 2009)

- Follow nutrition plan as developed by registered dietitian, which may include some of the following.
  - Try sucking on ice chips, sugar-free candy, frozen grapes, or flavored ice pops.
  - Avoid caffeine, alcohol, and tobacco.
  - Consume high-calorie/high-protein supplements.
  - Choose soft, moist foods with extra sauce.
  - Avoid dry foods such as tough meats, raw vegetables, breads, crackers, chips, and pretzels.
  - Carry a water bottle throughout the day. Aim for 8–10 cups (approximately two liters) of caffeine-free fluids per day.
- Keep sugarless hard candies or sugarless gum on hand.
- Perform oral cavity assessment daily.
- Perform oral care after each meal and at bedtime or as directed. Use a soft-bristle toothbrush, floss using waxed dental floss if no pain and if platelet count is adequate, and use alcohol-free mouth rinse.
- Rinse frequently with a salt and baking soda solution to cut thick, ropy secretions and for basic oral hygiene.
- Use oral care agents, saliva substitutes, and salivary stimulants as directed.
- Use analgesics, anesthetics, and antibiotics as directed.
- Maintain regular dental visits as directed.

**Report the Following Problems**

(Strohl & Camp-Sorrell, 2006)

- Oral assessment indicates increase in inflammation or presence of ulceration (white patches, confluent patches).
- Dizziness, increased weakness or fatigue
- Decreased urine output that is cloudy or dark
- Increased difficulty swallowing

**Seek Emergency Care Immediately if the Following Occurs**

- Temperature above 100.4°F (38°C) or chills with neutropenia

**REFERENCES**


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Appendices
Appendix A. Cancer Institute of New Jersey Adult Patient Telehealth Nursing and Management Policy

Title: Adult Patient Telehealth Nursing and Management Policy
Effective Date: 8/2000
Last Review Date: 9/2009
Services: Medical Oncology, Gynecologic Oncology, Surgical Oncology, Pharmacy, Nursing, Social Work, Practice Management

I. BACKGROUND
Telephone triage is the process of ensuring the safe and effective disposition of patient health problems by telephone. Telephone triage nursing practice at The Cancer Institute of New Jersey (CINJ) is based on a commitment to the delivery of quality, cost-effective, and safe oncology care. Telephone triage nursing practice requires policies and organizational structure that provide mechanisms to ensure accountability, establish communication and reporting, and monitor the quality of the nursing service provided.

CINJ has a designated telephone triage line, entitled the Patient Telehealth Line. The Patient Telehealth Line at CINJ is staffed by experienced oncology registered nurse(s). The purpose of the Telehealth Line is to provide care to patients and families through assessment of actual or potential health needs, health promotion, education, counseling and decision support and coordination of care. The telephone line is available to patients from 8:30 a.m.-5:00 p.m., Monday through Friday. Patients access the Patient Telehealth Line via the central CINJ telephone number.

A written position description has been developed for the telephone triage position. This document is consistent with state laws and the Nurse Practice Act, accepted standards of nursing practice, organizational policies, mission, values, and the performance evaluation system. Employee records are maintained with evidence of competency.

II. PURPOSE
The purpose of this policy is to outline the process and management of the Patient Telehealth Nurse Line at CINJ.

III. POLICY
CINJ is committed to ensuring that patients have access to telephone nursing services to provide information and support. Telephone triage policies are concordant with the standards mandated by regulatory agencies, the Nurse Practice Act of the State of New Jersey, and the Oncology Nursing Society (ONS) guidelines.

A. Telephone nursing involves skills that include competency in critical thinking, decision-making, expert clinical skills and judgment, as well as assessment and evaluation skills. Excellent communication skills are essential to clearly and accurately express oneself to patient and colleagues. Orientation to the telehealth line will be provided through an organized preceptor program using materials such as the Patient Telehealth Nursing and Management standard operating procedures as outlined in this policy, The Patient Telehealth Nursing Competency Checklist (Appendix A1), and other appropriate materials. Educational opportunities are provided to maintain skills and address issues identified during quality improvement activities. The requirements for nurses who perform Patient Telehealth Nursing and management are as follows:
   1. RN licensure in the state of New Jersey.
   2. Current certification as an Oncology Certified Nurse (OCN) or Advanced Oncology Certified Nurse (AOCN).

(Continued on next page)
Appendix A. Cancer Institute of New Jersey Adult Patient Telehealth Nursing and Management Policy

3. Successful completion of orientation to the Treatment Area as well as Patient Telehealth Nursing specific orientation as evidenced by completion of the Patient Telehealth Nursing Competency Checklist (Appendix A1).

4. Demonstrated effective use of clinical judgment and problem solving skills as evidenced by a successful completion of the probation period.

5. Demonstrated effectiveness in communication skills with patients and colleagues.

B. The scope of telephone nursing practice at CINJ includes:

1. Assessment and management of acute and/or emergent patient issues for both the medical and surgical oncology patient population (i.e., call 911; refer to Emergency Room).
   a. Give clear and firm directions in a calm and reassuring manner.
   b. Dispatch EMS to patient’s location if necessary.
   c. Provide accurate documentation (i.e. recent medical/surgical note) to the appropriate ER and calling report to on-call physician.
   d. Provide update to physician/APN regarding patient condition and patient telehealth nursing intervention using situation, background, assessment, recommendation (SBAR).
   e. Document on Telehealth Phone Record (Appendix A5).

   a. Symptom management related to patient treatment and supportive care (i.e., fevers, neuropathies, hand/foot syndrome).
   b. Symptom management related to surgical procedures and patient conditions (i.e., Jackson Pratt (JP) drain, wound care).
   c. Pain assessment.
   d. Medication review (i.e., antiemetic dosing, dexamethasone tapers)
   e. Patient education
   f. Document on Telehealth Phone Record (Appendix A5).

3. Assessment and management of psychiatric conditions and situations of potential abuse, violence and self-harm. The Memorial Sloan-Kettering Cancer Center (2004) Ambulatory Care Telephone Triage & Symptom Management Protocol Manual (3rd ed.) may be used to guide practice for psychiatric aspects (pp. 83–94), except for the triage response to violence and suicide, in which the protocols in Appendix A2 will guide practice.

4. Collaborate with APN/MD in updating patient’s plan of care related to symptom management (i.e., reason for call to telehealth line).
   a. Provide written orders to schedulers for clinic and treatment appointments.
   b. Provide written orders for diagnostic testing to be scheduled.
   c. Provide prescriptions/orders for laboratory testing.
   d. Notify patient of required interventions related to symptom management (i.e. antibiotic therapy, appointments, wound care).
   e. Document on Telehealth Phone Record (Appendix A5)

5. Educate and document patient questions and concerns related to their treatment, diagnostic tests, laboratory tests, clinic visits, surgical procedures, home care needs, diagnosis, etc.
Appendix A. Cancer Institute of New Jersey Adult Patient Telehealth Nursing and Management Policy

6. Lab values:
   a. Report critical values to appropriate health care members (i.e., treatment nurse, MD, APN) using SBAR.
   b. Notify patient of critical lab values and educate him/her regarding management of the following changes in status: neutropenia (ANC < 1,000), thrombocytopenia (platelets < 30,000), or anemia (hemoglobin 8.0) and follow up if necessary.
   c. Document on Telehealth Phone Record (Appendix A5).

7. Diagnostic testing
   a. Report normal diagnostic results as requested by the patient after collaborating with MD/APN using SBAR.
   b. Obtain diagnostic test results related to symptom management.
   c. Report abnormal diagnostic results (phoned to Telehealth Nurse) to MD/APN using SBAR.
   d. Document on Telehealth Phone Record (Appendix A5).

8. Phone in prescriptions related to symptom management after collaborating with MD/APN (response to patient initial call).
   a. Verify allergies and update patient’s pharmacy as needed.
   b. Complete and accurately document all prescriptions phoned to the pharmacy (Appendix A5).
   c. Routine prescription refills should be filled during patient visits, if required. Otherwise, prescription refill forms can be faxed. These faxes will be filed under physicians tab in folder located in Triage Area. The MD/APN has 24–48 hours to sign and return fax to appropriate pharmacy.

9. Verify our physician orders with outside facilities (i.e., diagnostic, laboratory, pharmacy, hospice).
   a. Obtain chart or written order.
   b. Verify with MD/APN, if written order not available.
   c. Provide updated prescription to facility via fax.
   d. Document on Telehealth Phone Record (Appendices A3, A4).

C. Process improvement activities will be monitored as needed by the Director of Oncology Nursing Services (or designee) for each Telehealth Nurse using the quality controls of the Symposium Phone System. The process improvement activity involves interviewing a random sample of patients (n = 5) for which the Telehealth Nurse has provided care over the telephone.

D. Staffing patterns ensure that sufficient numbers of qualified staff are available to manage the complexity of patient calls. This number is based upon benchmark data from the healthcare industry, as well as from internal process improvement monitoring.

E. The process of telephone triage involves a series of specific steps. These include:
   1. Assessment and data collection.
   2. Analysis and synthesis of information, identification and prioritization of the problem.
   3. Intervention, including directives for where and when treatment should take place.
   4. Communication to other members of the healthcare team as appropriate.
   5. Documentation of the encounter.
Appendix A. Cancer Institute of New Jersey Adult Patient Telehealth Nursing and Management Policy

F. An algorithm, or protocol, guides the process of telephone triage for specific patient problems. The algorithms utilized at CINJ are adopted, for most situations, from The Memorial Sloan-Kettering Cancer Center (2004) *Ambulatory Care Telephone Triage & Symptom Management Protocol Manual* (3rd ed.). These algorithms for telephone intervention are regularly reviewed and revised by Memorial Sloan-Kettering Cancer Center. For the triage response to situations of potential abuse, violence and self-harm, the protocol in Appendix A2 will guide practice.

G. All telephone encounters are documented on the Telehealth Phone Record Forms (Appendices A3, A4, A5). Paper records of all documentation are sent to medical records for placement in patients chart or scanning.

H. Nurses practicing on the Telehealth Line recognize the dignity and worth of individuals; respect cultural, spiritual, and psychosocial differences; and apply ethical concepts. Written organizational policies and procedures related to patient's rights and confidentiality are in place and outline the necessity of patient confidentiality during the telephone encounter and documentation of that encounter. The procedures include:

1. Verification of the identity of the person with whom the nurse is communicating over the phone. The nurse will verify patient’s name and date of birth and/or social security number.

2. Appropriate use of answering machine/voice mail and faxing:
   a. CINJ’s general consent for care contains a statement for leaving voice mail messages.
   b. If for some reason the patient did not complete the HIPAA Restriction form, the following situations would warrant the need for the Telehealth Nurse to leave a message with a significant other and/or on an answering machine regardless of having written patient consent:
      i. Neutropenia.
      ii. Anemia.
      iii. Other abnormal laboratory values that could pose a risk to the patient (e.g., abnormal chemistry results).
      iv. Labs required to complete an ordered CT scan.
   c. The Telehealth Nurse is responsible for faxing the following documents according to CINJ operating policy and procedure:
      i. Authorized prescriptions to appropriate pharmacies.
      ii. Authorizations to home care agencies for care.
      iii. Prescription for procedures.
   d. All other fax requests will rest with the appropriate department.
   e. Disability claim forms will be completed and faxed by the appropriate Advanced Practice Nurse/Nurse Coordinator.

3. Communication with minors:
   a. No message will be left with a minor (defined as a child less than 18 years of age).
   b. The Telehealth Nurse will continue to call the patient back during business hours until the patient or designated other is available. Documentation in the medical record will reflect this.

(Continued on next page)
Appendix A. Cancer Institute of New Jersey Adult Patient Telehealth Nursing and Management Policy

4. Reporting recognized child, geriatric, or spousal abuse situations:
   a. If an abusive situation is suspected in the home or revealed to the Telehealth Nurse by the patient or family member, the nurse should contact the Social Work Department as soon as possible for evaluation and determination of next steps.
   b. The Telehealth Nurse will document the referral and the plan agreed upon with the Social Worker/MD/Nurse Practitioner.

5. Reporting situations of potential self-harm or violence:
   a. The Telehealth Nurse will follow the triage response outlined in Appendix A2.

6. Using language relay services if needed:
   a. If translator is unavailable, utilize Auracom Line in the treatment area.

7. Resolving problem calls with supervisory/collegial help:
   For patient related issues, the following chain of command should be followed:
   Notify:
   a. The patient’s Advanced Practice Nurse or Nurse Coordinator (if applicable).
   b. The patient’s physician.
   c. The Director of Oncology Nursing Services or the Chief Nursing Officer.
   d. The Chief of Medical, Surgical, Gynecological, Radiology or Pediatric Oncology.
   e. The Deputy Director.
   f. All other issues should be referred to the appropriate departmental manager.

8. Confidential documentation: Standard operating procedures regarding confidentiality will be maintained.

9. How to respond to abusive callers (i.e., yelling, screaming, cursing, threatening calls):
   a. Attempt to identify the real problem.
   b. Tell the caller they will be assisted if they can calmly explain the situation.
   c. If the abusive behavior persists, instruct them the call will be terminated if the abuse does not stop.
   d. If the call is terminated, instruct the caller you are terminating the call and refer the situation to the Attending Physician and/or Advanced Practice Nurse.
   e. Document on the Telehealth Phone Record (Appendix A5).

I. Telehealth nurses must confer with or refer the patient to the appropriate physician or nurse practitioner for determination of disposition in specific situations in compliance with the scope of nursing practice in New Jersey. Any medical order received in these situations, such as a verbal order, must be documented and co-signed by the responsible physician or nurse practitioner per CINJ policy. The following situations require notification to the appropriate physician or advanced practice nurse:
   1. Acute or emergent problems where notification of a physician or advanced practice nurse is designated in the algorithm or protocol, including unrelied pain.
### Appendix A. Cancer Institute of New Jersey Adult Patient Telehealth Nursing and Management Policy

2. Potential need for change in the medical treatment plan (medication or procedures).
3. Prescription refills.
4. Abnormal radiology results that demonstrate a change in the patient’s condition and/or abnormal tumor marker tests must be given to the patient by the attending physician or advanced practice nurse.

### References


*Note.* Courtesy of the Cancer Institute of New Jersey. Used with permission.
### Appendix A1. Cancer Institute of New Jersey Nurse Helpline Competency Checklist

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Reviews Policy and Procedure for triage</td>
<td></td>
<td></td>
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<tr>
<td>2. Orients to triage desk</td>
<td></td>
<td></td>
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<tr>
<td>3. Log in</td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Make Set Busy</td>
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<tr>
<td>b. Take phone off hook</td>
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<td></td>
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<tr>
<td>c. Push green button</td>
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<tr>
<td>d. Log-in code</td>
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<tr>
<td>e. Push # sign</td>
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<td></td>
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<tr>
<td>f. Replace receiver</td>
<td></td>
<td></td>
</tr>
<tr>
<td>g. Remove not ready arrow</td>
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<tr>
<td>4. Checks messages upon arrival and every 60 minutes while on the phone</td>
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<tr>
<td>5. Identifies self as a triage nurse from CINJ and answers calls in a</td>
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<tr>
<td>timely fashion using protocols, standards and policies</td>
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<tr>
<td>6. Obtains the following information to complete the call</td>
<td></td>
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<tr>
<td>Name of patient</td>
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<tr>
<td>Patient's physician</td>
<td></td>
<td></td>
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<tr>
<td>Patient phone number/local pharmacy number</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Identifies caller’s problem/needs</td>
<td></td>
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<tr>
<td>Patient allergies</td>
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<tr>
<td>Gives appropriate advice for the problem/need</td>
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<tr>
<td>Verifies patient/family/caller understands the plan of care</td>
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<tr>
<td>7. Documents calls appropriately per policy</td>
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<tr>
<td>8. Logs off for lunch and notifies operators</td>
<td></td>
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<tr>
<td>9. Logs on after lunch and notifies operators</td>
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<tr>
<td>10. Notifies appropriate CINJ staff depending on caller’s problem</td>
<td></td>
<td></td>
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<tr>
<td>11. Sends documentation to medical records</td>
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<tr>
<td>12. Correctly logs off at the end of the day</td>
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<tr>
<td>13. Checks the previous day’s triage log and addresses outstanding</td>
<td></td>
<td></td>
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<tr>
<td>problems as needed</td>
<td></td>
<td></td>
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<tr>
<td>14. Successfully pages appropriate personnel</td>
<td></td>
<td></td>
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<tr>
<td>15. Verbalizes where the following resources are located</td>
<td></td>
<td></td>
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<tr>
<td>Protocols</td>
<td></td>
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</tr>
<tr>
<td>Phone books</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(Continued on next page)
### Appendix A1. Cancer Institute of New Jersey Nurse Helpline Competency Checklist

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>DEA list</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MD credentials</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CINJ directions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drug book</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Successfully transfers calls to direct extension and back to ACD system</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Verbalizes CINJ department managers and escalating chain of command for:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Treatment area</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Advanced practice nurses</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physicians</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Schedulers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tumor study groups</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Correctly assesses emergent or acute problems and gives appropriate instructions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Correctly educates the patient related to symptom control and treatment plan in a variety of situations</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Correctly assesses pain and provides appropriate treatment plan</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Identifies home care agency information requirements</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Identifies patient’s home care agency</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Provides patient with accurate information about tests (preparation, scheduling, etc.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Correctly identifies situations in which lab or diagnostic test results are given to patients</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maintains patient confidentiality with regard to leaving messages, giving information over the phone and using the fax machine as per policy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Verbalizes knowledge of medical equipment (procurement, patient education, etc.) and community resources</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Makes referrals to home care as needed</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Appendix A1. Cancer Institute of New Jersey Nurse Helpline Competency Checklist

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>28. Identifies criteria to notify patients about neutropenia, thrombocytopenia or anemia</td>
<td></td>
<td></td>
</tr>
<tr>
<td>29. Verbalizes ways to manage difficult calls</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>30. Triages prescription refill calls accurately</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>31. Consistently uses terminology the caller understands, and avoids medical jargon as much as possible</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>32. Consistently uses medically approved protocols, algorithms and standards of care</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>33. Listens carefully to the caller and avoids jumping to conclusions, talks directly to the person with the problem if possible</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>34. Pays attention to degree of anxiety and concern expressed by the caller, conveys empathy and concern</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>35. Provides the caller with the option to call back if the condition persists or worsens or new symptoms develop</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>36. Establishes a positive helping relationship at the onset of the call</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>37. Verbalizes understanding of the phone system and prompts</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>38. Demonstrates ability to make conference calls</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>39. Demonstrates ability to use computer systems (GE, SDM, SCM)</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>40. Demonstrates ability to use IDX</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>41. Verifies the identity to whom the nurse is communicating, per policy</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>42. Verbalizes understanding the process of recognizing and reporting child, geriatric, spousal abuse, potential suicide and violent situations</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>43. Identifies access to language relay services</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>44. Verbalizes understanding of confidential storage of paper and computer documentation</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>45. Checks the patient consent related to leaving messages/voice mail</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>

Triage Preceptee signature ___________________________ Date ____________

Triage Preceptor signature ___________________________ Date ____________

*Note. Courtesy of the Cancer Institute of New Jersey. Used with permission.*
Appendix A2. Procedures for Situations of Potential Abuse, Violence or Self-Harm

A. Procedures in situations of potential self-harm (suicide)
   1. For suicidal ideation
      a. The telehealth nurse will attempt to keep the patient on the phone while
         support staff contact a social worker assigned to that patient. In the case
         that the social worker assigned to that patient is not available there will be
         a covering social worker assigned to that particular case.
      b. Telehealth nurse to ask patient's permission to enlist the support of a fam-
         ily member or friend to facilitate patient safety.
      c. The telehealth nurse will ask the following questions:
         1. Name
         2. Where the patient is
         3. Is there a family member present
         4. What their plan to harm themselves is.
      d. The nurse should keep the patient on the phone, until a transition of the call
         to a social worker is completed and assessment is given to the respond-
         ing social worker. Social worker will do a complete assessment of patient
         on the phone.
      e. Telehealth nurse to inform patient of concerns for safety and that MD, NP
         and SW will be notified of patient's distress.
      f. The support staff should pull the medical record, contact the MD and APN
         and follow the directions of the social worker. Social worker will direct sup-
         port staff to contact the psychiatrist and/or psychologist.
      g. If the telehealth nurse or the social worker identifies at any time of the evalu-
         ation that there is potential for high risk or if the patient hangs up the phone,
         the Police and the screening center of the county should be contacted. The
         social worker and the telehealth nurse can access the information online
         at http://www.state.nj.us/humanservices/dmhs/MH-screeningcenters.html
         to the closest psychiatric screening center.
      h. The social worker will assess if the patient has suicidal ideations with or
         without a plan. If the patient only has thoughts, the social worker will have
         the patient come to CINJ today to be assessed further by the psychiatrist
         or psychologist.
      i. The telehealth nurse will document the call and actions taken.
      j. The social worker will confirm that the patient accessed service.

B. Procedures in situations with potential abuse or violence:
   1. Important questions to ask
      a. Determine location of patient (town, street name and number, room within
         the home)
      b. Quick identification of the threat
      c. Are you in a safe environment right now?
      d. Are you alone?
      e. Do you have children at risk?
      f. Have you been abused in the past?
      g. Do you have family or friends who can help you?
      h. Have you called the police, adult protective services, or anyone else?
      i. Do you need the telephone numbers for adult shelters or family crisis
         lines?

(Continued on next page)
Appendix A2. Procedures for Situations of Potential Abuse, Violence or Self-Harm

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2.</td>
<td>The telehealth nurse will elicit support of another staff member to call 911 if person is being abused at the time of the call or victim is seriously injured or unresponsive. Then have staff member contact MD/NP and appropriate social worker. The telehealth nurse will inform the patient the police are being called now. Stay on the phone with the caller to determine present safety issues (are they on a cell or portable phone, can you continue the conversation) and/or gather information until the police arrive and social worker is able to continue assessment.</td>
</tr>
<tr>
<td>3.</td>
<td>All findings will be provided to the responding social worker</td>
</tr>
<tr>
<td>4.</td>
<td>Social worker to discuss results of call with MD/NP.</td>
</tr>
<tr>
<td>5.</td>
<td>Document as per nursing documentation</td>
</tr>
</tbody>
</table>

*Note. Courtesy of the Cancer Institute of New Jersey. Used with permission.*
## Appendix A3. Triage Document

### Health Information

<table>
<thead>
<tr>
<th>Patient Name:</th>
<th>MR#:</th>
<th>DOB:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Date/time:</th>
<th>Person calling:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Telephone#:</th>
<th>Alternate #:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Attending Physician:

<table>
<thead>
<tr>
<th>Diagnosis:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

### Request:

- [ ] Labs
  - [ ] Diagnostic
  - [ ] Patient Education
  - [ ] Prescription (not medication prescriptions)
  - [ ] Other

### Action:

<p>| |</p>
<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td></td>
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<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

### Triage Nurse Signature:

<p>| |</p>
<table>
<thead>
<tr>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

*Note. Courtesy of the Cancer Institute of New Jersey. Used with permission.*
### Appendix A4. Triage Document
**Home Care/Hospice Call**

<table>
<thead>
<tr>
<th>Field</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient Name:</td>
<td>______________________</td>
</tr>
<tr>
<td>MR#:</td>
<td>________________</td>
</tr>
<tr>
<td>DOB:</td>
<td>________________</td>
</tr>
<tr>
<td>Date/Time:</td>
<td>____________</td>
</tr>
<tr>
<td>Telephone #:</td>
<td>________________</td>
</tr>
<tr>
<td>Alternate #:</td>
<td>________________</td>
</tr>
<tr>
<td>Person calling:</td>
<td>____________________________________________</td>
</tr>
<tr>
<td>Facility:</td>
<td>____________________________________________</td>
</tr>
<tr>
<td>Facility #:</td>
<td>____________________________________________</td>
</tr>
<tr>
<td>Attending Physician:</td>
<td>____________________________________________</td>
</tr>
<tr>
<td>Diagnosis:</td>
<td>____________________________________________</td>
</tr>
<tr>
<td>Past Medical History:</td>
<td>____________________________________________</td>
</tr>
<tr>
<td>Allergies:</td>
<td>____________________________________________</td>
</tr>
<tr>
<td>Current Medications:</td>
<td>____________________________________________</td>
</tr>
<tr>
<td>Chief Complaint:</td>
<td>____________________________________________</td>
</tr>
<tr>
<td>Plan:</td>
<td>____________________________________________</td>
</tr>
<tr>
<td>MD/APN Notified:</td>
<td>____________________________________________</td>
</tr>
<tr>
<td>Triage Nurse Signature:</td>
<td>____________________________________________</td>
</tr>
</tbody>
</table>

**Note.** Courtesy of the Cancer Institute of New Jersey. Used with permission.
### Appendix A5. Triage Document
#### Symptom-Based Calls

<table>
<thead>
<tr>
<th>Field</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient Name:</td>
<td>____________________________</td>
</tr>
<tr>
<td>MR#:</td>
<td>____________________________</td>
</tr>
<tr>
<td>DOB:</td>
<td>____________________________</td>
</tr>
<tr>
<td>Date/time:</td>
<td>____________________________</td>
</tr>
<tr>
<td>Person calling:</td>
<td>____________________________</td>
</tr>
<tr>
<td>Telephone#:</td>
<td>____________________________</td>
</tr>
<tr>
<td>Alternate #:</td>
<td>____________________________</td>
</tr>
<tr>
<td>Attending Physician:</td>
<td>____________________________</td>
</tr>
<tr>
<td>Diagnosis:</td>
<td>____________________________</td>
</tr>
<tr>
<td>Past Medical History:</td>
<td>____________________________</td>
</tr>
<tr>
<td>Allergies:</td>
<td>____________________________</td>
</tr>
<tr>
<td>Medications:</td>
<td>____________________________</td>
</tr>
<tr>
<td>Chief Complaint:</td>
<td>____________________________</td>
</tr>
<tr>
<td>Problem:</td>
<td>____________________________</td>
</tr>
<tr>
<td>Onset:</td>
<td>____________________________</td>
</tr>
<tr>
<td>Location:</td>
<td>____________________________</td>
</tr>
<tr>
<td>Duration:</td>
<td>____________________________</td>
</tr>
<tr>
<td>Frequency:</td>
<td>____________________________</td>
</tr>
<tr>
<td>Aggravating Factors:</td>
<td>____________________________</td>
</tr>
<tr>
<td>Alleviating Factors:</td>
<td>____________________________</td>
</tr>
</tbody>
</table>

#### Review of Systems (Check all that apply)

<table>
<thead>
<tr>
<th>System</th>
<th>Symptoms</th>
</tr>
</thead>
<tbody>
<tr>
<td>General</td>
<td>fever, chills, anorexia, weight loss, fatigue, weakness</td>
</tr>
<tr>
<td>Skin</td>
<td>rash, lumps, sores, itching, dryness, color change</td>
</tr>
<tr>
<td>Head</td>
<td>headaches, head injury</td>
</tr>
<tr>
<td>Eyes</td>
<td>pain, redness, excessive tearing, double vision, blurred vision, spots, specks, flashing lights, glaucoma, cataracts</td>
</tr>
<tr>
<td>Nose/Sinuses</td>
<td>nasal stuffiness, itching, nosebleeds, sinus trouble</td>
</tr>
<tr>
<td>Mouth/Throat</td>
<td>bleeding gums, sore tongue, dry mouth, sore throat, hoarseness</td>
</tr>
<tr>
<td>Neck</td>
<td>lump, goiter, swollen glands, pain, stiffness in neck</td>
</tr>
<tr>
<td>Breast</td>
<td>lump, pain, discomfort, nipple discharge, axillary swelling, incisional redness, incisional itching</td>
</tr>
</tbody>
</table>

(Continued on next page)
### Appendix A5. Triage Document

#### Symptom-Based Calls

**Respiratory:**
- □ cough
- □ sputum
  - color [ ]
  - quantity [ ]
- □ shortness of breath
- □ hemoptysis
- □ wheezing

**Cardiac:**
- □ chest pain
- □ palpitations
- □ dyspnea
- □ orthopnea
- □ edema
- □ high blood pressure

**Gastrointestinal:**
- □ trouble swallowing
- □ heartburn
- □ nausea
- □ vomiting
- □ abdominal pain
- □ excessive belching
- □ excessive flatulence
- □ diarrhea
- □ constipation
- □ bleeding

**Genitourinary:**
- □ frequency
- □ dysuria
- □ burning
- □ hematuria
- □ nocturia
- □ urgency
- □ hesitancy
- □ dribbling
- □ incontinence

**Peripheral Vascular:**
- □ intermittent claudication
- □ leg cramps
- □ varicose veins
- □ history of clots

**Musculoskeletal:**
- □ pain in muscle
- □ pain in joints
- □ pain in ribs
- □ pain in spine
- □ stiffness
- □ backache

**Neurological:**
- □ fainting
- □ seizures
- □ paralysis
- □ numbness
- □ tingling
- □ pins/needles, tremors

**Hematologic:**
- □ anemia
- □ easy bruising
- □ bleeding

**Endocrine:**
- □ heat or cold intolerance
- □ excessive sweating
- □ polyuria
- □ excessive thirst

**Psychiatric:**
- □ nervousness
- □ tension
- □ mood changes
- □ teary
- □ anxiety

**ACTION/PLAN:** _________________________________________________________
_____________________________________________________________________
_____________________________________________________________________

□ Patient instructed to call back if there are persistent, changing, worsening, anxiety-provoking or specific symptoms.

MD/APN Notified: _________________________________________________________
Triage Nurse Signature: ________________________________________________

*Note. Courtesy of the Cancer Institute of New Jersey. Used with permission.*
Appendix B. Huntsman Cancer Hospital and Clinics University Health Care Telephone Nursing Practice Guideline

I. PURPOSE
A. Provide standardization guidelines for telephone nursing practice for the outpatient clinics at the Huntsman Cancer Hospital and Clinics.

II. DEFINITIONS
A. Telephone Triage: a systematic process designed to screen the patient’s symptoms for urgency and to guide the patient to the appropriate level of care in the appropriate time frame based on verbal telephone interview alone – hearing and talking with the patient or patient surrogate.

B. Telephone Triage Nursing Care: The nursing care provided by oncology nurses to patients includes: advice, patient education, symptom management, homecare instructions, psychosocial support, and making referrals and appointments.

III. SCOPE
The scope of telephone nursing practice at HCH includes:
1. Acute or emergent problems, with clear disposition requirements (e.g., call 911, refer to the emergency room)
3. Questions related to patients’ treatment plan (e.g. treatment schedule, anticipated toxicities, select laboratory, radiology test results)
4. Patient education
5. Nursing or protocol-specific interventions prescribed for pain, symptom, and medication management; homecare needs; and the nursing plan of care
6. Questions about medical equipment, which may be referred to homecare, as appropriate
7. Lab or diagnostic testing results, which are in normal limits, as requested by the patient
8. Notification of patients and provision of education related to management of changes in status as directed by the physician or advanced provider.

IV. PROCESS
The process of telephone nursing involves a series of specific steps. These include:
1. Assessment and data collection
2. Analysis and synthesis of information, identification, and prioritization of the problem
3. Intervention, including directives for where and when treatment should take place
4. Documentation of the components of Telephone Triage Nursing Care with each telephone encounter
5. Evaluation and follow-up

(Continued on next page)
Appendix B. Huntsman Cancer Hospital and Clinics University Health Care Telephone Nursing Practice Guideline

A. ALGORITHM/PROTOCOL GUIDELINES
An algorithm or protocol guides the process of telephone triage for the specific patient problem. The algorithms utilized at HCH are adopted from Memorial Sloan-Kettering Cancer Center’s (2004) *Ambulatory Care Telephone Triage and Symptom Management Protocol Manual* (3rd ed.). These algorithms or protocols for telephone intervention are regularly reviewed and revised by Memorial Sloan-Kettering Cancer Center. The algorithms are approved for use by the HCH Outpatient Medical Director and the HCH Nursing Leadership Group.

B. DOCUMENTATION
A Telephone Nursing EMR template is utilized to document patient telephone encounters. All patient telephone encounters are documented in the Ambulatory Care Note section of EMR for the clinics, and in the Chemotherapy Note/Phone Message section for the Infusion Room. EMR is the patients’ permanent record.

C. CONSULTATION/REFERRAL
Triage nurse must confer with or refer the patient to the appropriate physician or advanced practice provider for determination of disposition in specific situations in compliance with the scope of practice in Utah. Any medical order received in these situations, such as a verbal order, must be documented and co-signed by the responsible physician or advanced provider per HCH policy. The following situations require notification to the appropriate physician or advanced provider:

1. Acute or emergent problems where notification of a physician or advanced provider is designated in the algorithm or protocol, including unrelieved pain
2. Potential need for change in the medical treatment plan including medication and procedures
3. Prescription refills
4. Abnormal radiology results that demonstrate a change in the patient’s condition and/or abnormal tumor marker tests must be given to the patient by the attending or advanced provider

D. PATIENT CONFIDENTIALITY
It is the responsibility of the nurse conducting telephone triage to comply with all HIPAA patient confidentiality standards.

E. PROBLEM PHONE CALLS
1. Resolving problem calls with supervisory/collegial help
   For patient related issues, the following chain of command should be followed:
   a. Appropriate Advanced Provider
   b. Physician
   c. Medical Director of Outpatient Services

(Continued on next page)
Appendix B. Huntsman Cancer Hospital and Clinics University Health Care Telephone Nursing Practice Guideline

2. How to respond to abusive callers (e.g., yelling, screaming, cursing, threatening calls)
   a. Attempt to locate the real problem.
   b. Tell the caller he or she will be assisted if he or she can calmly explain the situation.
   c. If the abusive behavior persists, instruct the caller that the call will be terminated if the abuse does not stop.
   d. If the call is terminated, instruct the caller you are terminating the call and refer the situation to the attending physician and/or advanced provider.
   e. Document the telephone encounter.

References

APPROVAL BODY: Huntsman Cancer Hospital and Clinics, Outpatient Clinics
APPROVAL DATE: April 4, 2007
POLICY OWNERS: Huntsman Cancer Hospital and Clinics, Outpatient Clinics

*Note.* Courtesy of the Huntsman Cancer Hospital, University of Utah Health Care. Used with permission.
### Appendix C. Sample Telephone Triage Documentation Forms

<table>
<thead>
<tr>
<th>Patient:</th>
<th>Doctor:</th>
<th>Person receiving call:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>UCLA Gynecology/Oncology Service</strong></td>
<td><strong>Chemotherapy Telephone Protocol</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Date:</strong></td>
<td><strong>Time:</strong></td>
<td></td>
</tr>
<tr>
<td>Diagnosis</td>
<td>Phone number</td>
<td>Age</td>
</tr>
<tr>
<td>Chemo</td>
<td>Last course Total # treatments</td>
<td>Recent lab work</td>
</tr>
<tr>
<td>Recent illness/surgery</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chief complaint</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Onset</td>
<td>Location</td>
<td></td>
</tr>
<tr>
<td>Character</td>
<td>Duration</td>
<td></td>
</tr>
<tr>
<td>Associated factors</td>
<td>Relieving factors</td>
<td></td>
</tr>
<tr>
<td>Treatment tried</td>
<td>Current meds</td>
<td></td>
</tr>
<tr>
<td>Emotional status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recommendations:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pharmacy:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Allergies:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Verbal contract/understanding with patient/family members:</td>
<td>Follow-up:</td>
<td></td>
</tr>
</tbody>
</table>

### Appendix C. Sample Telephone Triage Documentation Forms

#### Telephone Triage Encounter Form

<table>
<thead>
<tr>
<th>Date: ________</th>
<th>Time: ___________</th>
<th>Caller: ____________________________</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary MD: ___________________________</td>
<td>Agency: ____________________________</td>
<td></td>
</tr>
<tr>
<td>Triage to: ___________________________</td>
<td>Patient: ____________________________</td>
<td></td>
</tr>
<tr>
<td>Pharmacy name/number: ________________</td>
<td>D.O.B. ____________________________</td>
<td></td>
</tr>
<tr>
<td>Returned call</td>
<td>Home: ____________________________</td>
<td></td>
</tr>
<tr>
<td>Will call again on: ________________</td>
<td>Work: ____________________________</td>
<td></td>
</tr>
<tr>
<td>Pager/cell: _________________________</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Call results: Lab/date: ________</td>
<td>X-rays/date: ________</td>
<td>Path/date: ________</td>
</tr>
<tr>
<td>Dx: ________</td>
<td>TX</td>
<td>XRT</td>
</tr>
<tr>
<td>Chief complaint: __________________________________________________________</td>
<td></td>
<td></td>
</tr>
<tr>
<td>____________________________</td>
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</tr>
<tr>
<td>Message Taken By: ____________________________</td>
<td>Chart Requested</td>
<td></td>
</tr>
<tr>
<td>□ Emergent  □ Urgent  □ Non Urgent</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CVAD: ______________</td>
<td>Allergy: ________</td>
<td>Med. Reviewed ____________________</td>
</tr>
<tr>
<td>Time call returned: ____________________________</td>
<td></td>
<td></td>
</tr>
<tr>
<td>▶ Onset ◀ Location ◀ Duration ◀ Character ◀ Associated factors ◀ Relieving factors ◀ Treatment tried</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Data: ____________________________________________</td>
<td></td>
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<tr>
<td>____________________________________________</td>
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<tr>
<td>Action: ____________________________________________</td>
<td></td>
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<tr>
<td>____________________________________________</td>
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<tr>
<td>Response: ____________________________________________</td>
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<tr>
<td>____________________________________________</td>
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<td></td>
</tr>
<tr>
<td>Patient/caregiver agrees to plan of care □ Yes □ No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RN ____________________________</td>
<td>RN ____________________________</td>
<td></td>
</tr>
</tbody>
</table>

(Continued on next page)
### Appendix C. Sample Telephone Triage Documentation Forms

#### Telephone Triage Encounter Form

<table>
<thead>
<tr>
<th>Response:</th>
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<tbody>
<tr>
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</tr>
</tbody>
</table>

**Patient response:** Patient/caregiver agrees to plan of care. □ Yes □ No

<table>
<thead>
<tr>
<th>RN:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
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<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Date:</th>
<th></th>
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</thead>
<tbody>
<tr>
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</tbody>
</table>

**Note:** Courtesy of St. Luke’s Mountain States Tumor Institute. Used with permission.
<table>
<thead>
<tr>
<th>Date: ____________________________</th>
<th>Time: ______________</th>
</tr>
</thead>
<tbody>
<tr>
<td>Message taken by: __________________</td>
<td>Urgency</td>
</tr>
<tr>
<td>Patient name: _____________________</td>
<td>□ Emergency</td>
</tr>
<tr>
<td></td>
<td>□ ASAP</td>
</tr>
<tr>
<td></td>
<td>□ Today</td>
</tr>
</tbody>
</table>

Reason for call
(patient's own words):
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________

Problem: _____________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________

Assessment: __________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________

Action taken: _________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________
_____________________________________________________________________

Follow-up: ___________________________________________________________

MD consulted: _________________________________________________________

Signature: ___________________________________________________________
# Appendix D. After Chemotherapy Follow-Up: Call Guidelines

| Patient name: ______________________ | Age: ______ | Doctor: ______________________ |
| Phone number: _____________________ | Diagnosis: __________________________ |
| Chemotherapy: ____________________ | Treatment date: ______________________ |

Date: ______ Day: ___+___ Follow-up call: Placed call: ___:___ Ended call: ___:___

1. How well are you doing?

Do you have social issues? □ Yes, __________________________ □ No

2. Are you feeling okay?

□ Fever higher than 101°F
□ Pain at injection site
If yes to either, □ Instructed to call the office □ Transferred call

3. Are you eating and drinking?

□ Yes, no problems □ No, not eating or drinking
□ Nausea or vomiting
   If yes, were you given medication? __________________________
   Have you used it? __________________________
□ Instruct to call the office or transfer call.

4. Are you moving your bowels?

□ Yes, no problems □ Problems

□ Diarrhea
   How many times per day? __________________________
   Are you using medication? __________________________
□ Instruct to call the office or transfer call.

□ Constipation
   When was your last bowel movement? __________________________
□ Instruct to call the office or transfer call.

5. Let’s talk about your medications.

Are you taking medications that were prescribed? □ Yes □ No
Do you have any questions about your medications? □ Yes □ No
□ Instruct to call the office or transfer call if the patient has questions.

6. Do you know when your next appointment is?

□ Yes, __________________________ □ No, instruct to call for appointment or look up.

Staff member name: ____________________________________________________________

*Note. Courtesy of Joan Karnell Cancer Center. Used with permission.*
### Appendix E. Living Well Program Initial Assessment Guidelines

<table>
<thead>
<tr>
<th>Measure</th>
<th>Questions</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>In-Home Needs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Activities and instrumental activities</td>
<td>Are you independent with daily care, household tasks, etc.?</td>
<td>Evaluate for more care, private pay help, or refer to local area agency on aging.</td>
</tr>
<tr>
<td>of daily living</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Household size</td>
<td>Do you live alone? Are you the primary caregiver for another member of your household?</td>
<td>Evaluate need for additional support. Refer to local area agency on aging.</td>
</tr>
<tr>
<td>Meals</td>
<td>Are you able to shop for food or cook meals?</td>
<td>Evaluate for home-delivered meal programs.</td>
</tr>
<tr>
<td>Medication management</td>
<td>Do you take your medications on time and correctly?</td>
<td>Administer Folstein Mini-Mental State Examination. Refer to psychology professional for cognitive assessment. Inform doctor or nurse practitioner.</td>
</tr>
<tr>
<td>Mobility</td>
<td>Do you get around okay? Do you use a wheelchair or walker? Do you have stairs? Can you climb them?</td>
<td>Evaluate need for physical therapy referral and durable medical equipment.</td>
</tr>
<tr>
<td>Other Needs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coping</td>
<td>How are you coping with your diagnosis or treatment? During the last month, have you often been bothered by (a) feeling down, depressed, or hopeless or (b) little interest or pleasure in doing things?</td>
<td>Administer geriatric depression scale. Provide supportive counseling. Evaluate need for psychological referral.</td>
</tr>
<tr>
<td>Finances</td>
<td>What does your income consist of (e.g., Social Security, retirement)? Do you have any financial concerns?</td>
<td>Refer for financial assistance (e.g., supportive care grant) and copay assistance if related to medical bills.</td>
</tr>
<tr>
<td>Insurance</td>
<td>Do you have coverage (health and prescription)? Do you have questions about coverage? Have you received bills? Do you have questions about paying for treatment?</td>
<td>Refer to state insurance counseling hotline or assist with applying for medical assistance. Provide information about prescription coverage programs.</td>
</tr>
</tbody>
</table>

(Continued on next page)
### Appendix E. Living Well Program Initial Assessment Guidelines

<table>
<thead>
<tr>
<th>Measure</th>
<th>Questions</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Support system</td>
<td>Who supports you (e.g., family, church, community)? Is your family close by? Is your caregiver present? What is your caregiver’s coping style?</td>
<td>Evaluate for support groups. Evaluate for caregiver strain. Evaluate need for psychology referral for caregiver.</td>
</tr>
<tr>
<td>Transportation</td>
<td>How do you get back and forth to your medical appointments?</td>
<td>Evaluate for use of public transportation services or other transportation resources (e.g., American Cancer Society).</td>
</tr>
</tbody>
</table>

*Note. Courtesy of Joan Karnell Cancer Center. Used with permission.*
The letter f after a page number indicates that relevant content appears in a figure.

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Provide efficient telephone patient care with this updated resource!

In a busy oncology practice, on a given day as many as four phone calls occur for every patient scheduled to be seen. This can result in a lot of interruptions to appointments if an effective telephone triage policy is not in place. In addition, patient safety is an issue for those who wait on the line for a response to their concerns.

Margaret Hickey and Susan Newton again lead a team of professionals to provide expert advice in this second edition of *Telephone Triage for Oncology Nurses*. Updated models, tips for using guidelines and performing assessments on the telephone, and an overview of legal concerns associated with telehealth are included. Symptom management guidelines from Alopecia to Xerostomia have been revised to reflect the current evidence, and new symptoms are featured, including antibiotic therapy problems, bone loss, and hemoptysis. Appendices provide examples of documentation and assessment forms that can serve as models to help your program run efficiently and effectively.

*When a patient calls, you will be ready to address concerns quickly, easily, and with the most current evidence-based guidelines with this handy reference.*

Margaret Hickey, RN, MSN, MS, CORLN, is a scientific communications director at Novartis Oncology, Global Division. She has held a number of nursing leadership roles, including employment as the clinical director of the Tulane Cancer Center in New Orleans, LA, and a clinical director at the University of Pittsburgh Cancer Institute in Pittsburgh, PA. Additionally, Margie has held many professional nursing leadership roles, including her term as president of the Society of Otorhinolaryngology and Head-Neck Nurses (1998–1999). Margie is an established author, with publications in journals and textbooks, and speaker who presents locally, regionally, and nationally.

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