When faced with a cancer diagnosis, patients and their loved ones may experience a range of emotions that could lead to significant anxiety and depression (Prouse, 2010). Mental and emotional responses vary, but they may include fear of the unknown, concern for self and loved ones, social and financial effects, body image changes, and alterations to the patient's ability to maintain his or her normal daily activities (Cohen, Jenkins, Holston, & Carlson, 2013). A prominent coping strategy that patients with cancer often use to lessen anxiety is seeking out information to improve their understanding of their diagnosis, treatment, and potential outcomes (McCaughan & McKenna, 2007). Meeting patients' needs for information may have a positive impact on their ability to cope, as well as improve their decision making related to health, treatment, and other important life choices (Gysels & Higginson, 2007).

Historically, the primary delivery method for this information has been through interpersonal communication with healthcare providers and loved ones, with various supplemental educational tools providing reinforcement of the content shared during these interactions. Materials typically include written patient education materials in the form of pamphlets, folders, or discharge instruction sheets. Classes and follow-up telephone calls have also been used to promote understanding and adherence. However, technological advances, coupled with changing methods of educational delivery and ways that patients search for information, have prompted the need to explore an expansion of educational tool options (Koh et al., 2012). Although written patient education materials continue to meet some patients' needs, the option of offering electronic media (e.g., videos) is now under consideration by many healthcare organizations.

The process by which a patient with cancer performs an information search is reflective of many factors within society...
that include age, socioeconomic status, ethnicity, language barriers, health literacy, and exposure to technology (Eheman et al., 2009). Because of these factors, opportunities are available to supplement written patient education materials with videos for educational content delivery. This multimedia approach is helpful in meeting the needs of an expanding population of patients with cancer for whom exposure to television, computers, the Internet, and other technology is often commonplace. The use of videos for presenting accurate information is frequently more familiar to these patients than exposure to written documents, and it can even improve comprehension for certain patient populations. Organizations must react to the digital split that can be observed in society and acknowledge its impact on patient education.

Rationale for Use

Nothing can replace the value of one-on-one communication between healthcare providers and patients and their loved ones as a way to provide personalized, accurate, and thorough education that is responsive to the needs and concerns of patients. The use of educational tools can support and reinforce the information shared during these verbal communications. Although no one type of educational tool will meet the learning styles or tastes of every patient (Agre, Dougherty, & Pirone, 2002), the use of videos as a tool for patient education may meet many educational needs. Videos can provide visual images, motion graphics, illustrations, demonstrations, and written text for emphasis of key points. They can also include audio tracks to convey information and emotion. In addition, videos decrease reliance on a learner’s ability to read and can circumvent some health literacy hurdles (Wilson et al., 2012).

Many patients, particularly those in the younger generations, have come of age with educational entertainment, Internet searching, and online instruction. Although the Internet includes some informational sites that are not evidence based or are even inaccurate, it remains an excellent way to reach many patients who are searching for oncology information.

Healthcare organizations should be encouraged to post reliable, scientific sources of cancer-related educational content on the Internet via their organization-sponsored websites and use it as a forum for material delivery. A range of patient education videos can be provided to accommodate patients on various ends of the technologic spectrum—from those who are most familiar with watching television to those who are more technically competent and prefer to explore online. Forms of video delivery (e.g., DVD, inpatient television programming, YouTube) can also be modified for diverse audiences to increase access and decrease patient anxiety.

To understand why educational videos can result in knowledge acquisition, the methods in which learning takes place must be noted. The three primary cognitive learning styles are auditory, kinesthetic, and visual (Mitchell, 2007). Although a person typically favors one method over another, a multisensory approach involving the ears, hands, and eyes is often the most effective.

The three basic learning methodologies involve auditory, experiential, and visual learners. The majority of people are visual learners; they respond best to written information and pictures. Auditory learners are the second most common, and they grasp content best by hearing the spoken word; they prefer to listen, enjoy conversation and music, and excel at remembering sounds. Experiential learners make up a smaller percentage of the population, and they acquire information through touch and movement; they tend to be people oriented. Based on this understanding of basic learning methodologies, educational videos can be effective in addressing these three learning styles through visual components, plus the inclusion of pleasant sounds, voices, and music. Videos can appeal to the experiential learner through kinesthetic impact (i.e., a video’s focus on faces and people interacting while showing movement). Short video viewing time is important because research has demonstrated that the length of the video is inversely related to the learner’s attention span (Ferguson, 2012).

Development

A lack of understanding regarding the development and production of patient education videos may hinder an organization’s use of this type of teaching tool. Knowledge acquisition of the steps required for video development and production may remove this hurdle, consequently increasing the availability of these educational tools to patients. Organizational leadership must acknowledge the benefits of patient education videos to allow adequate resource allocation for video project development.

Team Members

The planning committee for the development of patient education videos requires team members with a variety of skill sets. For example, a project manager is crucial for coordination of concept development, scriptwriting, talent acquisition (e.g., actors, narrators), photography, professional directors and producers, editing staff, captioning, translation services, duplication, and final posting of the video to various venues. Topic-specific content experts and professionals with patient education knowledge are also vital to ensure that content is presented in a manner conducive to comprehension. The inclusion of information technology experts is often helpful; they can assist with uploading the video to assigned servers, websites, YouTube, or on-demand television systems. Legal counsel should be available to the development team to address copyright, consent, and disclaimer issues related to the use of other sources of information in the content development of the video.

After the video content development team is established, each healthcare facility must then determine the technical resources available internally for video production. Using internal departments that offer recording services, rather than contracting with external production companies, should be considered, and these decisions should be based on talent, budget, and timeline considerations. Some production companies will provide full-service capabilities, whereas others subcontract out for certain, or all, components. In addition, production companies may look to the healthcare organization for completion of certain aspects of video development, such as...
development of script narration or provision of clinical photogra-
phy. Selection of the type of technical support to be provided
for video development must be individualized and based on the
healthcare organization.

Content
Oncology healthcare providers who are experts in specific
areas of cancer care delivery are well suited to assist with the
creation of patient education videos (Agre et al., 2002). Their
knowledge and guidance as content experts can help with the
development of the narration script and with the determina-
tion of visual elements that are crucial for inclusion. Writing a
script is similar to writing for a print medium, but it requires
adjustment for the spoken voice. Health literacy standards must
be applied to the script to ensure that content is actionable.
Actionable information helps viewers understand what they
should do based on the information presented. Content should
also be easily understood and of an appropriate length to hold
the interest of learners. These standards, used in the develop-
ment of any written patient education materials, should also be
applied to any text that appears on the screen (U.S. Department
of Health and Human Services [USDHHS] & Centers for Disease
Control and Prevention [CDC], 2009). Special consideration
must be made based on the patient population being served to
ensure that language barriers are addressed through the use of
translated captioning or the offering of alternative video options
in applicable languages. Use of the Patient Education Materials
Assessment Tool, which is an instrument that can be used to
assess print and audiovisual material, should be considered
(Shoemaker, Wolf, & Brach, 2014). Recording content should
be focused on clearly identified, realistic goals and objectives
as included in any lesson plan. In addition, content should be
evidence based and focus on the information that promotes
self-care and safety via reporting of systems and side effects.
Content should be provided in as straightforward a manner as is
possible to enhance learning. The most important information
also should be presented first, and content should be clearly
categorized as “need to know” or “nice to know” (Rigdon, 2010).

Auditory Components
Auditory components of the video should aim to have a calm-
ing, confidence-inspiring effect on viewers; this is particularly
important because of the emotional impact that a cancer diag-
nosis may have on individuals. Actors or professional narrators
who have a clear yet soothing voice may be considered for
employment. They can often provide speech patterns that offer
a casual tone with inflection at just the right moment to add extra
impact to the script. Special attention should be paid to back-
ground music to ensure that the selection is culturally sensitive.
Music tempo must be appropriate to the rhythm of the video’s
narration or the actors’ voices to avoid a sense of urgency or
delay for viewers. In addition, the volume of background music
should be adjusted so it does not distract from the spoken voice.
Likewise, background noises can either be a distraction or can
add to the reality of a given situation. Any talent used for video
production must know how to correctly pronounce the words
in the script, which should include phonetic pronunciation for
difficult medical terminology. Pauses and specific areas for em-
phasis should also be noted. Alternative components of video
content should be recorded to provide additional choices when
editing. Those involved with video production should be aware of
the need for rehearsal with actors, narrators, or clinicians in
preparation for time in the production studio.

Visual Components
Visual components of video development should be sensitive
to the broad base of potential viewers, as well as to any poten-
tial negative physical (e.g., nausea or dizziness in response to
patterns on clothing or wallpaper, towering camera angles or
views, or displays of rapid movement or transitions) or emo-
tional effects that patients with cancer may experience when
watching the video. Pilot testing prior to distribution of the
final product can assist with identifying potential positive or
negative impacts on viewers. Pictures or action shots should be
realistic, but displays that may invoke fear should be avoided.
On-screen text should be in a font size and style that allows
for ease in viewing, depending on the screen size and display
method planned (e.g., tablet, DVD). Text should also be in a
color that is visible to those with color blindness (e.g., dark
gray or black text on a white or light-colored background).
Patients and healthcare providers portrayed on screen should
be of a variety of ages, races, cultures, sizes, and economic
levels to encourage viewers to relate to the content (USDHHS
& CDC, 2009).

Scenes should take place in various care venues (e.g., homes,
doctors’ offices, clinics, hospitals) to promote realism and
applicability to various viewer experiences. Actors should be
coached to remember the powerful subtext of body language,
and photos selected for inclusion should reflect this principle
as well. Organizational branding in video development is often
couraged; however, caution should be used when including
staff or patients in videos. Consent issues, patient confiden-
tiality, and potential transitions in staff can result in hurdles,
delays, or revisions in video content. Likewise, video content
should be carefully selected to avoid displaying a specific
product, type of equipment, or healthcare location. Doing
so will aid in the longevity of a video’s usefulness, without
requiring revision.

Video Closure
Viewers typically benefit from a review of crucial content at
the end of each video. This content may include an emphasis on
important information, such as self-care or when to contact
the doctor. Patients having knowledge of when to activate
timely self-care interventions or when to seek professional
advice is imperative (Prouse, 2010). Video closure also should
motivate patients to reconnect with their healthcare providers
to ask clarifying questions or to determine applicability of the
content to their specific condition. Final video instruction can
include specific healthcare provider contact information (e.g.,
phone numbers, department name) if videos are restricted
to internal use or internal distribution. Videos provided in a
general manner, such as via the Internet, may include more
general directions in referring viewers to their local health-
care provider. Conclusions of this sort in patient education
videos further support the patient-provider relationship. In
addition, the use of various auditory and visual components may demonstrate the need for patients to write down questions for upcoming medical appointments. This modeling behavior can promote collaboration and communication between patients and their healthcare team in an era of relationship-based care.

Methods of Delivery

Healthcare providers and organizations must focus on providing educational content to consumers at the right time, in the right place, by the right person, and in the right format (Hampton, 2012; Van Mossel et al., 2014). The timing of when patient education delivery will have its maximum impact should be considered on an individual basis. Although education provision at the time of diagnosis or preprocedure can be advantageous, patients’ ability to comprehend the content can be affected by numerous psychosocial considerations. Patients’ and family members’ viewing of educational videos can occur initially and repeatedly along the continuum of care on an as-needed basis. Multiple ways of viewing these videos exist. Just as viewing options are varied, so is the manner in which the videos can be distributed. Formatting the video as an MP4 file is often helpful for placing it on servers, making it available on DVD, or posting it on the Internet via YouTube.

Providing flexibility in viewing is the primary manner in which accommodation occurs for patients’ individualized needs. Variations in technical skills, age, socioeconomic status, physical disabilities, and other characteristics can be accommodated based on how the video is provisioned for viewing. Many options exist for providing video access while patients are in various settings (e.g., hospital, clinic, home). Videos can be viewed on DVD players or tablets; playback is made easy through the use of pre-established icons or directives on both of these methodologies. This delivery method offers a solution for those with limited technical skills who may need assistance with viewing the material; it also allows for ease in disinfection for immunocompromised patients because surfaces can be wiped down and earbuds disposed of between uses. Videos can also be made available via on-demand television systems or through linkage with certain electronic medical record communication tools (Cohen, Grote, Pietraszek, & Laflamme, 2010). Hard-copy DVDs or USB flash drives can be distributed to patients for their personal use at home. Videos can be posted on the Internet via YouTube or other organization-specific websites. Access via the Internet permits not only repetition in viewing from home but also allows for ease in sharing with geographically distant loved ones via a URL.

Accommodations must be included with each video option to ensure adequacy of volume and captioning for the hearing impaired. When possible, consider offering headphones or earbuds to enhance the video’s audio components, thereby not disturbing other patients in the area. Captioning can also permit translation of videos into various languages based on demographics of the target patient population. Compliance with the Americans With Disabilities Act and, as applicable, its website accessibility standards should be incorporated into video planning and distribution (Caldwell, Cooper, Guarino Reid, & Vanderheiden, 2008). A combination of video delivery methods is suggested to meet patients’ varied needs.

Implications for Practice

- Promote knowledge for many patient populations through video use, which offers a multisensory approach.
- Understand that videos can be used as supplemental educational tools during various patient encounters.
- Note that patient education videos can be a source of health information for a growing population of patients and family members who expect information discovery via the Internet.

Patients and their loved ones benefit most from viewing videos close to the time of interactions with their healthcare providers (Mitchell, 2007). Review of a patient education video can encourage open dialogue between patients and their healthcare providers, with questions specific to video content.

Implications for Nursing

A fundamental part of nursing’s role in comprehensive cancer care includes the education of patients and their loved ones. Oncology nurses must provide information about the disease process, treatment, and aspects of survivorship in a manner that encourages the highest quality of life possible. To receive exemplary care, patients must be provided with the necessary information in a variety of formats. With a focus on patient advocacy, nursing and healthcare organizations must reexamine their patient population to determine if current delivery methods of patient education materials are meeting patients’ needs (Brach et al., 2012). Based on these findings, nurses should consider incorporating internally produced patient education videos as an additional method for patient education delivery.

Conclusion

Studies have shown that multimedia tools are an effective method for patient education, even among patients with lower literacy levels (Wang et al., 2014). This approach coincides with the Healthy People 2020 goal of using information technology to improve health outcomes (HealthyPeople.gov, 2015). Educating patients about their disease, enhancing patient participation in decision making, and improving adherence to recommended treatments are critical aspects of promoting positive outcomes (Kutzleb et al., 2014). Healthcare providers should embrace technology to meet patients’ educational needs. Patients often use websites, social media, or other sources to find information that may not meet reliability standards for evidence-based content (Pandey, Hasan, Dubey, & Sarangi, 2012). However, video development by healthcare organizations will result in patients having access to reliable sources of information to augment their conversations with healthcare providers.

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