ASSESSMENT OF AN EDUCATIONAL BINDER FOR NEWLY DIAGNOSED ONCOLOGY PATIENTS

by

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DEDICATION

This paper is dedicated to my family, friends, colleagues, mentors, and pets. Without your support and guidance this project would not have been possible.

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ABSTRACT

Newly diagnosed oncology patients have many complex educational needs. These needs can be affected by stress, age, health literacy, and culture/ethnicity. It is important to take these factors into account when developing and evaluating patient health information. It is imperative that oncology patients are provided with quality health information to ensure that they are able to participate in shared decision making, thereby improving their outcomes. A new patient binder has been developed for patients seeking cancer care at the Benefis Sletten Cancer Institute. It is important that this educational tool be evaluated for readability, understandability, and actionability. The Patient Education Material Assessment Tool and the Flesch Reading Ease formula are two proven methods to evaluate patient health information. These tools will be used to evaluate the newly developed patient binder at the Sletten Cancer Institute. The results of the evaluation will be shared with the developers of the educational tool and leadership team. The continual evaluation of patient health information materials is essential to ensure that patients are receiving information that will meet their needs. The Clinical Nurse Leader can play an important role by acting as an educator, patient advocate, team leader, and expert clinician to ensure patients are receiving high quality patient health information.

INTRODUCTION

Introduction

Annually the number of patients newly diagnosed with cancer is expected to increase by over 20% (Weir, Thompson, Soman, Meller, & Leadbetter, 2015). A tenant of high-quality healthcare is to ensure that the educational needs of newly diagnosed cancer patients are met. As a cancer diagnosis can be stressful and confusing, quality is imperative to fully understand the diagnosis and have meaningful engagement in shared medical decision making (Matsuyama, Kuhn, Molisani, & Wilson-Genderson, 2013). Unfortunately, patient health information is often complex, incomplete and difficult for patients and families to comprehend.

Statement of the Problem

The educational needs of cancer patients are complex and can be affected by many factors such as stress, health literacy, age, and culture/ethnicity (Campbell, 2020) . Characteristics such as these greatly affect meaningful patient participation in shared healthcare decision making and subsequent adherence to treatment. Historically, diverse education methods have been used with varying degrees of success including print, audio visual and verbal information (Keinki et al., 2016). Research has shown a patient preference for written and verbal education methods (Kaupp, Scott, Minard, & Lambourne, 2019)

Many factors will affect patients understanding and comprehension of health information. It is important to realize that the health literacy of patients helps to ensure that they receive quality, safe and effective healthcare services especially with a complex illness like cancer (Campbell, 2020). A patient’s age is another important factor in their health literacy. Many cancer patients experience a large amount of stress which may also affect their ability to comprehend information they are receiving. Culture/ethnicity can also affect how patients perceive and understand health information (Campbell, 2020). All of these considerations must be considered when preparing health information materials for newly diagnosed oncology patients.

There are many resources for evaluating the quality of patient health information. Common instruments to evaluate patient health information resources include: The Patient Education Material Assessment Tool (PEMAT), which has proven to have strong validity, reliability and consistency for evaluating the understandability and actionability of patient education materials (Shoemaker, Wolf, & Brach, 2014). Another valuable tool to determine readability is the Flesch Reading Ease Score (FRES) . This is a formula that is used to assess the grade level and understandability of the material. This formula is noted to be one of the most accurate formulas to determine readability (Linney, 2019). It is important to use reliable, consistent tools when evaluating patient education materials.

Background and Need

Organizations need to provide high quality information to their patients to improve outcomes consistent with their mission. The Sletten Cancer Institute (SCI) is a comprehensive cancer center in central Montana serving patients in Great Falls and the surrounding areas. SCI strives to provide a comprehensive care experience to patients and their families who are affected by a cancer diagnosis. The approximately 600 new patients that are seen each year need effective and understandable education to help guide them through their cancer journey (P. Olinger, personal communication, September 13, 2019) . This education must consider the various cultural and literacy levels of the patients that are served.

To address the educational needs of the patients at SCI a new patient binder was developed to support the educational requirements of patients who have been diagnosed with cancer and are seeking care at the SCI. This new patient binder provides patients with information on the providers, services offered, community resources, and treatment specific information. A newly developed educational tool must be evaluated to ensure that it will meet the needs of the patients it was developed for.

Oncology patients have many educational needs which may be affected by health literacy, age, culture/ethnicity, and stress. It is important that the patient health information reflect these needs and situations. Materials must be evaluated to determine their effectiveness for newly diagnosed oncology patients.

Purpose of the Study

The purpose of this scholarly project is to evaluate the recently developed new patient education binder for understandability, actionability, and readability.

Significance to the Field

It is important that patient health information meet the needs of the patients it was intended for. The health literacy of patients has been linked to improved treatment adherence and outcomes (Busch et. al., 2015). Ensuring cancer patients have effective health information to improve their health literacy is imperative to their outcomes.

Definitions, Limitations, Ethical Considerations

-Understandability is defined as the ability of consumers of varying health literacy levels and diverse backgrounds to explain and process important messages (Shoemaker, Wolf, & Brach, 2014).

-Actionability is defined as the ability of consumers with varying health literacy levels and diverse backgrounds to identify what they are capable of doing based on the presented information (Shoemake et al., 2014).

-Readability is based on word familiarity, length of sentences, syllables, and other aspects represented as scores that highlight the grade level that is needed to understand the information presented (Kher, Johnson, & Griffith, 2017).

-Health literacy is defined as "the ability to obtain, process, and understand basic health information and services to make appropriate health decisions-is essential to promote healthy people and communities." (US Department of Health and Human Services, 2008, p.1).

- Patient Education Material Assessment Tool (PEMAT)
- Flesch Reading Ease Score (FRES)
- Clinical Nurse Leader (CNL)

Limitations of this project include limited time to evaluate the patient health information with its end user, evaluation of a single binder and the inability of the evaluation to be generalized beyond the Sletten Cancer Institute. Further evaluation of these components is necessary for a complete evaluation of any educational tool.

Ethical considerations to be considered involve sharing the results of the evaluation with the developers of the educational tool. It is important to consider the work and effort that has been put into the Benefis Sletten Cancer Institute new patient binder, and to share the results of the evaluation and suggestions for changes, with respect for their efforts. It is also important to share the information to help improve the quality of care for patients.

LITERATURE REVIEW

The Agency for Healthcare Research and Quality (2018) outlines six aims for quality health care: effective, safe, timely, patient centered, equitable and efficient. It is important for patient health information materials to reflect these criteria. Quality healthcare examined through this scholarly project is patient centeredness, specific to health information.

Patient centered, effective patient health information is an essential for all health conditions. Specific to newly diagnosed oncology patients, it is imperative that this education meet their needs. Many factors can affect the educational needs of newly diagnosed oncology patients, these may include age, health literacy, stress level and culture/ethnicity. Various methods of delivering patient health information are used to deliver effective education to patients. There are also various methods to evaluate the effectiveness of the patient health information. It is important to consider all of these factors when developing and evaluating patient health information.

There is an ongoing increase in the number of patients diagnosed with cancer each year, this is likely due to a rise in the aging population. Along with the increase in newly diagnosed patients, there will be more cancer survivors with ongoing educational needs (Weir, Thompson, Soman, Meller, & Leadbetter, 2015). Multiple factors affect patien'ts ability to understand, comprehend, and utilize the patient health information they are provided. Providing effective health information to patients who have been diagnosed with cancer is essential. When planning and developing education material factors such as age, health literacy, cultural/ethnic considerations and stress level must be considered. Studies have shown that younger patients, women, and married patients have increased educational needs (Matsuyama, Kuhn, Molisani, & Wilson-Genderson, 2013). Patients who have a low level of self-efficacy or experience and a high level of anxiety or feeling of loss of control, tend to have higher educational needs (Keninki et. al., 2016). The relationship between information needs and anxiety in oncology patients highlights the importance of providing high quality health information along with emotional support to help reduce anxiety in cancer patients (Goerling et al.,2020).

There is a correlation between patients' educational level and their educational needs especially with a complex diagnosis such as cancer, with needs that are especially high immediately after diagnosis and initiating treatment. Over time, the educational needs of oncology patients may decrease (Matsuyama et al., 2013). It is important that the health information given to newly diagnosed oncology patients be effective. Chemotherapy patients prefer to have most of their patient health information at the beginning of their treatments, with ongoing reinforcement throughout their course of treatment (Lambourne et al., 2019).

Assessment of patients helps to tailor education to their needs. It is important to understand health literacy and to involve patients and family members with various levels of literacy to ensure patient centered care (Campbell, 2020; Pruthi et al., 2015). Health literacy in cancer patients plays a vital role in maximizing and improving treatment health outcomes (Busch et al., 2015). It was found that oncology patients with stage 3 or 4 disease who have an adequate level of health literacy are more likely to receive treatment. Thus, adequate levels of health literacy may play an important role in enabling patients to obtain better care (Busch et al., 2015). Ensuring patients are able to process and utilize the complicated information that comes along with a cancer diagnosis, can help to decrease the chance of negative outcomes and improve care that is patient centered. It is also important to use some of the principles of health literacy when developing patient health information. These include using simple language, short sentences, leaving white space in the document, using numbers and bullet point, and defining medical terms (Foster, Idossa, Mau, & Murphy, 2016). When developing and evaluating patient health information it is important to be aware of the population characteristics of the patients that you will be serving, such as age, average education level, and culture. This will ensure that their health information needs are met with effective, understandable education materials. After assessment of the population it is important to develop various education materials to meet those needs.

Various education methods can be used when providing patient health information. Prior research has identified patient preferences for written and verbal information (Jewitt et al., 2016; Keinki et al., 2016; Tomisa, Horváth,Dombai, & Tamási, 2017). In recent years, many patients report using online resources; however, the quality of online health information is inconsistent and at times inaccurate. Hence, patients lacking appropriate health information from their providers often engage in treatment decision making using incomplete and/or faulty information. Health information, no matter the source, must be usable, readable and accessible (Keinki et al., 2016). Printed materials may contain both text and figures; when asked, the majority of patients report a preference of text over figures (Tomisa et al., 2017). However, across the board regardless of educational level, patients prefer clear and concise information. Patient health information is intended to prepare patients and families to engage in meaningful shared healthcare decision making; thus, it should provide expectations of treatment and side effects (Forshaw et al., 2017). If patients feel prepared and involved, they are more likely to engage and adhere to their treatment plan.

Comprehensive knowledge of the targeted patient population is the foundation needed to develop high quality health information and meet unique needs of a specific oncology patient population (Jewitt et al., 2016). This informed process has been shown to improve both acceptance and effectiveness. One study examining the unmet information needs of breast cancer patients revealed that common omission included results of medical exams, options for treatment, side effects, and medication information (Halbach et al., 2016). To help reduce the incidence of unmet needs, it was suggested that written patient health information and communication could be improved dramatically solely through avoiding the use of difficult and complex medical terminology.

Developing easy to understand patient health information is critical for patients with a new cancer diagnosis. The recommended reading level for patient health information materials is sixth to seventh grade. The first lines of the information are important, because the reader must understand them to keep reading (Pruthi et al., 2015).

Shared healthcare decision making is imperative for newly diagnosed cancer patients to make informed treatment decisions . Patient health information that allows and promotes shared decision making is essential. To assist patients in shared decision making, health care providers must individualize patient health information and assess a patient’s understanding and readiness (Tariman et al., 2016). Patient health information also plays an important role in patient activation. Patients with increased patient activation are more informed about their condition, they take an active role in the management of their condition and managing their symptoms and side effects. Patients with less activation are likely to be less informed of their diagnosis, they have a lower likelihood of reporting concerns to their healthcare providers, they are not as able to manage side effects, and more likely to not follow the recommendations of their providers (Hibbard, Mahoney, & Sonet, 2017). It is important for patient education materials to be tailored to patients and their needs. Patients have different needs throughout their diagnosis and treatment.

Once patient health information has been developed, it is essential to evaluate its effectiveness (Pruthi et al., 2015). To evaluate the educational material, it is important to use valid tools. Methods used to evaluate these educational methods include the Patient Education Material Assessment Tool (PEMAT), and the Flesch Reading Ease Score (FRES) (Heath & Huenerberg, 2019).

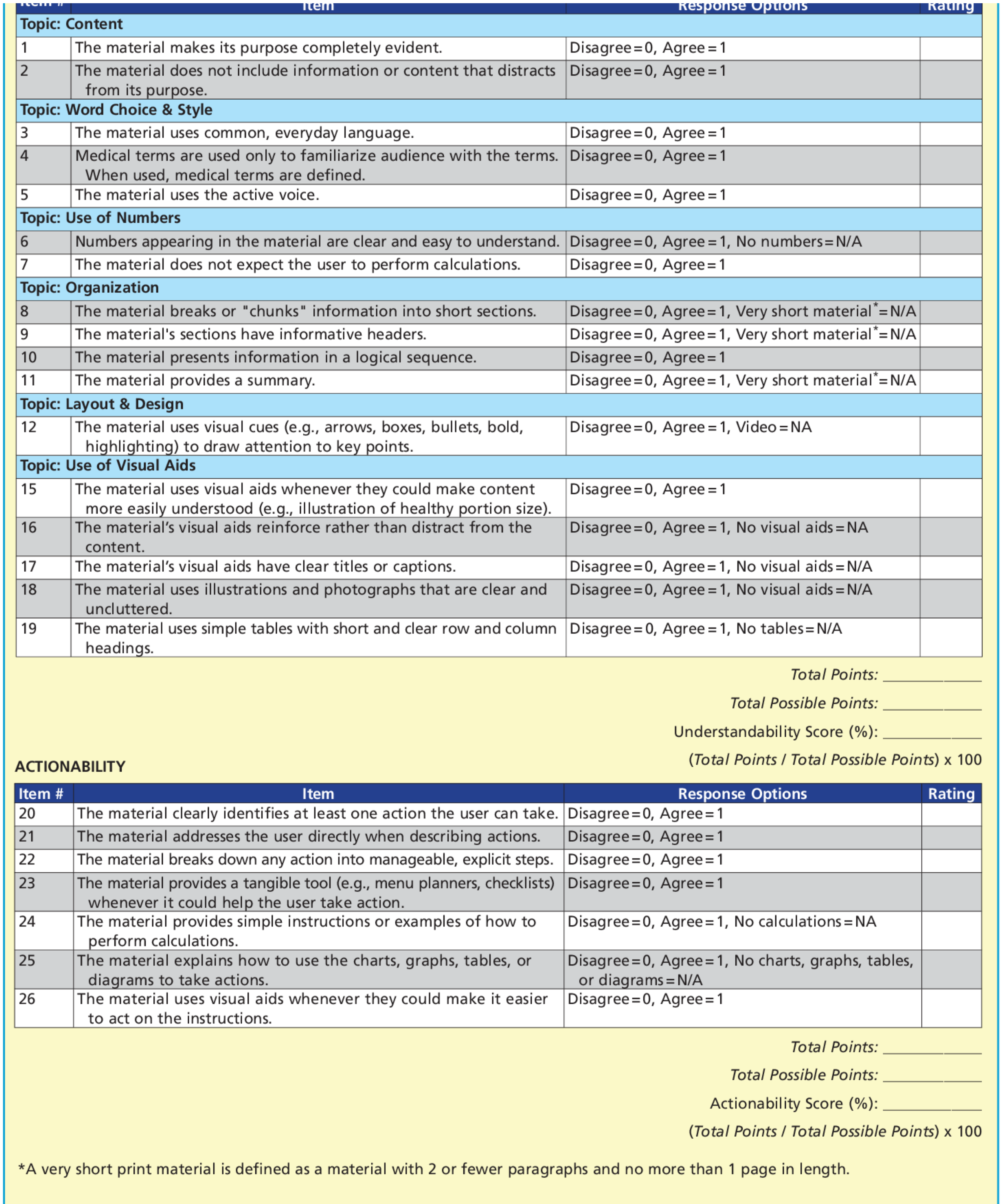
Development of education materials is important and utilizes resources from a patient’s medical facility. It is important to take into consideration the utilization of these resources to ensure that quality information is developed and provided to patients. Education has been proven to help patients better understand their diagnosis and treatment and improve their outcomes and patient-centered care (Busch, Martin, DeWalt, & Sandler, 2015; Weisbeck, Lind, & Ginn, 2019). The use of the PEMAT and FRES have been verified to be reliable tools to evaluate and revise educational tools to ensure that patients are provided with information that can improve their outcomes and the facility can be sure that its resources are being used to improve patient care.

A study conducted by Heath and Huenerberg (2019) found that one third of patient health information materials in a radiation oncology department were not up to date or relevant for that patient population. The information for oncology patients is ever changing and it is important that the health information provided, be up to date and relevant to the patients it is provided for. Information that is outdated my cause confusion and loss of confidence in the professionals providing the patient health information.

Studies have also shown that when patients are asked to evaluate the readability, comprehensibility, and suitability of patient health information they request information that is tailored to their needs (Smith et al., 2014). Involving patients in the evaluation process for education materials provides the developers with valuable information from the population that the education is intended for. Patients and family offer a unique perspective on the value and suitability of patient health information.

The PEMAT is a tool (presented in Table 1) was developed with input from a group of professionals with knowledge of health literacy, creation of content, health information technology, communication, and patient education and engagement. This tool is used to test actionability and understandability of written and auto visual patient health information. Testing of the PEMAT tool reveals solid internal and external consistency and can be used by anyone to evaluate patient health information. (Shoemaker et al., 2014). The PEMAT does not allow the user to assess cultural

Table 1. PEMAT Tool



Item #	Item	Response Options	Rating
Topic: Content			
1	The material makes its purpose completely evident.	Disagree = 0, Agree = 1	
2	The material does not include information or content that distracts from its purpose.	Disagree = 0, Agree = 1	
Topic: Word Choice & Style			
3	The material uses common, everyday language.	Disagree = 0, Agree = 1	
4	Medical terms are used only to familiarize audience with the terms. When used, medical terms are defined.	Disagree = 0, Agree = 1	
5	The material uses the active voice.	Disagree = 0, Agree = 1	
Topic: Use of Numbers			
6	Numbers appearing in the material are clear and easy to understand.	Disagree = 0, Agree = 1, No numbers = N/A	
7	The material does not expect the user to perform calculations.	Disagree = 0, Agree = 1	
Topic: Organization			
8	The material breaks or "chunks" information into short sections.	Disagree = 0, Agree = 1, Very short material* = N/A	
9	The material's sections have informative headers.	Disagree = 0, Agree = 1, Very short material* = N/A	
10	The material presents information in a logical sequence.	Disagree = 0, Agree = 1	
11	The material provides a summary.	Disagree = 0, Agree = 1, Very short material* = N/A	
Topic: Layout & Design			
12	The material uses visual cues (e.g., arrows, boxes, bullets, bold, highlighting) to draw attention to key points.	Disagree = 0, Agree = 1, Video = NA	
Topic: Use of Visual Aids			
15	The material uses visual aids whenever they could make content more easily understood (e.g., illustration of healthy portion size).	Disagree = 0, Agree = 1	
16	The material's visual aids reinforce rather than distract from the content.	Disagree = 0, Agree = 1, No visual aids = NA	
17	The material's visual aids have clear titles or captions.	Disagree = 0, Agree = 1, No visual aids = N/A	
18	The material uses illustrations and photographs that are clear and uncluttered.	Disagree = 0, Agree = 1, No visual aids = N/A	
19	The material uses simple tables with short and clear row and column headings.	Disagree = 0, Agree = 1, No tables = N/A	

Total Points: ____________

Total Possible Points: ____________

Understandability Score (%): ____________

(*Total Points / Total Possible Points*) x 100

ACTIONABILITY

Item #	Item	Response Options	Rating
20	The material clearly identifies at least one action the user can take.	Disagree = 0, Agree = 1	
21	The material addresses the user directly when describing actions.	Disagree = 0, Agree = 1	
22	The material breaks down any action into manageable, explicit steps.	Disagree = 0, Agree = 1	
23	The material provides a tangible tool (e.g., menu planners, checklists) whenever it could help the user take action.	Disagree = 0, Agree = 1	
24	The material provides simple instructions or examples of how to perform calculations.	Disagree = 0, Agree = 1, No calculations = NA	
25	The material explains how to use the charts, graphs, tables, or diagrams to take actions.	Disagree = 0, Agree = 1, No charts, graphs, tables, or diagrams = N/A	
26	The material uses visual aids whenever they could make it easier to act on the instructions.	Disagree = 0, Agree = 1	

Total Points: ____________

Total Possible Points: ____________

Actionability Score (%): ____________

(*Total Points / Total Possible Points*) x 100

*A very short print material is defined as a material with 2 or fewer paragraphs and no more than 1 page in length.

Figure 2 Patient Education Materials Assessment Tool for Printable Materials (PEMAT-P).

suitability, accuracy, or comprehensiveness. Developers of the PEMAT recommend that a readability assessment accompany evaluation of patient health information (Shoemaker et al., 2014). Review of findings from the PEMAT identified discrepancies among some of the items on the PEMAT, along with some interrater reliability concerns; these findings indicate additional research with more diverse populations is needed to validate the usefulness of this instrument. Nonetheless, the PEMAT is still considered a "gold standard" when evaluating health information. Overall, the study identified the PEMAT as a valuable tool when evaluating and developing patient health information material (Vishnevetsky, Walters, & Tan, 2018).

The FRES (presented in Table 2) is a tool used to determine the readability of patient health information by evaluating the number of syllables of each word and length of the sentences. Studies examining the readability of patient health information using the FRES and other readability tools, found that the majority of the patient health information material had readability levels that were too high for the population being served (Arian, Ramezani, Tabatabaeichehr, & Kamali, 2016; Brütting et al., 2019). The use of this tool is important to determine if the patient health information that has been developed, has an appropriate readability level.

It is vital to use evaluation tools that have been proven effective when evaluating newly developed patient health information. Evaluation must be an ongoing process with input from key stakeholders such as patients, providers and staff.

When evaluating newly developed patient health information, it is important to assess the patient population that will receive the information. Age, health literacy, stress

Table 2. Flesch Reading Ease Formula

The Flesch Reading Ease Readability Formula

The specific mathematical formula is:

$$RE = 206.835 - (1.015 \times ASL) - (84.6 \times ASW)$$

RE = Readability Ease

ASL = Average Sentence Length (i.e., the number of words divided by the number of sentences)

ASW = Average number of syllables per word (i.e., the number of syllables divided by the number of words)

The output, i.e., RE is a number ranging from 0 to 100. The higher the number, the easier the text is to read.

- Scores between 90.0 and 100.0 are considered easily understandable by an average 5th grader.

- Scores between 60.0 and 70.0 are considered easily understood by 8th and 9th graders.

- Scores between 0.0 and 30.0 are considered easily understood by college graduates.

(The Flesch Reading Ease Readability Formula, n.d.)

level and culture/ethnicity all are important variables to consider. Development of the health information needs to take into account patient preferences and the evaluation of the material should be an ongoing process completed with proven evaluation tools.

Meeting the health information needs of newly diagnosed oncology patients has many implications for nursing. Nurses are often the ones who deliver patient health information materials to patients and their families. Nurses have the opportunity to provide input into patient health information that is actionable and accessible to patients and families with various health literacy levels, ages, cultural backgrounds and stress levels (Campbell, 2020). It is imperative that the information is understandable, actionable, and readable for all patients. Newly diagnosed oncology patients are often under a great deal of stress which may reduce their ability to process new health information (Campbell, 2020). Nurses have the unique opportunity to communicate with patients and provide health information that will assist them in shared decision making. When patients feel informed about their diagnosis and treatment, they are able to be active participants in their care, which may lead to improved outcomes.

Education at the Benefis Sletten Cancer Institute begins when a newly diagnosed oncology patient is seen by one of three medical oncologists. The patient’s provider provides education on the patient’s diagnosis, treatment options and prognosis. Patients who need chemotherapy or radiation treatments receive further education from the nursing staff. Handouts detailing information on chemotherapy symptom management have been developed by the nursing staff . Patients receive detailed drug information from a reputable online resource along with disease specific information provided from the National Cancer Institute. Information on the various services offered at the Benefis Sletten Cancer Institute are discussed during a patient’s chemotherapy teaching. A new patient binder was developed to standardize the basic information that all newly diagnosed patients receive. Inserts are available to add to the binder based on the patient’s specific treatment plan. The binder is provided to patients by the social worker during their first visit to the center.

Patient health information is essential to not only oncology patients but to all patients who receive healthcare. It is important to ensure that patients are receiving education materials that are readable and understandable no matter their age, health literacy, stress level or culture/ethnicity. It is important that the Sletten Cancer Institute patient binder be understandable and readable for all patients who are entrusting us with their care. This will ensure that patients are educated on their diagnosis, treatment plan and survivorship goals. Patients will feel empowered to make health care decisions related to their care and continue to feel empowered in their care.

METHODS

A patient education binder was developed to educate newly diagnosed oncology patients seeking care at the Benefis Sletten Cancer Institute. The purpose of the binder is to help ensure that patients are informed of their diagnosis, treatment options, side effects and services offered. It is imperative that the newly developed binder meets the needs of the patients while taking into consideration, variation that may exist across the patient population, such as the ability of the patient to read, interpret, and utilize the health information provided. The PEMAT and FRES are two proven methods to evaluate readability, understandability, and actionability of patient health information (Heath & Huenerberg, 2019; Shoemaker et al., 2014).

The purpose of this scholarly project is to evaluate the recently developed new patient education binder for understandability, actionability and readability. The PEMAT and FRES will be used as evaluation tools to accomplish this goal.

To evaluate the newly developed patient educational binder, the PEMAT tool will be used first. Initially, the evaluator must read users guide to become familiar with the PEMAT evaluation items. The entire educational binder will then be read completely and the PEMAT for printable materials will be chosen as the evaluation tool. Each of the 24 items being evaluated on the PEMAT tool will then be answered as agree, disagree, or not applicable, with the evaluator referring back to the educational binder as necessary. It is important that the evaluator look at the items as if they were a patient, not a provider. The material will then be rated based on the answers to the items. If the item is rated at agree, disagree, or not applicable; it receives a score of 1, 0, or N/A respectively. The scores will then be calculated by adding the total points from all 24 items. The sum will then be divided by the total possible points, excluding the items that were scored as N/A. The result will then be multiplied by 100 to obtain the total percentage. The final step in this evaluation process is to interpret the scores. The higher the percentage, the more actionable or understandable the material (Shoemaker, Wolf, & Brach, 2019).

The FRES tool will also be used to determine the readability of the patient health information. The reading ease score will be determined by identifying the average sentence length and the average number of syllables for each word. The average sentence length is determined by dividing the number of words by the number of sentences. The average number of syllables is determined by dividing the number of syllables by the number of words. The formula to determine the reading ease score is as follows: 206.835-(1.015x average sentence length)-(84.6-average number of syllables for each word). Scores between 90 and 100 are able to be easily read by a person with a 5th grade reading level. Scores between 60 and 70 are able to be easily read by a person with an 8th to 9th grade reading level and finally a score of 0 to 30 are at a college reading level (The Flesch Reading ease readability formula, n.d.). The optimal reading level for this patient health information binder should be a 5th grade reading level. There are many online tools available to calculate the FRES of patient health information.

Each of these evaluation tools will be used by various members of the patient’s care team, such as providers, nurses, pharmacists, and social workers. Their scores will then be compared. It is important to have multiple evaluators of patient health information to gain various perspectives.

The evaluation of the newly developed patient binder will take place at the Benefis Sletten Cancer Institute. This binder will be provided to all newly diagnosed oncology patients at their first visit.

The evaluation data will be entered into the SPSS by the project leader. Standard descriptive statistics will be used to define the outcomes and study participants. Any group variances will be examined using standard psychometric methods.

The clinical nurse leader (CNL) is essential to the evaluation of patient education materials. The CNL is prepared to improve patient outcomes by acting as an educator, patient advocate, expert clinician and team leader. These roles are important when developing, evaluating and delivering patient health education. The CNL is an integral part of a patient's oncology care team. As an educator, patient advocate, expert clinician and team leader the CNL can help to improve the care and outcomes of newly diagnosed oncology patients.

As an educator, the CNL is able to use proper teaching strategies and principles along with current informational materials to educate patients under their care (American Association of Colleges of Nursing, 2013). As an educator working with newly diagnosed oncology patients, it is important to have knowledge of effective teaching strategies that will provide patients with information that can assist in shared healthcare decision making. When educating oncology patients it is important that the information they are provided with, be tailored to their needs, education level, health literacy and culture. The CNL has the unique ability to not only assess needs, develop, and evaluate the patient health information, but also the ability to effectively deliver that information to the patient and their family.

As a patient advocate, the CNL is responsible for ensuring that patients, their families, the community, are well informed and part of the care planning process (American Association of Colleges of Nursing, 2013). Evaluating patient and family health information for understandability, readability and actionability is necessary to ensure that patients and their families are well informed of their diagnosis, treatment options and side effects. Patients and families who are well informed are able to play an active role in the decision making and care planning process. The CNL is prepared to ensure that patients are well informed to ensure their ability to play an active role in their care and improve their outcomes.

In the role of expert clinician, the CNL is prepared to design, integrate, coordinate and evaluate the care of families, individuals and the community (American Association of Colleges of Nursing, 2013). Newly diagnosed oncology patients require a large amount of effective health information to guide them through their cancer journey. As an expert clinician the CNL has the ability to design this education, integrate it into the oncology patient population and evaluate its effectiveness.

As a team leader, the CNL is prepared to manage, lead a nursing team and play an active role in interdisciplinary healthcare systems (American Association of Colleges of Nursing, 2013). Ensuring the quality of patient health information materials is essential task for a team leader and member of an interdisciplinary team. Patient education plays an important role when discussing patient care with other health care providers. The CNL has the ability to become a leader when advocating for quality patient education and the continual evaluation of its material.

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