

ASSESSING THE READABILITY OF EDUCATIONAL MATERIAL FOR
THE UROLOGY PATIENT WITH BENIGN
PROSTATIC HYPERPLASIA

by

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ABSTRACT

Education for the Bozeman Health Urology patient is not standardized and at the recommended AMA reading level. Patient education is outdated, either verbal or written, and differs between providers. A microsystem assessment, patient survey, and staff survey have presented the need to assess patient education and education readability. Results have presented the average urology patient is male with a diagnosis of benign prostatic hyperplasia (BPH). This assessment concluded patient education needs to be standardized and tailored specifically to this population to increase patient satisfaction and improve clinical processes. Using Up-to-Date and assessment readability tools, patient education can be created based on evidence-based information.

CHAPTER ONE

INTRODUCTION

The ability to understand and utilize health information is vital for meaningful participation in healthcare decision making and health maintenance following a new diagnosis. Inability to understand and utilize health information negatively impacts patient ability to manage health condition(s) and subsequent healthcare outcomes.

A review of health information available online in diverse areas of healthcare revealed the majority of patient education material is developed well above the literacy level of the average adult (Badarudeen & Sabharwal, 2010; Cisu et al., 2018). Healthcare providers and staff can unknowingly provide health information materials that contain complex explanations and unfamiliar terms that intimidate and overwhelm patients. Though verbal education is often chosen, providing written material to patients during and following healthcare visits is essential. However, if the written health material is not presented in a format that is useable, it may be of little value, lead to misunderstanding, and create poor provider-to-patient communication.

The most common reason males seek healthcare through a urology clinic is related to symptoms of Benign Prostatic Hyperplasia (BPH). According to Lee et al. (2017) one in four men, or 26.2%, have BPH and the chances increase with age of developing the condition. Monitoring BPH is important for the minimization and treatment of lower urinary tract symptoms and preventing the potential progression of prostate cancer. BPH patients need education that is easy to understand concerning the maintenance of their care.

Statement of Problem

The opportunity to improve health information for newly diagnosed patients with BPH was identified through a review of existing patient education material used within the Bozeman Health Urology Clinic. Currently, there are five providers in this clinic who utilize different patient educational material and parameters for education. Variation between providers is present, some patients are given verbal information only, while others may receive both verbal information accompanied with printed materials for reference at home. Review of most existing printed patient health information was revealed to be redundant and/or not easily understood as the material was not created to meet the recommendations of a sixth-grade reading level by the American Medical Association (AMA) and the National Institute of Health (NIH) (Grabeel et al., 2018), while The Joint Commission (TJC) recommends a fifth-grade reading level (TJC, 2010).

This results in the readability of the material being difficult for the average patient. BPH is one of the most common diagnoses at this clinic, thus assessing the literature related to the readability of the educational materials will be explored for potential future implementation.

Background and Need

Ineffective patient health information has been identified as a significant contributing factor to other challenges experienced by healthcare professionals and patients at Bozeman Health Urology. For instance, the lack of educational materials on health information creates patient confusion, causes frustration and fear, lowers patient satisfaction, and increases phone calls and questions to triage nursing. These factors result in less time for nurses to focus on current patients and pertinent problems, thus creating a risk to patient health. Through the

utilization of readable, comprehensive yet summarized, easy-to-understand health information, healthcare professionals and patients can improve health outcomes. When patients seek medical care for a new or unknown health problem, they may leave frustrated if they believe their time and resources (i.e. money) was wasted. It is critical that office visits offer patients insight, education, and ultimately satisfaction in knowing they were seen by an expert for their urological problem(s). Patient satisfaction is correlated with organized learning, thorough communication, and timely response to errors (Nakada & Patel, 2019).

Educational material for the average patient should be standardized, summarized, and accessible. Clear communication creates the feelings of respect and being recognized by active members of their healthcare team. Those leaving with unanswered questions or an unclear understanding of their visit decreases the quality of health outcomes for both patients and the healthcare organization. Conversely, patient satisfaction is increased when caring staff and physicians give patients the belief they are a priority, are seen with dignity and respect, and their concerns are being heard (Nakada & Patel, 2019).

Purpose of Study

The purpose of this paper is to improve the quality of health information to empower patients to co-manage their health condition(s). An integrative literature review will be performed reviewing at the background of BPH, the readability, literacy level, material length, and assessment tools to identify reading/grade level of the educational materials for urology patients with BPH. The goal of this paper will be to use evidence-based research and give suggestions for creating and assessing educational material for patients with BPH. This paper

will not solve the problem, but offer the best evidence-based solutions for addressing the problem.

Significance to the Field

The short-term benefits to the patient will be an increase in satisfaction with their clinic visit, a decrease in anxiety, and improve health by better management of their BPH. Doctors see more patients with less time for education and discussion. The lessening of time for patient visits lessens the time for providers to educate, thus decreasing patient compliance and desirable health outcomes (Nakada & Patel, 2019). Providing efficient materials for education can provide answers and information to patients they were unable to have during their office visit. The long-term benefits would increase clinic efficiency and autonomy to the patient and decrease morbidity and mortality associated with the progression of BPH.

Definitions

Benign Prostatic Hyperplasia (BPH) – “A common non-malignant condition among older men. [A] benign overgrowth of prostatic tissue around the urethra which ultimately constricts the urethral opening, resulting in lower urinary tract symptoms (LUTS)” (Lee et al., 2017, p. 1).

Health Literacy – “The degree to which individuals have the capacity to obtain, process, and understand basic health information needed to make appropriate health decisions” (United States Department of Health and Human Services, 2020).

Lower Urinary Tract Symptoms (LUTS) – “Symptoms associated with LUTS include urgency, frequency, nocturia, incomplete urination, and weak urinary stream. If left untreated,

complications such as urinary retention, renal insufficiency and bladder stone can occur, requiring surgical intervention” (Lee et al., 2017, p. 1).

Readability – “As per the AMA’s and the NIH’s recommendations, readability of patient education materials should not exceed a sixth-grade reading level. The average reading skill of U.S. adults is at the eighth-grade level” (Eltoria et al., 2014, p. 1).

Simple Measure of Gobbledygook (SMOG) Index/Analysis – Created by McLaughlin (1969), who defines SMOG as “the degree to which a given class of people find certain reading matter compelling and comprehensible” (Dubay, 2007, p. 11).

STEEEP – A framework for quality assessment by The Institute of Medicine’s Six Domains of Healthcare: safe, timely, effective, efficient, equitable, and patient-centered (Agency for Healthcare Research and Quality, 2020).

Limitations

Limitations of this research only pertain to the average male patient population for Bozeman Health Urology with the diagnosis of BPH. Patients seeking care for other health considerations will not benefit from this quality improvement project.

Ethical Considerations

In the absence of high-quality health information, patients are unable to engage in meaningful shared healthcare decision-making, which negatively affects health outcomes. Using the STEEEP framework, patients should be given information that encompasses all six aims of the healthcare system (safe, timely, effective, efficient, equitable and patient-centered) and it will

measure the quality of patient material to give meaning, understanding, and relatable views of their care (Agency for Healthcare Research and Quality, 2020).

CHAPTER TWO

LITERATURE REVIEW

Purpose

The purpose of this literature review is to identify best practices in the education of patients newly diagnosed with BPH. This is accomplished through the utilization of current literature to guide content; assessing the readability of all the health information material given to the BPH patient population. This review will create a foundation to develop health information material that will provide patients with the information they need to participate in effective, high-quality care. It will also allow healthcare professionals to improve their practice by allowing patient education to be standardized and afford time to focus on the unique needs of individual patients. The literature was reviewed to find evidence-based practices on patient literacy, tools for assessing that literacy, and the background and the knowledge of the average BPH patient.

The topic of healthcare is vast, containing a large amount of information, complex medical terms and treatments, and diverse educational methods and materials. For this reason, extensive research has been prompted and executed to identify best practices when developing and utilizing educational material.

One critical factor is the readability of written educational materials. The general population who utilizes the educational material must also be considered. In today's busy and chaotic healthcare systems, healthcare professionals often forget that complex terms and explanations regarding care may not be understood by the patient or their family. Specific to the

average population of males with BPH, which according to the National Institute of Diabetes, Digestive, and Kidney Diseases (2014) affects ages 51 to 80 or older, the average age of the Bozeman Health Urology, male patient with BPH should be considered when creating and assessing educational material. Using the Epic computer system and programs, the average age of the Bozeman Health Urology male patient over the 2019-2020 year was determined to be 52, but the average age of the Bozeman Health Urology patient for that same period with the diagnosis of BPH was determined to be age 61 (Epic SlicerDicer, 2020). The Bozeman Health Urology patients have specific needs that should be assessed when creating written educational material.

Three themes were identified while reviewing the literature and will be presented in this literature review. First, the background and pathology of BPH and associated symptoms, the average patient affected by this diagnosis, risk factors, comorbidities, and quality of life will be presented. Second, research on effective education, readability, and average health literacy will be presented. Finally, evidence-based methods evaluate and develop health information will be presented. This section will also present research describing the consequences of providing inadequate education and/or not accounting for patient health literacy. While these topics have been well-researched, a “one-size-fit-all” conclusion cannot be developed with their results. To maintain patient centered care, it should be noted that individual traits and characteristics are unique, and no two patients are alike when it comes to factors when providing education.

Benign Prostatic Hyperplasia, BPH Background, Related Diseases, Age, and Risk Factors

BPH affects many older males and most often causes symptoms of the lower urinary tract. 70% of males ages 60 to 65 and 80% of those over age 70 in the United States are affected by symptoms caused by BPH, with numbers expected to increase in the future (Parsons, 2010). To further highlight the importance of high-quality health information for this population, BPH causes other health problems that are not usually associated with the urinary tract, such as falls (a 63% chance twice a year), fractures, and depression (Parsons, 2010). BPH increases healthcare costs by over one billion dollars annually, increases the frequency of emergency room visits, and results in 21 to 38 million hours of lost productivity (Parsons, 2010). BPH will continue to affect the older male population, and proper knowledge is key to prevention and progression of symptoms and potentially prostate cancer.

Monitoring rising levels of prostate specific antigen (PSA) is one of the first tests to diagnose BPH, and high, fluctuating levels may warrant a prostate biopsy to diagnose possible prostate cancer (Penson et al., 2008). Male patients often present to healthcare providers for lower urinary symptoms of BPH, but not all patients have symptoms or palpable prostate abnormalities (Penson et al., 2008). Along with BPH, according to Penson et al. (2008), rising levels of prostate specific antigen can be an initial sign of worsening or enlargement of the prostate and even cancer. This study notes that being aware of modifiable factors, family genetics, inflammation, and sex steroid hormones increase a person's chances of managing BPH (2010). Prevention of disease progression through patient knowledge of symptoms is vital to potentially minimize risks for the development of prostate cancer.

Certain groups are at risk, and proper education and confidence in healthcare-related decision-making may improve healthcare outcomes. A multiple mixed-method study by Owens et al. (2015) of 81 African-American men and women (the ethnic group most likely to die from prostate cancer) assessed the knowledge each had of education of prostate cancer and how this affected decision-making. The study found that both men and women had limited knowledge of the risk factors for prostate cancer, knowledge of symptoms was limited, with many women admitting they needed more education or had no knowledge of prostate cancer (2015). Many of the males were making decisions on their prostate cancer based on the recommendations of their doctor, job, or a family member (Owens et al., 2015). Results of the pre and post tests showed with education, knowledge of prostate cancer increased for both men and women, but only some were statistically significant with this method (Owens et al., 2015). The intervention increased the confidence about decisions regarding their health some of the time (pre-test: 22%, post-test: 29%) versus all of the time (pre-test: 45%, post-test: 51%) (Owens et al., 2015). This study showed shared decision-making was reported as the most common form of decision making (2015).

A study by Kobayashi et al. (2014) used a systematic review and meta-analysis to see if limited health literacy was correlated with a patient's age. This study assessed the databases of The Embase, PsycINFO, and MEDLINE using 60 studies to systematically review (29 also using meta-analysis) and found that age was strongly correlated with limited health literacy if it was defined by reasoning, comprehension of reading, but an older age was weakly correlated if health literacy was measured using vocabulary (2014). In conclusion, when assessing health literacy of

older adults, measurement tests should include both cognitive abilities and vocabulary to accurately assess an older adult's health literacy level (Kobayashi et al., 2014).

Effective Education through

Readability and Health Literacy

Patient education is often found not to be at a patient population's average health literacy level. The Office of Disease Prevention and Health Promotion (ODPHP) (2014) identified patient education as one of the Five Domains of Social Determinants of Health. This included the areas of social and community context, economic stability, neighborhood and build environment, and health and healthcare (2014). Further, using statistics and medical reports, the importance for healthcare providers to acknowledge how health literacy affects a patient's ability to interpret education in order to create appropriate education for the population (ODPHP, 2014). This report found that communication with the provider, the patient's ability to interpret the written education, and high verbal fluency compared to literary fluency showed their education was not effective, which concluded that proper education should be at the appropriate health literacy level for the average patient (ODPHP, 2014). A person's health literacy is defined by the United States Department of Health and Human Services (2020) as the capability to understand basic health information and is important in helping patients understand and navigate their health.

A retrospective, single-center study by Griffey et al. (2015) with a convenience sample of 431 patients in a 13-hospital system over a 2-year period found that patients were admitted to the emergency department and readmitted more often if they had low health literacy than patients with adequate to high health literacy. Limited health literacy was significantly correlated with returning to the ER within a 14-day period (33% with marginal health literacy and 24.9% with

adequate health literacy), though this could be correlated with the fact those with low health literacy utilize the ED when they should be seeing a primary care physician (Griffey et al., 2015).

A study by Platter et al. (2019) using a systematic framework of 56 individuals from 49 organizations in Maryland was used to create a baseline for what health literacy meant to their organization by using semi-structured interviews with 13 questions of the representatives of the organizations. This study concluded that there needed to be a common understanding and standardization by using the same framework of health literacy for Maryland to assess the health literacy of patients (Platter et al., 2019). The average patient population in the area of education should be assessed before creating health literature. Health literacy can even vary by state or county. How to assess and define health literacy should be standardized by organizations collecting health literacy information.

A book by Nielsen et al. (2004) found that tens of millions of Americans are unable to understand healthcare educational material due to the fact the health literacy of a patient was often disregarded due to the assumption the provider already knew the patient's health literacy level. The book's purpose was to guide healthcare providers to properly educate patients on the growing problem of neglecting the health literacy of patients by calling out healthcare leaders and the Surgeon General (Nielsen et al., 2004). This book concluded that in the United States, medical jargon creates difficulty in understanding, low literacy is more common in certain groups, it creates poorer health outcomes, and up to half of adults don't have "adequate" health literacy – this can be addressed by making healthcare employees aware of the varying health literacies of patients (Nielsen et al., 2004). Most health education for the average patient might

not include a literacy level for patients below average. Providers and healthcare employees need to be aware that medical jargon and terminology may be confusing to patients and reduce the readability of healthcare education.

According to a study by Paterick et al. (2017), many premature deaths were caused by modifiable factors (smoking, unsafe sex, poor diet, alcohol, drugs, decreased physical activity). This study found that in the early 1990's, 50% of mortality rates were thought to be preventative and caused by risky behavior (2017). In order to decrease mortality rates and improve health outcomes, providers need to spend more time educating patients and improve communication by avoiding medical jargon, using the teach-back method, answering patient questions, increasing the effectiveness of education, and be responsible for knowing the health literacy of patients (Paterick et al., 2017). This study concluded that the physician-patient relationship needs to be improved and share in decision-making in order to effectively educate patients (2017).

A pilot study using a convenience sample 112 patients with an ejection fraction of 40% or less, age 18-85 of a 100-bed hospital between May 2000 and July 2002 by Albert et al. (2007) found that video education increased scores in self-care behavior compared to only giving the standard education. VE patient required less telephone communication with healthcare providers, requested more literature on heart failure, and required less diuretic dosing (Albert et al., 2007). Other education methods, such as video education, can be useful and help retention and understanding of healthcare information. Once health literacy of the patient is known, assessed, and appropriate medical terms and education created, tools must then be used to assess if the education material is at an appropriate reading/grade level for that patient population. There are a

number of computerized and hand-scoring tools that can be used to assess readability of materials.

Tools to Assess Readability of Patient Education

Hand-scoring educational materials can be more effective than computerized scoring, but none of the popular patient assessment tools come without flaws. A study by Badarudeen and Sabharwal (2010) used a data analysis to assess the strengths and weaknesses of current readability tools (SMOG Readability formula, the New Dale-Chall readability formula, Flesch Kincaid Grade, Gunning Fog Index, Fry Readability Graph, Flesch Reading Ease score, and the Suitability Assessment of Materials). No readability tool was perfect or without limitation, and each tool had a different strengths and weaknesses (Badarudeen & Sabharwal, 2010). This study also found that popular definitions and ways to define readability, like “grade level” are not always accurate ways to define and collect readability data (2010). This is why more than one readability tool should be implemented and used when comparing the tool’s grade/reading level.

For example, in a physician manual by Weiss (2007), Flesch-Kincaid score (a popular computerized readability tool) was found to be accurate in measuring educational text’s complexity, but it will compute based on word length, thinks text before a period is always a sentence, and does not consider vocabulary. This study concluded that even the some of the most popular readability tools have imperfections (2007). Weiss also concluded that the average Medicaid patient enrollee was a fifth-grade reading level, and material should consider a third to fifth-grade reading level for practices who are at risk for lower health literacy, text should be short, and paragraphs should contain no more than three sentences (2007).

A study by Grabeel et al. (2018) found that one in five Americans read at a fifth-grade level and the average American reads at eighth to ninth-grade level. This study used patient educational materials from the academic medical center in Appalachian Tennessee from January 2016 to May 2016 using SMOG Method and F-K computerized method – which found SMOG produced a higher reading level than the F-K method. This readability tool also found 147 of the 148 materials were not AMA’s recommended sixth-grade reading level, but above the recommendation (99.3%) (2018). Computerized (not hand-scored) assessment tools may not accurately measure the reading level of patient education material in healthcare, causing problems for low-literacy patients (Grabeel et al., 2018). The possibility for inaccuracy with current computerized tools to assess reading level should be kept in mind when creating patient educational material.

Most current educational material is not at the AMA’s and NIH’s recommendations (Badarudeen & Sabharwal, 2010). An example of this is a study by Abu-Heija et al. (2019), who assessed 89 educational articles in September 2018 (using five quantitative readability software programs: Funning Fog Index, Flesch Reading Ease, Coleman-Liau Index, Flesch-Kincaid Grade Level, and SMOG) by Annuals.org, a site by the American College of Physicians, to determine if education was at AMA’s and NIH’s recommended sixth-grade reading level. Of the articles scored, 89 had an FRE of 62.8 (average difficulty) with less than a third having a score of 70.0 (seventh grade level), the FKGL score 7.0 (range 2.9 to 8.2), GFI 8.6 (ranging 5.2 to 13.2) showing 80% above the recommended reading level, and SMOG and CLI of 9.6 and 9.8 showing higher than about average recommended reading level (Abu-Heija et al., 2019). SMOG, a recommended tool for healthcare literature, showed only two articles at or below the

recommendation for the desired reading level (ranges 6.4 to 12.6) (Abu-Hejja et al., 2019). Most of the educational material on Annuals.org is higher than AMA and NIH recommendations, which correlates to poorer health outcomes, and therefore more should be done to stress the importance of readability of materials at an appropriate level for the average patient population (Abu-Hejja et al., 2019).

Using readability scales to assess comprehensibility of education materials carries inherent flaws and has its own limitations since essentially all the algorithms used, consider word length and the number of syllables in the words to assess readability. For example, more difficult medical words such as ‘lipid’ or ‘ketone’, which are short in length can be interpreted as more readable than longer words, such as ‘hospitalization’, which is longer, yet more understandable by the general population (Abu-Hejja et al., 2019, p. 10).

Pulling educational material from popular or even accredited medical websites may not be understood by patients.

An example of this was noted in a study by Koo and Yap (2017) specifically for BPH treatment information found online. Readability analysis using SMOG, Fry readability graph, and the Dale-Chall readability formula of three search engines assessed BPH key words daily for a month using 52 websites, the readability tests yielded grade scores between 13-15 (Koo & Yap, 2017). This study, using SMOG, found 13% of the sites were below the average reading level, and the other sites weren’t confirmed at the proper reading level with the other readability tests, which presented that BPH treatment information exceeded the readability and comprehension of the average US adult (2017). Sources about BPH from academic and health institutions have difficult readability (Koo & Yap, 2017).

CHAPTER 3

METHODS

Evaluation of patient calls to triage nursing and patient satisfaction surveys presented that patients were asking health-related questions that should have been answered during the in-office exam or presented through written educational materials. This gap in practice created many other challenges for the clinic, such as increased calls to triage nursing, decreased efficiency managing other patient concerns, disrupted workflow (i.e. missing and unnecessary steps), and Press Ganey Scores reflected low patient satisfaction.

The lack of patient education materials, or the absence of materials for some health topics, drove the need for a patterns and processes microsystem assessment of the urology clinic. With present education materials, there was no standardization of the educational information between providers, resulting in conflicting information to nursing staff as to what was correct educational information. In addition, much of the material lacked up-to-date and evidence-based information making it essentially “misinformation”. The required health literacy level the patient would need to interpret and utilize the information varied greatly; greatly surpassing the AMA’s and NIH’s recommendations for the health literacy level of the average patient. Further, the length and manner of presentation of the materials were vast and not condensed for the patient to effectively retain the information.

Purpose

The purpose of this project is to make suggestions from evidence-based practice on how to create and assess the readability of educational materials that would be most effective to the

average patient population with BPH. High quality health information that is evidence-based and consistent with best known practices for both patient knowledge and treatment for BPH. It is anticipated that improved education will result in a decrease in unnecessary nursing triage calls from patients, improve patient satisfaction scores in the area of education, improve nurse efficiency and workflow, and eliminate unnecessary steps for nurses at the Bozeman Health Urology Clinic.

Project Development

To accomplish the goals of this improvement project, best practices for creating and delivering effective education material will be utilized. Content will be evaluated and created using best available evidence to guide content. Patient education material will be created to accommodate the average patient, which is recommended to be at a sixth-grade reading level. However, to include a larger portion of patient population, education will be created at a fifth-grade reading level. This is meant to include patients who are under the average reading level. When the use of a complex medical terms is necessary, they will be explained and simplified, as the majority of these terms are not understandable by the average patient. Education will be condensed into an easy-to-read format, and be available through multiple sources (video, website explanations, take-home written education) to make access of the materials easy and enjoyable to suit different patient preferences and learning styles. Finally, patient educational material should be tailored to the population served when possible. The average patient population within the treatment area needs to be assessed to ensure the content is culturally relevant and acceptable. As a final step in this improvement project, nursing staff and the providers will be educated on how to effectively deliver patient education.

Sample/Population

The target sample for this particular project is the average, male, urology patient population at Bozeman Health urology clinic with the diagnosis of BPH. The setting is all the sites maintained by the Bozeman Health Urology group in Montana (Dillon, Livingston, Belgrade, and Bozeman).

Instruments

Tools that will be used to assess current health information and the creation/revision of educational material will be evidence-based, such as the database Up-to-Date (UpToDate, 2020). Readability assessment tools that will be utilized and will include three of the most popular tools: Flesch Kincaid Grade, Fry Readability Graph, and SMOG Readability formula (Badarudeen & Sabharwal, 2010). Multiple instruments will be used to compare accuracy, and finally hand-scoring will be performed because none of these readability assessment tools are flawless (Badarudeen & Sabharwal, 2010).

Proposed Analysis

In order to analyze the effectiveness of the changes to patient education material, nursing triage calls should be measured quarterly and compared to previous call volume. Press Ganey and patient satisfaction scores will be compared in 6 months and one year compared to previous satisfaction scores (Dempsey, 2016). A nurse education leader will be appointed to educate the providers and staff on the process and the purpose the new educational material. The nurse leader will incorporate Lean Management, which uses on-going assessment to create a process to

deliver these new education materials in the most efficient manner, possible. The Statistical Package for Social Sciences (SPSS) will be used to enter data collected by the project leader (Techopedia, 2017). Standard descriptive statistics will be used to describe study participants, outcomes, and group differences will also be examined using standard psychometric methods.

Since the average Medicaid patient enrollee was a fifth-grade reading level, this population should be considered when creating education (Weiss, 2007). Though the AMA and NIH recommend a sixth-grade reading level, educational material will be at The Joint Commission's recommended fifth-grade reading level to accommodate most patient populations (Grabeel et al., 2018; TJC, 2010). Education will be short, condensed, and paragraphs should contain no more than three sentences to accommodate patients who are in the risk group for low health literacy (Weiss, 2007).

CHAPTER 4

ROLES IN CLINICAL NURSE LEADERSHIP

The roles of the Clinical Nurse Leader related to this scholarly project are Nurse Educator, Team Leader, and Patient Advocate. The Nurse Educator will help create the new educational material using information from Up-to-Date, a database with evidence-based, original, and recommended graded information by physicians (UpToDate, 2020). They will assess the current educational material as well as update it for accuracy. They will use the condensed, evidence-based format for written materials, use computerized assessment tools and hand-scoring to confirm the reading level, and start compiling information to create online resources. They will also educate staff members and providers on the purpose of the new educational material.

The Patient Advocate will represent the opinions and needs of the patients by surveying and asking each patient what they would like to see as far as sources concerning education. According to Gerber (2018), an advocate defends a patient's interests, autonomy, communicates their opinions, and is the bridge to understanding information that may cause misinformation and misunderstandings. The advocate will ensure patients' wants and interests are communicated to the urology clinic to best meet their education needs.

The Team Leader will use Lean Management/Lean Thinking, which is outlined by Magalhaes et al. (2016) as a series of processes to attain a goal that will provide value to the patient or organization. Lean Thinking can be applied to many areas, and in healthcare it will help the care team take steps to achieve a goal and continually strive for perfection by assessing the process (Magalhaes et al., 2016). To use Lean Thinking in the urology clinic, the Team

Leader will start the lean process with the urology council and be assigned to assess for on-going improvement of the implementation of the education material. The Nurse Team Leader will confirm with the providers which educational information from UpToDate they will all use to standardize the educational material and eliminate conflicting educational information. The Team Leader will hold staff accountable as well as stress that every patient needs to be provided education in at least one approved format and source.

With combined efforts from the different roles of the nurse leaders, material will be improved and provide more than just education. Effective materials will change broken processes and better outcomes for staff and patients. Having staff work together is pertinent for the coherence of the new education. Assigning nurse leaders to create, improve, and monitor the new education will be the first step to bettering the healthcare system at the Bozeman Health Urology Clinic.

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