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Theresa McCrumb
Grand Valley State University

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Video Education for Improved Education of Newly Diagnosed Multiple Sclerosis Patients

Theresa McCrumb

Kirkhof College of Nursing

Grand Valley State University

Advisor: Karen Roberts Burritt PhD, RN, FNP-BC

Advisory Team: Rebecca Davis, PhD, RN

Susan Price, MSN, RN

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Abstract

Anxiety and depression are prevalent in multiple sclerosis (MS) patients, especially those newly diagnosed. Receiving a diagnosis of MS can be overwhelming and impact patients in multiple areas including physical issues, cognitive changes and anxiety and depression (Kantor, Bright & Burtchell, 2017). This anxiety and depression can cause patients to be less engaged in their plan of care and thereby reduce their quality of life (Rieckmann, et al., 2015). According to the Multiple Sclerosis Association of America (MSAA), four of 10 MS patients are diagnosed with depression and anxiety, with the highest incidence at diagnosis (Multiple Sclerosis Association of America, 2014). Without a clear understanding, the information can be frustrating and highly anxiety producing. The purpose of this DNP project was to evaluate a standardized video education process for newly diagnosed Multiple Sclerosis (MS) patients. This video was developed for implementation at a later date when organizational priorities allow. This video was developed to standardize education, create a process to assess the impact of the video education on anxiety and depression of MS patients at each clinic visit. The Health Belief Model guided the development of this toolkit. This model addresses patient perception and how their perception influences behavior (Hochbaum, 1958). Since anxiety and depression are associated with the diagnosis of MS, a process was developed for the assessment of anxiety and depression in this process.

Table of Contents

Video Education for Improved Education of Newly Diagnosed Multiple Sclerosis Patients

Multiple sclerosis (MS) is a chronic, progressive and often disabling disease impacting the myelin on nerve cells in the central nervous system (CNS). MS is the most common demyelinating disorder (Boss & Huether, 2014). Demyelination of the nerve cells causes disruption in transmission of neuronal signals. These improperly transmitted signals cause abnormalities in neurological functions. MS impacts more women than men and is most often diagnosed between the age of 20 and 40 (Boss & Huether, 2014). Treatment for MS has improved greatly over the last 10-15 years, primarily due to the development of disease modifying agents, however there is still no cure. Effectiveness of new treatment regimens can vary greatly from patient to patient. Some persons get great results while some people continue to decline despite trying multiple medications.

Like many chronic illnesses, patient engagement is vital to their plan of care and outcomes and education is the important factor in patient engagement. The 21st Century Steering Group developed a number of concepts that were needed in order for patients to be involved in their care and participate in shared decision-making. The number one principle was “setting and facilitating engagement by education and confidence-building.” With the need to decrease the strain on providers, there is becoming a higher need to rely on patient’s knowledge and motivation and education is the number one means for attaining higher patient engagement and knowledge (Rieckman, et al., 2015).

Often patients turn to the internet to gain the knowledge they feel is needed to be more involved in decision-making and decrease anxiety. In the 2011 North American Research Committee on Multiple Sclerosis (NARCOMS) registry, three in five MS patients stated the first line of information about their disease was the internet (Kantor, et al., 2018). Online information has increased drastically over the last two decades and has given patients with MS a vast amount of information to absorb. This can be beneficial, but it is also difficult to ascertain the legitimacy of the information found on the internet (Kantor, et al., 2018). For this reason, it is imperative that MS providers have a means to direct patients to legitimate sites and educational opportunities.

Assessment of the Organization

This organization of interest for the DNP project is a nationally recognized neuroscience center in Michigan. They specialize in many areas of neuroscience including, but not limited to, Parkinson's disease, multiple sclerosis, stroke, memory disorders and spine and back disorders. One of the many specialties they provide is care to person with of multiple sclerosis patients.

The MS clinic is staffed by one physician that divides his time between the provider role and Neuroscience Medical Director role. The MS clinic also has a nurse practitioner (NP) and physician's assistant (PA) that each share their time with other clinics in the organization, one master's prepared clinical nurse leader and a medical assistant. The MS clinic cares for approximately 1,400 MS patients and establishes a new diagnosis of MS for approximately 30-50 new MS patients per year.

Organizational Assessment Tool: Six-Box Model

The Six-Box Model (see Appendix A) was developed by Marvin Weisbord in the 1970's as a means to assess an organization (Weisbord, 1976). This model helps the user quickly assess an organization's interpersonal and group issues as well as more difficult problems within an organization (Weisbord, 1976). This model can be used within any organization, regardless of size and allows for assessment of information formally and informally (Weisbord, 1976). The six boxes include purpose, structure, relationships, rewards, leadership and mechanism (Weisbord, 1976).

Marvin Weisbord's Six-Box Model was chosen because it closely matches the parameters for the size and scope of this DNP project. This model is able to fit any type and size of organization. With this project being done in a smaller clinic within a large multi-hospital health system, this model was able to look more closely at the clinic information without much of the focus on the large health system.

Components of the Weisbord Six-Box Model

Purpose. Purpose is important in order for an organization to evaluate and understand the services they want to provide and assure they are providing those services (Weisbord, 1978). This organization was established to be a "one stop shop" and multi-disciplinary neurological clinic and that goal still remains for the organization. They have continued to add specialties and expand those they currently provide. The organization is currently recruiting for a provider to do procedures in an attempt to decrease outside referrals. Even while expanding, the focus continues to be on the original goal of a "one stop shop".

Structure. The structure of an organization helps to determine which services are being provided, who provides those services and how the act of providing them impacts the organization's bottom line (Weisbord, 1978). Under the current structure, the Clinical Nurse Leader (CNL) provides all patient education including those with newly diagnosed MS patients. With the current provider shortage in the clinic, this education falls heavily on the CNL, which can be problematic if the CNL is not working and the education is delayed.

The organization has set a priority of delivering "one stop shop" type of care. Unfortunately, there seems to be a discrepancy between this purpose and the organization's ability to follow through with that purpose due to the shortage of care providers. In the MS clinic, there is also a provider access issue. Currently, patients can wait up to several months to see the MS physician and approximately four weeks to see the MS nurse practitioner. The clinic manager indicated that the delay in care has led to decreased scores in the clinic's Press Ganey® surveys and dissatisfaction among patients.

Relationships. Businesses often struggle with maintaining and growing relationships with key persons such as employees, providers, staff and patients. These struggles can be between employees or providers and staff, or between the organization and their customers. The information from this box helped to answer the question "How do we manage conflict among people?" (Weisbord, 1978, p. 432). This organization appeared to have a good system for handling conflict. According to the clinic manager, conflict is handled well among employees with the use of good communication. Conflict between providers, staff and management is handled with the use of the only outpatient unit-based counsel (UBC) in the organization. This UBC is for RNs and allows for an outlet to discuss problems and find a resolution. A means for providers to give and/or receive feedback about practice is through peer review. One means for the providers to address process improvement is through LEAN meetings. These meetings typically meet once a week and are used to discuss gaps in care, gather information to address the gap, test the new process and determine its effectiveness.

Rewards. Obtaining a reward for making effort toward a goal is crucial. Without that reward, there is often a lack of effort. A feeling that the end product of the work will be enjoyed by a smaller group of people and not by those that worked for that goal is crucial to organizational rewards (Weisbord, 1978). The natural rewards are salaries and benefits. However, according to the clinic manager, associates of this organization also participate in award systems such as the Daisy Award, Friends of Nursing Awards and nursing awards specific to knowledge, compassion, spirituality, vision, advocacy and collaboration. The Daisy Award is given to nurses that demonstrates exemplary care. They can be nominated by anyone in the organization as well as patients and their families. The Friends of Nursing Award is given to non-nursing employees who show exemplary care and are a strong role model. The nominee must meet one of the following: Accountability, Excellence, Communication, Compassion, Continuous Learning and Respect. This award is nominated by patients, families and staff.

Leadership. While this clinic is overseen by a parent organization with many layers of leadership, this clinic is led by a clinic manager, medical director and a neurosciences regional director. The clinic manager is engrossed in day-to-day operations. She has a strong understanding of the clinic culture, operations and employee performance. The medical director has a strong understanding and clinical background in MS and the medical needs of the clinic as it relates to patient care. The regional director has a much broader view of the clinic and how the clinic fits into the larger parent organization

In addition, the MS clinic has a clinical nurse leader (CNL) that is responsible for most of the patient education, including the education of newly diagnosed MS patients. This leadership role is crucial to patient education. Currently there is no sustainability plan for coverage of patient care problems or vacations for this role.

Mechanisms. Having mechanisms in place is important to the function of an organization (Weisbord, 1978). These mechanisms can change over time, but they are needed to help an organization be efficient and competitive (Weisbord, 1978). The current process for education of newly diagnosed MS patients is primarily handled by the CNL who provides face-to-face education to the patient with the use of written materials. These materials are then given to the patient, along with information on how to contact the CNL if they have further questions.

Ethics and Protection of Human Subjects

An application for review and approval or exemption of this project was submitted to the system's Institutional Review Board with approval of the project (Appendix B). Beyond further planning and video development no project activities were commenced until the review was completed and IRB approval or exemption was granted. The purpose and scope of this project was limited to an evidence-based practice improvement plan. No patient identifiable information was collected. No physical, social, psychological, legal, or economic threats to patients were associated with this project. As such, it is anticipated that the impact of the project posed minimal or no risk to patients. These included the inconvenience or impacts associated with the request for anonymous and voluntary participation in the project. All members of the team have completed human subjects' protection training via the Collaborative Institute Training Initiative and their interactions with patients were guided accordingly.

Stakeholders

Key stakeholders include patients, the clinical nurse leader (CNL), provider, staff and leadership. The DNP student anticipated that patients would benefit from developing a consistent, sustainable educational tool that has the potential to lessen anxiety and depression. The CNL will benefit by having a standardized educational process available to allow for easier and more sustainable educational experience for patients. The providers will benefit by decreasing time educating patients and allowing them to use that time more productively, such as increasing patient visits and provider access. In addition, patients and providers will benefit by having a strong process in place to assess all MS patients for anxiety and depression, whether newly or previously diagnosed. And finally, leadership will benefit allowing staff to work more efficiently, thereby increasing productivity and revenue.

SWOT

A SWOT analysis (Appendix C) is a tool used to evaluate the strengths, weaknesses, opportunities and threats of an organization (Moran, et al, 2019). The SWOT analysis can be used along with another tool such as the Six Box Model to evaluate an organization's internal strengths and weaknesses and external opportunities and threats. In order to complete the SWOT analysis, interviews were conducted with the clinic manager, medical director and regional director.

Strengths

The MS clinic has many different internal and external strengths that are put on display on a daily basis. The clinic works hard to be collaborative and engaging with all colleagues. The decision-making tends to flow from the bottom up with clear attempts to assure those that complete the job are involved in the decision-making. Also, while there are some weaknesses that impact the overall financial health of the clinic, one of their strengths is they still maintain a strong bottom-line. Another strength within the organization is their ability to manage crises, both internally with employees and externally with patients and the community. And finally, another strength of the organization is their multi-disciplinary approach to care. They currently treat patients in six different neurological diagnoses and continue to expand within those areas.

Weaknesses

One of the weaknesses of the clinic is poor provider access. There was recently an internal physician change, as one MS physician was promoted to the Medical Director and the clinic position has yet to be filled. The organization is also actively recruiting for a PA or NP for the MS clinic. The issue with provider access has impacted patients as well, as their Press-Ganey® patient satisfaction scores have been negatively impacted in the area of timely provider appointments.

Another weakness is related to the ongoing frustration of reimbursement from a value-based versus fee-for-service environment. A fee-for-service mentality prevails even with the transition to value-based care. They are not completely reimbursed based on value-based care as of yet but are performing services and care based on a value-based system.

Lastly, an additional weakness was identified regarding marketing, both in the community and in their own hospital system. From a community standpoint, they currently compete with two other large health systems including one that recently became affiliated with a nationally recognized health care system. With the large presence of that organization in the region, it has been difficult to gain or keep patients or providers that desire the more widely known and respected health system. From an internal standpoint, the health system often struggles with marketing itself to employees. There is often a disconnect between employees understanding the services that are provided at the clinic as well. There have been examples of internal employees referring patients to outside services that are offered in this clinic.

Opportunities

The clinic has several opportunities that could make a positive impact. First would be increased marketing. While this is a weakness, it is also an opportunity. With the right marketing, there are opportunities to gain both patients and providers. There are many very positive aspects of this particular clinic that, if marketed correctly, could have a huge impact on its view in the community. As an example, they are the only Comprehensive Stroke Center with the fastest “door to needle” time in the area. However, until that is adequately marketed, they could be losing patients to the other systems in the area.

Another opportunity is to increase patient population with the recruitment of a proceduralist. This will allow for procedures to be completed at the clinic and eliminate referrals to outside providers. This could have a positive financial impact.

Threats

The biggest threat to the organization is competition. As stated earlier, this area of southwest Michigan has two other major health systems, including one affiliated with a nationally recognized health system. That particular system has billboards throughout the area with a very recognizable logo to draw patients to their health system. They have the ability to offer better incentives and pay to providers as well.

Another large threat has been the Affordable Care Act (ACA) and the threat of single payer healthcare. The ACA was a wide-ranging health reform law passed in 2010 (Healthcare.gov, n.d.). This law has three goals including making healthcare available those that may not have been able to obtain insurance in the past, increasing the Medicaid system and supporting alternative medical care delivery systems (Healthcare.gov, n.d.). The organization lives in a constant state of flux as it waits for a consensus on how and what services will be paid. The ACA has brought an overabundance of new insurance carriers and with that, an overabundance of different philosophies on coverage. This has created not only confusion from a payment standpoint but also difficulty for the patient in determining coverage for services.

Clinical Practice Question

Accordingly, an evidence-based project to answer the following practice or clinical question is proposed: Does the creation and of a *New Multiple Sclerosis Diagnosis* video education toolkit with accompanying process to evaluate depression and anxiety result in an improved education process for newly diagnosed MS patients?

Review of the Literature

The first step in creating an educational process is to understand what the evidence the literature presents. In this literature review, the focus was placed on video education since there is evidence that patients go to the internet first to obtain information about their MS diagnosis (Kantor, et al., 2018).

Search Methods

PRISMA, The Preferred Reporting Items for Systematic Review and Meta-Analyses (Appendix D), was used to help guide this review process (Moher, Liberati, Tetzlaff, Altman & PRISMA Group, 2009). A comprehensive, electronic review was completed using PubMed and CIHAHL databases. Keywords used were video, video recording, patient education and disease. The Boolean operator AND was used to help narrow down the articles that were relevant to this review. This review was limited to randomized controlled trials, systematic reviews and qualitative studies in the English language between 2009 and 2019.

Inclusion and Exclusion Criteria

Population

Articles for this review included ones that emphasized video education for a pool of patients with chronic conditions. The decision to widen the search to chronic conditions was made because unfortunately, there were no articles specifically relating to MS and video education.

Intervention

Articles included in this review featured video education either in an outpatient or home setting. These articles looked at the impact of the video education on knowledge first and foremost, but also included other measures such as patient satisfaction. Articles that had no intervention were excluded.

Comparison

These articles compared the impact of video education on knowledge versus “usual care” which included education by a staff person, reading material or patient general knowledge. Studies that did not compare video education to “usual care” and that did not look at knowledge levels before and after video were not included.

Outcome

Outcome measures that were included were knowledge acquisition and patient satisfaction. Articles with outcomes that were not clearly defined were not included.

Search Outcomes

The search yielded 129 articles with 67 from PubMed and 62 from CIHAHL. There were 10 duplicate articles found between the two databases. After review of title and abstract, 113 articles were removed based on inclusion and exclusion criteria. Three more articles were removed following review of full-text articles. This resulted in three articles used in this review.

Results

Three articles were included in this review based on the inclusion criteria. All three were randomized controlled trials. All of the studies looked at the impact of an educational video on knowledge acquisition and satisfaction. All of the studies showed a statistically significant increase in knowledge acquisition and two of the three showed a statistically significant difference in patient satisfaction. Geller, et al (2010) showed an increase in more negative attitudes toward the participants’ disease process, ovarian cancer, that is believed to be related to “increased intrusive thinking” (p. 370).

Study Characteristics

All three of the studies looked at the impact of video education on knowledge acquisition. One study took place in the United States (Geller, et al, 2010) and one each occurred in Singapore and the United Kingdom (Tan, et al., 2017; Dyson, et al., 2010). All of the studies were conducted in English with one study allowing both English and Mandarin (Tan, et al., 2017). Study sizes ranged from 42 to 62 and included a total of 163 participants (Geller, et al., 2010; Tan, et al., 2017; Dyson, et al., 2010).

Intervention and Comparison Characteristics

All of the articles looked at knowledge acquisition as the primary outcome, but also included patient satisfaction as a secondary outcome. All of the studies included at least one experimental group and a control group. All of the studies involved the need to watch the video at home at the patient’s leisure, with one being available via YouTube and two requiring the use of a DVD player.

Measures

Two of the studies used knowledge questionnaires that were not standards and were developed by the authors of the studies (Geller, et al., 2010; Tan, et al., 2017). The other study used a standardized form called the ADKnowl questionnaire (Dyson, et al., 2010). They all used generic patient satisfaction surveys developed by the authors (Geller, et al., 2010; Tan, et al., 2017; Dyson, et al., 2010). All of these surveys were administered to participants pre- and post-intervention.

Limitations

One limitation to this literature review is with the limited number of articles available that involved video education for chronic diseases. There are numerous articles involving video education for procedures, but very few for chronic conditions. The literature review for this project resulted in only three articles that involved chronic conditions.

Discussion

Educational videos have been used in a number of studies over the past ten years, however, none have focused on knowledge acquisition for MS patients and the literature is very limited related to any chronic disease. Most studies have focused on the impact of video education prior to a procedure.

All of the studies showed a statistically significant increase in knowledge in the video groups and two of the three showed increased patient satisfaction as well (Geller, et al., 2010; Tan, et al., 2017; Dyson, et al., 2010). None of the studies looked at knowledge acquisition from the standpoint of a patient's behavior toward their diagnosis. The project used the Health Belief Model to help understand why patients make the decisions they make related to their diagnosis.

Phenomenon Conceptual Model – Health Belief Model

The conceptual model applied for this phenomenon is the Health Belief Model (HBM) (Appendix D). The HBM was developed in the early 1950s by the U.S. Public Health Service in an effort to explain why some people participate in public health initiatives and others do not. In future years, others began to broaden its use to assist in explaining why different people have different reactions to symptoms and treatment. It integrated "stimulus-response theory with cognitive theory" to elucidate people's behaviors to a diagnosis or possible diagnosis

(Hochbaum, 1958, p. 1). The theory authors theorize that patients' health behaviors are determined by their need to avoid an illness or to recover from an illness. It is important to understand that this decision can be made not based on actual facts but rather the perception that the patient has of the disease or side effects (Hochbaum, 1958).

The HBM has a set of ideas that help address the decision-making of patients. The first idea is that patients will determine their perception of the pros and the cons or the cost-benefit, of a particular decision. The patient will determine the likelihood of contracting a specific disease and the seriousness of that disease. Once the pros and cons are weighed, then the patient will gather information to determine the perceived "benefit of taking action" or "barriers to action" (Hochbaum, 1958, p. 2). It is important to understand that these decisions will be made based on patients' perception and not necessarily facts they are given. After the pros and cons are weighed and the benefits and barriers are analyzed, the chance of taking an action is determined. This action is often prompted by a motivation to act and this motivation can either be internal or external (Hochbaum, 1958).

The HBM was used in this project to look at how patients may react differently to a diagnosis of MS based on the information they have prior to and following the diagnosis. MS was seen as a debilitating and life altering diagnosis prior to the implementation of disease modifying treatments. However, even with the current treatments, there is still a perception that life will be irrevocably changed with this diagnosis. This is often due to old information and poor education on current MS treatment and impact. The HBM was used in this project to look at how patients may react differently to a diagnosis of MS based on the information they have prior to and following the diagnosis.

Project Plan

Purpose of Project and Objectives

The purpose of this project was to develop an evidence-based toolkit to allow the organization to standardize education of newly diagnosed MS patients. This video was developed for implementation at a later date when organizational priorities allow. Implementation of this educational process is outside the purview of this project. This toolkit was developed to standardize education and create a process to assess the impact of the video education. This project strived to answer the following question: Does the creation and implementation of a *New Multiple Sclerosis Diagnosis* video improve education for newly diagnosed MS patients? In addition to this primary question, this project will seek to answer the following question:

1. Does this video increase patient satisfaction with the style of education received at diagnosis?

Design for the Initiative

This project was a Quality Improvement project. Prior to starting the project at the organization, the DNP student filed a formal IRB application with the organization's IRB for approval. Project steps did not commence until the IRB's approval was granted. The project was deemed not to be human subject's research.

Setting

The project was completed in an MS clinic within a larger neuroscience center that specializes in many areas including, but not limited to, Parkinson's disease, multiple sclerosis, stroke, memory disorders and spine and back disorders. They have approximately 1,400 MS patients and see approximately 30-50 new MS patients per year. Administrative approval was given verbally from the Neurosciences Regional Director and Medical Director.

Participants

The DNP student obtained perception surveys from providers, staff and acquaintances. The providers and staff were from a group within the MS clinic while the patients were from a pool of acquaintances with a known MS diagnosis.

Model Guiding Implementation – Donabedian Model

The implementation model utilized to explain the phenomenon surrounding education of newly diagnosed MS patient is the Donabedian Model (Appendix E). This model looks at three main areas as a focus: structure, process and outcomes. This model was chosen to reflect our goal to standardize education (structure), create a process for education and assessment of depression/anxiety (process), so that the organization can understand their educational and psychological results (outcome).

Structure

The structure portion looks at the perspective of the care that is provided (Donabedian, 1988). The Donabedian model considers structure to be anything an organization does that supports the care delivered in the organization (Lynne, et al, 2015). Structure can also show issues with process. While completing the organizational assessment, it was determined that there was no standardized method of patient education. One important aspect of caring for newly diagnosed MS patients is high quality education. Currently, education is provided briefly at the end of the appointment by either the provider or the CNL, leaving little time for deeper explanation or in-depth plan of care discussions. This lack of adequate education not only leads to decreased patient involvement in their own plan of care and decreased quality of life but decreased patient satisfaction of the provider. Decreased satisfaction scores can impact an organization's quality outcomes and the perception of an organization. After discussing with stakeholders at the organization, it was determined that education could be more standardized with the implementation of video education. Several conversations and meetings were used to discuss the content and flow of the video.

Process

The second portion of the model looks at process or the interaction between patient and provider (Donabedian, 1988). The goal of this project was to develop a more robust method of patient education and a more effective. Current practice makes the providers and the CNL responsible for the education of newly diagnosed MS patients. With limited time available for all appointments, education can be negatively impacted or rushed through, which can negatively impact newly diagnosed MS patients. This new video would decrease the time needed by providers and staff on general MS education and allow for more time to be used for questions or deeper conversations about plan of care.

Outcomes

An increase in knowledge and increase in satisfaction with care can both be considered outcomes according to Donabedian's model (Lynne, et al, 2015). The video was shared with stakeholders in the organization and MS patients and evaluated for satisfaction. The video can be utilized by the organization for further educational needs. In addition, it can used for future research pertaining to the education of newly diagnosed MS patient.

Have a standardized process allows the organization to more fully understand their outcomes and address patient needs in a more timely manner. By addressing their patient needs, they can improve patient satisfaction.

Implementation Steps and Project Timeline

This DNP project intended to show a video developed for newly diagnosed MS patients is effective as a form of education. A project timeline was developed to ensure the project proceeded on schedule. This timeline included implementation, data collection, analysis and final project defense. The project steps included:

1. Video Creation
    a. The video is integral in starting the project and paramount to the success of the project. Based on the HBM, information was provided in a manner that assured evidence-based information.
2. Develop Implementation Process
    a. Developed educational material for providers including medical director, nurse practitioner, physician assistant, registered nurses and medical assistants.
        a. Link to the video was emailed to providers and staff.
        b. A survey was sent to providers and staff to elicit their perceptions of patients' educational needs related to a new MS diagnosis and to determine how well the video addressed those perceptions. (Appendix F)
    b. Developed materials to get feedback from persons who have MS
        a. Link to the video was emailed to acquaintances of DNP student, not affiliated with the MS clinic, who have a known diagnosis of MS.
        b. Two surveys were sent to those MS community members to elicit the perception of their MS education and to determine how well the video addressed those perceptions. (Appendix G and H)

3. Data Assessment
    a. Data was gathered from all surveys and analyzed. Changes will be made to the process and/or video if the surveys warrant the changes.
4. The final report on the project will be submitted to GVSU and the organization. The DNP project will be defended in August 2020.

Methods

The first step in this project was to develop an evidence-based video regarding the most important “need to know” items regarding the diagnosis of MS. Information from the National Multiple Sclerosis Society was used largely to determine the “need to know” items and the most up-to-date and easily understood information (National MS Society, 2020). Feedback was obtained from persons with MS and providers and staff that would use the process in order to address acceptability to both groups. The HBM was used to crease the assessment tools.

This project involved the use of three different surveys – one for providers and staff and two surveys for the MS community members. The provider surveys were sent to all of the providers and staff who evaluate and/or treat MS patients in the organization. The providers included physicians, NPs, PAs, RNs and medical assistants in areas such as the MS clinic, neuro-ophthalmology and general neurology. The contact information for those providers and staff was obtained through the organization email system.

A convenience sample was used for this project due to the COVID-19 pandemic. The community members were chosen from a pool of acquaintances of the DNP student who had a known diagnosis of MS but were not affiliated with the clinic or organization. They were asked to evaluate the video and those that agreed gave contact information to the DNP student, which was used to send the video links and surveys. The goal was to receive 15 completed MS community member surveys and ten completed provider/staff surveys by the deadline for data analysis.

The provider survey included questions based on the HBM to assess their perception of the educational needs of their MS patients. After eliciting that information, it evaluated the degree to which the providers felt the video covered those topics.

The MS community member surveys included pre- and post-video surveys. The pre-video survey included just three questions and attempted to gain information about the person's perception of the impact of the diagnosis on their lives and the education received at the time of their diagnosis. The post-video survey included questions that evaluated the person's perceptions of how the video education would have impacted their lives and ability to deal with the MS diagnosis.

The video was uploaded to a password protected YouTube® Channel and a link was sent individually to each person taking part in the project. The surveys were sent through SurveyMonkey® and the surveys were completed and returned via the same system.

Measures

The DNP student obtained perception surveys from the providers and acquaintances. All data were collected via an online survey and exported to Excel by the DNP student.

Data Collection Procedures

Data collection occurred as soon as surveys were returned from providers, staff and acquaintances, but no later than July 14, 2020. All measurement tools were via online surveys and were collected in Excel. The measurement tools were retained by the DNP student in a secure location until completion of the project and then destroyed. The projected number of surveys returned to the DNP was 15.

Data Management and Analysis

Any secured data that is accessed will be done at a password protected computer. There was no data obtained from the EHR. The computer used for data entry was password protected. Both quantitative and qualitative data were collected in this project.

Resources and Sustainability Plan

One of the benefits to this project is that it took very little human effort or financial resources. Once the initial cost of creating the video was incurred, there would little or no additional financial resources for the organization to continue. The video cost of $2500 was paid for through a grant obtained by the DNP student. The human resource needed during the project was the DNP student.

Results

The purpose of this DNP project was to answer the clinical question: Does the creation and of a *New Multiple Sclerosis Diagnosis* video education toolkit with accompanying process to evaluate depression and anxiety result in an improved education process for newly diagnosed MS patients? This section is organized to initially show raw data that excluded any qualitative responses. Then each question is discussed as it relates to the HBM which included quantitative and qualitative responses.

MS Community Member Surveys

Each of the MS community members was asked to complete a survey prior to and following viewing the educational video. The pre-survey assessed their perceptions of the threat to their lifestyle and type and amount of education they received at the time of their diagnosis. Eight of 12 (67%) pre-video surveys sent out via SurveyMonkey were completed. The post-survey asked them to reflect on their perception of the biggest obstacles in their diagnosis and determine whether they felt the video adequately addressed those concerns. Six of the 12 (50%) post-surveys sent out were completed. There were two Likert format pre-survey questions and five Likert format post-survey questions. All of the questions had five choices with the middle choice always being “Neutral.”

Pre-Video Survey

The first question on the pre-survey asked, “At the time of your diagnosis, how beneficial did you perceive the amount and type of education you received from your provider?” Of those surveyed, three-quarters perceived the amount and/or type of education they received as either neutral (n=3) or Inadequate (n=3) with just two of eight rating it as Adequate (n=1) or Very Adequate (n=1) (see Appendix K). The second question asked, “At the time of your diagnosis, how severe of a threat did you perceive this disease to be to your lifestyle?” Of those surveyed, six of eight perceived their new diagnosis would have a Major Impact (n=3) or Life Altering (n=3) impact while just two of eight felt it would have a Minor Impact (n=2) on their life (see Appendix K). The third question asked to comment on the information or action they felt was needed from their provider to feel more confident in their ability to face their diagnosis. A common theme was needing the provider to take time to listen to them and explain their diagnosis. One wanted their provider “to not have rushed through everything and then pushed us out of the office.” Another wanted “to know that they would take the time to sit and answer any questions or concerns without rushing.” Another common theme was the need for information regarding a plan of care and treatment. One needed “a plan of care and timeline of expectations” while another needed “reassurance and facts/statistics regarding best treatment options.” Another needed “reassurance that the newer medications are more effective than the older one.”

A final comment made was their need to understand “how it was going to effect (sic) me working as a nurse.”

Post-Video Survey

The first question asked, “If you were being diagnosed with MS today and viewing this video, how severe of a threat would you perceive this disease to be on your lifestyle?” One-third perceived the threat as Minimal Threat (n=2), while half rated it as Neutral (n=3) and the remainder (n=1) felt it was a Severe Threat (see Addendum L). The second question asked to state some of the barriers they would face in their ability to follow the recommendations in the video. One stated, “I don’t feel there would be any barriers in following the recommendations in the video” while one felt there were “lots of moving graphics.” Other barriers included were inability to exercise daily and fatigue. One felt that it would be difficult to “overcome fatigue to exercise daily” while another felt that having a family and children and the medication adherence would make the desire to exercise difficult. Another one felt a barrier was “getting my family to understand that I may not be able to do everything I always did.” And the final felt that “depression, anxiety and negative thought patterns’ were a barrier.

The third question asked, “If you were being diagnosed with MS today and viewing this video, how beneficial would you perceive the recommendations in the video?” Two-thirds rated the recommendations given as either Beneficial (n=3) or Very Beneficial (n=1), while a third felt that they were Very Unbeneficial (n=2) (see Addendum L). Question four asked, “If you were being diagnosed with MS today and viewing this video, how do you rate your likelihood to follow at least 3 of the recommendations?” All felt they were Likely (n=1) or Very Likely (n=5) to follow at least three recommendations (see Addendum L). Question five asked “If you were being diagnosed with MS today and viewing this video, how confident would you be that you could face this disease and thrive?" All felt either Confident (n=5) or Very Confident (n=1) in their ability to face MS and thrive (see Addendum L). They were then asked to comment on what was missing from the video that would raise their confidence even more. Two felt there was nothing further needed to increase their confidence although one stated "I think it's the not knowing about the future that carries the most burden for me." Another would have liked to see "percentages of successful people in varying professions." Another was looking for "other treatments such as meditation, yoga and acupuncture." And finally, another was hoping for more information on autoimmune diseases because of the concern that not everyone "realizes that it means it's not contagious." And finally, the last question asked, "After watching the video, what is your perception of the effectiveness of the video as a form of education?" All felt that it was either Effective (n=2) or Very Effective (n=4) (see Addendum L).

Provider Survey

Due to the severely decreased patient care activities being performed onsite in the MS clinic, many providers and staff members were being furloughed at the time of the data collection. Only one survey was returned from the provider/staff portion.

The first question asked for what patients voice to them as their biggest perceived threat with their new MS diagnosis. The provider stated that the biggest perceived fear that patients voice to them is the loss of function. The second question then asked to rate how well the video addressed that threat and the provider answered, on a scale of Very Poor, Poor, Neutral, Good and Outstanding as Outstanding (Appendix M).

The third question asked what providers perceive as the patients biggest barriers to adherence with the treatment plan. The response given was the lack of understanding of the risk of progression. The fourth question asked how well the video addressed that barrier. On the same scale as above, the provider rated it as Good.

The fifth question asked what providers for their perception of how patients would rate the seriousness of their new diagnosis. On a scale of Life Altering, Momentous, Neutral, Superficial and Inconsequential, the provider rated is as Momentous.

The sixth question asked providers to rate their perception of patients' confidence in the effectiveness of the treatment plan discussed. On a scale of No Confidence, Somewhat Confident, Neutral, Very Confident, Momentous, the provider chose Very Confident.

The seventh question asked providers to list one or two actions or recommendations that are perceived by the patient as the biggest benefit to following the treatment plan. The response given was attending physical therapy or rehabilitation. Question eight asked the provider to rate how well the video addressed that benefit and the response was Outstanding.

Discussion

According to the MS community members and providers, the video was effective as a form of education. However, there were a couple of areas of the video that could be readdressed or redeveloped. One comment made was that the video had a lot of movement and could be difficult to watch. Often patients with MS can have visual problems that make this rapid movement difficult to watch. For that reason, slowing down some of the movement would be more beneficial to MS patients. Another area of the video that was lacking was information regarding alternative treatments for MS such yoga, acupuncture and meditation. There was a lot of information regarding medical treatments, but alternative treatments are a growing area of interest lately in most disease processes.

Because of the COVID-19 pandemic, the method of evaluation of the video was revised. The original plan was to have newly diagnosed MS patients at the clinic of interest evaluate the video. Due to the pandemic, a convenience sample of community dwelling persons living with MS was utilized. One recommendation would be to repeat this QI project utilizing the feedback of newly diagnosed MS patients. Additionally, more thorough input from staff and providers is also needed to analyze this project. Staff furlough during the COVID-19 pandemic affect provider and staff availability to participate

Another area that could use more investigation but was also limited by the COVID-19 pandemic, was the implementation of a standardized process for evaluating anxiety and depression in the clinic. The assessment of anxiety and depression is not done on a regular basis. If a patient appears to be suffering with anxiety and depression, it is discussed in clinic visits. There is no current process for the use of PHQ-9 and/or GAD-7 or any other form of assessment for anxiety and depression. There are also no printed materials used by the clinic that address what to do if a patient is struggling with anxiety and depression. Since anxiety and depression can worsen with inadequate education, it is important for the clinic to monitor these two areas. This would allow the clinic to better understand their outcomes and adjust as needed.

Video as a Form of Education

One part of the clinical practice question for this project was to determine the acceptability of video as a form of education. MS community members were asked to view the video and then rate the effectiveness of video as education. All surveyed felt it was effective with two rating it as effective and four rating it as very effective.

Limitations

The major limitation to this project was the lack of ability to interact with patients and providers due to the unprecedented COVID-19 pandemic. The DNP student was not allowed in the site or to have contact with MS patients from that clinic. MS community members were chosen from a convenience sample. Another limitation was found to be with the inability to contact providers during this time. Many of the providers were on furlough and unable to access email. As a result, there was only one provider that responded to the request to watch the video and complete the survey. And finally, the surveys used for this project were not valid tools as the questions were developed by the DNP student. The questions were based on a valid model, the Health Belief Model, however, the surveys were not valid tools.

Relevance for Clinical Practice and Further Study in the Field

According to the MS in the 21st Century Steering Committee, education is the top need for patients in order to be engaged in their care decisions and achieve a high level of satisfaction with their providers and their overall well-being (Rieckman, et al., 2015). The top three areas influenced by increased patient engagement include “increased clinical outcomes, reduced healthcare consumption and improved service quality” (Rieckman, et al., 2015, p. 204). In order to increase patient engagement, patient knowledge must increase first. Because the first visit with the neurology provider is often high stress, patients often forget nearly 80% of the information they are told at that visit (Kamm, et al., 2020). While the amount of data is small, the data available does show that patients’ knowledge does increase with the use of video education. This not only allows patients to view the video at their leisure, but also with family or friends that can help in the decisions and in a less stressful environment where they can retain more information.

Patient education is vital to the patient's participation in their treatment plan. Without a strong educational process, patients are either left with no information or left to their own devices to find the information. This project has begun to show that video education can be a powerful means of educating patients about MS. For this reason, it would be appropriate for use in the clinic to educate newly diagnosed MS patients.

Further study could involve evaluating the impact of this video education on anxiety and depression. Anxiety and depression are often found in newly diagnosed MS patients and lack of adequate education is often one contributor. This project would need to wait until the organization returns to pre-COVID-19 status in order to have access to providers and patients.

Dissemination of Results

The dissemination of this data will involve several means. A scholarly paper will be created and submitted to Scholar Works. In addition, results will be shared with the leaders of the organization in a staff meeting, when allowed. The video will also be available to the organization to use as they choose. It will be a valuable form of education for the organization to implement into their new patient education.

In addition, the findings of the project will be presented via PowerPoint to the team members, faculty, organization and the community. The project was already presented in a poster contest for a regional nursing research conference. The DNP student will look for other conferences nationally or locally. The DNP student may also look for an appropriate nursing journal to submit the manuscript.

Reflection on DNP Essentials

The American Association of Colleges of Nursing (AACN) has outlined *The Essentials of Doctoral Education for Advanced Nursing Practice* (2006). Each of essentials was addressed throughout this project and immersion work. The following essentials were specifically addressed in the project:

- Essential II: Organizational and Systems Leadership for Quality Improvement and Systems Thinking
- Essential III: Clinical Scholarship and Analytical Methods for Evidence-Based Practice
- Essential V: Health Care Policy for Advocacy in Health Care
- Essential VI: Interprofessional Collaboration for Improving Patient and Population Health Outcomes
- Essential VII: Clinical Prevention and Population Health for Improving the Nation's Health.

The remaining essentials were addressed through immersion work or through the nurse practitioner portion of the DNP program. The education acquired through the DNP program covers a great deal of Essential I: Scientific Underpinnings for Practice (American Association of Colleges of Nursing, 2006). This Essential was addressed in the DNP project by the use of theory, ethics, physical, analytical and organizational sciences. Essential II: Organizational and Systems Leadership for Quality Improvement and Systems Thinking was addressed throughout the project by developing a process that addressed the needs of the MS patient population now and in the future by using effective communication, evaluating financial aspects and health policy that works at a practice-level. This essential was also used during meetings with the DNP student's state senator while doing advocacy work in his office. Essential III: Clinical Scholarship and Analytical Methods for Evidence-Based Practice was employed throughout the project while analyzing data and literature in order to effectively develop the educational video toolkit. Essential IV: Information Systems/Technology and Patient Care Technology for the

Improvement and Transformation of Health Care was addressed during numerous DNP courses and the use of electronic medical records while completing clinical hours. Essential V: Health Care Policy for Advocacy in Health Care was established in this project, as well as used during time spent working on advocacy projects in office of the state senator. This DNP student assisted in advocacy related to the recruitment and retention of the mental health workforce. Essential VI: Interprofessional Collaboration for Improving Patient and Population Health Outcomes was addressed by the attendance at several conferences and seminars that addressed the use of multi-disciplinary approaches to healthcare, including one conference specifically related to neurology. Essential VII: Clinical Prevention and Population Health for Improving the Nation’s Health was addressed in the project by evaluating the gaps in care of patients with MS. Essential VIII: Advanced Nursing Practice was addressed throughout the DNP program but especially in the nurse practitioner role education and clinical experiences.

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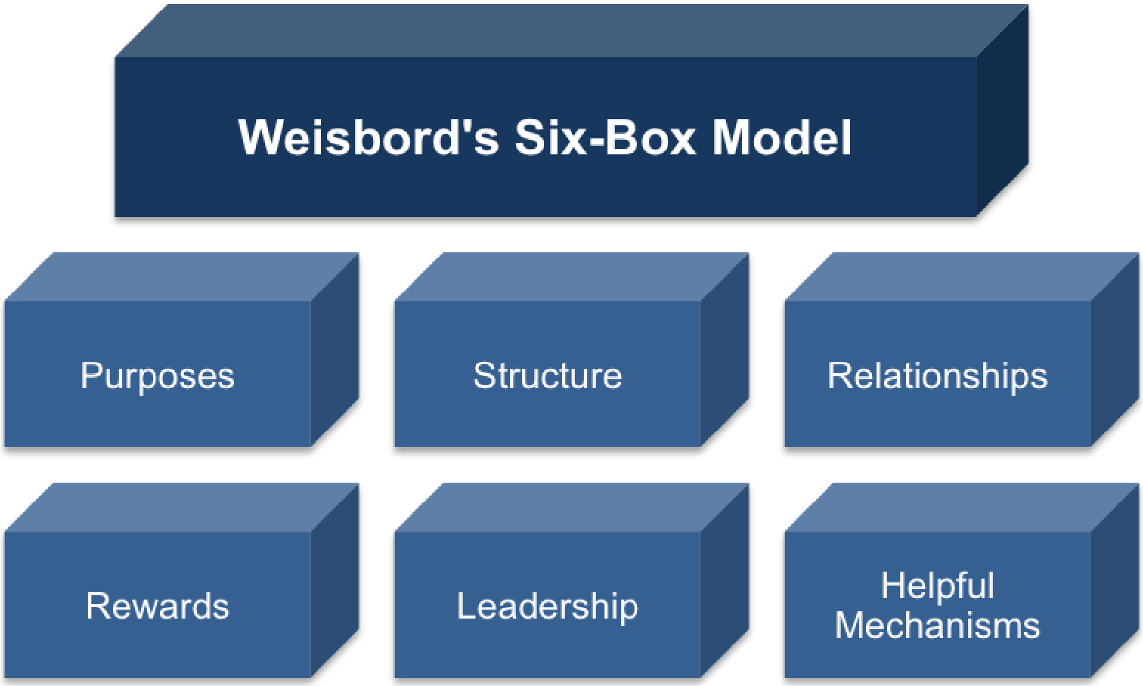
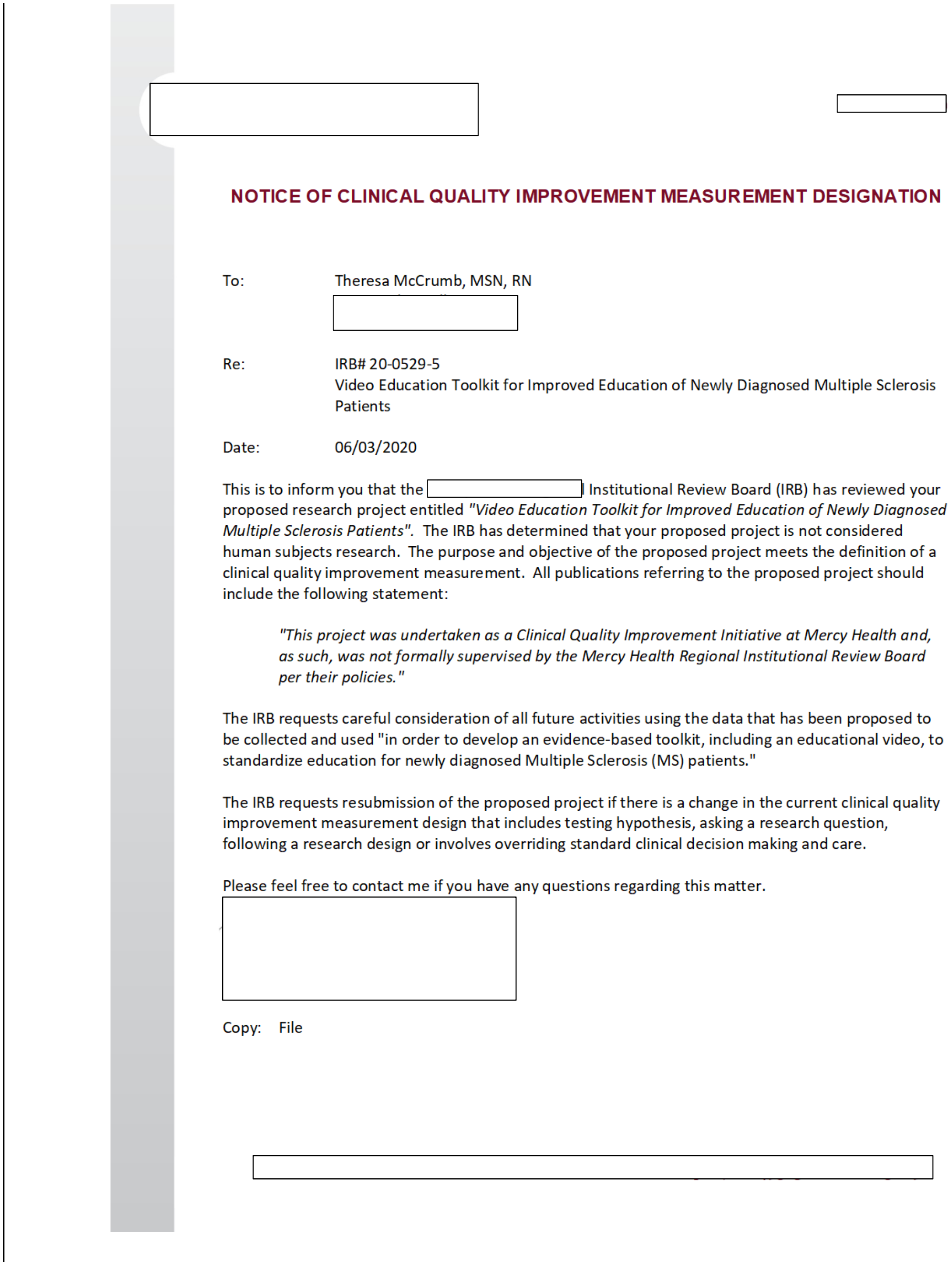
Appendix A

Six-Box Model



Appendix B

IRB Approval



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NOTICE OF CLINICAL QUALITY IMPROVEMENT MEASUREMENT DESIGNATION

To: Theresa McCrumb, MSN, RN
[redacted]

Re: IRB# 20-0529-5
Video Education Toolkit for Improved Education of Newly Diagnosed Multiple Sclerosis Patients

Date: 06/03/2020

This is to inform you that the [redacted] Institutional Review Board (IRB) has reviewed your proposed research project entitled *"Video Education Toolkit for Improved Education of Newly Diagnosed Multiple Sclerosis Patients"*. The IRB has determined that your proposed project is not considered human subjects research. The purpose and objective of the proposed project meets the definition of a clinical quality improvement measurement. All publications referring to the proposed project should include the following statement:

> *"This project was undertaken as a Clinical Quality Improvement Initiative at Mercy Health and, as such, was not formally supervised by the Mercy Health Regional Institutional Review Board per their policies."*

The IRB requests careful consideration of all future activities using the data that has been proposed to be collected and used "in order to develop an evidence-based toolkit, including an educational video, to standardize education for newly diagnosed Multiple Sclerosis (MS) patients."

The IRB requests resubmission of the proposed project if there is a change in the current clinical quality improvement measurement design that includes testing hypothesis, asking a research question, following a research design or involves overriding standard clinical decision making and care.

Please feel free to contact me if you have any questions regarding this matter.

[redacted]

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Appendix C

Table 1

Strengths	**Weaknesses**
• Collaborative and engaging with colleagues • “Bottom-up” decision making • Strong bottom line • Ability to manage internal and external crises • Multi-disciplinary approach to care	• Provider access • Poor provider access scores on Press-Ganey • Reimbursement issues related to fee-for-service vs. value-based care • Marketing to internal and external customers
Opportunities	**Threats**
• Marketing to internal and external customers • Addition of proceduralist to increase patient population	• Competition • Affordable Care Act

Appendix D

Prisma Diagram

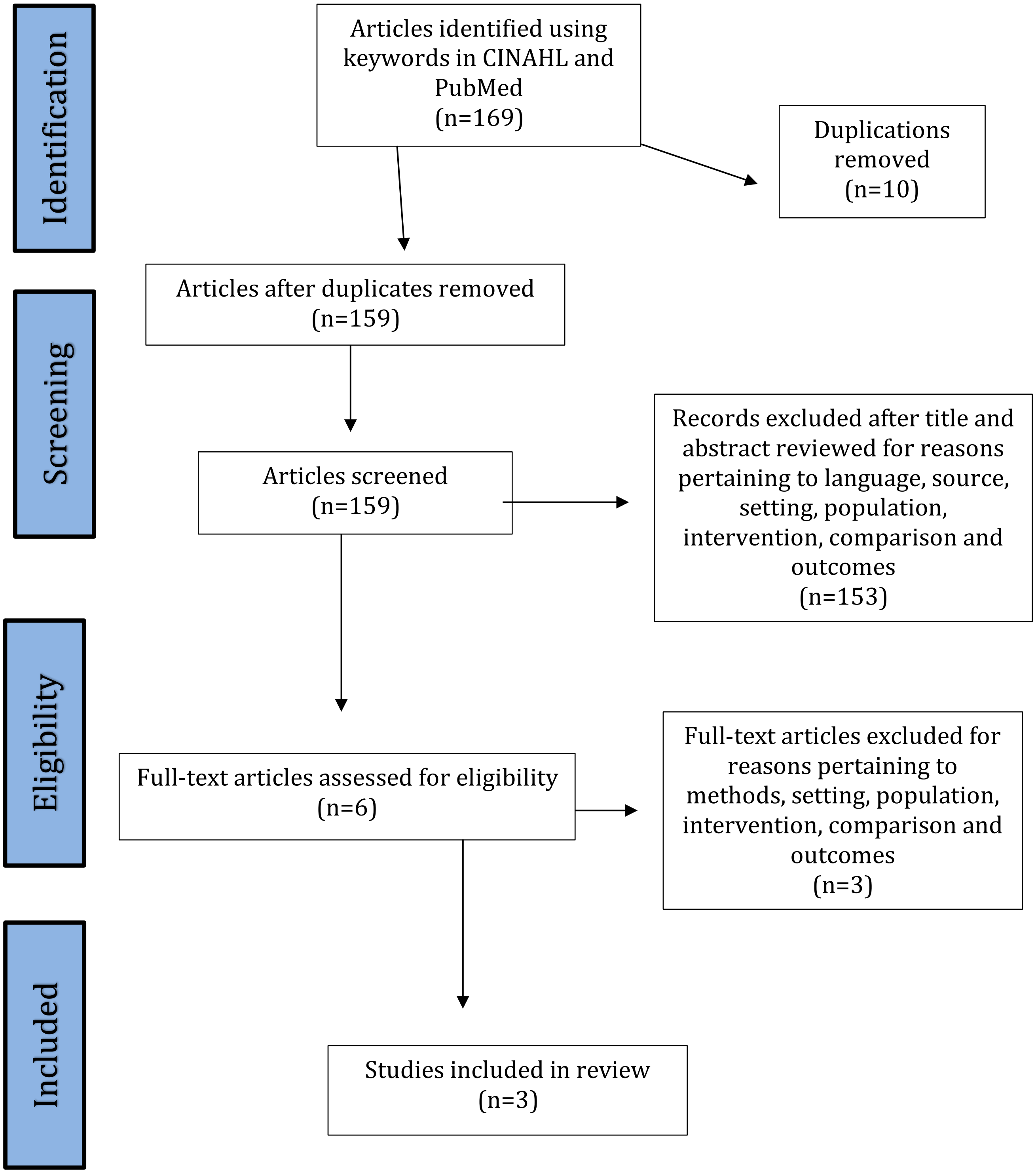


Figure. Flow diagram of search selection process. Adapted from "Preferred reporting items for systematic review and meta-analyses: The PRISMA statement," by Moher, D., Liberati, A., Tetzlaff, J., & Altman, D.G. (2009).

Appendix E

Table 2

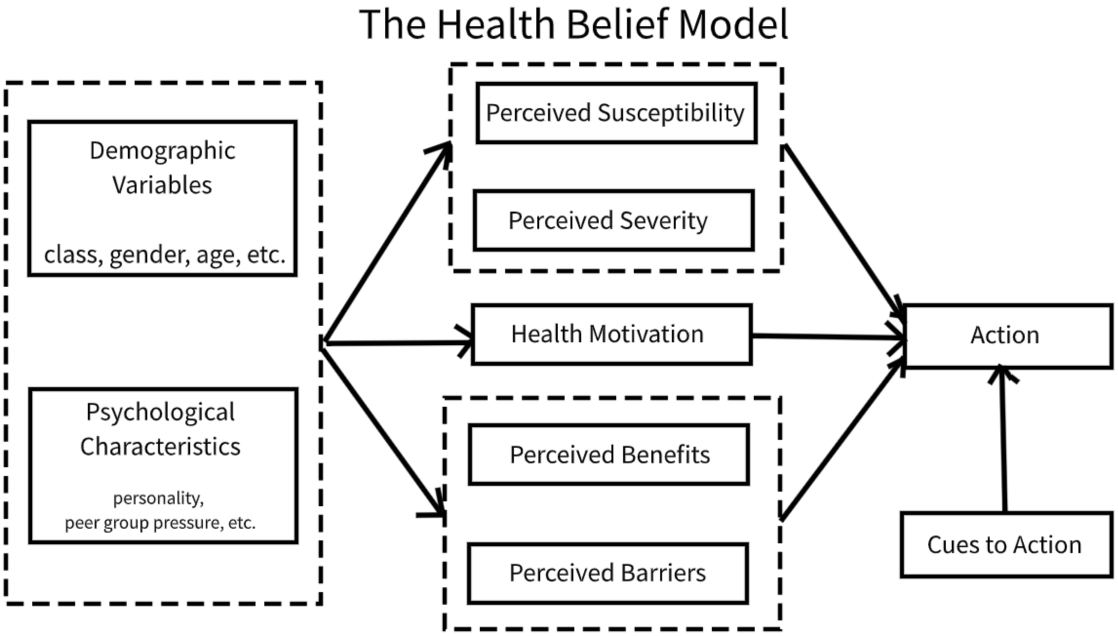
Author (Year) Purpose	Design (N)	Inclusion Criteria	Intervention vs Comparison	Results	Conclusion
Geller, M.A., 2010 *Purpose:* Evaluate the impact of an educational video on attitudes about their disease, knowledge and anxiety for patients with ovarian cancer	Randomized Control Trial	*Inclusion:* newly diagnosed ovarian cancer patients, ≥18 years of age, English-speaking, education ≥5th grade	*Control group*: watched video on gardening; *Treatment group*: watch professionally produced educational video	59 women were randomized with 30 to intervention group and 29 to control group; of the 30 randomized to the intervention group, 21 completed the pre- and post-surveys and of the 29 randomized to the control group, 13 completed the pre- and post-surveys; there were no differences in the groups socioeconomically; prior to video, participants answered a mean of 5.9 of 10 questions with no difference between control and treatment group, following the video, the treatment group answered 2.5 more questions correct than control group; 42% of intervention group had less favorable attitudes and experienced more distress	This study showed a positive impact on knowledge acquisition and showed that women learned and maintained more knowledge with the video than standard print information, however it also showed an increase in distress and negative attitude with the video which was thought to be related to an increase in knowledge about cancer and their prognosis
Dyson, P.A., 2010 *Purpose:*	Randomized clinical trial	*Inclusion:* Subjects over 18 years old with type 2 diabetes	*Both groups:* received medical care from PCP including DM2	21 subjects randomized to study group and 21 to control group:	This study showed that video lifestyle education significantly

Evaluate a video-based lifestyle education program for newly diagnosed diabetes patients		diagnosed within the last 6 months *Exclusion:* Individuals with type 1 diabetes, pregnant or women of childbearing age without adequate contraception, breastfeeding, major psychiatric disorder, eating disorder, history of alcohol or drug abuse, creatinine level >150, abnormal liver function tests or known malignancy	education from practice nurse, plus; *Treatment group:* Three lifestyle videos and requested they watch in their own time *Control group:* Given the video after conclusion of the project	*Knowledge:* highly significant increase in overall diabetes knowledge in intervention groups; *Labs:* significant reductions in A1C, total cholesterol, LDL in intervention group; *Diet/Physical Activity:* physical activity increased significantly in intervention group by steps per day but no significant changes at 6 months between the two groups and no significant decrease in nutrient intake between the two groups; *Quality of Life:* no significant changes in general quality of life between the two groups	increased diabetes knowledge over the control group and while there were significant changes in labs initial, there were not statistically significant changes at 6 months, with no significant changes in diet, physical activity and QOL between the two groups. There was extremely positive reactions to the video with over 90% positive ratings for this form of education.
Tan, M.L., 2017 *Purpose:* To evaluate the impact of anxiety, knowledge and satisfaction of an educational	Randomized control trial	*Inclusion:* newly diagnosed breast cancer women who were scheduled to undergo wide excision or mastectomy,	*First phase was Standard of Care:* Breast cancer nurses (BCN) provided pre-operative counseling session with the use of written	A total of 67 women participate with 32 in the standard of care group and 35 in the study group, however 3 forgot to watch the video and 2 did not get access to a DVD player as required and were not included in the study; both groups had a knowledge increase from pre- and post-surgery, but the study	This study showed that women diagnosed with breast cancer that watched the educational video had a statistically significant increase in

video for newly diagnosed breast cancer women		with or without reconstruction, age >21, breast cancer stage 0, I, II or III, read English or Mandarin *Exclusion:* diagnosis of lobular carcinoma in situ, metastatic disease, cognitive impairment or unsound mind and did not have access to a DVD player	materials consisting of a booklet and brochures to educate on surgical options, then they completed knowledge surveys and anxiety and satisfaction levels *Second phase, study group:* Received standard of care plus a video on breast cancer; they were also given knowledge, anxiety and satisfaction surveys at start of phase and 2 weeks after surgery	group had a larger increase knowledge; there was statistically similar decrease in anxiety and there was no difference in satisfaction between the two groups	knowledge, but there was no statistical significance between the control and study group when it came to anxiety or satisfaction with the surgery.

Appendix F

Health Belief Model



Appendix G

Donabedian QI Framework

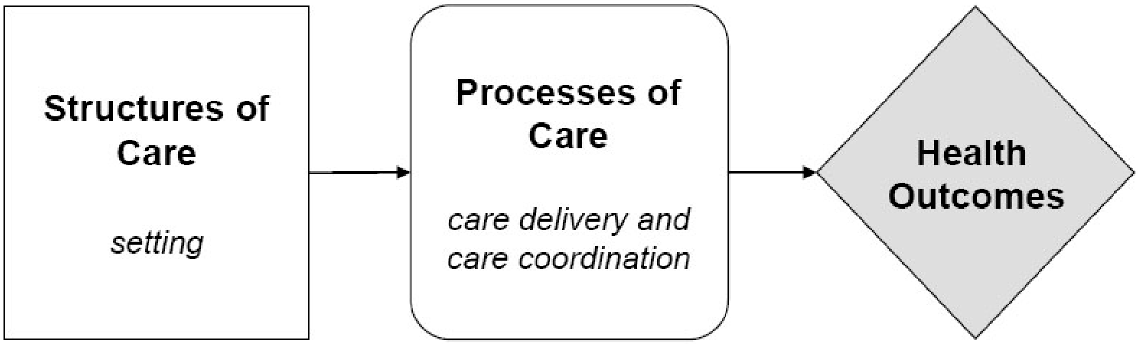


Figure 1. Donabedian, A. (1988). The quality of care how can it be assessed? *Journal of the American Medical Association.* doi:10.1001/jama.1988.03410120089033

Appendix H

Provider Survey

Staff/Provider Video Satisfaction

1. In your experience working with newly diagnosed MS patients, what do patients voice to you as the biggest perceived threat with being diagnosed with MS?

2. Please rate how well you believe this video adequately addresses those concerns.

1	2	3	4	5
Very Poor	Poor	Neutral	Good	Outstanding

3. What do you perceive as patients’ biggest barrier to adherence with treatment plan?

4. Please rate how well you believe this video adequately addressed those barriers.

1	2	3	4	5
Very Poor	Poor	Neutral	Good	Outstanding

5. In your experience working with newly diagnosed MS patients, what is your perception of how patients rate the seriousness of MS at diagnosis?

1	2	3	4	5
Life Altering	Momentous	Neutral	Superficial	Inconsequential

6. In your experience working with newly diagnosed MS patients, please rate their confidence in the effectiveness of the treatment plan discussed?

1	2	3	4	5
No confidence	Momentous	Neutral	Somewhat Confident	Very Confident

7. In your experience working with newly diagnosed MS patients, what are one or two actions or recommendations that are perceived by the patient as the biggest benefit to following the treatment plan?

8. Please rate how well you believe this video adequately addresses those concerns.

1	2	3	4	5
Very Poor	Poor	Neutral	Good	Outstanding

Appendix I

MS Patient Acquaintance Pre-Video Survey

MS Patient Acquaintance Pre-Video Survey

1. At the time of your diagnosis, how beneficial did you perceive the amount and type of education your received from your provider?

1……………….…….2………….…….3……………...……4………….….………5

Very Inadequate Inadequate Neutral Adequate Very Adequate

2. At the time of your diagnosis, how severe of a threat did you perceive this disease to be to your lifestyle?

1…………………2……………..……3………….…..……4…………….….………5

Life Altering Major impact Neutral Minor Impact Minimal or No Impact

3. What information or action did you need from your provider in order to feel more confident in your ability to face your new diagnosis?

Appendix J

MS Community Member Acquaintance Post-Video Survey

MS Community Member Acquaintance Post-Video Survey

1. If you were being diagnosed with MS today and viewing this video, how severe of a threat would you perceive this disease to be to your lifestyle?

   1………..……..2…………...……3……………....……4……………..…5
   Very severe threat Severe threat Neutral Minimal threat No threat

2. If you were being diagnosed with MS today and viewing this video, what barriers would you face that would interfere with your ability to follow recommendations in the video?

3. If you were being diagnosed with MS today and viewing this video, how beneficial would you perceive the recommendations to be in the video?

   1…………...…….2……………..……3…………...……4……………….……5
   Very Unbeneficial Unbeneficial Neutral Beneficial Very Beneficial

4. If you were being diagnosed with MS today and viewing this video, how do you rate your likelihood to follow at least 3 of the recommendations in the video?

   1……………………….2……………..……3………..……4……….…….……5
   Very Unlikely Unlikely Neutral Likely Very Likely

5. If you were being diagnosed with MS today and viewing this video, how confident would you be that you could have face this disease and thrive?

   1…………...……….2……..……..……3………...……4……….……….……5
   No Confidence Low Confidence Neutral Confident Very Confident

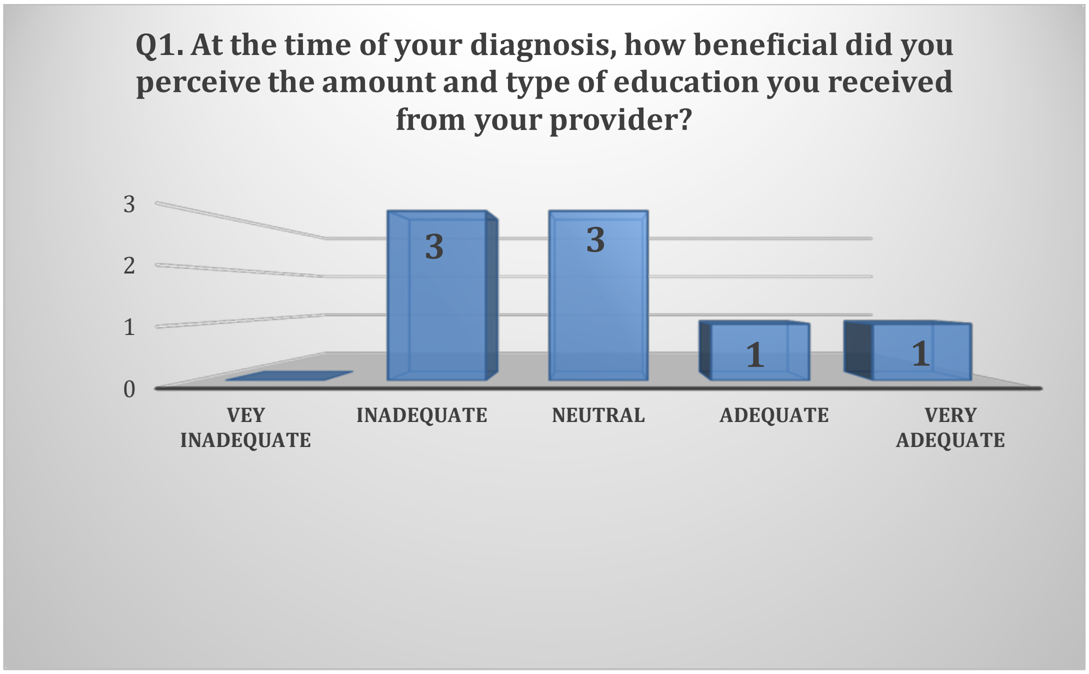
6. What information was missing from the video that would raise your confidence?

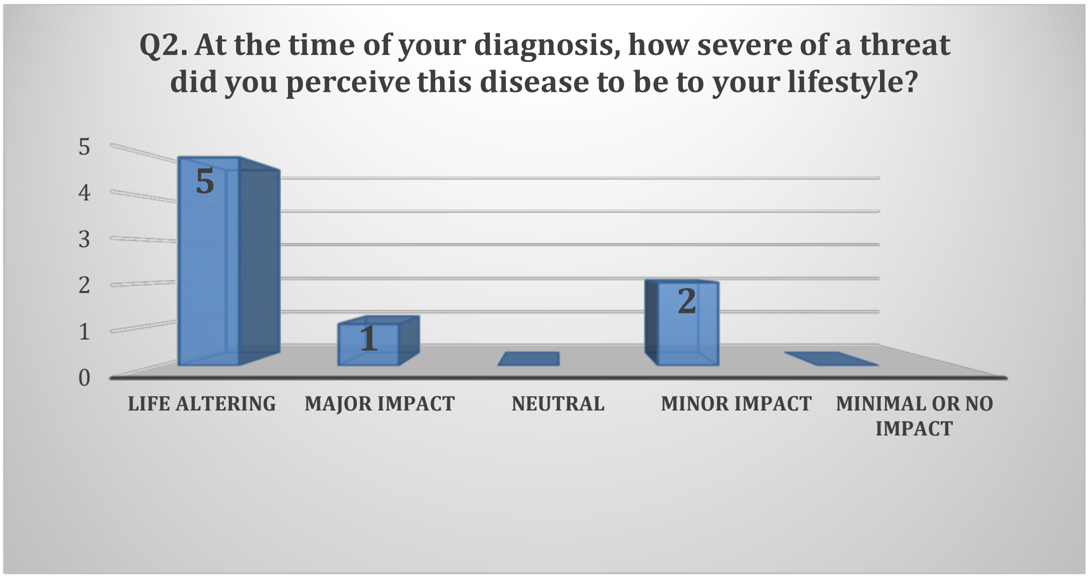
7. After watching the video, what is your perception of the effectiveness of video as a form of education?

   1……………...…….2…………..……3………..…..……4…………...…….……5
   Very Ineffective Ineffective Neutral Effective Very Effective

Appendix K

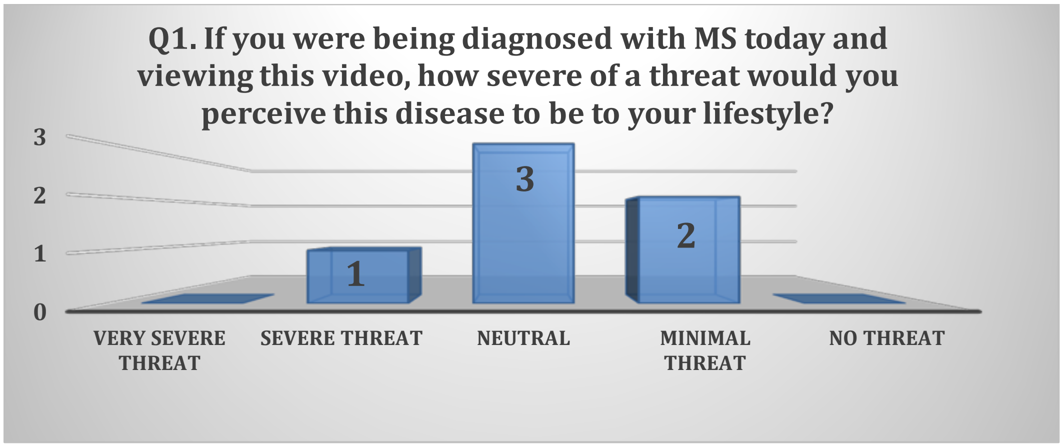
Pre-Video Survey Results

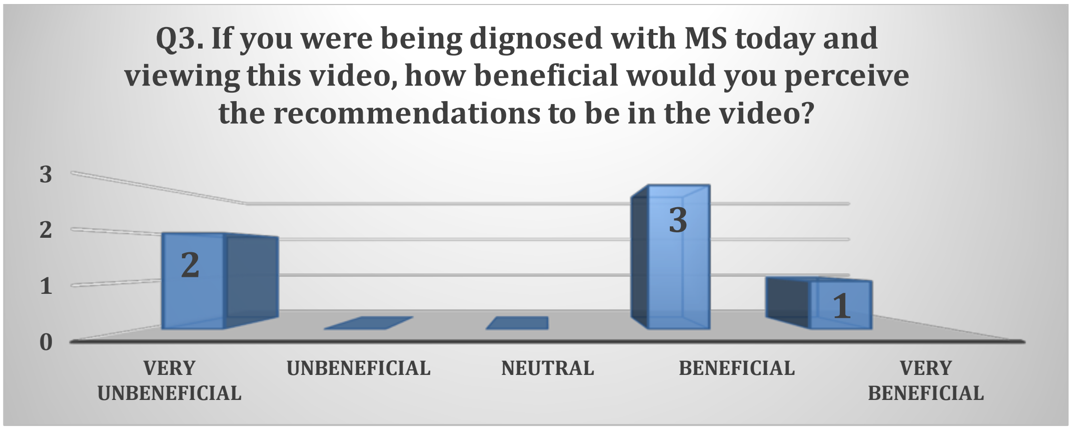


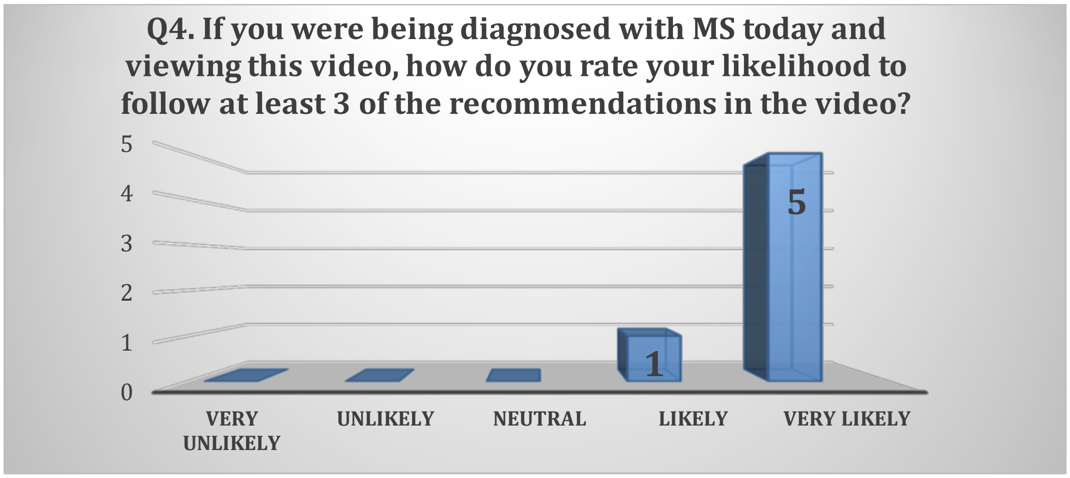


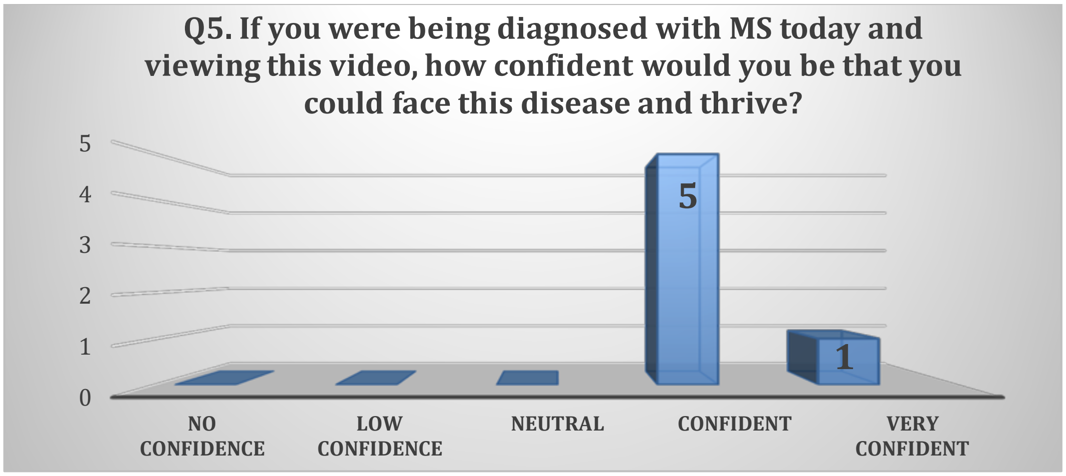
Appendix L

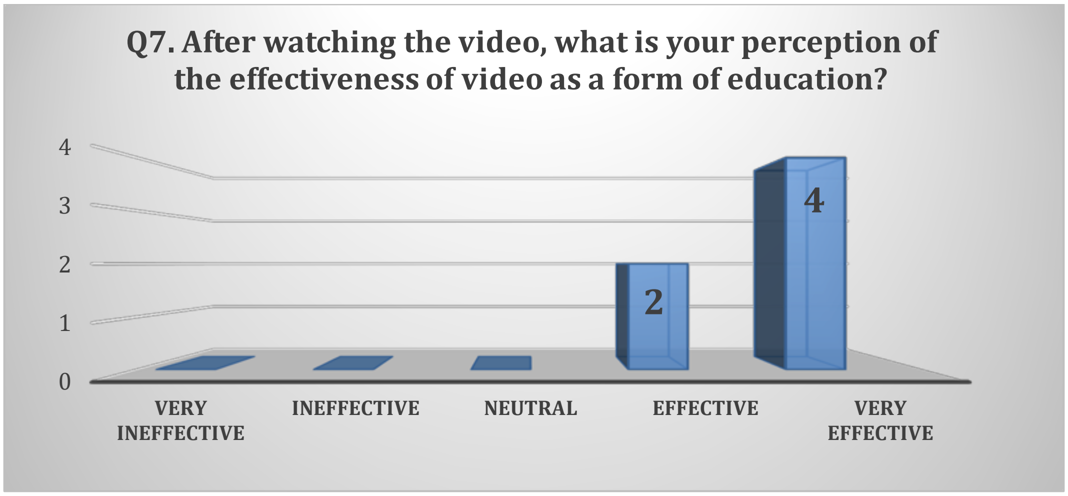
Post-Video Survey Results





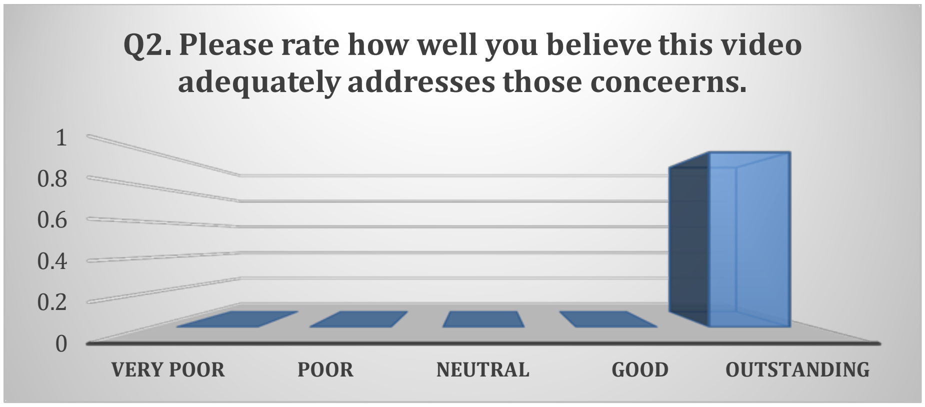


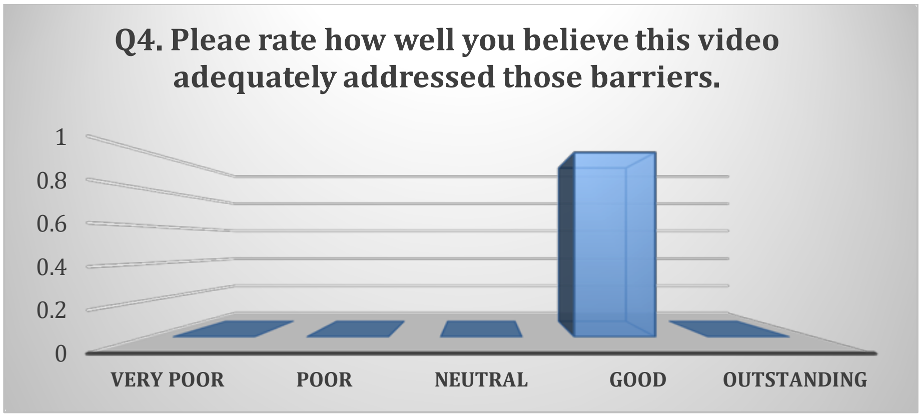

Q5. If you were being diagnosed with MS today and viewing this video, how confident would you be that you could face this disease and thrive?
5
4
3
2
1
0
5
1
NO CONFIDENCE
LOW CONFIDENCE
NEUTRAL
CONFIDENT
VERY CONFIDENT

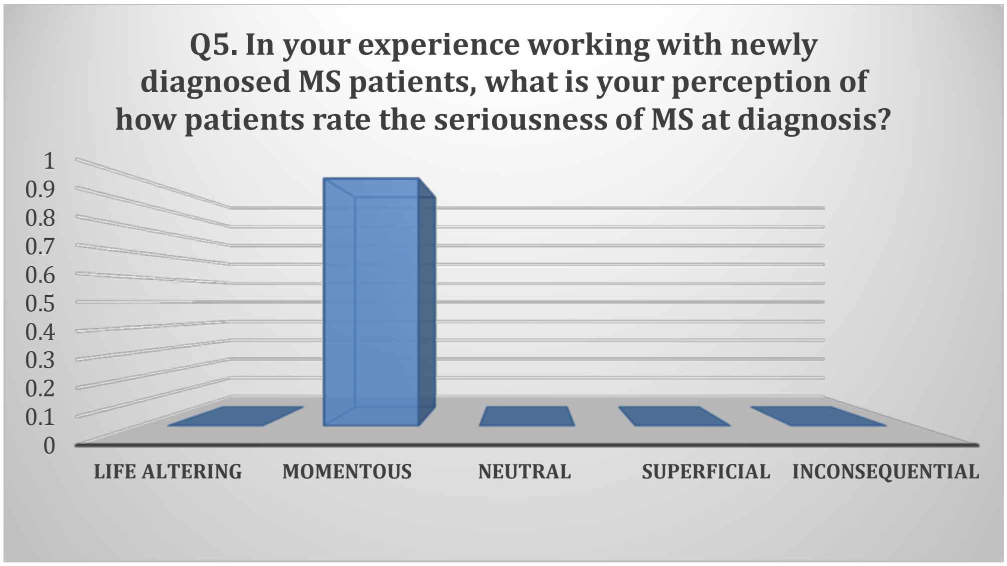

Q7. After watching the video, what is your perception of the effectiveness of video as a form of education?
4
3
2
1
0
2
4
VERY INEFFECTIVE
INEFFECTIVE
NEUTRAL
EFFECTIVE
VERY EFFECTIVE

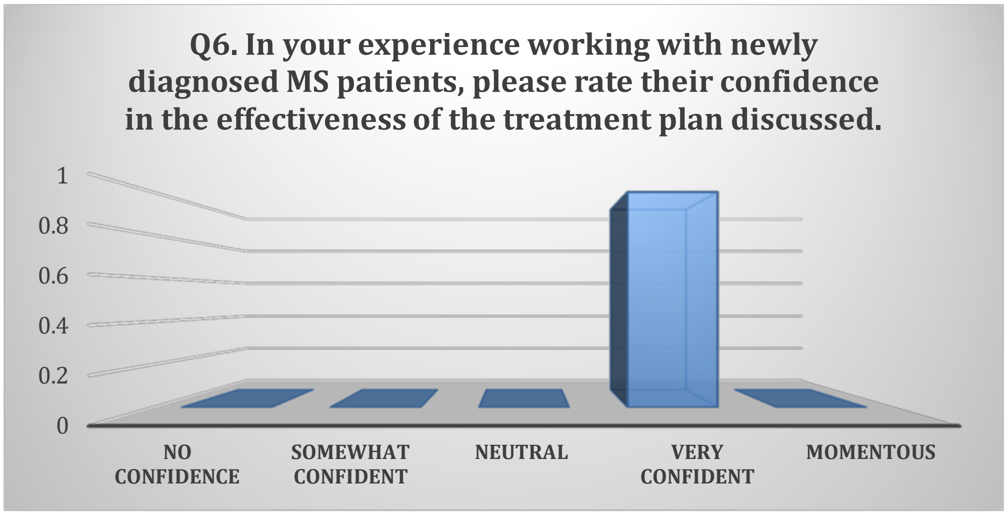
Appendix M

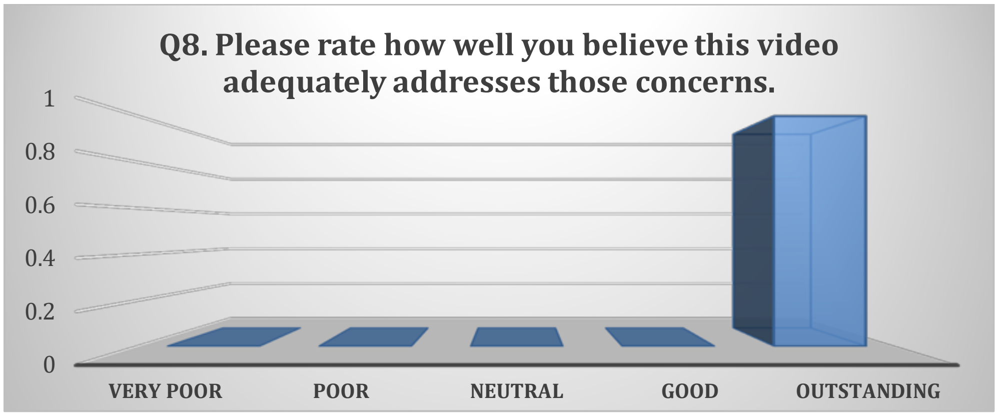
Provider Survey Results






Q5. In your experience working with newly diagnosed MS patients, what is your perception of how patients rate the seriousness of MS at diagnosis?
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
LIFE ALTERING
MOMENTOUS
NEUTRAL
SUPERFICIAL
INCONSEQUENTIAL


Q6. In your experience working with newly diagnosed MS patients, please rate their confidence in the effectiveness of the treatment plan discussed.
1
0.8
0.6
0.4
0.2
0
NO CONFIDENCE
SOMEWHAT CONFIDENT
NEUTRAL
VERY CONFIDENT
MOMENTOUS


Q8. Please rate how well you believe this video adequately addresses those concerns.
1
0.8
0.6
0.4
0.2
0
VERY POOR
POOR
NEUTRAL
GOOD
OUTSTANDING