Title
Impact of a Preoperative Education Video on Parent Satisfaction in Pediatric Ophthalmology

Author
Anulao, Kathleen June

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Impact of a Preoperative Education Video on Parent Satisfaction in Pediatric Ophthalmology

A dissertation submitted in partial satisfaction of the

requirements for the degree

Doctor of Nursing Practice

by

Kathleen June Anulao

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ABSTRACT OF THE DISSERTATION

Impact of a Preoperative Education Video on Parent Satisfaction in Pediatric Ophthalmology

by

Kathleen June Anulao

Doctor of Nursing Practice

University of California, Los Angeles, 2023

Professor Nancy A. Pike, Chair

Problem: Preoperative education for parents whose children are undergoing an ophthalmic procedure or surgery is critical for a positive surgical experience. Current parent preoperative education practices in a pediatric ophthalmology clinic rely mainly on verbal instruction and can have inconsistent delivery.

PICO Question: Among parents of pediatric patients undergoing ophthalmic procedure or surgery **(P)**, how does the utilization of a preoperative educational video **(I),** compared to the current standard of practice (verbal instruction only) (**C),** impact surgical day parent satisfaction **(O),** over a three-month period?

Methods: A quality improvement (QI) project was conducted between July 2022 to April 2023. Pre-surgical parents were identified in a pediatric ophthalmology clinic and viewed a 10-minute voice-narrated PowerPoint video containing standard parent education. Parents were given a paper copy of the slides and a QR code as a resource. Parents were asked to 1) evaluate the effectiveness of the video by completing the Patient Education Materials Assessment Tool for Audiovisual Materials (PEMAT-A/V), 2) answer demographic questions, and 3) complete the Hospital National Research Corporation (NRC) Health parent satisfaction survey. The NRC Health scores were compared three months before and after the preoperative video introduction. Percentages were used to evaluate sample characteristics and compare percentages of parent satisfaction scores pre- and post-video implementation.

Results: A total of 43 parents watched the video and answered the PEMAT-A/V questionnaire. PEMAT-A/V scores showed that 93% of participants reported the video as easy to understand and that it acknowledged actionable items needed for day of surgery. Parent satisfaction scores improved from pre-intervention (n=50; 3 months) 87% compared to post-intervention (n=49; 2.5 months) 100%.

Conclusion: Preoperative video education can positively impact satisfaction with surgical experience among parents of pediatric ophthalmology patients. Future development of parent educational videos based on procedure or surgery and in multiple languages could further impact parent understanding and overall satisfaction with the surgical experience.

The dissertation of Kathleen June Anulao is approved.

John Lazar

Mary Rezk-Hanna

Kristi K. Westphaln

Nancy A. Pike, Committee Chair

University of California, Los Angeles

2023

To my Chris, you made my dreams come true.

Cami and Vinny! You are my dream.

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VITA

Education	1998	B. S. Nursing, Mount St. Mary's College
	2003	Family Nurse Practitioner Neuropsychiatric Subspecialty University of California, Los Angeles
	2007	Registered Nurse First Assistant University of California, Los Angeles UCLA Extension
	2023	Doctor of Nursing Practice (in progress) University of California, Los Angeles
Licensure	1998	Registered Nurse License #550364
	2003	Family Nurse Practitioner License #14696
Certifications	2004	Family Nurse Practitioner Board Certified (FNP-BC) American Nurses Credentialing Center
Professional Experience	1998 - 2001	Staff Nurse, Perioperative Services Jules Stein Eye Institute University of California, Los Angeles
	2001 - 2005	Manager, Perioperative Services Jules Stein Eye Institute University of California, Los Angeles
	2005 - 2021	Family Nurse Practitioner Retina Division Ophthalmology Children's Hospital Los Angeles
	2021-present	Clinical Services Manager Division of Ophthalmology Children's Hospital Los Angeles

CHAPTER ONE: INTRODUCTION

Every year, approximately 3.9 million children undergo a surgical procedure in the United States (Rabbitts & Groenwald, 2020). Of those children, over 50,000 children undergo ophthalmology procedures or surgeries (Usmani et al., 2019). Indications for pediatric ophthalmology procedures or surgeries include a non-invasive eye exam under anesthesia (EUA) and diagnoses like strabismus, cataracts, ptosis, open globe (Uppuluri et al., 2021), and retinal detachment. The pediatric population can be very challenging from a developmental standpoint for parents and healthcare provider due to some children's inability to understand their surroundings and follow instructions. This can be a stressful time for most parents as they are asked to retain medical information during the surgical consultation and preoperative appointment where instructions are provided for the day of surgery (e.g., surgical feeding instructions, eye drops or oral medication, preoperative labs, COVID-19 testing, and whom to call if cold symptoms develop). If preoperative instructions are not followed, this can result in surgical time delays or same-day appointment cancellations (Lee et al., 2017). These delays or cancellations can exacerbate parent stress, dissatisfaction with the surgical experience, and institutional revenue loss with unused operating room and surgeon/anesthesiologist time (Viftrup., et al., 2020).

Evidence suggests that consistent preoperative parent education that is delivered in an understandable format and available in multiple modalities is helpful for parents and caregivers (Santapurum et al., 2021). Preoperative written handouts and preoperative educational phone calls have decreased anxiety and improved parent satisfaction in the general pediatric surgery population (Bartik & Toruner, 2017; Adams et al., 2011). With verbal instruction and leaflets, Nadeau et al. (2010) increased parent recall of pediatric ear, nose, and throat surgery risks.

Parents reported increased satisfaction with preoperative clinic visits and the education provided by nurses and nurse practitioners (Delaney et al., 2015). These parents received verbal, written, and video instructions for children undergoing surgery (ear, nose, and throat, urologic, and general surgery procedures). Furthermore, online YouTube™ videos can improve the consent process with increased parental knowledge and decreased anxiety for pediatric patients having inguinal hernia repair (Book et al., 2020). The provision of different methods of education is critical to enhancing parent understanding (Santapuram et al., 2021). If parents know what to expect and feel prepared, this knowledge has been reported to improve the overall hospital experience and parent satisfaction (Mendoza et al., 2020; Chen et al., 2020).

Patient and Parent Satisfaction

Patient Satisfaction

According to the Agency for Healthcare Research and Quality (AHRQ), patient satisfaction is a concept that expectations are met in the healthcare setting (Brega, 2015). However, measuring patient satisfaction and requesting feedback is controversial as the patient is no longer a passive healthcare recipient and is reconceptualized as a consumer (Tomes, 2013). Arguments against measuring satisfaction include patients not possessing healthcare provider training, satisfaction being subjective, and patients having unrealistic patient expectations (Manary et al., 2013). Despite the objections to measuring satisfaction, satisfaction surveys provide a way for patients to voice their opinion (Jha et al., 2008). The Affordable Care Act (ACA) of 2010 required hospitals to prioritize satisfaction and experience to receive federal reimbursement (ACA, 2010). Satisfaction is most commonly measured using the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS or CAHPS) survey, which contains mandated questions that are required to report annually to the Centers for

Medicare and Medicaid Services (CMS, 2021). This survey is often contracted through a CMS-verified vendor (e.g., National Research Center Health [NRC] (NRC, n.d.), Press Ganey (Press Ganey, 2022) to collect the data (e.g., telephone, email, mail) and provides individual and collective reporting to benchmark dimensions of patient satisfaction (https://nrchealth.com/). For example, NRC Health is an independent party that reaches out to those who utilize the health care system. The health care institution and NRC Health decide on questions to be asked and are customized for the department setting. Question categories range from hospital credentialing (e.g., queries or any other metrics being evaluated [NRC Health, n.d.]), and department settings can vary from inpatient, outpatient, and surgical. High satisfaction rates correlate with quality care (Jha et al., 2008; Levine et al., 2022; Prakash et al., 2010; Sam et al., 2017).

Parent Satisfaction

Parent satisfaction assesses a parent's opinion of the time spent with their child in the health care setting (AHRQ, 2022). Positive parent satisfaction and hospital experience are associated with quality care (Garratt et al., 2007). Some examples of parent questionnaires include the Consumer Assessment of Healthcare Providers and Systems (CAHPS^{R}), Child Hospital Survey (AHRQ, 2022), and Press Ganey surveys (Press Ganey, 2022).

Parent satisfaction and patient satisfaction are not the same. Parent satisfaction reflects a parent's opinion of the healthcare experience and not of the actual patient. Obtaining pediatric patient satisfaction requires asking the patient questions. Pediatric surveys are complicated by the wide range of pediatric ages, developmental stages, and literacy levels. Therefore, for this project, parent satisfaction will be measured. Parent satisfaction is a subjective concept in healthcare (Espinel et al., 2014). Parent satisfaction encompasses humanistic (provider attitudes or empathy and competency) and systems dimensions (accessibility, efficiency) (Margaritis et

al., 2011). Many studies have examined factors that affect parent satisfaction in the delivery of healthcare services (Viftrup et al., 2020). These factors include provider communication (Shafer et al., 2018), nursing responsiveness or staff performance (Wagner & Bear, 2009), wait times (Wieck et al., 2017), and preoperative and discharge education (Calabro et al., 2018). The use of technology has also been reported to improve efficiency and provider communication through the use of patient portals. Patient portals allow parents to keep on top of their child's medical condition and will enable them to view educational material (Beal et al., 2021). Studies suggest that the timing of preoperative education can influence parents' retention of preoperative instructions and positively impact satisfaction (Adams et al., 2012). For example, parental recall of preoperative education decreases when there are more days between the teaching and the day of surgery (Adams et al., 2012).

Patient and family-centered (PFCC) care is showing respect for the individual patient and their family (Institute for Patient- and Family-Centered Care, n.d.). Healthcare providers must recognize that parents want a proactive approach to their child's care (Institute of Medicine [IOM], 2001). As full partners in the health care team, parents must be informed of diagnoses and treatment plans. Being fully informed requires verbal information, having time to ask questions, and receiving education (e.g., written material or pamphlets, verbal instruction, or videos) (Adams et al., 2012; Newsom et al., 2018; Scrimin et al., 2009). Parents often must verbalize their fears and concerns to feel heard or validated by the surgical team (October et al., 2016).

Children and their parents must be prepared for the surgical day. Preparation begins by providing education about the procedure or surgery, pain management, and details surrounding expectations for the surgical day and discharge care needs (Delaney et al., 2015). Preoperative

education sets realistic expectations for families. Dissatisfaction can occur when patients' expectations are unmet (AHRQ, 2016). The surgical team can help guide parents with information on what is realistically feasible or most likely to happen on the day of the procedure. Parents have reported satisfaction when they feel prepared for their child's surgery (Ghomrawi et al., 2011) and it has been shown to reduce parental anxiety (Camur et al., 2020). Therefore, providing preoperative education can improve parent satisfaction with their child's procedure.

Problem Statement

The majority of pediatric surgical patients are identified in outpatient clinics. While surgeons will discuss the diagnoses and surgical procedure(s) needed with the parents, the current clinic structure does not provide time for more in-depth conversations on preoperative education (e.g., coronavirus disease of 2019 [COVID- 19]), testing requirements, perioperative expectations, postoperative visits, feeding instructions, and logistical information) which may or may not be discussed.

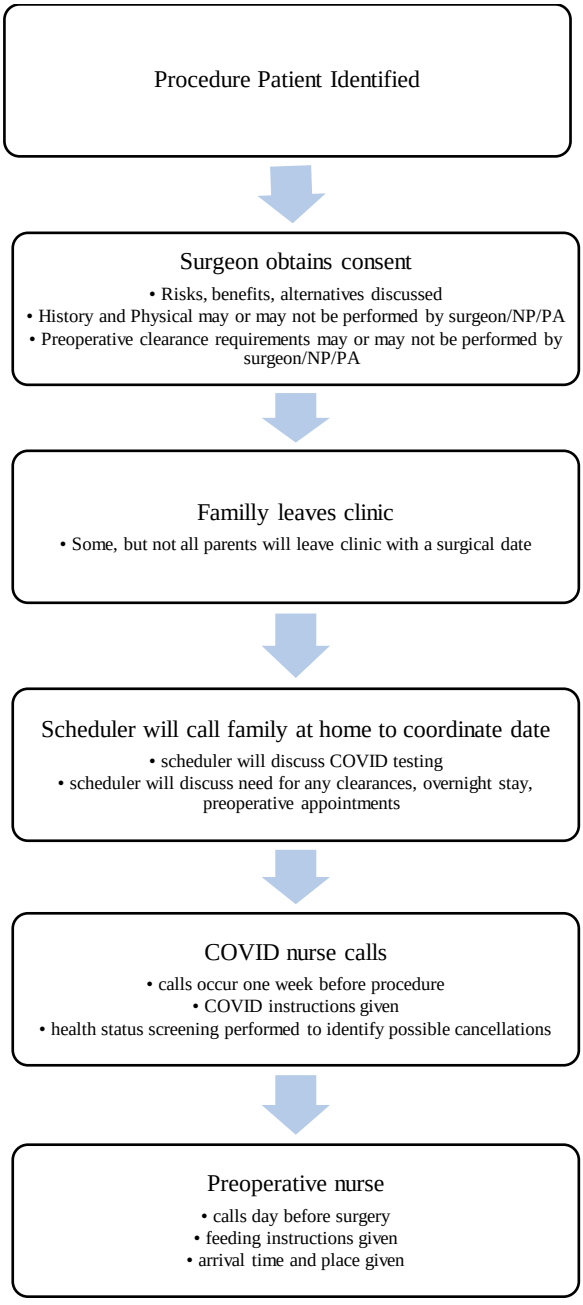
Additionally, a division-wide standardized preoperative verbal, written, or video parent/child education process needs to be established across all surgical ophthalmologic patients. Parents must receive health information matching their language preference and health literacy (Centers for Disease Control, 2019). Healthcare providers must prioritize verbal and written communication to provide safe care.

Current surgical sign-up workflow has many challenges (Figure 1). The ophthalmologic division does not have a unified way of preparing parents for their child's procedure. Education may or may not be conducted by the physician, advanced practice provider (physician assistant or nurse practitioner), surgical scheduler, and/or preoperative nurses. If education is performed, it is done through verbal instructions. There is one handout that surgical schedulers are supposed to

give to parents during surgical sign-up (Appendix A); however, the surgical schedulers may not meet with parents in the clinic to provide any surgical literature or information to families. Workflow changes during the pandemic eliminated the possibility of surgical schedulers meeting families. Schedulers are understaffed, and some work from home. Surgical schedulers communicate with families by phone and spend majority of their giving information and reassuring parents (J. Amaya, personal communication, June 6, 2022). Unfortunately, the information the scheduler provides is many times outside the scope of their practice (H. Rivas, personal communication, June 6, 2022). Administrative staff does not ask for language preference or tailor education to the parent's needs.

Figure 1

Current Surgical Sign-Up Workflow



The time of surgical sign-up time is the most opportune time to perform preoperative education. Approximately 75-80% of parents sign the ophthalmologic surgical consent when scheduling the procedure. Standardizing the repetitive aspects of preoperative education creates

an efficient and consistent teaching intervention. Parents report their preferred learning style to include educational literature, audiovisual content, and telephone conversations (Santapuram et al., 2021).

Professional organizations such as the American Academy of Pediatric Ophthalmology and Strabismus (AAPOS), the American Academy of Ophthalmology (AAO), and the National Institutes of Health (NIH) have teaching material readily available, including information webpages and videos on various ophthalmologic conditions and treatment. Therefore, this general information can be used to develop a preoperative video and supplemental handout. Parent preoperative education can decrease parental anxiety (Adams et al., 2012; Book et al., 2020; Harter et al., 2021; Mathew et al., 2020; Chen et al., 2020) and have a positive impact on parent satisfaction (Chen et al., 2020; Delaney et al., 2015; Moore et al., 2020; Padival et al., 2022; Turkdogan et al., 2022; & van Eck et al., 2018). In alignment with the Institute of Healthcare Improvement (IHI) (IHI, 2022), IOM (IOM, 2022) evidence suggests the benefits of preoperative education and calls on providers to provide preoperative education to enhance satisfaction.

Parents of pediatric ophthalmology patients report an NRC Health satisfaction score of 87% 3 months prior to intervention (n=50). The institution has established an institutional benchmark of 86.3%, and this goal is documented in the NRC Health webpage that is available to hospital leadership (NRC, 2022). Despite meeting the institution's established benchmark, some questions do not meet the benchmark goals (Appendix B). The responses to two questions suggest that parents are not receiving adequate preoperative instruction. The first question is, "Did nurses explain things in a way you could understand?" Only 76.8% (benchmark average 78.1%) of parents felt nurses provided understandable explanations. The second question is, "Did

providers explain things in a way you could understand?" Only 65.2% of parents felt that providers gave acceptable explanations (benchmark average 77.6%). Standardized preoperative education could improve, thus raising overall parent satisfaction and understanding.

An argument could be made that preoperative education for ophthalmologic surgery parents is unnecessary since overall parent satisfaction scores (87% with a benchmark of 86.3%) are acceptable. However, focusing on overall postoperative parent satisfaction scores creates a false sense of security. Preoperative education for the parents of pediatric ophthalmology patients must be prioritized because parents report that providers and nurses are not providing explanations. A gap in preoperative education exists in the ophthalmology division, as evidenced by a lack of verbal and audiovisual preoperative education. A preoperative video education intervention (Appendix C) can fill educational gaps and improve parent satisfaction.

The population of interest in this evidence-based quality improvement (QI) project are parents whose child is undergoing an ophthalmology procedure or surgery. The aim of the QI project will be to assess parent's acceptance of a preoperative education vision and provide a standardized preoperative educational video intervention to improve parent satisfaction. For this project, "procedure" will be defined as a diagnostic procedure or surgery.

PICOT Question

The population, intervention, comparison, outcome, and time (PICOT) question for this Doctor of Nursing Practice (DNP) scholarly project is: Among parents of pediatric patients undergoing ophthalmic procedure or surgery **(P)**, how does the utilization of a preoperative educational video **(I),** compared to the current standard of practice (verbal instruction only) (**C),** impact surgical day parent satisfaction **(O),** over a three-month period?

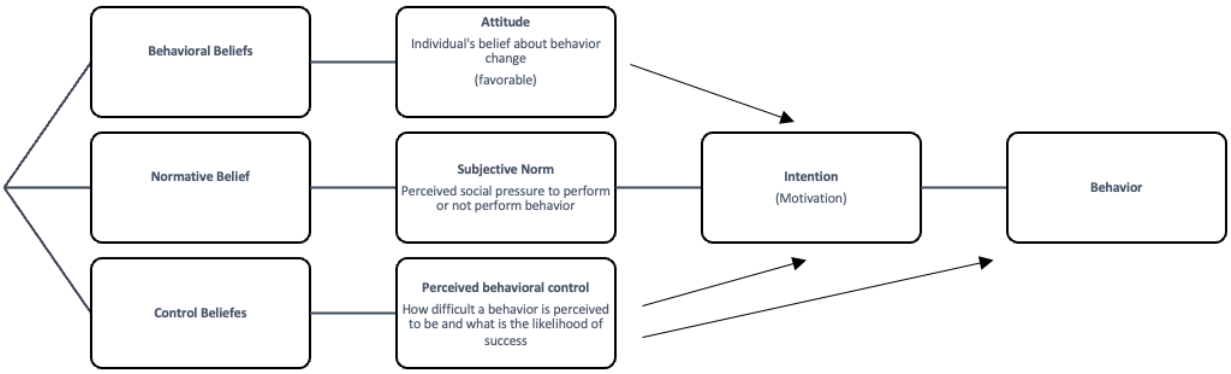
CHAPTER TWO: THEORETICAL FRAMEWORK

The theory of planned behavior (TPB) is the theoretical framework that underpins this QI project (Ajzen, 1991). This theory is used to predict and explain changes in behavior. TPB has been applied in health care, from educating patients about diabetic retinopathy screening (Hosseini et al., 2021) to work safety (Motalebi et al., 2021). The TPB is influenced by the theory of reason action (TRA) (Ajzen & Fishbein, 1977). The TRA states that a person's behavior is influenced by their own free will and is often based on what they perceive as necessary (e.g., patients can stop smoking solely of their volition or self-control) (Ajzen & Fishbein, 1977).

The first concept of TPB is the intention or plan to perform a behavior (Ajzen & Fishbein, 1977). The intention and behavior are influenced by three constructs of intention that can predict behavior change: 1) attitude toward behavior, 2) subjective norms, and 3) perceived behavioral control (PBC). Behavioral attitudes are the beliefs, positive or negative beliefs, that are held about a behavior change. Subjective norms are the societal beliefs held about behavioral change and the behaviors exhibited by others. The last construct of influence is PBC which are the individual's beliefs about how easy or difficult it is to change their behavior and the possibility of success. In conclusion, the TPB states that positive beliefs about the act or behavior, support from the social system, and positive PBC belief can predict a person's intention to change behavior (Figure 2).

Figure 2

Theory of Planned Behavior (Ajzen, 1991)



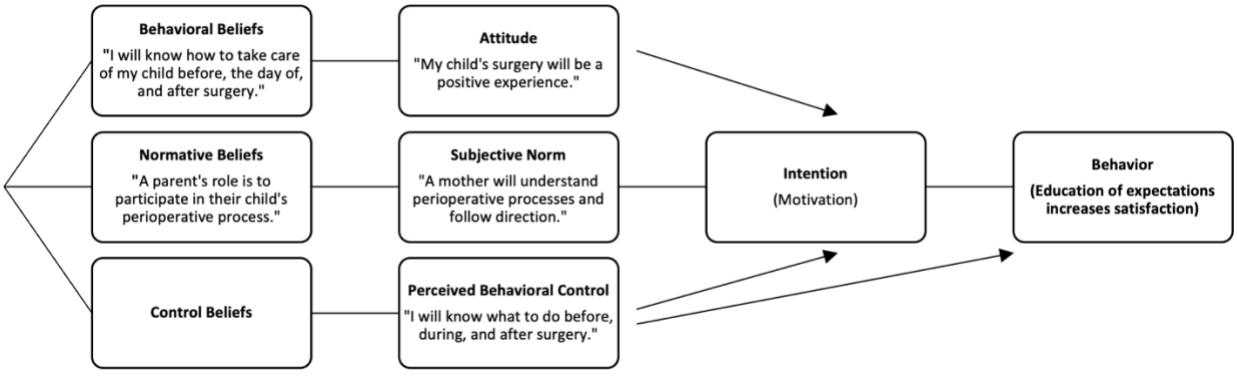
Application of TPB

The TPB allows the investigator to predict behavior change and use evidence-based interventions to achieve the overall goal. By assessing the parent's behavioral beliefs, support system (normative beliefs), and parent's PBC, the healthcare provider can target interventions to strengthen any areas of vulnerability. For example, if one parent wants to have surgery and the other is reluctant for the child to have surgery, the healthcare provider knows to spend more time addressing the parent's concerns. Successful implementation of the QI project will allow parents to acknowledge their planned behavior to follow through with preoperative preparation (COVID-19 testing, medication clearances), day of surgery logistics (arrive on time, follow feeding instructions), and postoperative care (postoperative appointments and medication administration) to avoid treatment delays. Attitudes toward the behavior are influenced by the surgeon's discussion of the risks, benefits, and alternatives of the procedure. Examples of subjective norms are friends and family who support the parents' decision for eye surgery. Perceived behavioral control interventions aimed at PBC help parents believe that navigating the surgical day is manageable (Figure 3).

The expected outcomes of this QI project will be increased parental satisfaction with their child's surgery because they will have education about the procedure/surgical process. Parents will set realistic expectations based on the information given to them in the video and therefore be more satisfied with the process. For example, parents become upset about what they perceive to be long wait times (Mendoza et al., 2020). The current education process does not include informing families they will arrive two hours prior to their child's procedure, to plan to be at the hospital for 6-8 hours, and to make arrangements for other family members on the procedure day. When parents are not given a realistic procedure day time commitment, there is a potential for decreased parent satisfaction because the wait will feel long for them. Parental frustration with waiting for their procedure is compounded by their child's fasting status. Understanding the expected time commitment will allow families to mentally prepare for possible long wait times and create realistic expectations and therefore increase parent satisfaction.

Figure 3

Theory of Planned Behavior Applied to the Preoperative Parent



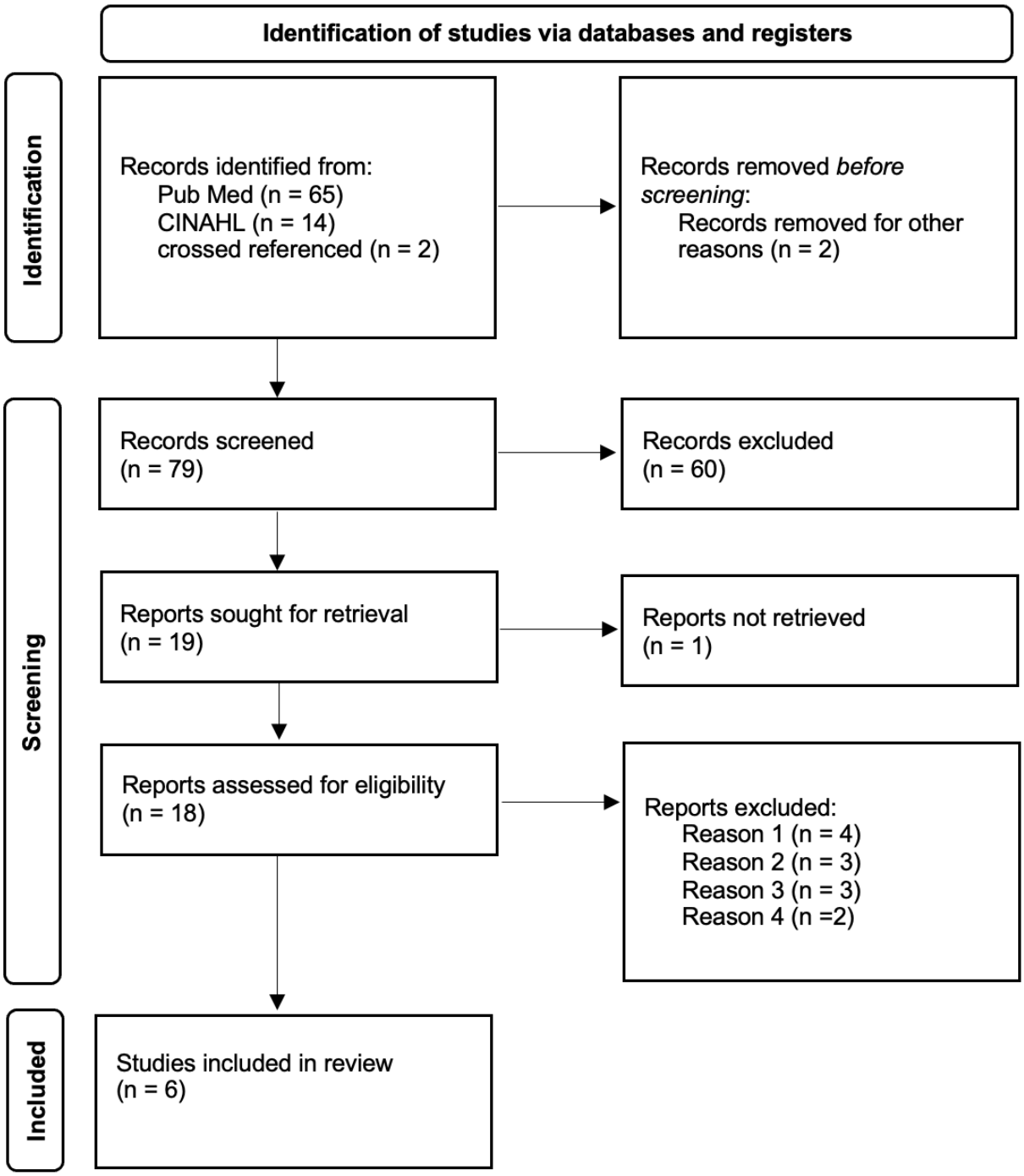
CHAPTER THREE: REVIEW OF LITERATURE

Literature Search

A review of the literature was conducted using two different databases. Search terms included: “parent satisfaction,” “video,” and “preoperative education." There was a yield of 11 articles in PubMed. The same search terms and Boolean operators were placed in the Cumulative Index to Nursing and Allied Health Literature (CINAHL), and no articles were identified. An additional search was done using the search terms "patient satisfaction" and "video," and "parent satisfaction." A total of 68 articles were identified, with 54 articles in PubMed and 14 in CINAHL. Inclusion criteria included: preoperative education, video, patient satisfaction, pre-surgical video education, and parental satisfaction. Exclusion criteria included studies that measured knowledge or anxiety. Studies that utilized preoperative video games or non-educational videos were not considered. In addition, two crossed referenced articles were identified. A Preferred Reporting Items for Systemic Reviews and Meta-Analysis (PRISMA) (Page et al., 2021) flow diagram illustrates the method for identifying research sources (Figure 4).

Figure 4

Preferred Reporting Items for Systemic Reviews and Meta-Analysis Diagram



Literature Review

The following six articles were critically appraised and documented in the Table of Evidence (TOE) (see TOE). Due to limited research on parent satisfaction in ophthalmologic surgery, the search criteria were expanded to parents of children and adult patients who had any surgery using preoperative education videos. No additional acceptable literature examined parent satisfaction and preoperative video education. Five out of the six articles evaluated the impact of preoperative education videos on satisfaction (Aslakson et al., 2019; Padival et al., 2022; Tucker et al., 2022; Turkdogan et al., 2022; van Eck et al., 2018) and one article measuring parental satisfaction after pediatric surgery (Chen et al., 2020).

Aslakson et al. (2019) evaluated the impact of a preoperative education video about advanced care planning (ACP) on satisfaction. ACP are detailed discussions about end-of-life decisions and advanced care directives. A two-armed, double-blind, randomized control trial (RCT) was performed on adult cancer subjects 18 years and older in the United States teaching hospital. The control group viewed a video that recounted historical hospital information and surgical practice. The video had no information about ACP and surgical information. The intervention group watched an updated video that contained information on ACP, the day of surgery perioperative sequence of events, and identifying a proxy in case the patient cannot speak for themselves. Ninety-two adults were randomly assigned to two groups. The control group (CG) (n=47) watched the original video, and the intervention group (IG) (n=45) watched the updated video. Measures in this study were: the Hospital Anxiety and Depression Scale (HADS); Iowa Goals of Care, Helpfulness of Video Survey; satisfaction survey; doctor satisfaction survey; and medical decision-maker designation.

Aslakson et al., (2019) used a six-item satisfaction survey. Statistical analysis was

performed using Stata statistical software with a one-tailed study test (power = 0.8 and alpha = 0.05). Both control (n=47) and intervention groups (n=45) were satisfied with their videos; however, there was no statistical significance between the two groups. This could be related to the similarities between the control and intervention group videos. Despite this limitation, the study suggests that video instruction is valued, and a video can improve satisfaction. Other vital lessons from this study are related to difficult conversations and content validity. Discussion of sensitive information like the end of life planning can be introduced to patients by video. In addition, it can catalyze more in-depth advanced care planning discussions between patients and providers. The last lesson from this study is how the researchers established content validity for their video. The video underwent rigorous review with interdisciplinary team members and hundreds of patients before they were shown to the general patient population.

Chen et al. (2020) conducted a single-blind RCT in China to study the effect of a comprehensive education program for parents of children with congenital cataracts. The sample consisted of 177 parents. The CG (n=96) received verbal teaching only. The IG (n=81) participated in verbal education, watched videos, had in-person group classes, two-hour module training, written instruction, and participated in social media groups. In addition, the following measurement tools were completed at four different time points: 1) surgical knowledge assessment, 2) Parenting Stress Index (PSI) questionnaires, and 3) Ocular Treatment Index (OTI).

The four measurement time points were at the start, end of the education session, six months postoperatively, and 12 months postoperatively. Analysis of covariance (ANCOVA) was used to analyze parental anxiety and satisfaction (statistical significance = $p \leq 0.05$). Satisfaction was measured once after the procedure. The satisfaction measurement tool was created by the

researcher and consisted of one question with a three-point Likert scale. Statistical analysis of parent satisfaction was performed with Student's *t-test* with a statistical significance set at $p \leq 0.05$. The IG rated satisfaction as "very good" (56.8%) compared to the CG 25.0%), which was statistically significant ($p < 0.001$).

Limitations of this study include the reproducibility of the interventions and cultural validity. The education intervention has many elements like parent group classes, social media, video, and written information. Replicating this intervention would be time intensive for some pediatric practices that see few children with cataracts or lack resources. Furthermore, there is a question of the ability to replicate a comprehensive program to a similar cataract population in the United States. In addition, the study was done in China, thus creating cross-cultural validity concerns. Lastly, a threat to internal validity is the inability to decipher what impact each intervention element (video or social media) had on the parent experience. Despite these limitations, Chen et al. (2020) suggest that preoperative videos can improve parent satisfaction and medical knowledge.

Padival et al. (2022) performed a double-blind RCT to evaluate satisfaction and information recall after viewing a preoperative video. Ninety-one adults were enrolled in the study at an academic institution in Cleveland, Ohio. Inclusion criteria included patients aged 18 years and older undergoing colonoscopy under conscious sedation. Exclusion criteria included non-English speakers, hearing or speaking impairments, or inability to sign consents. The control group received verbal consent only, and the intervention group consented verbally and watched a video. The video was less than five minutes long and was at a 5^{th} to 6th-grade comprehension level. Knowledge and recall measurements were measured with a researcher-created instrument.

The researchers achieved study power (80%) by recruiting more than 43 patients required

per arm. A significance level of 0.05 of a 2-sided t-test was used for statistical analysis of satisfaction and recall information. Statistical significance was established at a $p < 0.05$. Patients were called after their procedure and were asked to answer a post-colonoscopy questionnaire. The questionnaire consisted of 7 questions that the researcher developed. Six questions were "yes" or "no" questions and assessed knowledge of colonoscopy. The last question was a 5-point Likert scale that assessed satisfaction with the education of risks, benefits, and alternatives to colonoscopy. Eighty-four percent of patients were satisfied with the traditional consent, and 100% reported satisfaction with the video consent ($p = 0.03$). The study demonstrated that video information and provider verbal discussion could augment understanding and satisfaction. Additionally, patients reported that physician discussion was highly valued.

Tucker et al. (2022) performed a single-blind RCT to evaluate the effectiveness of multimedia teaching on knowledge and satisfaction. The study was conducted in an adult public cancer center in North Carolina, United States. The sample population was adults with endometrial cancer. The CG received verbal physician education (n=38), and the IG received verbal and multimedia-based education *(*n=37). In addition, the IG watched two different videos. The study used multiple satisfaction measures: Client Satisfaction Questionnaire-8 (CSQ-8), Cronbach's alpha, ranging from 0.83 to 0.94 (De Wilde & Hendriks, 2005); doctor satisfaction questionnaire/Global Satisfaction Score; Comprehension 9 survey; and a demographic survey. The CSQ-8 is a validated tool using eight questions scored on a 4-point Likert scale. Total scores range from 8-32, with high scores indicating higher satisfaction. A 4-point difference in the CSQ-8 score between the CG group over the IG was considered clinically significant by the researcher. Statistical analysis of CSQ-8 results was performed with two group t-tests with a p-value of 0.050.

Satisfaction was high between CG and IG. The mean CSQ-8 score of the intervention group was 31.19 (95% confidence interval [CI] 30.82-31.57) versus 30.69 (95% CI 29.99-31.39) with a p-value of <0.01. These results are not statistically significant and did not meet the 4-point difference required in the CSQ-8 score. Despite the statistical insignificance, the results suggest a video does not create dissatisfaction. Furthermore, knowledge recall between the control and intervention groups was the same. Physicians reported they were highly satisfied with video instruction because it saved them time with verbal instruction. The value of this study is in the utilization of a valid and reliable measurement of client satisfaction. The video method increased efficiency by decreasing physician face-to-face time with patients and standardizing educational messaging. In this study, the preoperative video increased physician satisfaction and created efficiencies in the physician education process.

Turkdogan et al. (2022) performed a double-blind RCT to test satisfaction after receiving preoperative video education. The study was conducted in an academic hospital in Montreal, Canada. Inclusion criteria were patients 18 years and older undergoing head and neck surgery. Exclusion criteria were patients who underwent prior surgery. The CG received verbal education from the physician. The IG received verbal education and watched multimedia videos on preparing for surgery, what to expect postoperatively, and recovery tips at home. Satisfaction was measured with the European Organisation for Research and Treatment of Cancer Quality of Life Questionnaire INFO 25 (EORTC QLQ).

The EORTC QLQ assesses disease knowledge, treatment, and satisfaction. The questionnaire is rated on a 4-point Likert scale, with an acceptable Cronbach alpha $\geq$ 0.70 on all subscales except for cognition (0.37) (Aaronson et al., 1993). Statistical analysis of the EORTC QLQ was performed with individual t-tests, and Cohen's d was used to measure the effect size

between the control and intervention groups. Cohen's d value of considerable clinical significance was set at 0.8. Comparison of satisfaction surveys (EORTC QLQ) was calculated at 1.02, meaning the intervention group had higher rates of preoperative education satisfaction. The contribution of this study is a valid measurement tool (EORTC QLQ) for cancer patients, a positive impact on satisfaction, and the preoperative video content.

Van Eck et al. (2018) performed a double-blind RCT to evaluate satisfaction with an interactive web-based education tool. A total of 177 patients were enrolled in the study in an adult orthopedic, private practice setting in Los Angeles, California. Ninety patients were in the CG and 87 in the IG. Satisfaction was measured using the Outpatient and Ambulatory Surgery Consumer Assessment of Healthcare Providers and Systems (OAS CAHPS) survey. This questionnaire contains twenty-four questions that measure preoperative education, facility, staff, communication, recovery, and patient experience. Survey scores were measured on a 100-point scale. Statistical satisfaction evaluation was calculated with an independent t-test and statistical significance was p-level < 0.05. The IG reported an overall increased satisfaction score of 97 ± 5 and a CG satisfaction score of 94 ± 8, p= 0.019. Patients had unlimited access to the educational video. However, the educational video utilized in this study may be cost-prohibitive and inaccessible to other practices that may not have the resources available in private practice.

Synthesis of Literature

The articles discussed in the literature review suggest evidence that a preoperative video can have a positive impact on satisfaction (Aslakson et al., 2019; Chen et al., 2020; Padival et al., 2022; Tucker et al., 2022; Turkdogan et al., 2022; van Eck et al., 2018). This next section synthesizes the findings from the review of the literature.

The population for this QI project is parents of children who will undergo an

ophthalmologic procedure. Only one study closely mirrors this group with parent participants of children undergoing cataract surgery (Chen et al., 2020). This study was performed in China, suggesting that this population may differ socially and culturally from the population for this DNP project. Other studies were more ethnically diverse, and the majority were Caucasian and excluded non-English speakers (Aslakson et al., 2019; Padival et al., 2022; Tucker et al., 2022; Turkdogan et al., 2022; van Eck et al., 2018). Five of the studies were performed in academic settings (Aslakson et al., 2019; Chen et al., 2020; Padival et al., 2022; Tucker et al., 2022; Turkdogan et al., 2022), which is consistent with the setting for this QI project. Despite some differences in population and study settings, there are enough similarities that the findings are relevant to the QI project.

The six studies utilized a preoperative education video as the intervention (Aslakson et al., 2019; Chen et al., 2020; Padival et al., 2022; Tucker et al., 2022; Turkdogan et al., 2022; van Eck et al., 2018). Medical education videos are increasingly available in inpatient electronic patient portals and are used to provide preoperative education (Shoemaker et al., 2014) or healthcare professional education (Park et al., 2021). Video production characteristics vary. Provider-generated videos can be created solely by the researcher (Chen et al., 2020; Padival et al., 2022), made with professional video producers (Aslakson et al., 2019; Tucker at al., 2022), or be available as part of a subscription web-based streaming service (Turkdogan et al., 2022; van Eck et al., 2018). Some studies allow patients to view the video once during clinic consultation (Aslakson et al., 2019; Chen et al., 2020; Padival et al., 2022; Tucker et al., 2022), while others provided unlimited access (Turkdogan et al., 2022; van Eck et al., 2018). There are advantages to having a different way to access videos. For example, if a video streaming service is not an option (van Eck et al., 2018), a simple voice-recorded PowerPoint presentation can be created and shared with parents. Another

alternative is to locate previously existing parent education videos online from professional websites like the American Academy of Ophthalmology or YouTube (Tanwar et al., 2015) and share these video resources with patients and parents.

Different types of video presentations and content were reviewed. Some videos were animated (Turkdogan et al., 2022), depicted actors as patients and health care providers (Aslakson et al., 2019), or visually provided text and graphics with audio voiceover (Padival et al., 2022). All studies did not fully describe description of video content and style (Chen et al., 2020; Tucker et al., 2022; van Eck et al., 2018). While patients and parents reported high satisfaction with video-based education (Aslakson et al., 2019; Chen et al., 2020; Padival et al., 2022; Tucker et al., 2022; Turkdogan et al.,2022; van Eck et al., 2018), the quality of the evidence was not strong enough to parse out how individual characteristics of the video impacted parent satisfaction. Video creation and presentation must be intentional and based on evidence (e.g., recommended literacy level for educational material is sixth-grade reading level) (Bastable, 2019).

The preoperative video content varied with each study and reflected the different perioperative educational needs. Some videos focused on the day of surgery logistics (such as feeding instructions and surgical day expectations) (Tucker et al., 2022; Turkdogan et al., 2022; van Eck et al., 2018); or reviewed procedure risks, benefits, and alternatives (Padival et al. (2022); or focused on advanced care planning and identification of a proxy (Aslakson et al., 2019); or presented postoperative care videos (Chen et al., 2020). For this DNP project, a video will be created that will be similar to the video content of Tucker et al. (2022), Turkdogan et al. (2022), and van Eck et al., 2018. The content of the video will include preoperative preparation, day of surgery logistics, and postoperative instructions. Diagnosis and surgical approach discussion will be reserved for the surgeon as parents report that time spent with the surgeon is critical (Adams

et al., 2012).

All six articles were RCTs which reflect Level II Level of Evidence (Aslakson et al., 2019; Chen et al., 2020; Padival et al., 2022; Tucker et al., 2022; Turkdogan et al., 2022; van Eck et al., 2018). Level II evidence represents the second strongest level of evidence for testing scientific inquiry (Melnyk & Fineout-Overholt, 2019). All six studies had randomly assigned CG and IG. A CG ensures internal validity and that the change came from the intervention. All control groups received verbal preoperative instruction from the surgeon (Aslakson et al., 2019; Chen et al., 2020; Padival et al., 2022; Tucker et al., 2022; Turkdogan et al., 2022; van Eck et al., 2018) compared to video education. A control group ensures internal validity, and the change came from the intervention.

Two studies were single-blind RCT (Chen et al., 2020; Tucker et al., 2022), and four were double-blind studies (Aslakson et al., 2019; Padival et al., 2022; Turkdogan et al., 2022; van Eck et al., 2018). Double-blind studies blind both the researcher and participant from knowing which treatment is being received, which improves the reliability of the study by reducing bias.

Aslakson et al. (2019), Chen et al. (2020), and Padival et al. (2022), created their questionnaires. Using an unvalidated questionnaire raises concerns if the questionnaire is measuring what it is supposed to be measuring. Additionally, it is unclear if the questionnaire is reliable or can measure the same results from different samples or studies. Padival et al., (2022) reported establishing the construct validity of their questionnaire. However, reliability measures like internal consistency (Cronbach's alpha), test-retest, and inter-rater reliability were not discussed. Therefore, it needs to be clarified that the Padival et al., (2022) questionnaire consistently measures satisfaction.

All six studies demonstrated that people were satisfied with the video. However, the video does not replace provider discussion (Aslakson et al., 2019; Padival et al., 2022). The video did

allow for more time or discussion with the provider. Second, patients value unlimited video access (Aslakson et al., 2019; Turkdogan et al., 2022; Van Eck et al., 2018). Unlimited access allowed for repetitive viewing for the patient or sharing with friends and family. Third, patients felt more prepared for their surgery after watching the video (Van Eck et al., 2018) since the video and surgeon discussion provided some repetitive information.

Gaps in Literature

Preoperative educational videos improve satisfaction (Aslakson et al., 2019; Chen et al., 2020; Padival et al., 2022; Tucker et al., 2022; Turkdogan et al., 2022; & van Eck et al., 2018). However, gaps in the literature exist. Examples of gaps include understandability and availability of education to non-English speakers. This QI project will take place in a hospital where 65% of the patient population is Latino (Children's Hospital Los Angeles, 2022), many of whom English is not their first language. Interventions and studies for Spanish-speaking parents must be explored to enhance the quality of educational delivery (IHI, 2001). Future research should incorporate non-English speakers, especially Spanish-speaking parents.

Another gap in the literature is the lack of research studies and interventions that measure "parental satisfaction" compared to "patient satisfaction." Patient satisfaction and parental satisfaction are conceptually different and reflect different care models (patient-centered vs. family-centered) (Chorney and Kain, 2010). Family-centered care is most commonly used in pediatric hospitals to address both the parent's and child's needs and support all members of the family (Chorney & Kain, 2010). If all studies only look at patient satisfaction, an opportunity to effectively improve satisfaction and provide care to parents and their children is being missed.

Doctor of Nursing Leadership

This DNP QI project is an exemplar of DNP-level work that aligns with two of the Eight

Essentials of Doctoral Education for Advanced Nursing Practice (American Association of Colleges of Nursing [AACN], 2006). Essential II is demonstrated by identifying an organizational clinical problem and utilizing systems leadership to improve organizational thinking (reference). This essential is operationalized by identifying similarly studied clinical problem phenomena in other institutions. The intervention requires DNP leadership to develop the QI project, engage stakeholders, and implement the project. Evidence in support of this DNP QI project suggests there is an evidenced-based need to improve parent satisfaction in the surgical education setting. The DNP leader understands intervention implementation requires knowledge of the pediatric ophthalmology population, pathology, procedures and surgery, stakeholders, and the surgical arena. Improving the parental educational experience by using a preoperative educational video has implications throughout the Ophthalmology Division.

This DNP project is an example of the execution of DNP Essential VI: Interprofessional Collaboration for Improving Patient and Population Health Outcomes (AACN, 2006). The QI and interprofessional interactions required to carry out this DNP project have initiated an institution-wide awareness of current educational practice. Physicians, perioperative team members, and the nursing education department have been approached to participate in this project. These interprofessional participants agree there needs to be more preoperative videos and online presurgical information in ophthalmology and other surgical divisions. The outcomes of this project will hopefully enhance parent satisfaction in pediatric ophthalmology.

Ethical Implications

Ethical treatment of parents participating in this QI project is critical as the IOM has provided guidance on maintaining ethical integrity (IOM, 2001). The Health Insurance Portability Act (HIPAA) rules must be honored for patient privacy and confidentiality. This QI

project was submitted to the hospital's Institutional Review Board (IRB), and exempt review status was granted. No protected identifying information was collected on project participants.

CHAPTER FOUR: METHODS

Project Design

A QI project was implemented to assess the impact on parental satisfaction of a preoperative educational video on parental satisfaction using a pre-post-test intervention design. The independent variable was the preoperative education video and the dependent variable was NRC Health parent satisfaction scores. The null hypothesis was that preoperative education would not impact parent satisfaction. The alternate hypothesis was that preoperative education improves parent satisfaction scores. Intervention impact was measured over three months and compared to past departmental parent satisfaction scores. The design of the project aligned with the principles of the theoretical framework of TPB. Parental satisfaction was assessed through the completion NRC Health Satisfaction questionnaire (Appendix D).

Outcome Measures

The purpose of this QI project was two-fold: 1) To investigate the impact of a preoperative video on parent satisfaction (pre- and post-intervention), and 2) To obtain parent feedback on the preoperative education video to make improvements.

Sample

Participants were identified in outpatient clinics on the hospital's main campus. Inclusion criteria are parents of children identified for procedure UGA in the operating room. In addition, the parents were English or Spanish-speaking and able to read and write in either language. Exclusion criteria included repeat surgical patients and parents due to prior knowledge of the preoperative routine, patients and parents seen at outside satellite clinics, and non-English or

Spanish-speaking parents. Participants were asked to watch the preoperative video and answer the PEMAT - A/V questionnaire and demographic questions.

The QI project lead recruited parents in the ophthalmology clinic. After signing the consent, parents were given a handout developed from the PowerPoint presentation, Quick Release (QR) electronic access to the video for future reference, and a copy of the pre-surgical checklist. A certified medical Spanish interpreter translated the video and handout with the hospital's translation department.

Setting

The QI project occurred in a free-standing, academic children's hospital in Southern California. The hospital serves a diverse community consisting of African Americans (4%), Asians (4%), Caucasians (12%), Latinos (25%), and others (24%). CHLA is a Level I pediatric trauma center, with 98 percent of patients carrying private or public insurance (CHLA, 2022). Participants were parents or legal guardians of children undergoing an ophthalmologic procedure at UGA. Ophthalmologic procedures occur in one of two operating rooms at the site's main campus

Intervention

A preoperative educational video was created for this QI project. The video was a narrated PowerPoint presentation by the QI project lead for the English version and a Spanish interpreter for the Spanish version. Both videos were under 10 minutes long, confirmed seventh grade Flesch Kincaid score, and outlined what to expect before surgery, on the day of surgery, and after surgery.

Interdisciplinary feedback on video content and delivery was obtained before parent video distribution. Members of the ophthalmology multidisciplinary team that provided feedback on the video included one of each of the following: English-speaking parent of an established

patient, Spanish-speaking parent of a verified patient, pediatric ophthalmologist, registered nurse, nurse practitioner, social worker, and surgical scheduler. Each individual was shown a copy of the video and asked to complete The Patient Education Materials Assessment Tool - Audiovisual (PEMAT-A/V) (Appendix E) to obtain feedback on the video before implementation into the clinic. Once the final version was completed, the translation department translated the English version into Spanish.

Measures

This QI project measured three elements of the parent participants. First, demographic information was collected. Parents were asked to complete demographic data after watching the preoperative video and five brief multiple-choice items related to demographics (e.g., age, sex, primary spoken language, education level, and how they like to receive educational information). Second, parents completed the Patient Education Materials Assessment Tool for Audiovisual Materials (PEMAT-A/V) (Shoemaker et al., 2014) to assess the video. Lastly, the NRC Health postoperative parent satisfaction questionnaire results were evaluated to assess the impact of video on parent satisfaction. All questionnaire data was anonymous and provided in Spanish and English.

Patient Education Materials Assessment Tool for Audiovisual Materials (PEMAT - A/V)

The PEMAT-A/V (Shoemaker et al., 2014) was utilized to measure the preoperative education video. Interdisciplinary team members were asked to evaluate the preoperative education video before implementing the QI project. The five team members viewed the video and completed the PEMAT-A/V before parents were invited to participate in the project. The following team members viewed the video: one ophthalmologist, one registered nurse, one nurse practitioner, a social worker, and a surgical scheduler. The questionnaire is a 17-item valid and

reliable measurement tool, as evidenced by a Cronbach alpha of 0.71 and an average item correlation of 0.62 (Shoemaker et al., 2014). The questionnaire is divided into two domains: understandability and actionability. Thirteen questions evaluate the domain of understandability by assessing the content, word choice and style, organization, layout and design, and use of visual aids. Four questions evaluate the second domain of actionability: the learner's ability to re-demonstrate any skills they learned. All responses to PEMAT-A/V are rated as either agree (1 point), disagree (0) points, or not applicable. The sum of total points is calculated, divided by the sum of total possible points, and multiplied by 100 to obtain a percentage. Higher percentages indicate better understandability and actionability. This questionnaire will be translated into Spanish by a certified interpreter from the translation department, as the PEMAT is not available in Spanish. One additional open-ended question was added to the PEMAT-A/V by the QI lead to assess narrative suggestions to improve the video (e.g., Do you have any suggestions to make the video better?).

National Research Corporation Health Questionnaire

The NRC Health is a service used by the institution to obtain hospital experience data from parents. Unit-specific questionnaires are sent to parents by telephone, email, or mail. The benefits of NRC Health questionnaires are the online availability of parent responses, the customizability of questions asked, and different ways to analyze responses. NRC Health parent response data is updated daily and stored online. Historical and up-to-date data are available anytime for those with access. Another benefit is the unit-based customizability of questions to assess parent experience. For example, different questions are asked for the ophthalmology parents and the emergency department, allowing for a targeted experience assessment. For this particular project, postoperative questionnaire information from parents of ophthalmology

patients will be evaluated (Appendix D). The questionnaire consists of 17 items in categories of system/organization, nurse/nurse aid, provider, and general satisfaction questions. The online repository of responses allows for data evaluation to be stratified by surgeon, timeframe, and question.

Hospital departments and leadership can access NRC Health results. Overall parent experience scores and individual questions scores are presented as overall percentages from 0-100%, with 100% being the most satisfied. Ophthalmologic postoperative overall parent experience prior to video intervention implementation was 87%. Overall parent satisfaction was measured, and two out of the 15 questions were evaluated. The first question was: *Did the providers explain things in a way you could understand?* 65.2% of parents reported that providers gave understandable explanations. The institution's benchmark goal for this question is 77.6%. The second question was: *Did nurses explain things in a way you could understand?* 76.8% of parents reported nurses provided explanations. The institution's benchmark goals for nursing explanations is 78.1%. The goal of this QI project was to improve responses to these questions by 5% for three months after the implementation of the preoperative education video.

Data Collection

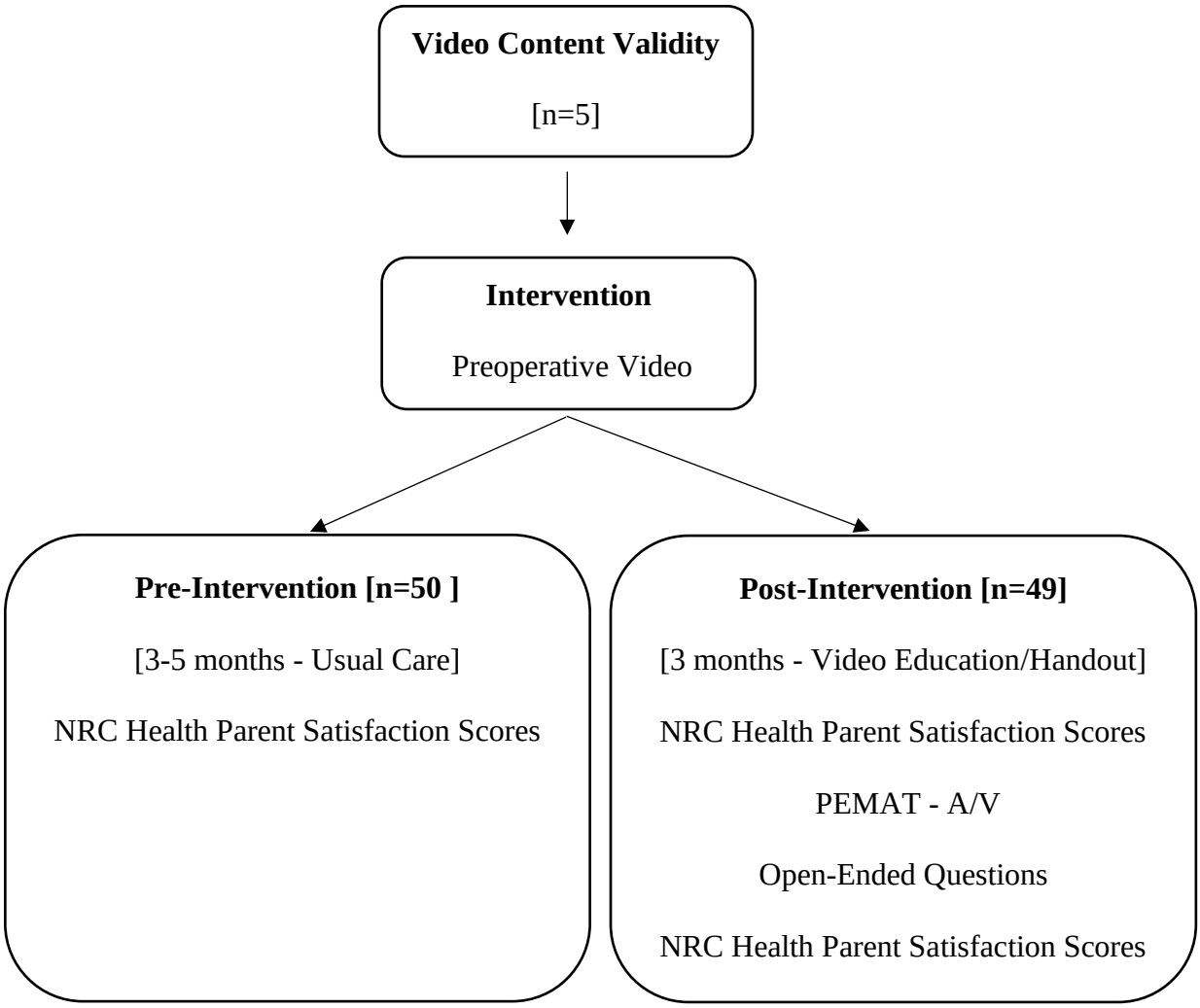
For the pre-intervention group, data were collected retrospectively from the hospital NRC Health platform to collect parent satisfaction data. Three specific measurements were evaluated: 1) overall parent satisfaction scores and responses to two other questions; 2) did the providers explain things in a way you could understand; and 3) did nurses explain things in a way you could understand.

Once the intervention was established with content validity and readability by the interdisciplinary ophthalmology team, the intervention was administered to parents who met

inclusion criteria during their pre-surgical appointment and after consents were signed. Parents watched the video and completed the demographic assessment, PEMAT-A/V questions, and one open-ended question (Appendix E). These questions were uploaded onto Qualtrics ® (SAP, Walldorf, Baden-Wurttemberg, Germany), which is a secure web-based platform. Benefits of the electronic questionnaire data collection include parental anonymity, elimination of paper waste and collection, and an electronic method for summarizing data. Parents were asked to complete the electronic questionnaire by accessing the questions on the clinic iPad or sending a QR code (Appendix F) via email or phone to complete the questionnaire. The second parent questionnaire was the NRC Health parent satisfaction questionnaire (Appendix D). Parents were contacted by NRC Health within two days postoperatively by phone or email and asked for their feedback. NRC Health collected and analyzed the results and made them available online daily. The data collection process is outlined in Figure 5.

Figure 5

Data Collection



Data Analyses

Descriptive statistics (means, standard deviations [SD], percentiles and frequencies) were used to assess the participants' demographic characteristics and questionnaire responses. Percentages were used to compare differences between the pre-and post-intervention parent satisfaction scores. The Statistical Package for Social Sciences (SPSS) version 27 (IBM; Somer, NY) was used to analyze the data.

CHAPTER FIVE: RESULTS

Participant Demographics

Fifty-two parents were invited to participate in viewing the video and complete the PEMAT - A/V questionnaire. Forty-five parents agreed to watch the video and complete the questionnaire, four parents declined to view the video, and 43 parents watched the video and completed the questionnaire (see Figure 6). Sixty-eight percent of participants were female, 20% were male, and 12% declined to specify gender. The majority of the participants were 18-34 years of age (57.7%). English was the preferred spoken language for 62.2% of parents, and 26.7% preferred Spanish. The majority of parents had some or college/graduate education (55.4%). Parents preferred to receive health care information by text reminders (35.6%), phone calls (24.4%), and email (25.7%). Only one person (2.2%) chose to receive information through the health portal (see Table 1) and 11.3% declined to specify their health information preference.

Figure 6

Subject Enrollment

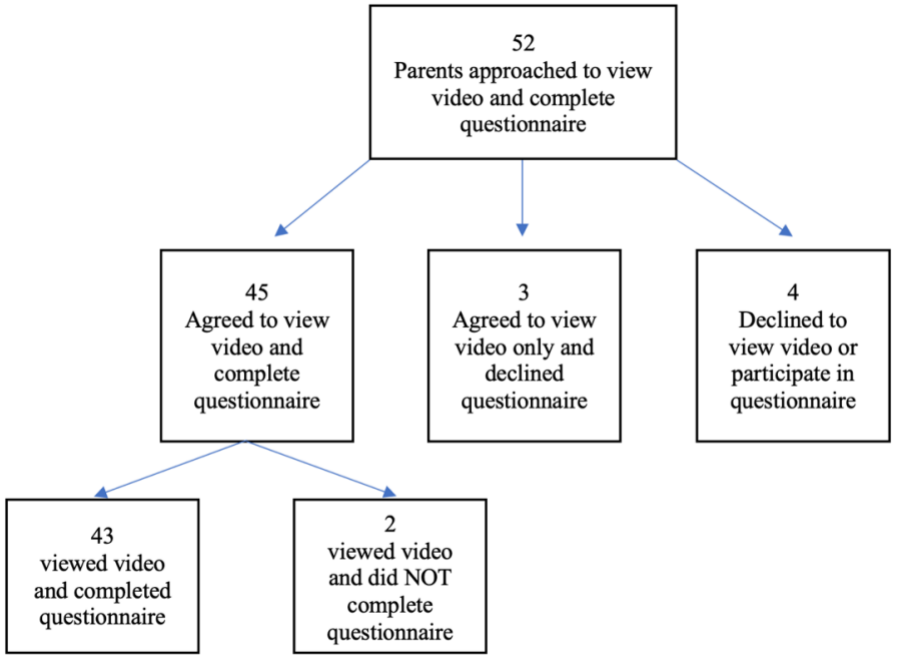


Table 1:

Demographic Data of PEMAT-A/V Participants

Characteristics	n = 43
• Female	31 (72.09%)
• Male	9 (20.90%)
• Declined to Answer	3 (6.97%)
Age	
• 18-24	8 (18.60%)
• 25-34	11 (25.58%)
• 35-44	15 (34.88%)
• 45-54	7 (16.27%)
• >55	1 (2.32%)
• Declined to Answer	1 (2.32%)
Primary Language	
• English	28 (65.11%)
• Spanish	12 (27.90%)
• Other	1 (2.32%)
• Declined to Answer	2 (4.65%)
Highest Level Education	
• High School or less	16 (37.20%)
• Some or College Graduate	14 (32.55%)
• Graduate School	11 (25.58%)
• Declined to Answer	2 (4.65%)
Health Care Information Preference	
• Phone Call	11 (25.58%)
• Email	12 (27.90%)
• Health Portal	1 (2.32%)
• Text Reminder	16 (37.20%)
• Declined to Answer	3 (6.97%)

PEMAT - A/V

PEMAT - A/V scores showed parents responded favorably to the education video (Table 2). Ninety-three percent of parents felt the video was understandable and 92% felt the video was actionable (n=43).

Table 2:

PEMAT - A/V Questions and Responses (n=43)

Questions	Response n (%)
Understandability	
Material makes the purpose completely evident	Agree 43 (100.0%) Disagree 0 No Answer 0
Material uses common everyday language	Agree 43 (100.00%) Disagree 0 No Answer 0
Medical terms are used only to familiarize audience with terms. When used, medical terms are defined.	Agree 43 (100.0%) Disagree 0 No Answer 0
The material uses active voice	Agree 41 (95.35%) Disagree 2 (4.65%) No Answer 0
The material breaks or chunks information into short sections	Agree 41 (95.35%) Disagree 2 (4.65%) N/A 0 No Answer 0
The material's sections have informative headers	Agree 41 (95.35%) Disagree 1 (2.32%) N/A 1 (2.32%) No Answer
The material presents information in a logical sequence	Agree 42 (97.6%) Disagree 1 (2.32%) No Answer 0
The material provides a summary	Agree 41 (95.35%) Disagree 0 N/A. 2 (4.65%) No Answer
The material uses visual cues	Agree 38 (88.3%) Disagree 3 (6.97%) N/A 1 (2.32%) No Answer 1 (2.32%)
Text on screen is easy to read	Agree 40 (93.0%) Disagree 2 (4.65%) N/A 1 (2.32%) No Answer
The material allows the user to hear the words clearly	Agree 42 (97.6%) Disagree 1 (2.32%) N/A. 0 No Answer 0

PEMAT - A/V Questions and Responses (continued)

Questions	Response n (%)	
The material uses illustrations and photographs that are clear and uncluttered	Agree	40 (93.0%)
	Disagree	1 (2.32%)
	N/A	2 (4.65%)
	No Answer	
The material uses simple tables with short and clear row and column headings	Agree	40 (93.0%)
	Disagree	2 (4.65%)
	N/A	1 (2.32%)
	No Answer	
Total points:	522 out of 559	
Understandability score (%)	93%	

Table 2:

Continue PEMAT - A/V Questions and Responses (n=43)

Questions	Response n (%)	
Actionability		
The material clearly identifies action the user can take	Agree	43 (100.0%)
	Disagree	0 (0))
The material addresses the user directly when describing actions	Agree	42 (93.3%)
	Disagree	1 (2.2%)
The material breaks down any action into manageable, explicit steps	Agree	43 (100.0%)
	Disagree	0
The material explains how to use the charts, graphs, tables or diagrams to take action	Agree	34 (73.3%)
	Disagree	2 (4.5%)
	N/A	7 (16.27%)
Total points:	158 out of 172	
Actionability score (%)	92%	

Several parents commented narratively on the preoperative educational video (n=18). Table 3 contains direct quotes from parents (Table 3). Sixteen percent of the comments were positive as parents found the video to be very informative, simple and easy to understand, and had important information (n=18). Some constructive comments focused on the visitation policy (n=3), that the text in the video was difficult to read (n=2), format that is friendly for parents who are blind (n=1), and information about parking and arrival times (n=1).

Table 3:

Preoperative Educational Video Parent Comments by Themes (n=18)

Narrative Comments
• Very informative, easy to understand, well explained, important information, great material (n=7) • Visitation policy, number of parents / family members allowed (e.g., COVID policy) (n=3) • Some slides too wordy…overwhelming to read…or text hard to read on phone (n=2) • Vision resources….I'm blind so answered based on listening (n=1) • Introduction more friendly or welcoming….introduce yourself and role (n=1) • Could include parking and arrival times (n=1) • First slide – ask if you need a translator to identify the language barrier immediately (n=1) • Feeding instruction page confusing (n=1)

National Research Corporation Health Questionnaire

NRC Health scores were compared pre- and post-intervention (Table 4). Post-intervention showed 100% of parents (n=49) were satisfied with their operating room visit compared to a pre-intervention score of 87% (n=50). Almost 83% of post-intervention parents responded yes to the question "did nurses explain things in a way you could understand?" (n=49), compared to a pre-intervention score of 76.8% (n=50). When asked "did providers explain things in a way you could understand" 76.1% post-intervention parents said yes (n=49) compared to 65.2% pre-intervention parents (n=50).

Table 4:

National Research Corporation (NRC) Health Scores Pre- and Post- Intervention

Question	Pre-intervention (n = 50)	Post-intervention (n = 49)	Percent Change
Are you satisfied with your surgical experience?	87%	100%	+13% Benchmark 86.3%
Did providers explain things in a way you could understand?	65.2%	76.1%	+10.9% Benchmark 77.6%
Did the nurse explain things in a way you could understand?	76.8%	83%	+6.2% Benchmark 78.1%

CHAPTER SIX: DISCUSSION

Evidence of quality care is exhibited by high satisfaction scores (Prakash, 2010; Sam et al., 2017). A preoperative ophthalmologic video was created for parents of children undergoing an ophthalmological procedure or surgery. The purpose of the preoperative video was to augment verbal and written education. Ninety-three percent of parents reported the video was understandable and 92% felt they knew how to help their child on the day of surgery. Parents commented that the video had important information and content was well explained. After implementing the ophthalmologic preoperative education intervention, parent satisfaction scores of their child's surgical day increased by 13%.

A preoperative education video is one evidenced-based strategy to improve satisfaction scores (Aslakson et al., 2019; Chen et al., 2020; Padival et al., 2022; Tucker et al., 2022; Turkdogan et al., 2022; van Eck et al., 2018). This QI study achieved 100% postoperative parent satisfaction rates after video implementation, similar to findings reported by Padival et al., (2022) in which 100% of patients felt satisfied after viewing a preoperative education video

about colonoscopy preparation. Like this preoperative education ophthalmologic video, other studies created their own video for their specific patient populations (Aslakson et al., 2019; Chen et al., 2020). Other preoperative education video studies elected to use online video platforms (Tucker et al., 2022; Turkdogan et al., 2021; van Eck., 2018), but all the studies show that videos, whether they are commercial or self-made, can improve satisfaction (e.g. patient, parent, or general satisfaction) (Aslakson et al., 2019; Chen et al., 2020; Padival et al., 2022; Tucker et al., 2022; Turkdogan et al., 2022; van Eck et al., 2018); increase knowledge (Padival et al., 2022); and decrease anxiety (Aslakson et al., 2019). Though this project did not measure knowledge and anxiety, the next step is to develop additional content for videos that target patient and parental anxiety and surgical procedure education.

Chen et al., (2020) evaluated parent satisfaction in parents of pediatric cataract patients. Their study showed similar findings with a 93.8% understandability level of the preoperative education video compared to 93% in this QI project measured by the PEMAT-AV. However, satisfaction rates differed with 56.8% satisfied in the pediatric cataract parents versus 100% of pediatric surgical ophthalmology parents in this project. Some possible reasons for the differences in satisfaction levels could be study setting (China vs. U.S.), education level (low vs. higher education), and gender of parents (more males vs. females), respectively. Lower education levels could contribute to decreased preoperative education comprehension.

A video was created using and uploaded onto a QR code. Other studies in the literature did not use QR code scanning for video access (Aslakson et al., 2019; Chen et al., 2020; Padival et al., 2022; Tucker et al., 2022; Turkdogan et al., 2022; van Eck et al., 2018). This method to access educational materials is budget-friendly and easily reproducible in many clinical settings. Parents could access the video at home for repeat viewing and sharing with others. Utilization of

cell phones to scan QR codes to access health care information was preferred by many study participants. For the pediatric population, the pre-surgical clinic visit can be overwhelming and time-consuming to provide all pre-surgical, and procedure information in one visit. The ability for parents to retain all of this vital information is unlikely, so the option to review via a QR code at a later time is more convenient for patients and families.

Parents found the preoperative video to be understandable and helped them know what to do to help their child on their surgical day. However, there are opportunities for improvement. Parents wanted more information about visitation and any COVID policies. Guidance on visitation was intentionally made vague due to the fluidity of COVID rules and policy. Some parents felt some slides were hard to read on the phone and the feeding instruction slide needed to be clearer. One parent was visually impaired and could not scan the QR code at home. Future video versions will require modification for those who are visually impaired (e.g., low visual acuity or blind).

Future Implications for Practice and Research

Traditional preoperative teaching through verbal methods and handouts can be supplemented with current technology, like videos. The use of pre– post-operative and surgical procedure videos for patient education are becoming standard practice at most healthcare facilities. The type of platforms for delivery are still being developed. Delivery via smartphones, websites, and QR codes is feasible and potentially cost-effective to enhance education. This QI project created videos that could be accessed by scanning a QR code, allowing the parent to review in the clinic, at home, and developed for repeated viewing. While many hospitals want to move all communications to occur through a health portal, parents in this project reported a

preference for mobile phones to access health education. Therefore, future videos should consider smartphone applicability.

Strengths and Limitations

The strengths of this QI project were the use of validated measurement tools PEMAT - A/V and NRC Health and the use of video preoperative education in the pediatric ophthalmology clinic. Videos can be used to enhance verbal and written preoperative education.

This study should be viewed in light of some limitations. The QI project was conducted in a single center and only included parents of pediatric ophthalmologic patients. The QI project only included Spanish and English-speaking parents. Of note, Spanish speakers were only willing to participate if there was an in-person interpreter despite video and questionnaires being available in Spanish. This could reflect low Spanish literacy, which was not assessed in this project.

Another limitation is the small sample size of parents agreeing to complete questionnaires. This could be related to time limitations in the clinic, stress/anxiety related to new diagnoses, and up-and-coming surgical procedures. Voluntary surveys or questionnaire responses may not be reflective of all parental opinions. Parents with something negative or positive to say are more likely to respond to surveys. However, the ACA requires hospitals to prioritize satisfaction scores and experience to receive federal reimbursement (ACA, 2010). This QI project measured PEMAT/ A-V and NRC Health satisfaction scores over three months, and an increased period of measurement might be beneficial to evaluate the effectiveness of the video intervention.

CONCLUSION

Preoperative video education can positively impact parental satisfaction with surgical experience among parents of pediatric ophthalmology patients. In addition, the future development of parent educational videos based on procedures or surgery in multiple languages could further impact parent understanding and overall satisfaction with the surgical experience.

APPENDICES

Appendix A

Surgical Preoperative Website Information

Ambulatory Surgery Center

The Ambulatory Surgery Center is a modern, fully-equipped facility, featuring three state-of-the-art operating rooms and one procedure room.

This center provides all of the convenience of a state-of-the-art outpatient procedure center yet provides families with access to the full array of pediatric services available at our hospital's main campus.

The center is staffed by anesthesiologists and registered nurse anesthetists who are specially trained in treating children.

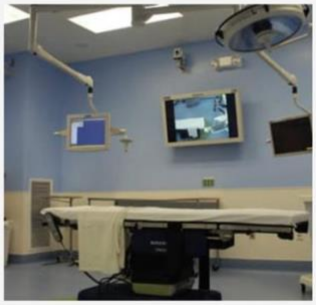
Burtie Green Bettingen Surgery Center

The Bettingen Surgery Center includes 14 state-of-the-art outpatient operating rooms, special procedure units, recovery facilities and the Associates Center for Minimally Invasive Surgery. Minimally invasive techniques and technology allow some procedures to be performed more quickly, with less pain and a faster recovery time.

The Center is named after one of the hospital's most generous benefactors, contributing more than $18 million. Burton Green Bettingen, known to her friends as "Burtie," was eight years old when she was rushed to Children's Hospital Los Angeles for neurosurgery due to complications from meningitis, a brain condition. The compassionate care she received during her time here made an impact on her long after she went home.

Surgery Centers

Overview



Children's Hospital Los Angeles provides the full spectrum of surgical care — from routine procedures to complex surgeries — in two modern, leading-edge surgical centers. Many surgery centers are not able to provide care for children who need complex operations. These types of cases are routinely treated at Children's Hospital.

Our surgeons have access to all of the specialists who may be needed for a child's recovery. Post-surgery care is coordinated by a multispecialty team of pediatric experts and children can be smoothly transferred from the operating room to an inpatient setting.

Family-Friendly Environment

- Pre-surgical tours offered.
- Play area staffed with a Child Life Specialist.
- Access to our gardens, dining options and waiting areas.
- Parents join children at the bedside as they go to sleep and awaken after surgery.
- Complimentary valet service on procedure day

Appendix B

NRC Health Survey Results Pre-Intervention

QUESTION SUMMARY

Question	YTD	Last 3 Months	Last Month	n-size	Score	Bench mark	Gap
Recommend OP surgery facility	88.2	90.5	92.9	102	88.2	83.3	4.9
Rating hospital 0-10	87.9	85.4	92.3	99	87.9	78.3	9.6
Care free of discrimination	81.7	83.7	87.5	115	81.7	77.0	4.7
Nurses courtesy/respect	77.6	74.5	62.5	125	77.6	81.9	-4.3
Nurses explained things	76.8	78.4	68.8	125	76.8	78.1	-1.3
Was told when could leave	75.6	82.0	75.0	119	75.6	80.1	-4.5
Comfortable talking w/ nurses	75.2	74.5	56.3	125	75.2	77.5	-2.3
Nurses listened carefully	75.2	72.5	50.0	125	75.2	79.0	-3.8
Trust provider w/care	75.0	80.8	75.0	128	75.0	79.1	-4.1
Providers listened carefully	70.5	67.9	56.3	129	70.5	81.8	-11.3
Confidence and trust in nurses	70.4	64.7	50.0	125	70.4	77.9	-7.5
Good communication b/w staff	69.4	76.0	62.5	121	69.4	73.1	-3.7
Got help as soon as wanted	68.3	66.0	56.3	120	68.3	73.8	-5.5
Family involved in visit	65.3	64.0	56.3	121	65.3	63.5	1.8
Did providers explain things	65.2	72.7	75.0	132	65.2	77.6	-12.4
Procedure began on time	33.3	27.6	11.8	138	33.3	59.5	-26.2

Appendix C

Preoperative Education Video

Scan the QR code to view the video.

Video de preparación para la cirugía/el procedimiento

Scan the QR code to view the video

Appendix D

NRC Health Parent Satisfaction Questionnaire

Question number	NRC Health Questions for Outpatient Surgery	Response
1	Did your procedure start on time?	• No • Yes, somewhat • Yes, mostly • Yes, definitely
2	Did the providers explain things in a way you could understand?	• No • Yes, somewhat • Yes, mostly • Yes, definitely
3	Did the providers listen carefully to you?	• No • Yes, somewhat • Yes, mostly • Yes, definitely
4	Did you trust the providers with your child's care?	• No • Yes, somewhat • Yes, mostly • Yes, definitely
5	Did you have confidence and trust in the nurses treating your child?	• No • Yes, somewhat • Yes, mostly • Yes, definitely
6	Did nurses treat you with courtesy and respect?	• No • Yes, somewhat • Yes, mostly • Yes, definitely
7	Did nurses listen carefully to you?	• No • Yes, somewhat • Yes, mostly • Yes, definitely
8	Did nurses explain things in a way you could understand?	• No • Yes, somewhat • Yes, mostly • Yes, definitely

8	**NRC Health Questions for Outpatient Surgery**	**NRC Health Questions for Outpatient Surgery**
9	Were you comfortable talking with nurses about your child's worries or concerns?	Were you comfortable talking with nurses about your child's worries or concerns?
10	During your visit, did you get help as soon as you wanted it?	During your visit, did you get help as soon as you wanted it?
11	Was there good communication between the different doctors and nurses?	Was there good communication between the different doctors and nurses?
12	Was a family member or friend allowed to be involved in your child's visit as much as you wanted?	Was a family member or friend allowed to be involved in your child's visit as much as you wanted?
13	Did your care providers explain when you would be allowed to leave?	Did your care providers explain when you would be allowed to leave?
14	How likely would you be to recommend this outpatient surgery facility to your family and friends	• 0 not at all likely • 1 • 2 • 3 • 4 • 5 • 6 • 7 • 8 • 9 • 10 extremely likely
15	Using a number from 0 to 10, where 0 is the worst possible, and 10 is the best hospital possible, what number would you use to rate this hospital during your child's stay?	• 0 worst hospital possible • 1 • 2 • 3 • 4 • 5 • 6 • 7 • 8 • 9 10 best hospital possible
16	What else would you like to say about your experience?	
17	Would you be willing to join Children's Hospital Los Angeles' online community and provide periodic feedback that will help us continue improving the care we deliver to patients and families?	• Yes, I would like to be part of the patient feedback • No thanks, not at this time. • N/a, I am already a member of the patient feedback group

Appendix E

Patient Education Materials Assessment Tool for Audiovisual Materials

and Demographic Questions

Title of Material:

Name of Reviewer: Review Date:

Read the PEMAT User's Guide (available at: http://www.ahrq.gov/professionals/prevention-chronic-care/improve/self-mgmt/pemat/) before rating materials.

UNDERSTANDABILITY

Item #	Item	Response Options	Rating
Topic: **Content**			
1	The material makes its purpose completely evident.	Disagree=0, Agree=1	
Topic: **Word Choice & Style**			
3	The material uses common, everyday language.	Disagree=0, Agree=1	
4	Medical terms are used only to familiarize audience with the terms. When used, medical terms are defined.	Disagree=0, Agree=1	
5	The material uses the active voice.	Disagree=0, Agree=1	
Topic: **Organization**			
8	The material breaks or "chunks" information into short sections.	Disagree=0, Agree=1, Very short material[1]=N/A	
9	The material's sections have informative headers.	Disagree=0, Agree=1, Very short material[*]=N/A	
10	The material presents information in a logical sequence.	Disagree=0, Agree=1	
11	The material provides a summary.	Disagree=0, Agree=1, Very short material[*]=N/A	
Topic: **Layout & Design**			
12	The material uses visual cues (e.g., arrows, boxes, bullets, bold, larger font, highlighting) to draw attention to key points.	Disagree=0, Agree=1, Video=N/A	
13	Text on the screen is easy to read.	Disagree=0, Agree=1, No text or all text is narrated=N/A	
14	The material allows the user to hear the words clearly (e.g., not too fast, not garbled).	Disagree=0, Agree=1, No narration=N/A	

Item #	Item	Response Options	Rating
Topic: **Use of Visual Aids**			
18	The material uses illustrations and photographs that are clear and uncluttered.	Disagree=0, Agree=1, No visual aids=N/A	
19	The material uses simple tables with short and clear row and column headings.	Disagree=0, Agree=1, No tables=N/A	

Total Points: _____

Total Possible Points: _____

Understandability Score (%): _____
(*Total Points* / *Total Possible Points* × 100)

ACTIONABILITY

Item #	Item	Response Options	Rating
20	The material clearly identifies at least one action the user can take.	Disagree=0, Agree=1	
21	The material addresses the user directly when describing actions.	Disagree=0, Agree=1	
22	The material breaks down any action into manageable, explicit steps.	Disagree=0, Agree=1	
25	The material explains how to use the charts, graphs, tables, or diagrams to take actions.	Disagree=0, Agree=1, No charts, graphs, tables, diagrams=N/A	

Total Points: _____

Total Possible Points: _____

Actionability Score (%): _____
(*Total Points* / *Total Possible Points*

Survey Demographic Information

Question	Answers
1) How old are you?	Option 1) Under 18 years old Option 2) 18-24 years old Option 3) 25-34 years old Option 4) 35-44 years old Option 5) 45-54 years old Option 6) 55 +
2) What is your gender?	Option 1) Female Option 2) Male Option 3) Decline to answer
3) What is the highest level of education you have completed?	Option 1) Elementary School Option 2) High School Option 3) Some College Option 4) College Option 5) Graduate School
4) What is your primary spoken language?	Option 1) English Option 2) Spanish Option 3) Other
5) How do you like best to receive health care information?	Option 1) Phone call Option 2) Email Option 3) Health Portal Option 4) Text Reminders

Appendix F

Questionnaire QR Codes

English

Spanish

TABLE OF EVIDENCE

Authors	Purpose	Sample and Setting	Methods Designs Interventions Measures	Results	Discussion Interpretation Limitations
Aslakson, R. A., Isenberg, S. R., Crossnoher, N.L., Conca-Cheng, A. M., Moore, M., Bhamidipati, A., Mora, S.,Miller, J., Singh, S., Swoboda, A. M., Pawlik, R. M., Weiss, M., Volandes, A., Smith, T. J., Bridges, J. F., & Roter, D. L. (2019). Integrating advance care planning videos into surgical oncologic care: A randomized clinical trial. *Journal of Palliative Medicine, 22(*7), 764-772. https:// doi.org.10. 1089.jpm.2018. 0209	Evaluate effectiveness of video based preop instruction **Purpose:** Can advanced care planning be done by video? **ACP:** pts able to plan for possible future health outcomes, contemplate future goals, and plan if pt is unable to speak for themselves. **Secondary purpose:** • Measure anxiety depression • Pt/MD satisfaction • video helpfulness decision maker designation	**Diagnosis:** CA: pancreatic, hepatobiliary, GI • n=92 • IG: 45**;** CG: 47 • **Inclusion criteria** • CA • ≥ 18 yo • no post op admit • able to sign consent • English speaker • no visual/hearing impairment **Setting** US Academic tertiary care center	**Design:** RCT, 2 armed, double blinded **IG:** watched video - preop info, recovery, medical advice. **CG:** video about MDs and hospital **Methods** • RCT • Randomized at enrollment • video viewed in clinic • video accessibility at home **Measures** • audio recording analyzed by RIAS • Hospital Anxiety and Depression Scale (HADS) • Iowa Goals of Care • Helpfulness of Video Survey • Pt/MD satisfaction survey	• mean age 64 yo • no demo difference IG/CG • 86% white • 11% AA • 63% female • no difference in dicussion of advanced care planning content between IG/CG • provider/pt conversations IG/CG equally addressed psychosocial/ socioemotional/ biomedical disease elements • increased HADS scores POW 1	↑satisfaction with video ↑effort/work for study coordinator to create video **Validity/reliability** • pt satisfaction • survey generated by researcher- not valid/reliable • ↓ethnic diversity • no numerical results/graphs of satisfaction results **Limitations:** • under power- sample size total 72 with 36 each group **Value of study:** increased pt/MD satisfaction discussion and video

Authors	Purpose	Sample and Setting	Methods Designs Interventions Measures	Results	Discussion Interpretation Limitations
Chen, H., Lin, Z., Chen, J., Li, X., Zhao, L., Chen, W. & Lin, H. (2020). The impact of an interactive, multifaceted education approach for congenital cataract on parental anxiety, knowledge and satisfaction: A randomized controlled trial. *Patient Education and Counseling, 103*(2), 321-327. https://doi.org/10.1016/j.pec.2019.09.002	Assess effectiveness education plan (in person classes, modules, video, social media group) What is the effect of education on: 1)pathology/ surgical knowledge 2) anxiety 3) parental stress 4) parent satisfaction	**Sample:** *n:*177 caregivers of children 28 days old to 18 yo dx: congenital cataract **Inclusion criteria:** parents of children with cataract surgery 28 days old to 18 yo **Exclusion criteria:** non-Chinese speaker, declined participation **Setting:** Zhongshan Ophthalmic Center in Guangzhou, China	**Design:** RCT, double-blind **CG:** verbal teaching **IG:** verbal education, in person classes, modules, videos, written information, social media (WeChat) **Measures** (tested 4x; start/end of program; 6-months postop; 12-months postop) 1) sx knowledge assessment 2) Parenting Stress Index (PSI) 3) Ocular Treatment Index (OTI) **Parent Satisfaction Questionnaire** 3 questions created by researcher x 1 **Method:** • pts screened for eligibility (n=214) • CG=107; IG=93 • IG received comprehensive teaching	• ↑ knowledge sx repeated ANOVA p-value <0.05 • IG>CG score knowledge at 6, 12 mos. p<0.001. • IG<CG anxiety at 6, 12 months • Parenting stress: anxiety ANCOVA analysis • 90% very good/good • 84% understand info • Satisfaction statistical analysis with ANCOVA test p value equal or greater than 0.05. Final analysis or satisfaction p=0.001.	IG: • ↑ sx knowledge repeated over 4 time points • ↓anxiety over 4 times points • ↑ satisfaction **Limitations:** validity/reliability threats: questionnaire created by researcher and only used in this study **Validity:** external validity- China study may not be generalizable, time/effort commitment for intervention. **Opportunities** parents receptive to classes, videos, social media

Authors	Purpose	Sample and Setting	Methods Designs Interventions Measures	Results	Discussion Interpretation Limitations
Padival, R., Harris, K. B., Garber, A., El-Khider, F., Kichler, A., Vargo, J., Baggot, B. B. (2022). Video consent for colonoscopy improves knowledge retention and patient satisfaction: A randomized controlled study. *Journal of Clinical Gastro-enterology*, *56*(5). https: //doi. 10.1097/ MCG. 00000000 00001589	Purpose: create a video tool to supplement provider's informed consent process in order to: • ↑ satis-faction • ↑ recall Procedure: colonoscopy under conscious sedation	∫**Sample:** *n*=91 IG: 45 pts CG: 46 pts **Inclusion:** • > 18 yo and above • undergoing outpatient colonoscopy with • conscious sedation **Exclusion:** • non-English speaking • audiovisual impairment • unable to consent • combined procedure **Setting:** Cleveland Clinic; Oct-Dec 2018	**Design:** prospective, double-blind RCT. **CG:** verbal consent only **IG:** • verbal and video • video content: • surgical indication, risks, benefits, alternatives. • Video: 4.5 min, 5-6 grade level **Methods** **IG:** video before verbal consent **Measures:** • 1-2 days after colonoscopy all patients called • **knowledge assessment survey:** • 2 yes/no questions; 5-point Likert scale to assess indications, risks, benefits, alternatives • **satisfaction survey:** 5-point Likert scale. P value < 0.05 statistically significant	**IG:** *n*=45 - higher recall than **CG:** 46 Mean age: 58.5 +/- 12.4 years **Power analysis:** 43/group 80% power to detect 18% in retention of groups with level of 0.05 on 2-sided *t* test. Satisfaction *p* level=0.03. **Knowledge assessment survey** • IG had better recall than CG (IG: 77.8% and CG: 15.2%. • **satisfaction survey:** 5-point Likert scale. P value < 0.05 statistically	**Discussion** • video watchers: ↑ satisfaction, knowledge recall • **Applicability** video a good addition to informed consent process, but should not take the place of face:face consent with MD • **Video** allows pt to hear info 2 times **Internal validity concerns** • pts interviewed by researchers and asked questions->no anonymity **Valid** + randomization, CG/IG, single blind, +explanations for those who left **Limitations:** Questionnaire not validated/reliable

Authors	Purpose	Sample and Setting	Methods Designs Interventions Measures	Results	Discussion Interpretation Limitations
Tucker, K., Sullivan, S., Deal, A., M., Allman, K., McCabe, S. D., Gehrig, P. A., (2022). A prospective randomized trial of standard versus multi-media supplemented counseling in patients under-going endometrial cancer staging surgery. *Gynecologic Oncology*. https://doi.org 10.1016/j.ygn o. 2022.07.013	Compare 2 preoperative teaching methods: verbal vs verbal plus multimedia method Preoperative education includes: 1) informed consent 2) preoperative and postoperative expectations	**Sample:** dx: endo-metrial CA-adult pts **Inclusion:** • 18 yo and older • English speaking • Endometria l CA • Lymph node biopsy **Setting:** public comprehensive cancer center North Carolina	**Design:** single-blind RCT **CG** (verbal education by MD) *n*=38 **IG** (multimedia based education- 2 videos and verbal instruction) *n*= 37 **Methods:** • computer randomization of pts • IG: 2 videos and MD discussion; CG: discussion only • demographic questionnaire • satisfaction survey • knowledge survey **Measures** • Satisfaction Questionnaire-8 (validated) score 8-32 points • MD Satisfaction Questionnaire- global satisfaction score • Comprehension- 9 question survey at 3 different time points • Demographic survey	**Satisfaction/CSQ-8** • researcher determined 4-point difference in CSQ-8 score was statistically significant p<0.01 as measures by 2 group 5 test. Statistical analysis p=0.050 • IG: CSQ-8 score 31.89 (32 highest score) • CG: 30.69 **MD Satisfaction** • MDs reported higher satisfaction **participants:** • 70% white • 72% 50-70 yo • 75% college educated Sample size of 37 in each group has 80% power	• videos were animated and reviewed staging sx for endometrial CA and lymph node bx • clinic visit and consultation was 80 minutes • limitations: 85% had prior procedure **Validity** • pt satisfaction questionnaire proven reliable/valid **Reliability** • Satisfaction/ knowledge results consistent over time • video can help prevent provider burnout, standardize teaching

Authors	Purpose	Sample and Setting	Methods Designs Interventions Measures	Results	Discussion Interpretation Limitations
Turkdogan, S., Roy, C. F. Chartier, G., Payne, R., Mlynarek, A., Forest, C., & Hier, M. (2022). Effect of peri-operative patient education via animated videos in patient undergoing head and neck surgery. *JAMA Otolaryngology-Head and Neck Surgery, 148*(2): 173-179. https://doi.10.1001 /jamaoto.2021.3765	Determine feasibility of standardized multimedia preoperative education which looks at effects of preoperative education on satisfaction	**Sample** • 18 yo and older head/neck sx • CG**:** *n*=50 • IG: *n=50* **Inclusion:** • 18 yo and older • head/neck pt resection, parotid-ectomy, thyroid-ectomy, parathyroidectomy, laryngectomy, transoral robotic resection **Exclusion** • revision/repeat surgery **Setting** Tertiary academic hospital Jan-Aug 2020 Montreal, Canada	**Design:** RCT dbl-blind **Intervention:** • evidenced-based animated video (created by Precare) • sx/preop/intraop/ postop • 6th grade level in English or French • unlimited access to video **Methods** • computerized random assignment • **IG:** video and verbal teaching • **CG:** verbal only **Measures** • Satisfaction questionnaire • EORTC QOL INFO 25 - validated (scores 20-80) • preop questionnaire-14-items	*n*=100; female: 63; male: 48. AA: 6 Hispanic: 12 Mid-Eastern;11 White: 78 **Satisfaction/** European Organisation for Research and Treatment of Cancer Quality of Life Questionnaire Cohen *d* measured difference between IC/CG with individual t test. • Cohen *d:*0.2 small effect; 0.5 medium effect; 0.8 large effect. • Satisfaction for IG= Cohen *d*=1.02 IG patient comments: 60% found video acceptable, 92% found it interesting; 100% rated video useful, easy to understand, and 75% felt more confident about procedure	↑satisfaction IG>11.3-point (Cohen *d*=1.02; CG: 61.1/80; IG: 72.4/80) during 1 month postop questionnaire Unlimited video access highly rated. ↑ flexibility and access; allows for review if procedure schedule; friend/family can view also **Limitations** • some patients have no or poor internet availability. • challenges in creating online content

Authors	Purpose	Sample and Setting	Methods Designs Interventions Measures	Results	Discussion Interpretation Limitations
van Eck, C. F., Toor, A., Banffy, M. B., & Gambardella, R. A. (2018). Web-based education prior to outpatient orthopedic surgery enhances early patient satisfaction scores. *The Orthopedic Journal of Sports Medicine, 6*(1), 232596711 7751418. https://doi.org/10.1177/ 232596711 7751418	Evaluate interactive web-based education tool on patient satisfaction scores Videos: • Preop instructions • day of surgery expectation • postop instructions • links to other videos	**Sample:** *n*=177 Power analysis: 30 each group females: 73 males: 104 mean age: 42 +/- 14 years **Inclusion:** any pt seen by MD surgical pt 18-65 yo **Exclusion:** non-English Speaker **Surgery:** knee arthroscopy, ACL, shoulder arthroscopy **Setting:** adult orthopedic private practice in Los Angeles, CA	**Design:** double blind RCT CG: routine education MD>fellow>PA or medical assistant> anesthesia>PACU RN and short video **IG:** web-based education HealthLoops- web based interface. **Methods:** • randomized by excel • take satisfaction survey- OAS CAHPS 14 days prior surgery • repeat OAS CAHPS 14 days postop **OAS CAHPS:** 24 questions on preop education, facility, staff, communication, recovery, general experience, demographics	CG: *n*=90 IG: *n*=87 Satisfaction results CG: 94 +/- 8; p=0.19 IG: 97 =/- 5 Measures OAS CAHPS survey independent *t* test with p<0.05. Satisfaction survey before and after surgery p result was 0.019	**Discussion** satisfaction score IG interpretation • overall health no impact on scores • web-based pts felt more prepared • pt had video access outside office • private practice-staff smaller and have same messaging • private practice highly interested in satisfaction scores Satisfaction tool: valid reliable Limitations: private practice, excludes pts without internet access

OAS CAHPS: Outpatient and Ambulatory Surgeries and Ambulatory Surgeries and Procedure

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