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Implementation of Surgical Education Video to Burn Patients Before the Informed Consent Process

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By

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Manuscript: Implementation of Surgical Education Video to Burn Patients Before the Informed Consent Process

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Abstract

Purpose: Before the initiation of this evidence-based Doctor of Nursing Practice (DNP) project, a systematic review of literature set forth by other researchers regarding the informed consent process was done. The literature showed patient satisfaction scores increased, while anxiety decreased regarding surgical procedures after using a multimedia educational tool. The first goal of the project was to determine any gaps in knowledge of the burn surgical patient population. The second goal of the project was to determine gaps in knowledge and comfort levels with providers obtaining informed consent. The third goal was to determine the efficacy of implementing a surgical education video for patients and providers.

Background: The informed consent process is a daily task for providers with a surgical patient population. In the burn population, informed consent is often presented by an intern or resident

physician. Consent is comprised of surgical debridement with a multitude of options for coverage of their wounds. The current state of practice is a verbal overview of all the possible procedures that may be done to the patient's wound(s). Patients often verbalize feeling overwhelmed with the amount of information on the consent and often have questions related to their procedure just before the brief of the operative case.

Methods: An educational video was developed that detailed the surgical procedure and the potential burn wound coverings. A 3-question survey was given to patients who have already been through the informed consent process. Survey metrics examined knowledge of consent when signed, the satisfaction of verbal explanation, and if a video would increase understanding. The video was given to the same patients to watch. After the video was viewed, those patients were then again surveyed. Providers were also given a 3-question survey before viewing the video. Survey metrics examined comfort of consent, knowledge of procedures, and if the video would increase patient understanding of consent topics. The providers were then surveyed after watching the video.

Results: Initial post-implementation data shows that patients and providers have increased comfort and knowledge in the informed consent process. Patients show an 80% increase in understanding of consent, a 72% increase in satisfaction with video vs verbal overview, and a 97% increase in satisfaction with material viewed. Provider data shows a 65% increase in the comfort of consent, a 64% increase in knowledge of procedures, and a 97% increase that the video will help patients understand their consent. This shows that this evidence-based project is an improvement from the current standard of practice.

Evaluation: Implementation of a standardized audio/video teaching method for burn surgical patients is an effective way to increase patient and provider satisfaction regarding the informed

consent process. This tool can easily be modified with practice changes for sustainability. Implementing this educational tool is a cost-effective and simple way to educate burn patients before their surgical procedures. There is an overall improvement in patient satisfaction and increased satisfaction in the providers who obtain the consent.

Keywords: Knowledge Gap, Video Teaching, Sustainability, and Satisfaction

Implementation of Surgical Education Video to Burn Patients Before the Informed Consent Process

Background and Significance

Informed consent is a process where the provider and the patient discuss invasive procedures. The consent process highlights the risks of the procedure versus the benefits and the complications that could potentially arise. It also creates a forum for discussion and questions. This is an integral part of the perioperative process and must be conducted in a way so that patients can fully understand the consent that they are signing. At the UC San Diego Regional Burn Center, the surgical consent is often comprised of surgical excision of the burn wounds, followed by a multitude of coverings that may be used for the patient's wounds. It is necessary to excise or debride the burn wound before the surgeon's determination of which covering to use.

In the burn population, consent is often performed by an intern or resident physician. These physicians are rotating through the burn service for a month at a time as a required aspect of their surgical rotations. Since burn is a specialized service and not commonly found in most hospitals, it is a rotation that these physicians have had little experience with. These providers are required to experience an orientation process when starting on the burn unit, including education surrounding the surgical procedures that are performed. The current state of practice is a verbal overview of the surgical procedure followed by several other surgical coverings that can be used, including a patient's skin (autograft) versus different temporary coverings. Patients have often mentioned feeling overwhelmed by the number of procedures on the consent, have questions following signing the consent, and even have questions up to the time of the briefing (the first safety check) of the surgical case. It was clear through these examples that patients and providers obtaining the consent need further education regarding burn-specific surgical informed consent.

Purpose/Aims

The overarching goal of this project was twofold. Creating a video that explains the contents of the informed consent, in layman's terms, was done. The first and most prioritized goal was to improve patient knowledge and understanding of the informed consent process. Patients that were surveyed expressed how helpful this video was to understand the surgical procedures that were listed on the consent. Patients also reported that the terminology was much easier to understand when it was explained to them in the format that was presented. Overall, the patient population showed a robust and genuine enthusiasm for the project. Moving forward, some patients suggested visuals of the wound coverings described in the video would be helpful,

while others stated that they would not like to see such visuals. Further study will need to be done on this topic as this project evolves.

The secondary goal of this project was to examine provider comfort, knowledge, and to improve the patient experience. The physician feedback has been robust and enthusiastic as well. All the physicians who participated in the study have asked if this video could be part of the onboarding experience as they enter their burn surgical rotation. This was implemented with the March 2022 group of interns, and residents rotating through the burn surgery service.

Evidence-Based Practice Model

The model chosen for this project is the Iowa Model Revised. This model was developed by Marita G. Titler, Ph.D., RN, FAAN, Director of Nursing Research, Quality and Outcomes Management, Department of Nursing Services and Patient Care, University of Iowa Hospitals and Clinics, Iowa City, Iowa, and her colleagues to describe knowledge transformation and to guide implementation of research into clinical practice (Donate, 2004).

The rationale for selecting the Iowa Model Revised is that the model is designed as a multiphase change process with feedback loops (Melnyk, 2019). This is helpful to keep the project efficacious, by asking questions about yourself and the project along the way. This will help propel the project forward and question each stage of the process to help keep focus. The project is a patient education-based project. This model that identifies and sustains the practice change is important for the longevity of the project, and sustainability of practice change. The feedback loops highlight the messy and non-linear nature of EBP and support teams moving forward (Melnyk, 2019). The use of team formations to identify and engage stakeholders is appealing. The burn surgery service is a strong multidisciplinary team which makes this step

applicable. The Iowa Model is widely used and has stood the test of time as a pragmatic guide for the EBP process (Buckwater et al.,2017).

Literature Review/Evidence for the Problem

A review of the literature was performed before the design and implementation of this EBP project. Search engines such as PubMed and CINHAL were utilized to access relevant literature. These search results yielded two levels I articles, four-level II articles, and three-level III articles. Evidence was compared using a hierarchy and levels evidence table for analysis.

An examination of health literacy interventions on the informed consent process was performed by Perrenoud (2015). In this systematic review, Informed consent is a fundamental principle in the health care context which nowadays includes the patient's capacity to judge and to be involved in the decision making concerning their care that ensures that the care received reflects their goals, preferences, and values (Perrenoud, 2015). A meta-analysis performed by Kinnersley (2013) looked at various interventions that may be utilized to achieve informed consent, Achieving informed consent is a core clinical procedure and is required before any surgical or invasive procedure is undertaken. However, it is a complex process that requires patients to be provided with information that they can understand and retain, the opportunity to consider their options, and to be able to express their opinions and ask questions. There is evidence that at present, some patients undergo procedures without informed consent being achieved (Kinnersley, 2013). A randomized controlled trial (RCT) by Wongkietkachorn (2017), examined if preoperative needs-based education would increase satisfaction in a same-day surgical center. This RCT found that Needs-based patient education is more effective in decreasing anxiety, increasing patient satisfaction, and reducing time spent in education compared with traditional patient education (Wongkietkachorn, 2017). Other studies have found

a need for improvement regarding the informed consent process. Video-assisted consent for Mohs micrographic surgery improves patient knowledge, leads to a better understanding of the risks, and saves physicians time without compromising patient satisfaction and anxiety levels in this study setting (Miao, 2020). The objective of a study by Marcus (2018) examined that providers need to be sure informed consent has been achieved, especially from a medical/legal risk standpoint. An interactive educational multimedia website appears to be a helpful adjunct to the informed consent process for patients undergoing transsphenoidal excision of a pituitary adenoma (Marcus, 2018). A close comparison of the burn population was a study performed by Lin (2018). In this study, video-assisted vs. verbal informed consent was examined for patients requiring wound debridement. In this study, Lin found, Video-assisted informed consent may improve the understanding of surgery and satisfaction with the informed consent process for trauma patients in the ED. Institutions should develop structured methods and other strategies to better inform trauma patients, facilitate treatment decisions, and improve patient satisfaction (Lin, 2018). A randomized controlled study performed by Book (2020) showed increased knowledge and decreased anxiety among caregivers. Preoperatively providing access to an online consent video regarding IHR reduces anxiety and enhances knowledge without altering satisfaction level. Adjunct online videos are a useful tool to enhance the consent process (Book, 2020).

This review of the literature demonstrates that video learning tools increase patient knowledge and satisfaction, both aims of this project. Literature searches will be ongoing as the project moves forward. Translation into other languages and practice changes that will be inevitable will need to be updated as needed.

Description of Evidence-Based Project

An evidence-based project (EBP) was designed and implemented for patients and providers. A video was made describing all aspects of the burn surgical procedures, and all possible biological vs synthetic coverings that may be utilized for the wound(s). The video consists of a verbal overview with visual captions of each section of the consent being discussed. This information was broken down in laymen's terms and describes what the patient may have on their wounds post-operatively.

Patients who have already gone through the informed consent process were given a 3-question survey. This survey was performed using a Likert scale of 0-5 (0 being dissatisfied to 5 being most satisfied). Metrics examined were understanding of the consent when it was signed, the patient's satisfaction with the providers' verbal overview, and if they believe that an educational video would increase their knowledge. Patients were then shown the 4-minute video and then again surveyed. Metrics post video examined if the video improved understanding of the consent. Post viewing metrics examined measured increased understanding of the consent, preference over verbal or video consent, and if the video would be helpful as additional education along with the verbal consent process.

Providers (resident and intern physicians) rotating through the burn surgery service were also given a 3-question survey before watching the video. Metrics of the provider surveys examined their current comfort level of obtaining consent, current knowledge of describing burn surgery-related procedures, and if the video would give them and their patients increased knowledge regarding the procedures ahead of them. The providers then watched the same video displayed to the patients and completed a 3-question post-survey. Metrics on that survey examined if the video increased the provider's comfort of consent if the video increased their

knowledge base of burn surgical procedures and if the video will aid their patients in gaining a greater understanding of the consent.

Ethical Considerations

CITI training was completed by the lead author under The University of San Diego's Institutional Review Board. This study was approved by the Institutional Review Board at the University of San Diego, Hahn's School of Nursing. AGUIRE paperwork was also submitted to the University of California San Diego, excusing IRB approval as this is an evidence-based project. There were no conflicts of interest in this evidence-based project.

Results of Evidence-Based Project

Illustrated in figures 1 and 2, the pre - and post-video survey data were compiled in the patient population (n=13). A T-test: two-sample assuming equal variances statistical analysis was performed. For the first metric, understanding of consent when signed yielded a 78% increase ($p<0.001$). The second metric which measured the preference for a video overview versus a verbal overview yielded a 72% increase ($p<0.0010$). The final metric examined if the video would be a helpful adjunct to the informed consent process consent post video viewing, yielded a 96% increase ($P<0.001$).

Figure 1

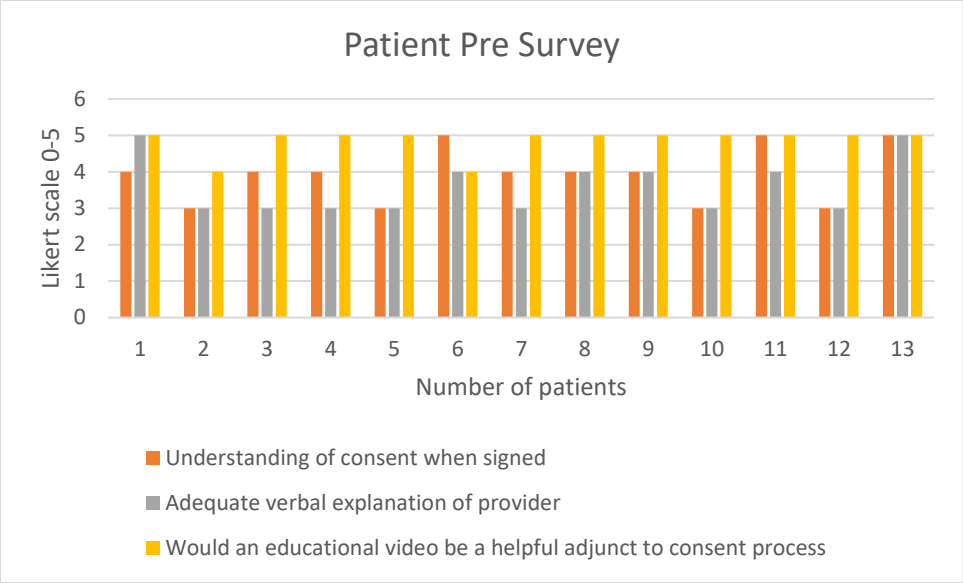
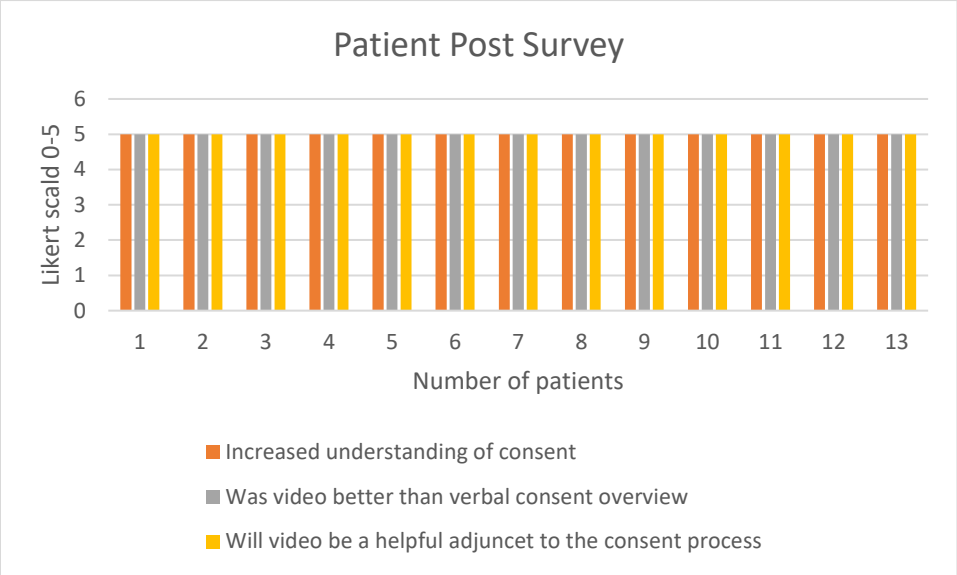


Figure 2



Illustrated in figures 3 and 4, the pre and post-data were compiled in the provider population (n=12). A T-test: two-sample assuming equal variances statistical analysis was performed. In the first metric, the comfort of obtaining burn surgical consent yielded a 65% increase ($p<0.001$). The second metric of the video increasing provider knowledge of burn surgical procedures yielded a 64% increase ($p<0.001$). The final metric of the project which

examined if the video would improve patients' understanding of the informed consent viewing yielded a 96% increase ($p<0.001$).

Figure 3

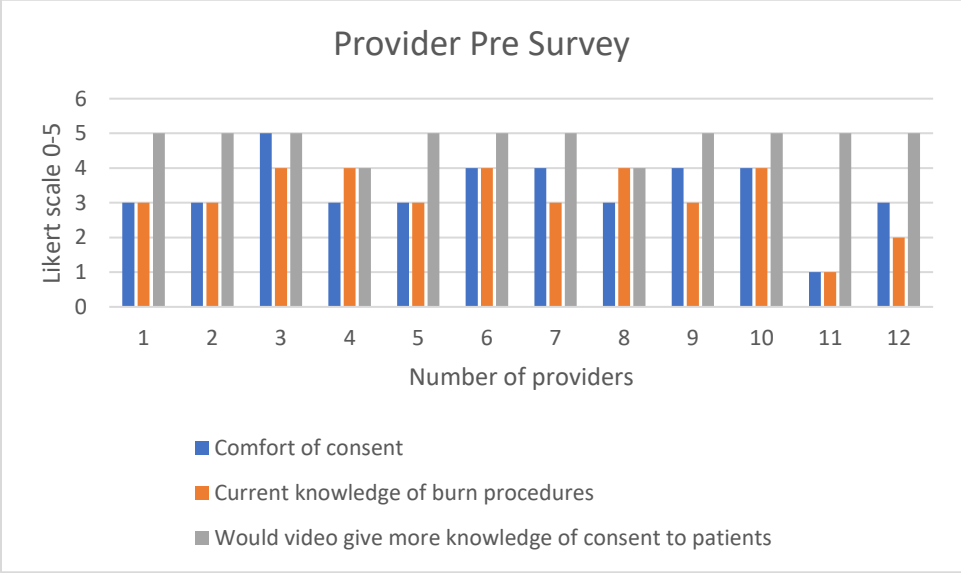
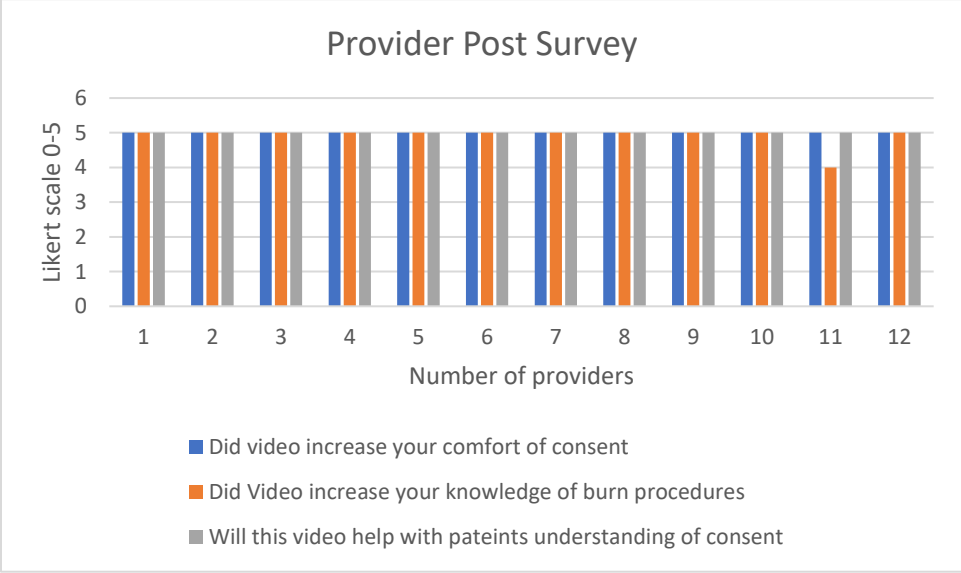


Figure 4



Study Limitations

The response rate by both patients and providers was 100%. Participants in both groups were enthusiastic about being part of the study. Inclusion criteria for this study were English-

speaking, adult, non-ICU level of care patients. More patients will be able to view the video as the project evolves by accommodating Spanish-speaking patients by the interpretation which is currently being done and closed-captioning will also be available. People acting as surrogate decision-makers for minors will also be included in further study.

Discussion

This project has increased patient and physician knowledge and comfort and has ultimately streamlined the informed consent process for the burn surgery service. This project was designed with sustainability in mind. This project can be easily edited with practice changes which will inevitably happen over time. This video is currently being translated into Spanish and closed captioning will be added.

Implications of Further Research

Although there is strong evidence supporting the intervention of this project, there is a paucity of literature specifically relating to the burn surgical informed consent process. A vast number of studies examine the education of patients related to the informed consent process and how multimedia and video education can improve patient knowledge and comfort of signing the informed consent. Although there is a multitude of studies regarding informed consent for other surgical services/specialties /procedures, there is a paucity of literature regarding burn patients. This leads to the importance of this project and potentially leads to further study of this topic.

Conclusions

The informed consent process is an opportunity for providers and patients to have a moment of discussion. It is a pivotal point in which a patient and a provider determine the next

step of their care. The patient must have clear communication and education regarding the procedures to which they are consenting. It is also a discussion where a provider can provide education and support at what is an overwhelming time for patients in their hospital stay. The implementation of this evidence-based project is a simple, affordable, and effective way to educate patients on the burn service before informed consent. Overall, this project is sustainable, leading to further study and ultimately improved patient outcomes.

References

Book, F., Goedeke, J., Poplawski, A., & Muensterer, O. J. (2020). Access to an online video enhances the consent process, increases knowledge, and decreases the anxiety of caregivers with children scheduled for inguinal hernia repair: A randomized controlled study. *Journal of Pediatric Surgery*, *55*(1), 18–28. https://doi.org/10.1016/j.jpedsurg.2019.09.047

Buckwalter, K. C., Cullen, L., Hanrahan, K., Kleiber, C., McCarthy, A. M., Rakel, B., Steelman, V., Tripp-Reimer, T., & Tucker, S. (2017). Iowa Model of Evidence-Based Practice: Revisions and Validation. *Worldviews on Evidence-Based Nursing*, *14*(3), 175–182. https://doi.org/10.1111/wvn.12223]

Donate, K . J. (2007, July 3). Evidence-Based Practice: Understanding the Process. Retrieved February 13, 2021, from Topics in Advanced Practice Nursing

Garcia, J., Hunter, R. C. (1974) Grateful Dead. *Live from the Mars Hotel*, Warner Brothers Music.

Kinnersley, P., Phillips, K., Savage, K., Kelly, M. J., Farrell, E., Morgan, B., Whistance, R., Lewis, V., Mann, M. K., Stephens, B. L., Blazeby, J., Elwyn, G., & Edwards, A. G. (2013). Interventions to promote informed consent for patients undergoing surgical and other invasive healthcare procedures. *Cochrane Database of Systematic Reviews*. https://doi.org/10.1002/14651858.cd009445.pub2

Lin, Y. K., Chen, C. W., Lee, W. C., Cheng, Y. C., Lin, T. Y., Lin, C. J., Shi, L., Tien, Y. C., & Kuo, L. C. (2018). Educational video-assisted versus conventional informed consent for trauma-related debridement surgery: a parallel-group randomized controlled trial. *BMC Medical Ethics*, *19*(1). https://doi.org/10.1186/s12910-018-0264-7

Marcus, H. J., Jain, A., Grieve, J., & Dorward, N. L. (2018). Informed Consent for Patients Undergoing Transsphenoidal Excision of Pituitary Adenoma: Development and Evaluation of a Procedure-Specific Online Educational Resource. *World Neurosurgery*, *118*, e933–e937. https://doi.org/10.1016/j.wneu.2018.07.102

Melnyk, B, M. (2019). *Evidence-based practice in nursing and healthcare A guide to best practice.* Fourth edition. Wolters Kluwer

Miao, Y., Venning, V. L., Mallitt, K. A., Rhodes, J. E., Isserman, N. J., Moreno, G., Lee, S., Ryman, W., Fischer, G., & Saunderson, R. B. (2020). A randomized controlled trial comparing video-assisted informed consent with standard consent for Mohs micrographic surgery. *JAAD International*, *1*(1), 13–20. https://doi.org/10.1016/j.jdin.2020.03.005

Perrenoud, B., Velonaki, V. S., Bodenmann, P., & Ramelet, A. S. (2015). The effectiveness of health literacy interventions on the informed consent process of health care users: a systematic review protocol. *JBI Database of Systematic Reviews and Implementation Reports*, *13*(10), 82–94. https://doi.org/10.11124/jbisrir-2015-2304

Wongkietkachorn, A., Wongkietkachorn, N., & Rhunsiri, P. (2017). Preoperative Needs-Based Education to Reduce Anxiety, Increase Satisfaction, and Decrease Time Spent in Day Surgery: A Randomized Controlled Trial. *World Journal of Surgery, 42*(3), 666–674. https://doi.org/10.1007/s00268-017-4207-0