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Improving Anesthesia Provider Efficiency

Gloria Dullinger-Brown

Doctor of Nursing Practice Student



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Video Presentation of Anesthetic Options, Risks, and Benefits to Women aged (18-40) in the Prenatal Clinic (23-28 weeks gestation) to Improve Anesthesia Efficiency in obtaining informed consent for patients in active labor.



Acknowledgements



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Introduction

- Inefficiencies in the informed consent process for anesthetic procedures contributed to 12 billion dollars in healthcare waste (Ostrem, 2019).
- Pain impacts the legal process of informed consent
- Relief of pain limits providers' time to explain the legal components of informed consent.
- Limits patient's engagement in active decision-making

Inconsistency in the time and process to obtain informed consent impacts the patient, provider, and healthcare organization.

Background



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- Providers rush through consent to provide immediate pain relief.
- Patients sign consent without active engagement in the process.
- Discussion of all anesthetic options, risks, and benefits may be inconsistent based on the patient's need for pain relief.



- Education during the prenatal period impacts patient's ability to actively engage in the decision-making process (Krist et al., 2017)
- Reprioritization of the timing and delivery method of anesthetic information increases informed decision making and can be used to address efficiency (Kanengoni et al., 2020)
- Improvement in procedural efficiency directly impacts healthcare costs and quality of care.

The Problem

- Anesthesia providers time to explain anesthetic options, risks, and benefits to patients admitted to labor and delivery in active labor. The population affected are patients in active labor (age 18-40).

PICOT

In pregnant women aged 18-40, does the change of timing and process for the education of anesthetic options using video education during the prenatal period (23-28 weeks gestation) compared to women in active labor receiving verbal anesthetic options affect anesthesia providers' efficiency?

Aim

Establish a process for presenting anesthetic options in the prenatal period using video education to improve anesthesia provider efficiency in obtaining informed consent for patients in active labor.

Objective

- Use video education in the prenatal period (23-28 weeks' gestation) to improve anesthesia providers' efficiency in obtaining informed consent by 20 percent (2 minutes) for patients admitted in active labor for 19 weeks.

Evidence Search

- Medline, EMBASE, CINAHL, Web of Science, Pub Med, Ovid, and Scopus databases.
- Search terms for each database used a combination of *“anesthesia,” “multimedia,” “informed consent,” “labor and delivery,” “prenatal, education,” “patient satisfaction,” “anxiety,” “anesthesiologist,” “nurse anesthetists,” “procedures,” “labor and delivery,” “obstetrics,” “efficiency,” and “timing.”*

Synthesis of Evidence

Seven Randomized Control studies

One Quasi-experimental

Two Qualitative studies

Two Systematic reviews

Five Qualitative studies

- Lack of informed consent for labor patients – the need for change
- Patient Satisfaction-inconsistent
- Inconsistent provider and process for presentation of information
- Video Education- supported before the procedure and impact quadruple aim.
- Patient anxiety and pain impact decision-making Knowledge improved with video use
- Timing of information and pains impact decision-making

Synthesis Conclusions

- The need for change in the informed consent process.
- The challenges of women in pain giving informed consent.
- The appropriate timing of procedural information before active labor
- Practitioner inconsistency in providing information.

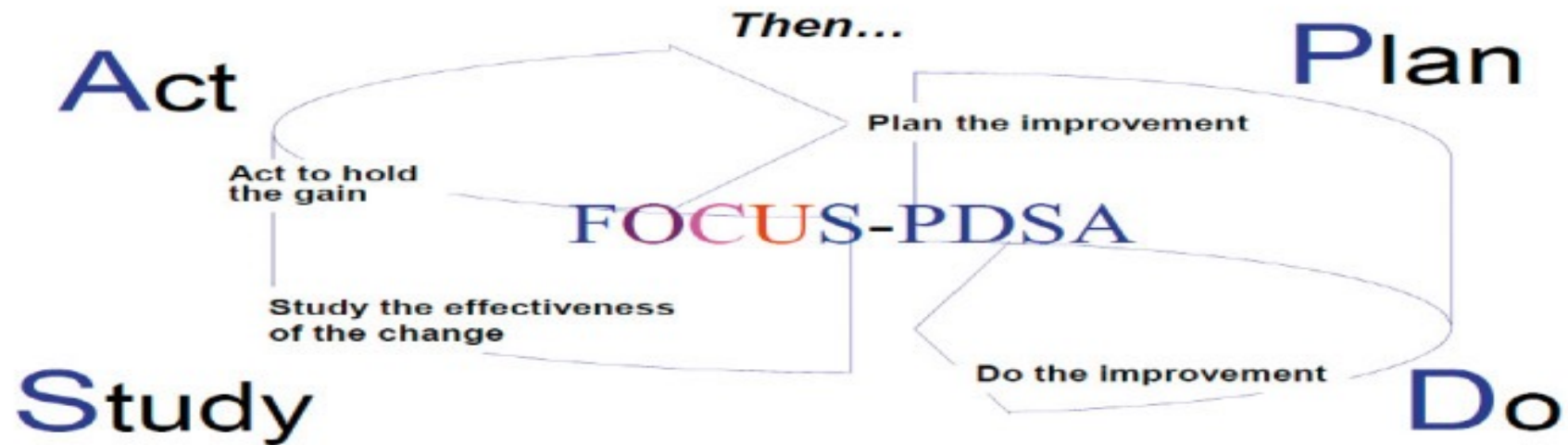
Synthesis Conclusions

- The positive impact of video education on consistency and knowledge of procedures.
- Did not address the impact on healthcare costs or efficiency.
- Improvement in efficiency and efficacy tends to decrease costs.
- Changing healthcare processes that improve patient care quality, efficiency, and outcomes impact healthcare costs (Jones et al., 2019).



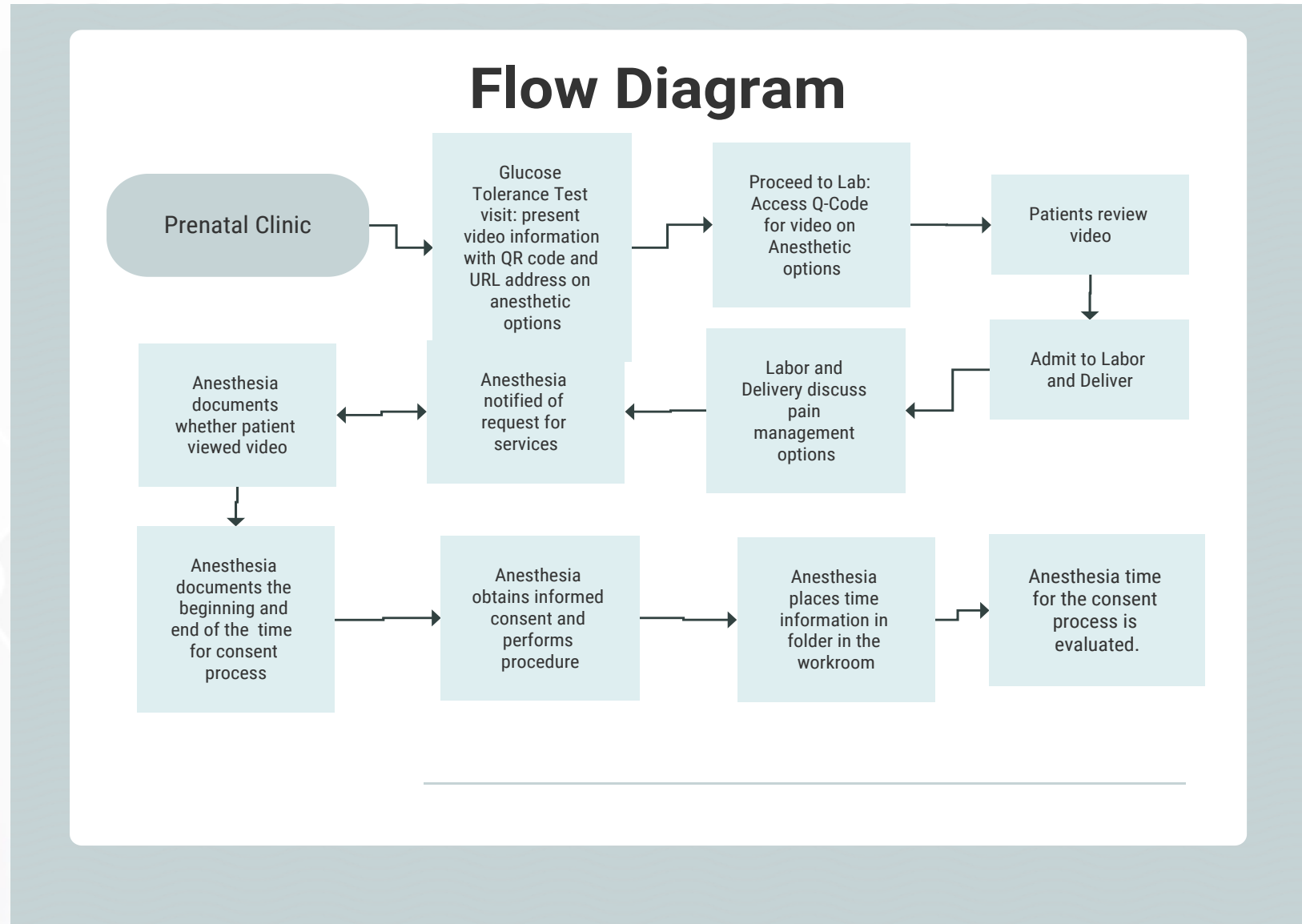
Conceptual Framework

- F** - Find a process to improve
- O** - Organize a team that knows the process
- C** - Clarify current knowledge of the process
- U** - Understand causes of process variation
- S** - Select the process improvement



Workflow

- Project design followed the workflow from:
- The Prenatal Clinic
- Admittance to Labor and Delivery
- Request for Anesthesia Services



Planning (P_{DSA})

- Planning, budget, and resources
- Nursing assistants provide QR-code and URL access to video
- Development of video on anesthetic options, risks, and benefits
- Patient decides whether to view information
- Prenatal clinic use of dot phrases as reminders to present video
- Development of checklists and tool.



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Participants

- Women aged 18-40
- English-speaking.
- Patients scheduled for a GTT at 23-28 weeks receive access to a video on anesthetic options, risks, and benefits.
- Patients could freely decide whether to view the video information.
- Project site.



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Sampling

- Two groups: those who viewed the video (Yes) and those who did not (No) indicated on the anesthesia providers checklist.
- A total of 110 participants with 66 in the No group and 44 in the Yes group.

Institutional Review Board (IRB) Approval



- IRB approval was approved for study 0001795 and classified as exempt from the project implementation site.
- A letter of support for the project was obtained from the FL1 organization as part of the IRB process.
- The degree-seeking institution also granted IRB approval and exemption.

Checklist In Prenatal Clinic

Nursing Assistant

- Daily: Check for patients admitted For GCT.
Date:
***Use one checklist per patient
- Complete visit requirements
- Present Video information utilizing the following statement: A video is available to provide knowledge of anesthetic options, risks, and benefits. You can access this information utilizing a Q-code or the indicated web-access site.
- A paper copy of the Q-code and website are provided to the patient.**
- Conclude by stating: This is a short video that can be viewed while you wait for your blood draw.**
In nursing, notes use dot s to document "pain relief during labor".
- At the conclusion of the video: Patients will be directed to address any questions concerning anesthetic options to anesthesia providers when admitted to labor and delivery.
**Place completed checklist in folder "labeled" completed checklist*

Notes to project leader:



Doing (PDSA)

Nursing Assistants – Select patients meeting sample criteria

Provide patients with educational video access

Patient decide whether to watch video

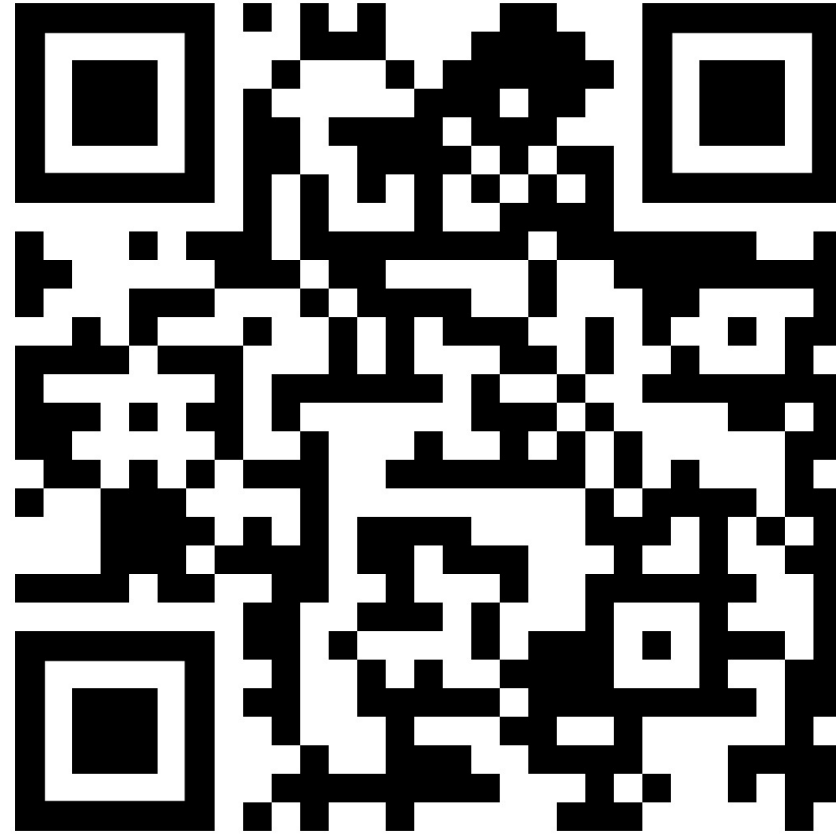
Nursing Assistants place completed checklist in folder

Access to YouTube Video

QR-Code

Access to YouTube video on Anesthetic Options, Risks, and Benefits

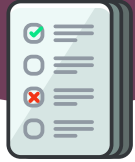
<https://youtu.be/y3Lfokof42w>








Labor and Delivery Unit

Labor and Delivery notify provider of patients desire to have an anesthetic intervention for labor.

Anesthesia provider
CHECKLIST



-  Called to Labor and Delivery for request of Anesthesia service
-  Meet Patient
Time stamp here: Time in:
-  Verbalize
Did you review the anesthetic options, risks, and benefits during your prenatal visit
Circle: Yes or No (if No proceed to a verbal discussion of anesthetic options,
-  If Yes:
Inquire about what questions patient may have, review information regarding information contained in the video: document specific question
-  Obtain informed consent.
Document completion of consent after patient signs consent
Time of completion:
-  Perform procedure
-  Place the completed document in the folder labeled anesthesia consent in the anesthesia workroom

Anesthesia Provider

Checklist used to gather information on:

- whether patient viewed the video
- time spent in the informed consent process (using stopwatch)
- patient comments about video contents
- completed form placed in folder

Data Analysis(PDSA)

Time spent in the consent process between participants that viewed the educational video (Yes) and those who did not (No)

Process Measures

- Completed checklists from prenatal clinic and anesthesia collected every Friday
- Number of educational video views each week.
- Data placed on Microsoft Exel spreadsheet.

Patient Comments indicating engagement

- The Video was very good
- I wish I had watched this my last pregnancy
- The video answered all of my questions
- I wanted an epidural but was afraid until I watched the video
- The video helped my anxiety
- I don't have any questions

Two-Tailed Independent Samples t-Test for Time spent in consent process by Watched video



	N			Y		
Variable	M	SD	n	M	SD	n
Time spent in consent process	275.77	139.35	66	136.36	87.87	44

Results

- The project aim was achieved
- The project objective was achieved and higher by 32 seconds. The average cost of obtaining consent is \$16/minute or 26 cents per second. Cost saving of \$36.24/patient.
- Anesthesia provider efficiency was improved by 49.55%.
- Cost savings to the organization \$28,997 per year.

Discussion

- The timing and Delivery method of anesthetic information increases the likelihood of patients making informed decisions and can be used to address efficiency (Kanengoni et al., 2020).
- Prenatal process change indicates a slight positive trend.
- Patient comments support video use.

- Improved efficiency results decreased healthcare COSTS
- Consistent delivery of anesthetic procedural information
- *Provider satisfaction
- OB/GYN physicians support video as a valuable adjunct for discussion of labor options
- Strong organizational support



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Limitations

- English language narrations only.
- Lack of closed captions.
- Difficult to track OB/GYN physician's reinforcement of the video.
- Lack of equal number of participants in each group.
- Anesthesia providers completion of checklists.
- Lack of input on video content from non-anesthesia providers.



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The Future (Act)

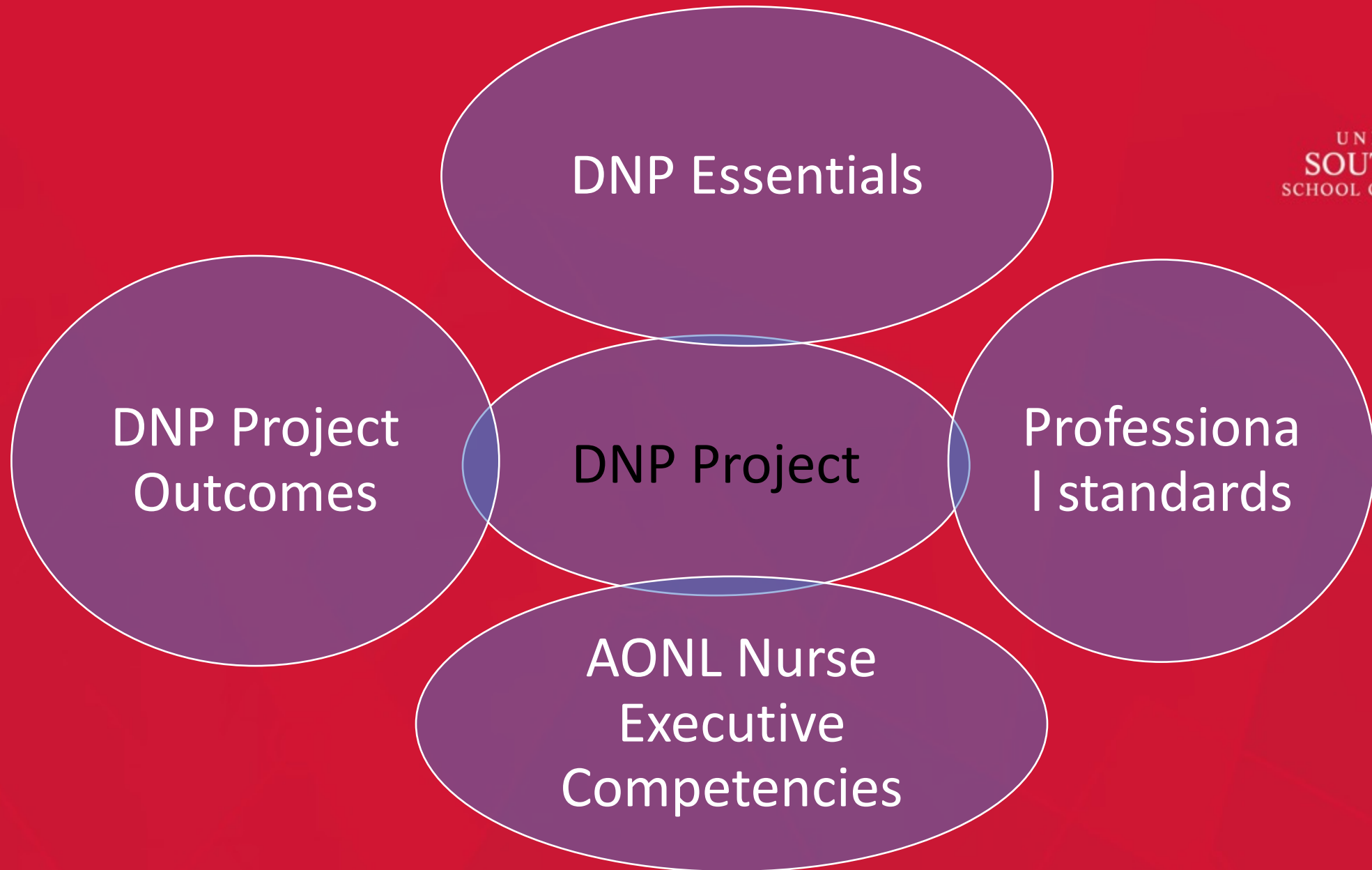
- Video education in multiple languages, during elective inductions for telehealth patients and Cesarean sections.
- The Future....
- Dissemination

Kotter's Change Model





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Conclusions

- Process change impacted anesthesia provider efficiency.
- The use of video education prior to active labor as an adjunct to informed consent improve anesthesia provider efficiency, impacts the provider, patient and healthcare costs
- Video education as an adjunct to procedural consent impacting consent process at the local, state and national level

Thank You



Questions?



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References

Jones, C., Finkler PhD CPA, Steven A., Kovner, C. T., & Mose, J. (2019). *Financial management for nurse managers and executives* (5th ed.). Saunders.

Kanengoni, B., Andajani-Sutjahjo, S., & Holroyd, E. (2020). Improving health equity among the african ethnic minority through health system strengthening: A narrative review of the New Zealand healthcare system. *International Journal for Equity in Health*, 19(1).
<https://doi.org/10.1186/s12939-020-1125-9>



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References

Krist, A. H., Tong, S. T., Ayccock, R. A., & Longo, D. R. (2017). Engaging patients in decision-making and behavior change to promote prevention. *Information Services & Use*, 37(2), 105–122. <https://doi.org/10.3233/isu-170826>

Ostrem, H. (2019, January 22). The staggering cost of inefficient systems in healthcare. *Pulsara*. <https://www.pulsara.com/blog/the-staggering-cost-of-inefficient-systems>