

UTILIZING LIDOCAINE: INCREASING AWARENESS AND DECREASING THE PAIN EXPERIENCE



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Conceptual Framework

Katherine Kolcaba's Theory of Comfort includes several assumptions:

- comfort is a desirable, holistic outcome that is at the heart of nursing
- human beings actively strive to meet their comfort needs
- enhanced comfort leads to an increase in health seeking behaviors resulting in empowerment, leading to satisfaction with health care
- institutional integrity is strengthened when the organizational value system is oriented toward the recipients of care

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Abstract

This project was established to increase awareness among nursing students about a technique they can use to decrease the pain their clients experience during intravenous (IV) catheter placement. While the Infusion Nurse Society recommends using the least invasive methods first (i.e. topical lidocaine cream), I have chosen to develop a video demonstrating the use of injected buffered lidocaine because the technique required is more advanced than applying a cream to the skin. Initially, this project will impact the students following me in the nursing program by increasing their knowledge and skill base. On a grander scale, it has the potential to impact the patients these future nurses care for by decreasing the pain they experience with peripheral IV insertion.

Purpose

- Develop an instructional video presentation on the use of lidocaine for peripheral IV insertion
- Discuss lidocaine in terms of what it is, why it is used
- Discuss advantages and disadvantages of using lidocaine
- Increase personal knowledge
- Increase awareness of a simple pain relief measure among future nurses by including the video as a supplemental resource in NU440 Nursing Technologies III— when IV skills are learned

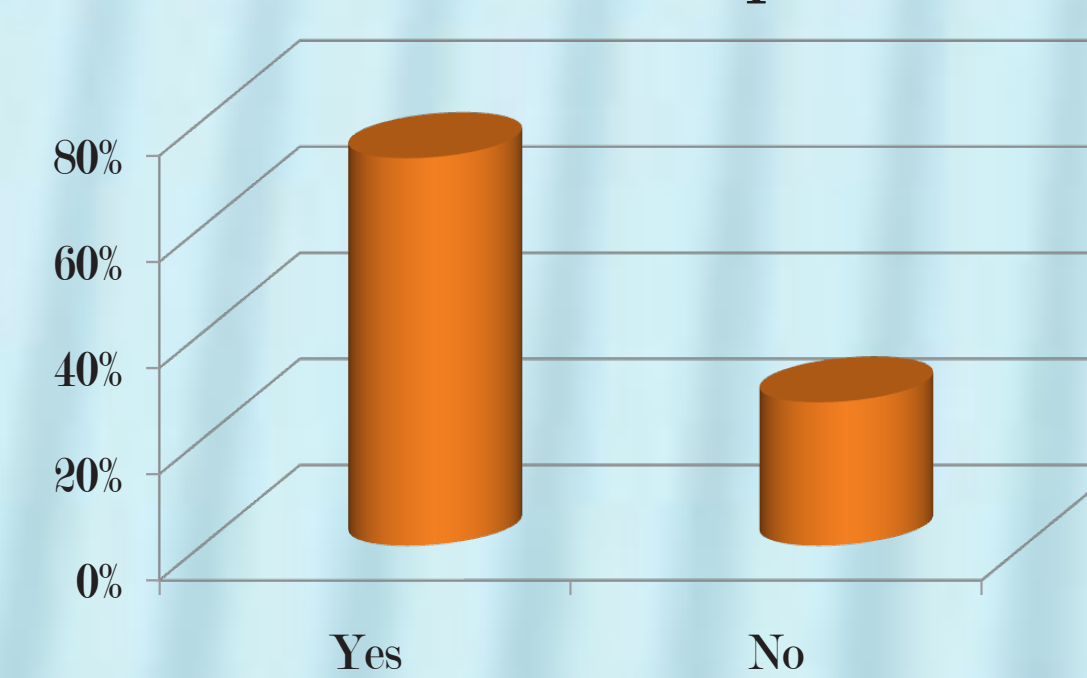
Methods

For the filming portion, participants included a registered nurse, narrator, volunteer actor (to play the role of patient), and a videographer. All parties being recorded signed audio/video recoding release forms. The actor signed a consent form for placement of an IV using lidocaine by a registered nurse.

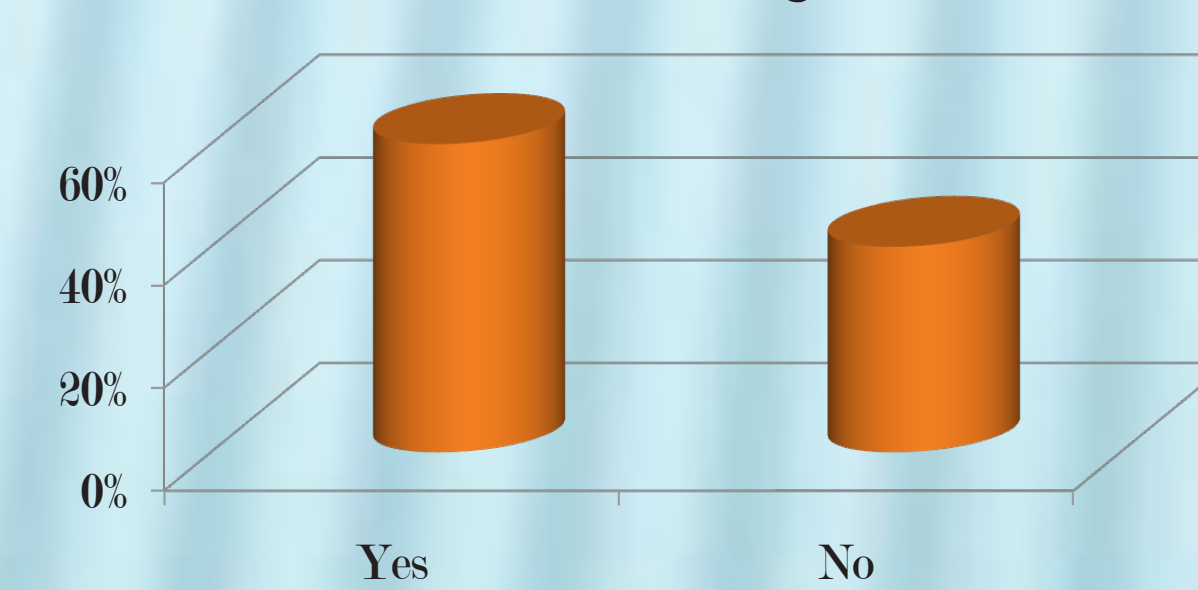
For the survey portion, all participants were Level III nursing students, enrolled in NU473 Nursing III. Participants were invited to view the video and complete a short electronic survey via an announcement made by the principle investigator in class. After signing a consent form, 45 interested parties were e-mailed a link for viewing the video and completing the survey. Of the 45 who received the link, 15 completed the survey.

Results

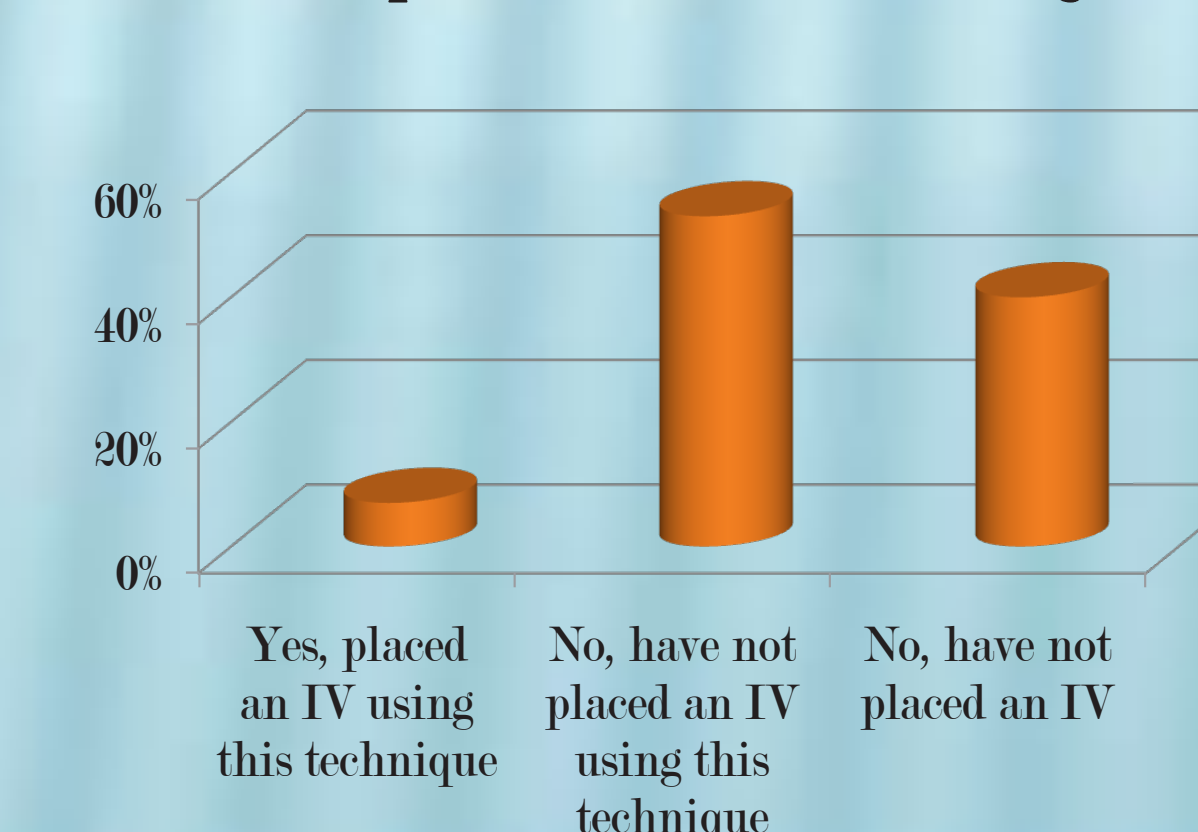
Prior to viewing the video, were you familiar with this technique?



To date, have you attempted to place an IV in the clinical setting?



Have you used lidocaine when inserting an IV for a patient in the clinical setting?



On a scale of 1 to 10, how likely are you to consider using this technique in your professional practice?

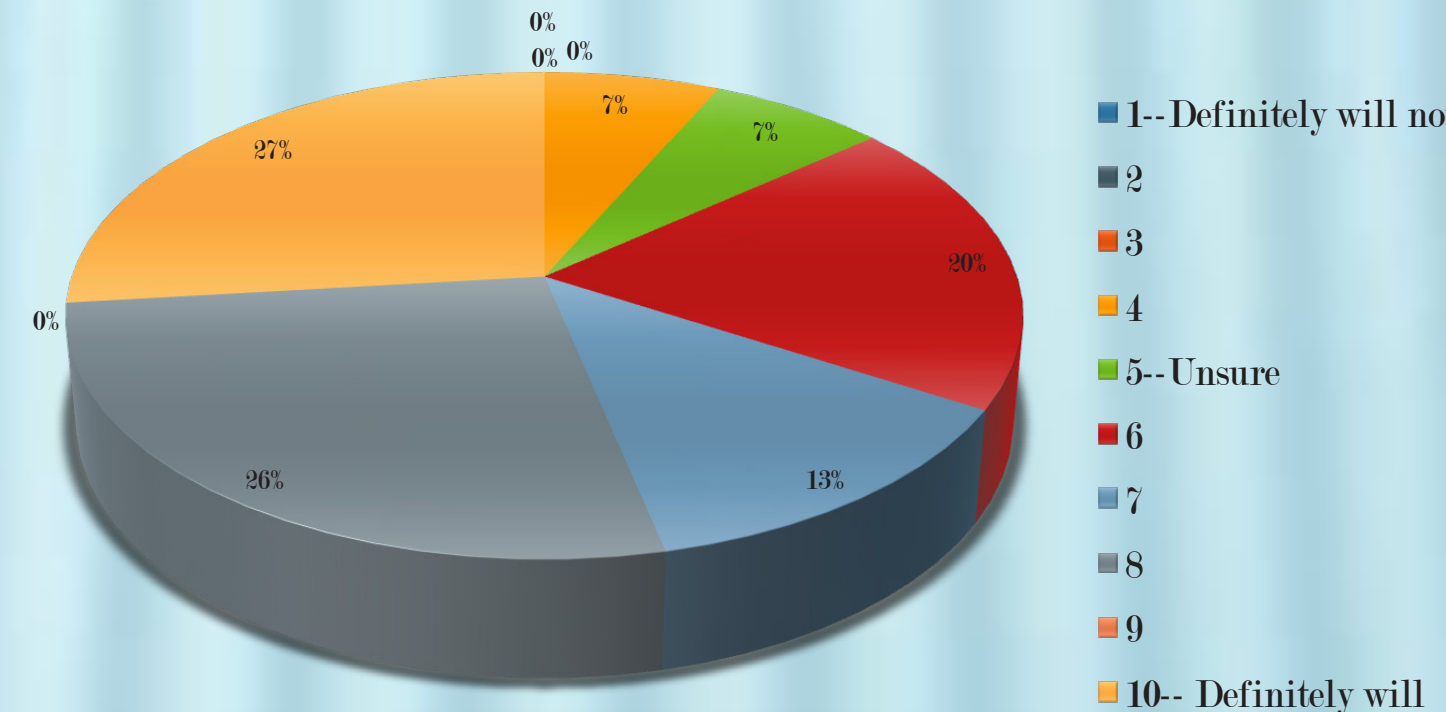


Table 1. Student Responses to Survey Question 6*: As a result of watching this video, will your professional practice be changed?

1. I will ask some of the nurses at the hospitals I have cliniced at what they think of the procedure. I will do this to get a more opinions on the subject and then make my decision on whether or not to implement the change.
2. I don't think so. With the personal experience I have with IV's it has burned and hurt more with Lidocaine than without. If the pt however requests Lidocaine and it is available I would use it.
3. Yes, because anything I can do to keep the patient comfortable and pain free will be attempted.
4. I will consider using lidocaine.
5. I have had an IV placed during a hospital stay and it was a painful procedure. The nurse used a large needle and placed it in my hand, one of the most painful locations. Having medication, such as Lidocaine, to numb the area prior to the IV insertion would have been wonderful. Also, as nurses we learn that pain management and prevention is a primary goal in our care. This would be a great way to decrease patient anxiety and pain levels and increase patient satisfaction with the care they receive at the hospital.
6. No, I feel that the extra needle stick is a waste of time and pain for the patient. The IV insertion should be as least painful as possible. If the person inserting the IV is educated and practiced it should not be very painful.
7. It would depend on hospital protocol.
8. Yes, I think it is a good thing to do for your patients as it decreases their pain.
9. No, I actually followed an IV nurse last week and she showed me how to use it and why. From then on I decided I will use this technique. Had I not followed that IV nurse and saw this video it probably would have changed my mind. I think it is a great technique.
10. Yes, I have researched this method before and the video only increased my interest in it.
11. I would be willing to try this technique, if the facility I work for in the future approves.
12. No, I would have probably used lidocaine anyway as this was shown to me in clinical.
13. Probably not. I may try using this technique at patient's request, or suggest it if patient is particularly fearful of pain related to catheter placement. I prefer to just stick the patient once if possible.
14. I think that this was very educational. There are a number of patients that do not like to be stuck with a needle. This might help to ease their anxiety.

*One student declined to provide a response for this question.

Evaluation & Conclusions

Overall, students found the video to be informative and helpful. Several students noted being exposed to this technique during time with IV therapy in clinical. It is encouraging to hear students are able to get this exposure, but I feel it also likely they would benefit more going in to their clinical experience with knowledge of this technique. Familiarity with this technique would allow them to maximize the potential of their time with IV therapy by engaging in conversation about the technique, asking their assigned IV therapist specific questions, and gaining practice using the technique if appropriate.

One concern that arose from the student survey was sticking the patient twice by using this technique. The art of expertly and painlessly inserting an IV is not a skill that is acquired without much practice. In order to gain competency with IV insertion, this technique could be a useful tool. As with all treatments and procedures, this technique should only be used when the risks outweigh the benefits.

Development of a brief PowerPoint could also be helpful for covering material not explicitly covered in the video, such as the adverse effects of lidocaine. Also, because this video is not intended to be the sole resource used for information regarding this technique, students should be encouraged to seek more information from available resources.

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