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### NUM It! Improving Patient Pain and Anxiety During Needle Sticks

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### Clinical Issue/Background

In the world of emergency pediatric healthcare, pediatric patients experience high levels of pain and anxiety during medical assessments and procedures. One of the most common procedures causing anxiety is intravenous (IV) insertion and the loud noise caused by the J-tip, the main numbing agent in our Emergency Department.

However, there are barriers to using the J-tip. The pressurized lidocaine medication, is contraindicated in certain patient populations:  
< 3 kgs, patients on prescribed blood thinners and patients on chemotherapeutic agents.

For implanted vascular access device (IVAD) access with EMLA cream, per Children's Health policy, requires use 1 hour prior to access for peak efficacy.

Num spray is a sterile vapocoolant spray clinically proven to reduce pain during needle sticks without emitting loud noises that increase anxiety in pediatric patients. Also, it allows for faster IVAD access on patients that do not arrive with EMLA cream placed.

### PICOT

Does ED staff observe an improvement in pain for the pediatric patient with the use of Num sterile spray in procedures such as IVAD access, IV access, and intramuscular (IM) injections when alternative interventions are not applicable?

### Methods

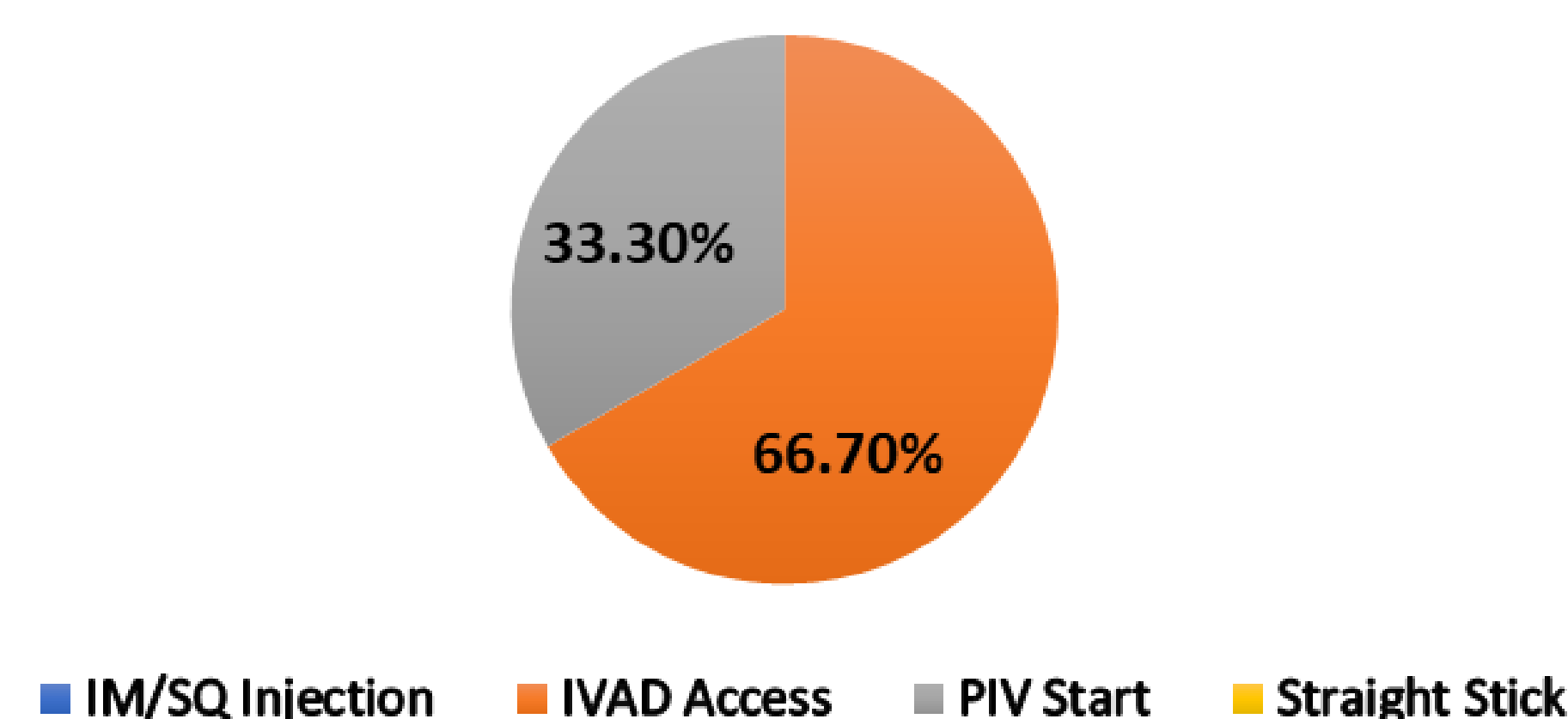
- Literature review
- Educational Infographic
- Pre Num use survey
- Post Num use survey
- Survey Response Evaluation

### Data Collection

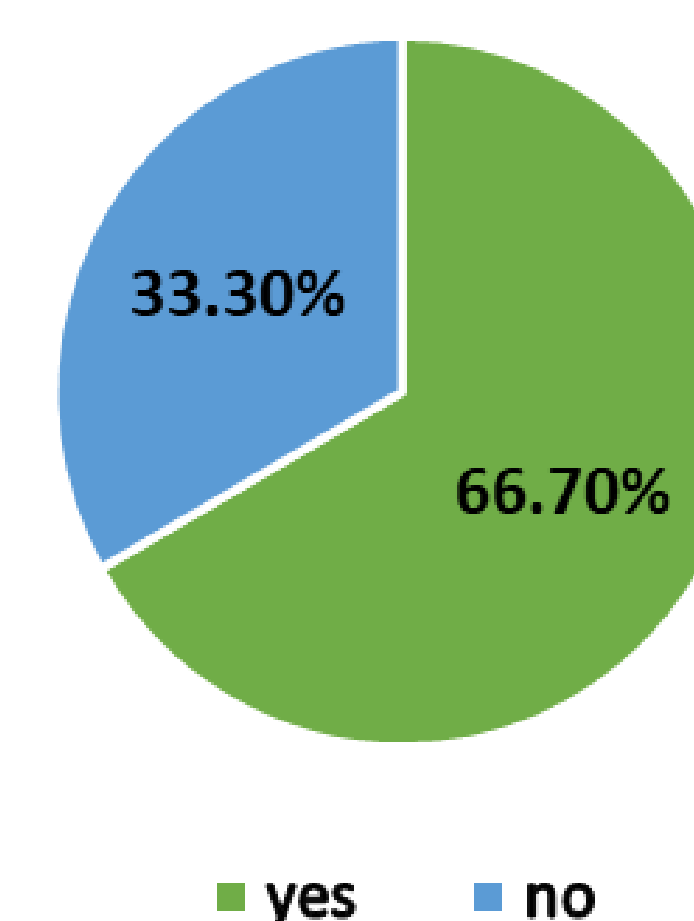
Based on ED staff survey responses: 6

#### Pre-Survey Data:

What procedure are you using num spray for?

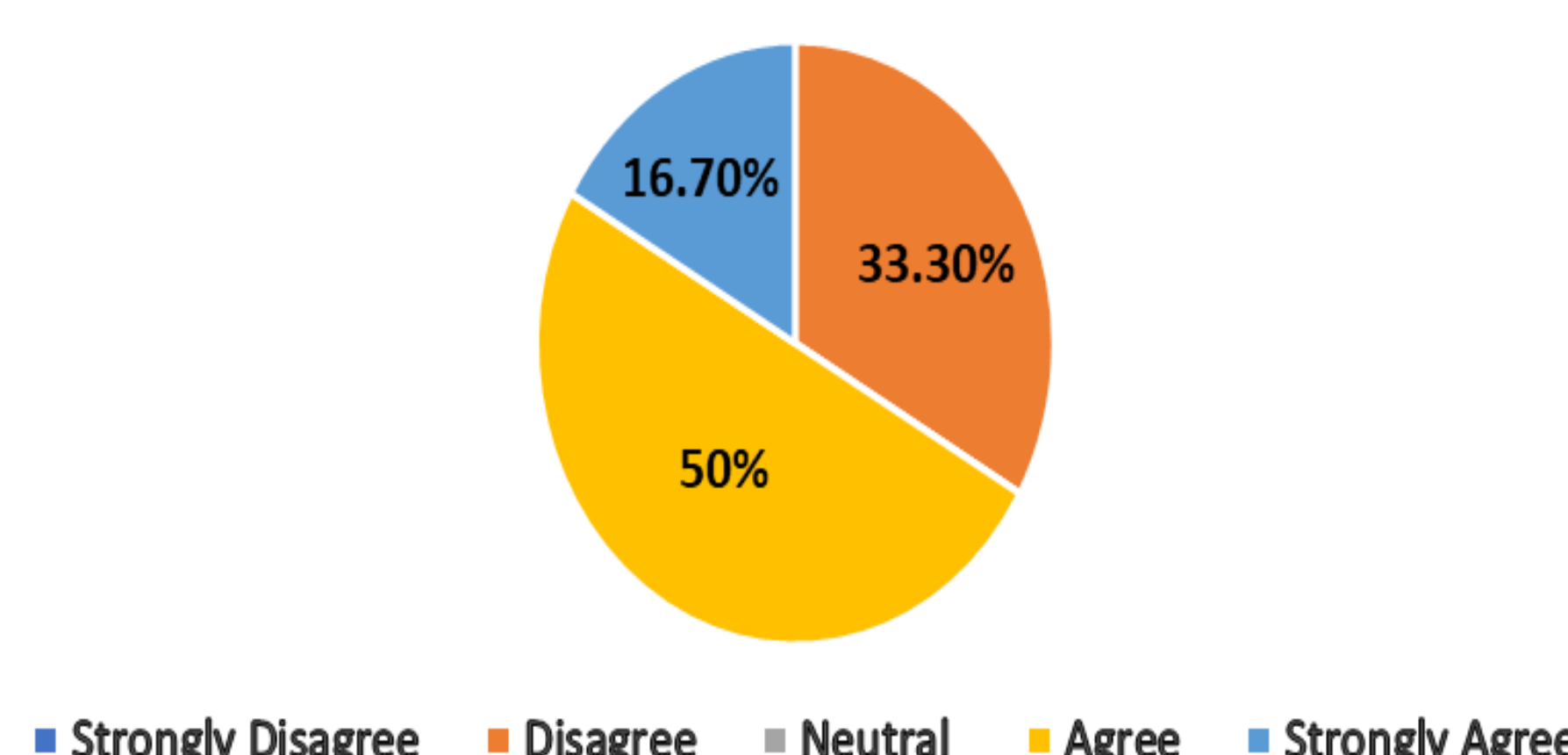


Is this your first time using num spray?

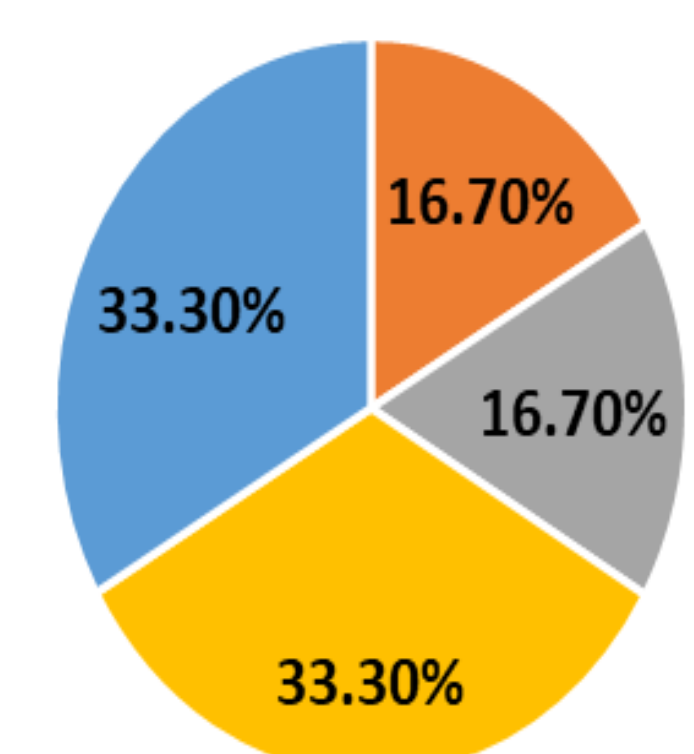


#### Post-Use Survey Data:

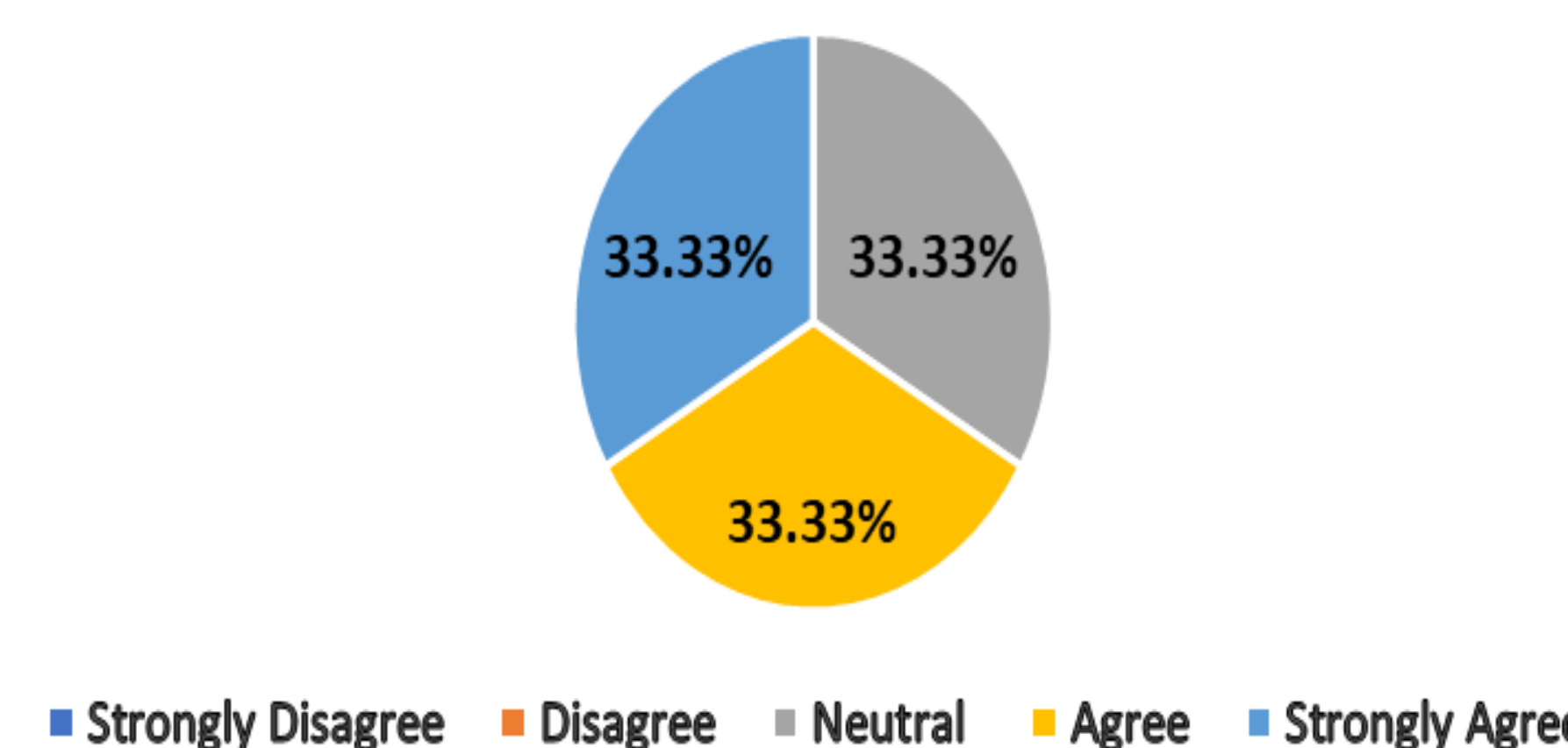
Using num spray helped decrease patient pain experience during procedure? (ex. using age appropriate pain scale)



The use of num spray made the procedure less stressful?



The use of num spray made for a more efficient procedure?



### Findings of Literature



### Results

Upon reviewing our results, we found that we had less survey replies than usage. Our group was aware that people were using the products, but unfortunately not filling out the surveys. In addition, when we tried to reach out to distribution for further stocking information/numbers we unfortunately received no reply. One of the things we thought influenced our results is that a good portion of hematology/oncology patients come with EMLA cream on. We theorize that we did not take the proper time to educate ED staff that the Num spray can be used in conjunction with EMLA cream. However, we do have responses that say for kids without EMLA cream they thought it was a great intervention that helped make the process faster. Furthermore, we do not believe we provided the necessary education that it can be used with IM injections as well. We found that majority of users were first timers, therefore providing full information of its listed applications would have been useful for the department.

### Recommendations

Continue to encourage and educate ED staff on use and applications of Num spray with the continued use of the pre and post surveys to gain a better sample to determine if use of Num spray correlates with decreased pain and anxiety with PIV insertions, IVAD access and IM injections.

