

BACKGROUND

Research

- Exclusive breastfeeding recommended for at least 6 months¹
- 21.9% achieve breastfeeding recommendations²
- 60% of mothers stop breastfeeding earlier than desired³
- Significant health benefits for infant and mother²
- QR codes increase participation engagement and were preferred among learners^{4,5,6}
- QR code benefits: low cost, adaptability, facilitate just-in-time education^{4,7}
- Video-based education is a successful educational method for healthcare providers⁸
- Significant knowledge gained with utilization of video-based education⁹

Gap in Practice

- Multiple inconsistencies identified in how anesthesia providers care for and educate lactating patients undergoing anesthesia or sedation.
- Providers tend to be cautious and rely on outdated recommendations to "pump and dump" despite new evidence to the contrary. Current literature describes safety of perioperative medications in lactating patients and patients can breastfeed once they are awake and alert in the postoperative period. Discarding milk is rarely necessary.
- Burnout and education fatigue gives need for readily adaptable workflows⁹



OBJECTIVES

- Following the educational video, anesthesia providers will list resources available regarding lactating patients undergoing surgery.
- Following the educational video, anesthesia providers will explain the perioperative care of lactating patients undergoing surgery.
- Following the educational video, anesthesia providers will examine whether just-in-time education via QR code is favorable amongst anesthesia providers.

METHODS

Study Design

- All anesthesia providers and learners at Mayo Clinic in Rochester, Florida, Arizona, and Health Systems were sent the pre/post surveys and educational module. Participation was voluntary.
- IRB not required

February 2019

Pre-Intervention

- Pre-survey needs assessment sent out to assess baseline knowledge of current recommendations for caring for lactating mothers undergoing anesthesia
- Surveys developed in REDCap

June 2, 2022

Intervention

- Video module sent to anesthesia providers via QR code
- Post-Intervention
- Post-survey attached at the end of module assessing knowledge and satisfaction of educational approach
- Post-survey open for 3 weeks

July 14, 2022

Statistical Methods and Results

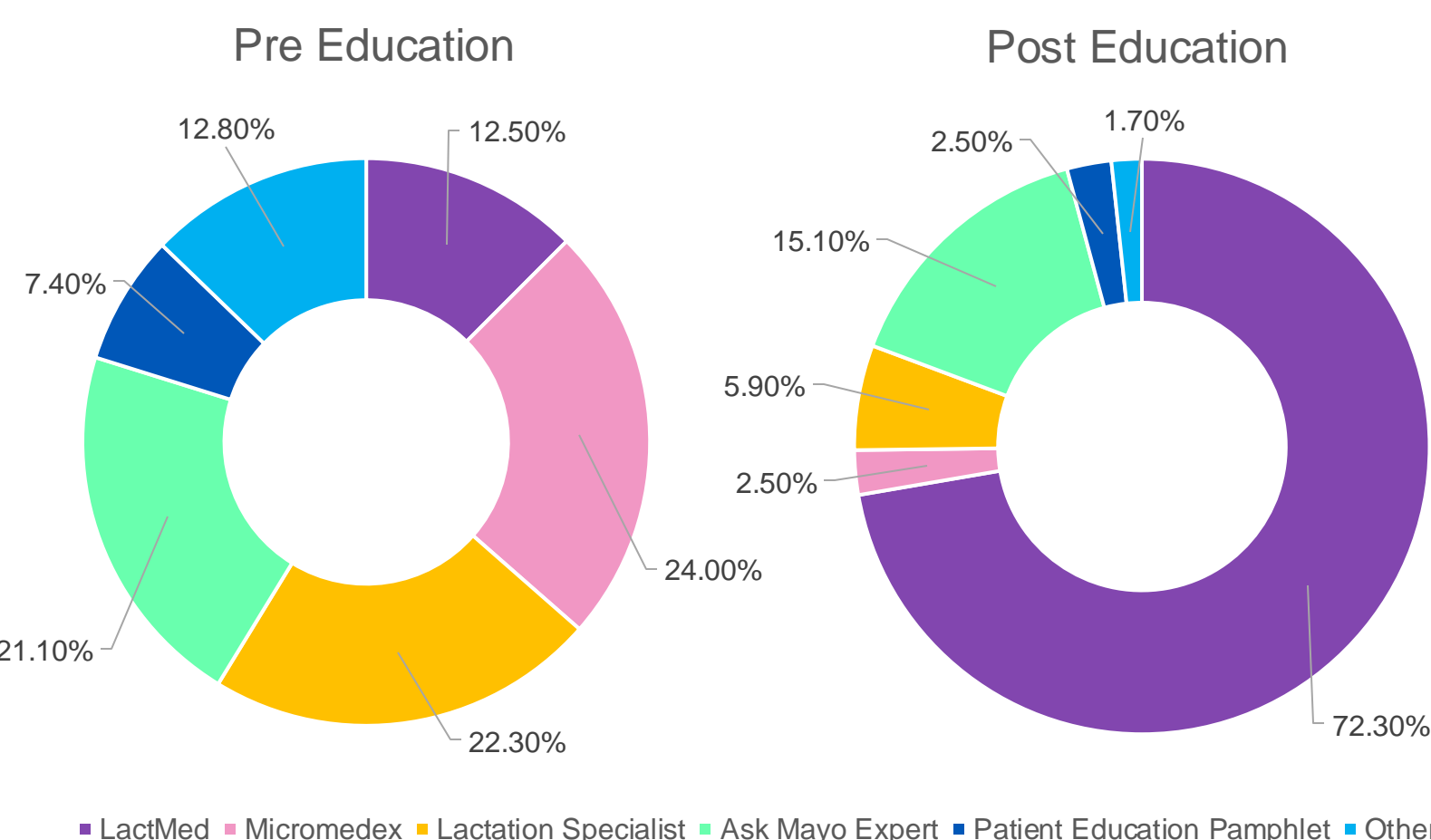
- Post-survey closed
- Chi-square and Fischer exact tests were used for statistical analysis ran in Blue Sky
- Pre-survey had 388 respondents, post-survey had 119 respondents, and 2 respondents omitted for not watching the video

RESULTS

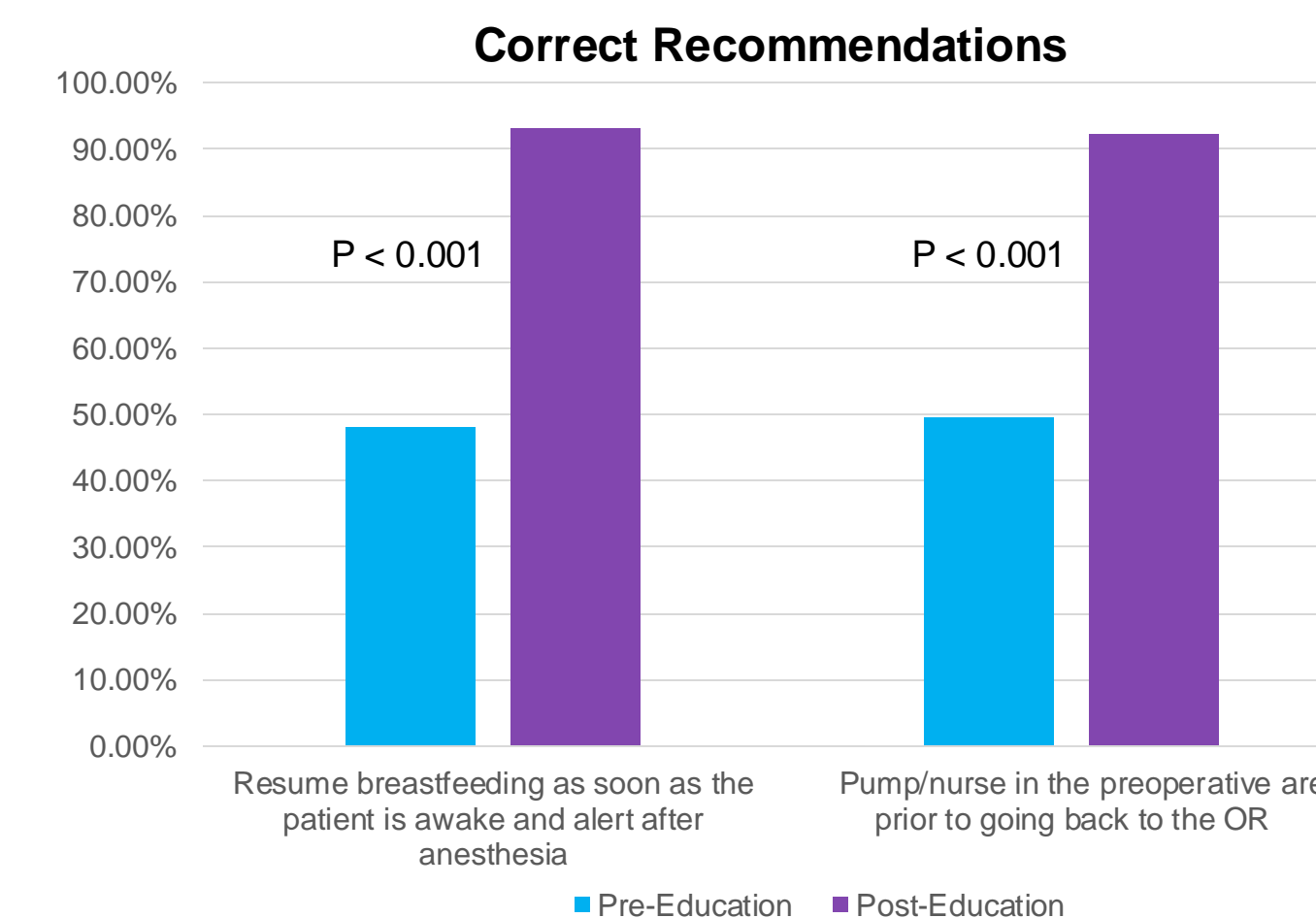
Respondent Characteristics	Pre-Survey N=338 N=%	Post-Survey N=119* N=%
Provider		
Resident	27 (8.0)	9 (7.6)
CRNA	203 (60.1)	68 (57.6)
SRNA	23 (6.8)	13 (11.0)
Consultant	85 (25.1)	28 (23.7)
Location		
Minnesota	276 (81.7)	66 (55.5)
Arizona	31 (9.2)	16 (13.4)
Florida	28 (8.3)	35 (29.4)
MCHS	3 (0.9)	2 (1.7)
How education was accessed		
Email link	-	103 (86.6)
QR Code	-	5 (4.2)
Link on intranet	-	11 (9.2)

*One missing subject for provider in the post-survey

"I would most likely utilize the following source for questions regarding specific medications and/or perioperative management of the breastfeeding patient:"



Survey Question	Pre-survey n=338 n= (%)	Post-survey n=119 n= (%)
I would describe my fund of knowledge regarding the management of a breastfeeding patient in the perioperative period as:		
Expert	9 (2.7)	7 (5.9)
Above average	56 (16.6)	35 (29.4)
Average	177 (52.4)	56 (47.1)
Below average	64 (18.9)	19 (16.0)
Poor	32 (9.5)	2 (1.7)
I would describe my comfort level discussing breastfeeding in the perioperative period with my patient as:		
Extremely comfortable	49 (14.5)	30 (25.2)
Comfortable	124 (36.7)	59 (49.6)
Neither comfortable nor uncomfortable	114 (33.7)	18 (15.1)
Uncomfortable	42 (12.4)	10 (8.4)
Extremely uncomfortable	9 (2.7)	2 (1.7)



RESULTS

- 99.2% of providers report they find it important to counsel and educate breastfeeding and lactating patients who present for a procedure
- Everyone who watched the educational video found the education helpful to care for lactating patients undergoing surgery
- In the post-education group, 93.3% of providers would recommend continued breastfeeding after general anesthesia or sedation. Compared to 48.2% in the pre-education group.
- After education, 91.7% would recommend preoperative feeding of pumping prior to transport to the operating room. Compared to the 49.6% in the pre-education group.

DISCUSSION

Clinical Application

- The education can be easily accessed by Anesthesia providers just-in-time when caring for a lactating surgical patient
- Evidence-based recommendations provide patients with the most up-to-date care

Strengths

- Ease of access: QR code in workspaces and web-based link
- Video as a mode to education can be easily replicated and accessible from multiple hospital sites
- Education provides additional resources for questions regarding specific medications and/or perioperative management of a breastfeeding patient

Limitations

- Additional education released throughout timespan between the pre-survey and post-survey intervention
- Education dissemination process to Mayo Clinic Health Systems differed from the process utilized for the other Mayo Clinic sites
- Natural attrition of staff and maintenance of anonymity prevented a direct comparison of respondents pre- and post-implementation.
- Education was disseminated during the COVID-19 pandemic, which impacted Anesthesia providers and may have led to decreased opportunities for providers to view and complete the education

INTERVENTION



Anesthesia & Lactating Patient Care



CONCLUSIONS

- Video-based education was a successful education modality for anesthesia providers.
- Post-survey showed that everyone who viewed the education found the video as a helpful way to learn
- Post-survey resulted in increased comfort among providers and a significant knowledge gained following the education provided
- Future studies will track just-in-time education to evaluate usage of the QR code when caring for a lactating surgical patient

REFERENCES

