



University of Colorado
Anschutz Medical Campus

Malignant Hematology Procedures Workshop: An Educational Pilot Project Utilizing Simulators

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Background

- Advanced Practice Providers (APPs) perform bone marrow biopsies (BMBX) and lumbar punctures (LP) on malignant hematology patients
- Procedures performed for diagnosis and to administer intrathecal chemotherapy
- Procedures previously taught through observation leading to inconsistencies
- Purpose:** To pilot an evidence-based procedure workshop to train new hire APPs

Methods

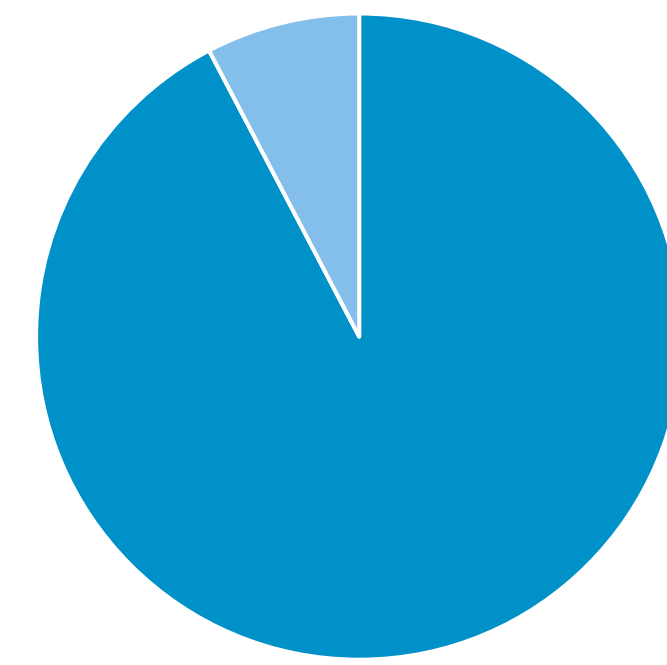
- Workshop on week 7 of a 12-week orientation using instruction with educational curriculum and simulators
- Pre-survey assessment
- Programs (4-hrs): PowerPoints, Breakouts
- Post-survey assessment and feedback

Pilot Sample

Pilot Sample	
Occupation:	
Nurse Practitioner	6
Physician Assistant	7
Years of experience:	
<1	5
1-3	3
3-5	2
5+	3
Prior procedural experience:	
Yes	7
No	6

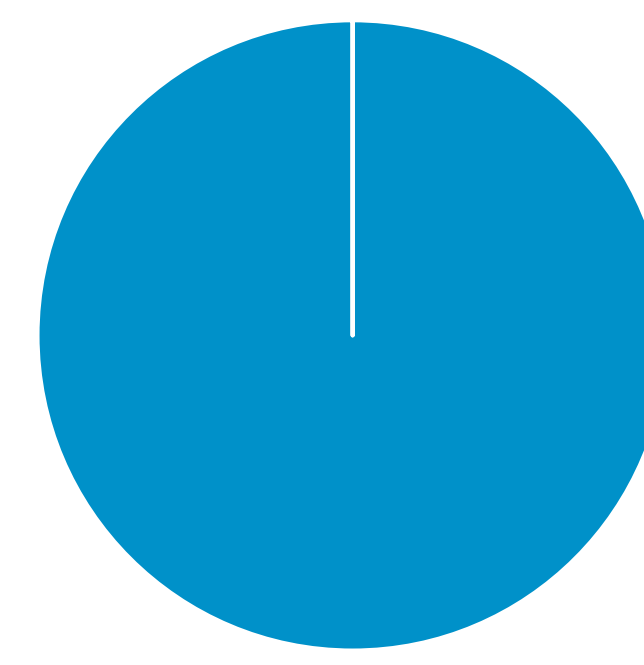
Results

93% stated workshop participation increased level of comfort for live LP patient experiences



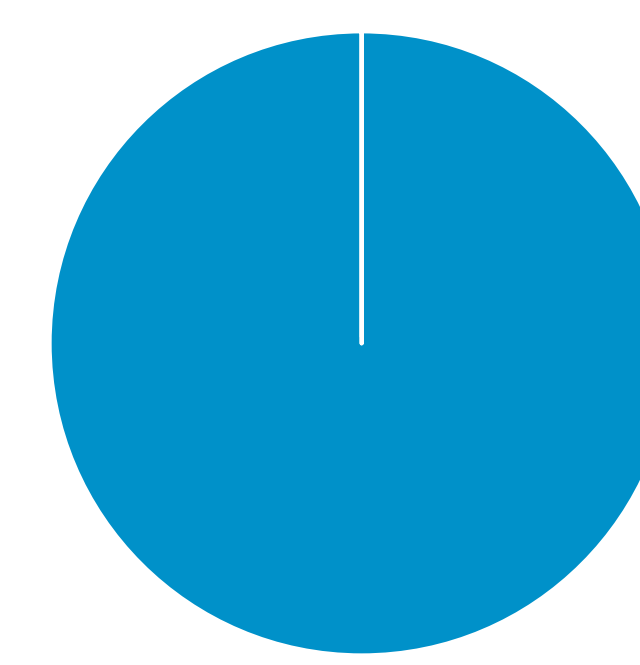
Yes - 12 (92%); No, I have prior LP experience - 1 (8%)

100% found the educational content (slides) helpful in understanding the BMBX procedure



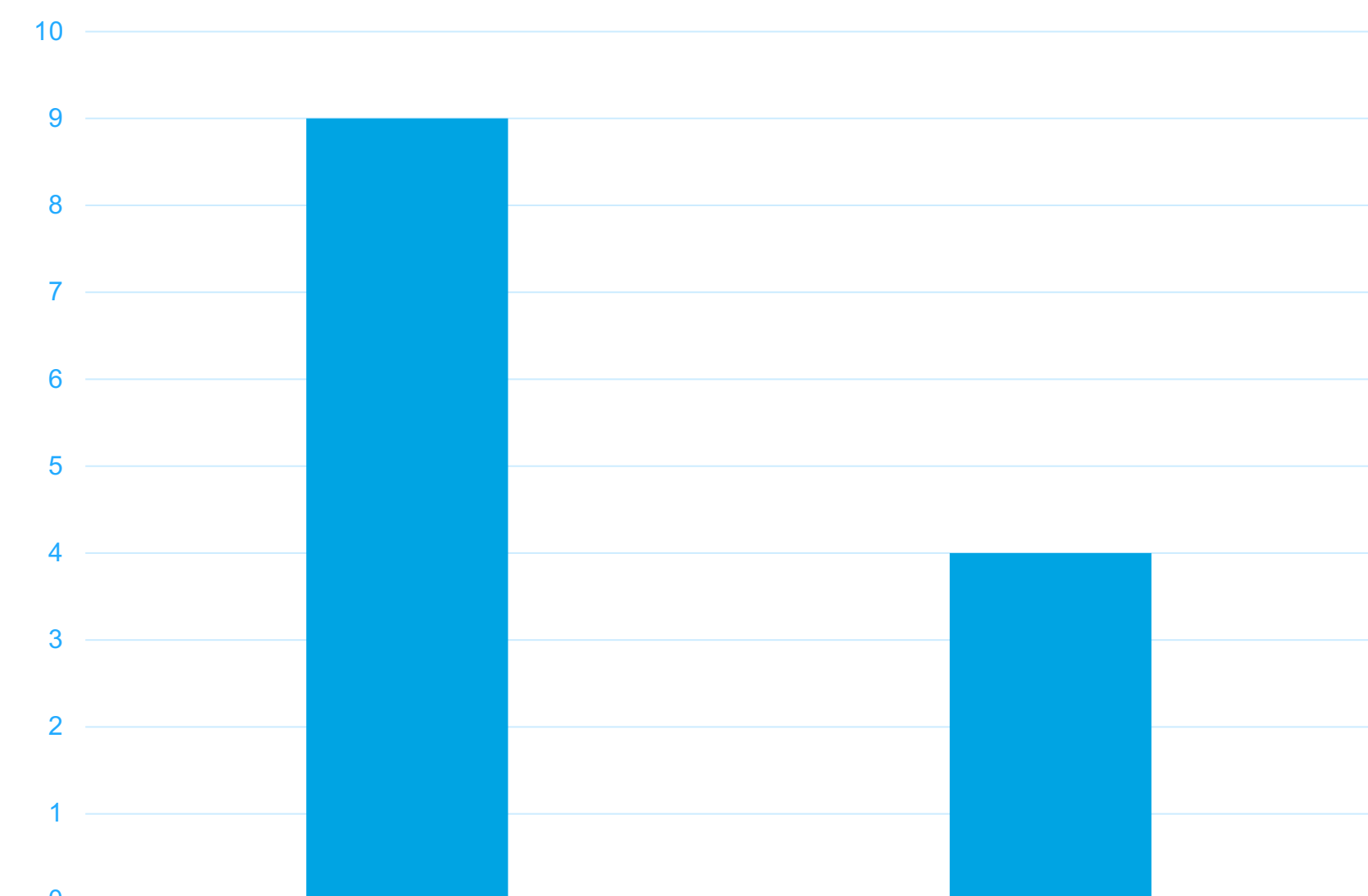
Yes - 13 (100%) --- No - 0 (0%)

100% found task trainer simulation beneficial for understanding the BMBX procedure



Yes - 13 (100%) --- No - 0 (0%)

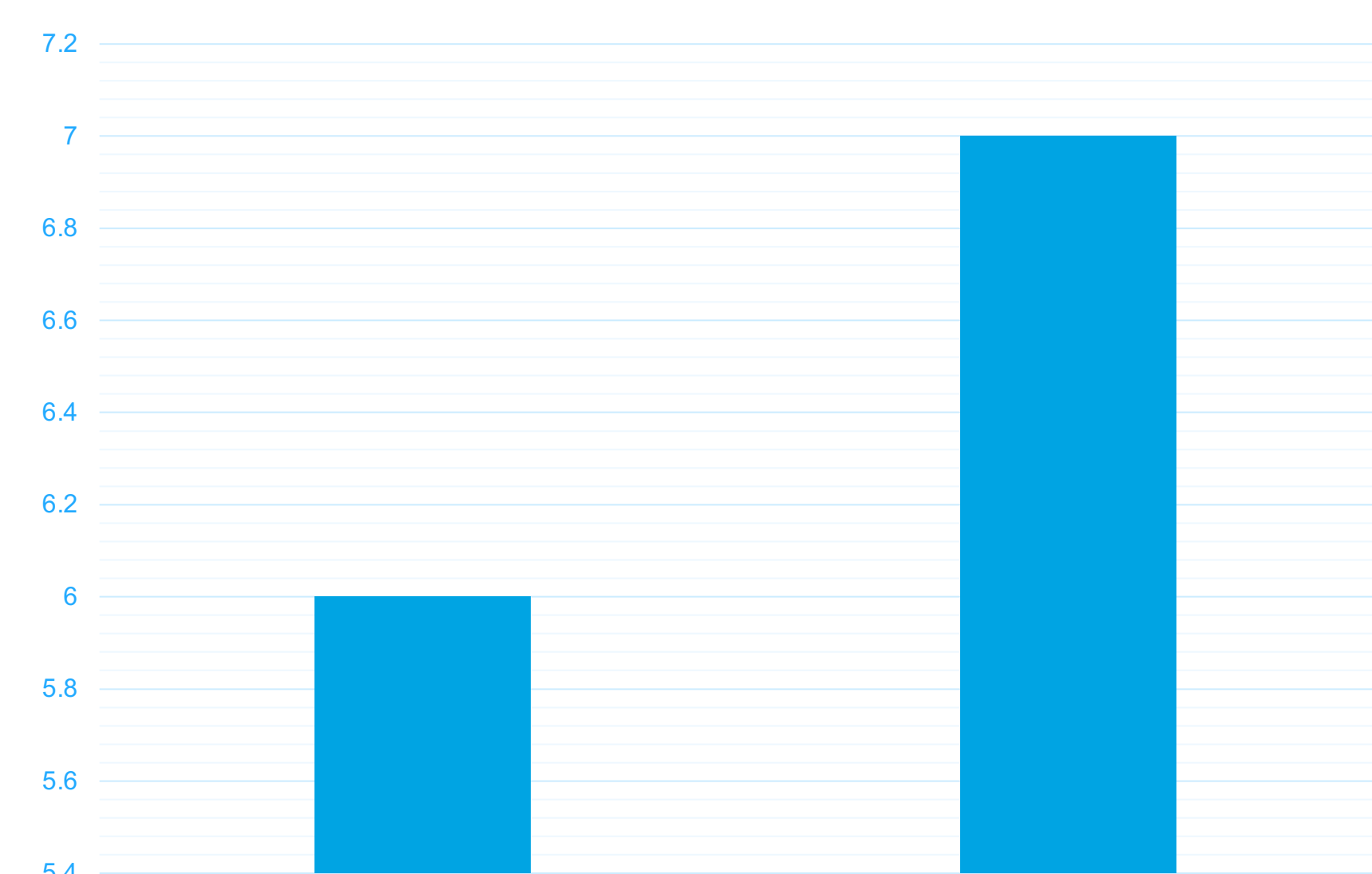
Did you find the simulation training to be beneficial for your understanding of LPs?



Yes - 9 (69%)

No, I found the training beneficial, but I had prior experience - 4 (31%)

Rate your level of confidence in your ability to perform a patient BMBX following workshop participation



Completely Confident - 6 (46%) Fairly Confident - 7 (54%)

Conclusions

Simulator exposures increased confidence prior to first live patient experience

Simulators are cost effective and more sustainable than training with cadavers

Workshops enhanced procedural understanding

Implications

This pilot displayed that the use of simulation with task trainers is beneficial when paired with instructional design.

Simulation training specific for APPs is beneficial, cost-effective, and can be replicated within other institutions.

Sustainability

Now embedded in BMT APP onboarding orientation

Train existing staff as co-facilitators

Ongoing use of simulators to maintain competency