

Development of a Simulation based curriculum for Anaesthesiology residents- A Needs Assessment to identify areas of concern

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Introduction

The integration of simulation based teaching into the Anaesthesiology residents' training curriculum is essential to ensure coverage of rarer scenarios and common skills, this entails identifying both technical and non-technical skills best suited for simulation-based instruction through a needs assessment with the goal of developing said curriculum

Today's tech-savvy generation of students often find traditional teaching methods less engaging, gravitating towards active participation and experiential learning facilitated by technology and innovation, particularly within the boundaries of SBT (Simulation based training)

Furthermore, it has been recently proposed by the National Medical Council (NMC), that we include non technical skills into the residents CBME (competency based medical education) curriculum.

Methods

To effectively explain the purpose of the needs assessment and get quantitative data regarding the specific skills and scenarios that would best benefit from simulation based teaching, we created a multiple-choice and manual entry questionnaire on Google Forms

The form covered relevant questions using a resource tool for formulating needs assessment published by medical education journals, the content based on information obtained through informal discussions with peers and residents.

Colleagues and postgraduates reviewed it for face validity before we obtained institutional ethics approval.

We then distributed the form, along with a participant information sheet, to medical colleges in our region (Karnataka) ISA (Indian society of Anaesthesiology) members, and alumni of our institution.

Conclusion

Needs assessment using the above methods helped us figuring out what we need to teach and how we can effectively teach it. Using this we

1. Highlighted curriculum expectations and gaps
2. Gathered information about what students know and can do.
3. Obtained feedback that helps teachers, students to make good decisions to guide instructions

Additionally, using technology, we will be able to

1. Motivate students to learn better.
2. Motivate and encourage teachers to meet the identified needs of students

Results

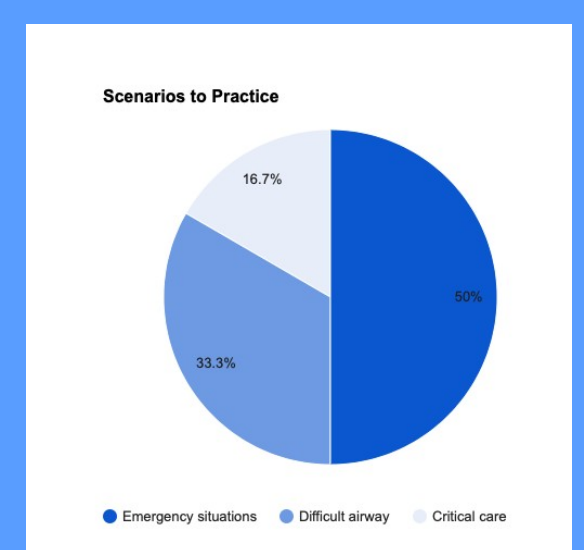
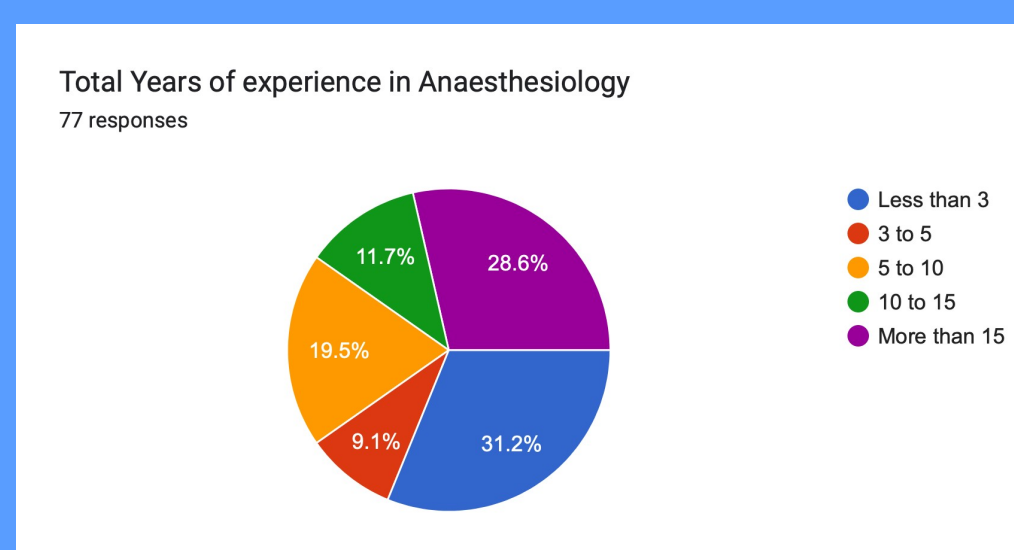
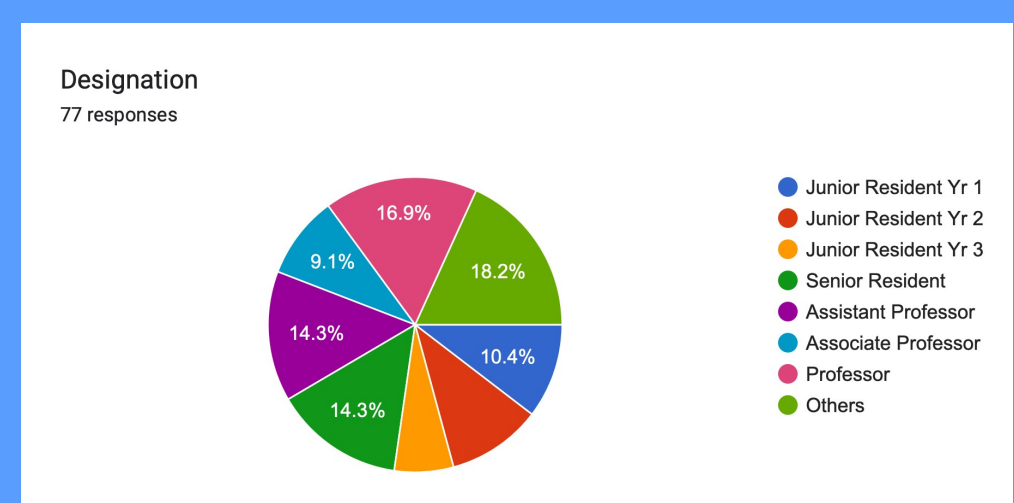
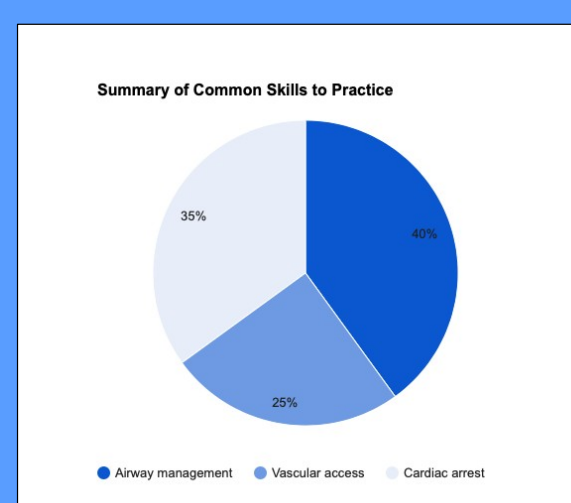
A total of 77 anaesthesiologists from 32 institutions responded, achieving data saturation in the open ended questions.

Through the quantitative data, we could narrow down topics that needed attention through simulation based training.

The keywords identified for the curriculum were "practice ready," "confidence," and "better communication."

Majority selected "failed airway management, Circulatory failure, anaphylaxis, malignant hyperthermia, maternal and fetal collapse" as scenarios that can benefit from simulation training.

Technical skills such as surgical airway, needle decompression of pneumothorax, paediatric central lines and point of care ultrasound scored the highest. All participants agreed that non-technical skills, such as inter-professional and hierarchical communication, could benefit from simulated practice.



References

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