Improving Response To Non-traumatic Dental Pain In The ED Through A Novel Task Trainer For Dental Blocks

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Would a novel task trainer for dental block techniques be an effective educational tool for ED residents?

Typical medical training often does not provide students and residents with sufficient knowledge to properly respond to dental emergencies.

What is the most effective teaching strategy for educating ED physicians on Inferior Alveolar and Supraperiosteal Dental Blocks?

Would a novel task trainer for dental block techniques be an effective educational tool for ED residents?

Could I design a novel task trainer that shows subjective efficacy in teaching residents how to perform various dental procedures?

Design | Pretest Analysis | Simulation | Post-Test Analysis
--- | --- | --- | ---
29 Emergency Medicine residents were gathered for a program-wide simulation day and asked to participate in the study.

Pretest survey measured EM residents' confidence and willingness to perform dental blocks.

Administered task trainer simulation of Inferior Alveolar and Supraperiosteal nerve block administration.

Post-test survey analyzed confidence and willingness to perform dental blocks in the future, when indicated.

### Significant Findings

- **48% increase** in residents who agreed/strongly agreed to: “I feel confident in my ability to perform Supraperiostial and Inferior Alveolar nerve blocks”
- **38% increase** in residents who agreed/strongly agreed to: “I am likely to perform a Supraperiostial and Inferior Alveolar nerve block when indicated”
- **38% increase** in residents who agreed/strongly agreed to: “I feel as though I could teach a colleague how to perform a dental nerve block”
- **17% increase** in residents who agreed/strongly agreed to: “I believe that Supraperiostial and Inferior Alveolar nerve blocks are useful tools in the ED”

### Interpretations

A low fidelity task trainer may be an efficacious training tool for educating residents in performing Inferior Alveolar and Supraperiosteal Dental Blocks.

### Future Direction

This training tool may prove to be a valuable in other types of oral/dental procedures. A larger sample size could strengthen the findings in this study.

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