

Increasing the Use of Video Laryngoscopy (VL) Among Nurse Anesthetists via Education Training Bundle: A Quality Improvement Project

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Background

- Direct Laryngoscopy (DL) is the standard of practice for tracheal intubation.
- DL involves using the sniffing position to intubate through a direct view of the larynx.



- **VL uses indirect view through a camera and provides:**

- ✓ Higher first-pass success rates
- ✓ Decreased soft tissue injuries
- ✓ Better outcomes
- ✓ Decreased cost
- ✓ Decreased hemodynamic response



Despite the documented benefits of VL, CRNAs continue to choose DL as their primary method of intubation.

PICOT Question

In inpatient-based CRNAs at the UAB Hospital (P), does a video-assisted laryngoscopy training bundle (I) compared to standard training (C) increase knowledge and use of VL (O) over one month (T)?

Methodology

Chart Review:

- 14-day, retrospective
- Patient data: age, gender, ASA class, Mallampati Score, BMI
- Case data: DL/VL used, CL grade view, # of attempts, total time to intubate



Initial Survey:

Consent, baseline VL knowledge, demographics

Training Bundle:

Presentation on benefits of VL, hands-on VL practice, and guidance on VL use



Post Survey:

Re-evaluation of VL knowledge and whether CRNAs plan to increase VL use

Chart Review:

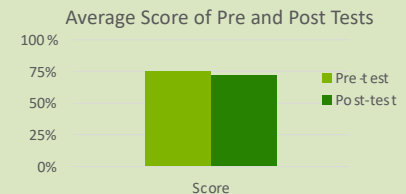
- 14-day, retrospective
- Same information collected as pre-training chart review



Inclusion Criteria: full-time or part-time UAB MSA CRNAs of all nationalities, all genders, age ≥ 19, who agree to participate and speak English

Results

- There was no significant difference between pre- and post-intervention groups.
- There was no significant change in VL use.
- Male patients and patients with a higher BMI, ASA status, and Mallampati score were significantly **more likely** to receive VL.
- Age and time to intubation were not significantly associated with VL use.
- CRNAs scores from pre-training VL knowledge tests to post-training tests did not improve.



Sustainability

- **Supplies:** Each UAB operating room already has a McGrath VL device, with other VL devices available upon request.
- **Facility support:** MSA leaders have given their support to this project.
- **CRNA buy-in:** This is a barrier to sustainability. Continued leadership support may improve buy-in.

Limitations

- Lack of complete documentation
- Lack of DL availability
- Student-led training bundle
- Distractions during training bundle

Theoretical Framework

Plan Do Study Act

Plan

Researching current data. Developing training bundle.

Do

Implementing the training bundle and collecting surveys.

Act

Assessing results. Dissemination.

Study

Comparing retrospective chart reviews.