Endotracheal Intubation Training: Learning with the Mobile Telementoring Intubating Video Laryngoscope

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Context / Setting:

a. Medical students on anesthesia rotation in a Veteran's Administration Medical Center
b. The availability of the Storz Video Macintosh Intubating Laryngoscope System (Medipack Video Laryngoscope, Karl Storz, Inc, Tuttlingen, Germany) incorporating into its handle two short fiber-optic bundles (image and light), allowing video presentation on a separate large monitor screen [1].

Need:

1. Medical students need a consistent, preparatory knowledge base (Bloom's: factual knowledge [2]) prior to learning higher levels of cognition (understanding, application, etc.).
2. **Instructors** need to be able to see exactly what the trainee is seeing, to maximize the ability of the instructor to point out anatomical details, as well as to advise on appropriate maneuvers.

Action:

IRB approval was obtained with adherence to APS/NIH guidelines. Students completed a web based program in basic intubation skills, followed by questionnaire to test mastery of essential basic facts. Students intubated an anatomically correct intubation mannequin (Laerdal Difficult Intubation Mannequin) with either the video laryngoscope) or a standard #3 MacIntosh laryngoscope blade (by random selection). The time required to place the endotracheal tube, as well as the trainees' and instructors' perceptions as to the value of the video technique was assessed using a comprehensive questionnaire with anchored Likert scales.

Impact:

A pilot trial comparing the video-laryngoscope with the standard MacIntosh laryngoscope blade for early learning, has demonstrated that - all **trainees** believed they had a better view of the larynx, they had a better grasp of the anatomy, they could learn faster - all **instructors** believed they knew precisely what the trainees were seeing, they could better advise them, and better demonstrate the anatomy, it took less time to intubate with the video laryngoscope

References:

1. Kaplan M, Ward D, Berci G. A new video laryngoscope – an aid to intubation and teaching. J Clin Anest 14:620-626,2003.

(These views represent those of the authors and are not necessarily intended to represent the views of the United States Air Force and/or Veteran's Administration).