



# Fiber-Optic Illusions: Can Video Laryngoscopy Offset Interruptions in Compressions?

Scott T. Youngquist, MD, MSc  
Salt Lake City Fire Department  
University of Utah School of Medicine

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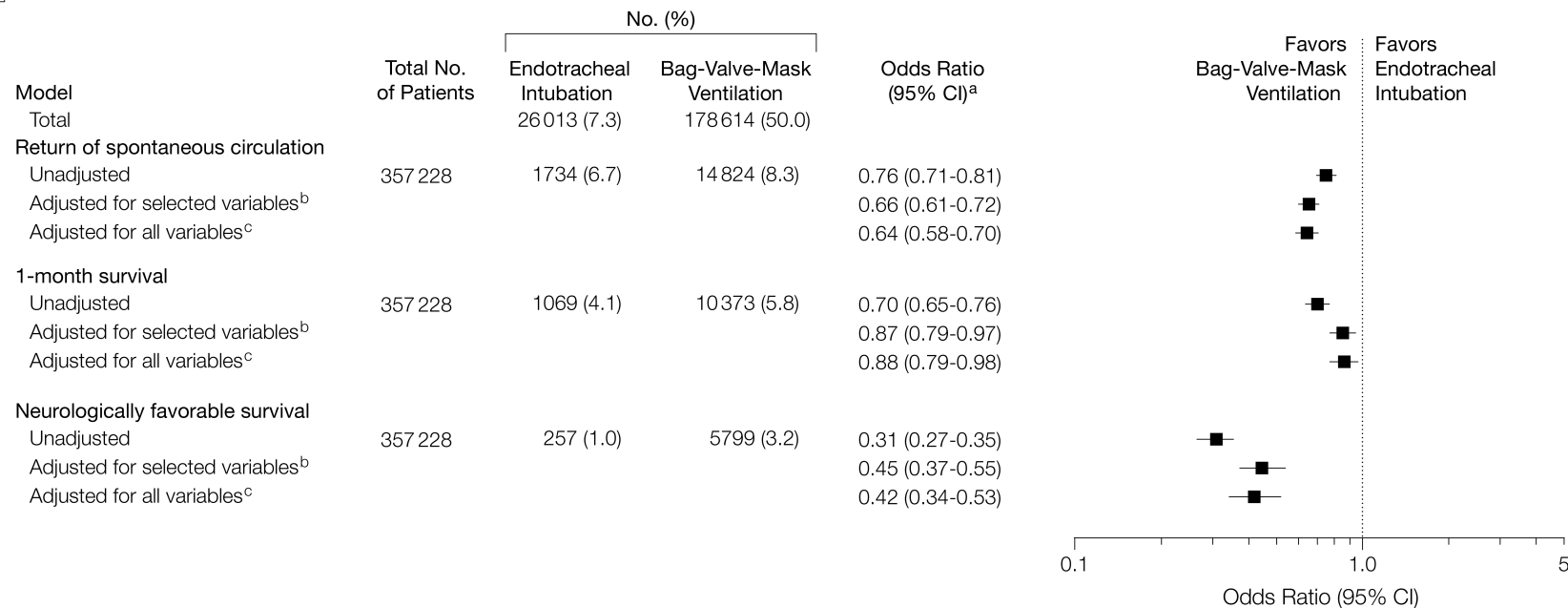
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# Adverse Effects?

A Endotracheal intubation vs bag-valve-mask ventilation





## Advanced Airway Placement

**Excessive Ventilation**

**Vasoconstriction**

**Increased Intrathoracic Pressure**

**Esophageal Intubations**

**Interruptions in Compressions**

**Increased Ischemia**

**Selection Bias**

**Functional Survival**

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# Advanced Airway Placement

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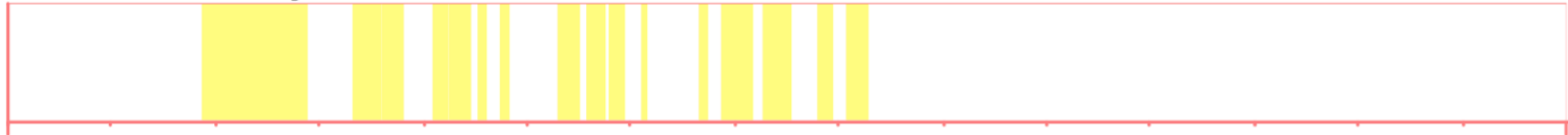


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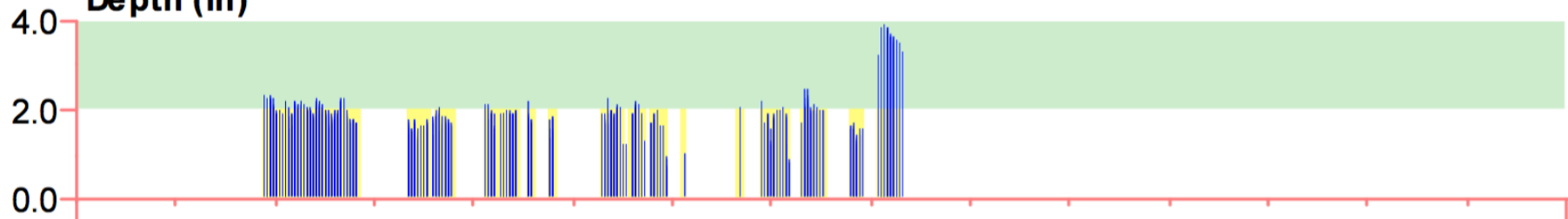




## Shock Summary



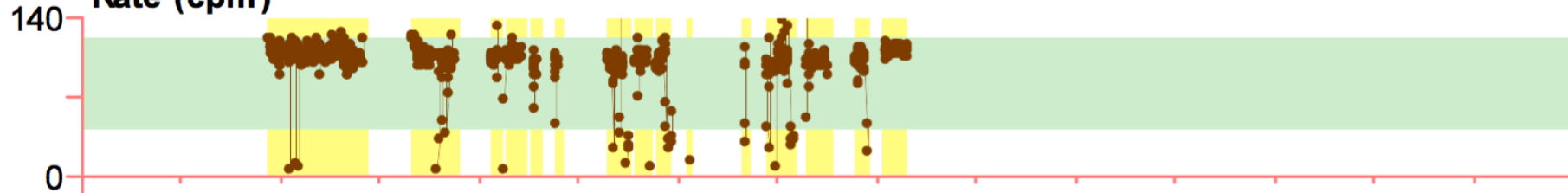
## Depth (in)



## Compression Quality



## Rate (cpm)



17:48:55

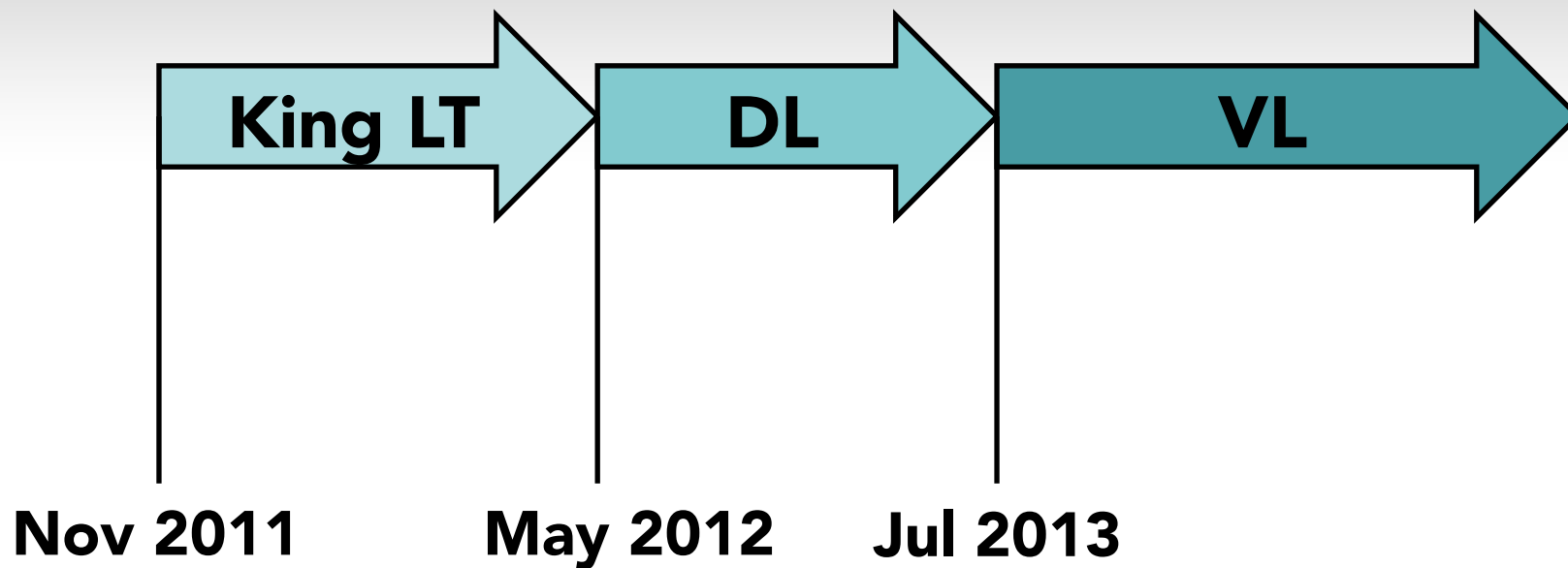
18:37:07



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# Preferred First Line Airway





## 538 Resuscitation Attempts

- 141 data deleted or not recorded
- 23 with <5 min CPR
- 14 intubated but unknown if DL or VL
- 12 Pediatric arrests
- 7 intubated after ROSC
- 5 Corrupted files

### 336 Analyzed

No Advanced  
Airway  
N=23

King LT  
N=43

Direct  
Laryngoscopy  
N=145

Video  
Laryngoscopy  
N=125

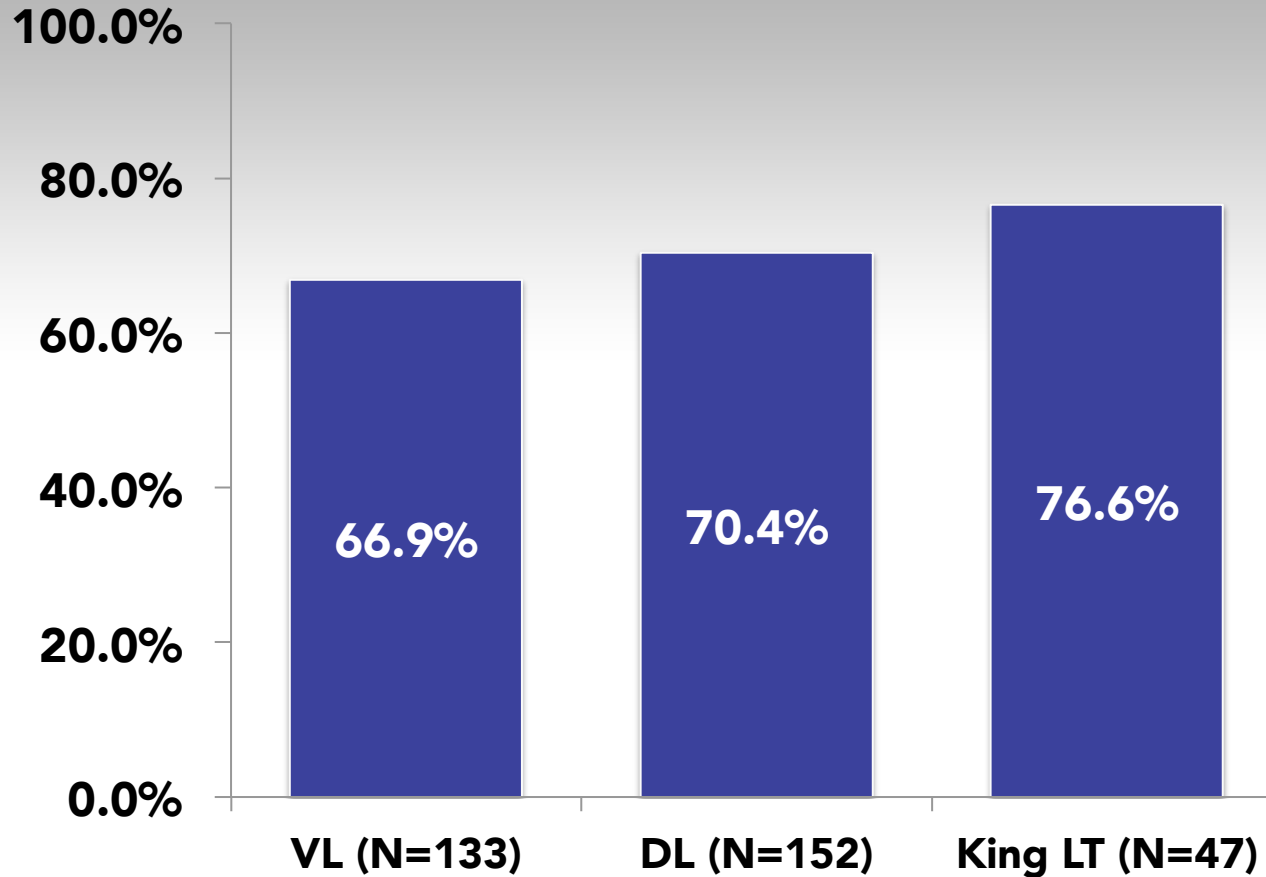
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# First Attempt Success



$p > 0.05$

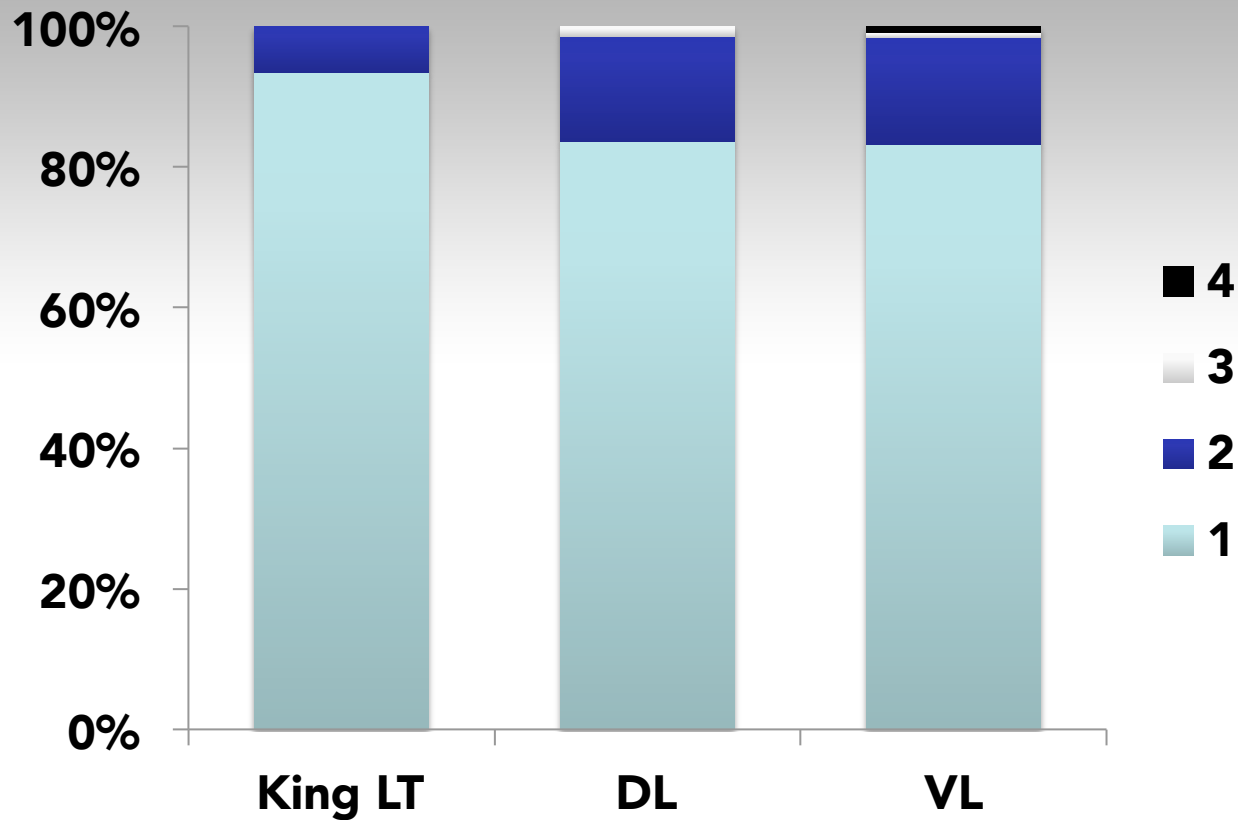
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# Number of Attempts Until Success or Abandonment



$p > 0.05$

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# CPR Metrics

## None (n=23)

Rate (cpm) 112 (105-121)

Depth (in) 2.2 (1.7-2.4)

## King LT (n=43)

Rate (cpm) 118 (111-125)

Depth (in) 2.1 (1.9-2.4)

## DL (n=145)

Rate (cpm) 114 (106-124)

Depth (in) 2.2 (1.9-2.4)

## VL (n=125)

Rate (cpm) 111 (106-116)

Depth (in) 2.2 (2.0-2.4)



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# CPR Interruptions



## None (N=23)

CCF	92 (86-95)
Longest Pause	18 (11-33)
Pauses >10 sec	2 (1-3)

## King LT (N=43)

CCF	92 (90-95)
Longest Pause	29 (15-65)
Pauses >10 sec	2 (1-3)

## DL (N=145)

CCF	92 (90-94)
Longest Pause	26 (12-59)
Pauses >10 sec	2 (1-4)

## VL (N=125)

CCF	92 (90-95)
Longest Pause	22 (14-41)
Pauses >10 sec	2 (1-3)

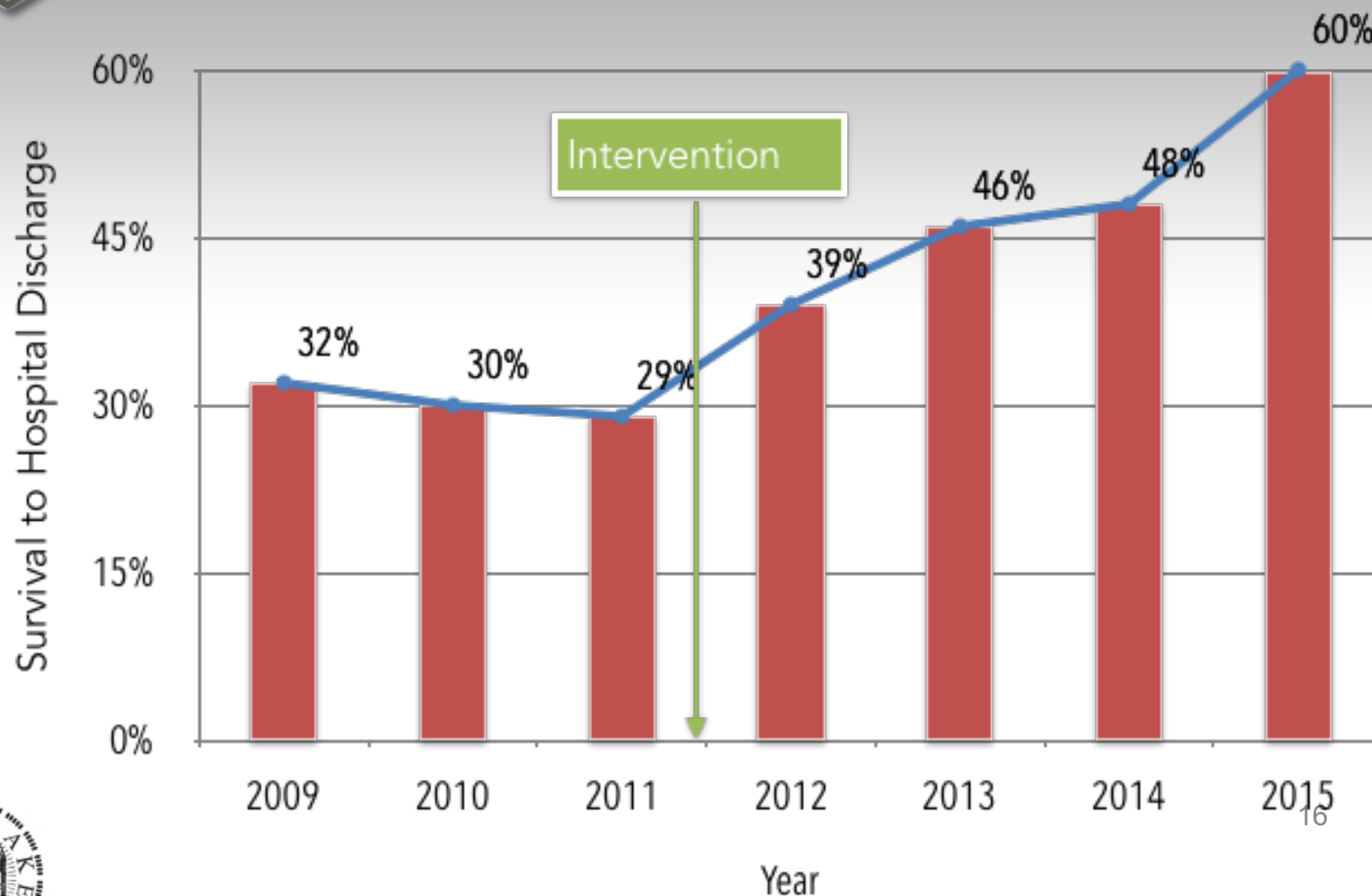
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# Utstein Survival

Witnessed with Shockable Initial Rhythm



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# Influence of Advanced Airways on Survival

	<b>Unadjusted Relative Risk</b>	<b>(95% Confidence Interval)</b>
<b>Endotracheal Intubation</b>	<b>0.21</b>	<b>(0.13-0.35)</b>

**p<0.0001**



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# Influence of Advanced Airways on Survival: Propensity Score

	<b>Adjusted Relative Risk</b>	<b>(95% Confidence Interval)</b>
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<b>Endotracheal Intubation</b>	<b>0.76</b>	<b>(0.45-1.3)</b>
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**p=0.31**

**Adjusted for age, gender, witnessed, ems witnessed, shockable initial rhythm, shocked by PAD, public location, early ROSC, number of epi doses**

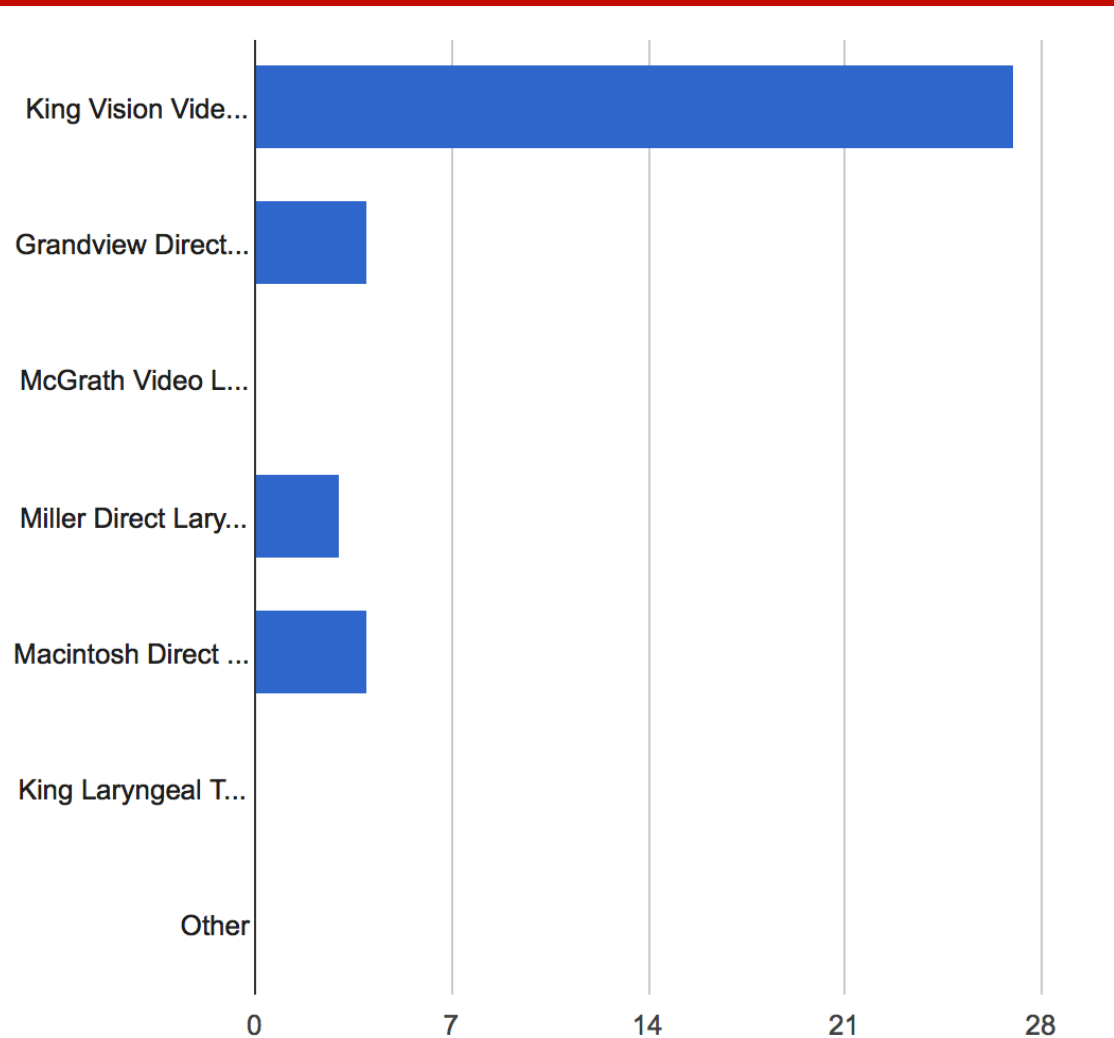
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# Preferred Approach



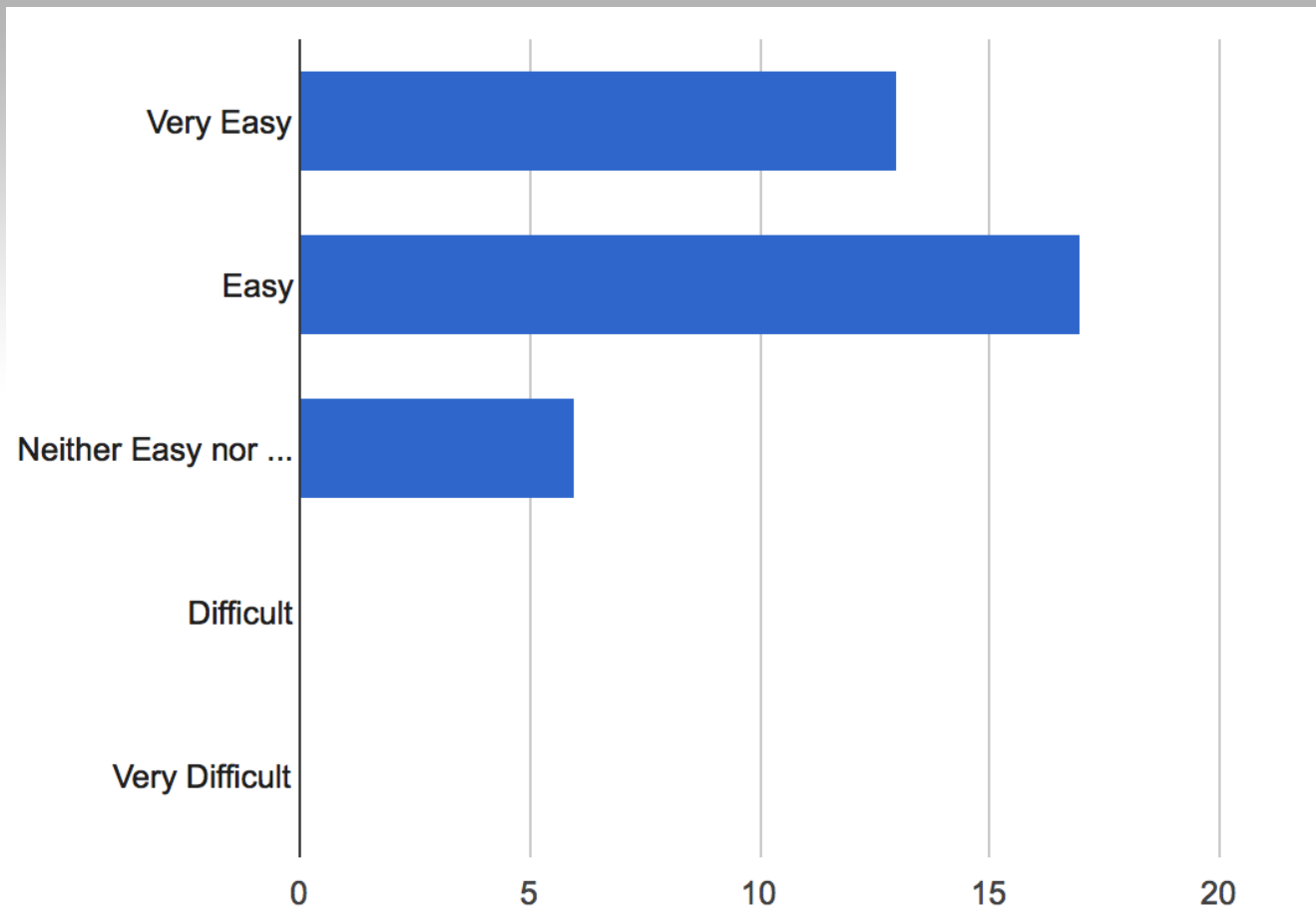
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# Ease of Getting a Grade 1 View of the Glottis

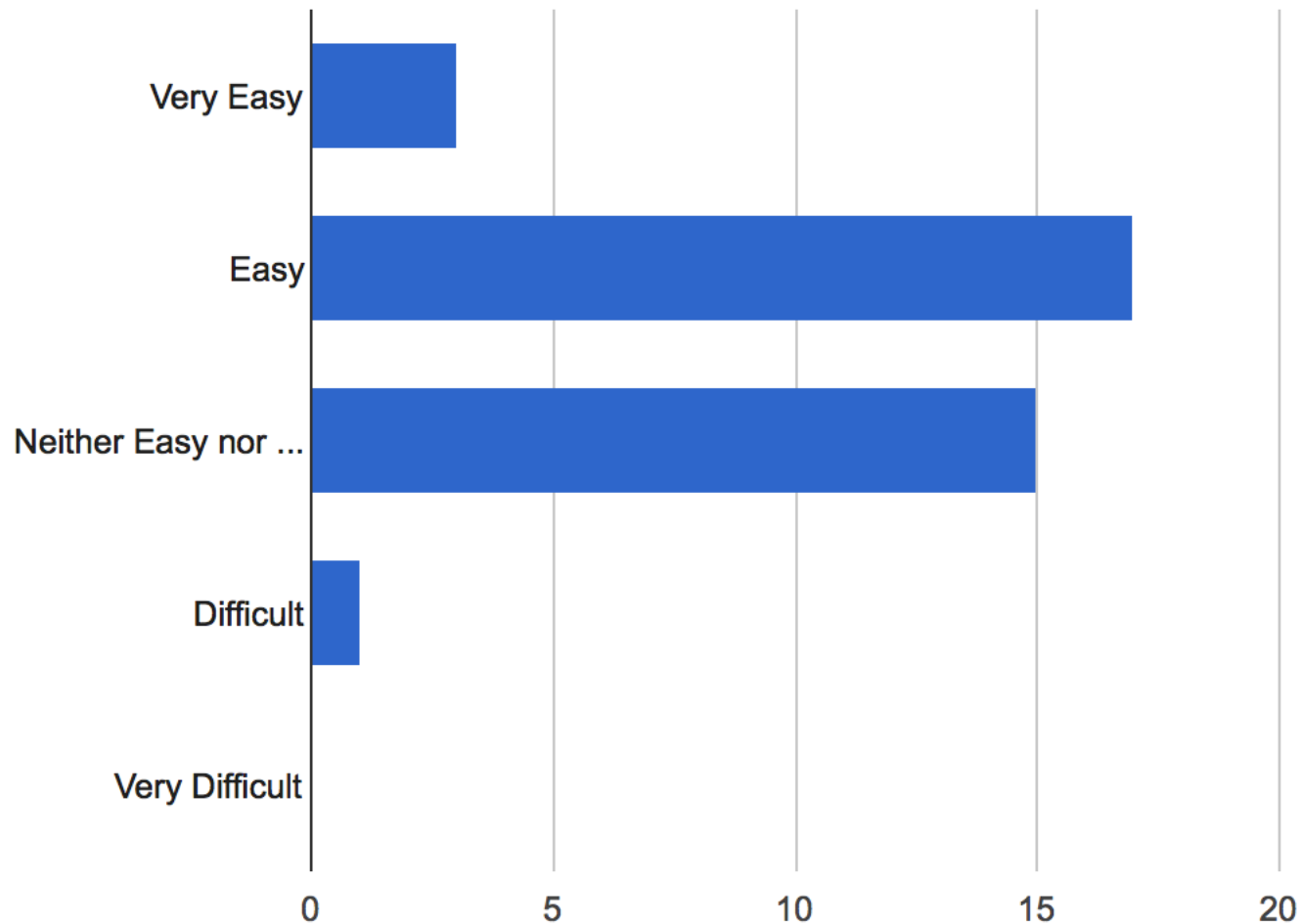


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# Ease of Passing the Tube



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# Summary

Can Video Laryngoscopy Offset  
Interruptions in Compressions?

**Not in a system where CPR quality is  
closely monitored**



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# Summary

Monitoring CPR quality is more important for achieving quality CPR than is the choice of airway





# Summary

The adverse effects of intubation on survival are probably largely due to selection bias





# Summary

Like MDs, paramedics find obtaining a view with video laryngoscopy is easier than passing the tube



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