

## Supplemental Online Content

Bowyer MW, Andreatta PB, Armstrong JH, Remick KN, Elster EA. A novel paradigm for surgical skills training and assessment of competency. *JAMA Surg*. Published online September 15, 2021. doi:10.1001/jamasurg.2021.4412

**eTable.** Example Procedural Assessment Instrument - Cricothyroidotomy

This supplemental material has been provided by the authors to give readers additional information about their work.

**eTable: Example Procedural Assessment Instrument - Cricothyroidotomy**

Procedural Step	Performance Category	Score	Measure
Identify/Mark Landmarks	N/A	0	Nominal
	Sternal Notch	1	Scale
	Notch of Thyroid Cartilage	1	Scale
	Cricothyroid Membrane	1	Scale
	Required Guidance	-1	Scale
	Performed Independently	1	Scale
	Performed Efficiently	.5	Scale
Incise, Open Cricothyroid Membrane (CTM)	N/A	0	Nominal
	Stabilize neck with non-dominant hand	1	Scale
	Vertical incision, 3-5cm over CTM	1	Scale
	Palpate, Confirm CTM	1	Scale
	Incise CTM, Horizontal, 1cm	1	Scale
	Avoid Perforating Vessels, Vocal Cords	1	Scale
	Dilate CTM w/ back of scalpel	1	Scale
	Required Guidance	-1	Scale
	Performed Independently	1	Scale
	Performed Efficiently	.5	Scale
Place/Secure Tracheostomy/Endotracheal Tube	N/A	0	Nominal
	Required Substantial Guidance	-1	Scale
	Required Minor Guidance	.5	Scale
	No Guidance Required	1	Scale
	Efficient, No Guidance Required	1.5	Scale
Understanding of Relevant Anatomy	N/A		Nominal
	Required Substantial Guidance	-1	Scale
	Required Minor Guidance	.5	Scale
	No Guidance Required	1	Scale
	Efficient, No Guidance Required	1.5	Scale
Understanding of Procedural Steps	N/A		Nominal
	Required Substantial Guidance	-1	Scale
	Required Minor Guidance	.5	Scale
	No Guidance Required	1	Scale
	Efficient, No Guidance Required	1.5	Scale
Overall ability to perform Cricothyroidotomy	Beginner	1	Nominal
	Transitional	2	Nominal
	Competent	3	Nominal
	Advanced	4	Nominal
	Expert	5	Nominal