

# *Battlefield Tracheal Intubation for Wounded Warriors*

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# Battlefield Tracheal Intubation for Wounded Warrior University of Nebraska Medical

Center \$ 6,000,000

For an FY2009 earmark the Battlefield Tracheal Intubation project has the following objectives: Continue the development of an airway management system for use on the battlefield to **make it easy to ventilate wounded soldiers** by incorporating a **laryngeal mask** to use with the video laryngoscope and other video intubation devices; further miniaturize and harden the device to **improve its portability** on the battlefield and remote areas including aircraft; **add patient monitoring capabilities** and electronic recordkeeping; develop wireless and **telemetry capabilities**; explore additional uses of this technology for other battlefield injuries.

“Inadequate airway management is a major contributor to morbidity and mortality in both the pre hospital and in-hospital settings”

- Helm et al – up to 85% of pre hospital deaths from trauma may be due to airway obstruction

- A man can live without food for 40 days
- Without water for 3 days
- Without oxygen 5 minutes

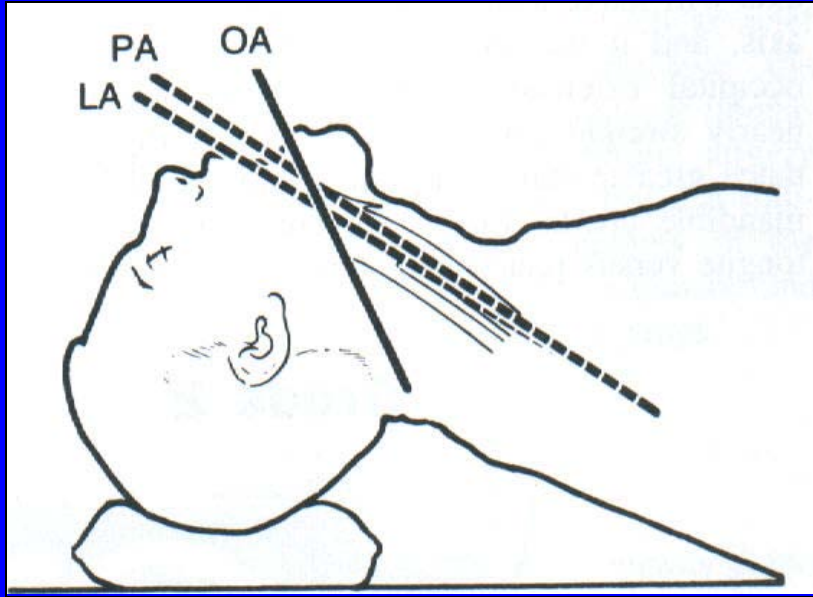
Quote from Peter Laser – Omaha NE 2007

The 5-year-old's mother said her daughter received a triple dose of sedatives during her treatment at the Little Angel Dental offices.

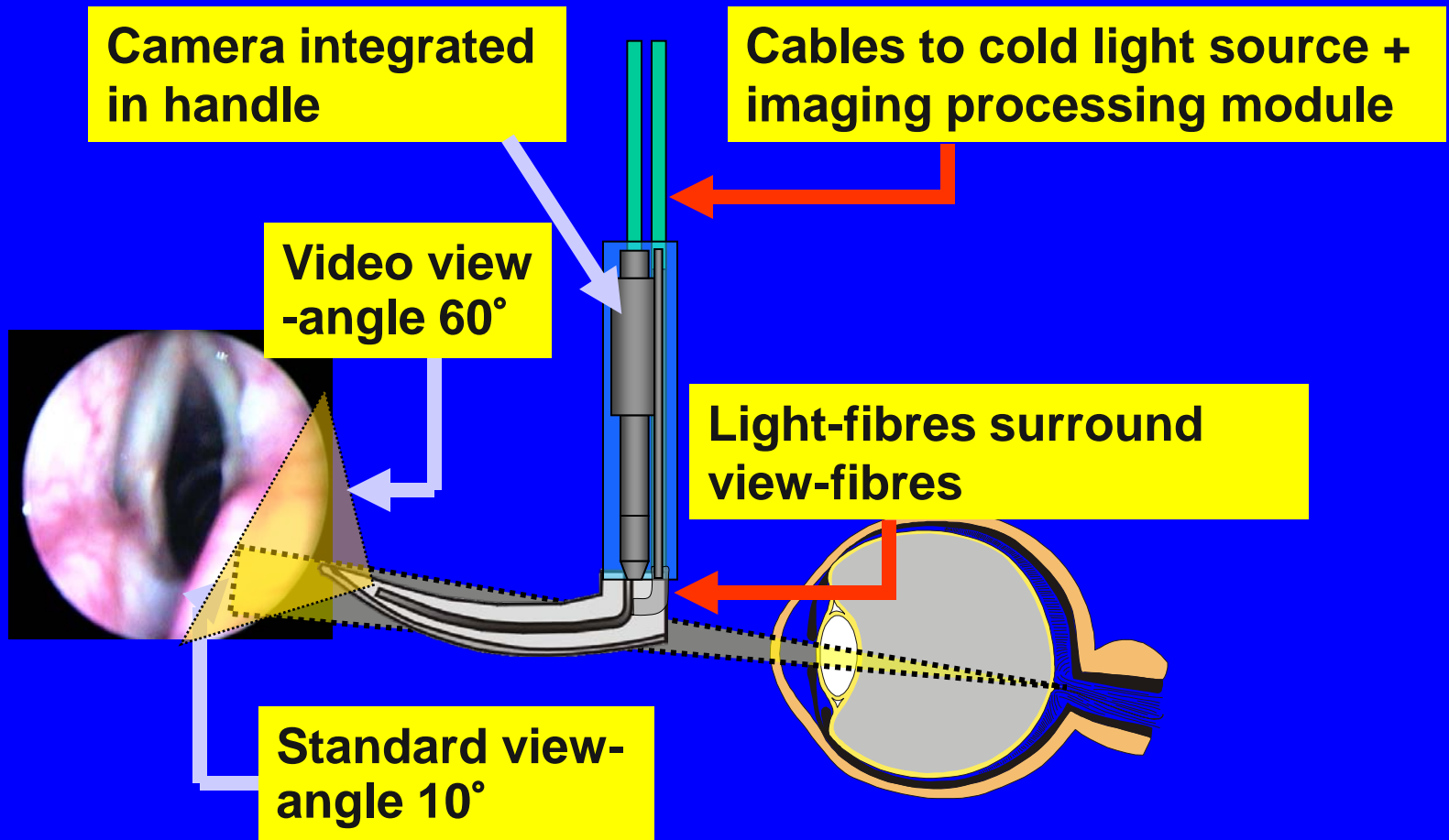
- “Diamond received a triple dose of sedatives - an oral agent, an intravenous drug and nitrous oxide gas - during her treatment”



# Why is Intubation Difficult?



# Solution – Video Laryngoscopy





**Especially useful for first responders or non anesthesia providers**



# Development Timeline



Validate VL - OR,ICU,ER - now

Novel Blades / Supraglottic – yr 1

Telemetry and Wireless – yr 2-3

Perioperative Monitors  
yr 2-3

Telementoring for  
airway management  
and sedation yr 3,4

Create Conscious  
Sedation Virtual  
Monitoring yr 4

Virtual perioperative care (create  
force multiplier for DOD) – year 4

Teleanesthesia  
Yr 5

# Raytheon/UNMC Partnership

- Telemetry solution for Video Laryngoscope
- Will create perioperative telemedicine solution
- Migrate G Phone technology into perioperative arena
- Allow interface of numerous surgical optical devices with TMED platform

# Telehealth Efforts

- Operational Utility Evaluation of Video Laryngoscopy for US Air Force FY08
  - Wilford Hall, Offutt, NE ANG
  - Expansion to CSTARS and OCONUS 2009
  - Establishes Line of Communication for other Telehealth Product Expansion
- Autism Telehealth AF – Funded FY09
- Virtual Pre Op VISN 23
- Virtual Urology Clinic
- Teledermatology VISN 23 Funded
- Virtual Telepain Clinic Validated

# Questions?

