

Pediatric Emergency and Critical Care Lit



UPDATE!

@EMtogether





Mansano et al.

Bedside tests to predict laryngoscopic difficulty in pediatric patients.

Inter J Pediatr Otorhinolaryngol. 2016; 83:63-68.

What This Study Adds

Frontal Plane to Chin

Height Distance (FPCD)

Neck Circumference

Mallampati Index Weight

Sternomental Distance

BMI Thyromental Distance

Inter-incisor Distance

What This Study Adds

Frontal Plane to Chin
Distance (FPCD)

Height

Neck Circumference

Mallampati Index

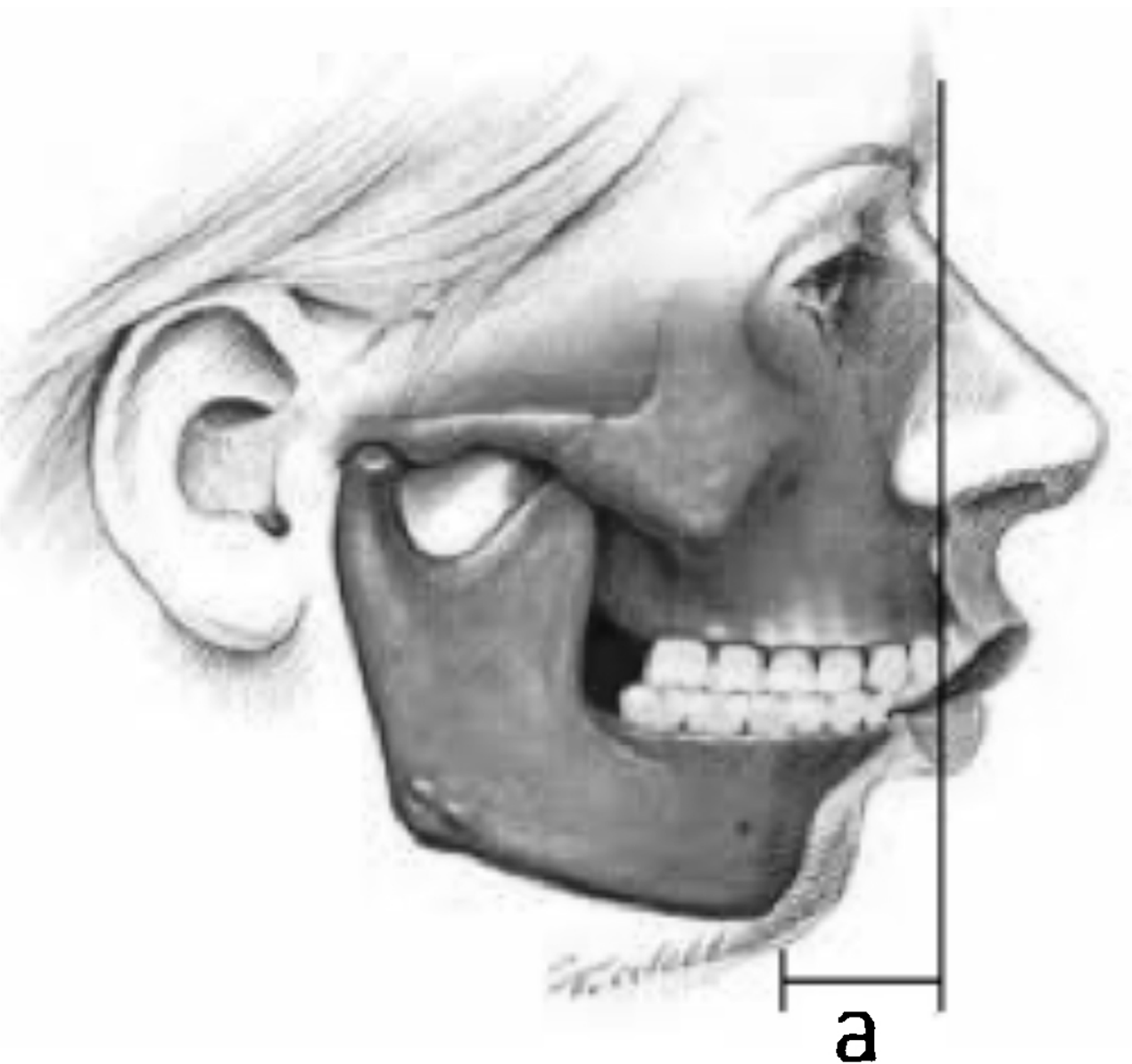
Weight

BMI

Sternomental Distance

Thyromental Distance

Inter-incisor Distance



**FPCD (cm) to
weight (kg) ratio
> 0.2:**

Sensitivity 88.89%
Specificity 73.68%

Clinical Practice

Retrognathism = Difficult Airway

“Kiss your airway goodbye...”





1 mL

NDC 0409-7241-01

Epinephrine
Injection, USP
1:1000

Andersen et al.

Time to Epinephrine and Survival After Pediatric In-Hospital Cardiac Arrest.

JAMA. 2015; 314(8):802-810.

What This Study Adds

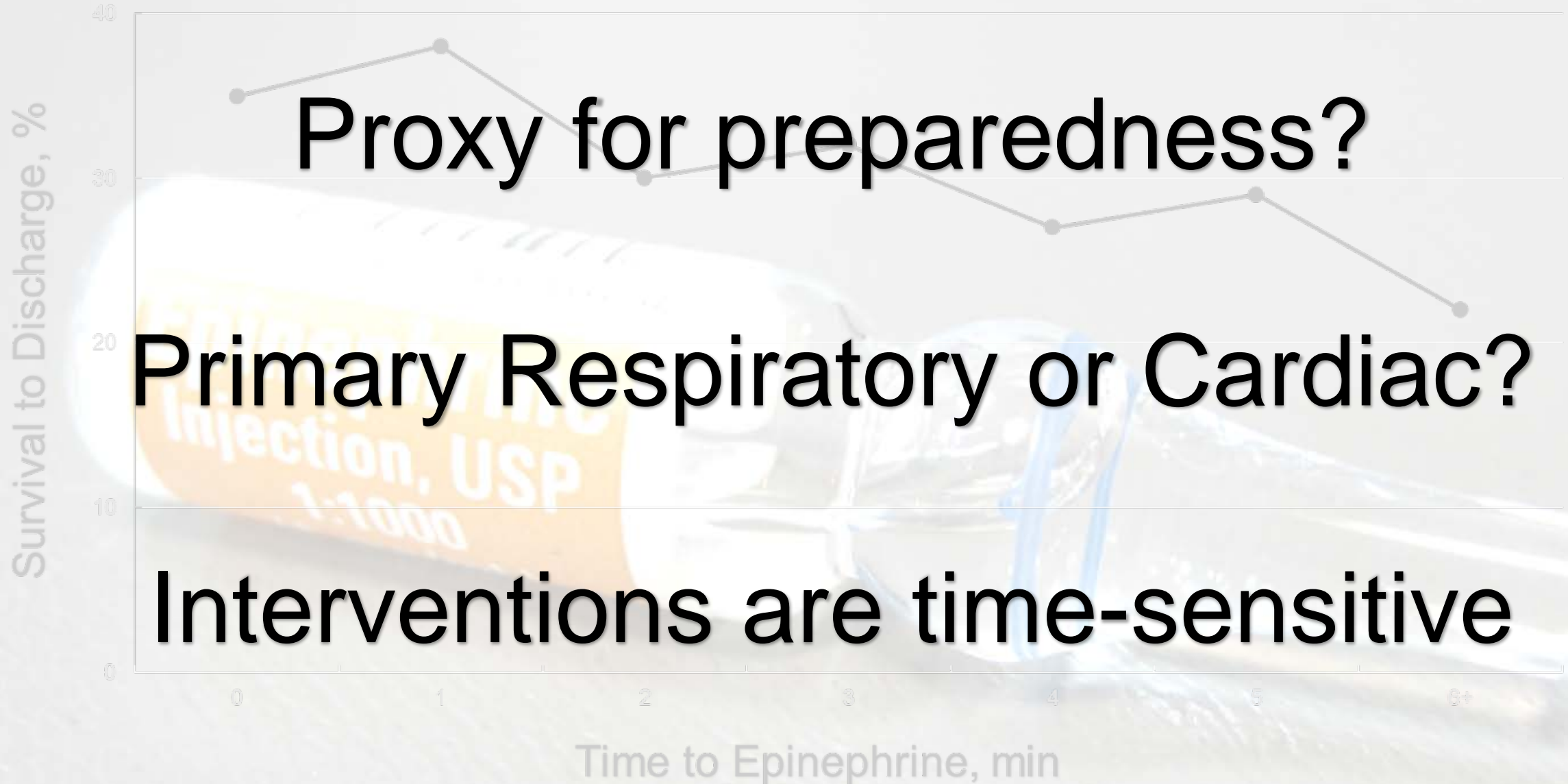
Retrospective analysis, 1558 U.S. children < 18 yo

487 (31.3%) Survived to **Discharge**

Time-to-Epi: 1 min (IQR 0-4)

RR per minute delay: 0.95 [95% CI, 0.91 to 0.99]

Clinical Practice





Hoffman et al.

Comparison of the AVPU Scale and the Pediatric GCS in Prehospital Setting.

Prehosp Emerg Care. 2016; Early Online 1-5.

What This Study Adds

Prospective cohort, 302 children < 10 yo

Median age 2.3

Alert (73.5%)

Verbal (13.9%)

Painful (9.4%)

Unresponsive (3.1%)

Verbal Stimuli:

100% PPV

pGCS \geq 8

Clinical Practice

V = 8 = Great

**Responds to Voice,
at least pGCS of 8**

Only Pain? Only Gain...an ETT





Turner et al.

A Review of Pediatric Critical Care in Resource- Limited Settings.

Front Pediatr. 2016; 4(5): 1-15.

What This Study Adds

Majority of childhood deaths preventable

Lower respiratory tract disease

Malaria

Diarrhea

Meningitis

Nutritional Deficiencies



Global Newborn and Child Sepsis Initiative

Developed
Nation

ECMO,
Transport

Developed
Nation

Inotropes,
Mech Vent

Child Mortality
< 30/1000

1st hr IVF, IV abx, CPAP

Child Mortality
> 30/1000

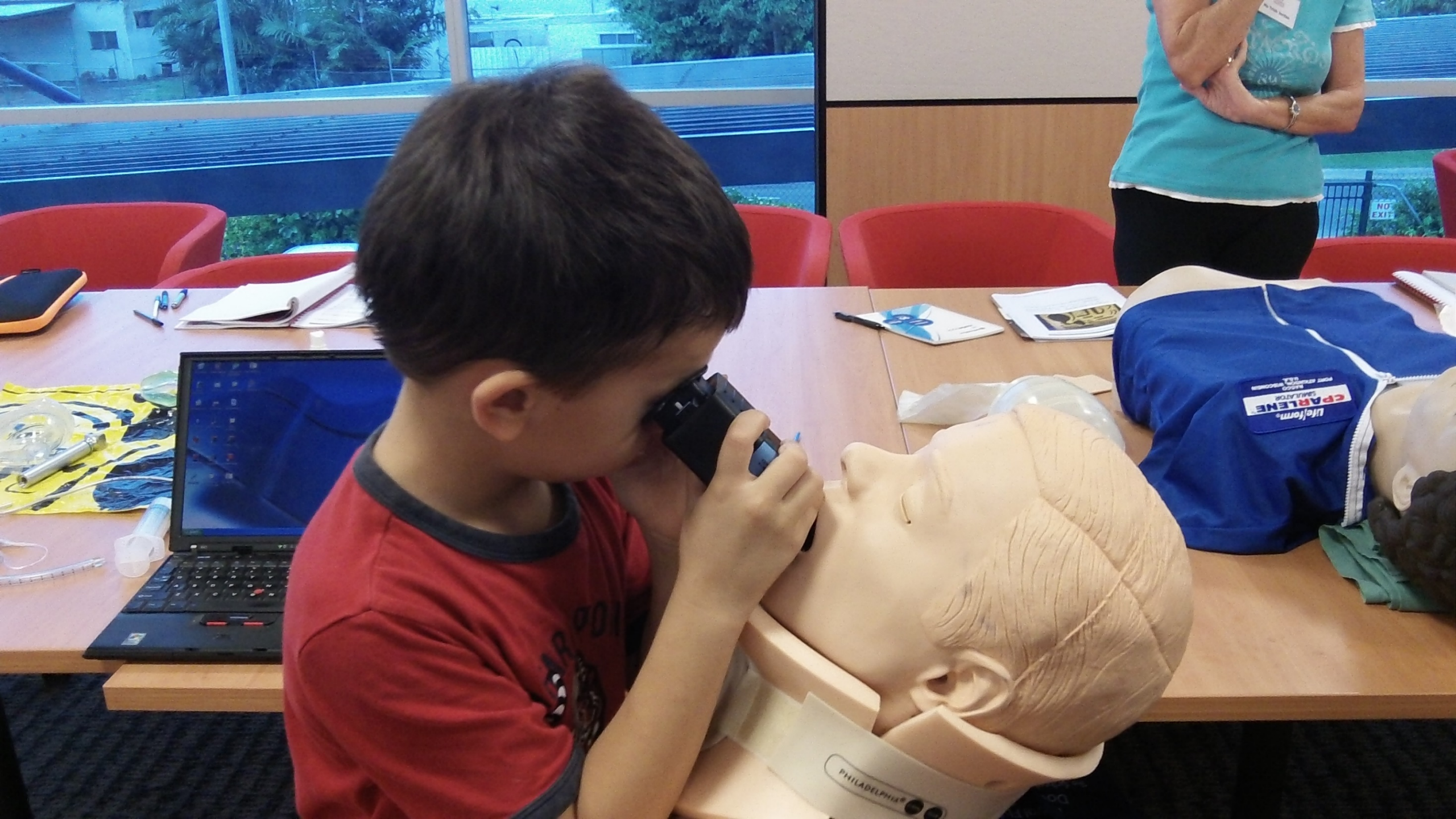
Vax, H₂O, Vitamins
IM abx via HCW

Clinical Practice

Country-specific goals

Basics save lives

Research agenda set



Fiadjoe et al.

Airway management complications in children with difficult tracheal intubation: a prospective cohort analysis.

Lancet Respir Med. 2016; 4:37-48.

What This Study Adds

Prospective, 1018 difficult pediatric intubations,
13 children's hospitals

1st-pass success

Direct Laryngoscopy **3%**

Fiber-optic **54%**

Indirect Laryngoscopy **55%**

Clinical Practice

Associated with complications

> 2 attempts

Weight < 10 kg

Thyromental distance

3 direct laryngoscopies before indirect

Go to video early!





Rankin et al.

Intravenous Fluid Bolus Prior to Neonatal and Infant Lumbar Puncture.

JAMA Pediatr. 2016; 170(3): 1-6.

What This Study Adds

Prospective, convenience; 3 years, 40 pts
0 to 3 months, ddx pyloric stenosis

Difference in subarachnoid space mm^2

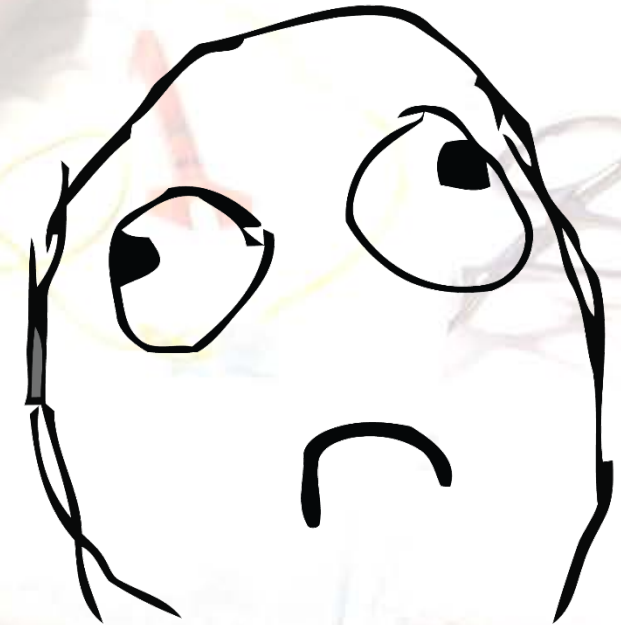
Before IV bolus: **37.8** mm^2

After IV bolus: **36.9** mm^2

P = 0.42

Clinical Practice

IV bolus probably doesn't help.





Flood et al.

Predictors of Emergency Department Utilization Among Children in Vulnerable Families.

Pediatr Emerg Care. 2016; Ahead-of-print.

What This Study Adds

Fragile Families and Child Wellbeing Study

5000 vulnerable children, 9-year follow-up

	OR
Hospitalization in last year	15.97 [6.64 to 38.4]
History of asthma	2.53 [1.17 to 5.44]
Clinic visit in last year	1.22 [1.12 to 1.33]
Caregiver ED visits	1.15 [1.03 to 1.28]

A woman in a white tank top with red trim is pouring milk from a white pitcher into a glass. A young boy in a blue t-shirt with 'VIKEHOOPS' on it is sitting at the table, looking down at his plate. The table is set with plates of food, including green beans and a salad. In the background, there is a bookshelf filled with books and a framed picture on the wall.

Clinical Practice

Over-utilization is a problem

Insurance status not predictive of ED utilization

Care coordination, education

Editorial: vulnerable child syndrome

KA-POW!!!

The image features the text "KA-POW!!!", a classic comic book sound effect. The letters are rendered in a bold, blocky font. Each letter is filled with a bright red color and has a thick white outline, which is further defined by a black shadow effect. The text is centered within a yellow, jagged-edged shape that resembles a starburst or a burst of energy. This yellow shape is set against a background of blue and white radiating lines that create a sense of motion and impact. The overall style is reminiscent of mid-20th-century comic book art.



**Thank
You!**



Quick Links

- [Mansano et al. **Bedside tests to predict laryngoscopic difficulty in pediatric patients.** Inter J Pediatr Otorhinolaryngol. 2016; 83:63-68.](#)
- [Andersen et al. **Time to Epinephrine and Survival After Pediatric In-Hospital Cardiac Arrest.** JAMA. 2015; 314\(8\):802-810.](#)
- [Hoffman et al. **Comparison of the AVPU Scale and the Pediatric GCS in Prehospital Setting.** Prehosp Emerg Care. 2016; Early Online 1-5.](#)
- [Turner et al. **A Review of Pediatric Critical Care in Resource-Limited Settings.** Front Pediatr. 2016; 4\(5\): 1-15.](#)
- [Fiadjoe et al. **Airway management complications in children with difficult tracheal intubation: a prospective cohort analysis.** Lancet Respir Med. 2016; 4:37-48.](#)
- [Rankin et al. **Intravenous Fluid Bolus Prior to Neonatal and Infant Lumbar Puncture.** JAMA Pediatr. 2016; 170\(3\): 1-6.](#)
- [Flood et al. **Predictors of Emergency Department Utilization Among Children in Vulnerable Families.** Pediatr Emerg Care. 2016; Ahead-of-print.](#)