pediatric airway for emergency physicians who are not also pediatricians

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sizing
dosing
anatomy
physiology
provider anxiety
provider anxiety
provider anxiety

the principles are the same
the strategy is the same
the meds are the same
the techniques are the same
RSI vs. Awake

Prepare for failure of intubation and failure of BVM

Change something

Post-intubation management

Successful

Airway attempt

Unsuccessful

BVM (perfect technique) or LMA

Unsuccessful

Supraglottic device

Prepare for cricothyrotomy

Unsuccessful

Next patient
you do this all the time

RSI vs. Awake

Prepare for failure of intubation and failure of BVM

Change something

Post-intubation management

Successful

Airway attempt

Unsuccessful

Successful

BVM (perfect technique) or LMA

Successful

Supraglottic device

Prepare for cricothyrotomy

Unsuccessful

Next patient

Unsuccessful

Next patient
sizing
sizing

the most important issue
sizing

the most important issue

what is the right size?
sizing

the most important issue

what is the right size?

where is the right size?
sizing

weight = 2 x age in years + 9

ETT size = (age + 16) / 4
ETT size = (age / 4) + 4
ETT size = 4 + 1/4 age
ETT size = same as child’s pinky

distance to lip = ETT size x 3

distance to nare = ETT size x 4

cuffed ETT if ≥ 5.5 mm
you will not remember infrequently used information when you’re nervous
you will not remember infrequently used information when you’re nervous

you will not remember infrequently used information when you’re nervous
you will not remember infrequently used information when you’re nervous
### Sizing Chart

<table>
<thead>
<tr>
<th>Age</th>
<th>2y</th>
<th>3y</th>
<th>4y</th>
<th>5y</th>
<th>6y</th>
<th>7y</th>
<th>8y</th>
<th>10y</th>
<th>12y</th>
<th>&gt;15</th>
</tr>
</thead>
<tbody>
<tr>
<td>Height</td>
<td>21-35</td>
<td>30-40</td>
<td>39-50</td>
<td>49-60</td>
<td>59-70</td>
<td>69-80</td>
<td>79-90</td>
<td>89-100</td>
<td>99-120</td>
<td>120-150</td>
</tr>
<tr>
<td>Weight</td>
<td>4-11</td>
<td>5-13</td>
<td>6-15</td>
<td>7-19</td>
<td>8-23</td>
<td>9-27</td>
<td>10-31</td>
<td>12-40</td>
<td>14-50</td>
<td>16-60</td>
</tr>
</tbody>
</table>

**Cuff Sizing**
- LMA: 1, 1, 1, 1.5, 2, 2, 2, 2.5, 2.5, 2.5, 3, 3, 3, 4
- Cuff Volume: 2-4 ml, 7, ≥10, 14, 20, 30
- ETT: 2.5, 3.0-3.5, 3.5-4.0, 3.5-4, 4-4.5, 4.5-5, 5-5.5, 5.5-6, ≥6.0-6.5, ≥6.0-6.5, ≥6.0-6.5

**Vital Signs**
- HR: 120-180, 100-140, 100-120, 100-110, 70-115, 60-100, 55-120

**Ventilation**
- Blade: 0-1 Miller, 1 Miller, 1.5/2 Miller, 1.5 Miller, 2 Miller
- Humidifier: 1 liter, 2 liter, 3 liter

**Resuscitation Equipment**
- Bag: 0.5 liter, 1 liter, 2 liter, 3 liter
- Syringe: Standard, 5 ml, 10 ml
- N/0: 5-10 ml, 0-10 ml, 0-10 ml, 0-10 ml, 10-15 ml, 10-15 ml, 14-18 ml, 14-18 ml, 14-18 ml, 14-18 ml
sizing
dosing
dosing

for the love of god and your license
use a resuscitation chart
anatomy
small diameters more likely to obstruct
small diameters more likely to obstruct
	his is why adults don’t get croup
small diameters more likely to obstruct

this is why adults don’t get croup

vasoconstrictor and anti-inflammatory therapy
small diameters more likely to obstruct

dthis is why adults don’t get croup

vasoconstrictor and anti-inflammatory therapy

positive pressure
large occiput
large occiput

large occiput

sheets under **shoulders** to get ear to sternal notch

large tongue and high tracheal opening
large tongue and high tracheal opening

straight blades may give you a better view
narrowest portion of airway is at cricoid ring vs. vocal cords in adults
narrowest portion of airway is at cricoid ring vs. vocal cords in adults

cuffed vs. uncuffed tubes
narrowest portion of airway is at cricoid ring
vs. vocal cords in adults

cuffed vs. uncuffed tubes

the cuff takes up 0.5 mm
narrowest portion of airway is at cricoid ring vs. vocal cords in adults

cuffed vs. uncuffed tubes

the cuff takes up 0.5 mm

the cuff can make it a little harder to intubate tiny airways
short trachea
short trachea

don’t push the the damn thing in too far
small/absent
cricothyroid membrane
small/absent
cricothyroid membrane
cricothyrotomy is “contraindicated” < 10
small/absent
cricothyroid membrane

cricothyrotomy is “contraindicated” < 10

LMA
small/absent
crico thyroid membrane

cricothyrotomy is “contraindicated” < 10

LMA

forget jet ventilation
needle cric
small/absent
cricothyroid membrane

cricothyrotomy is “contraindicated” < 10

LMA

forget jet ventilation
needle cric
small/absent cricothyroid membrane

Cricothyrotomy is “contraindicated” < 10

LMA

Forget jet ventilation needle cric

Whatever
physiology
increased metabolic rate
= decreased time to desaturation
increased metabolic rate

= 

decreased time to desaturation

preox preox preox
increased metabolic rate = decreased time to desaturation

preox preox preox
be ready ready ready to ventilate ventilate ventilate
high vagal tone
high vagal tone

have atropine ready
45% ECF water

succinylcholine dose is really 2 mg/kg
pediatric airway for emergency physicians who are not also pediatricians
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you already know how to do it
pediatric airway for emergency physicians who are not also pediatricians

you already know how to do it

do not try to remember anything—use a resus chart
pediatric airway for emergency physicians who are not also pediatricians

you already know how to do it

do not try to remember anything–use a resus chart

get your pediatric resus stocking organized
pediatric airway for emergency physicians who are not also pediatricians

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do not try to remember anything—use a resus chart

get your pediatric resus stocking organized

nebulized epinephrine for stridor
pediatric airway for emergency physicians who are not also pediatricians

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nebulized epinephrine for stridor

large occiput
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nebulized epinephrine for stridor
large occiput
straight blade for little dudes
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know how to do a needle cric