Life Support Learning Center/Respiratory Therapy

Child/Infant Basic Airway Course

The goal of this course is to develop a standard educational offering to UVA Health Clinicians on Basic Airway Management

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1. Child/Infant
    a. Airway
        i. Positioning
            1. Sniffing position for infants and younger children
                a. Describe this positioning
                    i. Is there anything you can use to help or facilitate this
            2. Head tilt chin lift for older children
            3. Jaw thrust
            4. Modified Jaw Thrust
        ii. Questions for students regarding Airway
            1. Which patients require airway interventions
                a. Lethargic to unresponsive mental status
                b. Obstruction
                    i. Emesis
                    ii. Blood
                    iii. Sputum
                    iv. Food
                    v. Anything else?
                    vi. Immediately clear airway by
                        1. Turn the patient on their side if you can
                        2. Suction to clear any of the above mentioned material
                c. How do you suction a pediatrics patient's airway?
                d. For how long?

    b. Breathing
        i. Questions
            1. What are normal respiratory rates (PALS 2020 Guidelines)
                a. Infant, 30 – 53
                b. Toddler, 22 - 37

c. Pre-School, 20 - 28
d. School age child, 18 – 25
e. Adolescent, 12 – 20

2. What is a normal O2 saturation?
3. When is it better to use Capnography/ETCO2
4. When should you consider provide BVM assisted ventilations for a Infant/Child?
    a. How Much?
        i. Until you see minimal chest rise
    b. How fast or slow do you provide this ventilation
        i. A gentle breath over a second, (inspiratory and Expiratory)
    c. How Often
        i. One breath every two-three seconds as noted above
    d. What are the techniques used to provide BVM ventilations
        i. One person head tilt chin lift to a sniffing position with a "E-C" clamp on the mask
            1. Then lift the jaw up into the mask to provide a mask
        ii. Is the above technique adequate and easy to provide
            1. No
        iii. Where should the person be when assisting ventilation when using a BVM
            1. At the head of the patient
                a. Why?
        iv. Two person BVM ventilations
            1. One person to gently squeeze the BVM and the other to use a double "E-C" technique
        v. Is the two person technique better, if so why?

c. Airway Adjuncts
    i. Nasopharyngeal Airway
        1. How do you size for placement?
        2. How is it inserted?
        3. When is/can this device be used
        4. Are there any contraindications on using an NPA
            a. If so, what are they?
    ii. Oropharyngeal Airway
        1. How do you size for placement?
        2. How is it inserted?
        3. When is/or can this device be used?
        4. When do you NOT use this device?
        5. Are there any adverse effects or contraindications of using an OPA?
            a. When?
            b. Why?

iii. Nasal Cannula
    1. What is the minimum/maximum flow rate, why?
        a. 0.25-4L
        b. When/why would you need to humidify O2 delivery?
iv. Simple face mask
    1. What is the minimum to maximum flow rate?
        a. 6 – 10L
v. High Flow Nasal Cannula
    1. What is the minimum/maximum flow rates
        a. 4L-40L
        b. What is the goal you want to achieve?
vi. Bag Valve Mask
    1. Review from above
    2. What is the best way to identify best practice for ventilating with a BVM
        a. Patient chest rise versus volume/amount of squeeze of a BVM
        b. Does the patient receive O2 from a BVM placed on a patients face if not squeezed, why?