

Preparing for Office Emergencies

Primary care offices should consider having readily available the following equipment, medications and information. These recommendations include equipment for the three most common pediatric emergencies that present to a primary care office:

1. Respiratory distress (including severe bronchiolitis, croup and status asthmaticus)
2. Various forms of early shock (most commonly caused by dehydration or potentially early sepsis)
3. Anaphylaxis

Successful intervention requires a disciplined approach focused on the ABCs of resuscitation. Each piece of equipment noted below is described in terms of its relevance to these three key elements.

Airway: *A portable suction unit with various size catheters and tips.* Maintaining a patent airway is the first step in any resuscitation. Suction equipment with a variety of suction catheters is useful because a Yankhauer suction tip is of little use in a child younger than 36 months. Tracheostomy suction catheters are ideal for smaller patients and readily available. Efforts to suction nasal and oral secretions should be preceded by supplemental oxygen administration and

performed for only several seconds at a time. If possible, the catheter should be advanced before applying suction. The suction is applied as the catheter is withdrawn to minimize the duration of suction-induced hypoxia.

Breathing: *Two or three sizes of self-inflating bag valve masks with appropriate face masks and a self-contained oxygen source* is a vital tool for the patient requiring either simple blow-by oxygen or assisted ventilation. Having an appropriate selection of masks and self-inflating (infant, pediatric and adult) bags must not be overlooked given the dangers of over ventilation in smaller children and the importance of mask fit in terms of successful ventilation. A nebulizer machine with appropriate tubing and mouthpieces is also important for addressing upper airway obstructive and lower airway reactive disease with either epinephrine or albuterol. When using a nebulizer or blow-by oxygen with small children, it is always best to allow the willing parent to hold the child and to allow the child to assume a position of comfort. Oxygen masks should not be held over an anxious child's face. Rather, have the parent hold the mask with oxygen flowing or a paper cup with an oxygen extension tube poked through the cup bottom approximately an inch away from the child's face where it is best tolerated.

Circulation: *Crystalloid solution in the form of normal saline* should suffice for the vast majority of acutely dehydrated and/or hypotensive children requiring emergent bolus therapy. An initial bolus of 20 mL/kg normal saline is well tolerated by all volume depleted children. Patients demonstrating continued signs of hypovolemia can receive a second 20 mL/kg saline bolus over 30 minutes, ideally while underway to the hospital. A wide variety of IV sizes ranging from 18 to 25 gauge with appropriate IV tubing should cover most situations. Physicians who are familiar with the technique of placing intraosseous needles may wish to have several intraosseous needles available as a backup vascular access route. Appropriate dressing materials, adhesive tape and/or Cobain wrap will be needed to secure the intravenous and intraosseous needles.

Medications: It is important to keep on hand *albuterol solution (either in premixed vials or pure solution) for nebulization, Racemic epinephrine for nebulization and 1:10,000 epinephrine solution for acute asthma and anaphylaxis.* Nebulized medicines (2.5 to 3 mL solution) are generally well tolerated in children and can be used repeatedly during a respiratory emergency as the patient is prepared for transport and also during transport to the emergency department. *Activated charcoal* may also prove useful with certain toxic exposures once the case has been discussed with your local poison control center.

Information: Some form of *code card or poster* should be available or on display in the office. It should contain routine doses of all critical medications on a body mass or length basis. More importantly it should contain phone numbers to access help in terms of referral and EMS response. During a true emergency is not the time to look up the dose of epinephrine for anaphylaxis. Keep the information simple and nearby. 📍

*- This handout has been developed by
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