

CASE 3: Patient is a 2 year old male child brought by car to the ED. His mother states that he fell off a very tall slide on the playground a few minutes ago. He was unconscious "for a couple of minutes" and has been acting very sleepy since. He is lying quietly in his mother's arms, and is breathing spontaneously. There is some dried blood on his face. Assessment reveals that the child is unresponsive to pain, breathing is slightly decreased, and color is pale. His airway is open, no abnormal airway noises with a little bluish tint around his mouth. Lungs are clear. He has a potential C-spine injury and requires immobilization. This child is in need of emergent care.

Vital signs: RR 24, shallow; HR 160, BP 98/58. Temp is 36 C°

1. **What is child's color zone?** _____

Immediate oxygen delivery is required.

2. **What delivery method would you use?** _____

3. **If choosing a mask, what size?** _____ Oxygen saturations and color improve after supplemental oxygen given. The child's clothing is removed. Additional assessment reveals that the only other abnormality is a swollen deformed left thigh area. There is also a small amount of blood in each nostril. He has good rectal tone with no evidence of bleeding. Additional history per mom includes no significant past medical history, is on no medications, no known allergies.

4. **What would be the IV catheter size for this child?** _____

5. **How much saline (NS) would be administered by bolus?** _____

The child does not have a gag reflex. Rapid sequence intubation is ordered.

6. **What size ET tube would be appropriate?** _____

7. **What size stylet?** _____

The doctor orders the following for intubation and needs to know dosages.

8. **What are the doses (mg) for:**

a) **atropine:** _____ b) **lidocaine:** _____

c) **midazolam:** _____ d) **rocuronium:** _____

After intubation, patient is a little more difficult to ventilate, abdomen is slightly distended.

9. **What size NG tube would be appropriate?** _____ Child is transported to the CT scanner without incident.

Note: Frequencies on CT scanner can be color-coded as well.



Pediatric Disaster Response Workshop

PARTICIPANT WORKSHEET

Material adapted from

"Study Packet for the Correct Use of the
Broselow™ Pediatric Emergency Tape,"

Karen Frush, M.D., Duke University Medical Center

www.ncdhhs.gov/dhsr/EMS/pdf/kids/DEPS_Broselow_Study.pdf

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CASE 1: Patient is a 9 month old white male whose mom called 911 because she was having trouble "waking him up" this

morning. Past medical history is significant for failure to thrive with one previous hospitalization and he does appear quite small for 9 months. Mom reports no other history such as trauma or allergies.

Exam: Infant's eyes are open and staring, but he seems unaware of his surroundings, has decreased work of breathing, his color is pale and skin is cool to touch. Cardiac monitor shows sinus tachycardia. Lungs are clear.

This child requires immediate intervention. Mom is not sure how much he weighs, but he has always been "really skinny." Vital signs: RR 16; HR 160; central pulses intact, peripheral pulses weak.

1. **What color zone is this child?** _____
2. **Your first priority should be** _____
3. **He is spontaneously breathing, but in case respiratory assistance needed, what size BVM is needed?** _____
4. **What size oral airway?** _____
5. **IV access is established for a bolus of saline. How much saline?** _____

Dextrostick is 38 mg/dL. Normal for infants is >40mg/dL.

6. **The next intervention should be the administration of** _____
7. **How much?** _____

(Note: If your unit only stocks D50, you will need to dilute the D50. Take equal portions of D50 and NS to make D25).

Progress report... After administration of D25W child begins to cry slightly. After 60 mL of fluid heart rate is 150 and respiratory rate is 22 with crying. Color is still pale, skin slightly warmer to touch. **Further interventions?**

CASE 2: Patient is a 6 year old Asian-American female with a known peanut allergy who took a bite from a cookie in the hospital cafeteria and her father noticed that she began to develop some swelling of her lips and her "breathing sounds kind of wheezy." He usually carries an Epi-pen, but they had left the house without it. He carried her to the ED. She is gasping for breath, is wide-

eyed and frightened with audible wheezing and increased work of breathing. Her lips are pale. There are raised areas on her skin.

Vital signs: HR 140, RR 32 with wheezing audible, BP 90/58. Cardiac monitor shows sinus tachycardia.

1. **What is her color zone?** _____

Oxygen delivery is a priority.

2. **Would you use an adult or pediatric O2 mask?** _____
3. **What would be the dose of subcutaneous epinephrine she would require?** _____
4. **How much normal saline would you give as a fluid bolus?** _____

The dose of SQ epinephrine has still not been drawn up. The patient becomes unresponsive, work of breathing is increased; wheezing is still audible; lips and nail beds are pale. Heart rate is 160, RR is 10, BP is 70/30. The patient is in shock. She needs assisted ventilation, starting with mask and ventilation bag.

5. **What size mask?** _____
6. **What size ET tube should be used for intubation?**

_____ You now have an IV.

7. **What dose and concentration for IV epinephrine is needed (see color zone)?** _____

After administration of IV epinephrine, patient is more arousable. HR 160, RR 24, wheezing decreased, BP 100/78.

What further interventions would you consider?