On Mouth-To-Mouth

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Abstract: **Health care providers are becoming increasingly reluctant to perform mouth-to-mouth resuscitation. While it may be prudent to exercise caution in this endeavor, it is important to appreciate the potential consequences of delaying this lifesaving procedure. (JABFP 1988; 1:55-56.)**

The setting is all too familiar. A cardiac arrest is called in the far reaches of your hospital. You run to the bedside and find yourself among the first to arrive. Neither respiratory therapy nor the code team (or crash cart) is yet on the scene. Health care providers are feverishly putting on monitor leads, obtaining IV access, getting a bedboard under the patient, and performing external chest compressions . . . and no one is breathing for the patient. And the patient is blue. Knowing looks pass back and forth from those in attendance . . . and no one is breathing for the patient. As precious seconds (which seem like hours) pass by, you reflect on your options. You could:

1. Perform mouth-to-mouth resuscitation,
2. Wait a little longer and hope that help (in the form of someone with an Ambu bag) arrives,
3. Perform mouth-to-mouth resuscitation,
4. Yell at a nurse,
5. Look for a medical student and have him/her perform mouth-to-mouth resuscitation,
6. Busy yourself with the ECG monitor,
7. Wait a little longer,
8. Let the patient die,
9. Perform mouth-to-mouth resuscitation.

The act of performing mouth-to-mouth resuscitation in a medical environment is at risk of becoming an extinct art.[1] Fear of acquired immunodeficiency syndrome (AIDS) has overcome all reason. Even elderly ladies and gentlemen who haven't ventured out of nursing homes for years are not receiving rescue breathing because of the possibility that they somehow contracted *the* disease.

Ironically, reluctance to perform mouth-to-mouth resuscitation seems to be less of a problem with prehospital cardiac arrest. Most events that occur outside the hospital take place in the home. Nonmedical observers in this setting most often know the victim well and are frequently aware of his/her medical history. If nonmedical observers know cardiopulmonary resuscitation (CPR), they usually administer it promptly.

Delay in providing respiratory support is also less of a problem in hospital emergency departments and intensive care units. While reluctance to perform mouth-to-mouth resuscitation is still prevalent among health care providers in these areas, the crash cart is usually so nearby and the personnel in attendance so familiar with emergency cardiopulmonary care that the time for control of the airway is frequently minimal. In contrast, the problem of achieving airway control in other medical environments (on regular wards, in waiting rooms, out-patient clinics, and medical offices) is significant. Reluctance to perform mouth-to-mouth resuscitation in these settings has reached epidemic proportions. Considering that respiratory equipment (and the crash cart) is often just too many minutes away, prompt administration of rescue breathing must be looked on as the essential first step in the lifesaving process.

The facts are these:

1. Although the human immunodeficiency virus (HIV) (AIDS) is present in saliva, no transmission of infection during mouth-to-mouth resuscitation has ever been documented.[2-4]
2. The epidemiology of HIV infection is similar to that of hepatitis B virus infection. The risk of hepatitis B virus transmission in health care settings far exceeds that for HIV virus transmission. While experience with AIDS is still fairly limited, more than 15 years of experience in management has been accumulated with hepatitis B virus infection. No transmission of infection during mouth-to-mouth resuscitation has ever been documented for hepatitis B.[2]

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3. Though final answers are not yet in, the potential risk of transmission of AIDS by mouth-to-mouth resuscitation appears to be extremely small.

We suggest:

1. If a patient arrests outside the hospital and you don't do CPR, the chances are good that no one else will. If the cause of the arrest is purely respiratory (drowning, drug overdose, etc.), prompt administration of rescue breathing could be lifesaving. *Breathe* for the patient.
2. If a patient arrests in a hospital setting and you know help and an Ambu bag are on the way, it may be reasonable to wait a few moments for their arrival. Ventricular tachycardia/fibrillation is the most common cause of cardiopulmonary arrest in this setting. Defibrillation is the treatment of choice. Putting off management of the airway for a few moments (although less than ideal) probably won't adversely affect outcome in most instances. However, if help in the hospital is late in arriving and the patient isn't being ventilated, *breathe* for the patient.
3. If nothing in the available history of the patient even remotely suggests that he/she might have AIDS, hepatitis B, herpes, active tuberculosis, or meningococcal meningitis, don't even wait the few moments. If the patient is not being ventilated, and an Ambu bag is not available at the bedside, *breathe* for the patient.
4. Consider more widespread use of the *pocket mask*. This underutilized, inexpensive device has been shown to be far superior to bag-valve-mask systems in ventilating the patient in respiratory arrest.[5,6] Because the mask eliminates direct contact between rescuer and victim, it greatly reduces the risk of transmission of disease. The device may be made even safer by adding a *one-way valve* to the mask (so that air expired by the victim is directed away from the rescuer). Greater availability of this inexpensive airway adjunct in medical settings where cardiopulmonary arrest may occur (nursing stations on all floors, waiting rooms, medical offices, etc.) would go a long way to alleviating the problem.
5. Anticipate. Consider keeping a pocket mask (preferably with a one-way valve) or Ambu bag at the bedside of any patient at particularly high risk of developing a cardiopulmonary arrest.
6. Don't let the patient die of hypoxemia.

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