hypoxemia secondary to inadequate oxygenation, ventilation, and circulation (shock) than due to a cardiac condition. Some causes of cardiac arrest include injuries, suffocation (e.g., FB aspiration), smoke inhalation, anaphylaxis, apparent life-threatening event, or infection. Respiratory arrest is associated with a better survival rate than cardiac arrest. After cardiac arrest occurs, the outcome of resuscitative efforts is poor.

Apnea signals the need for rapid, vigorous action to prevent cardiac arrest. In such situations, nurses must initiate action immediately and notify emergency personnel. In the hospital, emergency equipment must be available and easily accessible in all patient care areas. The status of emergency equipment must be checked at least once daily.

Outside the hospital, the first action in an emergency is to quickly assess the extent of any injury and determine whether the child is unconscious. A child who is struggling to breathe but conscious should be transported immediately to an advanced life support (ALS) facility, with the child maintaining whatever position affords the most comfort. Transportation by an emergency medical service (EMS) is recommended. Services in most large communities can institute ALS immediately or en route to a medical facility.

An unconscious child is managed with care to prevent additional trauma if a head or spinal cord injury has been sustained (see Spinal Cord Injury, Chapter 30).

Resuscitation Procedure

In 2010, the American Heart Association implemented some changes in CPR guidelines. It stipulates that compressions only (no breaths) should be used when the rescuer is "untrained or trained and not proficient" (Travers, Rea, Bobrow, et al, 2010). However, if there is a respiratory arrest and the cause is asphyxia, then ventilations should be provided. Historically, the sequence for CPR was A-B-C (airway, breathing or ventilation, and chest compressions [or circulation]), but the 2010 guidelines have changed this recommended sequence to C-A-B to reduce the amount of time to the initiation of chest compressions (Fig. 21-12). Some modifications were also made to the depth of compressions, which now should be at least one third of the anteroposterior diameter of the chest (4 cm in infants and 5 cm in older children).