

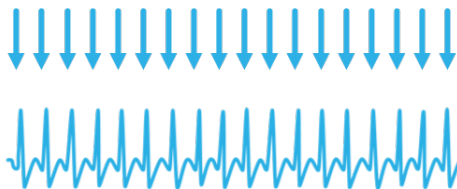
## Rhythm disturbances

# PERFORMING CARDIOVERSION AND DEFIBRILLATION

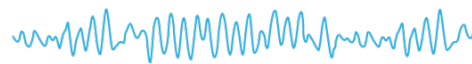
### *Cardioversion versus defibrillation*

Cardioversion and defibrillation are mainstays in the management of dysrhythmias. Cardioversion generally refers to electrical depolarization and resynchronization of the myocardium for regular, stable rhythms, while defibrillation generally refers to irregular or unstable rhythms.

When possible, cardioversion should be synchronized to coincide with the R wave, to avoid an impulse delivered during ventricular repolarization, which may cause a regular rhythm to degenerate into fibrillation. This applies to pulseless ventricular tachycardia, as well, when feasible.



Cardioversion



Defibrillation

### *Establishing adequate perfusion*

It is crucial to establish adequate myocardial perfusion at the time of resynchronization for either defibrillation or cardioversion, because an impulse delivered to an ischemic myocardium is more likely to degenerate into pulseless electrical activity (PEA). Minimizing interruptions in compressions around the time of the shock has been associated with improved rates of return of spontaneous circulation (ROSC). Good communication can help coordinate a defibrillation attempt to minimize interruptions to compressions.

Defibrillation attempts are not a good time to change compressors, this will add an increased delay to resuming compressions after the shock.

Some studies have suggested it may be safe to defibrillate during chest compressions, provided there is an adequate insulating barrier between the patient's chest and the compressor's hands.



#### **Tips for ensuring adequate perfusion**

- Charge the machine during compressions
- Clear all non-compression personnel before compressor
- Countdown to the shock to coordinate with the compressor
- Resume compressions immediately