Synchronized Cardioversion and Defibrillation

**Indications**
- Defibrillation: Ventricular fibrillation, pulseless ventricular tachycardia; when synchronization circuit is not working
- Synchronized cardioversion: Unstable supraventricular tachycardia; unstable ventricular tachycardia; stable SVT or VT refractory to pharmacologic interventions.

**Red Flags**
- Do not delay CPR for any interval of time when defibrillating. Sedate alert patients if possible prior to cardioversion. **Electrical therapy is dangerous and can harm rescuers if they are in contact with the patient during delivery of electrical charge.**

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Don appropriate standard precautions

**Prepare Equipment**
- Manual Paddles: Connect to monitor and apply gel to paddle surface
- Hands-off Pads: Check expiration date of pads and connect to monitor

**Prepare patient**
- Ensure safety
  - Move patient to another location if on electrically conductive material (metal flooring, puddles of water, wet grass, etc.)
- If possible, explain procedure to patient
- Identify site
  - Paddles – apex and sternum
  - Pads – apex and sternum or anterior and posterior left chest
- Expose chest
  - Shave hair from site if particularly thick
- Cleanse area with alcohol prep pad if visibly soiled
  - Allow alcohol to dry before placing pads or paddles
- Dry patient if wet or diaphoretic

**Perform procedure**
- If necessary, sedate patient
- Attach electrodes to patient
  - Paddles: apply firm, even pressure against chest
  - Pads: remove adhesive backing and apply firmly to skin
- Confirm rhythm on monitor
- Set energy level, following manufacturer’s recommendation
  - If performing a synchronized cardioversion, activate circuit by pressing button on monitor
  - Confirm synchronization by looking for arrows/dots/other indicator above QRS
- Charge defibrillator
- Clear the patient
  - Look around the patient and speak loudly, “One – I’m clear, Two – everyone’s clear, three, shocking.”
- Deliver shock on “Three”
  - Paddles: press down firmly on patient and depress both shock buttons simultaneously
Pads: press shock button on defibrillator
Assess the patient

<table>
<thead>
<tr>
<th>Confirm successful shock delivery by checking for rhythm conversion</th>
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<tbody>
<tr>
<td>If rhythm converted, check for corresponding pulse and blood pressure</td>
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<tr>
<td>If rhythm did not convert, prepare for additional electrical therapy as directed</td>
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**Critical Criteria:**
- Use appropriate standard precautions
- Apply gel to paddles
- Ensure good contact between pad/paddles and patient
- Clear patient contact before delivering electrical charge
- Assess patient and ECG rhythm before and after therapy