Applications of Voltage
- Defibrillator
  - capacitor charged to few 1000 V
  - "jolt" of charge stops heart
  - normal beating hopefully resumes

Electrocardiogram
- measures variations in potential (mV) across heart
  
  ![EKG Graph](image)
  
- can detect clogged arteries, damaged tissue

Dissecting the EKG
- SA node initiates contraction and depolarization generates P wave
  
  ![EKG Diagram](image)
  
- if P wave is not identical in each beat, cycle is not beginning at SA node

Applications of Voltage
- Cathode ray tube
  - used in older TVs and computer monitors (not flat screen)
  - TV scans 1/30 s; eyes 1/20 s

EKG
- Regular
  
  ![EKG Regular](image)

- Irregular
  
  ![EKG Irregular](image)

Dissecting the EKG
- AV node (blue) causes slight delay so that heart can pump blood into ventricles.
  
- The electrical impulse then travels down, bifurcating into the right and Left Bundle Branches.
  
- if electrical pathways of specialized cells are blocked, width of QRS complex is wider