

# Technology to Improve Safety in the ED

## TELEHEALTH

Delivery of healthcare services using information and communication technologies for diagnosis, treatment, prevention of disease and injuries

- Cost-effective decrease in 911 calls, EMS transports, and ED visits
- Positive clinical outcomes, especially in rural settings
- Clinical effectiveness across broad range of medical conditions
- Timely interventions for behavioral health and stroke patients

## REMOTE BLOOD BANK TECHNOLOGY

Secure, electronic system that allows real-time access to blood products for transfusion

- Blood products located closer to patient areas
- Initiate transfusion of unassigned blood products more rapidly
- Built-in security features enable:
  - patient identification
  - blood product selection
  - minimized transfusion reactions

- Predicts overcrowding, boarding, stress on the ED
- Alerts potential for increased workload
- Data accessible to capacity management teams and administrators

*NEDOCS: National Emergency Department Overcrowding Study*  
*SONET: Severely overcrowded, Overcrowded, Not overcrowded Estimation Tool*

## EARLY WARNING SYSTEM FOR ED OVERCROWDING

Merging of real-time electronic health records data into validated scoring tools to forecast overcrowding status (e.g., NEDOCS, SONET)

## BARCODE TECHNOLOGY

**Specimen labeling:** ID band and specimen label verified at point of care  
**BCMA:** Patient ID band and medication barcodes verified at time of administration  
*BCMA = Barcode Medication Administration*

- Evidence-based best practice for proper identification of patient specimens
- Faster, more efficient labeling process
- Decrease in or elimination of mislabeled specimens
- Electronic verification of medication and the dose ordered
- Decrease in medication errors and adverse events

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