Bystander CPR is performed about 48 percent of the time nationally, improving survival rate by about 12 percent.

Sarasota County implemented dispatcher-guided, hands-only CPR education in the community and hospitals two years ago, and bystander CPR rate went from 13 percent to 40 percent.

Aeromed recently assisted with a Sarasota County School Board initiative to train all 2018 high school seniors in hands-only CPR by the end of the year.

Hands-only CPR is a graduation requirement in 38 states, but Florida is not one of them.

If CPR is performed in the first two to three minutes, the chances of survival can double or triple. The need for more trained bystanders and quicker intervention can help improve survival rate.

Students learned about the Pulse Point app and AED devices. They practiced their hands-only CPR techniques with trained professionals and got to experience the endurance of Hands only CPR for at least 2 minutes.

Next year, the program will include eighth-grade and 12-grade students and teachers in Sarasota County.

### Thermal Burns

Burn classification based on depth

- **First (superficial)** – epidermis only, no blisters, painful
- **Second (superficial and deep partial thickness)** – epidermis and partial dermis, painful, red and weeping, blisters
- **Third (full thickness)** – epidermis AND dermis, whitish and charred/translucent, pain unreliable indicator

Rule of 9’s – only 2nd and 3rd degree
Trauma care comes before burn care, except in instances of minor trauma.

Inhalational burns—doubles mortality, leads to fluid shifts affecting pulmonary compliance/oxygenation. Warning signs include burns to face/nose/mouth, singed nasal hairs or eyebrows, hoarse voice, productive brassy cough, carbonaceous sputum. Tachypnea and stridor are late findings. Early intubation preferred.

Escharotomy—for circumferential burns, cuts skin but not down to fascia. Improves breathing and ventilation.

### Parkland Formula
- Fluid requirement (mL) = (4 mL of crystalloid) × (% TBSA burned) × body weight (kg)
  - (3x in peds <30kg)
- Half in 1st 8 hours, 2nd half in following 16 hours

**Urine Output Goals**
- Should be between 0.5 - 1mL/kg/hr for adults and 1mL/kg/hr for children <30 kg

### Compartment Syndrome
- Needs escharotomy and fasciotomy

Antibiotics are not routinely used for burns, per TGH Burn Team

**Burn Center Referral Criteria**
- Partial thickness > 10% TBSA
- Burns involve face, hands, feet, genitalia, perineum, or major joints
- Third degree burns in any age group
- Electrical burns, including lightning injury
- Chemical burns
- Inhalation Injury
- Burns with preexisting complicating conditions
- Burn + trauma if burn is higher risk of death
- Burned children in hospitals not capable of care of a child
- Pts who require special social, emotional, or rehab intervention

**Practice Questions**

**Question #1**
36 year old male has full-thickness burns to the chest area (top half of the anterior trunk), entire right arm, and

**Question #2**
For the patient in question #1, at what hourly rate do you want to start IV fluids if this patient weighed 60 kg?

- A) 780 ml/hr
- B) 360 ml/hr
- C) 540 ml/hr
- D) 650 ml/hr

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Answers: B and C