

Safe Use of Epinephrine for Anaphylaxis

The Problem

The dose and route of epinephrine used to treatment of anaphylaxis (**0.3mg/0.3mL intramuscularly**) has the potential to be confused with the dose of epinephrine used during cardiac arrest (**1mg/10mL intravenously**). Clinicians may incorrectly assume that the entire epinephrine ampule (1mg) should be administered intravenously to treat anaphylaxis. Intravenous administration of undiluted epinephrine can result in coronary vasospasm and other adverse cardiovascular effects.

Aim/Goal

Provide clinicians with ready to administer dose form of epinephrine for the treatment of anaphylaxis.

The Team

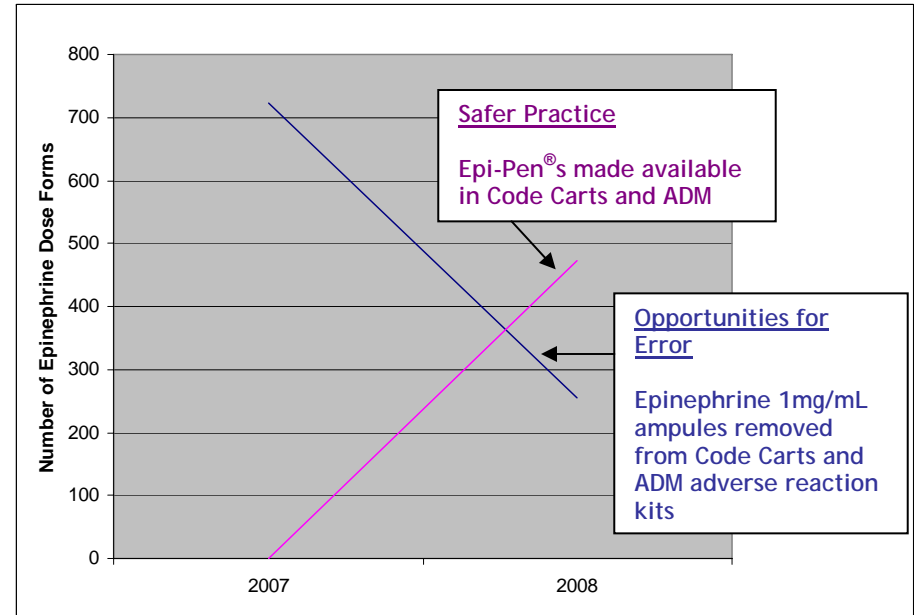
- Jean Beach, CPhT
- Kathy Cunningham, MS, PharmD
- Patricia H. Folcarelli, RN, PhD
- Michael Howell, MD
- Francis Mitrano, MS, RPh
- Allison McHugh, RN, BSN, MHS.
- Karen Smethers, PharmD
- Diane Soulliard, PharmD
- Cheryle M. Totte, MS, RN

The Interventions

- Epinephrine 1mg/mL (1:1000) ampules were removed from all Code Carts and ADM adverse drug reaction kits
- Epinephrine 0.3mg autoinjectors (Epi-Pen®s) were placed the Code Carts and ADM adverse drug reaction kits
- An Epi-Pen® competency was posted on the hospital portal to educate clinicians on the dose and route of epinephrine for the treatment of anaphylaxis and to demonstrate how to safely administer an epinephrine 0.3mg autoinjector.

Results

The opportunity for a clinician to have ready access to an epinephrine 0.3mg autoinjector for the treatment of anaphylaxis in was increased.



Next Steps

Package epinephrine drip kits in the Intensive Care Units of the Medical Center to reduce the opportunity for epinephrine 1mg/mL ampules to be used in an incorrect dose or route.

Monitor for adverse events related to the use of epinephrine at the Medical Center.



Beth Israel Deaconess
Medical Center



A teaching hospital of
Harvard Medical School

THE SILVERMAN INSTITUTE
For Healthcare Quality and Safety

For More Information Contact
Karen Smethers, PharmD, BCOP
ksmether@bidmc.harvard.edu