EPINEPHRINE DILUTION FOR SHORTAGE

I. PURPOSE:

To define the proper dilution and administration of Epinephrine during times of drug shortage in the Chicago EMS System.

II. DEFINITION:

Epinephrine may be carried in two forms for EMS use:

A. Epinephrine 0.1 mg/ml (1:10,000) prefilled syringe

B. Epinephrine 1 mg/ml (1:1000) vial

Glass ampules should not be used for medication administration by EMS.

III. USE:

A. Epinephrine 0.1 mg/ml (1:10,000) prefilled syringe is the preferred formulation to administer IV epinephrine when indicated by EMS protocols.

B. For shortages of the Epinephrine prefilled syringe, Epinephrine from the 1 mg/ml (1:1000) vial may be used after one of the below Epinephrine Dilution Procedure methods.

IV. EPINEPHRINE DILUTION PROCEDURE:

There are two methods that can be used to dilute the epinephrine:

A. Method 1: Place a 23-gauge needle on the end of a saline flush - 0.9% Sodium Chloride Injection (10 mL prefilled syringe) and discard 1 mL from the syringe. Remove the plastic top of the vial and clean with an alcohol wipe. Draw up 1 mL of 1 mg/mL (1:1000) epinephrine from the vial into the syringe. Gently swirl the medication. The syringe now contains 0.1 mg/mL (1:10,000) Epinephrine.

B. Method 2: Remove the plastic top of the epinephrine vial and clean with an alcohol wipe. Draw up 1 mL of 1 mg/mL (1:1000) Epinephrine from the vial into a 10 mL syringe using a 23-gauge needle. Draw up 9 mL from a bag of 0.9% Sodium Chloride IV Solution. Gently swirl the medication. The syringe now contains 0.1 mg/mL (1:10,000) Epinephrine.
V. HOSPITAL REPLACEMENT:

A. Hospitals should prioritize Epinephrine prefilled syringes for EMS replacement.

B. Hospitals that are unable to replace Epinephrine prefilled syringes may replace EMS providers with an “Epinephrine Dilution Kit” containing the following:

1. Epinephrine 1 mg/mL (1:1000) vial
2. 23-gauge needle
3. Alcohol wipe
4. Saline flush – 0.9% Sodium Chloride Injection (10 mL prefilled syringe) OR Syringe (10 mL)