

## Code Blue Procedures



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## Objectives

- ♦ To acquaint the pharmacist with the activities of a code blue emergency
- ♦ To identify the procedures followed during a code blue emergency by the pharmacist
- ♦ To elucidate the appropriate conduct to follow during a code blue emergency by the pharmacist

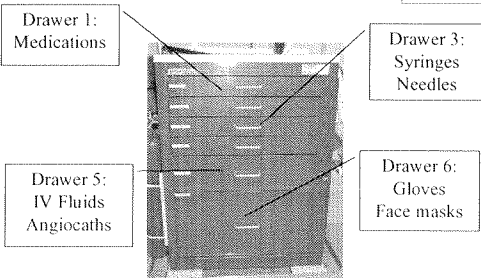
## Why Pharmacist Participation

- ♦ Use of medications is an inherent part of most code blue emergencies
- ♦ Preparation of intravenous medications comes under the purview of pharmacists
- ♦ It is a dynamic and interactive process of pharmaceutical care

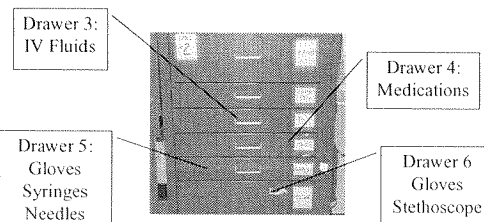
## Crash Cart Locations

- ♦ Determine location of crash cart on any unit(s) covering
- ♦ Replacement medication trays are kept in the central pharmacy manufacturing area
  - Replaced to ICU Pyxis machines
  - Replaced to CPD post-code when cart is cleaned and medications and instruments replaced

## HUH/HWH Crash Cart Components



## RIM Crash Cart Components



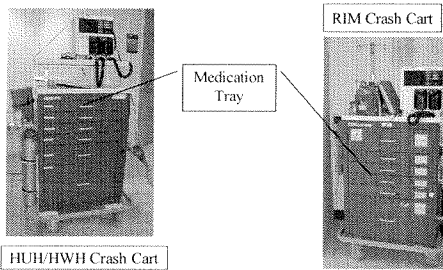
## Attending a Code Blue

- ◆ Notification
  - Overhead PA system
  - Code blue pager
- ◆ Reach site of code
  - Take stairs when possible
  - Enter room/area and identify yourself to staff already in attendance

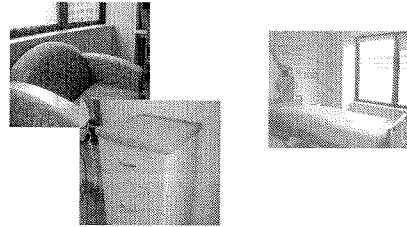
## Pharmacist Procedures

- ◆ If the medication tray is still in the cart, remove it at an opportune time when the other drawers are not in use
- ◆ If medication tray is already being attended by a physician or nurse, offer to work with them or to handle the medications

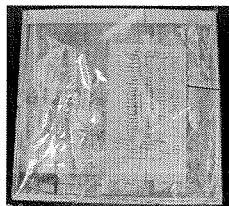
## Remove the Medication Tray



## Place Tray on Solid Surface



## Medication Tray



Remove the plastic from the tray


## Pharmacist Procedures

- ◆ Identify the physician calling the code
- ◆ Identify the nurse recording the events
- ◆ Stand by the medication tray in sight of the physician running the code
- ◆ If possible, be in view of the ECG monitor

## Pharmacist Procedures

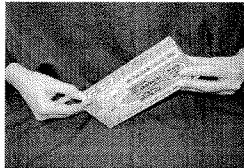
- ♦ Identify yourself to the recording nurse
- ♦ If events allow, identify yourself to the physician calling the code
- ♦ Locate the nurse or physician administering the medications

## Syringe Preparation

- ♦ At the start of the code open and assemble an epinephrine and an atropine syringe
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- ♦ Replace each assembled syringe in its box to make quick identification easier
  - ♦ Draw up 2-3 syringes with 20ml NS for flushing between doses of medications

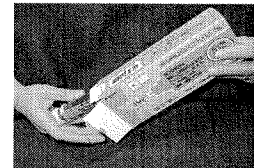
## To Assemble a Syringe

Open the syringe box from the side indicated



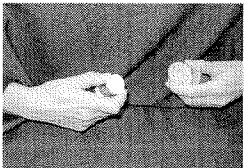
## To Assemble a Syringe

So that the two parts fall out into your hand, then



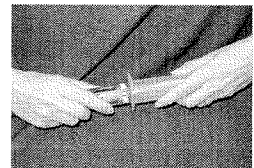
## To Assemble a Syringe

Flip off the plastic end-caps and



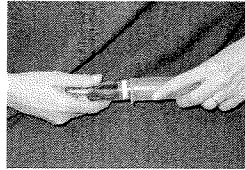
## To Assemble a Syringe

Attach the medication half to the plunger half with a push



## To Assemble a Syringe

And a twist until resistance is met



## Pharmacist Procedures

- ◆ Obtain IV solutions, syringes, and needles from the cart as necessary for requested medications
- ◆ Determine if IV medications will be administered by needle or blunt tip system; may need to exchange needles on syringes
- ◆ Stay focused on physician calling the code

## Dispensing Medications

- ◆ Select correct medication requested by the physician calling the code
- ◆ Assemble the syringe (if not done in earlier step) or draw up medication requested; change to blunt tip system if required
- ◆ Step to bedside and loudly read name of medication and dose from syringe or vial as you hand it to the administering MD or RN

## Dispensing Medications

- ◆ Reading name of dose of medication from syringe or vial
  - Ensures that the correct medication is being dispensed
  - Is a double check that the correct medication is handed to the administering physician or nurse

## Dispensing Medications

- ◆ Return to stand by the medication tray
- ◆ Check with recording nurse that the correct time and medication were recorded
  - Try and use overhead clock in room to write administration times so everyone can follow the medication timing
- ◆ Draw up another syringe/vial/ampule of medication just used

## Dispensing Medications

- ◆ Helpful hints
  - Back of the medication list found in the medication tray contains dosing basics
  - Keep track of empty boxes/vials/ampules as physician calling the code often asks how much of various medications were already used
    - Line up empty containers next to the medication tray as used
    - Keep track of timing between doses of epinephrine
    - The recording nurse can corroborate counts and timing

## Dispensing Medications

- ◆ More helpful hints
  - Wearing gloves is not mandatory
  - Be aware that other code blue attendees may encounter blood then hand you a syringe to dispose of in the needle box,
  - Therefore, know where to find gloves and try to keep some nearby in case they are needed

## Preparing Medications

- ◆ Helpful hints
  - If possible, check patient's chart for allergies, age, height, and weight
  - Correct patient demographics make for more accurate calculation of doses or infusion rates if needed

## Preparing Medications Amiodarone

- ◆ Initial dose: 300 mg IVP qs to 20 ml with NS or D<sub>5</sub>W; may repeat with 150 mg qs to 20 ml prn
  - Infuse each dose over 10 minutes
- ◆ Infusion dose: 150 mg in 150 ml D<sub>5</sub>W; stable for 2 hours only
  - Infuse at 1 mg/minute = 60 ml/hour
- ◆ Kit with drug, label, and IV fluid in medication tray



## Preparing Medications Norepinephrine

- ◆ Dilute 4 mg in 250 ml D<sub>5</sub>W or D<sub>5</sub>NS (16 mcg/min)
- ◆ Avoid dilution with plain NS
- ◆ Infuse at 0.5-1 mcg/min and titrate up to 30 mcg/min to improve blood pressure
- ◆ Avoid giving in same line as alkaline solutions



## Preparing Medications Isoproterenol

- ◆ Dilute 1 mg in 250 ml D<sub>5</sub>W, LR, or NS (4 mcg/ml)
- ◆ Infuse at 2-10 mcg/min titrated to an adequate heart rate



## Preparing Medications Epinephrine

- ◆ For cardiac arrest, dilute 30 mg epinephrine (30 ml of 1:1000 solution) in 250 ml NS or D<sub>5</sub>W to infuse at 100 ml/hr and titrate to response
- ◆ For bradycardia, dilute 1 mg of 1:1000 epinephrine in 500 ml NS and infuse at 1-5 ml/min (2-10 mcg/min)



## Preparing Medications Procainamide

- ◆ Dilute 1 grams in 250 ml D<sub>5</sub>W or NS (4 mg/ml)
- ◆ Maximum concentration 20 mg/ml
- ◆ Recurrent VF/VT: 20 mg/min up to 50 mg/min with maximum dose of 17 mg/kg
- ◆ Maintenance: 1-4 mg/min



## Professional Conduct

- ◆ Always remain focused on the physician calling the code
- ◆ Watch and be aware of events going on around you
- ◆ Never leave a code that is underway without arranging for someone to handle medications and, if possible, letting the physician calling the code know

## Professional Conduct

- ◆ Sometimes additional medications are needed; options to obtain them include:
  - Calling from room to have tubed or delivered to nursing unit, i.e., phenytoin IVPB; send RN, MD, or other pharmacist to pick up from tube
  - Having RN, MD, or other pharmacist go to front desk and call pharmacy
  - Having RN or other pharmacist obtain medication from Pyxis, i.e., flumazenil

## Professional Conduct

- ◆ End of Code
  - Always ask permission to leave even though the code has ended as further drips and their calculated rates may be needed
  - Clean up your area and dispose of syringes and waste paper in the appropriate containers

## Conclusion

- ◆ Always remain calm and in control
- ◆ Note that each code you attend will be a different scenario; be alert and pay attention
- ◆ Remember that participation in code blue emergencies becomes easier with each time you do it