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

Drawer 1: Medications

Drawer 3: Syringes Needles

Drawer 5: IV Fluids Angiocaths

Drawer 6: Gloves Face masks
RIM Crash Cart Components

Drawer 3: IV Fluids

Drawer 5: Gloves, Syringes, Needles

Drawer 4: Medications

Drawer 6: Gloves, Stethoscope
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
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

HUH/HWH Crash Cart

Medication Tray

RIM Crash Cart
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
- 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 D₅W; may repeat with 150 mg qs to 20 ml prn
  - Infuse each dose over 10 minutes
- **Infusion dose:** 150 mg in 150 ml D₅W; 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$_5$W or D$_5$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 D5W, 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 D₅W 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$_5$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
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
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