



THE UNIVERSITY OF MISSISSIPPI  
MEDICAL CENTER

# **Simulator-based Mock Code Drills to Improve Code Team Performance**

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# Agenda

- **Demonstrate use of iStan for training of hospital-based Rapid Response and Code Teams – *Why* do this?**
- **Discuss logistical issues and pitfalls for training**
- **Outline multidisciplinary educational opportunities**
- **How to create scenarios**
- **Design mock codes for different patient care areas**

# Why mock codes?

## Before Code Blue: Who's minding the patient?

Little-known 'failure to rescue' is most common hospital safety mistake

By JoNel Aleccia

Health writer

msnbc.com

updated 7:28 a.m. CT, Tues., April 8, 2008

High-profile medical errors such as operating on the wrong body part or receiving a mistaken dose of drugs should take a back seat to a far more common and insidious mistake, a new report reveals.

For the fifth straight year, an analysis of errors in the nation's hospitals found that the most reported patient safety risk is a little-known but always-fatal problem called "failure to rescue."

Story continues below ↓



- When they come to the simulation center the trainees KNOW two things for sure:
  - An **emergency will happen**
  - **Nobody will (really) die.**
- Difficult to simulate hours of an “eventless” unit/clinic shift and **THEN** introduce an emergency...

# Why mock codes?

To **observe** how:

- emergent patients are **recognized** on a unit
- decision to **call for help** is reached
- emergency care is **delivered**



<http://laughingsquid.com/emergency-yodel-button-by-archie-mcphee/>

- To **evaluate** how the healthcare and code teams (resident physician, intern, nurse, respiratory care) perform in their own environment:
  - **Communication**
  - **Teamwork**
  - **Chain of command**
  - **Work in high-stress situations**
- To **improve**
  - training and policies
  - patient outcomes

# Training rapid response teams and code teams



- The Joint Commission – National Patient Safety Goal “**Respond to a change in patient’s condition**” resulted in the creation of **Rapid Response Teams**
- Healthcare facilities determine **how and who** will respond
- Goal of team → **prevent a Code Blue**

# Who you gonna call?



- **Stan is:**
  - seizing, wheezing or turning blue
- **How does the initial responder respond?**
  - BLS assessment → who do I call for help?
  - Are symptoms recognized and acted on appropriately?
  - Is the responder dazed and confused?

# Preparing for a mock code

## Form your team



- **Education**
- **Simulation**
- **Logistics**
- **Evaluation**
- **Makeup / Props**
- **Role players**

# Preparing for a mock code



- Identify **educational objective**
  - Code team should recognize difficult airway and when to call for assistance
- Choose a **clinical location** for the drill
  - Availability of code cart, drugs, support services unique to that area
- Involve on-site **unit educator / manager**
  - You need an ally

# A plausible cover story



- **Credibility** is key!!!
- Come up with **your “story”**
  - **Why is this patient on that unit?**
  - **How did s/he arrive**
    - (direct admit, from ED, PACU, transfer from clinical unit)
- **Create patient identity**
  - Documentation, wristband, props
- **Adjust** scenario and simulated patient physiology

# Make it look realistic



- **First impression is vital!!!**
  - “Don’t come in, just a dummy”
- **A patient appears**
  - Moulage to scenario
  - Provide family member or patient **voice** to call for help

# Do you keep it a secret?

- **Cons**

- **Unable to in-brief team in advance**
- **Users unfamiliar with simulator**



- **Pros**

- **Able to access readiness**
  - **Staff**
  - **Response plan**
  - **Equipment**
  - **Communication**

**After a year of mock codes:  
Michelle a' coming, Stan a' coming...**

# Logistics: location



- **Reconnaissance**
- **Find space for**
  - Simulator
  - Patient care
  - Controller
  - Recording equipment
  - Evaluator
- **What do we bring?**
  - Prepare a **checklist**
  - Check equipment and supply compatibility
  - You can never have too much of
    - Electrical outlets, adhesive tape, used stylets

# Logistical Issues: Simulator



## iStan

- **Difficult to conceal:**
  - Has to travel assembled, not in suitcase
- **Connections**
  - Wireless signal interference in hospital
  - Not wireless between monitor and computer
  - Cords under foot

# Logistical issues: monitor



- Cannot use the built-in or mobile unit monitors the unit staff is accustomed to
- Need to **set custom display setting** to resemble that of the unit
- **Room layout** may need to be changed

# Logistical issues: operator



Operator has to

- **fit in the space available**
- **see but not be seen**
- **hear but not be heard**
- **stay connected to the simulator**

# Keeping operator connected



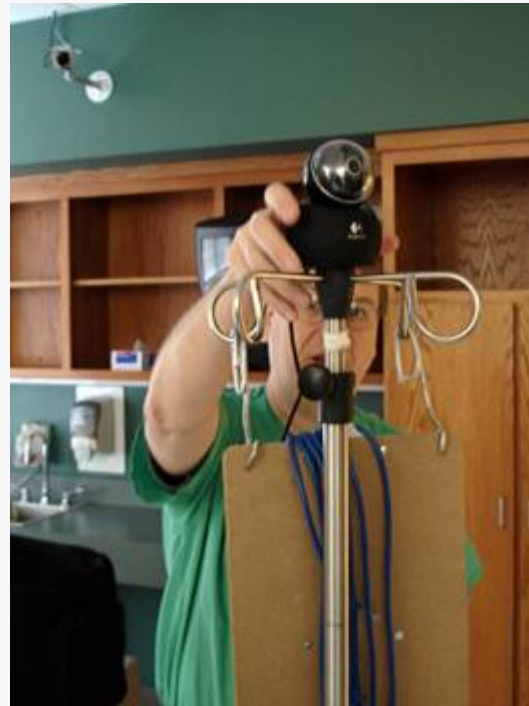
## Equipment

- METIVision?
- Webcam?
- HiDef camera?

## Consider

- Reliability
- Wired vs wireless connection to computer
- Is archiving, annotating, retrieving, editing of data needed?

# Logistical issues: recording



- **Consider**
  - **Staff performance if camera/man is visible**
  - Room size / **angle** of camera(s)
  - Fixed camera vs hand held
  - Recording **quality**
  - **File format** for editing

# Potential Pitfalls



- **Possible disruption of patient care**
  - Leaving an actual patient to respond to a virtual one
  - What if there was a real code at the same time?
- **Willingness of personnel to participate**
  - Fear of the unknown – What is my role here?
  - Performance anxiety - Am I being evaluated?
- **Time Constraints**
  - Everyone is busy – how long do you run the scenario?
  - When, where and how to debrief?

# Endless opportunities for interprofessional teaching...

- Reinforce BLS and ACLS skills for interns, residents, nursing and respiratory care providers -- in a realistic context
- Review contents of code cart, airway bag, and documentation requirements -- to very motivated learners



# Training beyond medical knowledge

## “What should we do?”

- Does the code **team leader** have critical decision making, communication and organizational skills?
- Define code team member and assistant roles – who does what?
- Strengthen **teamwork** skills for all participants



# Reinforce vital skills



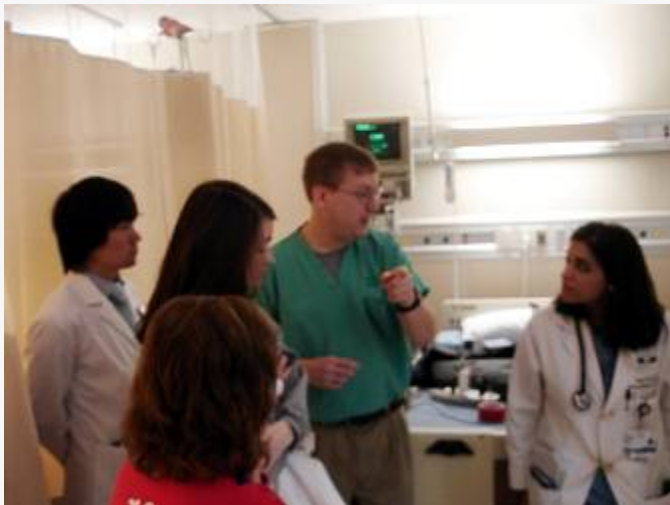
- **Managing a difficult airway**

- Obstruction, Laryngospasm, or Stenosis

- Who is trained to intubate?
- What equipment is available in airway bag
- When to call for additional help



## How did we do?



- Debriefing is key, **prepare for it!**
- Create **evaluation** sheets specific for responders and the scenario
- Annotate and **record critical data** (Monitor arrived X min after call for help. Code was called when sats were Y%)
- Maintain a **non-threatening environment** and promote learning
- Debrief the entire team
- Provide specific feedback for smaller groups, if necessary

# Developing the scenario



- **No shortage of scenario ideas**
  - Based on real events / M&Ms
  - Based on resident / nursing comments and feedback
  - Can recycle scenarios
  - Adjust for history-location-team
- **Scenario development**
  - Clinical information as **realistic** as possible
  - Vital signs and physiology based on **actual cases**
  - Challenging to create **realistic lab results** on the fly

# Running **a-mock** code scenario



- More **unpredictable** than running the same scenario in the Sim lab
- Easier to run the scenario with **manual transitions**
- May need to **override** parameters
- Let learners experience the **consequences** of their actions
- Need to be ready to rescue and resurrect

# Let the games begin



# A REAL CODE???



# Rapid response team arrives



# Is his airway patent?



# Who can intubate?



# Call the code team!



# Let's intubate!



# The tube is in!



# What's up Doc??



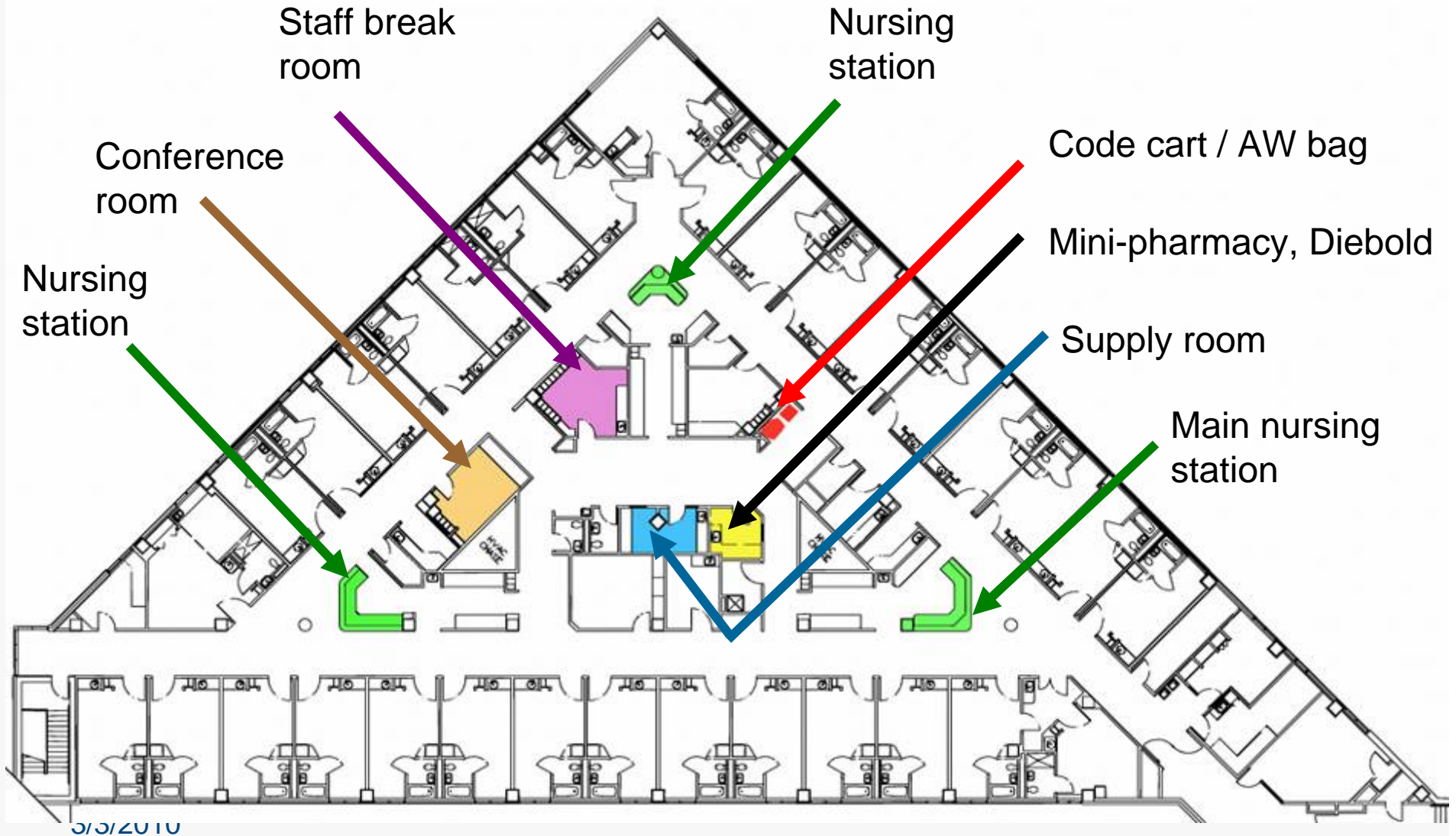
## Now its your turn...

- **We'd like you to participate:**
- **Location choices**
  - ICU, Adult in-patient unit, out-patient clinic
- **What is your educational goal?**
  - Scenario
  - Cover story
  - Evaluation process
- **Logistical considerations for each area**
  - Space and equipment needs

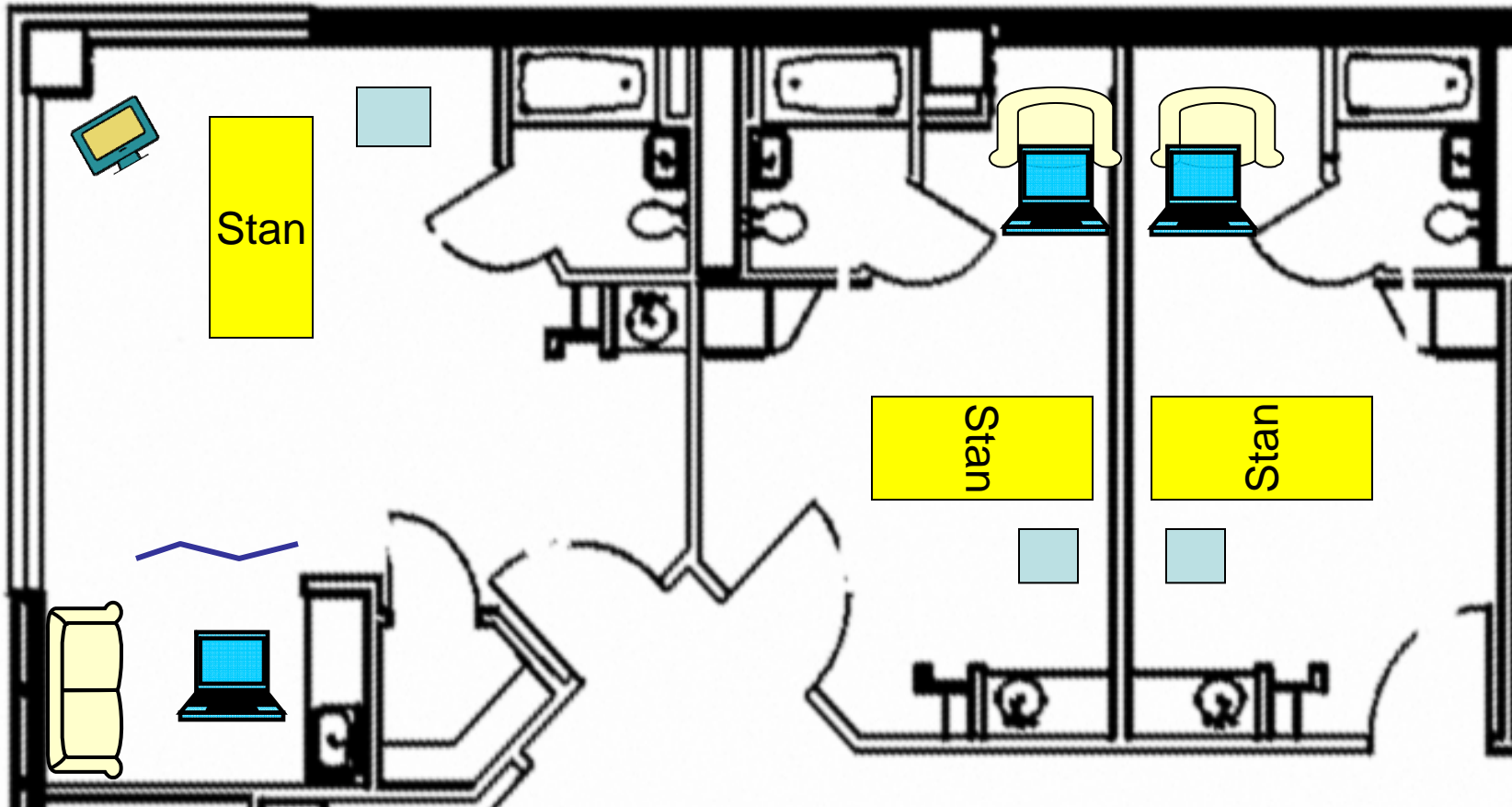
# Adult in-patient unit

- **Educational goal**
- **Scenario**
- **Cover Story**
- **Equipment needs**
- **Space**
- **Layout of area**
- **What time of day**
- **Plan B**

# Adult in-patient unit



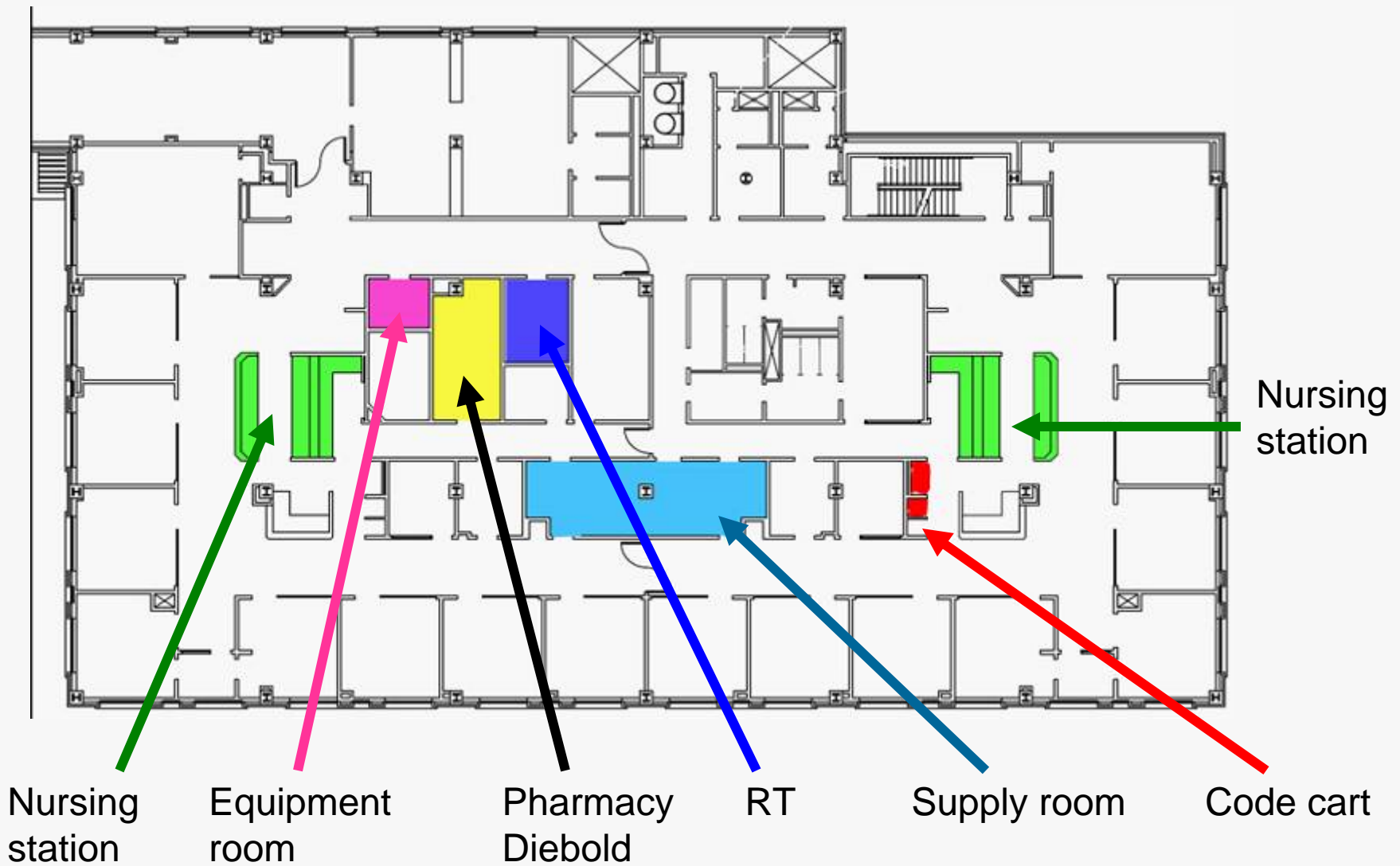
# Adult in-patient unit



# Critical Care Unit

- **Educational goal**
- **Scenario**
- **Cover Story**
- **Equipment needs**
- **Space**
- **Layout of area**
- **What time of day**
- **Plan B**

# Critical care unit



Nursing station  
3/3/2010

Equipment room

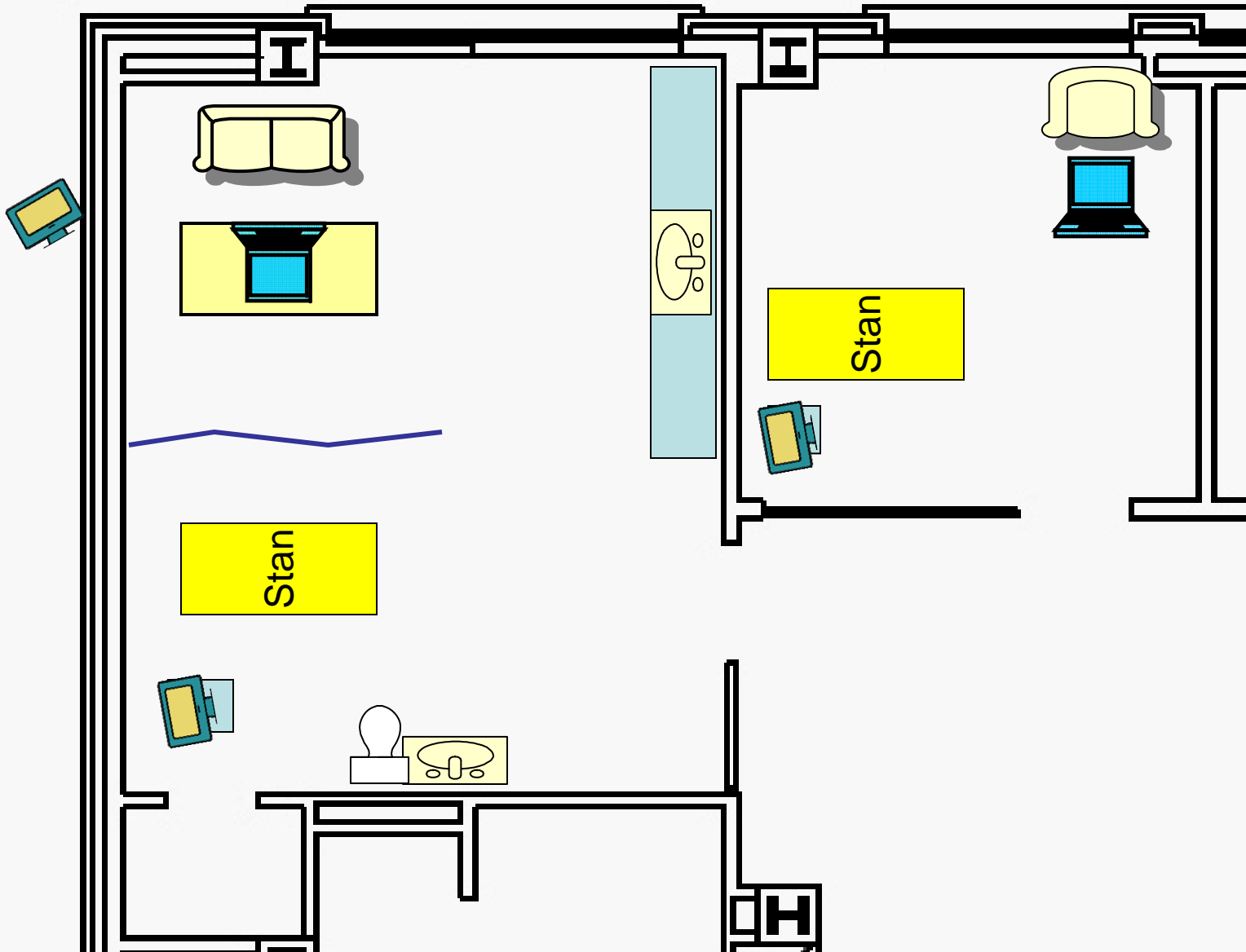
Pharmacy Diebold

RT

Supply room

Code cart

# Critical care unit

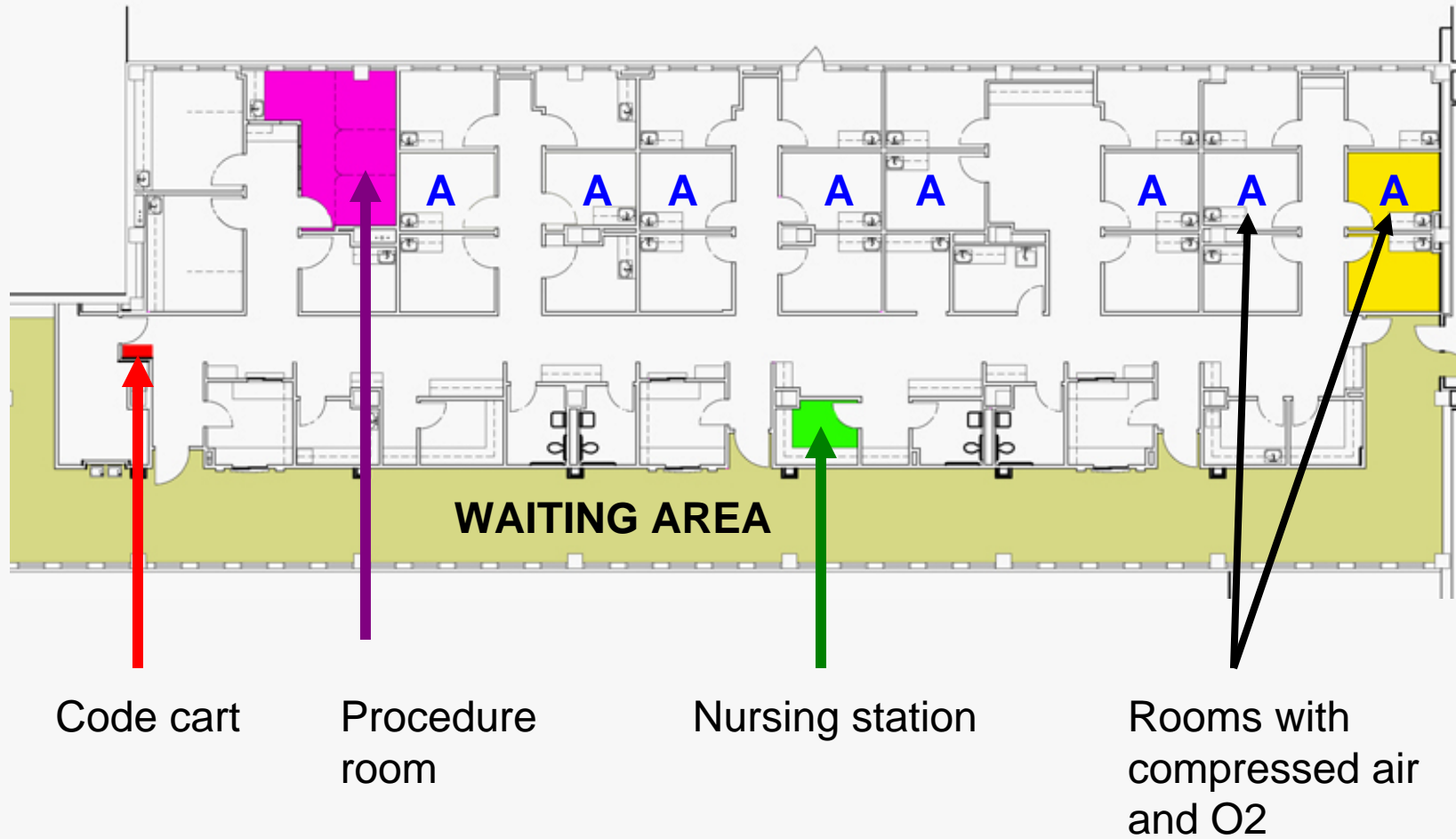


# Pediatric out-patient clinic

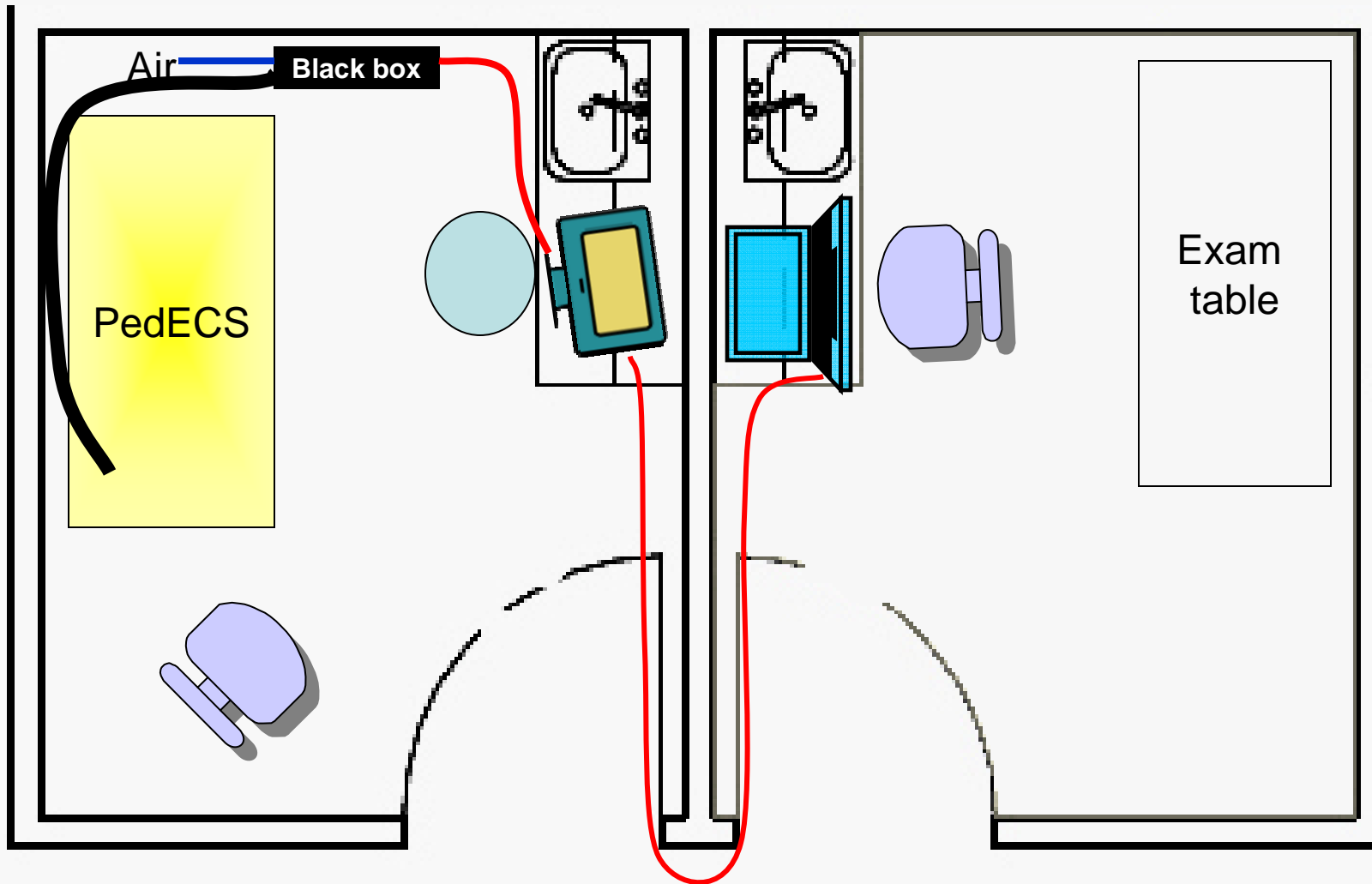
- Educational goal
- Scenario
- Cover Story
- Equipment needs
- Space
- Layout of area
- What time of day
- Plan B



# Pediatric out-patient clinic



# Pediatric out-patient clinic



# Thank you!!!

