



BOISE STATE UNIVERSITY

# Operations Wizardry On a Budget

Janet Willhaus, PhD, RN, CHSE



BOISE STATE UNIVERSITY

COLLEGE OF HEALTH SCIENCES

*Simulation Center*





# Disclosure

- Conflict of Interest
  - 
  - Janet Willhaus reports no conflict of interest



# Objectives

- Upon completion of this presentation, participants will be able to:
  1. Describe cost and time effective techniques for managing simulation supplies and simulation scenarios
  2. Describe an organizational method for preparing the simulation team for a simulation scenario
  3. Discover how to reseal and repack an IV bag for multiple uses in a simulation center

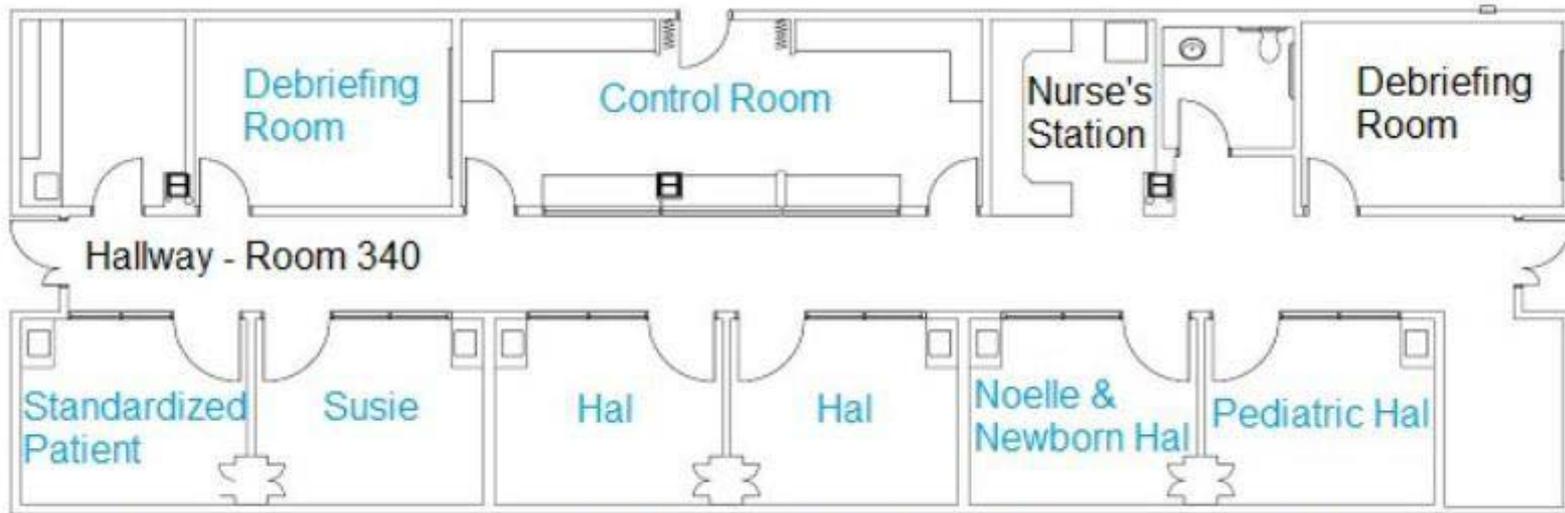


# Introductions



- Janet Willhaus
  - facilitator of simulation research and scholarship;  
facilitator of Graduate Certificate in Healthcare Simulation  
and teacher of Simulation Operations; Level 3 simulation  
faculty

- Just a little about our simulation center.....



Susie | Standardized Patient | Noelle & Newborn Hal | Pediatric Hal | Debriefing | Control Room | Hal





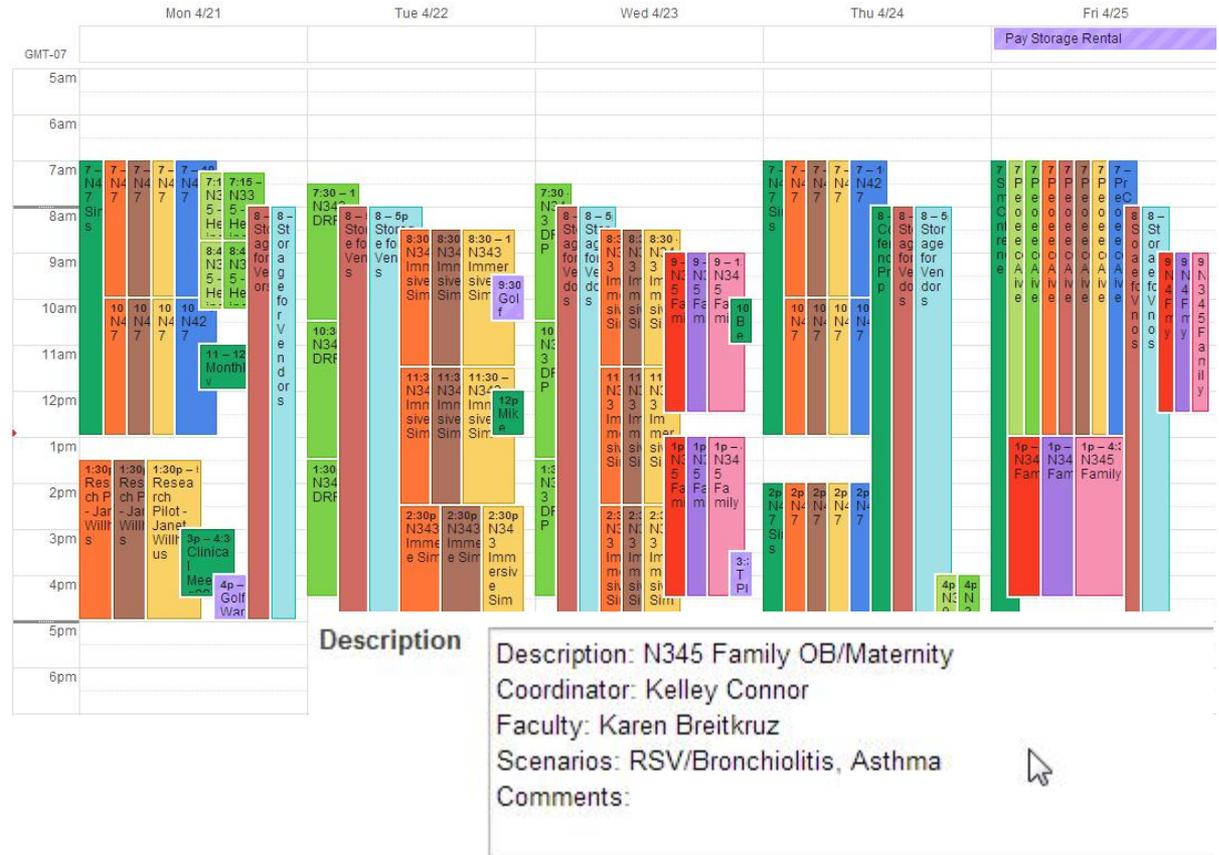
- Customers
  - Nursing –our largest user
  - Respiratory Care
  - Radiology
- Volume –AY 2015/2016
  - Unique learners –682
  - Total simulations –1231
  - Total learner hours -7347



# Problem: How are we going to keep track of what is going on?

## Google Calendar

- Available
- Easy to duplicate events
- Easy to create repeating events
- Everyone can see
- Can create more detail in description box





# Problem: How are we going to keep everyone on the same “page” during simulations?

## Scenario Template

- Create your own or use existing
- All information in one spot
- Techs know how to setup
- Students have prep materials
- Faculty/techs know progression
- Debriefing is consistent

  
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Last Review Scenario Na			Manikin/ Type:	Guided Reflection Debriefing Guide		
Author:	Patient Name:	Position:	Me	Outcomes/Performance Measures/Objectives	Measures/Objectives	Debriefing Prompt
1   What an	Age:	Position:	HR:	Opening	Initial group discussion/facilitation	<input checked="" type="checkbox"/> How do you think things went? <input checked="" type="checkbox"/> Can someone give me a quick summary of the scenario? <input checked="" type="checkbox"/> What did you see? <input checked="" type="checkbox"/> How was that?
2	Gender:	Position:	BP:			
3	Diagnosis:	Environment:	SPO2:	Clinical Reasoning & Critical Inquiry	Objectives come from the first page under "Facilitator Information." There may not be an objective for every curricular thread.	<input checked="" type="checkbox"/> Tell me about the priorities of your patient care?
4	History of P	Environment:	Ausc Lungs: Heart: Bowel:			
Very brief de	Past Medic:	Safety:	M Mental Sta Vocal Exa	Communication		
	Current Me:	Hospital:	Other:	Experiential Learning		
1   Clinical Reason Critical	Significant I	Hospital:	HR:	Global Worldview		
2   Commu	Social Histo	Hospital:	BP:			
3   Experie Learnin		IV:	SPO2:	Professionalism & Leadership		
4   Global Worldvi		Medicati	Ausc Lungs: Heart: Bowel:			
5   Profess & Leadi		Medicati	M Mental Sta Vocal Exa	Closing	Wrap up group discussion	<input checked="" type="checkbox"/> What would you do differently next time? <input checked="" type="checkbox"/> What are some things from this
Role Learner #1 Learner #2 Learner #3	Learning Outcomes/C	Chart Re	Other:			
Role Confederate	Lecture	Other:	Other:			
Confederate Confederate	Readings	Other:	1			
1   Desired not distr	Websites	Other:	HR:			
3	Other	Other:	BP:			
			SPO2:			

## Problem: How are we going to schedule and communicate with all users involved with simulations?

### SignUpGenius.com

- SPs, faculty, staff, students
- Free
- Easily build signups
- Invite to signup
- Can review their signups at any time
- Can send emails to groups
- Auto reminders for session sent out via SignUp Genius
- Print signups



## Problem: Each faculty suggested a different medication and/or dilution when requesting a setup for deliberate repetitive practice (DRP)?

- Generally faculty were less concerned about the specific medication, but wanted practice with general medication administration
- Develop a **formulary**/generic MAR
- Have several meds available for each delivery type (PO, IM, subcutaneous, IV, etc.)
- Stock pre-made meds



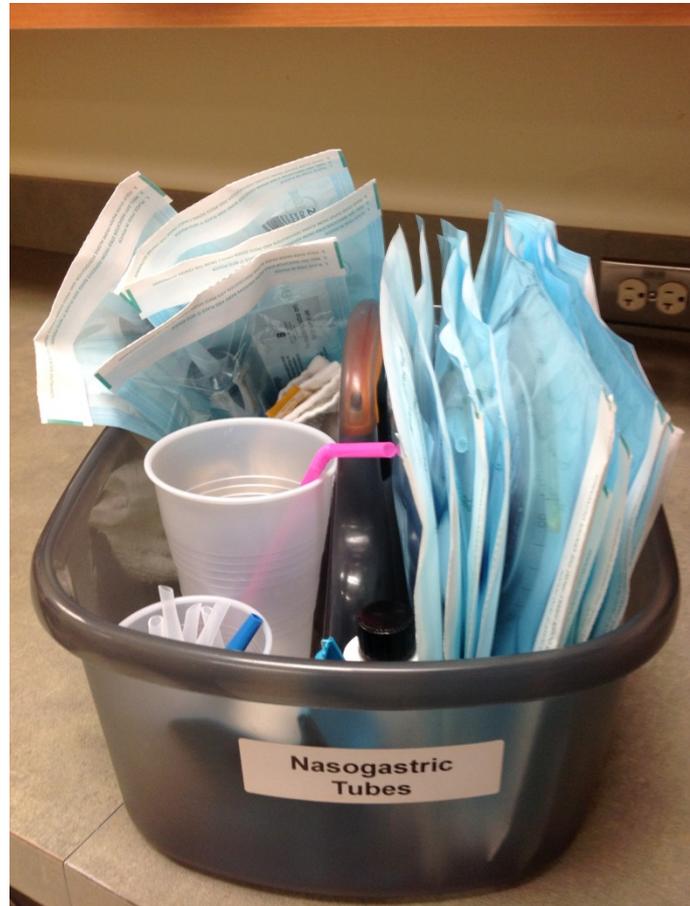


# Problem: How to manage supplies for specific procedures?





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# Problem: How can we turnover the rooms quicker between simulations?

- Template: checklist for room and simulation
- Bleeding patient
  - Line the underside of the gown with plastic film (ie: Opsite, Tegaderm)
- Suicidal client
  - Zip ties on cabinets and leaving select items



### Technician/Facilitator Go-Live Checklist

- Confirm scenario(s) name and order
- Confirm staging is complete
  - o Pump, headwall, lights, moulage (spray), medication cart/supplies
  - o Patient chart
  - o SPs (if needed)
    - o Prepped
    - o moulaged
- Confirm all hardware is ready
  - o Patient room:
    - o manikin charged
    - o power strip on
    - o patient vitals computer
  - o Control station:
    - o both computers up
    - o manikin software up
    - o manikin in initial state
    - o EMS software up and feeds set
      - o camera control & presets
    - o voice changer up and set
    - o headphones checked
    - o check recording capabilities (if needed)
  - o Debriefing room:
    - o computer up
    - o EMS software up and feeds set
- Facilitator packet prepped and stationed
- Session ready- set- go



# Problem: How are we going to keep the simulation setups organized?

## Scenario Boxes

- Everything ready to go
- Techs can quickly grab and setup
- Everything goes back in correct box



# Problem: How can we create realistic labeling?

## Google Images

- Readily available
- Lots to choose from
- Remove specific manufacturer identifiers

## Dymo Label Maker

- A must have

0.15% Potassium Chloride in  
5% Dextrose and  
0.20% Sodium Chloride  
Injection USP

REF L6450	1000 mL
NDC 0264-7645-00	EXCEL® CONTAINER
DIN 01931598	

**20 mEq K<sup>+</sup>/liter**  
Y94-003-096 LD-265-1

Each 100 mL contains:  
Hydrous Dextrose USP 5 g  
Sodium Chloride USP 0.2 g  
Potassium Chloride USP 0.15 g  
Water for Injection USP qs  
pH: 4.4 (3.5-6.5)  
Calc. Osmolarity: 360 mOsmol/liter, hypertonic

Electrolytes (mEq/liter):  
Na<sup>+</sup> 34      K<sup>+</sup> 20      Cl<sup>-</sup> 54

Sterile, nonpyrogenic. Single dose container.  
Do not use in series connection.  
For intravenous use only. Use only if solution is clear and  
container and seals are intact.

**WARNINGS:** Some additives may be incompatible.  
Consult with pharmacist. When introducing additives, use  
aseptic techniques. Mix thoroughly. Do not store.

Recommended Storage:  
Room temperature (25°C). Avoid excessive heat. Protect  
from freezing. See Package Insert.

LATEX DEHP PVC Rx only OTHER

EXCEL is a registered trademark of B. Braun Medical Inc.

# Problem: How are we going to have a running IV?

## Drain Bags

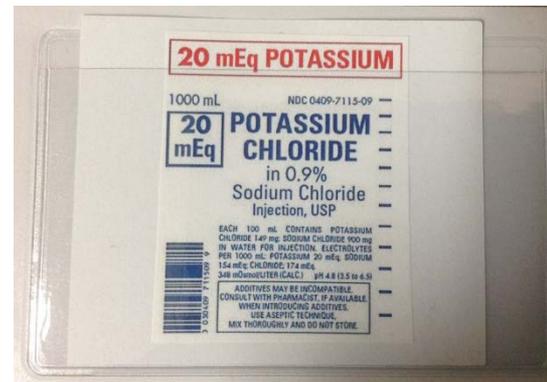
- Manikin arms don't work that well for a flowing IV
- Bypass the manikin arm



# Problem: How can we avoid a new IV setup for each simulation?

## IV Bag Removable Tags

- Can leave IV setup attached to manikin
- Attach business card holder to bag
- Change labeling only
- Looks professional
- Keep tag labels in setup boxes for each simulation



# Problem: How can we re-package disposable supplies but make them look “real?”

## Self Sealing Sterilization Pouches

- Students get experience of opening supplies
- Helps maintain fidelity of the simulation
- Looks professional, \$5-\$45 for 200





# Repackaging list

- Sterile drapes (polylined towels)
- NG tubes
- Saline fluids (100cc-1000cc)
- Levofloxacin
- Lovenox
- Chloraprep
- Trach suction catheter w/ sleeve 10fr.
- IV extension sets
- Saline flush
- IV microclave
- Nasal cannula
- Non rebreather oxygen mask
- Simple mask
- Inner cannula for trach
- IV primary tubing
- Secondary tubing
- Q-tip for sterile procedures
- Trach suction kit (includes suction catheter and sterile gloves)
- 60mL syringe



Problem: How can we re-package disposable supplies but make them look “real?”



# Problem: How can we reuse saline and heparin lock flushes?

- Use sealable sterilization pouches



Problem: How can we make “cysts” for our nurse practitioner students to practice lancing?

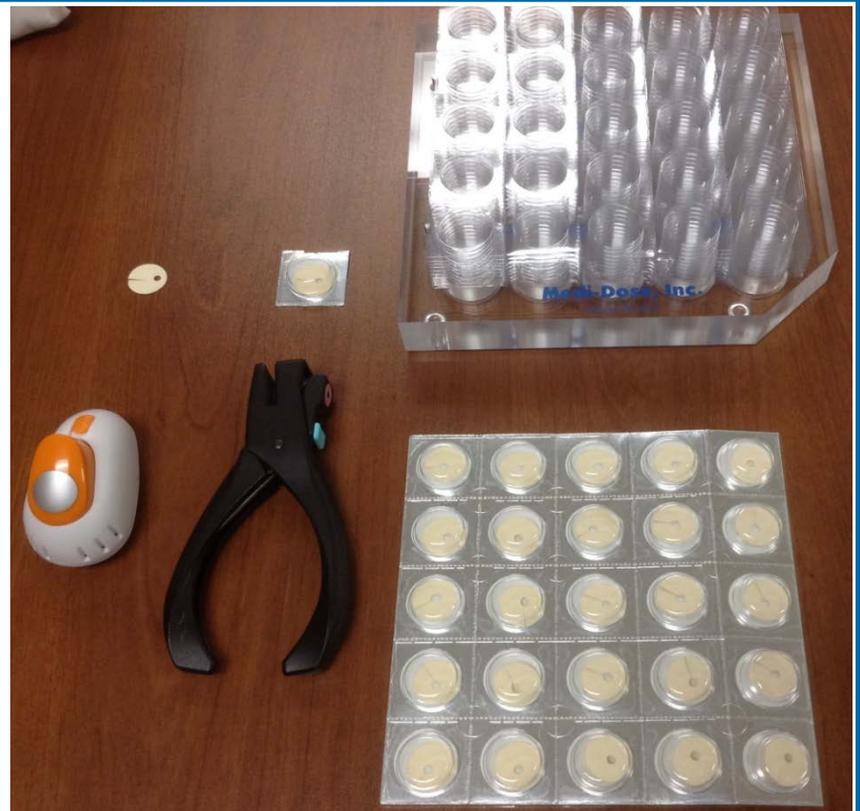
- [An Abscess Model for Teaching Incision and Drainage Techniques to Pediatric Residents](#)



Problem: Faculty are requesting a new/packaged biopatch for each CVL dressing change practice?  
 Biopatches cost \$10. What to do?

### Make Our Own

- Adapted an existing example
- Students get the experience of opening a new supply each time



Source: Carol Okupniak, MSN, RN, director, Center for Interdisciplinary Clinical Simulation and Practice, Drexel University's College of Nursing and Health Professions

## Problem: How can we reuse IV bags?

- Evolution of solutions
  - Golf tees
  - Hot glue gun
- Current solution
  - Parafilm, Tubing
  - \$25.00 roll 2' x 250"



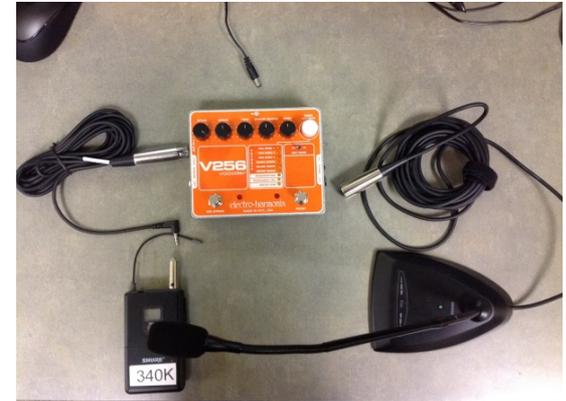
## Problem: How can we provide non-intrusive cues when needed?

- iPads – labs, x-rays
- Something missing: come in as a character from central supply, unit clerk
- Radios for standardized patients
  - Ear buds
  - Hiding in the drawer



# Problem: How can we modulate the voice of the person that is speaking for the manikin?

- Voice changer
  - Microphone – control room
  - Electro Harmonix – control room
  - Wireless transmitter – control room
  - Wireless receiver – simulation room
  - Powered speaker – simulation room



Problem: Needed to have phones in the simulation rooms, but didn't want to pay for monthly phone lines...

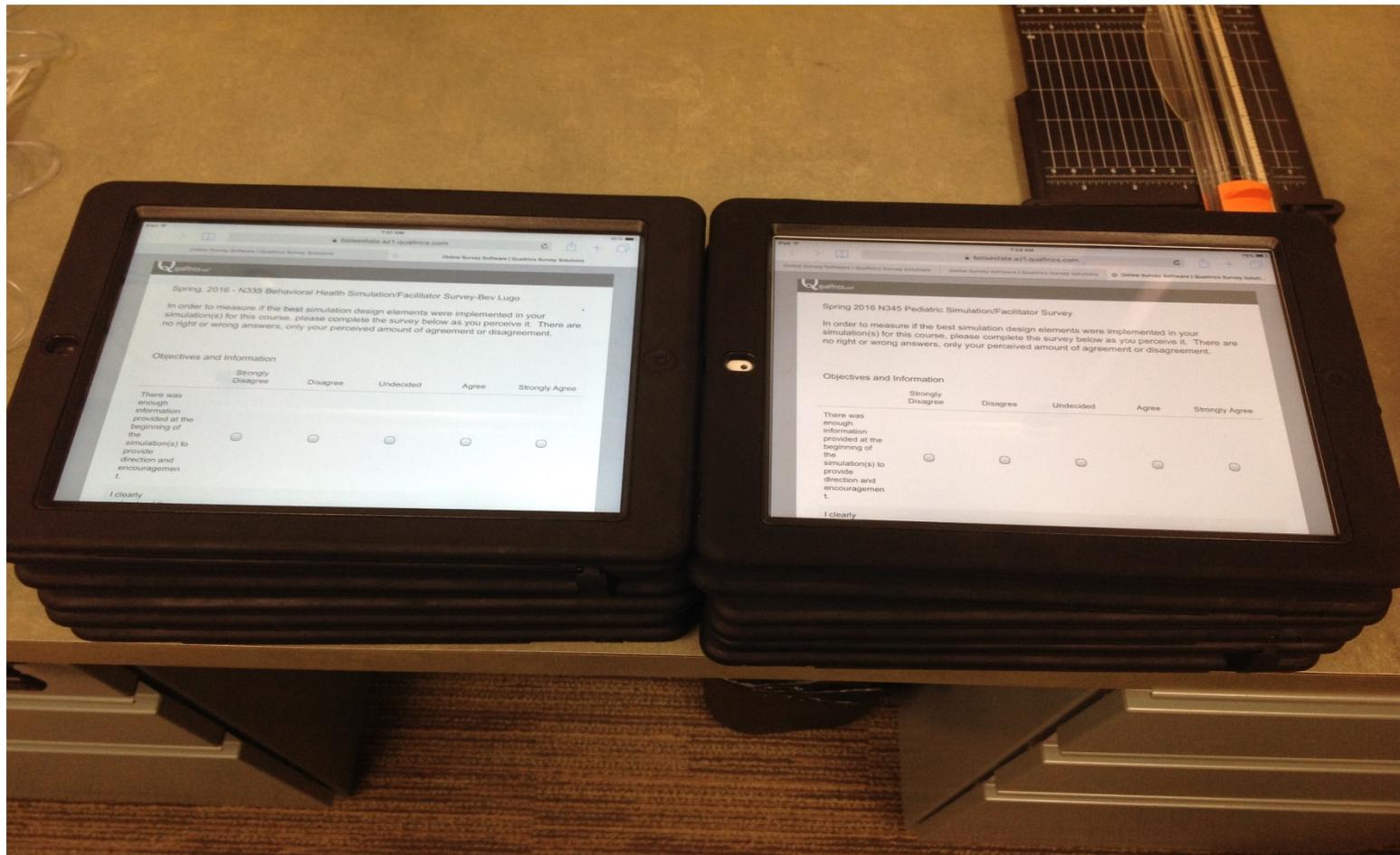
### Intercom Phones

- A simple and inexpensive solution
- Conference call
- Students can call out or faculty can call in
- Speaker phone





# Problem: How to get students to do Evaluations?

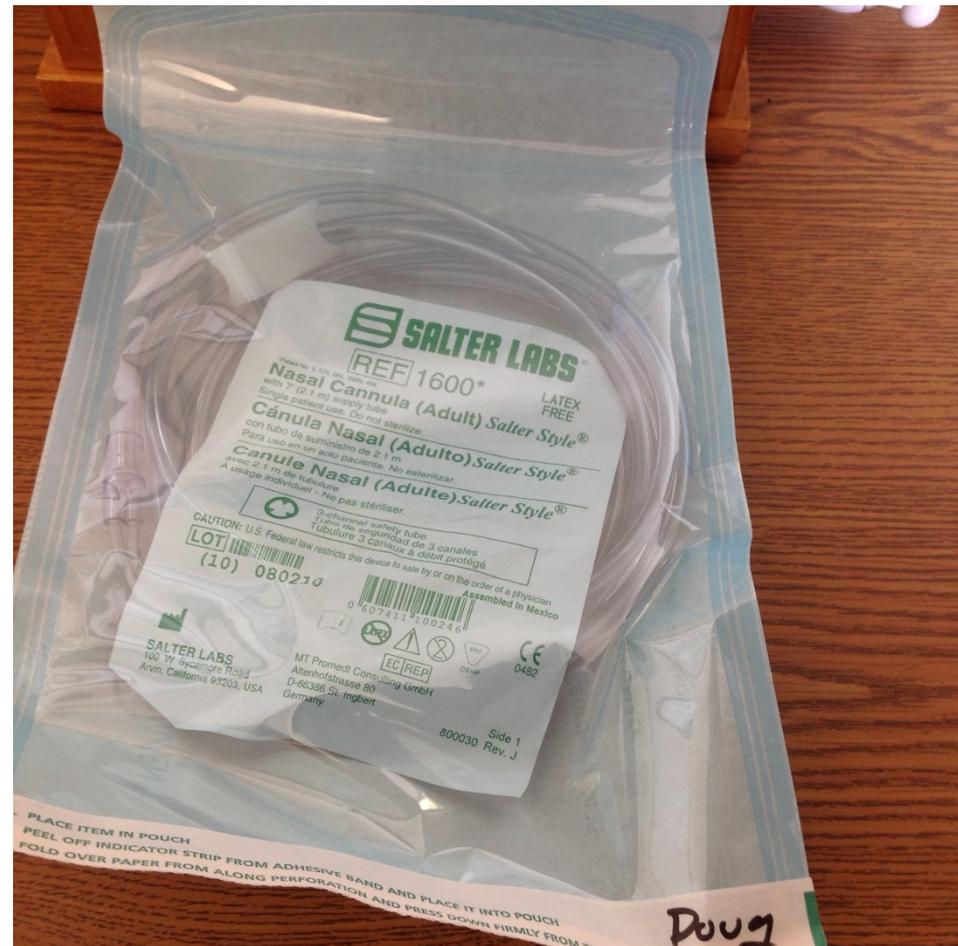


## Problem: How can we manage data and computers?

- Data Syncing
  - Dropbox
  - Google Apps
  - One Drive
  - Shared Drive
- Remote Management
  - Splashtop



# Problem: How do we keep SP's safe using airway intervention?



## Problem: How do we keep things safe?

- Caution for repackaging and relabeling
- Simulated versus real supplies
- No real drugs allowed
- Things must be labeled carefully



## Problem: How to do moulage?

- Chez Moulage – recipe book from Laerdal
- Recipes for Disaster – METI (now CAE)
- Moulageconcepts.com
- Sickkitchen.com
- Smooth-on.com
- Local theater supply
- Halloween stores after Halloween
  - Tattoo sleeves





# Activity

- Resealing an IV bag
- Other packet materials



# Now lets hear from you!



# QUESTIONS??

Email

janetwillhaus@boisestate.edu

# THANK YOU!!