

SIMLAB SYLLABUS

SUMMER ANES 485 MSA-1

[June-July 2009]

ANES 485 – Introduction to Physiological Model-based Simulation is a 5-week course taught with 6 teams.

Overall goal:

Practice of basic techniques and **exposure** to some advanced techniques.

Prerequisite:

Review selected sections from the “Summer Syllabus” that deal with airway management.

Note: These readings should be reviews of work already accomplished in classes. [Time impact 15 min/lab]

Reading:

New Reading: “Comments on simulation and crisis management in Anesthesiology”.

Chapter 80 in “Anesthesia” Miller Ed5 (material not covered in handout.)

Chapter 23 in “Clinical Anesthesia” (Barash, Cullen, and Stoelting) Ed4

Chapter 5 in “Clinical Anesthesiology” (Morgan, Mikhail and Murray) Ed4

Note 1: The reading assignments above will **apply to ALL** subsequent modules. **The assignments will NOT be repeated.**

Note 2: Unless otherwise noted ALL LABS are preceded by a Quick or Super quick machine check AND some part of the MSMAIDS, NEALS IVMAN setups (usually done verbally). At some point a FULL FDA machine check will be asked for partially by recitation and partially by doing one.

Decorum/Dress:

- 1. Come to the lab ON TIME !**
- 2. Come dressed in full OR garb unless noted otherwise or impossible for some reason. (scrubs, hat, mask, booties) You can keep a “spare” set of scrubs for lab. Gloves should be worn in lab as appropriate (gloves are in the lab)**

Practice #1 LB01

Goals:

1. Understand and APPLY the basic principles of ventilation and oxygenation when masking a patient.
2. Know and recite the anatomy and physiology related to masking and intubation.
3. Practice introducing yourself and speaking to a patient with calming tones

Preparation (mini quizzes):

- >Know airway anatomy terminology from external nares to right and left mainstem bronchi
- >Know proper airway pressure
- >Know risks of high pressure masking
- >Know and demonstrate the proper use of a curved (Macintosh) blade for intubation

Machine-TableTop: MSMAIDS

Masking

Approach to, and interaction with, patient (Dr. Cascorbi)

One hand masking

2 hands with assistant

One hand w/ jaw thrust

Masking from the side of the patient (not at the head)

Nasal airways (preparation and insertion – risks)

Oral airways (insertion – risks)

Criteria

Regular breaths

Leak free seal

Maintaining CPAP (5 cm H₂O) – benefits/risks

Simple problems

Agnathia- micrognathia

Beards

Edentulousness

Facial deformities

Practice #2 LB02

Goals:

1. Understand and APPLY the basic principles of ventilation and oxygenation when intubating a patient.
2. Know and recite the anatomy and physiology related to intubation.
3. Practice introducing yourself and speaking to a patient with calming tones

Preparation (mini quizzes):

- >Be able to demonstrate PROPER placement of a Macintosh and a Miller Lscope blade
- >Know how improper use of the blade can seriously damage the patient.
- >Know and demonstrate how CCW rotation of the ETT can minimize trauma and perhaps multiple attempts.
- >Know how tube diameter and length effect airway resistance.
- >Demonstrate bird-dog focus and how an ETT can be ready to insert without having to pick it up after the target is located.
- >Meaning of RAE pertaining to the RAE tube.

Machine-TableTop: NEALS IV MAN

Standard (oral) ETT placement

Use of Lscope

- Testing and possible failures
- Height of patient (table)
- Head angle
- Viewing angle
- Ram and jam (a NO NO)
- Teeth

ETT insertion

- Testing cuff (how long?)
- Indications and contraindications
- High pressure cuff
- Low pressure cuff
- Tip angle and the glottic opening
- Pre-bending for better access
- Use of a stylette
- Taping - vs - tying
- Effect of changes in head position on tube depth

Effect of too-high cuff pressure
Effect of RT MSB intubation and RUL blockage
RAE Tube insertion
Indications, contraindications
Nasal
Oral

Practice #3 LB03

Goals:

1. Understand and APPLY the basic principles of ventilation and oxygenation when using a supraglottic device in a patient.
2. Know and recite the anatomy and physiology related to placing a supraglottic device.
3. Practice introducing yourself and speaking to a patient with calming tones

Preparation (mini quizzes):

- >Know pharyngeal/laryngeal airway anatomy terminology related to supraglottic devices
- >Know critical esophageal breakover pressure for C-LMA and for ProSeal LMA
- >Know indications/contraindications
- >Know names of different devices

Machine-TableTop: MSMAIDS + NEALS IV MAN

Supraglottic (extra-tracheal) devices
Structure of devices
Differences
Similarities
When to use
Anatomy “covered” by devices
Kinds of failure
Devices
C-LMA
FTLMA (I-LMA – Intubating LMA)
ProSeal LMA

Practice #4 LB04

Goals:

0. Rehearsal for Machine and Tabletop/drug setup/checkout test
1. Rotating MSMAIDS setup and NEALS IV MAN setup

2. Verbalizing all drugs “normally” used (doses/kg –adult, concentration in supply vial/bottle, size syringe for different ages.)
3. Demonstrating perfect masking with oral or nasal airway and intubating with one attempt and NO ram and jam or improper patient head lifting
4. Possible demonstration of LMA placement skill.

Preparation (mini quizzes):

- >Know MSMAIDS and NEALS IV MAN with doses, concentrations and syringe sizes “in your sleep”)
- >Visualize the masking, intubating and LMA placement routines

Machine-TableTop: Random questions based on previous training

Practice #5 LB05

1. Graded Examination
2. Rotating MSMAIDS setup and NEALS IV MAN setup
3. Verbalizing all drugs “normally” used (doses/kg –adult, concentration in supply vial/bottle, size syringe for different ages.)
4. Demonstrating perfect masking with oral or nasal airway and intubating with one attempt and NO ram and jam or improper patient head lifting
5. Possible demonstration of LMA placement skill.

Preparation (mini quizzes):

- >Know MSMAIDS and NEALS IV MAN with doses, concentrations and syringe sizes “in your sleep”)
- >Visualize the masking, intubating and LMA placement routines

Machine-TableTop: MSMAIDS + NEALS IV MAN