

Sophomore Cardiovascular & Respiratory Assessment Laboratory

The Cardiovascular & Respiratory assessment labs include a didactic lecture segment and a lab assessment segment. Part of the Lab using Simman for heart sounds and breath sounds. The algorithm below shows the rotation, every 8 seconds, through the Cardiac sounds that are used. The Respiratory algorithm is essentially the same except that breath sounds alternate every 16 seconds.

In addition, a miscellaneous handler is employed for vocal files. When the students arrive, they are greeted by Simman and questioned about why they are in the Lab. This provides the students a limited interaction with Simman as an interactive “patient”. The Cardiovascular & Respiratory labs then provide a basis for future interactive patient simulations.

Set up for the algorithm starts with the miscellaneous “voice” handler. Appropriate vocal files, anticipating interactive dialogue, need to be made and stored. A new miscellaneous handler is created and the vocal files are inserted. The scenario is then constructed and the miscellaneous handler inserted and started in the originating frame. The Voice handler sample.vhn was used in formatting the example below. It was loaded in the editing phase and the saved as a new file with the changes. Thus the 1_Allergies, 2_Medications, etc titling. The titling is important when placing the vocal files on the remote, as the titles need to be manually added to the menu screen before they can be dragged to the remote.

The scenario is running when small groups of the students enter the lab. The lab instructor manually presses the correct sequence of buttons on the remote to ensure the minimal dialogue takes place; which in this example is:

Simman: Hey weren't you guys in here last Tuesday?

Students: No, we were here on Friday.

Simman: Oh! Well what's up for today?

Students: We are going to assess your heart sounds.

Simman: Oh, OK. Well I already have my gown unbuttoned.

Students: usually laugh and the lab instructor proceeds to point out various stations the students can take turns at.

260 Cardiac lab 2.sce



Actions



Events



Frame0
 A:Sinus 68
 Blood Pressure 120/80
 Monitor Controls
 SpO2 = 98
 CO2 = 34.0 mmHg
 Temp. = 37.2 (°C)
 Breathing Rate: 10 CO2 Exhalation OFF
 Airway
 Reset All
Start Misc. Handler: Voice 260 cardiac2 airway remote
 Auscultation Sounds
 Heart: Normal
 FrameTime=0:08

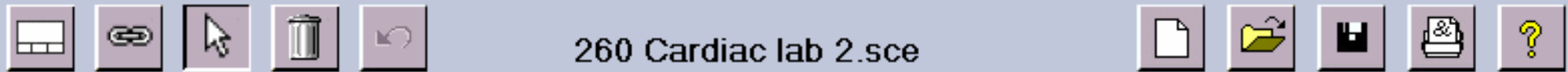
Frame1
 A:Sinus 68
 Blood Pressure 120/80
 Monitor Controls
 SpO2 = 98
 CO2 = 34.0 mmHg
 Temp. = 37.2 (°C)
 Breathing Rate: 10 CO2 Exhalation OFF
 Airway
 Reset All
 Auscultation Sounds
 Heart: Systolic Murmur
 FrameTime=0:0

Miscellaneous Handler

Frame2
 A:Sinus 68
 Blood Pressure 120/80
 Monitor Controls
 SpO2 = 98
 CO2 = 34.0 mmHg
 Temp. = 37.2 (°C)
 Breathing Rate: 10 CO2 Exhalation OFF
 Airway
 Reset All
 Auscultation Sounds
 Heart: Diastolic Murmur
 FrameTime=0:0

Frame3
 A:Sinus 68
 Blood Pressure 120/80
 Monitor Controls
 SpO2 = 98
 CO2 = 34.0 mmHg
 Temp. = 37.2 (°C)
 Breathing Rate: 10 CO2 Exhalation OFF
 Airway
 Reset All
 Auscultation Sounds
 Heart: Friction Rub
 FrameTime=0:0

260 Cardiac lab 2.sce



Actions

BP

!

SpO₂
CO₂
Temp.

ABC Misc.

Events

ABC Misc.

!

Frame2
 A:Sinus 68
 Blood Pressure 120/80
 Monitor Controls
 SpO₂ = 98
 CO₂ = 34.0 mmHg
 Temp. = 37.2 (°C)
 Breathing Rate: 10 CO₂ Exhalation OFF
 Airway
 Reset All
 Auscultation Sounds
 Heart: Diastolic Murmur

FrameTime=0:0

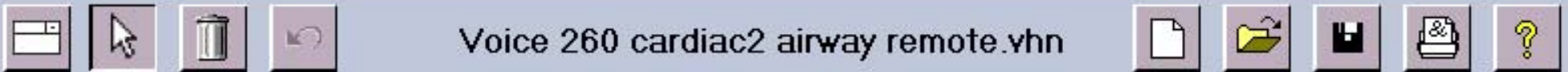
Frame3
 A:Sinus 68
 Blood Pressure 120/80
 Monitor Controls
 SpO₂ = 98
 CO₂ = 34.0 mmHg
 Temp. = 37.2 (°C)
 Breathing Rate: 10 CO₂ Exhalation OFF
 Airway
 Reset All
 Auscultation Sounds
 Heart: Friction Rub

FrameTime=0:0

Frame4
 A:Sinus 68
 Blood Pressure 120/80
 Monitor Controls
 SpO₂ = 98
 CO₂ = 34.0 mmHg
 Temp. = 37.2 (°C)
 Breathing Rate: 10 CO₂ Exhalation OFF
 Airway
 Reset All
 Auscultation Sounds
 Heart: Aortic stenosis

FrameTime=0:0

Frame0



Actions



Used Events

- Medical History\1
- Medical History\2
- Medical History\3
- Medical History\4
- Medical History\5

1_Allergies

===== Actions =====
Vocal Sound: '260 Cardiac lab1 In tuesday' Number: 1

4_PSH

===== Actions =====
Vocal Sound: '260 sure' Number: 1

2_Medications

===== Actions =====
Vocal Sound: '260 Cardiac lab1 whats up today' Number: 1

5_Event

===== Actions =====
Vocal Sound: '260 Cardiac lab1 no - thank you' Number: 1

3_PMH

===== Actions =====
Vocal Sound: '260 Cardiac lab1 OK gowns off' Number: 1

Edit Menu

ABC Action

- Bag-tube-ventilation
- BURP
- Combi
- Cricoid pressure
- Cricothyrotomy
- Extubation
- Fiberoptic intubation
- Hyperventilation
- Inadequate ventilation
- Intubation
- IV Line
- IVLine Removed
- JET ventilation
- LMA
- Mask ventilation
- NPA
- OPA
- Oxygen
- Oxygen Removed
- Pneumothorax Decompr
- Suction
- System Events
- Two person mask ventil.
- Volume Infusion

Miscellaneous

- Abort attempt
- Auscultate heart
- Auscultate lungs
- Awaken the patient
- Call for help
- Check diuresis
- Check Hemoglobine
- Consciousness Check
- C-section performed
- Medical History
 - 1_Allergies
 - 2_Medications
 - 3_PMH
 - 4_PSH
 - 5_Event
- Request blood
- Stomach Decompressor
- System Events

Sound



Medication

- Adenosine
- Albumin
- Aminophylline
- Amiodarone
- Anaesthetised airway
- Appropriate cardiac c
- ASA
- Atropine
- Benzodiazepines
- Blood
- Bretylium
- Dextran
- Dobutamine
- Dopamine
- Epinephrine
- Fentanyl
- Flumazenil
- Furosemide
- General Anaesthesia
- Glucose 5%
- Glucose 50%
- Glycopyrroniumbromi
- Inhalation Therapy
- Ketamine
- Lactated Ringer
- Lidocaine
- Magnesium Sulfate
- Mannitol
- Morphine

Configure your remote by dragging the items you want from the listboxes onto the remote buttons. Assign an item to a shift-function by dropping it in the shift-field above the button.



Airway

Shift

1_Allerg 2_Medi 3_PMH 4_PSH 5_Ever

Cardiac

Shift

[Five empty green buttons]



Drop here to delete

OK Cancel Help