HEART FAILURE

LIVE FAMILY MEMBER REQUIRED

Estimated Time: 45 minutes • Debriefing Time: 45 minutes



Scan to Begin



Patient Name: Hector Fernandez

SCENARIO OVERVIEW

Students get report on a patient who was recently intubated for exacerbation of end-stage CHF. During report, the RT giving report gets a call from that patient's RN stating some vent changes are needed. After making the vent changes and in the middle of completing a vent check/assessment, the patient's family member (and Medical Power of Attorney) arrives. He/She states that Hector would not want to be on machines. Time Elapses – the students will remove the patient from life support with the family member at bedside.

This is Level 4B: This simulation requires a "Live Family Member" to play the patient's family member – preferably a wife.

LEARNING OBJECTIVES

- 1. Perform a focused respiratory assessment
- 2. Recognize and respond to abnormal findings
- 3. Evaluate objective and subjective data
- 4. Implement and follow evidence-based standards and protocols
- 5. Safely manage mechanical ventilation
- 6. Analyze the legal and ethical consequences of life support.
- 7. Demonstrate appropriate communication
- 8. Document accurately

CURRICULUM MAPPING

WTCS RESPIRATORY THERAPY PROGRAM OUTCOMES

- Apply respiratory therapy concepts to patient care situations
- Demonstrate technical proficiency required to fulfill the role of a respiratory therapist
- Practice respiratory therapy according to established professional and ethical standards

RESPIRATORY DISEASE

- Evaluate radiologic images of the chest
- Analyze signs, symptoms, etiology, pathogenesis and treatment for cardiovascular diseases/disorders

RESPIRATORY AND CARDIAC PHYSIOLOGY

- Apply the principles of gas transport
- Apply the principles of ventilatory mechanics
- Interpret blood gas data
- Evaluate fluid and electrolyte balance

RESPIRATORY AIRWAY MANAGEMENT

• Demonstrate skill of secretion removal

RESPIRATORY LIFE SUPPORT

- Explain the general principles of mechanical ventilation
- Operate various ventilators
- Evaluate patient response to mechanical ventilation
- Analyze the legal and ethical implications of initiation, continuation, and withdrawal of life support

RESPIRATORY CLINICAL PRACTICE

- Apply standard precautions
- Asses vital signs
- Perform pulse oximetry
- Perform a pulmonary exam
- Perform open system suction
- Perform closed system suction
- Perform cuff pressures
- Check a ventilator
- Perform arterial puncture

SIMULATION LEARNING ENVIRONMENT & SET-UP

PATIENT PROFILE

Name: Hector Fernandez

DOB: 09/06/19XX

Age: 62

MR#: 41219

Gender: Male

Height: 175 cm (5'10")

Weight: 86.4 kg (195#)

Allergies: penicillin (hives)

Admitting Diagnosis: Respiratory Failure,

exacerbation of CHF

Medical History: congestive heart failure, coronary artery disease, anterior MI with stenting – 4 years ago, chronic atrial fibrillation, hypertension, chronic renal insufficiency, COPD, OSA, restless leg syndrome, hypothyroidism, diabetes mellitus 2, chronic constipation

Surgical History: R TKR – 15 years ago

Code Status: Full

Ethnicity: Hispanic

Spiritual Practice: Catholic

Primary Language: Spanish

Secondary Language: English

EQUIPMENT/SUPPLIES/SETTINGS

Environment

- Inside room: Patient in bed, as close to fowlers position as possible
- Inside or outside room: Hand sanitizer and/or sink
- Outside room: Computer or form(s) for documentation

Patient

- Hospital gown
- No moulage
- ID band present with QR code
- Intubated with 8.0 ETT secured 24 at the teeth with a commercial tube holder
- On mechanical ventilator: Volume Control 18, Vt 500, PEEP +10, 100%
- IV in place with medications running per included MAR

Monitor Settings

- Simulator vitals: HR 72, RR 18, BP 100/68, Temp 37.8, SpO2 = 95%
- Patient is sedated. It may be easier to paralyze the patient and allow the mechanical ventilator to initiate all of the breaths.

Supplies

- General
 - Respiratory Equipment
 - Mechanical ventilator and supplies
 - Resuscitation Bag and Mask
 - Oral and endotracheal suction supplies (open or closed system)

Medications

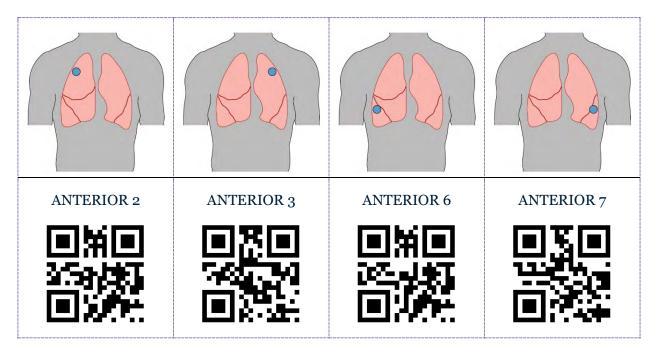
- Morphine IV, 10 mg Needed to be administered by an "RN" in State 4.
- However, for realism, the technician should review the MAR and have the appropriate IV's running.

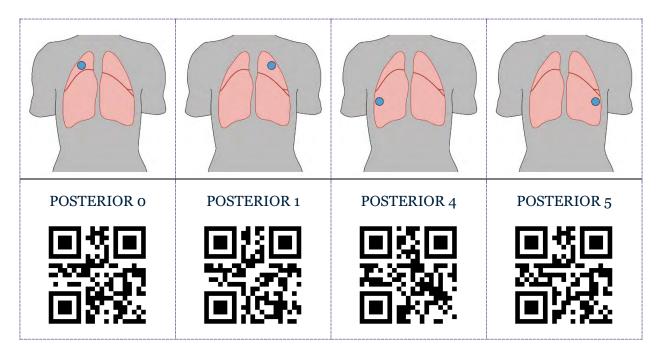
QR CODES

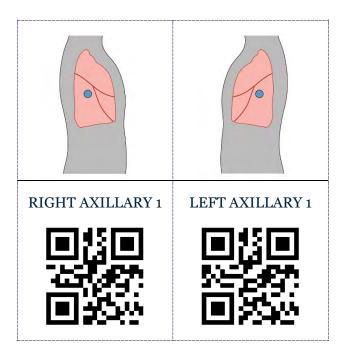
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PATIENT IV	RIGHT LEG	LEFT LEG	FACILITATOR
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CHEST QR CODES

Cut along the dotted lines. Fold along the solid line to create a bi-fold of the diagram and QR code.







TEACHING PLAN

PREBRIEF

The facilitator should lead this portion of the simulation. The following steps will guide you through Prebrief.

- Scan the **QR Code: "Scan to Begin"** while students are in Prebrief.
- "Meet Your Patient" (on iPad) and explain how the iPad works in the simulated learning environment including:
 - Explain how to use the iPad scanner and QR codes. Remind students that there are multiple QR codes in the simulation, but they should only scan them if they think it will provide data necessary for their assessment and evaluation of the patient.
 - For some scenarios, it may be helpful to tell students where the QR code are located. For others, you may want students to "find" the QR codes during their assessments. This is your choice.
 - Describe how a QR code sound will work in the scenario. For the most authentic sound experience, student should use ear buds or the ARISE "stethoscope" for all QR codes with the following symbol: □. Example:
 QR Code: Chest Anterior 1 □
 - As the facilitator, you should be aware that throughout the simulation some QR codes are necessary to the programming of the iPad content.
 Directions for which QR codes are required (to be scanned) in each state are listed under each state of the documentation below. The QR codes are also in **BOLD** type.
 - Level tab This tab "tells" the content in the iPad to change to what is needed for the next state of a simulation. It is used a few times in this scenario after the provider is notified to display new orders (those just given over the phone) and lab results, etc.
 - Medication QR Codes The student(s) must scan QR Code: Patient ID prior to scanning any medication. That scan is valid for 2 minutes and then it "times out." The student(s) will need to scan QR Code: Patient ID again to give more medications.
 - MAR Hyperlinks On the MAR all medications are underlined and hyperlinked to DailyMed, which is a medication reference housed by the

National Library of Medicine. Students can click on these links during the simulation for up-to-date medication content, labels, and package insert information.

- Discuss the simulation "Learning Objective(s)" (on iPad) as well as any other Prebrief materials
- Get "Report" on iPad
 - Possible Facilitator Questions
 - What are your priorities for this patient?
- View "Patient" video on iPad
 - Possible Facilitator Questions
 - Given this video, can you make any conclusions about Hectors' condition?
- Advance to the "Patient Profile" screen (on iPad). This will act as a simulated patient chart.
- Students can view the tabbed content on the iPad (see below) prior to entering the patient's room and throughout the simulation as needed.

H&P

History and Physical

CHIEF COMPLAINT: Shortness of breath, impending respiratory failure

HISTORY OF PRESENT ILLNESS: Hector presents today to the Emergency Department with shortness of breath that has worsened over the course of several days. His wife is with him and she is providing most of the details of his illness. Discussed Code Status with his wife. He was a Full Code at his last admission 2 months ago. His wife states that Hector recently filled out new Advance Directive papers and that she would go home and get them after my examination.

PAST MEDICAL/SURGICAL HISTORY: Congestive heart failure, coronary artery disease, anterior MI with stenting – 4 years ago, chronic atrial fibrillation, hypertension, chronic renal insufficiency, COPD, OSA, restless leg syndrome, hypothyroidism, diabetes mellitus 2, chronic constipation, R TKR – 15 years ago

ER/HOSPIALIZATIONS IN THE LAST 12 MONTHS: Was admitted to the ICU 2 months ago for about 2 weeks following a similar presentation.

MEDICATIONS: See medication reconciliation record.

ALLERGIES: Penicillin (hives)

FAMILY MEDICAL HISTORY: Father dies from an apparent MI at age 50. Mother died from complications of congestive heart failure at age 58. He has no siblings.

REVIEW OF SYSTEMS: Abbreviated due to the acuity of current medical condition – he is on BiPAP. His wife is providing most of the details.

HEENT: The wife states, he has been sleeping "all of the time" and it is difficult to arouse him. She is unaware of any recent injury, headaches or change in vision.

Respiratory: He is obviously and significantly dyspneic. This has increased over the past few days.

Cardiovascular: Wife states his chest always hurts when he breathes fast. He hasn't complained about that recently because he's been sleeping all of the time.

Peripheral Vascular: Wife states that his legs are "a little puffier."

Gastrointestinal: Wife is not sure of any changes in appetite or weight gain/loss.

Endocrine: History of diabetes mellitus Type 2. Wife states that he hasn't been urinating much at all.

PHYSICAL EXAM:

Vital signs: BP= 128/72, T= 38.9, P= 114, R= 32, O2= 93% on BiPAP per respiratory therapy, Height= 175 cm, Weight= 86.4 kg

General Appearance: 62-year-old male who appears acutely ill. He is currently on the BiPAP per respiratory therapy.

HEENT: unremarkable

Respiratory/Chest: Breath sounds are diminished throughout with fine, wet crackles in all lung fields. No cyanosis or clubbing noted.

Cardiovascular: Tachycardic in the 110's. Irregular S1S2 rhythm without murmur. S3 & S4 present.

Vascular/extremities: Pedal pulses – L 2/4 / R 2/4 Capillary refill time less than three seconds. 3 plus pitting edema bilaterally. Right leg is reddened and consistent with cellulitis.

Gastrointestinal/abdomen: unremarkable

Genitourinary: No CVA tenderness.

ASSESSMENT: Impending Respiratory Failure, Exacerbation of CFH, & Probable RLL cellulitis

PLAN: STAT CBC with differential, Chem 7, Magnesium, BNP, Liver Enzymes, CK & Troponin, & INR. STAT portable chest x-ray, ECG, & bedside echocardiogram. Respiratory Therapy Consult and BiPAP management – obtain STAT ABG. 80 mg furosemide IV, STAT.

Electronically Signed - Dr. Hospita, MD

ORDERS

- The Adult ICU Vent Bundle Protocol (as listed on the orders below) is located in Appendix A.
- The K+ Replacement Protocol (as listed on the orders below) is located in Appendix B.

Provider Orders

Date	Time	Order
Today	2 hours ago	Emergency Department Orders
		Continuous telemetry and SpO2 monitoring
		Obtain current weight
		Insert Foley catheter for strict I &O
		Obtain accurate home medication history
		STAT Labs: CBC with differential, Chem 7, Magnesium, BNP,
		Liver Enzymes, CK & Troponin, INR
		STAT portable chest x-ray: respiratory failure
		STAT ECG

	•	-
		STAT bedside echocardiogram
		STAT Respiratory Therapy Consult
		STAT BiPAP per protocol, O2 to keep SaO2 > 90%
		STAT ABG
		80 mg furosemide IV, STAT
		K+ replacement protocol
Today	90 minutes	STAT intubation for hypercapneic respiratory failure
	ago	STAT Succinylcholine IV Push 1.5 mg/kg – once for intubation
		STAT Etomidate IV Push 0.3 mg/kg – once for intubation
		Post intubation: Propofol IV infusion @ 50-100 mcg/kg/minute
		– titrate to achieve appropriate level of sedation (see adult ICU
		sedation protocol)
		STAT portable chest x-ray post intubation for tube placement
		Vent settings: Rate 18, Vt 500, PEEP +10, O2 to keep Sat > 90%
		ABG's 30 minutes post placement on ventilator
		Place OG tube
		Consult PulmonologyDr. Hospíta, MD
Today	30 minutes	Transfer to ICU
	ago	Start <u>Adult ICU Vent Bundle Protocol</u>
		Vent Bundle protocol
		Start Milrinone infusion: 0.125 mcg/kg/min
		Start Furosemide infusion: 0.2 mg/kg/hr
		<u>K+ Replacement Protocol</u>
		Notify me when ABG's have resulted
		Notify me immediately when wife arrives with Advance Directive papers and home medication listDr. Saw, MD
Today	Now	Increase ventilator rate to 20 and PEEP to 12Dr. Saw, MD

MAR

Medication Administration Record

Scheduled		
0.12% Chlorhexidine oral rinse 15 ml 2 times per day	Due Today	Last Given
	1900	
Exonxaparin 40 mg subcutaneously daily	Due Today	Last Given
	1900	
Ranitidine 150 mg capsule via gastric tube 2 times per	Due Today	Last Given
day	1900	
Continuous Infusion		Г
Propofol IV infusion - titrate to achieve appropriate leve	el of sedation (see	Started
Adult ICU Ventilator Bundle Protocol)		1 hour ago
Milrinone IV infusion, 0.125 mcg/kg/min		Started
		15 minutes ago
Furosemide IV infusion, 0.2 mg/kg/hr		Started
		15 minutes ago
PRN		
KCL (potassium chloride) Replacement Protocol, 10 ml hour	Eq/100 ml over 1	Last Given
Discontinued		
Furosemide 80 mg IV, STAT	Discontinued	Last Given
	2 hours ago	2 hours ago
STAT Succinylcholine IV Push 1.5 mg/kg – once for	Discontinued	Last Given
intubation	1 hour ago	1 hour ago
STAT Etomidate IV Push 0.3 mg/kg – once for	Discontinued	Last Given
intubation	1 hour ago	1 hour ago

DAILY RECORD

Daily Record

Vitals	Today – 2 hours ago	Today – 90 minutes ago	Today – 1 hour ago	
Pulse	148	102	78	
Resp. Rate	32	24	16	
BP Systolic	138	102	101	
BP Diastolic	72	68	72	
Temp (°C)	38.9	38.2	37.8	
O2 Saturation (%)	93	95	94	
Applied Oxygen	BiPAP	BVM	Vent	
Pain	2	Not assessed	0	

24 HR I & O (ml)			
Input			
Output			
Total			

Daily Weight (kg)	Today – 90 minutes ago		
	86.4		

VITALS

The iPad shows the "enterable" vitals screen.

VENTILATOR FLOW SHEET

The iPad shows the "enterable" ventilator flowsheet. The first column is populated with the assessment data entered in the emergency department. See below.

Respiratory Therapy – Ventilator Care Flowsheet

* Blank field = not assessed *

Patient Assessment	Today – 40 minutes ago	[time]	[time]	[time]
Heart Rate	76			
Respiratory Rate	18			
BP Systolic	101			
BP Diastolic	72			
Temp (°C)	37.6			
O2 Saturation (%)	94			
Level of Consciousness	Sedated			
Color	Normal for skin tone			
Lung Sounds – RUL	Fine crackles			
Lung Sounds – RML	Fine crackles			
Lung Sounds – RLL	Fine crackles			
Lung Sounds – LUL	Fine crackles			
Lung Sounds – LLL	Fine crackles			

Airway Assessment	Today – 40 minutes ago	[time]	[time]	[time]	
Airway/Mask Type	Endotracheal Tube				
Airway/Mask Size	8.0				
ETT Location (at the teeth)	24				
ETT Location	Center				
ETT Relocated (✓)					
Secure & Patent (✓)	(✓)				
Cuff Pressure (cmH20)	Minimal Occluding Volume				
Oral Care Completed (✓)	23				
Oral Secretions	Moderate				
	Thin				
	Clear				
Tracheal Secretions	Small				

Thin
Clear

Ventilator Bundle	Today – 40 minutes ago	[time]	[time]	[time]
HOB > 30°	✓			
Daily Sedation Vacation	Contraindicated			
Assess Weaning Readiness	Contraindicated			
PUD Prophylaxis	✓			
DVT Prophylaxis	✓			

Ventilator Assessment	Today – 40 minutes ago	[time]	[time]	[time]
Vent/BiPAP	Vent			
Mode	Volume Control			
Set Rate	18			
Total Rate	18			
Set V _T (ml)	500			
Expiratory V _T (ml)	498			
Spontaneous V _T (ml)				
Exhaled Ve (lpm)	8.96			
Set PS or PC (cmH2O)				
O2 (%)	94			
Set IPAP				
Set PEEP (cmH2O)	10			
Total PEEP (cmH2O)	10.9			
PIP (cmH2O)	34			
Plateau (cmH2O)	26			
MAP (cmH2O)	18.2			
C _L -Static (ml/cmH2O)	33			
C _L -Dynamic (ml/cmH2O)	21.6			
Raw (cm H20/L/sec)	8.7			

Peak Flow (lpm)	55		
Waveform	Square		
Inspiratory Time	0.9		
I:E Ratio (of set rate)			
Sensitivity	3 lpm		
All Alarms On & Set (✓)	✓		
Bag/Mask @ bedside (✓)	✓		

PROGRESS NOTES

Progress Notes

Date/Time	Note
Today/45 minutes ago	Pt. arrived in the ED via EMS and was immediately placed on BiPAP per protocol (18/6 and 100 %) via a small full face mask secondary to RR in the 30's and Sats in the low 90's on 100% O2 via NRB. BBS revealed fine crackles and diminished throughout all lung fields. Pt. was difficult to arouse, but would wake and answer simple yes or no questions. ABG was obtained about 20 minutes after BiPAP was initiated. Results revealed hypercapneic respiratory failure and a decision was made to intubate and place on mechanical ventilation per protocol. Pt. was intubated via anesthesia without incident with an 8.0 ETT secured with a commercial tube holder in the center at 24 at the teeth. Patient was placed on VC 18, 500, 100, and +10 per MD order. Tolerating well with sedation. See Ventilator Flowsheet for further details. ABG's to be drawn per order. Will continue to monitor

LABS-DIAGNOSTICS

The iPad displays a plaque that reads, "The following labs and diagnostics for Hector Fernandez are available for review." Students can tap a "button" for each of the following: Labs, ECG, and Echocardiogram."

Facilitator Note: Students see the following when the "Labs button" is tapped:

Laboratory Results

CBC with Differential			
	Today – 105 minutes ago	Units	Reference Range
WBC	11.8	x10³uL	F: 4.7-10.3/M: 4.5-10.5
RBC	3.6	x10 ⁶ uL	F: 4.0-4.9/M: 4.0-4.9
Hgb	9.9	g/dL	F:10.9-13.3/M:11.0-13.3
НСТ	30.2	%	F: 33.0-39.6/M: 32.7-39.3
MCV	76.7	fL	F: 78.5-90.4/M: 76.5-90.6
MCH	25	pg	25-33
MCHC	30	g/dL	31-37
RDW	12.3	%	F: 11.6-13.4/M: 12.0-14.0
Platelet	182	x109uL	F: 183-368/M: 194-364
MPV	7.5	7.4-0.4	7.4-10.4
Neutro	72	38-68	38-68
Lymph	25.7	25-54	25-54
Mono	0.3	0-0.8	0-0.8
Eos	1	1-5	1-5
Baso	1	0-2	0-2

Chem 7 with Magnesium			
	Today – 105 minutes ago	Units	Reference Range
Glucose	162	mg/dL	Fasting 70-150
BUN	32	mg/dL	10-25
Creatinine	3.2	mg/dL	F: 0.4-1.4/M: 0.5-1.5
Sodium	134	mEq/L	135-145
Potassium	3.8	mEq/L	3.5-5.3
Chloride	108	mEq/L	98-108
Carbon Dioxide	28	mEq/L	23-27
Magnesium	1.7	mEq/L	1.5-2.5

Liver Enzymes			
	Today – 105 minutes ago	Units	Reference Range
ALT	53	U/L	7-55
AST	36	U/L	8-48
ALP	102	U/L	45-115
Albumin	4.8	g/dL	3.5-5.0
Total Protein	6.9	g/dL	6.3-7.9
Bilirubin	0.9	mg/dL	0.1-1.2

BNP			
	Today – 105 minutes ago	Units	Reference Range
BNP	2450	pg/mL	< 75 years old = <125
			> 75 years old = <450

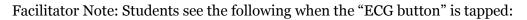
CK & Troponin			
	Today – 105 minutes ago	Units	Reference Range
CK	330	U/L	M: 52-336/F: 38-176
Troponin	О	ng/mL	<0.1

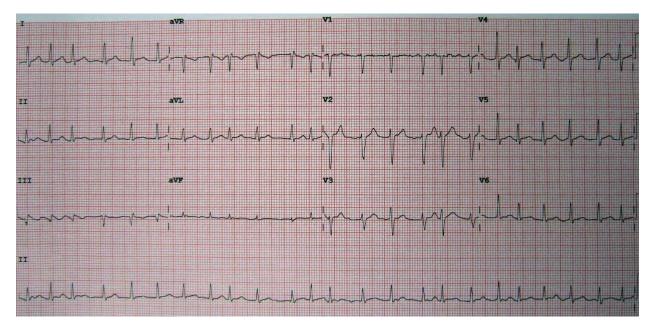
INR			
	Today – 105 minutes ago	Units	Reference Range
INR	2.4	seconds	< 1.1

Arterial Blo	od Gas (ABG)		
	Today – 90 minutes ago	Units	Reference Range

рН	7.16		7.35-7.45
PaCO ₂	82	mmHg	35-45
PaO ₂	68	mmHg	80-100
HCO ₃	28	mmol/L	22-26
Base Excess	-2	mmol/L	0+/-3
SaO ₂	94	%	
Site = ® Radial	Modified Allen's test = $$		% O2 = 100

Arterial Blood Gas (ABG)			
	Today – 30 minutes ago	Units	Reference Range
рН	7.30		7.35-7.45
PaCO ₂	50	mmHg	35-45
PaO ₂	72	mmHg	80-100
HCO ₃	28	mmol/L	22-26
Base Excess	-2	mmol/L	0+/-3
SaO ₂	95	%	
Site = ® Radial	Modified Allen's test = $$		% O2 = 100





Facilitator Note: Students see the following when the "Echocardiogram button" is tapped:

Echocardiography Report

PRIORITY: STAT

REASON FOR EXAM: Exacerbation of end-stage congestive heart failure

COMPARISON EXAM: None available

INTERPRETATION: Dictation pending

IMAGING

Imaging Report



DESCRIPTION: Portable x-ray post-intubation for respiratory failure.

EXAM: Portable AP chest

REASON FOR EXAM: Intubation

COMPARISON EXAM: Not available.

TECHNIQUE: 1.5 mAS @ 125 kvp

Dictation Pending.

LEVEL 1

The iPad reads, "The iPad is at Level 1."

SCANNER

Use this to scan available QR Codes.

EXIT

The iPad reads, "Are you sure you want to exit? All data will be lost."

- If "No" is selected, the iPad will return to the tabbed content.
- If "Yes" is selected, the iPad will let the student(s) exit and prompt them to complete an embedded 3-5 minute survey.

STATE 1

PATIENT ASSESSMENT & VENTILATOR CHANGES

- Patient Overview
 - The patient is on a mechanical ventilator per the settings listed in the Provider Orders. Students should perform a patient assessment, makes the ordered ventilator changes, and complete a ventilator check.
- Expected Student Behaviors
 - Perform appropriate hand hygiene and infection control
 - Introduce themselves and verify the patient (can scan QR Code: Patient ID)
 - Accurately obtain vital signs and interpret for an adult patient
 - Students can enter vitals on the iPad, but they are not tied to any iPad programming.
 - Perform a focused respiratory assessment
 - Inspection Students will not find any abnormalities in the chest exam. When the extremities are evaluated, bilateral pitting edema and Right-lower extremity cellulitis is found (Scan QR Code: Right Leg & QR Code: Left Leg). Students should assess the patient's airway and ETT at this time as well as assess/measure cuff pressure.
 - Palpation Students will not find any abnormalities in the chest exam.
 - Percussion Students will not find any abnormalities in the chest exam.
 - Auscultation Scan QR Code: Chest □
 - There are ten QR codes to apply to the chest see above Chest QR Code chart for locations
 - Students will hear the following breath sounds:
 - o Crackles are noted in all lung locations.
 - Change the ventilator settings per provider orders

- Student should make note of current settings such as flow, I time, I:E ratio, etc. prior to making changes. Some may require a ventilator check be completed both before and after setting changes.
- Student should also inform the patient's RN of the changes.
- Perform a ventilator check
 - Students should perform all necessary calculations at this time including: compliance, resistance, etc.
- Optional: Perform closed or open suction procedure
 - If the students feel there is a need to suction or would like to evaluate the patency of the ETT, suctioning could be performed at this time.
 - Facilitator Note: If students choose to suction, you may need to pause and discuss how this will affect ABG results.
- Recognize and respond to abnormal findings
- Document accurately
 - The ventilator check can be documented on the provided enterable ventilator flowsheet located on the iPad in the Ventilator Flowsheet tab.
- Technician Prompts
 - o Nothing is required from the patient.
 - The technician or faculty member should play the role of the RN either in person or on the phone so students can communicate that ventilator changes were made.
- Facilitator Questions
 - Analyze the vital signs: are they within normal limits?
 - Analyze the findings from the pulmonary exam: do you have any concerns?
 - Discuss the rationale behind the ventilator changes. Are these changes appropriate? Why or why not?
 - How do you know that mechanical ventilator is functioning correctly for this exact patient?

- What side effects can you expect from the mechanical ventilator?
- Tabbed iPad Prompts and Content
 - When the students have completed the "Expected Student Behaviors" as above, scan **QR Code: Facilitator**.
 - The iPad will read "You have been approved to proceed."
 - The iPad automatically advances to Level 2. (Students are not prompted to this.)

LEVEL 1/2

- When the Level 1 tab is tapped, the iPad reads, "The iPad is at Level 1."
- The Level 1 tab will automatically change to a Level 2 tab after **QR Code:** Facilitator is scanned.
- When the Level 2 tab is tapped, the iPad reads, "The iPad is at Level 2."

STATE 2

FAMILY MEMBER ARRIVES

Patient Overview

The patient remains unresponsive on mechanical ventilation. At this time, a family member arrives (preferably a wife - see the H&P) with a copy of the Advance Directive paperwork (a printable copy of this is located in Appendix C). Students should comfort the family member, answer all of the family members questions regarding the mechanical ventilator, and call for the RN.

• Expected Student Behaviors

- Provide comfort and communicate therapeutically with the family member of a dying patient
- Demonstrate appropriate communication with the interprofessional team
 - Students should call the RN to ensure the Advance Directive paperwork is taken care of according to Provider Orders.

Technician Prompts

- Nothing is required from the patient.
- Actor Prompts
 - The role of the family member (preferably the wife) can be played by the technician or a faculty member.
 - The family member is upset, but not overly distraught as Hector is chronically ill and has been in and out of the hospital often.
 - The family member should have a printed copy of the completed Advance Directive papers in hand see Appendix C.
 - Responses can include:
 - "Here are the Advance Directive papers the doctor was asking for. He wouldn't want any of this."
 - "Can you explain what that machine does (points to the ventilator)?"
 - "Why does he need those tubes in his mouth?"

- "Is he in any pain? He was really worried that he would hurt when the end came."
- "Can I talk to him? Does he even know that I'm here?"
- "How long before you can shut everything off?"
- Facilitator Questions
 - During this State, it may be helpful to "pause" occasionally and review communication techniques.
 - Discuss how choosing the "right" words are important when answering family member's questions.
 - o Discuss the Advance Directive paperwork with students.
- Tabbed iPad Prompts & Content
 - When the students have completed the "Expected Student Behaviors" as above, scan **QR Code: Facilitator**.
 - The iPad will read, "You have been approved to proceed."
 - Then, the iPad displays a plaque the reads, "About three hours have passed."

LEVEL 2/3

- When the Level 2 tab is tapped, the iPad reads, "The iPad is at Level 2."
- The Level 2 tab will automatically change to a Level 3 tab after **QR Code:** Facilitator is scanned.
- When the Level 3 tab is tapped, the iPad reads, "The iPad is at Level 3."

STATE 3

NEW ORDERS

Patient Overview

State 3 begins with a plaque the reads, "About three have passed." Then, the iPad alerts students to new orders with 1) a dinging sound and 2) a plaque that reads, "New orders are available." The orders are to remove the patient from the ventilator. In addition, two new tabs are available. One is the "Advance Directive" tab, which has the completed paperwork (printable copy located in Appendix C) and the other is a "Protocols" tab. This tab has an example Death Management Protocol that nursing uses after a patient's death. A printable copy of this is located in Appendix D.

Expected Student Behaviors

- o Review the patient's Advance Directive paperwork in the chart
 - This is critical as the orders must be in the chart before discontinuing life support.
- o Review the Death Management Protocol
 - While this is a nursing protocol, it is beneficial for the respiratory therapy students to know what happens after a patient's death in a health care facility.
- o Demonstrate appropriate communication with the interprofessional team
 - Students should communicate with the RN prior to and during the entire procedure.

Technician Prompts

- o Nothing is required from the patient.
- Actor Prompts
 - The family member has stepped out of the room to make some phone calls.
- Nurse Prompts
 - Someone such as a faculty member (maybe even nursing faculty) will need to play the role of the RN during this state.

• The students should communicate with the RN prior to and during the procedure to facilitate the removal of life support.

• Facilitator Questions

- Why is it important to ensure Advance Directives are in the chart prior to the removal of life support?
- Discuss the Death Management Protocol. How is this type of protocol beneficial?
- Tabbed iPad Prompts & Content
 - The iPad automatically advances to Level 4 after both the "Advance Directive" and "Protocols" tabs are viewed. (Students are not prompted to this.).

ORDERS

Provider Orders

Date	Time	Order
Today	5 hours ago	Emergency Department Orders
		Continuous telemetry and SpO2 monitoring
		Obtain current weight
		Insert Foley catheter for strict I &O
		Obtain accurate home medication history
		STAT Labs: CBC with differential, Chem 7, Magnesium, BNP,
		Liver Enzymes, CK & Troponin, INR
		STAT portable chest x-ray: respiratory failure
		STAT ECG
		STAT bedside echocardiogram
		STAT Respiratory Therapy Consult
		STAT BiPAP per protocol, O2 to keep SaO2 > 90%
		STAT ABG
		80 mg furosemide IV, STAT
		K+ replacement protocol
Today	4.5 hours	STAT intubation for hypercapneic respiratory failure

	ago	STAT Succinylcholine IV Push 1.5 mg/kg – once for intubation	
		STAT Etomidate IV Push 0.3 mg/kg – once for intubation	
		Post intubation: Propofol IV infusion @ 50-100 mcg/kg/minute	
		– titrate to achieve appropriate level of sedation (see adult ICU	
		sedation protocol)	
		STAT portable chest x-ray post intubation for tube placement Vent settings: Rate 18, Vt 500, PEEP +10, O2 to keep Sat > 90%	
		ABG's 30 minutes post placement on ventilator	
		Place OG tube	
		Consult Pulmonologypr. Hospíta, MD	
Today	3.5 hours	Transfer to ICU	
	ago	Start <u>Adult ICU Vent Bundle Protocol</u>	
		Vent Bundle protocol	
		Start Milrinone infusion: 0.125 mcg/kg/min	
		Start Furosemide infusion: 0.2 mg/kg/hr	
		K+ Replacement Protocol	
		Notify me when ABG's have resulted	
		Notify me immediately when wife arrives with Advance Directive papers and home medication listDr. Saw, MD	
Today	3 hours ago	Increase ventilator rate to 20 and PEEP to 12Dr. Saw, MD	
Today	2.5 hours	Place Advanced Directives in patient's chart	
	ago	Change Code Status to DNR	
		Consult Pastoral Care & arrange care conferenceDy. Saw., MD	
Today	now	Respiratory therapy to remove patient from ventilator	
		Leave ETT in place per family request, No supplemental O2	
		Discontinue all current medications, leave lines in place per	
		family request	
		Furn off all monitors in patients room	
		o mg Morphine IV now & every hour as needed	
		Notify me when patient expiresDr. Sam, MD	

MAR

Medication Administration Record

Scheduled				
Morphine IV, 10 mg, now	Scheduled	Last Given		
	Now			
Continuous Infusion				
PRN				
Morphine IV, 10 mg, every hour as needed		Last Given		
Discontinued	T			
Furosemide 80 mg IV, STAT	Discontinued	Last Given		
	5 hours ago	5 hours ago		
STAT Succinylcholine IV Push 1.5 mg/kg – once for	Discontinued	Last Given		
intubation	4.5 hours ago	4.5 hours ago		
STAT Etomidate IV Push 0.3 mg/kg – once for	Discontinued	Last Given		
intubation	4.5 hours ago	4.5 hours ago		
0.12% Chlorhexidine oral rinse 15 ml 2 times per day	Discontinued	Last Given		
	Now			
Exonxaparin 40 mg subcutaneously daily	Discontinued	Last Given		
	Now			
Ranitidine 150 mg capsule via gastric tube 2 times per	Discontinued	Last Given		
day	Now			
Propofol IV infusion - titrate to achieve appropriate	Discontinued	Last Given		
level of sedation (see Adult ICU Ventilator Bundle Protocol)	Now	Now		
Milrinone IV infusion, 0.125 mcg/kg/min	Discontinued	Last Given		
	Now	Now		
Furosemide IV infusion, 0.2 mg/kg/hr	Discontinued	Last Given		
, 0, 0,	Now	Now		
KCL (potassium chloride) Replacement Protocol, 10	Discontinued	Last Given		
mEq/100 ml over 1 hour	Now			

PROTOCOLS

The iPad displays the Death Management Protocol. A printable version is located in Appendix D.

ADVANCE DIRECTIVE

The iPad displays the Advance Directive form. A printable copy of this is located in Appendix C.

LEVEL 3/4

- When the Level 3 tab is tapped, the iPad reads, "The iPad is at Level 3."
- The Level 3 tab will automatically change to a Level 4 tab after both the "Advance Directive" and "Protocols" tabs are viewed.
- When the Level 4 tab is tapped, the iPad reads, "The iPad is at Level 4."

STATE 4

REMOVAL OF SUPPORT

- Patient Overview
 - The family member(s) arrives back in the room and the students remove the patient from life support with the RN present. This is all done in simulation and nothing is needed from the iPad.
- Expected Student Behaviors
 - o Remove patient from mechanical ventilation per Provider Orders
 - Provide comfort and communicate therapeutically with a family member of a dying patient during the removal of life support
 - o Demonstrate appropriate communication with the interprofessional team
 - Students should communicate with the RN prior to and during the entire procedure.
 - Document accurately
- Technician Prompts
 - Nothing is required from the patient.
 - Actor Prompts
 - The family member returns to the room and will remain in the room and at the bedside during the procedure. If asked to leave she refuses stating, "Hector wanted her at his side."
 - The family member is upset and very teary.
 - Responses can include:
 - "Will he die right away? How long will it take?"
 - "Will this hurt him? Please do everything you can to make sure he doesn't have any pain."
 - Nurse Prompts
 - Someone such as a faculty member (maybe even nursing faculty) will need to play the role of the RN during this state.

- This actor should discontinue the monitor, IV's, etc. as listed in the Provider Orders. In addition, this actor should administer the IV morphine.
- The students should communicate with the RN prior to and during the procedure to facilitate the removal of life support.
- Facilitator Questions
 - Why is it important to ensure Advance Directives are in the chart prior to the removal of life support?
- Tabbed iPad Prompts & Content
 - When the students have completed the "Expected Student Behaviors" as above, scan QR Code: Facilitator.
 - The iPad will read, "You have been approved to proceed."
 "Scenario objectives have been completed. You may exit at any time."
 - The Level 4 tab will automatically disappear (Students are not prompted to this.)

LEVEL 4/EXIT

- When the Level 4 tab is tapped, the iPad reads, "The iPad is at Level 4."
- The Level 4 tab will automatically disappear after **QR Code: Facilitator** is scanned.
- When the Exit tab is tapped the iPad reads, "Scenario objectives have been met. Are you sure you want to exit the game?"
 - o If "No" is selected, the iPad will return to the tabbed content.
 - o If "Yes" is selected, the iPad will let the student(s) exit and prompt them to complete an embedded 3-5 minute survey.

DEBRIEF

Nothing needed from the iPad.

QUESTIONS

- 1. How did you feel this scenario went?
- 2. What were the main issues you had to deal with when caring for Hector?
- 3. Review understanding of learning objective: Perform a focused respiratory assessment.
 - a. What concerns did you find during your physical assessment and evaluation?
 - b. Is this what you would expect in a patient with respiratory failure secondary to end-stage congestive heart failure? Why or why not?
 - c. If you could "do over" any part of Hector's assessment, what would it be and why?
- 4. Review understanding of learning objective: Recognize and respond to abnormal findings.
 - a. What abnormal findings did you encounter in this scenario?
 - b. How did you respond to those abnormal findings?
 - c. Were the findings what you expected? Why or why not?
 - d. Specifically comment about your evaluation of the chest xray. What were your findings?
- 5. Review understanding of learning objective: Evaluate objective and subjective data.
 - a. What abnormal findings did you find in the vital signs and/or physical assessment? How did you respond to these findings?
 - b. Explain how the mechanical ventilator will affect the ABG results.
- 6. Review understanding of learning objective: Implement and follow evidence-based standards and protocols
 - a. How did the protocol in today's scenario help the health care team in caring for Hector?
 - b. Explain the evidence behind using a "Ventilator Bundle."
 - c. How are evidence-based standards developed and why are they important?
- 7. Review understanding of learning objective: Safely manage mechanical ventilation

- a. Describe how mechanical ventilation works.
- b. If you could "do over" any part of the mechanical ventilation management, what would it be and why?
- 8. Review understanding of learning objective: Analyze the legal and ethical consequences of life support.
 - a. How did you feel about removing Hector from life support?
 - b. Was the process legal? Why or why not?
 - c. Did you feel the process was ethical? Why or why not?
 - d. What avenues do health care workers have if they feel the removal of life support is illegal and/or unethical?
- 9. Review understanding of learning objective: Demonstrate appropriate communication.
 - a. Explain how you communicated with Hector family member?
 - b. If the family member was unable to speak English, how would you adapt your communication techniques?
 - c. If you could "do over," how would you change your communication with Hector?
 - d. Why is it important to update other members of the interprofessional team with changes in patient condition, changes to the ventilator, etc.?
 - e. What role did interprofessional communication play in today's scenario?
 - f. If you could "do over," how would you change your interprofessional communication?
- 10. Review understanding of learning objective: Document accurately.
 - a. What is important to document in your assessments and interventions?
- 11. Summary/Take Away Points
 - a. "Today you cared for a Hispanic patient who was removed from life support as a result of the Advance Directive paperwork he completed with his family member. What is one thing you learned from participating in this scenario that you will take with you into your respiratory therapy practice?" (Each student must share something different from what the others' share.)

Note: Debriefing technique is based on INASCL Standard for Debriefing and NLN Theory Based Debriefing by Dreifuerst.

SURVEY

Print this page and provide to students.

Students, please complete a brief (2-3 minute) survey regarding your experience with this ARISE simulation. There are two options:

1. Use QR Code: Survey

Note: You will need to download a QR Code reader/scanner onto your own device (smartphone or tablet). There are multiple free scanner apps available for both Android and Apple devices from the app store.

This QR Code will not work in the ARIS app.



2. Copy and paste the following survey link into your browser.

https://ircvtc.co1.qualtrics.com/SE/?SID=SV_6Mwfv98ShBfRnBX

APPENDIX A

ADULT ICU VENTILATOR BUNDLE

General Nursing Orders

1. ☑ Goal sedation level: __2_ (+4 to -5) per Richmond Agitation Sedation Scale (RASS)

+4	+3	+2	+1	0	-1	-2	-3	-4	-5
Combative	Very Agitated	Agitated	Restless	Alert and Calm	Drowsy	Light Sedation	Moderate Sedation	Deep Sedation	Unarousable

- 2. ☑ Initiate Daily Awakening: Unless otherwise ordered, interrupt sedation each shift until patient is awake, can follow commands or until they become uncomfortable or agitated. Then resume infusion at 1/2 the previous rate and titrate to RASS Scale goal. Coordinate with weaning assessment.
- 3. Z Elevate HOB to between 30-45° unless contraindicated.
- 4. ☑ Oral Care: 15 ml of 0.12% chlorhexidine 2 x daily until 24 hours after extubation
- 5. Venous Thromboembolism (VTE) Prophylaxis:
 - ☑ Apply intermittent pneumatic compression to lower extremities
 - ☑ 40 mg enoxaparin subcutaneously daily
- 6. Stress Ulcer Prophylaxis: Give ranitidine
 - ☑ 150 mg capsule via gastric tube 2 x daily
 - □ 50 mg intravenously every 8 hours

Medication Orders

Analgesics:

- morphine in normal saline 1 mg/mL
 - □ 2-5 milligram intravenously every 10 minutes times 3 doses. If bolus doses ineffective notify provider. If effective continue with clinician controlled analgesia

SIMULATION

	\square 0.5-2 milligram intravenously every 15 minutes as needed for pain
•	fentanyl in normal saline 10 micrograms/mL
	☐ 25-50 microgram intravenously every 10 minutes times 3 doses. If bolus doses ineffective notify provider. If effective continue with clinician controlled analgesia
	\square 10-50 microgram intravenously every 10 minutes as needed for pain
•	hydromorphone in normal saline 0.2 mg/mL
	□ 0.2-0.6 milligram intravenously every 10 minutes times 3 doses. If bolus doses ineffective notify provider. If effective continue with clinician controlled analgesia
	\square 0.05-0.6 milligram every 15 minutes as needed for pain
Sedativ	ves /Anxiolytics
•	dexmedetomidine in NS 400 mcg/100 ml (4 mcg/ml)
	☐ 0.5 microgram/kilogram per hour continuous intravenous infusion; May titrate to 1.5 microgram/kilogram per hour to achieve ordered RASS sedation level (Note: this does not cover alcohol withdrawal)
•	propofol 10 mg/mL intravenous emulsion
	☑ 5 microgram/kilogram per minute continuous intravenous infusion; May titrate to 80 microgram/kilogram per minute to achieve ordered RASS sedation level

APPENDIX B

K + REPLACEMENT PROTOCOL

Protocol Guidelines

- 1. See Mg++ and Ca+ replacement protocols as needed
- 2. All IV electrolytes must be infused via pump
- 3. If K+ less than 3.0 and no Mg++ and Ca+ level in last 2 days, draw Mg++ and Ca+ after K+ run when repeat K+ level drawn
- 4. Use PO replacement for all patients unless NPO or if medically contraindicated per physician
- 5. PROTOCOL MUST BE RENEWED BY PHYSICIAN EVERY 72 HOURS

Protocol (Normal K+ Range = 3.5-5.4)

☐ Oral K+ Protocol

K+ Level	K+ Dose	Repeat K+ Level
< 3.2 – Notify MD	KCL 40 mEq po STAT then, 40 mEq by mouth every 4 hours x 2 doses	4 hours after last dose
3.3 – 3.8	KCL 40 mEq by mouth every 4 hours X 2 doses	Next AM
> 3.8	No treatment	

☑ IV K+ Protocol

E IV R. Hotocol					
	K+ 1				
K+ Level	Central access with cardiac monitor	Peripheral access or central access without cardiac monitor	Repeat K+ Level		
< 3.2 – Notify MD		10 mEq/100 ml over 1 hour x 6 doses	30 min after last dose infused		
3.3 – 3.8 20 mEq/100 ml over 1 hour X 2 doses		10 mEq/100 ml over 1 hourx 4 doses	Next AM		
> 3.8 No treatment		No treatment			

APPENDIX C



Advance Directive including Power of Attorney for Health Care

Overview

This is a legal document, developed to meet the legal requirements for Wisconsin. This document provides a way for a person to create a Power of Attorney for Health Care and other documentation that will meet the basic requirements for this state.

This advance directive allows you to appoint another person and alternate people to make your health care decisions if you become unable to make these decisions for yourself. The person you appoint is called your **health care agent**. This document gives your health care agent authority to make your decisions only when you have been determined incapable by your physicians to make them. It does not give your health care agent any authority to make your financial or other business decisions. In addition, it does not give your health care agent authority to make certain decisions about your mental health treatment.

Before completing this document, take time to read it carefully. It also is very important that you discuss your views, your values, and this document with your health care agent. If you do not closely involve your health care agent, and you do not make a clear plan together, your views and values may not be fully respected because they will not be understood.

If you want to document your views about future health care, but do not want to or cannot use this advance directive, ask your health organization or attorney for advice about alternatives.

This is an advance directive for:	
Name Hector Fernande	Date of Birth 9/6/19XX
Telephone (Home)	(Work)(Cell)
Address 101 Main Stree	+
City Anytown	State/ZIP WI 99999

January, 2014 For additional copies visit: www.honoringchoiceswi.org.

The name "Honoring Choices Wisconsin" is used under license from the Twin Cities Medical Society Foundation.

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Part 1: My Health Care Agent

If I am no longer able to make my own health care decisions, this document names the person I choose to make these choices for me. This person will be my health care agent. This person will make my health care decisions when I am determined to be incapable of making health care decisions as provided under Wisconsin law. I understand that it is important for my health care agent and me to have ongoing discussions about my health and health care choices.

When selecting someone to be your health care agent, choose someone who knows you well, who you trust, who is willing to respect your views and values, and who is able to make difficult decisions in stressful circumstances. Often family members are good choices, but not always. Choose someone who will closely follow what you want and will be a good advocate for you. Take time to discuss this document and your views with the person(s) you choose to be your health care agent(s).

Your health care agent must be at least 18 years old and may not be one of your health care providers, or an employee of your health care provider, unless he or she is a close relative. You may also designate an alternate and second alternate health care agent.

Marile 111001100 Per month	ez Re	lationship <u>u</u>	rife	
Telephone (Home)	(Work)		(Cel	1) 555 - 555 - 0100
Address 101 Main Street	1			
city Anytown		State/ZIP	WI	99999
If this health care agent is unable a health care agent is: \mathbb{N}		make these ch	oices for	me, then my next choice fo
Second choice (alternate l	nealth care a	gent):		
Name		lationship		
Telephone (Home)	(Work)		(Cel	1)
Address				
City		Co. 15 1, 2020		
City		State/ZIP		
If this alternate health care agen	t is unable or un			
If this alternate health care agent	t is unable or unit	villing to make		
If this alternate health care agen choice for a health care agent Third choice (2nd alternat	t is unable or unvis: Na	willing to make	e these ch	oices for me, then my next
If this alternate health care agent choice for a health care agent Third choice (2nd alternat Name	t is unable or unvis: Nac	willing to make agent):	e these ch	oices for me, then my next
If this alternate health care agent choice for a health care agent Third choice (2nd alternat Name	t is unable or unvis: Na e health care Re (Work)	willing to make agent):	e these ch	oices for me, then my next
If this alternate health care agent choice for a health care agent Third choice (2nd alternat Name	t is unable or unvis: Na e health care Re (Work)	willing to make agent): elationship	e these ch	oices for me, then my next
If this alternate health care agent choice for a health care agent Third choice (2nd alternat Name	t is unable or unvis: Nac	willing to make agent): elationship State/ZIP	e these ch	oices for me, then my next

Part 2: General Authority of the Health Care Agent

I want my health care agent to be able to do the following:

Draw a line through (e.g., Arrange for) anything listed below that you do **not** want your health care agent to do.

- Make choices for me about my medical care or services, like tests, medicine, and surgery. If treatment already has been started, my health care agent can keep it going or have it stopped based on my stated instructions or my best interests.
- Interpret any instruction I have given in this form or given in other discussions according to my health care agent's understanding of my wishes and values.
- Review and release my medical records and personal files as needed for my medical care.
- Arrange for my medical care and treatment in Wisconsin or any other state, as my health care
 agent thinks is appropriate.
- Determine which health care professionals and organizations provide my medical treatment.
- Make decisions about organ and tissue donation (anatomical gifts) after my death according to my known wishes or values.

Limitations on Mental Health Treatment

Pursuant to Wisconsin statutes my health care agent may not admit or commit me on an inpatient basis to an institution for mental diseases, an intermediate care facility for persons with an intellectual disability, a state treatment facility or a treatment facility. My health care agent may not consent to experimental mental health research or psychosurgery, electroconvulsive treatment or drastic mental health treatment procedures for me.

To complete the next 3 sections:

Initial or check the box beside one statement in each section. If you do not mark any box in a section, your choice is "no" according to Wisconsin statute. This means if you do not indicate a choice, a court may make such a decision and not your health care agent.

Admission to a Nursing Home or Community-Based Residential Facility My health care agent may admit me to a nursing home or community-based residential facility for short-term stays for recuperative care or respite care. Agent authority to admit me to a nursing home or community-based residential facility for the purpose of long-term care: Yes, my health care agent has authority, if necessary, to admit me to a nursing home or community-based residential facility for a long-term stay. This is subject to any limits I set in this document. No, my health care agent does not have authority to admit me to a nursing home or community-based residential facility for a long-term stay. Unless I choose "yes," I can be admitted to a long-term care facility for a long-term stay

nless I choose "yes," I can be admitted to a long-term care facility for a long-term stay nly with a court order.
. Withholding or Withdrawal of Feeding Tube
Yes, my health care agent has authority to have a feeding tube withheld or withdrawn from me, unless my physician advises that, in his or her professional judgment, the withholding or withdrawing will cause me pain or discomfort. This is subject to any limits I set in this document.
No, my health care agent does not have authority to have a feeding tube withheld or withdrawn from me.
nless I choose "yes," a feeding tube can be withdrawn or withheld from me only ith a court order.
. Health Care Decisions during Pregnancy
Yes, my health care agent has authority to make health care decisions for me if I am pregnant. This is subject to any limits I set in this document.
No, my health care agent does not have authority to make health care decisions for me if I am pregnant.
nless I choose "yes," health care decisions during pregnancy can be made for me nly with a court order.
Does not apply . I am either a male or no longer capable of becoming pregnant.

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Part 3: Statement of Desires, Special Provisions, or Limitations

You are not required to provide any instructions or make any selections in this section.

My health care agent shall make decisions consistent with my stated desires and values. He or she is subject to any special instructions or limitations that I may list here. The following are some specific instructions for my health care agent and/or physician providing my medical care. If there are conflicts among my known values and goals, I want my health care agent to make the decision that would best represent my values and preferences. If I require treatment in a state that does not recognize this advance directive, or my health care agent cannot be contacted, I want the instructions to be followed based on my common law and constitutional right to direct my own health care.

If you choose **not** to provide any instructions, your health care agent will make decisions based on your oral instructions or what is considered your best interest. If you choose **not** to provide any instructions, it is recommended that you draw a line and write "no instructions" across the section.

If I reach a point where there is reasonable medical certainty that I will not recover my ability to know

Instructions Regarding Life-Prolonging Treatments

Initial or check the box beside the statement or statements you agree with.

who I am, who my family and friends are, or where I am, I want to be kept comfortable and clean, and I want my health care agent to: Stop or do not start medical treatments that might be used to prolong my life. Treatments I would not want if I were to reach this point include but are not limited to: feeding tubes including intravenous (IV) hydration, respirator/ventilator, and cardiopulmonary resuscitation (CPR). If I suffer this type of condition, in my view, the potential benefits of supportive medical treatments are outweighed by the burdens of those treatments. Continue or start feeding tubes including intravenous (IV) hydration if needed, but stop all other medical treatments including, but not limited to, a respirator/ventilator and cardiopulmonary resuscitation (CPR). I want my agent to be able to make decisions for me about life-sustaining treatment. Follow my instructions as provided below. **Pain and Comfort** Initial or check the box beside this statement if you agree. If I reach a point where efforts to prolong my life are stopped, I still want medical treatments and nursing care that will make me comfortable. The following are important to me for comfort (If you don't write specific wishes, your physician and nurses will provide the best standard of care possible):

Cardiopulmonary Resuscitation (CPR) My CPR choice listed below may be reconsidered by my health care agent in light of my other instructions or new medical information, if I become incapable of making my own decisions. If I do not want CPR attempted, my physician should be made aware of this choice. If I indicate below that I do not want CPR attempted, this choice, in itself, will not stop emergency personnel from attempting CPR in an emergency. Initial or check the box beside the statement you agree with. I want CPR attempted unless my physician determines any one of the following: I have an incurable illness or injury and am dying; OR I have no reasonable chance of survival if my heart stops; OR I have little chance of long-term survival if my heart stops and the process of resuscitation would cause significant suffering.

I do not want CPR attempted if my heart stops. To the extent possible, I want to allow a natural death.

Other instructions or limitations I want my health care agent to follow:

LET ME GO PEACEFULLY

When I am nearing my death and cannot communicate, I want my friends and family to know I have the following thoughts and feelings:

If I am nearing my death, I want the following:

List the type of care, ceremonies, etc. that would make dying more meaningful for you.

LOST RIGHTS

Person or people I want my health care agent to include when making health care decisions: I ask that my health care agent make a reasonable effort to include the following person or people in

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my health care decisions if there is time: _

	ation, parish, synagogue, or worship group in (city)A\syTOWN phone number of the congregation, parish, synagogue, or worship group is: ? Ittempt to notify someone there if I am unable to give authorization to do so.	二.				
I am not religious or spiritually affiliated.						
fter m	My Death y death the following are my instructions. If my health care agent does not have authority lese decisions, I ask that my next of kin and physician follow these requests if possible.	r to				
xampl	ation of my Organs or Tissue (Anatomical Gifts) as of organs are kidney, liver, heart, and lungs. Examples of tissue are eyes, skin, bones, alves. Initial or check the box beside the one statement you agree with.	and				
	After I die, I wish to donate any parts of my body that may be helpful to others. To make your wishes legally effective, register at www.donorregistry.wisconsin.gov					
	After I die, I wish to donate only the following organs and tissue:					
X	I do not wish to donate any part of my body.					
	opsy r check the box beside one choice, or both A and B.					
	A.I would accept an autopsy if it can help my blood relatives understand the cause of m death or affect their own health care choices.	У				
	B. I would accept an autopsy if it can help advance medicine or medical education.					
X	C.I do not want an autopsy performed on me.					

Part 4: Making the Document Legal

This document must be signed and dated in the presence of two witnesses who meet the qualifications explained below.

My Signature

I am thinking clearly, I agree with everything completed this document willingly.	that is written in this document, and I have
My signature HECTOR FERNANCE2	Date
If I cannot sign my name, I ask the following person	n to sign for me
Signature of the person who I asked to sign this doo	cument for me

Statement of Witnesses

By signing this document as a witness, I certify I am:

- · At least 18 years old.
- Not related by blood, marriage, domestic partnership, or adoption to the person signing this
 document.
- Not a health care agent appointed by the person signing this document.
- · Not directly financially responsible for this person's health care.
- · Not a health care provider directly serving the person at this time.
- Not an employee (other than a social worker or chaplain) of a health care provider directly serving the person at this time.
- · Not aware that I am entitled to or have a claim against the person's estate.

I know this to be the person identified in the document. I believe him or her to be of sound mind and at least 18 years old. I personally witnessed him or her sign this document, and I believe that he or she did so voluntarily.

Signature Suo Shith	Date <u> </u>
Print name Lisa Smith	
Address 2000 Main Street	
City Anytown	State/ZIP W ¥ 99999
Witness Number Two: Signature Angela Meyer Address 2000 Main Street	Date <u>X/XX/2-0X X</u>
Address 2000 Main Street City Anytown	State/ZIP WI 99999

APPENDIX D

DEATH MANAGEMENT PROTOCOL

- 1. Notify primary MD/Covering MD of patient's death.
 - a. Only physicians, coroners, medical examiners or deputy medical examiners may pronounce death. A nurse, physician's assistant, paramedic or emergency medical technician may not pronounce a person dead and may not be listed on the Notice of Removal Form as a pronouncer of death.
 - b. A registered nurse or licensed practical nurse may report observations that indicate an apparent death to a physician by telephone.
 - c. The nurse should report to the physician immediately upon observation of the apparent death. The physician may then exercise professional judgment in pronouncing the individual dead.
 - i. There should be no unnecessary delay in reporting to the physician. The nurse should record the information given to the physician and the physician's response in the person's medical record.
 - ii. The date and time of death that is recorded in the medical record must reflect the date and time of the pronouncement of death by the physician, coroner, deputy coroner, medical examiner or deputy medical examiner. This is the same date and time of death that must be placed on the death certificate.
- If a patient dies while in restraints or seclusion, is on one or more psychotropic
 meds, or is a suspected suicide, the death must be reported within 24 hours to the
 Department of Health and Human Services using the Patient Death
 Determination form.
 - a. Scene Preservation
 - i. If a coroner or medical examiner determines that a case requires an actual scene investigation it is important that no one inadvertently alters potential evidence at the death scene.
 - ii. The coroner or medical examiner will determine if the body may be moved or removed, if the family or others may enter the death

- scene, and what, if any, of the items at the death scene should be preserved.
- iii. Any medical device attached to or introduced into the body should be left in its original position. The coroner or medical examiner will need to document all of the medical intervention rendered. This information is important for the pathologist who performs the autopsy and is especially important for trauma cases, no matter how long the person has been in the facility.
- 3. Notify STATLINE of death (1-866-894-2676). The Eye Bank will determine medical suitability for potential tissue/eye donation.
 - a. RN/Recovery Coordinator may talk with family regarding potential tissue donation after suitability is determined.
 - b. Complete consent for tissue donation with legal next of kin if applicable
- 4. Notify family ensure accurate contact number and name before disclosing information
- 5. Notify spiritual care call on-call chaplain
- 6. Determine if patient is a Medical Examiner's case. Call the County Medical Examiner and document in EMR. Discuss with police if evidence needs to be preserved in the following conditions:
 - (a) All deaths in which there are unexplained, unusual or suspicious circumstances.
 - (b) All homicides.
 - (c) All suicides.
 - (d) All deaths following an abortion.
 - (e) All deaths due to poisoning, whether homicidal, suicidal or accidental.
 - (f) All deaths following accidents, whether the injury is or is not the primary cause of death.
 - (g) When there was no physician, or accredited practitioner of a bona fide religious denomination relying upon prayer or spiritual means for healing, in attendance within 30 days preceding death.
 - (h) When a physician refuses to sign the death certificate.
- 7. Notify House Supervisor. Let them know if Medical Examiner, Autopsy and/or tissue/eye recovery involved.

- 8. Obtain the morgue cart from the morgue.
- 9. Complete the Notice of Removal of Human Corpse form and take to ED Registration.
- 10. Take body to morgue
 - Place body in the cooler on the morgue cart with pillow under patient's head.
 - b. If autopsy is requested/ordered, place the "Autopsy pending sheet" over the body.
 - c. Body can only be left in the morgue for 24 hours. Inform legal next of kin that the decision on the funeral home must be made within 24 hours of death.
- 11. Notify the funeral home when the body is in the morgue. (Notify them if patient weighs > 300 lb/136 kg).
 - a. If tissue recovery and/or autopsy will occur, let the Funeral Home know they will receive a second call when the body is ready to be picked up.

Guidelines for Tissue/Eye Donation or Autopsy Cases

- 1. <u>Cooling procedure for Tissue Donor</u>
 - a. Nothing is required if body is placed in morgue cooler
- 2. <u>Cooling procedure for Eye Donor</u>. After the family has left:
 - a. Gently irrigate both eyes with sterile saline
 - b. Gently close the eyelids with gloved fingers; apply a cool compress of saline soaked gauze over the closed eyelids. Ensure the gauze covers the lid line.
 - c. Elevate the head to decrease chances of bleeding/bruising and apply a light ice pack over closed eyelids.
 - d. Document the date/time eye care was completed on the ice pack
 - e. Cover patient with sheet and transport to the morgue. (Eye bank will coordinate all recovery details.)
- 3. Autopsy Guidelines if applicable: Place "autopsy pending" sheet on body
 - a. "Medical Examiner ordered" requires no family consent. The Medical Examiner makes all arrangements including the release of the body to the funeral home.
 - b. Physician requested: Complete the Permission for Postmortem Examination form. Next of kin or POA signature is required. Contact pathology for a post mortem examination.
 - c. Family requested: Arrangements and payments are their responsibility.

CREDITS

Adult ICU Vent Bundle Protocol adapted from ICU Ventilator Bundle at

 $\label{lem:http://webcache.googleusercontent.com/search?q=cache:f4XoACzGpP4J:orders.benefis \\ \underline{.org/ordersdoc/Critical\%2520Care/ICU\%2520Ventilator\%2520Bundle.pdf+\&cd=7\&hl=en\&ct=clnk\&gl=us} \ and$

Adult K+ Replacement Protocol adapted from Adult Electrolyte Replacement Protocol from Louisiana University at

https://webcache.googleusercontent.com/search?q=cache:h_wLaA-ov2EJ:https://www.medschool.lsuhsc.edu/emergency_medicine/docs/Adult%2520Elec_trolyte%2520Replacement%2520Protocol%2520%2520MCLN%25200006%2520J.pdf+&cd=9&hl=en&ct=clnk&gl=us

Advance Directive document from the Wisconsin Medical Society, "Honoring Choices Wisconsin." Retrieved from:

https://www.wisconsinmedicalsociety.org/professional/hcw/

CXR image created from: Case courtesy of Dr Derek Smith, Radiopaedia.org, rID: 40123 and Case courtesy of Dr Tomas Jurevicius, Radiopaedia.org, rID: 48089

Death Management Protocol adapted from the Wisconsin Department of Health Services.

Retrieved from: https://www.dhs.wisconsin.gov/regulations/report-death/proc-reportingdeath.htm

Lung sounds used with permission from Thinklabs Medical, LLC, Centennial, CO at $\underline{\text{www.thinklabs.com}}$

Medication information from National Library of Medicine: Daily Med at http://dailymed.nlm.nih.gov/dailymed/ Pitting Edema picture from https://en.wikipedia.org/wiki/Heart_failure

Pitting Edema picture with cellulitis from

https://commons.wikimedia.org/wiki/File:Pitting Edema2008.jpg

Pitting Edema picture without cellulitis from

https://commons.wikimedia.org/wiki/File:Combinpedal Right to Left.jpg

REFERENCES

- American Heart Association (2016). Get with the Guidelines: Heart Failure. Retrieved from http://www.heart.org/HEARTORG/Professional/GetWithTheGuidelinesHFStroke/Get-With-The-Guidelines---HFStroke UCM 001099 SubHomePage.jsp
- Cleveland Clinic. (2017). B-type Natriuretic Peptide (BNP) Blood Test. Retrieved from https://my.clevelandclinic.org/health/articles/b-type-natriuretic-peptide-bnp-bloodtest
- Colucci, MD, W. (April 2017). Treatment of Acute Decompensated Heart Failure: Components of Therapy. Retrieved from <a href="https://www.uptodate.com/contents/treatment-of-acute-decompensated-heart-failure-components-of-therapy?source=search_result&search=chf&selectedTitle=3~150
- Davis's Drug Guide. (2000-2017). Furosemide. Retrieved from https://www.drugguide.com/ddo/view/Davis-Drug-Guide/51345/all/furosemide
- Dunlay, MD, S. & Colucci, MD, W. (April 2017). Management of Refractory Heart Failure with Reduced Ejection Fraction. Retrieved from <a href="https://www.uptodate.com/contents/management-of-refractory-heart-failure-with-reduced-ejection-graction?source=search_result&search=end%20stage%20chf&selectedTitle=1~150#H21
- File, MD, T. (April 2017). Risk Factors and Prevention of Hospital-acquired and Ventilator-associated Pneumonia in Adults. Retrieved from

 $\underline{https://www.uptodate.com/contents/risk-factors-and-prevention-of-hospital-acquired-and-ventilator-associated-pneumonia-in-acquired-and-ventilator-associated-pneumonia-in-acquired-and-ventilator-associated-pneumonia-in-acquired-and-ventilator-associated-pneumonia-in-acquired-and-ventilator-associated-pneumonia-in-acquired-and-ventilator-associated-pneumonia-in-acquired-and-ventilator-associated-pneumonia-in-acquired-and-ventilator-associated-pneumonia-in-acquired-and-ventilator-associated-pneumonia-in-acquired-and-ventilator-associated-pneumonia-in-acquired-and-ventilator-associated-pneumonia-in-acquired-and-ventilator-associated-pneumonia-in-acquired-and-ventilator-associated-pneumonia-in-acquired-and-ventilator-associated-pneumonia-in-acquired-and-ventilator-associated-pneumonia-in-acquired-and-ventilator-associated-pneumonia-in-acquired-and-ventilator-associated-pneumonia-in-acquired-and-ventilator-associated-pneumonia-in-acquired-and-ventilator-associated-pneumonia-in-acquired-and-ventilator-associated-acquired-acqu$

adults?source=search result&search=ventilator%20bundle&selectedTitle=1~150

Fonarow, MD, G. C. & Weber, DO, J.E. (2004). Rapid Clinical Assessment of Hemodynamic Profiles and Targeted Treatment of Patients with Acutely Decompensated Heart Failure.

75998203

Clinical Cardiology, 27 (Supplement V). Retrieved from

https://deepblue.lib.umich.edu/bitstream/handle/2027.42/107535/4960271702 ftp.pd f?sequence=1

- Friedrich, E. & Bohm, M. (May 2007). Management of End Stage Heart Failure. Heart, 93(5), 626-631. Retrieved from https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1955535/
- Hyzy, MD, R. (April 2017). Noninvasive Ventilation in Acute Respiratory Failure in Adults.

 Retrieved from <a href="https://www.uptodate.com/contents/noninvasive-ventilation-in-acute-respiratory-failure-in-adults?source-search result&search=noninvasive%20positive%20pressure%20ventilation&selectedTitle=1~150
- Joint Commission (2016). Specifications Manual for Joint Commission National Quality Measures. Downloaded from:

 $\frac{https://manual.jointcommission.org/releases/TJC2016A/AdvancedCertificationHeartF}{ailure.html}$

- Mayo Foundation for Medical Education and Research. (1995-2017). Test ID: CK. Retrieved from http://www.mayomedicallaboratories.com/test-catalog/Clinical+and+Interpretive/8336
- Menaka, MD, P. & Douketis, MD, J. (April 2017). Prevention of Venous Thromboembolic

 Disease in Acutely Ill Hospitalized Medical Adults. Retrieved from

https://www.uptodate.com/contents/prevention-of-venous-thromboembolic-disease-in-acutely-ill-hospitalized-medical-

adults?source=search result&search=vte%20prophylaxis%20ventilator&selectedTitle=3 ~150#H79882310

- Nohria, A., Lewis, E., & Stevenson, L. (2002). Medical Management of Advanced Heart Failure.

 Journal of the American Medical Association, 287 (5), 628-640. Retrieved from

 http://jamanetwork.com/journals/jama/fullarticle/194604
- Prescott, H. & O'Brien, J. (2010). Prevention of Ventilator-associated Pneumonia in Adults.

 F1000 Med Report (2, 15). Retrieved from

 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2948395/
- Ranitidine: Drug Information. (1978-2017). Retrieved from https://www.uptodate.com/contents/ranitidine-drug-information?source=see link
- Stella, L. (2013). Understanding Measures for Heart Failure Treatment, American Nurse Today, 8(2). Retrieved from https://americannursetoday.com/understanding-core-measures-for-heart-failure-treatment/
- Tleyjeh, MD, I., Burdetter, MD, S., & Baddour, MD, L. Cellulitis. Antimicrobe. Retrieved from http://www.antimicrobe.org/e1.asp
- WebMD, Inc. (2017). Hemoglobin A1c (HbA1c). Retrieved from

 http://www.emedicinehealth.com/hemoglobin a1c hba1c/page2 em.htm#what are n

 <a href="https://www.emedicinehealth.com/hemoglobin a1c chart
- Yancy CW, Jessup M, Bozkurt B, Butler J, Casey DE Jr, Drazner MH, Fonarow GC, Geraci SA, Horwich T, Januzzi JL, Johnson MR, Kasper EK, Levy WC, Masoudi FA, McBride PE, McMurray JJV, Mitchell JE, PetersonPN, Riegel B, Sam F, Stevenson LW, Tang WHW, Tsai EJ, Wilkoff BL. (2013) ACCF/AHA guideline for the management of heart failure: a report of the American College of Cardiology Foundation/American Heart Association Task Force on Practice Guidelines. Circulation. 2013;128:e240–e327. DOI: 10.1161/CIR.0b013e31829e8776



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