

HEART FAILURE

Estimated Time: 30 minutes • Debriefing Time: 30 minutes



Scan to Begin



Patient Name: Hector Fernandez

SCENARIO OVERVIEW

Hector Fernandez is a 62-year-old Hispanic male patient who presents to a clinic for a routine follow-up visit for his heart failure. He also needs a urinalysis, capillary puncture (blood glucose), and ECG at this visit. When students “meet the patient,” he complains of “shakiness” and states that he “took his insulin this morning but hasn’t had time to eat.” Students should then accurately prioritize what task to complete first by prioritizing tasks presented in a multiple-choice question format.

LEARNING OBJECTIVES

1. Demonstrate professionalism in a healthcare setting
2. Practice standard precautions
3. Obtain vital signs
4. Obtain patient history
5. Employ elements of therapeutic communication based upon theories of psychology
6. Assist physician with patient care: routine examinations
7. Analyze the causes, signs and symptoms, diagnosis, treatment, and prevention of common diseases and disorders of the cardiovascular system
8. Instruct patients in the collection of specimens
9. Perform capillary puncture and obtain blood glucose reading
10. Obtain clean catch midstream urine sample and perform urinalysis using reagent strips
11. Obtain ECG
12. Prioritize tasks based on patient's current status

CURRICULUM MAPPING

WTCS PROGRAM OUTCOMES

- Provide patient care in accordance with regulations, policies, laws, and patient rights
- Demonstrate professionalism in a healthcare setting
- Demonstrate safety and emergency practices in a healthcare setting

SIMULATION LEARNING ENVIRONMENT & SET-UP

PATIENT PROFILE

Name: Hector Fernandez

Weight: 86.4 kg (190 lbs)

DOB: 09/06/19xx

Allergies: Penicillin (Hives)

Age: 62

Code Status: Full code

MR#: 41219

Ethnicity: Hispanic

Gender: Male

Spiritual Practice: Catholic

Height: 175 cm (5 ft 10 in)

Primary Language: Spanish

EQUIPMENT/SUPPLIES/SETTINGS

Patient

- Street clothes
- Has Ziploc bag of various medications with him

Monitor Settings

- Vitals: HR 68, RR 15, BP 188/94, Temp 37.4, O2 sat 100% on RA, Pain 2/10

Supplies

- Equipment to obtain vitals including oxygen saturation
- Note: QR codes for medications can be scanned for images of medication bottles. The following medications are included in this scenario:
 - Aspirin 81 mg PO
 - Furosemide 40 mg PO
 - Lisinopril 10 mg PO
 - Metoprolol tartrate 25 mg PO
 - Atorvastatin 40 mg PO
 - Digoxin 0.125 mg PO
 - Acetaminophen 500 mg PO
 - Regular insulin vial

- Lantus insulin vial
- “Snack” such as orange juice or crackers, or glucose tablets if that is what is used in your area for hypoglycemic patients.

QR CODES

REPORT 	PATIENT 	LEG 	BLOOD GLUCOSE MONITOR 
BOTTLE OF URINALYSIS STRIPS 	URINE SPECIMEN CUP 	URINALYSIS REAGENT STRIP 	BLOOD GLUCOSE RESULT 
ECG MACHINE 	ECG RESULT 	ATORVASTIN 	DIGOXIN 
FUROSEMIDE 	LISINOPRIL 	METOPROLOL 	ACETAMINOPHEN 

ASPIRIN



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.
 - 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.
- Discuss the simulation “Learning Objective(s)” (on iPad) as well as any other Prebrief materials
- Get “Report” on iPad
 - Possible Facilitator Questions
 - What is your plan of care for this patient?
- Play the “Patient” video on iPad
 - Possible Facilitator Questions
 - After listening to the patient’s statement, how will you prioritize the tasks you need to accomplish at this visit?
- The Patient Profile is displayed

- A prioritization multiple choice question is immediately displayed on the iPad for the student to answer: “Prioritize the tasks in order in which they should be accomplished based on the patient’s current status:”
 - A) Reconcile medications
 - B) Obtain an ECG
 - C) Instruct patient on how to obtain a clean catch midstream urine sample
 - D) Obtain a capillary blood glucose reading.
- Students should order these responses in the proper order using drop down boxes, then tap Submit Answer.
 - The correct answer is “obtain a capillary blood glucose reading” as first priority, with the other tasks in any order.
 - If students answer incorrectly, they receive a message to “Try again. Based on Mr. Fernandez’s status, there is something else that receives top priority in the tasks you should perform.”
 - If students select the same task twice, they receive a message, “All tasks must be completed. Make sure each task is only selected once.”
 - Students should continue to make selections until they select the correct answer and receive a message in green responding they are correct with the rationale for why this is correct.
 - After this question is answered correctly, the student is asked to “Verbalize the steps you will take to obtain a capillary blood glucose reading.” The student may view the provided checklist for reference.
 - The next plaque displays an image of the glucometer with the results “55” displayed. The message states, “Interpret the meaning of this result in terms of Mr. Fernandez’s diabetes disease process. Verbalize how you will address this result?”
- The student receives an update that reads, “Mr. Fernandez has received a snack and is feeling better.”
- A second question is provided: “Which of the following tasks would you like to perform next?”
 - A) Reconcile patient’s medications
 - B) Obtain an ECG
 - C) Instruct patient on how to obtain a clean catch midstream urine sample
- Students may also elect to view chart forms at this time

- Students should then prioritize what task to complete next. This list of tasks will continue to appear until all tasks are completed.
- If student selects “view chart forms,” the iPad exits to the Patient Profile plaque, where students can view chart forms by tapping on the menu icon in the upper left-hand corner of the screen. They can go back to the task question at any time by tapping on the “Task List” tab.
- If student selects “Reconcile patient’s medications,” an enterable medication form is displayed
 - **QR codes** for various medication labels are provided above. These can be attached to medication bottles. Students should scan the QR code, then enter accurate information on the medication reconciliation record on the iPad.
 - Students start typing the first few letters of a medication, then select the correct medication and dose from the drop-down selections provided.
 - In the Notes section: students should enter the instructions for how to take this medication, then tap “submit”
 - If a student enters an error, they can tap “Discontinue” to remove the medication
 - After submit is tapped, the iPad will go back to the task list (with this choice now removed)
 - Note: The Facilitator should check for accuracy of medication entry
 - If student selects “Obtain an ECG,” a plaque will display showing an ECG machine with the message “Verbalize the steps you will take to obtain an ECG.” An option to view the corresponding checklist is provided.
 - After “Continue” is tapped, an ECG with normal sinus rhythm is then displayed with the message, “Review the ECG for accuracy.” Note: this image is zoomable.
 - If students select “Instruct the patient on how to collect a clean catch midstream urine sample,” a plaque will display that shows a urine specimen cup and the text: “Verbalize how you will instruct Mr. Fernandez to obtain a urine sample for urinalysis.” An option to view the corresponding checklist is provided.

- The next plaque displays the reagent strips with the text, “Verbalize the steps you will take to test the urine using the reagent strips.” An option to view the corresponding checklist is provided.
- The next plaque displays a dipped reagent strip and the bottle with the text, “Verbalize the key components tested in a urinalysis using reagent strips.”
 - When all tasks have been completed, the iPad displays “You have completed the learning objectives for this scenario and may exit.”
- At this point, the iPad go back to the Patient Profile screen where students may click on the menu icon in upper left-hand corner to view the chart forms listed below for this patient. Students may also enter vital signs at this time.

TASK LIST

- Returns to the “task” question described above and allows the students to self-direct through the required tasks to be completed for this visit.

CHECKLISTS

- Procedure checklists for obtaining a capillary blood glucose, obtaining a clean catch midstream urine specimen, obtaining an ECG and performing a urinalysis using reagent strips are located here. Copies are also located in Appendix B to optionally print out for student use.

VITALS

- The iPad shows the “enterable” vitals screen.
 - If values are entered, they are checked for accuracy against following values (+/- 5): HR 68, RR 15, BP 188/94, Temp 37.4, O2 sat 100% on RA, Pain 2/10

PROBLEM LIST

Problem List

Currently Known Medical Problem(s)

1. Chronic Heart Failure, NYHA Class 2
2. Coronary Artery Disease
3. Diabetes Type 2
4. Chronic Kidney Disease, G3a
5. Obstructive Sleep Apnea
6. Hypertension
7. Osteoarthritis
8. Tinea pedis, recurrent
9. Gastroesophageal Reflux
10. Allergies, seasonal

CURRENT MEDICATION LIST

Facilitator Note: This is an enterable form for students to enter medications. Scan the medication QR codes to view realistic medication bottles.

Medication <input type="text"/>	Notes <input type="text"/>	<input type="button" value="Submit"/>
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Current Medication	Daily Med Link	Notes	Edit
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PATIENT EDUCATION

Patient Education handout on Heart Failure is provided under this tab for students to use to coach the patient on managing his disease process. Appendix A contains a printable Patient Education handout for optional student use.

EMERGENCY CONTACT INFORMATION

Emergency Contact Information

Contact	Contact Information
Wife: Maria Fernandez	Phone: 555-555-0156 Address: 220 South Main Street Anytown, WI

LEVEL

When the Level 1 tab is tapped, 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” until all assigned tasks have been completed.

- 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 CARE AND COMPLETE TASKS

- Overview
 - State 1 information is provided for reference if this scenario is completed in the simulation lab. After students answer the first prioritization question, they will view a second question and at that time they can select “View Chart Forms.” At this point they can enter the room and take care of the patient. They can click on the “Task List” tab at any time and go through the tasks and associated questions listed above under Prebrief.
- Expected Student Behaviors if done in simulation lab:
 - Introduce themselves to the patient
 - Verify patient identity with name and date of birth
 - Communicate therapeutically regarding patient concerns
 - Prioritize tasks and immediately obtain a capillary blood glucose reading.

QR code: Blood glucose monitor is provided if a glucometer is not available

Scan the **QR code: Blood glucose result** to see an image of the glucometer with the result displayed
 - Provide a snack for the patient
 - Complete the three remaining tasks in any order. Checklists are provided for reference for each procedure under the “Checklists” tab.
 - Perform medication reconciliation

QR codes for medication bottles are provided. Students should enter the correct information on the medication reconciliation record on the iPad
 - Instruct patient how to collect a clean midstream urine sample

A **QR code: Urine specimen cup** is provided if a real specimen cup is not available
 - Perform a urinalysis using reagent strips

QR code: Urinalysis strips (bottle with color codes) and **QR code: Reagent strips** are provided if real items are not available

- Obtain a patient history.
- Communicate findings to the provider using correct medical terminology
- Coach patients regarding treatment plan for heart failure using Patient Education handouts
- Technician Prompts
 - Patient brought his medications in, but does not understand what they are for, or how to take them as prescribed. He is feeling shaky and hungry because he took his insulin but hasn't eaten yet. There is somewhat of a language barrier since his primary language spoken is Spanish. He can speak English, but does not understand medical "lingo." When students explain how to perform the urine sample, he needs reinforcement in how to do the procedure.
 - Initial patient responses can include:
 - "I'm feeling shaky. I took my insulin this morning but didn't have time to eat this morning."
 - "I have a lot of different doctors. Last week, Doctor Nuevez told me I needed to start taking insulin."
 - When students are performing the capillary blood glucose make statements like:
 - "I hate poking my fingers every day."
 - After the reading displays: "What does that number mean? What is it supposed to be?"
 - After a snack of juice or crackers are provided: "I feel better now. Not so shaky."
 - When students instruct patient how to obtain a clean midstream urine sample, act slightly confused and ask questions like:
 - "So, I pee into the cup a little, pee into the toilet, then pee into the cup again?"
 - Express confusion, especially if any medical terms like "meatus" or "urethra" are used.
 - "I usually have to pee more than that cup... do you have a bigger container I can use? In the hospital, they had a bigger urinal."
 - When students obtain an ECG, ask questions like:

- “What is wrong with my heart?”
- “Will that machine shock me like those shows on TV?”
- “They told me my heart is failing... But I don’t know what that means.”
- When students are performing the medication reconciliation, say things like:
 - “When I feel short of breath, I take all of the medicine in this bag. On days I feel well, I don’t take anything to save money.”
 - “I don’t know what that medication is for. I just take what the doctors tell me.”
 - “That white one makes me have to go to the bathroom all the time, so on work days I can’t take it. I can’t ‘hold it’ until my break time!”
- If students ask about the patient’s current weight, you may simulate measuring weight and/or state result is “200 pounds.” Ask them to convert this to kg.
- If students ask the following questions while obtaining a patient history, provide these responses:
 - Do you feel short of breath today?
 - Answer: “A little.”
 - Do you have a cough?
 - Answer: “Yes, sometimes.”
 - Is your cough productive?
 - “I don’t understand what ‘productive’ means.
 - Do you bring up anything when you cough?
 - “Yes, sometimes.”
 - What does it look like?
 - “White and... what word do you use... frothy.”
 - Do you take any other medications?
 - “When I have pain and it won’t go away with this medication, my wife gives me one of her pain pills.”

- Do you know what medication your wife gives you?
 - “No. It is “poquito” and white.
 - Do you smoke?
 - “Yes.”
 - Does anyone in your household smoke?
 - “Yes, my wife does.”
 - How much alcohol do you drink?
 - “A couple every day when I get home from work.”
 - Do you watch how much cholesterol, fat and salt you eat?
 - “I’m not sure, I just eat what my wife gives me.”
 - What kind of food do you generally eat every day?
 - “Coffee and eggs, tortillas, burritos and refried beans.”
- Possible Facilitator Questions
 - For each procedure, as it is completed, ask questions like:
 - Why is the first drop of blood wiped away?
 - Why is it important to obtain a mid-stream sample?
 - What information is gained by performing a urinalysis?
 - Why is it important that the ECG leads placed in the correct locations?
 - What information does the ECG tell the provider?
 - When entering medications: What is the mechanism of action of this medication? (Facilitator note: links are provided for each medication in the medication reconciliation record to view medication information.)
 - What are general topics to address when providing care for a patient with heart failure?
 - How will you modify your approach for someone who does not speak English as their primary language?

- What coaching is important to provide patients for with heart failure for self-management of their condition at home?
- Scenario Ends when the student has completed all of the assigned tasks, expected behaviors and communicated their findings with the provider.

DEBRIEF

Nothing needed from the iPad.

QUESTIONS

1. **Reaction:** How do you feel this scenario went? (Allow students to vent their emotional reactions before delving into learning objectives.)
2. **Review understanding of learning objectives: Demonstrate professionalism in a healthcare setting**
 - a. How did you professionally manage the patient visit when there may be a language barrier?
3. **Review understanding of learning objectives: Practice standard precautions**
 - a. Describe the standard precautions you used while caring for Mr. Fernandez.
4. **Review understanding of learning objectives: Obtain vital signs**
 - a. Review the vital signs you obtained for Mr. Fernandez. Are these within normal limits for a 62-year-old male?
5. **Review understanding of learning objectives: Obtain patient history**
 - a. What kind of health history questions are important to review with a patient with heart failure?
6. **Review understanding of learning objectives: Employ elements of therapeutic communication based upon theories of psychology**
 - a. Did Mr. Fernandez exhibit any “cues” that indicated you should utilize some therapeutic communication?
 - b. How did you respond to his concerns? Was it effective?
 - c. If you could “do over” while communicating with Patrick, is there anything you would do differently?
7. **Review understanding of learning objectives: Assist physician with patient care: routine examinations**
 - a. When assisting with patient care of a patient with heart failure, what data is especially important to be obtained?
8. **Review understanding of learning objectives: Coach patients regarding: treatment plan**

- a. Describe the handout that you reviewed with a patient with heart failure. What are some important topics to emphasize for self-management of this condition?
9. Review understanding of learning objectives: Perform capillary puncture and obtain blood glucose reading.
 - a. Evaluate your explanation of the blood glucose procedure to Mr. Fernandez. How did it go?
 - b. Evaluate your performance of the capillary blood glucose procedure. Is there anything you would do differently if you could “do over?”
10. Review understanding of learning objectives: Obtain clean catch midstream urine sample and perform urinalysis using reagent strips
 - a. Evaluate your explanation of the clean urine catch procedure to Mr. Fernandez. How did it go? If you could “do over,” would you explain anything in a different manner?
 - b. Why is the clean catch procedure important for an accurate sample?
 - c. Explain how you evaluated the reagent strip.
11. Review understanding of learning objectives: Obtain ECG
 - a. Explain the proper procedure for attaching the ECG leads.
 - b. How will you evaluate the ECG results for accuracy? What are some examples when you need to re-do the ECG?
12. Review understanding of learning objectives: Prioritize tasks based on patient’s current status
 - a. How did you prioritize the tasks that needed to be accomplished during Mr. Fernandez’s visit today? Why?
 - b. If you had to “do over,” would you do anything differently?
13. Summarize/Take Away Points:
 - a. “In this scenario you assisted in caring for a Hispanic male patient with chronic heart failure who arrived for a routine visit with several tasks to accomplish, but he stated he was feeling shaky after taking his insulin. What is one thing you learned from participating in this scenario that you will take into your nursing practice?” (Ask each student to share something unique from what the other students 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
 - a. 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.
 - b. This QR Code will not work in the ARIS app.



2. Copy and paste the following survey link into your browser:
 - a. https://ircvtc.co1.qualtrics.com/SE/?SID=SV_6Mwfv98ShBfRnBX

APPENDIX A: HEART FAILURE PATIENT EDUCATION HANDOUT

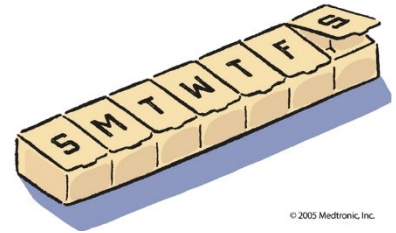
What Can I Do to Manage Heart Failure?

Although heart failure cannot be cured, it can be managed well. Your treatment plan may include medicines, surgery, implantable medical devices, or a combination of these approaches. There are also a lot of things you can do to help improve your condition. Together with proper medical care and careful monitoring, good self-care can help you feel better, stay out of the hospital, and live a longer life.

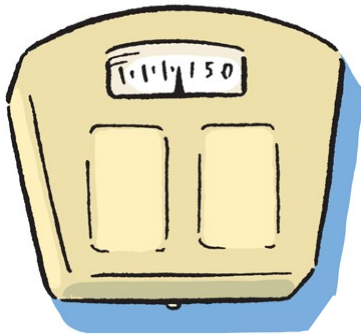
To manage your heart failure, it is best if you do the following:

Take your medicines regularly as prescribed by your doctor.

When the medicines that your doctor has prescribed are taken regularly and at the correct doses, they can make you feel better, reduce hospitalizations, and help you live longer. Experts in heart failure call many of these medicines “lifesaving.” Since your medication is very important, when traveling, keep your medication



in your carry-on luggage and bring it with you on the plane. It is helpful to keep your medicine organized, and remember to refill your prescriptions before you travel so that they do not run out.

Weigh yourself every day and write it down.

Daily changes in weight are usually the result of water weight. By weighing yourself every day at the same time, you can help monitor whether your body is retaining fluid due to heart failure. Even though you may feel the same, a gain of just 3 to 4 pounds over a few days is a sign of worsening congestion that must be treated. If treated, your heart and lungs can function more easily and you may feel more comfortable. If left untreated, it may become more serious and require hospitalization.

Follow a low-sodium (low-salt) diet.

Heart failure can cause your body to retain sodium and result in fluid buildup. The extra fluid makes your heart work harder and your symptoms get worse.

A low-sodium diet generally means that you eat no more than about 2,000 milligrams (mg) of sodium per day. That amount is less than 1 teaspoon of salt from all sources, including the salt that is already in your food.

To reduce the sodium in your diet, stop adding additional salt to your food. Avoid processed foods –especially canned, boxed, or bagged foods – and eat more fresh vegetables and fruit. Be sure to review the nutritional information labels on all packaged foods for sodium content, and decrease the total amount of salt you eat per day. Pay close attention when eating at restaurants. Many restaurants will tell you nutritional information of foods if you ask. They will hold salt when cooking if you ask and will serve salad dressing and sauces/gravies on the side. Also pay attention to certain foods that contain a large amount of water, such as head lettuce or watermelon. Although following a low- sodium diet might be a challenge, by following the diet recommended by your doctor or nurse you will gain better control of your condition.



Get regular physical activity.

Heart failure can make you feel tired. One of the ways to feel better is to keep physically active through a regular exercise program. In general, start slowly and increase your exercise gradually. Talk to your doctor about an exercise program that is best for you. Exercise can be a highly valuable plan to improve your condition.

Quit smoking.

Quitting smoking is one of the best things you can do for your heart and overall health. Smoking damages your blood vessels, increases your blood pressure, and causes lung disease in addition to other problems. Quitting smoking is strongly recommended for all people with heart disease, including heart failure. Talk to your doctor or nurse about new methods for helping people quit smoking.



Stay connected socially.



Your family and friends can help. Don't keep your condition a secret. Let your family and friends support you and help you stay with your treatment plan. Having an active social life can also help keep your mind off your problems and give you a more positive outlook on life. Participating in activities that you enjoy reminds you of why you want to take good care of yourself and stay healthy. Plan some fun activities that will reduce stress and give you energy.

Monitor your symptoms daily and learn when to call your doctor.

You know your heart failure symptoms best. Write down when you notice your symptoms are getting better or worse, or when you develop new symptoms. This information can help alert you as to when you should call your doctor and can also help your doctor make changes to your treatment.

Feel free to ask your doctor and nurse any questions you might have about your treatment plan.



Adapted by the SCA Prevention Medical Advisory Team from the IMPROVE HF registry toolkit. This material is intended to be educational. It is not intended to replace the information provided to you by your healthcare providers and may not be directly applicable for your individual clinical circumstance.

Please refer to the manufacturers' prescribing information and/or instructions for use for the indications, contraindications, warnings, and precautions associated with the medications and devices referenced in these materials.

Sponsored by Medtronic, Inc.

May 2007

APPENDIX B: PROCEDURE CHECKLISTS

PROCEDURE CHECKLISTS**OBTAINING CAPILLARY BLOOD GLUCOSE MEASUREMENT USING GLUCOMETER**

- Sanitize hands
- Assemble equipment
- Verify expiration date on container of test strips
- Calibrate the glucometer (if needed)
- Identify patient and explain the procedure to the patient
- Ask the patient when the last time something was eaten and document appropriately
- Remove a test strip from the container and immediately replace lid on container
- Insert test strip into glucometer
- Open gauze packet
- Clean appropriate anticipated puncture site with antiseptic wipe and allow to dry
- Apply gloves
- Perform a finger puncture at appropriate site with lancet
- Dispose of lancet appropriately
- Wipe away first drop of blood with a gauze pad
- Place finger in dependent position until a large drop of blood is formed
- Apply the drop of blood to target area on the test strip
- Place gauze over puncture site and apply pressure
- Observe digital display of test results
- Remove test strip from meter and discard appropriately
- Check puncture site and apply adhesive bandage, if needed
- Remove gloves and sanitize hands

- Document the test results correctly
- Properly store the glucometer

CLEAN CATCH MIDSTREAM SPECIMEN COLLECTION INSTRUCTIONS

- Sanitize hands
- Identify patient and explain procedure to patient
- Label specimen container
- Instruct male patient to:
 - Wash hands and open antiseptic towelettes, and remove lid from specimen container
 - Pull down undergarments and stand in front of the toilet
 - Retract the foreskin of the penis if uncircumcised
 - Cleanse area around meatus and the urethral opening by wiping each side of the meatus with a separate antiseptic towelette.
 - Use a third towelette to cleanse directly across meatus
 - Discard each towelette into toilet after use
 - Void a small amount of urine into the toilet
 - Collect the next amount of urine by voiding into the sterile container without touching the side of the container.
 - Fill container approximately half full with urine.
 - Void the remaining amount of urine into the toilet
 - Replace lid on specimen container
 - Wipe area dry with tissue, flush the toilet and wash hands
- Test specimen or prepare it for transport to an outside laboratory

TESTING URINE USING REAGENT STRIP

- Sanitize hands
- Assemble equipment
- Check expiration date of reagent strips
- Apply gloves
- Remove reagent strip from container and recap immediately
- Do not touch test areas with fingers
- Mix the urine specimen thoroughly
- Remove specimen container lid and completely immerse reagent strip in urine
- Remove the strip immediately and run the edge against the rim of the urine container
- Hold reagent strip in a horizontal position and place as close as possible to the color blocks on color chart
- Read the results at the exact reading times specified on the color chart
- Dispose of strip into regular waste container
- Remove gloves and sanitize hands
- Document results accurately.

OBTAINING 12 LEAD ELECTROCARDIOGRAM

- Sanitize hands
- Check expiration date on electrodes
- Identify patient and explain the procedure
- Instruct patient that he or she will need to lie still, breathe normally, and not talk during the procedure
- Ask patient to remove appropriate clothing
- Assist patient to supine position on table
- Make sure patient's arms and legs are adequately supported on the table
- Drape the patient properly

- Position the electrocardiograph with the power cord pointing away from the patient and not passing under the table.
- Prepare the patient's skin for application of the disposable electrodes
- Apply the limb electrodes
- Properly locate each chest position and apply the chest electrodes
- Connect the lead wires to the electrodes
- Arrange the lead wires to follow body contour
- Plug the patient's cable into machine and properly support cable
- Turn on electrocardiograph and enter the patient's data
- Remind the patient to lie still and press the AUTO button to run the recording
- Check to make sure the standardization mark is 10 mm high
- Check the recording for artifacts and correct them if they occurred
- Inform the patient he or she can move and talk
- Disconnect the lead wires
- Remove and discard the disposable electrodes
- Assist patient from the table
- Sanitize hands
- Document procedure accurately
- Place the recording in the appropriate place to be reviewed by the provider
- Return equipment to proper place.

CREDITS

Heart Failure Patient Education handout from American Heart Association, Get with the Guidelines HF Clinical Tools Library. Downloaded from http://www.heart.org/HEARTORG/Professional/GetWithTheGuidelines/GetWithTheGuidelines-HF/Get-With-The-Guidelines-HF-Clinical-Tools-Library_UCM_305817_Article.jsp#.WVZ7a03fPIU

Medication information from National Library of Medicine: Daily Med at <http://dailymed.nlm.nih.gov/dailymed/>

Image of medication bottles from www.shutterstock.com

Picture of edema from Wikipedia at <https://en.wikipedia.org/wiki/Edema>

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