The Heart Institute
at Lawnwood Regional Medical Center

The Cardiovascular Intensive Care Unit

VISITING HOURS
10am - 2pm, 4pm - 6pm, 7:15pm - 8pm
It is our goal to make the patient and family experience as pleasant as possible. We know that this can be a very stressful time. We hope that the information we have provided will help answer questions and alleviate some of your concerns.

We will be available for all questions or concerns throughout the hospital stay. It is our goal to provide excellent care to our patients, while keeping their family members well informed. We strive to be compassionate and kind.

Our staff is highly-skilled and specially trained to care for patients admitted to the Cardiovascular Intensive Care Unit & Cardiovascular Step-Down Unit.

Above all else, we are committed to the care and improvement of human life. In recognition of our commitment, we strive to deliver high quality, cost effective health care to the community we serve. Prepare to be impressed.

Sincerely,
The Heart Institute
THE UNIT
The Cardiovascular Intensive Care Unit is a 12-bed unit. State-of-the-art equipment has been incorporated into all aspects of patient care. **Our nursing staff is highly experienced, with extensive training in the care of these patients and the care of all critically ill adult patients.** Our nursing staff is highly-skilled and specially trained to care for any patient who is admitted into the Cardiovascular Intensive Care Unit. The nurses are experienced and have advanced training in the care of critically ill patients. Our nurses are required to pass a competency test for critical care nursing upon entry and are tested yearly thereafter. Continuing education is required for maintaining their nursing license.

Some of the patients we care for in the CVICU are:

**Patient after open heart surgery:**

♥ **CABG (Coronary Artery Bypass):** Blockage of artery(s) in heart are bypassed with a chest artery (internal mammary artery) or a section of leg vein.

♥ **Valve replacement/repair** (for “leaking” or “stiff/blocke”d heart valve)

♥ Other Cardiac Surgeries

**Patient after vascular surgery:**

♥ **Repair of an aneurysm:** When the wall of a blood vessel becomes thin and bulges

♥ Repair of a Carotid, Femoral- Popliteal or other artery which is blocked or obstructed

**Patient after Thoracic Surgery:**

♥ A surgical incision into the chest wall or lung
Patient before, during, or after a heart attack, which requires extensive monitoring:

- **Myocardial infarction** (MI) or heart attack occurs when an area of the heart muscle does not receive any oxygen-rich blood, due to a blocked coronary artery.
- **Angioplasty/Stent**: catheter inserted to open a blocked heart artery
- Patients requiring special medications for blood pressure
- **IABP (Intra Aortic Balloon Pump)**: a catheter is inserted with a balloon-like end. It sits inside the body, near the heart and inflates with the heart beat, allowing the heart to rest.

Patient that has had a procedure for coronary artery disease:

- Blockage of one or more artery(s) in the heart
- Dysfunction of one or more valves in the heart
- **CHF (Congestive Heart Failure)**: Heart muscle is weakened and does not pump blood well

**Electrical activity of heart not functioning properly:**

- **Arrhythmia**: Irregular heart rhythm
- **Pacemaker**: slow signal
OUR TEAM

Each patient will have a doctor who will admit him/her into CVICU. This doctor may call in other doctors, specialists, to help manage the patient’s care. Other team members whom you may see in the CVICU are:

- Director
- Registered Nurses (RN)
- Respiratory Therapists
- Dieticians
- EKG Technicians
- Laboratory Personnel
- Pharmacists and Technicians
- Radiology Technicians
- Housekeepers
- Case Managers
- Physical Therapists
- Speech Therapists
- Clergy (your own is welcome)
- Unit Secretaries
- Transporters
- Nursing Assistants
- Volunteers
- Public Relations
- Guest Relations

All hospital personnel will wear a name tag identifying them. The tag will also provide you with their title.
VISITING HOURS:
10am - 2pm, 4pm - 6pm, 7:15pm - 8pm

A waiting room is provided just outside the unit. There is a telephone, television, coffee and restrooms for your use and convenience. This is where the nurse and doctor will look for family members.

- Please register with the volunteer on duty. Please have the volunteer call CVICU to obtain a beeper. This will allow you travel throughout the hospital, yet we can get in contact with you if necessary. **If we beep you; PLEASE do not panic.** Simply pick up a phone from any location in the hospital & call 2876. Generally we will page you for a physician to speak with you or update you on the status of your family member. If you choose not to use a beeper, please advise the volunteer when leaving the waiting room, so we will know how and where to contact you.

- In the event that there is no volunteer in the waiting room, please call 2876 to request permission to visit your family member. There are times when visiting is restricted due to patient care and various other reasons.

- While in CVICU, visiting is normally limited to family-members only. We request that the number of visitors be limited to **two** at a time.

- The hospital and CVICU staff recognizes the importance of family in the patient’s recovery. Our visiting hours are from These are general guidelines and we realize that there are special circumstances. Exceptions can be made for these special circumstances. Please speak to the nurse if you feel that you need to make other arrangements and he/she will guide you.
• We may ask all visitors to leave the unit at any time during these hours. We only do this when a patient is entering or in the case of an emergency. Please understand that this can occur frequently, but that we also provide the same dignity & privacy to your loved ones.

• We do also limit visiting hours, as necessary, for the care of the patient and other patients in the unit, physician examinations, during procedures, or the patient may be simply resting

• We encourage hand washing before entering and upon leaving our patient rooms.

• If you suspect that you are ill, please notify the nurse for further instructions on visiting.

• We discourage children under the age of 14 to visit. It can be very scary for the child. Also, this is to protect both the child and patient from being exposed to any germs. Exceptions may be made on an individual basis depending on the circumstances. Please contact your nurse for any questions regarding this matter.

• If your loved ones procedure or surgery is scheduled prior to 8am, you will need to use the Emergency Room Entrance to enter the hospital. They will call the unit to obtain permission for you to enter.
WHAT TO EXPECT IN CVICU

While you are waiting, if you have any questions or concerns, please feel free to have the volunteer contact us & we will be happy to assist you. We have beepers available at the CVICU Secretary desk.

If your family does not want to tour the unit there are some important things that they should know:

• Surgery will usually take 2-4 hours, but the time required to place lines, give anesthesia and transport the patient to and from the operating room is much longer. Generally speaking, it will be 4-6 hours (or longer) until the entire process is complete.

• We like to stress the importance of not focusing on time lines or becoming anxious or worried if it is longer than predicted. Time lines are very general and used only as a guide. Please ask your doctor his/her expectation of the amount of time required for you/your loved ones surgery.

• The Cardiac Surgeon will usually speak to the family after the surgery is complete.

• Patients are brought to CVICU immediately after surgery and will remain there for 1-3 days. Once a patient has arrived in CVICU, there is usually a 20 minute to 45 minute wait, until you may see the patient. This time is spent receiving report from the operating room team, setting up the lines and equipment, obtaining labs, EKG and Chest X-Ray. We understand the importance of seeing your loved one and allow you in briefly as soon as we can.

• Many of the tubes and equipment that may be seen at the beside are described in this pamphlet under the heading: ‘Sights and Sounds in CVICU’"
• The volunteer or nurse will notify the family when they can visit. Normally Visiting time is limited during the recovery phase and is individualized by the nurse. This is a time of very close monitoring of vital signs, allowing the patient to wake and begin breathing on their own. Also, families often cannot be allowed to visit due to problems or procedures with other patients in the CVICU.

• There will be a lot of equipment in the room. The nurse will explain to the family what it is for. There are a lot of bells and beeps. There is no need to worry. A nurse will be at the bedside the whole day & night of your surgery. “The monitors have several different sounds, each with different meaning. This alerts the nurses to the cause, even if they are somewhere else in the unit.”

• Patient comfort is a priority of ours and we frequently ask if the patient’s need anything more for pain. Adequate pain management is essential for breathing & healing. We administer a continuous Pain/Sedative medication. It will help with both pain and anxiety. Most people have very little or no pain during this time period.

• You may be kept asleep with medications until we are sure your vital signs are stable. We then allow you to awaken.

• Many patients require a ventilator after surgery; due to the medications that have been given during the surgery. A ventilator is also called a respirator or breathing machine. It supports breathing and delivers oxygen to your body until able to do it by their self. A tube is inserted in through the mouth or nose and past the vocal cords. This means that you will not be able to speak while it is in place. Once you are awake, your vital signs are stable, and you can breathe on your own, the tube will be removed.
• This tube is normally in for 4-8 hours. Every patient is different and evaluated on an individual basis. Age, sensitivity to medications, body temperature, signs of bleeding and changes in vital signs are some factors that may increase or decrease the amount of time.

• After the breathing tube is taken away we will start breathing exercises with you. Coughing, deep breathing, and turning is also very important. The nurse and respiratory therapist will help you. We will also show you how to splint your incision with performing these exercises. (breathing tube)

• The exercises are the same ones that you were taught prior to surgery. At first, it is normal to only able to do ½ as much on the incentive spirometer. Use the incentive spirometer every hour or two.

• The morning after surgery the heart surgeon will round and decide when tubes and equipment will be removed by the nurse. Sometimes this will not occur until the next day. Once these tubes are removed, a few hours later walking begins. We will start slowly and increase the amount of walking and sitting time as able.

• It is important for us to instruct on Sternal Precautions. These are precautions necessary for the protection of the surgical area. The sternum has been opened and wires are placed to close the bone. We will provide you with a “heart pillow” and talk about/demonstrate these precautions, for activities such as turning, coughing, lifting and getting out of bed or into a chair safely. Later in your recovery physical therapy will review the precautions and ensure proper performance.
• Eating usually begins the morning after your surgery. Nutrition is important to help you body heal. Any special diet needs or changes will be addressed later by a dietician & the nurses.

• We will increase your independence as able. We will also increase your activity.
  * We want walking to be done at least four times a day.
  * We encourage sitting in a chair for longer and longer periods of time.
  * We will begin to encourage independence more and more as strength improves.

• Bowel function slows down after surgery due to the medications, decreased activity, decreased appetite and food intake. It usually takes 3–4 days for appetite to return to “normal”.

• Pain will be assessed by the nurse frequently, medications will be given as needed. This is very important for deep breathing and progressive increase in activity.

• After surgery, some will develop an irregular heart rate or rhythm. There are many causes and the change is usually not harmful or even felt. The doctor may give medications to help regulate the change. It is not life threatening and quite common.

Channel 28:
• Has been setup so that you may watch a video that can help prepare you and your family for your upcoming heart surgery. It is informative and can help you identify questions that you may wish to ask your nurse or others on the team.
BELONGINGS • FLOWERS
TELEPHONE CALLS

• Please limit belongings to toiletries, dentures, eye glasses, hearing aides and slippers. All other items should be taken home until the patient transfers from CVICU. (Except for specialized items approved by the doctor or nurse)

• **Do not send flowers to the patient**, while in CVICU. Space is limited and flowers can carry germs that can be harmful to our patients.

• Also limit other items such a balloons or “nick- nacks”, due to limited space.

• We encourage you to bring in pictures or cards that may be displayed in the room. You may also write a personalized note on the blackboards located in each room.

• There are no telephones at the patient bedside in CVICU. Many of our patients are in “Critical” condition and require a quiet atmosphere.

• You are welcome to call CVICU for updates.

• Although we ask that one member of the family is designated to call for these updates. The designee should share the update with the other family members. This will decrease the time that the nurse is away from the care of your family member.

• We will supply a 4-digit privacy code, which must be given to the nurse before we can give you any information. This is to ensure the patients privacy.
• Please refrain from calling during the hours of six thirty and seven thirty (both am and pm). This is when the nurses from each shift report to one another on the care and needs of your loved one.

• We understand the necessity of communicating with family and friends, however, our facility does not allow the use of cellular phones within the hospital. All cell phone calls must be made outside the building. You may see some of our hospital staff using certain types of cellular phones. They have been designed especially for safe usage in the hospital.
RECOVERING AFTER SURGERY: IN THE HOSPITAL

After surgery, you’ll spend at least a day in the intensive care unit (ICU). Highly trained nurses will monitor you closely. When you are ready, you will be moved to a general care room. You’ll stay there for 5-6 days. While there, you’ll recover further and prepare to go home.

RECOVERING AFTER SURGERY: AT HOME

You’ve just come through one of the major events in your life. So give yourself time to get better little by little. Expect good days and bad days. At first you may tire easily. But being active will help you recover. Find the right balance between rest and activity. And follow all instructions you are given.
DURING YOUR RECOVERY, CALL YOUR DOCTOR IF YOU:

• Are short of breath while resting, or after only a little exertion.

• Notice your heart beating fast or slow or skipping beats (palpitations).

• Gain more than 2 pounds in 1 day(s) or 5 pounds in 7 days, or your legs swell (retaining fluids).

• Feel dizzy or light headed.

• Have fever of 100°F or higher.

• Notice changes in your incision, such as swelling, oozing, or getting red or tender. (Call your surgeon.)

• Have pain in your chest or shoulder that gets worse instead of better.

• Have clicking or grinding in your breastbone.
Your doctor prescribed an anticoagulant for you. This medication prevents the formation of blood clots. It also helps keep existing blood clots from growing larger.

**HOME CARE**

- Follow the fact sheet that came with your medication. It tells you when and how to take your medication. Ask for a sheet if you didn’t get one.
- Protect yourself from injury.
- Take your anticoagulant at the same time every day.
- If you miss a dose of this medication, take it as soon as you remember—unless it’s almost time for your next dose. In that case, just wait and take your next dose at the normal time. Don’t take a double dose.
- Go for your blood tests as often as directed.
- Don’t take any other medications without checking with your doctor first.
- Tell all other health care providers (dentists, chiropractors, home health nurses) that you take an anticoagulant. It’s also a good idea to carry a medical ID card or wear a medical-alert bracelet.
- Use a soft-bristled toothbrush and an electric razor.
- Don’t go barefoot. Don’t trim corns or calluses yourself.
WHEN TO CALL YOUR DOCTOR, IF YOU ARE ON ANTICOAGULANTS

Call your doctor immediately if you have any of the following:

- **Bleeding that doesn’t stop in 10 minutes**
- **A heavier than normal menstrual period or bleeding between periods**
- **Coughing or throwing up blood**
- **Diarrhea or bleeding hemorrhoids**
- **Dark colored urine or black stools**
- **Red or black and blue marks on the skin that get larger**
- **Dizziness or fatigue**
- **Chest pain or trouble breathing**

POSSIBLE SIDE EFFECTS

Tell your doctor if you have any of these side effects. Don’t stop taking the medication unless your doctor tells you to. Mild side effects include the following:

- Nausea
- Diarrhea
- Poor or no appetite
PARTS OF THE HEART

• The **superior vena cava** carries oxygen-poor blood from the upper part of the body to the right atrium.

• The **inferior vena cava** carries oxygen-poor blood from the lower part of the body to the right atrium.

• The **right atrium** receives oxygen-poor blood from the body through the superior vena cava and the inferior vena cava.

• The **tricuspid valve** allows oxygen-poor blood to flow forward from the right atrium to the right ventricle.

• The **right ventricle** pumps oxygen-poor blood through the pulmonary valve.

• The **pulmonary valve** allows oxygen-poor blood to flow forward to the pulmonary artery.

• The **pulmonary artery** carries oxygen-poor blood to the lungs to receive oxygen.

• The **pulmonary veins** carry oxygen-rich blood from the lungs to the left atrium.

• The **left atrium** receives oxygen-rich blood from the lungs through the pulmonary veins.

• The **mitral valve** allows oxygen-rich blood to flow forward from the left atrium to the left ventricle.

• The **left ventricle** pumps oxygen-rich blood through the aortic valve.

• The **aortic valve** allows oxygen-rich blood to flow forward to the aorta.

• The **aorta** carries oxygen-rich blood to the rest of the body, except the lungs.
The heart has four valves that open and close to allow blood to flow forward through the heart.

Top view of the normal heart showing the coronary arteries and four valves
SIGHTS & SOUNDS OF CVICU

While in the Cardiovascular Intensive Care unit a patient is under constant monitoring and observation. Vital signs will be taken frequently.

• All patients have at least one I.V. line.
• A television is provided in every room for diversional activity.
• There is a nurse call system at each bedside.
• There are many machines in the rooms.
• As a patient improves, the many of the machines will gradually be discontinued.
• Please feel free to ask questions about the different equipment and tubes that you see.
• The more that you & your family understand the more comfortable you should feel.
• Almost every piece of equipment has its own alarm. These alarms do not necessarily mean that anything is wrong or an emergency. Our staff is trained to respond to all of these sounds and know how to tell them apart.

Some of the machines or lines/tubes that you may see are:

HEART MONITORS:
All patients in CVICU will be placed on a heart monitor. There are central monitoring stations at the nurses desks that receive the heart rhythm & vital signs from the room. The nurse can monitor the vital signs from both desks and from other patients rooms. Please do not panic if the nurse is not in the room. He or she has the ability to monitor you or your loved one throughout the unit.
VENTILATOR:
Many patients after surgery will be connected to a ventilator. (Also called a respirator, or breathing machine). This machine functions to support breathing and deliver oxygen to the patient until they are able to do it by themselves. The tube is inserted into the patient's mouth or nose and past the vocal cords. Due to this the patient will not be able to speak while it is in place. This tube is called an Endotracheal tube.

OXYGEN:
Many patients require oxygen while in CVICU. It is delivered to the patient with a tube that is placed under the nose or with a mask. The ventilator also delivers oxygen.

INTRAVENTOUS PUMPS:
I.V. (intravenous) pumps regulate the amount of fluid and medication administered to a patient. There may be one or several in each room.

ARTERIAL LINE:
This is a small tube similar to an I.V. catheter. It is inserted in the wrist or groin artery, by the doctor, and gives constant blood pressure readings. It also allows the nurses a way to draw blood without any additional needle sticks. When it is in the wrist, a brace-like support is placed on the wrist to protect it from kinking. If it is in the groin, we teach the importance of keeping your leg straight and not to bend at the hip. Also, that the head of the bed can only be elevated slightly and bed rest is required. We will also need to assist with any turning and positioning. This is all to prevent the catheter from kinking or being dislodged.

SWAN GANZ CATHETER:
Is a special “yellow” catheter that has been inserted through a blood vessel into the heart. It will determine valuable information about the pressures in the heart & how well the heart is working. Knowing this information is very important after cardiac surgery.
**Temporary Pacemaker:**
A temporary pacemaker may be required if the electrical system of the heart is not working properly, or as a preventative measure after cardiac surgery. It will stay in place until it has been determined that it is no longer necessary or until a permanent pacemaker is placed.

**Intra Aortic Balloon Pump:**
A catheter is inserted with a balloon-like end. It sits in the body, near the heart and inflates with the heart beat, allowing the heart to rest, for a period of time. This catheter also monitors the patient’s blood pressure. An extra set of EKG leads are placed on the patient and attach to a machine that usually is located near the bottom of the bed. It looks like a lap-top mounted to the top of a machine.

**Chest Tubes:**
Patients who have had chest or heart surgery or injury may require tubes to drain fluid from the chest or lungs, or to help the lungs expand. These tubes are connected to a plastic container that sits on the floor. Blood or fluid usually is seen in these tubes; this is expected and allows for monitoring.

**Gastric Tube:**
Is placed through the nose or mouth and inserted into the stomach. It may be connected to a suction catheter. The suction helps keep the stomach empty and prevents nausea. This tube can also be used to give medications and nutrition if necessary.

**Foley Catheter:**
Inserted into the bladder to drain urine and monitor amount.
**RESTRAINTS:**

- Our unit respects the right of the patient to receive respectful care, with dignity and compassion, in the least restrictive environment.

- There may be an occasion where restraints are necessary for the safety of the patient.

- The decision to use a restraint is done *only after* assessing the individual and concluding that at this time, the use of less intrusive measures poses a *greater safety risk*. We would use the restraints if the patient has a high risk of pulling out a vital tube or causing self-harm:
  - Dislodges a tube that could cause severe bleeding
  - Pulls out the tube that assists the patient with breathing
  - Bends or kinks a tube that could prevent circulation to the leg or arm

- A restraint is “any manual method or physical/mechanical device, material or equipment that restricts freedom of movement or normal access to one’s body & cannot be easily removed”.

- Other measures that can be attempted are environmental changes, interpersonal skills/communication (listen-reassure), diversional activities, sitter or family member at bedside, frequent orientation, bed alarms, comfort measures, frequent toileting, and meeting nutritional needs.

- We will frequently re-evaluate & try less restrictive alternatives.

- If restraints are necessary, the nurse or doctor will contact the family.
Breathing Exercises:
For patients who have had surgery or for those patients who must remain on bedrest, breathing exercises are extremely important. The staff will instruct and assist the patient when coughing and deep breathing. The patient may also be instructed in the use of and incentive spirometer. These exercises will expand the lungs and help to prevent complications such as pneumonia. Breathing exercises may be uncomfortable after surgery, but there is pain medication available as needed. The patients will be encouraged to cough, deep breathe, and use the incentive spirometer at least every hour.

Summary:
It is our goal to make the patient and family experience during this stressful time as pleasant as possible. We hope that this booklet has helped to answer some of your questions. Please feel free to ask any questions and express any concerns that you may have at any time.

Community Resources and Support Groups:
American Heart Association
1111 S. Federal Highway
Suite 110
Stuart, FL 34994
800-424-8721

Lawnwood Regional Medical Center & Heart Institute
Private Dining Room - Located in the back of the Cafeteria
Every 2nd Monday of the month from 4:00 p.m. to 5:30 p.m.
Dr. David Thompson
Cardiovascular Intensive Care Unit
1700 South 23rd Street
Fort Pierce, FL 34954
772-467-2876

4 digit code:____ ____ ____ ____ for patient information