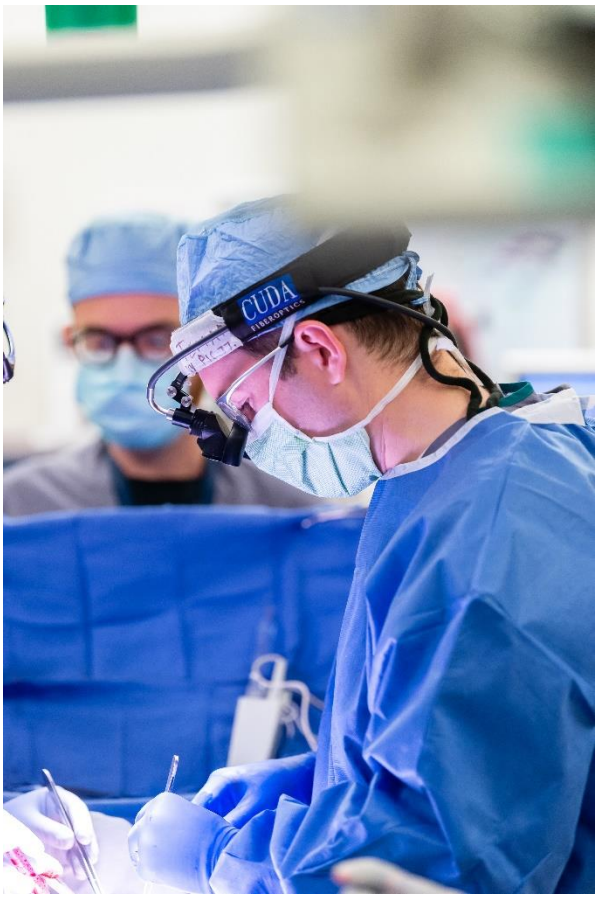
CARDIAC SURGERY

Enhanced Recovery After Surgery

Your Guide to Healing



UVA Health

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Welcome

We want to thank you for choosing UVA Health for your surgery. Your care and well- being are important to us. We are committed to providing you with the best possible care using the latest technology.

This handbook should be used as a guide to help you through your recovery and answer questions that you may have. Please give us any feedback that you think would make your experience even better.

Please bring this book to every visit and your admission to the hospital

_____

Patient Name

_____

Surgery Date

_____

Surgeon

KEY TO SYMBOLS:

CHECK OFF WHEN COMPLETED

MAKE YOUR NOTES HERE

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Contact Information

UVA Health
University Medical Center
1215 Lee St
Charlottesville, VA 22908

Heart and Vascular Surgery Clinic
Dr. John Kern
Dr. Ourania Preventza
Dr. Nicholas Teman
Dr. Leora Yarboro
Dr. Kenan Yount
Dr. Jared Beller

CONTACT	PHONE NUMBER
Heart and Vascular Surgery Clinic	434.243.2000
Heart and Vascular Surgery Clinic Fax Number	434.244.7588
Cardiac Surgery Bracelet	844.467.5578
IMPORTANT NUMBERS	
Anesthesia Perioperative Medicine Clinic	434.924.5035
If no call for surgery time by 4:30 pm the day before surgery	434.982.0160
Hospital Inpatient Units:	
TCV ICU	434.982.0301
4 West	434.924.5338
4 Central	434.924.5481
4 East	434.924.2478
CCU	434.924.2582
UVA Health University Medical Center	434.924.0000
Lodging Arrangements	434.924.1299
Parking Assistance	434.924.1122
Interpreter Services	434.982.1794
Hospital Billing Questions	800.523.4398

Helpful links:

Locations & Directions: www.uvahealth.com/locations
Parking Information: Includes information on parking options such as valet and handicap parking options. https://uvahealth.com/patients-visitors/parking
Shuttle Service: There are several patient shuttles available. Ask us for more information or visit: https://uvahealth.com/patients-visitors/shuttle
Lodging Options: https://uvahealth.com/patients-visitors/places-stay
MyChart: MyChart provides patients with secure online access to their information, enabling interaction and communication with our surgeons and team members. To enroll visit www.mychartuva.com

Download the UVA Health App: the UVAHealth app is free and is a smart assistant for your visit to UVA Hospital. It provides information to you based on your location, including directions to your appointment and other points of interest within the hospital.

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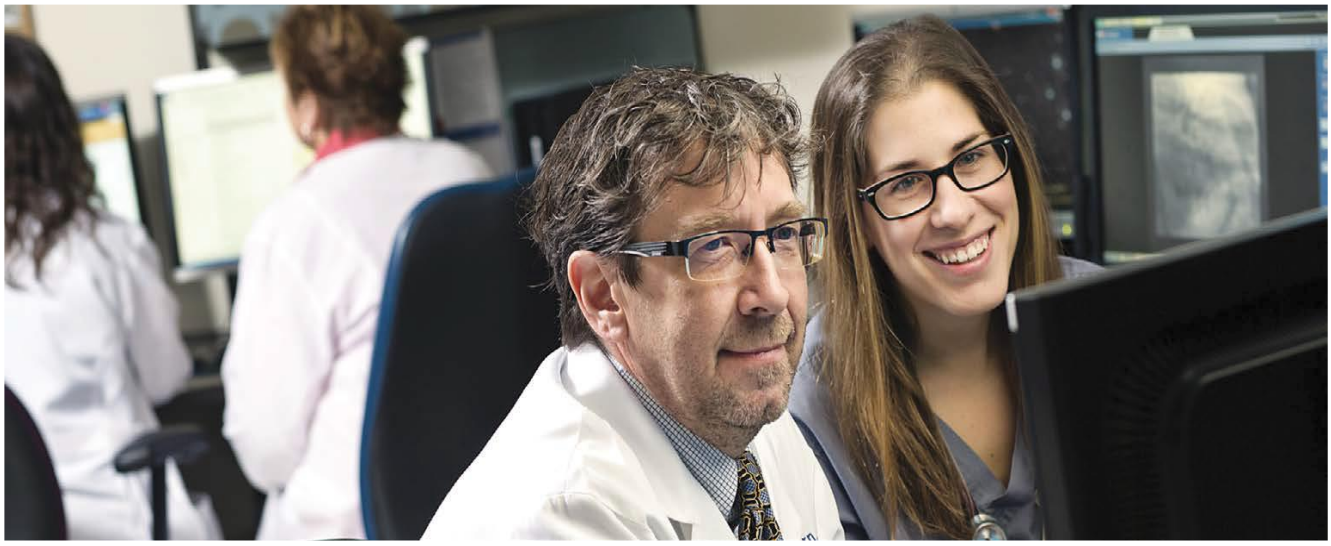
Introduction to Cardiac Surgery

At UVA Health, we perform traditional open-heart surgery and minimally invasive heart surgery. We perform catheter-based valve replacement procedures and hybrid procedures. This is a combination of open surgical and catheter-based options. The team will review your case to determine the best approach for your surgery. We will provide you with additional information explaining the actual procedure.

We encourage you to ask questions, and to assist you, there is an area at the end of this booklet for you to jot down notes or questions.

To learn more about Cardiac Surgery at UVA visit: https://heart.uvahealth.com



Enhanced Recovery After Surgery

What is Enhanced Recovery After Surgery?

Enhanced recovery after surgery (ERAS) is a way of improving the experience of patients who need major surgery. It helps patients recover sooner so life can return to normal as quickly as possible. ERAS programs standardize how we care for our patients and focus on making sure patients are actively involved in their recovery.

There are four main stages:

1. **Planning and preparing before surgery** – giving you plenty of information so you feel ready.
2. **Reducing the physical stress of the operation**- allowing you to drink up to 2 hours before surgery.
3. **Developing a pain tolerable plan** – allowing you to be comfortable to perform activities.
4. **Eating and activity after surgery** – encouraging you to eat, drink, and walk around as soon as possible after surgery.

For all our patients, it is important that you know what to expect before, during, and after your surgery. Your care team will work closely with you to plan your care and treatment.

Your care team consists of several healthcare professionals and YOU! You are the most important part of the care team; it is important for you to participate in your recovery. By working together, we ensure your hospital stay is as short as possible.

Before Your Surgery

You will work with your team who will help you prepare for surgery. Your team includes the following:

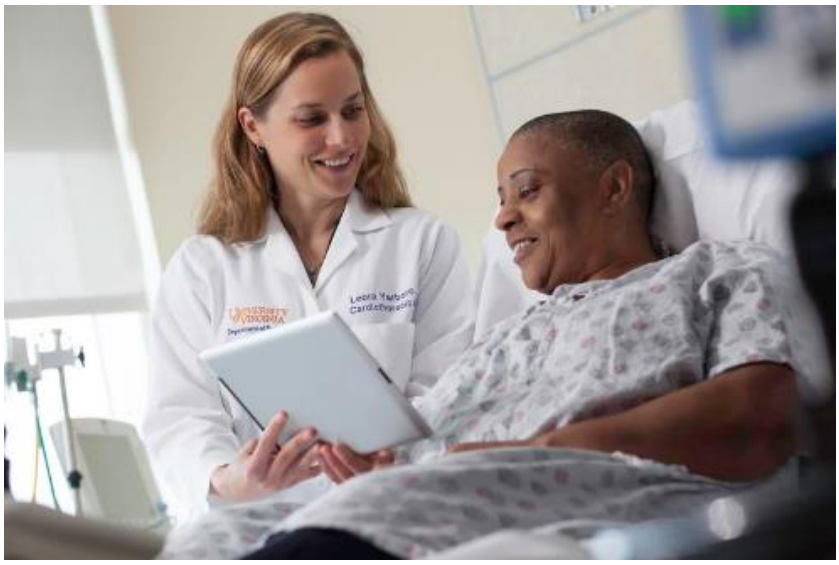
- YOU
- The surgeons, who will have fellows, residents, and medical students working with them.
- Nurse practitioners and physician assistants
- Clinical nurse coordinators
- Nurse navigators
- Registered nurses
- Patient Care Technicians
- Medical Assistants
- Administrative assistants

Before your surgery, you will:

- Be asked questions about your medical history
- Have a physical exam
- Sign the surgical consent forms
- Undergo preoperative testing

You will receive:

- Instructions on preparing for surgery, such as:
    - Medications to stop or hold before surgery
    - How to use an incentive spirometer (a device used for breathing exercises)
    - How to use a special antibacterial soap to shower with the night before and morning of surgery
    - Reducing alcohol intake if you drink alcohol
    - Quitting smoking if you currently smoke.
    - Incision care and how to protect these areas after surgery
    - How to prepare for after surgery



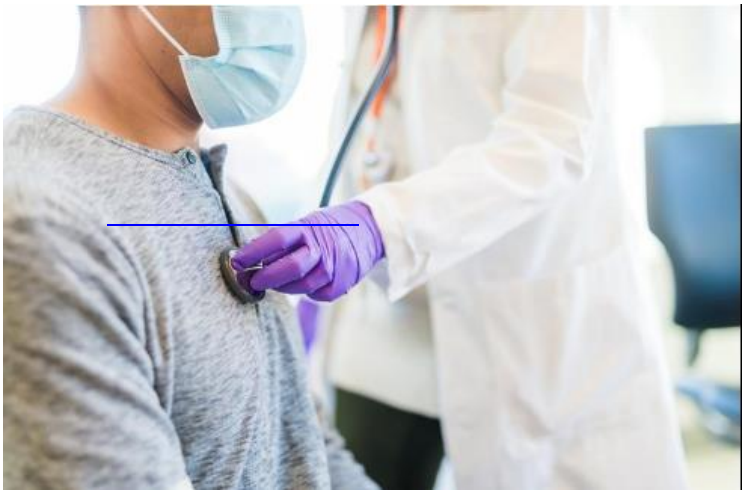
Anesthesia Perioperative Medicine Clinic

The Anesthesia Perioperative Medicine Clinic will review your medical and surgical history to determine if you will need an evaluation prior to surgery.

If an in person anesthesia evaluation is needed, the Anesthesia Perioperative Medicine Clinic will notify you.

- An appointment will be scheduled for an office visit a few weeks prior to the surgical date.
- Your medications will be reviewed
- You may have a blood test, test of the heart (EKG), and/or other tests the surgeon or anesthesiologist requests.
- For questions or if unable to keep the appointment with Anesthesia Perioperative Medicine Clinic please call **434-924-5035.** Failure to keep this visit with Anesthesia Perioperative Medicine Clinic before surgery may result in cancellation of surgery.

There may be times that you are instructed to go to the Anesthesia Perioperative Medicine Clinic after your appointment with your surgeon. If this is the case, you are welcome to a same day appointment, but please allow for up to 2 hours.



Preparing for Surgery

You should expect to be in the hospital for about 4-6 days after surgery. Your surgeon will let you know if your length of stay is expected to be longer.

At discharge from the hospital, some patients can go home with family or friends; others may need home health, rehabilitation, or long-term assistance. Regardless, it will be very important to have help with meals, taking medications, performing activities of daily living (bathing, dressing, etc.) when you first leave the hospital.

How to prepare yourself for surgery:

- Practice breathing exercises using an incentive spirometer provided to you.
- Continue your daily activity, but do not over exert yourself.
  Note: If you are unsteady, have a friend or family member nearby.
- If you are able to:
  - Practice sternal precautions, if you are given these instructions.
  - Practice wearing your sternal support device, if you are provided one. Become comfortable with using it.

Helpful hints:

- Eat healthy foods before surgery – this will help in your recovery.
- Increase the fiber in your diet – this will help with your bowel function.
- Consider cardiac rehabilitation or prehabilitation before surgery, especially if you feel you are weak or frail. Visit cardiac rehab programs close to your home prior to coming in for surgery.
- If you think you may need extra assistance after surgery, consider visiting rehabilitation or skilled nursing facilities close to your home
  - **Note:** You may visit www.medicare.gov to learn more about agencies and facilities in your area. You can compare home health agencies, rehabilitation and nursing care facilities, just in case you need extra care at discharge.
- Consider setting up lodging for family/friends during your hospital stay.
  - One family member may stay in the hospital with you at all times.
  - See “Lodging” link on page 5.
- Stop or cut back on alcohol consumption and smoking. Both of these can make your recovery from surgery more difficult.
- Practice good oral hygiene. Brush your teeth and floss regularly.

Planning for Surgery

Things to do around the house before surgery to make it easier after surgery: ✔

- ☐ Clean and put away laundry.
- ☐ Clean the house and do the house work.
- ☐ Put clean sheets on the bed.
- ☐ Put the things you use often between waist and shoulder heights to avoid having to bend down or stretch/reach too much.
- ☐ Bring the things you use most often during the day to the area you plan to spend the most time in, such as upstairs or downstairs.
    - You WILL be able to climb stairs after surgery.
    - However, you do not want to go up and down more than 2-3 times throughout the day.
- ☐ Buy food you like and other things you will need after surgery since shopping may be hard when you first go home.
- ☐ Consider preparing meals ahead of the time and freezing for convenience after surgery.
- ☐ Cut the grass, tend to the garden, etc., unless otherwise instructed by your doctor.
- ☐ Arrange for someone to get your mail and take care of pets and loved-ones if necessary.

Care Partners

We would like for you also to start to consider who you would like to identify as your Care Partner(s).

- Care Partners are 1-2 adults identified by you to be an active part of your healthcare team.
- One Care Partner may stay with you around the clock.
- Your Care Partners are encouraged to participate in daily physician rounds and will receive updates on your condition.
- Your Care Partners may be the same people you identify to be your help once you are discharged.

Pre-Surgery Checklist

What you <u>should</u> bring to the hospital: ✔

- ☐ A list of your current medications.
  Tip: there are various apps for your electronic devices available to help you with tracking your medications.
- ☐ Any paperwork you were given for surgery.
- ☐ A copy of your Advanced Directive form.
- ☐ Your bag given to you by the heart team including:
  - "Blood bracelet"
  - Sternal support device
  - Incentive spirometer
  - Education book
- ☐ Any toiletries you may need.
- ☐ A book or something to do while you wait.
- ☐ If you are on home oxygen, please have a FULL tank to use at discharge.
  - If you do not bring a tank, you may be charged to have a tank delivered to UVA for the ride home.
  - UVA is not able to fill or exchange oxygen tanks.
- ☐ Your CPAP or BiPAP machine, if you have one.
  - You can leave this in the car.
  - The staff will let your family know when to bring this in.

What you SHOULD NOT bring to the hospital:

- ☒ Large sums of money
- ☒ Valuables such as jewelry or non-medical electronic equipment.

Please know that any belongings you bring will go to "safe keeping" or you will be responsible for them.

Note: Wear loose comfortable clothes and shoes you can wear when you are discharged. Allow for swelling.

Day Before Surgery

Scheduled Surgery Time

If you are coming in the morning of surgery, a nurse will call you the day before your surgery to tell you what time to arrive at the hospital. If your surgery is on a Monday, you will be called the Friday before.

If you do not receive a call by 4:30 pm the day before surgery, please call **434-982-0160.**

Food and Drink the night before surgery

- Stop eating solid food at midnight the night before surgery.
- You CAN have sips of water with your medications on the morning of surgery
- Please have clear liquids ready to drink on the morning of surgery. You will be able to drink up until your arrival time for surgery.

Please be aware that the unpredictable nature of some cardiovascular surgeries may cause your appointment or surgery to be postponed with short notice. Our surgery team makes every effort to avoid and minimize the disruption to you and your family during this time. If your appointment or surgery needs to be rescheduled, we will provide as much notice as circumstances allow. We are committed to providing you the same level of attention and service. We understand the inconvenience this may cause and greatly appreciate your understanding.

Shower or Bath Instructions

You will be given either **chlorhexidine soap** or **chlorhexidine wipes** to use the night before and the morning of your surgery. Chlorhexidine helps to prevent infection after surgery.

How to Use Chlorhexidine (CHG): Chlorhexidine can be used three different ways. Taking a shower is recommended. If you are unable to shower, you may take a bath or use disposable cloths.

Chlorhexidine Soap Instructions: The soap may be used in baths or a shower. You may find it easier to soap all over your body in a shower because part of your body is under water during a bath. You may want to put a plastic chair in the tub or shower for your comfort and safety.

SHOWER:

Use one bottle of the soap the night before surgery and one bottle of soap the morning of surgery.

Night before and Morning of surgery:

- Take a shower and wash your hair as you may normally.
- Wet your body under the shower, then turn shower off.
- Saturate a clean wet washcloth with enough liquid soap to cover the skin being cleansed.
- Wash from below your chin to your toes- unless otherwise instructed.
- Wash all body surfaces, especially underarms and groin, continue adding soap until you cover all parts of your body.
- Wash all over with soap a second time and pause waiting one minute before turning the shower back on and rinsing yourself completely with water.
- Pat dry with a clean towel and dress in clean clothes.

BATH (Shower preferred):

Use one bottle of the soap the night before surgery and one bottle of soap the morning of surgery.

Night before and Morning of surgery:

- Wet your body with clean water in the tub.
- Bathe and wash your hair as you would normally.
- Stand, or sit in bath chair.
- Saturate a clean wet washcloth with enough liquid soap to cover the skin being cleansed.
- Wash from below your chin to your toes- unless otherwise instructed.
- Wash all body surfaces, especially underarms and groin, and continue adding soap until all parts of your body are covered.
- Wash all over with soap a second time and pause, waiting one minute before rinsing yourself completely with water.
- Pat dry with a clean towel and dress in clean clothes.
- Do this washing, waiting, and rinsing for each foot and lower leg separately.
- Pat dry with a clean towel and dress in clean clothes.

Chlorhexidine Gluconate 2% Wipes

The soap that is used in these wipes is intended to be left on the skin. **Do Not** rinse off.

The night before surgery use six (6) of the cloths provided and in the morning of surgery use the other six (6) cloths

Night before and Morning of surgery:

- Take shower or bath as you would normally do; use an anti-bacterial soap if possible. Afterwards, dry off and open the Chlorhexidine wipe packages.
- Firmly rub the wipe over your body. Vigorously clean surgical areas with back-and-forth motion for 30-45 seconds.
    - Use one wipe for each arm or leg and one wipe each for the front and back of the body.
    - Wash from below your chin to your toes- unless otherwise instructed.
- Leave the soap on the skin – do not rinse off.
- Pat dry with a clean towel and dress in clean clothes.

Note: Please use a clean towel, clothes, and sheets after you use the CHG.

Important: Do not use any deodorant, lotion, powder or perfume after washing the morning of surgery.

Caution: Do not let the special body wash get into your eyes, ears, or mouth. If you accidentally get some on these areas, rinse right away. If you feel any burning or irritation on the skin, rinse the area right away and do not use product.

Notify your doctor if you notice any itching or hives, swelling in your face or hands, swelling or tingling in your mouth or throat, chest tightness, trouble breathing, or any new or worsening skin rash, redness, burning, itching, or swelling in the area where the soap was used.

CHG products contain large amounts of alcohol and are flammable. Do not use near a flame, heater, electrical device, or while smoking. Apply in a well-ventilated place.

CHG may cause a brown stain on clothing when chlorine is present. Avoid staining by using a warm (not to exceed 129 F) fresh-water flush at the start of the wash - do not use chlorine bleach.

Let the area dry completely before getting into bed or getting dressed.

Shaving: If you have body hair, you may trim it closely to the skin the day before surgery. Intravenous lines may be placed to allow us to monitor and provide you with needed medications and fluids. A sterile dressing will be applied over these lines at the insertion sites. For this reason, clipping your hair the evening before surgery will help ensure the dressing remains sterile and in place, as hair can prevent the dressing from adhering to your skin. **DO NOT SHAVE ANY AREAS THE DAY BEFORE OR DAY OF SURGERY. Shaving can put you at greater risk for infection.**

Day of Surgery

Before you leave home:

- ☐ Remember to wash with the special chlorhexidine soap.
- ☐ Remember to brush your teeth.
- ☐ Remove nail polish, makeup, jewelry, and all piercings.
- ☐ Take your morning medications with a sip of water as instructed.
- ☐ Review your list of "what to bring to the hospital"
- ☐ Continue drinking clear liquids up to 2 hours before surgery.

Hospital arrival

- ☐ Arrive at the hospital the morning or surgery as instructed – usually 2 hours before surgery.
- ☐ Finish drinking clear liquids as you arrive. You cannot drink after this time.
- ☐ Check in on the second floor of the University Medical Center as instructed by the phone call nurse.

Surgery

When it is time for your surgery, you will be taken to the preoperative area outside the operating rooms. You are allow two visitors with you during this time.

You will:

- ☐ Be identified for surgery and get an ID band for your wrist.
- ☐ Be checked in by a nurse
- ☐ Have an IV started
- ☐ Have hair clipped away from the surgical sites, if needed.
- ☐ Be weighed.
- ☐ Be given several medications that will help keep you comfortable.
- ☐ Be started on a preoperative antibiotic to help prevent infection.
- ☐ Meet several members of the surgery team including:
    - The anesthesia team who will review your medical history and discuss your anesthesia plan.
    - A member of the cardiac team who will review your consent for surgery and may mark your surgical site, depending on the type of surgery you are having.
    - The nurse who will care for you in the operating room. The nurse will ask for a phone number to call one person with updates during your surgery.

In the Operating Room

Once you arrive in the OR:

- We will do a "check-in" to confirm your identity and the location of your surgery.
- You will lie down on the operating room bed.
- You will be hooked up to monitors.
- "Bootlike" hose will be placed on your legs to circulate your blood during surgery.
- You may be given a blood thinner shot to prevent blood clots.
- You will be given antibiotics to prevent infection.
- You will be given additional medication by the anesthesiologist to put you to sleep.

Just before starting your surgery, we will do a "time out" to check your identity, as well as confirm the type of surgery and location of surgery.

In the operating room (OR), there may be over ten people in the room, all focused on you – the patient.

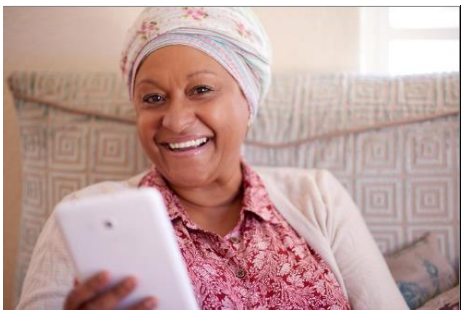
This team works closely together and includes: Anesthesiologists, Surgeons, Fellows, Physician Assistants, Nurses, Perfusionists, Surgical Technologists, Echocardiographers, and Support Techs. Your surgeons will perform the surgery and a resident or fellow with 3-5 years of surgical training will assist your surgeon during the operation.

Many patients do not recall being in the operating room (OR) because of the medication we give you to relax and manage your pain.

During Surgery

The operating room nurse will communicate with your family every 1.5-2 hours for an update. The nurse will let your family know when the surgery is finishing and when the surgeon will call or come speak with them.

Friends and family are welcome to wait in the 4 South family lounge. The TCV ICU (Thoracic Cardiovascular Intensive Care Unit) (4 South) is located nearby. Cardiac surgery patients do not go to a recovery room, instead they go directly to the TCV ICU (4 South).



Before the actual surgery begins, several tubes and lines are placed, and your skin is prepped.

The first phone call may indicate that the surgery "is just getting started". However, several things need to occur before the surgery actually begins, including the placement of tubes and lines.

The tubes and lines may include:

- Endotracheal tube placement (breathing tube).
- Central line placement (line inserted in your neck to measure heart pressures and give fluids and/or blood).
- Arterial line placement (line in the wrist or groin to measure blood pressure).
- Foley catheter placement (to measure urine output).
- TEE probe placement (transesophageal echocardiogram – an imaging study that is done by passing a tube from the mouth down the esophagus to look at heart function and heart valves before, during, and after surgery).
- Cerebral oximetry (to measure brain function).

At the completion of the surgery, several chest tubes are placed to help drain fluid and/or blood from around the heart. Generally, temporary pacing wires are placed to help regulate your heart beat, if needed.

Many of the tubes and wires placed before surgery are still in place after surgery. Sometimes it is over whelming to see. Please ask questions; the team will make every effort to explain.

After Surgery

The Heart Team – Your Care Team

The Heart Team is led by your surgeon and includes a Fellow, along with residents, 1-2 medical students, members from the ICU, stepdown unit, and nursing staff.

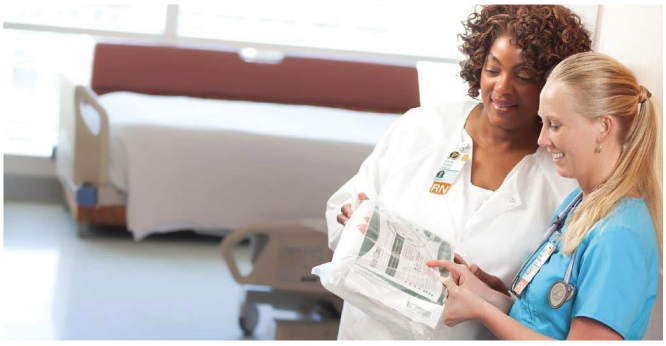
The heart team also includes Nurse Practitioners and Physician Assistants who will care for you in the ICU and on the floor. Other members of your care team may include pharmacists, physical and occupational therapists, respiratory therapists, dietitians, social workers, care coordinators, patient care assistants, case managers, transporters, sonographers, and many others.

The TCV ICU (4 South) team includes intensive care specialists (Intensivists), **who will help care for you**. Intensivists are physicians who specialize in intensive care medicine. They may also specialize in cardiac anesthesia or cardiac surgery. You may also be followed by other specialists, such as pulmonologists (lung specialists), endocrinologists (diabetes specialists), or nephrologists (kidney specialists).

Patient safety is our #1 concern.

There will be times that the staff will ask not to be interrupted. These times may be during change of shift, during report, during handover of care, during medication or blood administration, or during an emergency.

During these times, staff are passing along, discussing, or verifying valuable information in order to provide the best and safest care possible.



Change of shift for nursing staff occurs from 7:00 to 7:30 in the morning and evening. During this time, we ask that you:

- Hold phone calls until after 7:30.
- Use the call button located on the television remote, and on the side rails of every bed, for any assistance you may need.

After change of shift, your current nurse will come in to introduce the oncoming nurse. As part of their handover of care, you will notice both nurses verifying any IV medications that are being administered. After the nurses have completed their handover of care, we encourage you to ask any questions you may have!

Thoracic Cardiovascular Intensive Care Unit (TCV ICU): 4 South

From the OR, you will be taken directly to the TCV ICU (4 South). Families generally wait in the waiting room nearest to the unit, next to 4 South.

Once the surgery is completed, the surgeon will meet or call your family or care partner(s).

You will be transferred to the ICU directly from the operating room. Once you are brought up from the operating room, the nurses and other staff will need about 60-90 minutes to get you settled in and ensure that you are stable.

Once you are settled in the unit, your family or care partner(s) will either be called for or someone will come get them from the waiting room. If your family does not hear from someone, please come to the ICU doors and call into the unit from the "doorbell" on the wall.

After you are settled in the TCV ICU (4 South):

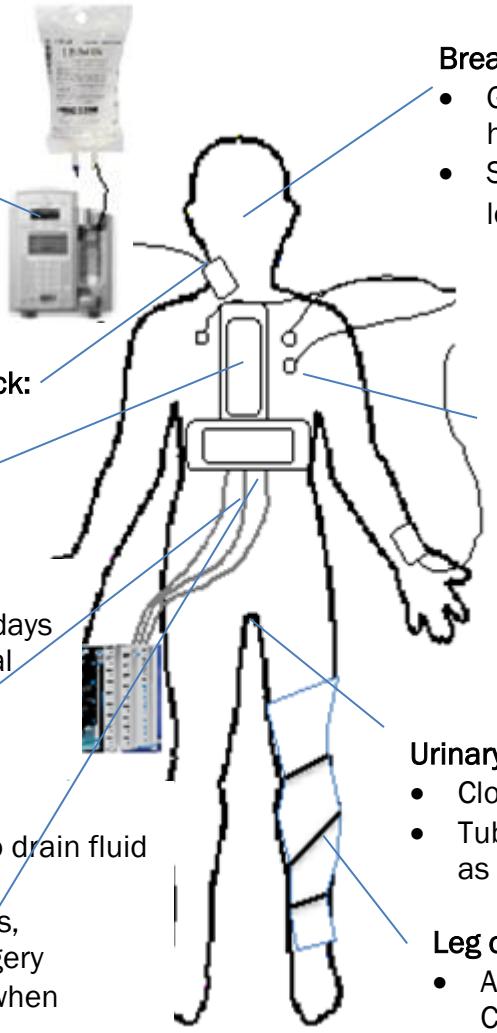
- Your family and friends can come see you.
- You may still be asleep and may have all the tubes and lines in place.
- You may look pale and swollen. This is normal and should improve over the next few days.

The TCV ICU (4 South) nurse will explain what to expect and how to contact the staff. They will also answer any questions.

The TCV ICU (4 South) staff use white boards for communication in each patient room. You will see the date and names of your care team on this board, as well as the plan for the day and your sleep plan.

TCV ICU Postoperative Cardiac Surgery Patient

This drawing shows the various tubes, lines, and dressings that may be in place immediately after surgery.



IV Medications:
- Antibiotics
- Blood pressure control
- Insulin
- Pain medicine

Breathing tube:
- Goal is to remove within 4 hours of arriving to the ICU
- Some patient may need it longer

Catheter (small tube) in neck:
- Deliver IV medicine
- Draw blood
- Monitor vital signs

Monitors:
- Line in wrist to measure blood pressure
- Stickers on chest to monitor heart rate and rhythm
- Probe on finger to measure oxygen

Incision:
- Dressing will be removed 2 days after surgery unless a special vacuum dressing is used
- Will be cleaned 2x per day

Urinary catheter (tube in bladder)
- Closely measures urine output
- Tube will be removed as soon as possible

Chest tubes:
- Flexible plastic tubes to drain fluid and blood
- You may have 2-4 tubes, depending on your surgery
- Each tube is removed when output is low enough

Leg or Groin Dressing:
- ACE wrap on leg for CABG patients, removed day 1
- Stockings or squeezing boots may be used to prevent blood clots as well

Temporary Pacing Wires:
- Small flexible wires, when used, assist when the heart rate is too fast or too slow. Wires are connected to a device, pacer box, when needed.
- Wires are removed when no longer needed

To aide in your recovery:

Incentive Spirometer

The incentive spirometer is a device to help see how deeply you are breathing and to exercise your lungs. You will use the incentive spirometer with a general goal of 10 times an hour every hour you are awake.

Medications

While you are in the hospital, you may need intravenous (IV) medications after surgery to maintain heart rate, rhythm, blood sugar, blood pressure, and heart pressures. Some patients may need blood sugar medications after surgery, such as insulin, for a short period of time.

Medications will be adjusted and changed from IV to pills or liquid that you can take by mouth. Your nurse and/or a pharmacist will go over all your medications with you and your care partner, especially prior to discharge.

You will be given a shot in your belly to help prevent blood clots while you are in the hospital. You will also be asked to wear compression hose during your stay and for 2 weeks after you are discharged.

Sternal precautions

- For traditional open-heart surgery, you will be taught sternal precautions to aid in the support and healing of your breast bone.
- Use your sternal support device if you are given one.
- If female, wear a clean bra during the day and night, along with your sternal support.

Quiet at Night

Quiet at Night is an effort to promote sleep while in the hospital. Sleep improves immune function, reduces the risk of delirium, and improves wound healing and recovery as well as many other positive benefits. Everyone feels better with some sleep!

Our goal is to give you 4 hours where interruptions are minimized each night beginning at 10:00 pm. Quiet at Night will start in the ICU and progress with you throughout your hospital stay. When you are admitted to the ICU, the staff will give you or your care partner a sleep plan along with ear plugs and an eye mask. The nurses will ask questions each day to develop an individualized plan that meets your needs. They will write the plan on the white board in your room.

In addition to the eye masks and ear plugs, the ICU has headphones for the in-room TV, a relaxation channel (11), a white noise channel (16), chamomile or decaffeinated tea, a dark screen saver for the bedside computer, and a couple of other tools to help with sleep.

Patient Progression

The team will work with you and your family as you progress after surgery. Again, each patient is different and will progress at a different rate. The team will work to be sure you are comfortable and safe as you progress through your recovery and will set goals daily.

One of our first goals is to wake you up slowly and to remove the breathing tube as soon as possible, sometimes before you leave the operating room.

As you are able, we will then begin a process called **Progressive Mobility** or **Early Movement**. We will work with you to have you sit up in bed, then sit up in a chair, and finally begin to walk…slowly.

Early movement is vitally important. It promotes health for all systems of the body:

- Helps breathing, strength, and normal bodily functions.
- Helps to reduce the risk of pneumonia, blood clots, and skin breakdown.

Early movement includes:

- Raising the head of the bed, we like for you to sit up in bed on the day of surgery.
- Sitting up, either on the edge of the bed or in a chair.
- Marching in place.
- Walking around the room or in the hallway.

You will receive help from the nurses and possibly physical and occupational therapists. We encourage you to ask questions.

Hospital Inpatient Unit

After TCV ICU (4 South), once you are ready for the next level of care, pending bed availability, you will be transferred to 4 West. You will continue to be followed closely by the Cardiac Surgery Team. This unit has semiprivate and private rooms available. Please keep in mind that private rooms are typically reserved for transplant and isolation patients. While on this unit, it is important to remember that you are no longer in need of direct one-on-one care. Your nurse will be caring for several patients at the same time.

On 4 West, there are several processes in place to encourage you and your family to participate in planning your care.

For example:

- The team will give a verbal report at your bedside during change of each shift.
- Comfort Rounds are done periodically to check on each patient throughout the day to check on their comfort.
- You will have a white board in your room that contains information about your care team and daily tasks as reminders for you and your family.
- Quiet at Night efforts will continue. As you may recall, this an effort to promote healing and well-being. This may include a sleep plan with input from you and your family.

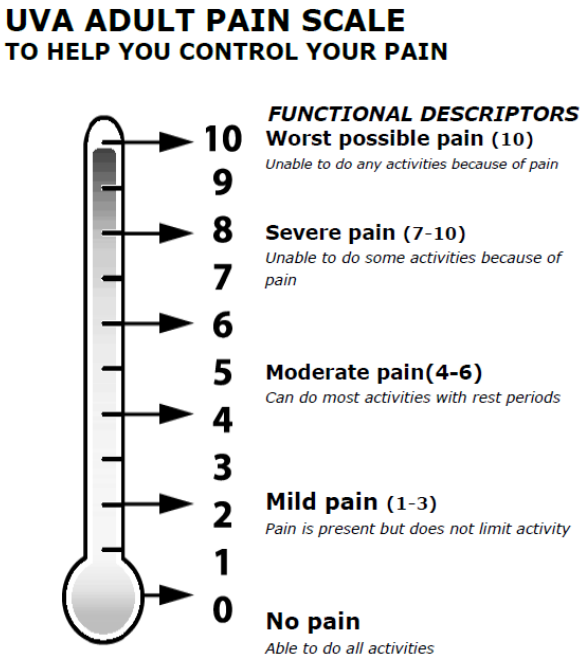
In addition, as you progress:

- Each day you will be working towards your discharge.
- Each day you may have a tube or wire removed.
- To assist you with safe and early movement after surgery, you may have physical and occupational therapists working with you.
- Your diet will be advanced as tolerated and you may receive additional education on what you should be eating.

During any of the handover of care reports or rounds, please feel free to ask questions.

Pain Tolerable Recovery

Managing your pain and allowing for pain tolerable recovery is very important. Although we may not be able to make you pain free, our goal is to make your discomfort tolerable. The goal should be where you are comfortable and allows you to continue to participate in your recovery.



We use multimodal medications, meaning medications that work independently and together in order to help make the pain tolerable.

- Before surgery: you may be given medications before surgery that will help with the pain afterwards
- During surgery: you may be given an injection at the surgery site.
- After surgery: you may also be given medications in your IV or vein to help keep you comfortable. As you improve, you may be given medications by mouth. You may need a narcotic pain pill, such as oxycodone, for severe pain. Each person's pain tolerance and expectations are different; however, the plan is to decrease the amount of narcotics we give as you recover.

Preventing and treating mild pain early is easier than treating pain after it becomes severe. We will create a specific plan to try to keep your pain tolerable.

We will ask you regularly about your level of comfort. It is important that you are able to take deep breaths, cough, and move.

There are a few things that you can do to help make the discomfort tolerable, such as splinting techniques. A heart pillow will be provided to help you with splinting. Splinting involves holding something tight to your chest to act as a splint.

- Every time you take a deep breath, cough, sneeze, laugh, or move, hold a pillow or your hand against the incision area for support.
- Use your sternal support and/or pillow as often as needed.

Discharge

Discharge planning should start before surgery and will continue after surgery. The team will work with you to evaluate home needs and continue working on a plan for discharge. Each day we will evaluate progress, and our case managers will help arrange for discharge services.

You will be discharged home with family or friends, home with home health, to a rehab center, or to a skilled nursing facility. This will vary, depending on your condition and how well you do after surgery. Please talk with the staff about any anticipated needs or preferences. Case managers and social workers will see you during your hospitalization to help determine what support you will need when you leave.

Please let us know the names of:

Home pharmacy: _____

Home health care agency: _____

Cardiac Rehab: _____

Skilled Nursing Facility / Rehab:_____

Any special needs: _____

You will be ready for discharge when:

- ☐ You are taking only medications that are oral (pill form) or can otherwise be provided at home or a skilled facility. This includes being able to control your pain with pill medicines and not IV medicines.
- ☐ You have a stable blood pressure and heart rhythm
- ☐ You are able to get up and move around enough for the amount of care and assistance you will have when you leave the hospital
- ☐ You are able to eat and drink, pass urine, and have a bowel movement
- ☐ You have all chest tubes, wires, and catheters removed (with some special exceptions that would be discussed with you if needed)
- ☐ You have stable blood sugars with appropriate insulin or other medications
- ☐ You have a stable level of blood thinning and a plan for which of your doctor(s) will manage your medication if you require blood thinning medications after surgery

Discharge Medications:

Prior to discharge your care team will review all of your medications with you and your care partner.

Discharge medications may include aspirin, beta-blocker, cholesterol- lowering medications, diuretics (fluid pills), blood thinners, pain medications, insulin or blood sugar medications, your usual home medications, and medications to help with bowel regimen (to help have a bowel movement and prevent constipation).

You may be asked if you would like to participate in a program called "Meds to Beds". This program is designed to help you with filling your medicines before you leave the hospital. The pharmacy team reviews the medications with you as well. Future refills can be done closer to home, this is a program designed to help you with your prescription needs before you leave the hospital.

Talk with your team if you think you will have difficulty filling your medication prescriptions.

At Discharge, you will be given: ✔

- ☐ A copy of your discharge instructions (also called After Visit Summary or AVS), including reminders on sternal precautions
- ☐ A list of any medications you may need and prescriptions for any new medications, including anything needed for pain.
- ☐ Wound care supplies (3 days), if needed.
- ☐ Instructions on when to see your primary care physician, any specialists, cardiologists, etc.
- ☐ Instructions on when to return to see your surgeon (3-4 weeks).
- ☐ Blue arm band with our toll free number

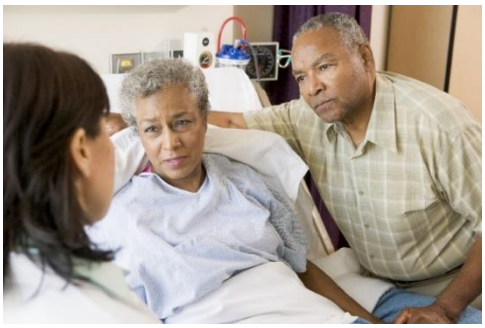
Before you leave the hospital: ✔

- ☐ We will ask you to identify how you will get home and who will stay with you, if appropriate.
- ☐ We will ask if you use oxygen to please make sure you have a full tank for the ride home. The hospital is not allowed to fill or exchange tanks.
- ☐ We will ask for you to be sure to collect any belongings that may have been stored in "safe keeping"

IMPORTANT REMINDER:

Remember, we will not discharge you from the hospital until we are sure you are ready.

Potential Events Delaying Discharge



Many events can delay your discharge from the hospital. Our team works to decrease the risk associated, and we also try to anticipate what those events could be based on your medical history. Before and after surgery we communicate concerns among the care team in an effort to increase awareness of any issues that may delay discharge.

Potential events:

Bleeding: In order to prevent the buildup of blood in your chest, we will place several chest tubes to help to drain any fluid or blood away from your heart. We will monitor you closely for any signs of blood loss.

Altered mental status: An altered mental status may be related to delirium, neurological changes, not getting enough sleep, a stroke, or a transient ischemic attack (TIA). Before surgery we will evaluate your risk for a stroke or a TIA and will do what we can to decrease the risk.

Irregular Heartbeat: Atrial fibrillation or slow heartrate requiring a pacemaker. Atrial fibrillation is somewhat common after cardiac surgery. If you develop an irregular heartbeat, such as atrial fibrillation, we will start you on medication to help control the rate and rhythm. A less common adverse reaction is a slow heart rate, requiring a pacemaker. You will be monitored during your hospital stay so that we know if these events occur.

Wound infection: We do everything possible to prevent wound infections, including encouraging everyone to wash their hands often! If you develop a wound infection, you may be discharged with an open wound that requires dressing changes at home. We will arrange for assistance with this before discharge, if covered by your insurance. You may be at increased risk to develop a wound infection if you are a smoker, are obese, have uncontrolled or poorly controlled diabetes, or if you have peripheral arterial disease (PAD).

Blood sugar control: Patients who undergo cardiac surgery often have a challenge with maintaining blood sugar control. Surgery increases stress, which can raise your blood sugar levels. It is important to maintain good blood sugar control to help prevent wound infections and promote healing. If you have diabetes, you may be on higher doses of your medication(s). If you do not have diabetes, you may need to be on medication for blood sugar control.

Respiratory problems – (prolonged ventilation, pleural effusion, pneumothorax, pneumonia): This is one of the more common complications after surgery. Patients with lung disease, pulmonary hypertension, or with a strong smoking history are at a higher risk. There are things you can do to decrease the risk of respiratory problems after surgery. If you are a smoker, the sooner you can quit before surgery the better. If possible, practice with the incentive spirometer prior to surgery.

After surgery, we encourage you to use the incentive spirometer every hour after the breathing tube is removed. We also encourage progressive mobility. We want to work with you to get you up and moving as soon as we can after surgery.

Post-operative nausea and vomiting / Decrease in appetite: It is very common to feel sick after your surgery. We give you medication to reduce this. If you feel sick, you should eat small frequent meals and/or switch to a liquid diet. Many patients also have a decrease in appetite after cardiac surgery. We encourage you to eat foods high in protein and eat frequent meals to try to decrease this from happening.

Postoperative ileus: Following surgery, your bowel can shut down, so food and gas have trouble passing through the intestines. This is called an ileus and may only last 2-3 days. The best way to avoid it is to decrease the amount of narcotic pain medications you take, get up as much as possible after your surgery, and eat small amounts of food and drinks. You may also be given medications to help your bowel function.

Kidney problems: Some patients have a higher risk than others; we try to predict those who are a higher risk and work very closely with a team of kidney specialists. Poor kidney function, heart failure, blood transfusions, infection, recent dye injections, and prolonged surgery times can lead to challenges with kidney function.

Limb ischemia or blood clots: Some patients are at a higher risk of developing limb (arm or leg) ischemia (lack of or low blood flow) or forming a blood clot. The approach and the type of surgery may put you at an even higher risk. We may recommend blood thinners, sequential circulatory devices (SCDs), and TED stockings to reduce blood clots in the legs. We also encourage progressive mobility in order to reduce the risk of forming blood clots.

Depression: Depression is common after cardiac surgery. We encourage you to talk to your friends and family about these feelings. Please also let your care provider know if you are feeling depressed or emotional. Enrolling in cardiac rehabilitation or participating in a support group such as Mended Hearts may help.

This list does not include all potential risks or events. Each patient is unique and has a unique risk for any event that may delay discharge. Please speak to your provider about any concerns you may have.

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After Discharge

We would like to see you approximately 3-4 weeks after you are discharged from the hospital. We also recommend an appointment with your primary care doctor in 1-2 weeks and with the cardiologist in 6 weeks after discharge.

Contact Numbers

It is easiest to reach someone **Monday-Friday between 8:00am and 4:30pm** in our office. Please don't hesitate to call.

Heart and Vascular Surgery Clinic	434.243.2000

After hours and on weekends, call the number on your bracelet:

Cardiac Surgery Bracelet	844.467.5578

Note: If you feel you have a medical emergency, please call 911 or go to your nearest emergency room.

When to call

Complications do not happen very often, but it is important for you to know what to look for if you start to feel bad.

After you leave the hospital, call us if:

- You have a fever greater than 101.5°F or chills.
- You feel movement, clicking, or instability in your chest.
- You have an increase of weight by 3 pounds per day or 5 pounds in a week OR any increased shortness of breath or unexplained swelling.
- Your heartbeat feels too fast, or too slow, or is irregular or is skipping beats.
- You are vomiting, nauseated, or have diarrhea or constipation.
- You have any unrelieved pain or pain that does not get better with medication.
- You have any problems with the incisions, including redness, draining, bleeding, or pus coming from the wound(s), or if the incision opens up.
- You are feeling faint or have a change in your mental status.
- You are feeling weaker instead of stronger.
- You have any aches, chills, and decreased appetite.
- You are unable to pass urine for more than 6 hours or unable to have a bowel movement for more than 3 days.
- You have any excessive bruising, blood in the urine or stool, or bleeding gums.
- You have any questions or concerns

Common Concerns

Incision / Wound Care: For the first 1-2 weeks following your surgery, your incision may be slightly red and uncomfortable.

- If your incision is red, inflamed, swollen, painful, or leaking any fluid, please contact the surgeon.
- It is common to have lumpy areas in the wound at the ends of the incision.
- The wound will "soften up" in several months.

Incision / Wound care instructions:

- You should shower daily with warm, not hot, water and let the soapy water trickle over your incision.
- Have someone close by or a chair in the shower, the first time you shower as you may become weak or dizzy.
- Please use liquid soap, a clean wash cloth and clean towel each and every time. After your shower, pat the area dry and apply a clean bra or T-shirt.
- Avoid soaking in the tub until you are seen by the cardiac surgeon.
- If you have any dressings or drains, you will be given specific instructions on how to care for them and when they are to be removed.

Specific instructions for chest tube sites:

- Leave the dressing on for 48 hours after the chest tube is removed.
- If draining, reinforce with dry gauze.
- After 48 hours, you may remove the dressing and clean the site with soap and water.
- Leave the site open to air, unless it is draining. If draining, apply new dry gauze and change daily or as needed. Occasionally, you may see clear pink or clear golden colored fluid draining from the chest tube site. This is normal – cover the area with absorbent dressing and tape into place.
- Call the clinic if you notice air moving in and out of the chest tube site or you smell a foul odor.

Sun Exposure:

- For the first year after surgery, your incision will be sensitive to sun exposure. Please use sunblock and/or cover with clothing when spending time outside.

Low Grade Fever: A low grade fever may be a warning. If you develop a low grade fever - 99.0 - 99.5°F, monitor your temperature a couple times a day to see if it progresses.

This may also mean that you need to work on deep breathing. You should use your incentive spirometer (lung exerciser) 10 times per hour while awake and walk at least 3 times per day to help prevent pneumonia after surgery.

Bowel Function: After your operation, your bowel function will take several weeks to settle down and may be slightly unpredictable at first. For most patients, this will get back to normal with time. Make sure you eat regular meals, drink plenty of fluids and take regular walks.

Patients can have a variety of bowel complaints, including:

- Irregular bowel habits
- Bowel movements that are loose or constipation

It is important to let us know if you are having very watery diarrhea more than 6 times daily. There is a dangerous bacterial infection that we may want to test you for if you are having a lot of watery diarrhea.

Urinary Function: After surgery, you may get a feeling that your bladder is not completely emptying. This usually resolves with time. However, if you are not urinating or have concern, contact us. If you have severe stinging or burning when passing urine, please contact us, as you may have an infection.

Diet

You may find that for a few weeks following your operation you may have to make some slight adjustments to your diet depending on your bowel pattern, your blood sugars, and your appetite.

Our dietitians are available to speak with you about any specific questions you may have. Follow any dietary instructions given to you while in the hospital. Your team may advise you on a specific diet plan or encourage you to eat a regular diet until you regain your strength. A low-fat, heart healthy diet is generally recommended. Try not to miss a single meal. You will feel better, have more strength and less discomfort, and heal faster if you continue to eat.

You may want to try foods that are easy to digest at first and start with small frequent meals throughout the day, including:

- Foods those are soft, moist, and easy to chew and swallow.
- Foods that can be softened by cooking or mashing.
- Eating plenty of soft breads, rice, pasta, potatoes and other starchy foods (lower-fiber varieties may be tolerated better initially). However, if you experience constipation, you may want to gradually increase the fiber in your diet.
- Foods that are higher in fiber include fresh fruits, vegetables, beans, legumes, and whole grains.

You should try to eat a balanced diet; however, some patients have a decreased appetite after surgery. A decreased appetite may be caused by constipation or feeling nauseated. If you are experiencing constipation, you may try over the counter laxatives but notify your physician if constipation is not resolved within days. If you are feeling nauseated, avoid letting your stomach empty. Eat small amounts of food and eat slowly. If you don't have an appetite, choose higher calorie options and try to make the most of times when you feel hungry.

Be sure to:

- ✓ Drink fluids as instructed. Unless you are instructed to limit your fluid, it is important to drink six to eight cups of non-caffeinated fluids per day to help prevent constipation
- ✓ Chew food well – take small bites!
- ✓ Get enough protein; consume high protein foods and beverages such as eggs, low-fat milk, yogurt or cottage cheese, lean meats, fish, beans and legumes.
  - Try to eat 2 servings of fish a week; fatty, cold water fish such as salmon, tuna, trout, or sardines
- ✓ Eat 5 servings of fruit and vegetables a day.
- ✓ Replace saturated fats (stick margarine, butter, shortening, coconut and palm oils) with unsaturated fats (olive oil, canola oil, avocado, unsalted seeds, nuts, and nut butters).

Avoid:

- ☒ Tough, thick pieces of meat, fried, greasy and highly seasoned or spicy foods.
- ☒ Adding salt to your food.
- ☒ Foods high in trans-fat (also called partially hydrogenated fat, fried, and high fat baked goods).
- ☒ Carbonated beverages in the first couple of weeks
- ☒ Gas forming vegetables such as broccoli, cauliflower, or beans (legumes).

Resuming Sexual Relationships: You should be able to resume a normal, loving relationship after you have recovered from your surgery and you are not feeling any discomfort, shortness of breath, and the sternum is well-healed.

Most patients can resume sexual relationships after their 3-4 week follow-up with the cardiac surgeon. The sexual position may need to vary for comfort and to protect the sternum and minimize stress.

Driving: No driving until you are seen by the cardiac surgeon in the clinic 3-4 weeks after surgery. Do not drive anything with a steering wheel (i.e. car, tractor, lawn mower, bicycle, etc).

*Exception: minimally invasive mitral valve surgery. Patients may drive 2-3 weeks after surgery as approved by your surgeon.

Work: You should be able to return to work 4-6 weeks after your surgery, depending on your job. If your job is a heavy manual job, you should not perform heavy work until 6 weeks after your operation. You should check with your employer on the rules and policies of your workplace, which may be important for returning to work. If you need any paperwork completed for your employer, such as a "Return to Work" form, FMLA papers, or short-term disability papers, it is best to bring these with you to the hospital or **fax them to our office at 434.244.7588.**

Cardiac Rehabilitation: Cardiac rehabilitation is an outpatient program designed to aid patients in their recovery. Most insurance will cover a monitored cardiac rehab program encompassing 18-36 sessions. Ideally, these sessions occur three times a week to be most beneficial. Cardiac rehab can be done at a program close to your home.

Cardiac rehab programs may include registered nurses, exercise physiologists, registered dieticians, physical therapists, and pharmacists. We encourage our patients to enroll in cardiac rehab. Your cardiac surgeon and cardiologist will let you know when it is safe to start, between three and six weeks after surgery.

Hobbies and Activities: Walking is encouraged from the day following your surgery. Plan to walk three or four times daily in small increments. Gradually increase your activity; **do not overdo it.**

It may take up to 2-3 months to fully recover after surgery. It is not unusual to be tired and need an afternoon nap 6-8 weeks following surgery. Your body is using its energy to heal your wounds inside and out.

<u>You should:</u>

- ✓ Be able to climb stairs from the time you are discharged.
- ✓ Return to hobbies and activities soon after your surgery – this will help with your recovery.

<u>You should NOT:</u>

- ☒ Do any heavy lifting (less than a gallon of milk or 10 pounds).
- ☒ Push or pull with your arms – remember sternal precautions.
- ☒ Play contact sports until at least 6 weeks following your surgery. Please ask your surgeon first.

Glossary of Terms

Below is a list of commonly used terms you may hear while in the hospital.

Ablation- a surgical or catheter based procedure used to correct structural problems in your heart that cause an arrhythmia or irregular heart rhythm.

Anesthesiologist – a doctor who specializes in providing anesthesia during surgery or any invasive procedure.

"A" line / art line / arterial line – a line placed in an artery in the wrist or groin used for monitoring blood pressure and drawing blood.

Angina – chest pain.

Aorta – the large artery that leads blood out of your heart to the rest of the body.

Aneurysm – outpouching or weakness of a blood vessel.

Arrhythmia – irregular heart rhythm.

Artery – blood vessel that carries oxygen-rich blood to organs and tissues.

Atrial fibrillation – an irregular heart rhythm or arrhythmia that results when the upper portion of the heart or atria take over the function of the normal pacemaker of the heart.

Atrial Septal Defect (ASD) – a hole between the two upper chambers of the heart.

Atrium or Atria – upper chamber of the heart.

CABG – pronounced like cabbage – coronary artery bypass grafting or bypass surgery.

Cardiac catheterization (cardiac cath) –a procedure in which a catheter or tube is inserted into an artery in the groin or arm and passed to the heart. A cardiac cath looks at the arteries that supply the heart with blood and/or at the pressures in the heart.

Cardiac Surgery Nurse Navigator – a nurse on the heart team that serves as a resource for patients and family members.

Cardiopulmonary bypass – the heart-lung bypass machine that takes over the function of the heart and lungs during heart surgery.

Cardiac Rehabilitation- an outpatient medically supervised exercise program designed to improve health and well-being of the patient. Programs include exercise training, education, and counseling.

Care Partner – adults identified by the patient or the patient's legal surrogate to be an active part of the health care team.

Carotid artery – major artery on both sides of the neck carrying oxygen-rich blood to the brain.

Case Manager – a nurse who helps with discharge needs or concerns. The case manager helps arrange what you will need after discharge, such as home oxygen, medical devices, or outpatient therapies. The case manager will also help arrange home health, or a transfer to a rehabilitation hospital or skilled nursing facility.

Central Line – A central venous catheter is a long, thin, flexible tube used to give medications, fluids, or blood products, measure pressures in the heart, placed in the neck or groin area.

Chest tube – tube placed to drain fluid from the chest to help expand the lungs and drain fluid from around the heart.

Coronary artery – arteries that supply the heart with blood. Diseased arteries may also be referred to as CAD or blockages.

Coumadin – a medication that keeps the blood from forming clots. The generic name is warfarin.

Diuretic- medication used to help remove or pull of fluid from the body by means of urination.

Echocardiogram (ECHO) – ultrasound of the heart. An ECHO shows the heart function and motion, as well as how the blood pumps through the heart. The echocardiogram also looks at the valves of the heart. An ECHO can be performed outside the chest wall with an ultrasound on the patient's chest (TTE or transthoracic echocardiogram) or performed when a probe is passed through the throat to the esophagus to get clearer pictures of the heart (TEE or transesophageal echocardiogram).

ECMO – extracorporeal membrane oxygenation – treatment that uses a pump to circulate blood to the heart and/or lungs

EKG- electrocardiogram – a test that measures the electrical activity of the heart. An EKG evaluates the heart rate, rhythm, and electrical function of the heart.

Electrophysiologist (EP) – a doctor who specialized in the electrical activity of the heart.

Endarterectomy – procedure that removes or cleans out buildup of plaque in an artery.

ERAS – Enhanced Recovery After Surgery.

Extubated – when the breathing tube (endotracheal tube) is removed after the patient no longer needs the ventilator.

Foley catheter – a tube inserted through the urethra that goes to the bladder to drain urine.

Heart pillow – a large pillow that is used to splint the chest.

Home Health – services such as nursing, physical therapy, occupational therapy, and respiratory therapy that care for the patient in their home.

Hybrid – combination open and catheter based surgery.

IABP – intra aortic balloon pump – a device used to support the heart.

Ileus- temporary absence of the normal contractile movements of the intestines.

Incentive Spirometer (IS) – breathing exerciser that helps patients keep their lungs expanded after surgery.

Intensivist – a doctor who specializes in intensive care medicine. Intensivists only see patients in the hospital and specialize in caring for the critically ill.

Intubated – refers to a patient with a breathing tube (endotracheal tube) in place when the patient is unable to breath on their own.

IV (intravenous) line – a small catheter that is put into a vein to administer medications or fluids.

Mended Hearts – national support group for cardiac patients. All patients can join for free at www.mendedhearts.org/join-us-today/.

Minimally Invasive – also known as a "mini" or minimally invasive incision surgery. Mini-sternotomy or minimally invasive surgery involves a smaller incision through the breastbone or smaller incisions in the chest area.

Myocardial infarction (MI) – commonly known as a heart attack.

Occupational Therapy (OT) – a form of therapy that encourages rehabilitation through the performance of activities required in self-care and daily life.

Perfusionist – the person who operates the heart-lung bypass machine that takes over the function of the heart and lungs during cardiac surgery.

Physical Therapy (PT) – physical therapists promote mobility, function and quality of life through strengthening exercises using mechanical force and movements.

Pleural effusion – a condition in which excess fluid builds around the lung.

Pneumonia- lung infection caused by bacteria, virus, or fungi.

Pneumothorax- collapsed lung.

Pre-op – the period before surgery, preoperative.

Post-op – the period after surgery, postoperative.

Progressive mobility – stepped approach to help a patient regain mobility after surgery. Mobility refers to moving – transferring, walking, or exercising.

Social Worker – a person who does a psychosocial assessment and assists with financial matters.

Sternotomy- incision through the breastbone.

Sternum- breastbone.

TAVR /TAVI or TMVR – transcatheter valve replacement of the aortic valve or mitral valve.

TCV ICU – Thoracic Cardiovascular Intensive Care Unit (4 South)

TIMU – Thoracic Cardiovascular Intermediate Care Unit (on 4 West)

Trachea – commonly known as windpipe.

Valve – the heart has four valves that allow blood to flow from one area of the heart to another. The valves open and close as the heart pumps the blood.

Vein – a blood vessel that returns oxygen-poor blood to the heart and lungs.

Ventilator – a machine that helps patients breathe.

Ventricle – the lower chambers of the heart.

Care Instructions and Notes

Care Instructions and Notes

Additional Handouts

Additional Patient Education Materials

Note to staff: Additional patient education materials are available on the Patient Education Repository
• Cardiac Rehab Information – PE 01002
• Coronary Artery Disease Risk Factors – PE 01060
• Preoperative Instructions for Heart Surgery – PE 01031
• What to Expect on the Day of Heart Surgery – PE 01067
• What is Heart Valve Disease – PE 01071
• Thoracic Aortic Aneurysm (TAA) – PE 01119
• Minimally Invasive Heart Surgery – PE 01095
• Procedure: Chlorhexidine Baths & Showers – PE 01013
• Sternal Precautions - PE 16066
• Discharge Instructions After Heart Surgery – PE 01011
• Discharge Instructions After Thoracic Surgery – PE 01016
• Discharge Instructions for Minimally Invasive Heart Surgery – PE 01095
• Drain Instructions for Cardiac Surgery Patients – PE 01097
• How Family and Friends Help After Heart Surgery – PE 01070
• Quiet at Night – PE 15025
• Illustrations are also available H:\Patient Education
 	
Additional resources:
• UVA ERAS
  ○ www.uvaeras.weebly.com
 	
Support Resources
• Mended Hearts National Resource Center: 1.888.HEART99 (432.7899)
  ○ http://www.mendedhearts.org
• STS- The Society of Thoracic Surgeons
  ○ Patient information for Heart, Lung, and Esophageal Surgery
  ○ https://www.sts.org/patients
• Smoking cessation resources from STS
  ○ https://www.sts.org/sites/default/files/stopsmokingbrochure09.pdf
  ○ https://www.sts.org/sites/default/files/smokingQUITcard.pdf
  ○ https://www.sts.org/sites/default/files/quitsmoking.pdf
• Resources for home health, nursing facilities, and rehabilitation
  ○ Medicare.gov