

## Your Hospital Stay After Your TAVR

### *What to expect*

*This handout explains what to expect during your hospital stay after your transcatheter aortic valve replacement (TAVR). It explains the care and medicines you will receive and gives important information about self-care after you go home.*

### How long will I stay in the hospital after TAVR?

- Right after your TAVR, you will be moved to the Cardiothoracic Intensive Care Unit (ICU) on 5-Southeast. There, nurses will watch you closely. Most patients stay in the ICU for 1 day after the procedure. We will keep you in the ICU only as long as you need to be there. We want to help you recover safely and as quickly as you are able.
- From the ICU, most patients go to a *cardiac telemetry* room on a cardiology unit of the hospital, on either 5-Northeast or 6-Northeast.
  - Most patients who have **transfemoral** aortic valve replacement stay in the hospital for 3 to 4 days after the procedure.
  - Most patients who have **transapical** or **transaxillary** aortic valve replacement stay in the hospital for 4 to 5 days after surgery.
- Some patients, if they are well enough, may be able to go home directly from the ICU.

### The Cardiothoracic Intensive Care Unit

After you leave the operating room, you will go to the Cardiothoracic Intensive Care Unit (ICU). Highly-skilled cardiac nurses will monitor and care for you there.

After TAVR, most patients stay in the ICU for 1 to 2 nights. How long you are in the ICU will depend on how your recovery is going. Your time in the ICU is when the most important changes in your condition occur.



*Highly-skilled nurses will monitor and care for you in the Cardiothoracic Intensive Care Unit after your surgery.*

## **Can I have visitors in the ICU?**

Your family and close friends may visit you in the ICU at any time. They can take the Cascade elevators to the 5th floor.

We encourage family and close friends to leave the hospital at night to get some rest. When they leave, they should make sure we have a phone number where we can reach them.

Family may call the ICU at 206.598.6500 any time if they have questions or concerns or want to know how you are doing. We ask that only one family member makes these phone calls to the ICU. That person can then share this information with your other family members and friends.

## **What care and monitoring will I receive in the ICU?**

Highly skilled cardiac nurses will care for you in the important hours after surgery. A doctor from the cardiac surgery team will also be available at all times.

## **What to Expect in the ICU**

### **Checking Your Vital Signs**

During your stay in the ICU, your heart rate, rhythm, and blood pressure (*vital signs*) will be watched at all times. This is done using patches placed on your chest and *catheters* (thin, flexible plastic tubes) inserted into an artery or vein.

### **IV Catheters**

You will also have several *intravenous* (IV) catheters. These will be used to:

- Give you medicines, fluids, and blood transfusions, as needed
- Draw blood samples for testing.

About 12 hours after surgery, most of these IVs are usually removed. One small IV catheter is left in place until you are discharged.

### **Pacemaker Wire**

During TAVR, your doctor will place a pacemaker wire through catheter in a large vein that ends in your heart. This pacemaker wire is used short-term to increase your heart rate as needed during the procedure. Usually this wire is removed right after TAVR, while you are still under *anesthesia* (medicine that makes you sleep). Removing this IV catheter and pacemaker wire is painless.

Sometimes, if a patient's heart rate is slow, the doctor leaves the pacemaker wire in place. Rarely, in about 6% of patients (about 6 out of 100 patients), the heart rate remains slow and a permanent pacemaker is needed.

If you need a permanent pacemaker, your doctor will talk with you and your family about the procedure. If needed, the pacemaker will be placed during your hospital stay.

### **For Transapical TAVR Patients**

If you had transapical TAVR, fluid may build up in your chest after surgery. If this happens, it will need to be drained. During TAVR, your surgeon will put a chest tube in place to drain this fluid.

It is normal to have a small amount of blood in the chest tube drainage during the first 24 hours after surgery. These chest tubes are usually removed within 24 to 48 hours after surgery.

### **Urinary Catheter**

During surgery, a small rubber catheter will be inserted into your bladder to drain urine. It is usually removed about 24 hours after surgery.

### **Breathing and Coughing**

When you are in the ICU after surgery, the breathing tube that you had during surgery will still be in your throat. The tube will be connected to a breathing machine (*ventilator*).

You will need to be on the ventilator until your anesthesia wears off and you are able to breathe on your own. You will not be able to talk or drink anything until the breathing tube is removed.

The breathing tube is usually removed a few hours after TAVR, or as soon as it is safe to do so. After it is removed:

- You will receive oxygen through a face mask or nasal prongs. Leave the mask or prongs in place. They give you the extra oxygen your body needs at this time.
- Your throat may be sore and your voice may be hoarse. These symptoms are from the breathing tube, which passed between your vocal cords and down your throat. The soreness and hoarseness should lessen with time. Sucking on ice chips may help if your mouth is dry.
- Incision pain may restrict your breathing and cause you to take shallow breaths. You **must** take deep breaths and cough up secretions because:
  - If secretions stay in your lungs, bacteria may build up and cause *pneumonia* (a lung infection).
  - If you take shallow breaths, your lungs may partly collapse, and this may keep you from getting enough oxygen.
- **Use the incentive spirometer** as you were taught before surgery. It will show you how you are breathing and encourage you to breathe more deeply.

## **Pain Control**

Pain from your incision will make coughing uncomfortable. Take your pain medicine as prescribed. It will reduce the soreness so that you can cough up secretions more easily.

As soon as you are able to, your nurse will help you sit on the edge of your bed or in a chair. Sitting also helps with deep breathing and coughing.

## **Moving to the Cardiac Telemetry Floor**

When you are stable (usually 12 to 48 hours after surgery), you will be moved from the ICU to a *cardiac telemetry* floor of the hospital, on either 5-Northeast or 6-Northeast.

Here, your heart rate and rhythm will be monitored with a *telemetry box*. Specially trained nurses will help you as you recover.

**From now on, you will be responsible for much of your recovery.** The staff caring for you will guide you, but you will be expected to actively take part in your own care. This will include:

- **Deep breathing.** Take slow, deep breaths at least 10 times an hour with your incentive spirometer. This exercise helps you fully expand your lungs. It will help release trapped secretions so you can cough them up. Clearing your lungs this way helps prevent pneumonia, helps you feel better, and speeds recovery.
- **Walking and increasing your activity.** Activity helps you breathe more deeply. It also strengthens your muscles and helps your body recover faster.
- **Eating healthy foods to nourish your body.** Protein, vitamins, and minerals will help you heal faster. You will receive a regular diet after surgery. Even if you do not feel hungry, we will encourage you to eat. Walking and increasing activity will help you build an appetite.

If you have high blood sugar, you will be on a special diet until your sugar levels get back to normal. This diet controls the amount of carbohydrates you eat. It will help lower your infection risk and improve your healing.

## **Getting Ready to Leave the Hospital**

Most patients stay in the hospital for 3 to 5 days after TAVR surgery. During your stay, you and your family will receive instructions to help you prepare for your *discharge*. Discharge is when you leave the hospital.

Before discharge, be sure to:

- Ask your care team members any questions you may have.
- Plan for someone to drive you home on the day of your discharge from the hospital.
- Plan for someone stay with you for at least 1 week after you get home.

Your cardiac team will assess your progress and prepare you and your family for discharge. You will likely meet with a nurse, dietitian, pharmacist, and physical therapist. You and your family will learn about exercise, medicines, and other self-care you will need to do at home.

## Going Home

Before you are discharged, a nurse will review pain control, activity guidelines, incision care, when to call the doctor, emotional reactions after surgery, and discharge planning with you. You will also receive a handout that explains these things.

If you have questions or concerns, please ask. We want to make sure you are fully prepared to go home. Some patients and family members learn well by watching educational videotapes. We have many videos that you and your family members may watch.

## Self-care at Home

### Protect Your Wrist

<b>For 48 hours:</b>	<ul style="list-style-type: none"><li>• <b>AVOID</b> lifting, pushing or pulling with the affected arm.</li><li>• <b>AVOID</b> bending, turning, or twisting your wrist on the affected arm.</li><li>• Do <b>NOT</b> have your blood pressure taken on the affected arm.</li></ul>
<b>For 5 days:</b>	<ul style="list-style-type: none"><li>• Avoid vigorous exercise that uses the affected arm.</li><li>• Do <b>not</b> lift anything that weighs more than 5 pounds (2.27 kilograms) with the affected arm. (A 2-liter soda bottle weighs 4½ pounds.)</li><li>• It is normal to have a small bruise or lump at the insertion site.</li></ul>

### Protect Your Groin

- For 7 days after your transfemoral TAVR, do **NOT**:
  - Lift anything that weighs more than 10 pounds. This includes groceries, children, pets, trash, and laundry. (A gallon of water weighs almost 9 pounds.)
  - Work in the garden, including lawn mowing and raking.
  - Hold your breath, bear down, or strain when having a bowel movement.
- You may have a bruise at the insertion site. This is normal. It might spread down your leg over the next day. It may take **2 to 3 weeks** to go away.

- For **30 days** after TAVR (until you are seen at your 30-day follow-up visit), do **not**:
  - Run, jog, swim, or bike
  - Play sports like golf, tennis, bowling, or softball

### **For Transapical or Transaxillary TAVR Patients**

- For **2 weeks** after TAVR, do **NOT**:
  - Reach your arms behind your back or above shoulder level. This will keep your skin and muscle from stretching, and will help your incision heal faster.
  - Lift anything that weighs more than 10 pounds. This includes groceries, children, pets, trash, and laundry. (A gallon of water weighs almost 9 pounds.)
  - Garden, including lawn mowing and raking.
  - Hold your breath, bear down, or strain when having a bowel movement.

### **Care of Your Incision and Wrist Puncture Site**

- Watch your incision closely for any signs of infection. These include:
  - Redness around the incision
  - New drainage
  - Warmth or heat at the incision
  - Fever of 101°F (38.5°C) or higher
  - Bleeding at the wrist or groin site that does not stop after 10 minutes of pressure
- If you have any of these infection or bleeding signs, call one of these numbers **right away**:
  - During clinic hours, call **206.598.VALV (8258)** and ask for the nurse or nurse practitioner.
  - After hours and on holidays and weekends, call **206.598.6190** and ask to page the CARD I Fellow on call.
- **If your incisions:**
  - **Are still draining** when you leave the hospital, your nurse will give you instructions and supplies for incision care at home.
  - **Are not draining**, it is best to leave them open to the air. If your clothing rubs or irritates your incisions, you can cover the area with dry gauze. Remove the gauze at night. You do not need to apply any special dressing.

- Do not put any medicine or lotion on your incisions until they are fully healed and the scabs have fallen off, unless your healthcare team has told you otherwise.
- You may remove the wrist dressing (bandage) the day after your procedure.
- It is normal to have a small bruise or lump at the wrist site.
- You may also have a bruise at the groin incision site. This is normal. It might spread down your leg over the next day. It may take **2 to 3 weeks** to go away.

### **Showering and Bathing**

You may shower when you get home unless your doctor tells you not to. When you shower:

- Gently wash your incisions with mild, unscented soap and water.
- Gently pat dry your incisions. Do **not** rub them.

You may take a bath after your incisions heal fully, about 2 weeks after your surgery. Do **not** soak your incisions for longer than 5 minutes until all the scabs have fallen off and your incisions are fully closed. This will help prevent infection.

Do **not** take very hot showers or baths or soak in hot tubs. Hot water may lower your blood pressure and make you weak or dizzy. This could cause you to faint. (Fainting may also occur from the medicines you are taking.)

### **Exercise**

Make daily exercise part of your life. Exercise helps keep your joints flexible, builds strength and endurance, and helps your body heal and stay healthy. Your physical therapist will review exercises with you.

Slowly increase your activity as you prepare for discharge. Once you are home, keep doing the exercises you learned in the hospital.

### **Medicine**

The medicines you will take after surgery help you recover. These medicines are prescribed for you and must be taken as directed.

Your medicines at discharge may be different from the ones you are used to. Also, these medicines may be adjusted or changed when you are discharged and in your follow-up visits. A pharmacist or a nurse will teach you about your medicines and answer any questions you may have.

### **Nutrition**

What you eat affects your health. A registered dietitian or diet technician can help you learn how to eat for a healthy heart. They can give you and

your family tips on heart-healthy food choices, shopping, and cooking. Ask your nurse how to set up an appointment with a dietitian.

Eating healthful foods will help you heal faster. Your body needs the proteins, vitamins, and minerals that these foods supply. Remember, even if you are not hungry, we encourage you to eat regular meals. Walking and other activity will help you build an appetite.

### **Antiplatelet or Anticoagulation Therapy (Blood-thinning)**

You will need to take medicine to keep blood clots from forming on your new valve after TAVR. Most patients take:

- **Low-dose aspirin**, 81 mg, every day for the rest of their life to thin their blood,
- AND
- **Clopidogrel (Plavix)**, 75 mg, every day for 1 to 6 months after TAVR to keep blood clots from forming.

If you were taking aspirin and clopidogrel before TAVR, you will keep taking them to treat the condition you first started taking them for.

If you were taking warfarin (Coumadin) before TAVR, you will probably take it after TAVR. You might be asked to take aspirin for a short time, too.

### **Bleeding**

**Tell your cardiologist, primary doctor, or other providers if you have any signs of bleeding.** These include:

- Bloody nose
- Tenderness in your abdomen
- Dark, bloody stool (poop), or stool that smells odd
- Bloody urine

### **Risk of Infection**

Your new man-made valve can become infected. The American Heart Association advises taking antibiotics to lower your risk of infection before you have:

- Dental cleaning and any type of dental procedure
- A surgery or procedure that involves your lungs, bladder, or digestive system

**Tell your dentist, doctor, alternative medical providers, and all other providers that you have an artificial heart valve.**

## **Valve Infection**

Tell your provider **right away** if you have any of these signs of infection:

- Fever higher than 100 °F (37.8 °C)
- Tenderness in your abdomen
- Bloody urine
- New shortness of breath
- New swelling around your legs or ankles
- Weight gain of 2 to 5 pounds over 3 days

## **High Blood Sugar and Diabetes**

Many patients who were not diagnosed with diabetes before surgery will need insulin after surgery. Sometimes this is from a side effect from a medicine, such as prednisone. Other people may have had higher-than-normal blood sugar before surgery but did not know it.

If you have high blood sugar, you will be on a carbohydrate-managed diet until your blood sugar levels return to normal. This diet will help lower your risk of infection and help your body heal.

If you have diabetes, your blood sugar will be closely monitored and treated. If you did not need insulin before TAVR but are receiving it afterward, do not be alarmed. This is to prevent the problems that can happen with uncontrolled blood sugar. Your usual oral diabetes medicine and insulin regimen will be restarted as needed. Your diabetes medicine may be changed or adjusted at discharge and in your follow-up visits.

## **Medical Alert Jewelry**

We advise you to wear a medical alert bracelet or necklace after heart valve surgery and if you are taking blood thinners. Some people prefer to carry a wallet card with this information.

Many drugstores and some jewelry stores carry this type of identification. Another source for medical alert jewelry is:

### **Medic Alert Foundation International**

2323 Colorado Ave., Turlock, CA 95382

[www.medicalert.org](http://www.medicalert.org)

888.633.4298

## **Follow-up Visits**

After discharge, our team will work with your heart doctor to monitor you closely. We want to make sure you are making good progress so that you do not need to be readmitted to the hospital.

A nurse will meet with you before discharge to set up your follow-up visits. Your schedule will likely include these visits:

<b>When</b>	<b>With</b>	<b>What</b>
<b>30 days after TAVR</b>	Nurse practitioner	<ul style="list-style-type: none"> <li>• <i>Echocardiogram</i> (ultrasound of the heart) to check your valve</li> <li>• Activity and walk test</li> <li>• Filling out a form that tells us about your current symptoms</li> </ul>
<b>Once a year</b>	Nurse practitioner	<ul style="list-style-type: none"> <li>• Echocardiogram to check your valve</li> <li>• Activity and walk test</li> <li>• Filling out a form that tells us about your current symptoms</li> </ul>

**If you are part of a research study**, you may have follow-up visits

## Questions?

Your questions are important. Call your doctor or healthcare provider if you have questions or concerns.

### **Regional Heart Center**

**Clinic:** Call 206.598.8258 during clinic hours.

**After clinic hours or on holidays or weekends:** Call 206.598.6190 and ask for the CARD I Fellow on call to be paged.