



Centre for
Heart Valve Innovation
St. Paul's Hospital, Vancouver

Deciding to Have a Transcatheter Aortic Valve Implantation



YOUR DOCTOR HAS ASKED the Vancouver Transcatheter Heart Valve Program team to see if having a special procedure called a transcatheter aortic valve implantation (TAVI) would help you. Transcatheter aortic valve implantation is a new way of replacing the aortic valve in your heart. In the past, we could only replace the aortic valve by doing open heart surgery.

Please read this booklet, share it with your family, and bring it with you when you come for your appointment in our Clinic. Think about questions you might want to ask and write them down on the last page. We will review the information with you and explain anything you are not sure about.

This booklet has a lot of information about TAVI as a possible option for treating your heart valve disease. We hope it helps you understand how we decide which option is the best option for you, and your part in that decision.

Take your time to read this important information, share it with your family, and write down any questions you may have.

‘Transcatheter’ means we use a catheter (a small flexible and hollow tube) to place a new aortic valve in the heart. We do this by making a small opening in an artery, then threading the catheter and the new valve into the right position (replacing the valve). Unlike open heart surgery, there is no need to open the chest for this procedure, but we still do the procedure using anaesthetic.

Why might you need your aortic valve replaced?

Your doctor has told us that you have a heart valve disease called aortic stenosis.

The aortic valve is one of four valves in your heart. These valves make sure blood flows through your heart in the right direction. When blood leaves the heart, it flows through your aortic valve.

Stenosis means a narrowing of the aortic valve opening. Aortic stenosis mostly happens as people age. Over time, the valve stiffens and cannot open enough to let blood through. This may cause you to feel short of breath, to have chest pain, or to feel faint or very tired.

Until now, the usual treatment for severe aortic stenosis has been open heart surgery. Open heart means the person's chest and the heart itself are opened so the doctor can operate directly on the heart. The doctor removes the diseased valve and replaces it with a new valve. While this surgery is being done, the person's blood is circulated outside the body through a special machine, called a heart-lung bypass machine. This is called surgical aortic valve replacement. Surgical aortic valve replacement is the best option for most people.

A surgical aortic valve replacement may not be the best option if:

- You are older and have other diseases like kidney or lung disease.
- You have had one or more open heart surgeries in the past.
- You are not well enough for a major surgery such as this.
- You have had radiation to your chest.

Is TAVI the best option for you?

We don't know yet. In order for us to decide whether TAVI would be the best option for you, we need a lot of information about you, your heart, and your general health.

Also, it is not just our decision. If we recommend TAVI for you, you can choose to continue with your current treatment instead, or talk to your doctor about other options. But it is important to make your decision after we have seen you and given you information about your options.

Every person goes through a thorough review before we can decide if TAVI is an option. If you decide you want to know if TAVI is an option, you will need to come to the hospital for at least two visits (sometimes more). If you are from out of town, you will need to make your own travel and hotel arrangements for these days. If you are in hospital right now, you may have the tests done while you are admitted.

The review process

- Step 1: We schedule you for an appointment in our clinic for a TAVI Assessment.
- Step 2: You attend the clinic for your TAVI Assessment. This takes at least 2 hospital visits, on at least 2 separate days.
- Step 3: The team reviews the results of your clinic visit and recommends the best option for treating your aortic stenosis.
- Step 4: We notify you and your doctor with our team's decision. If a TAVI is the option of choice, we book you for your surgery to have your aortic valve replaced.

TAVI Assessment

In order for us to get a complete picture of you and your health, we must see you in our clinic in person for at least two visits (sometimes more). We try to coordinate all your appointments over 2 or 3 days, but there may be a few days between clinic days. If you are from out of town, we try to schedule your clinic visit over 2 or 3 days in a row. (Remember to book your hotel for at least two to three nights.)

During this time you will have a number of heart tests done. Your heart tests may not be done in the same hospital as your clinic visits. We send you a letter with the days and times of your appointments, along with information on where your appointments are located.

Since we ask a lot of questions and do a lot of tests, the clinic visit can be quite tiring. Plan to rest in the evening.

If you are in hospital right now at St. Paul's Hospital or Vancouver General Hospital, the TAVI nurse or the cardiologist will explain the plan to you and answer your questions.

If you do not speak or understand English well enough to have conversations about your health or to make medical decisions, we can arrange for a medical interpreter. You would not pay for this.

- Ask someone in your doctor's office (or someone you know who speaks English) to call us at least 3 to 5 days before your appointment to request an interpreter.
- To book an interpreter, we need the following information:
 - Your name
 - The day and time of appointment
 - The language you speak and understand the best.

What to bring to your appointment:

- This booklet with your questions written. It is a good idea to keep all your TAVI information and documents in one folder, and bring the folder with you to all of your TAVI appointments.
- A list of all the medicines you are taking. You can either ask your pharmacy to print the list or use the 'List of Medications' form we send you.
- The completed questionnaire called 'Quality of Life Patient Questionnaires'.
- The forms we send you about information about research studies that you are eligible for.
- A list of questions you and your family have for us
- A person who knows you well, such as your spouse or an adult child or good friend. This person meets the team with you, helps give information about you, and gives you support through the assessment process.

What to expect during the clinic visits

- We review what TAVI is, how TAVI is done, and what the risks and benefits are of this type of procedure.
- You have time to ask your questions.
- We give you information about how the team decides which treatment option is the best one for you.
- We arrange for you to have different heart tests.
- You answer questions about your every day life, what you can and cannot do for yourself, your living situation, and your heart symptoms.
- You do a walking test and a memory test.
- A doctor gives you a medical check-up and asks you questions about your heart and your health.
- Our heart surgeon reviews your health record. The doctor may wish to examine you further.
- We take pictures of you. This helps us when the team meets after your clinic visit to discuss your options. The pictures are kept in your chart.

Heart tests to expect

We ask you to have a number of heart tests. These tests help us decide whether TAVI is the best option for you. You may have already had some of these tests done in the past. However, we do them again because the focus of the test this time is specific to TAVI.

Everyone who is being considered for a TAVI have these tests:

- An echocardiogram: ('Echo' meaning using sound waves, 'cardio' meaning heart, and 'gram' meaning a print out.)

An echocardiogram (also called an 'Echo') is an ultrasound test. High-pitched sound waves are bounced off different parts of the heart, creating pictures. This test allows us to look at the heart muscle, the valves of the heart, the blood vessels of the heart, and how blood flows through the heart. While you are lying down on a bed, we slide an ultrasound probe (special camera) across your chest with the help of clear gel.

It takes about 30 to 60 minutes to complete this test.

- A cardiac angiogram: ('Cardiac' meaning heart, 'angio' meaning blood vessels, and 'gram' meaning a print out.)

A cardiac angiogram (also called a 'cardiac cath') is a test to check the blood vessels around the heart and the blood pressure inside the heart. A doctor who specializes in the diseases of the heart (a cardiologist) inserts a long flexible catheter (a small hollow, flexible tube) into an artery in your groin through a small needle. Contrast (also called x-ray dye) is injected through the catheter so we can see your blood vessels better.

Heart tests to expect, *continued*

The test takes about one to two hours, but you stay in the hospital for about 4 to 6 hours after the test. To help you learn more about this test and how to prepare, we send you a patient information booklet before the test.

- **Computed Tomography:** ('Computed' meaning using a computer, 'tomo' meaning a slice or section, and 'graphy' meaning an image or print out)

Computed Tomography (also called a 'CT scan' or 'CAT Scan') is a special x-ray that takes many pictures of your heart and blood vessels in small "slices". The computer puts these pictures together to create a three-dimensional (3D) view of your heart and blood vessels.

During the test, we give you contrast (special x-ray dye) to outline the heart and blood vessels so they can clearly be seen. To do this, we start an intravenous (intra meaning 'into' and venous meaning 'vein, commonly called an IV). We inject the contrast into your bloodstream through the intravenous.

It takes about 30 minutes to complete this test.

Some people may also have this test:

- **Transesophageal echocardiogram:** ('Trans' meaning through, 'esophageal' meaning the passageway tube from mouth to stomach)

A transesophageal echocardiogram (also called a 'TEE') is done when the doctors feel they need a more detailed look at your heart. It is similar to a regular echocardiogram, but the ultrasound probe is passed through your mouth and down your esophagus.

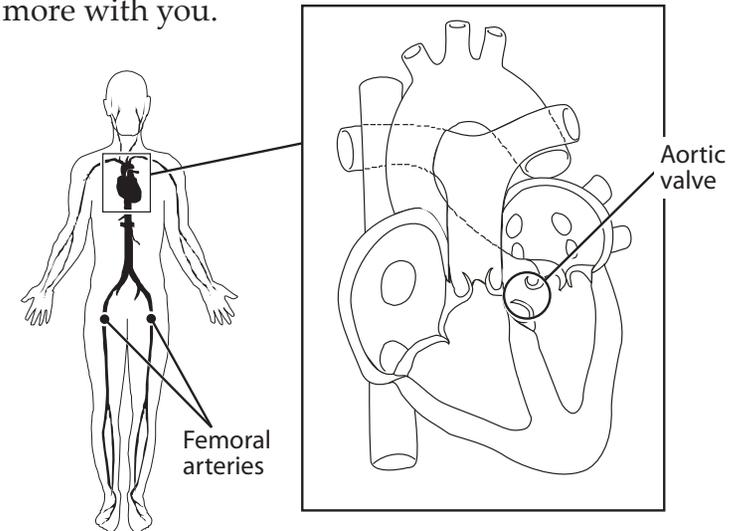
This test takes about 60 minutes. We give you some medication to make you sleepy during the test. So you can learn more about this test and how to prepare, we send you a patient information booklet.

Deciding the best option – Is TAVI for you?

After your clinic visits, the TAVI team meets to review all the information we have about you, including your assessment and the results of your heart tests. From this information, the team determines which option would be the best choice for treating your aortic stenosis. Our goal is to recommend the treatment option that is best for you and that is in keeping with your wishes and goals.

The best option could be:

- **Medical management:** This means your aortic stenosis is best managed without surgery for now. Your family doctor or heart specialist (cardiologist) will continue to monitor and treat your aortic stenosis with medication. Your doctor may ask you to return to the TAVI Clinic in the future.
- **Surgical aortic valve replacement:** This means open heart surgery is the best option for you to have your aortic valve replaced. A cardiac surgeon's office would contact you to discuss this more with you.



The best option, continued next page

The best option, *continued*

- **Transcatheter Aortic Valve Implantation (TAVI):** This means TAVI is the best option for you to have your aortic valve replaced. This procedure can be done one of two ways. We would let you know which way we think would be best for you.
 - Transfemoral TAVI - means inserting the catheter into the femoral artery in the groin
 - Transapical TAVI - means inserting the catheter through a small opening in your heart (specifically the pointed end of the heart called the apex) through your chest
- **Palliative approach:** This means that even if you had a heart valve replacement, it would not help you feel a lot better or you would not benefit in terms of your quality or length of life. We will suggest that you be referred to a health care team that focuses on helping you with your symptoms with the goal of improving your quality of life.

When will you know?

We call you within two weeks of your clinic visit to tell you what the team believes would be the best option. We also send your doctor a letter.

Take time to talk further with your doctor or cardiologist about what we recommend.

If we feel TAVI is the best option for you

Take some time to think about whether you want to go ahead with the procedure. Think about whether you are willing to go on the TAVI wait list and go forward with the procedure should we call you sooner than your expected surgery date. This means that you have to be willing to come into the hospital for the procedure when we call. Call the TAVI office at 604-682-2344 extension 62658 when you have decided how you want to proceed.

Three dates determine how long you can expect to wait:

1. The date the medical team meets to review your case.
2. The date you let us know you want to go ahead with the procedure.
3. The openings available at the hospital to do the procedure.

We will let you know how long the wait list is when we talk by telephone.

If you tell us you wish to go ahead with the TAVI procedure:

- We send you an information booklet about preparing for the procedure, and what to expect while in the hospital.
- We ask that you continue to have your symptoms of aortic stenosis monitored and treated by your family doctor or heart specialist (cardiologist).



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