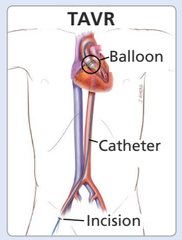
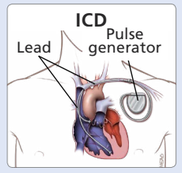
Intermountain® Healthcare

Heart Failure Decision Aid

When heart failure (HF) progresses to an advanced stage, difficult decisions must be made. Making informed decisions require teamwork through shared decision-making. This guide is designed to help you and your doctor align your health as it is now with what you determine to be your ideals, goals and priorities of care.

Current situation	Your health now	Your ideals, goals, and priorities	Your health now	Your ideals, goals, and priorities	Your health now	Your ideals, goals, and riorities
Things to consider	• Your breathing and swelling problems may or may not be managed. • Symptoms, such as fatigue and feeling short of breath, usually occur when you are active.	You want the chance to live longer but DO NOT want invasive treatment/support. What you may experience: • Some discomfort • Probable hospital stay	Your breathing and swelling problems may be able to be fixed • Activity is less tolerated, distances walked are less • May require constant oxygen even at rest • May be experiencing abnormal heart rhythm, dizziness	You wish to live longer and will consider invasive treatment What you may experience: • Some discomfort • Hospitalization • Limited physical activity which may improve with invasive treatment	Inability to carry on any physical activity without discomfort, even at rest	You wish to not prolong life artificially allowing for a natural death. • You will not be on a breathing machine • You may be in the hospital, a skilled facility or at home for a period of time

Options:	Non-Invasive Treatment / Support	Invasive Treatment / Support	End-of-Life Care (care focused on giving you comfort)
Devices used	**Manage risk factors:** High cholesterol, high blood pressure, diabetes **Manage lifestyle:** Stop smoking, limit excess alcohol, avoid illegal drugs, eat a low-fat/low-sodium diet, be active Take medications as prescribed: • **ACE Inhibitors** (Lisinopril, Captopril, Ramapril, Benazepril, Enalapril, Fosinopril) • **ARBs** (Losartan, Valsartan, Telmisartan, Olmesartan, Irbesartan, Candesartan) • **Beta Blockers** (Bisoprolol, Carvedilol, Metoprolol, Toprol XL) • **Diuretics** (Furosemide, Torsemide, Bumetanide) • **Aldosterone Blocker** (Spironolactone, Eplerenone)	**TAVR** (Transcatheter Aortic Valve Replacement): A procedure that treats an aortic valve that isn't working properly because it has become thick or stiff. During the TAVR, the doctor uses a catheter (a thin, flexible tube) to put a new aortic valve in your heart.  **Aortic Valve Replacement Open-Heart Surgery:** This is another way to fix your aortic valve by opening the chest instead of doing the procedure through a catheter. It is not recommended for people with certain health problems. Patients referred for open heart surgery go through an extensive evaluation by a large team of doctors and surgeons.  **Pacemaker:** Pacemakers correct a heartbeat that is too slow, too quick, or with an irregular rhythm. It is placed under the skin and may or may not have wires attached to your heart to monitor your heart rate/rhythm. It uses electrical impulses to communicate to your heart to beat at a normal rate. **ICD (Implanted Cardioverter Defibrillator):** An ICD does everything a pacemaker does, however, it also has a defibrillator attached that can deliver a shock to the heart if it senses a dangerous rhythm, such as those that cause sudden cardiac arrest.	**Oxygen for shortness of breath** **Medication to help you relax and for anxiety or pain relief** **Physical Aids to help with comfort** (e.g., adjustable bed, nursing care in your home) **Emotional Support** (e.g., social work, palliative care, chaplain, etc.) for you and your loved ones

Current situation	Non-Invasive Treatment / Support	Invasive Treatment / Support	End-of-Life Care (care focused on giving you comfort)
How it works	**Activity:** Regular activity strengthens your body. **Weight:** Extra weight means extra work for your heart and other organs. **Diet:** What you eat and drink can have a big effect on your health. Caffeine increases heart rate, high-fat foods clog your arteries, high-sodium food increase swelling. **Smoking:** Narrows arteries, reduces lung capacity. **ACE Inhibitors and ARBs:** Used to block stress hormones to allow the heart to recover; used when LVEF ≤ 40%; reduces blood pressure by widening blood vessels making it easier for the heart to pump. **Beta Blockers:** Used to block stress hormones to allow the heart to recover; used when LVEF ≤ 40%. Slows heart rate and reduces blood pressure. **Diuretics:** Can help prevent hospitalization due to heart failure. Improves symptoms of congestion. Reduces fluid retention. Patient should maintain daily weights to ensure appropriate diuresis. **Aldosterone Blocker:** Used to block stress hormones to allow the heart to recover; used when LVEF ≤ 40%. Diuresis (potassium-sparing) and blocks aldosterone signal to heart.	**TAVR**: The doctor makes a small cut (incision) in your groin or between your ribs. A catheter and a tiny balloon are moved through a large vein to your heart. Once the doctor reaches the heart, the balloon will be opened and closed several times. This stretches your old valve to make room for the new valve. Once the new valve is in place it takes over for the diseased valve. **Aortic Valve Replacement Open-Heart Surgery:** Your doctor will make a cut on the skin and bone of the chest. The chest will be opened so the doctor can see where to operate. A heart and lung machine will be connected to pump blood through your body while your heart is being worked on during surgery. The doctor will replace the damaged valve and take you off of the heart and lung machine. The doctor will close up your chest. This surgery takes about 3 to 5 hours. **Pacemaker:** The procedure takes about 1 to 2 hours. You will be relaxed but awake. Numbing medicine is injected in the area and an incision is made below your collarbone. The doctor uses X-ray to move the pacemaker and if applicable the leads through your vein into the heart. The pacemaker is then set to the rate that is best for your heart. **ICD:** The procedure takes about 1 to 2 hours. You will be relaxed but awake. Numbing medicine is injected in the area and an incision is made below your collarbone. The doctor uses X-ray to move the leads through your vein into the heart. The leads are then connected to the pulse generator. The pacemaker portion is set to the rate your heart needs.	**All care given to you is designed to provide comfort and relief for:** • Shortness of breath • Anxiety • Pain • Fear Your chances of being at home are increased. You will be kept comfortable at all times.

Options:	Non-Invasive Treatment / Support	Invasive Treatment / Support	End-of-Life Care (care focused on giving you comfort)
How you may feel in the short-term	Because many of these medications reduce blood pressure you may notice some dizziness in the beginning. You should notify your doctor as a dose adjustment may be needed. Never change your medication dose on your own. Always talk with your doctor. It is best to sit up slowly if laying down and dangle your feet at the side of the bed to allow your blood pressure to normalize before standing. You may also experience fatigue in the beginning.	**TAVR / Aortic Valve Replacement Open-Heart Surgery:** You will be moved to the intensive care unit (ICU) right after the procedure, where your heart's activity will be watched. Your pain will be managed. You will rest on a bed for several hours. You may have pain or discomfort at the incision site. A new valve will work better. This may ease symptoms caused by a stiff or narrow heart valve. This helps you breathe easier and be more active. **ICD / Pacemaker:** You will probably stay in the hospital overnight, so your healthcare team can monitor your heartbeat. The next morning, your pacemaker will be checked to make sure it is working correctly. An ICD may relieve symptoms such as a racing heartbeat, dizziness or fainting. It can also prevent rhythm problems that can cause sudden cardiac arrest. You will get a temporary device ID card that shows the type of ICD you have, when it was placed, and who performed the procedure. You will get a permanent card in the mail in a few weeks. ***Carry the ID card with you at all times.***	Medications used to calm you and make you comfortable may also make you tired. It may be difficult to hold conversations.

Current situation	Non-Invasive Treatment / Support	Invasive Treatment / Support	End-of-Life Care (care focused on giving you comfort)
What you may experience long-term	Comfort care is not designed to prolong life. However, your quality of life during your last hours to months can be improved.	There is no guarantee these procedures or treatment will work for you. You will need to speak to your doctor about your potential outcomes based on your health and chronic conditions. **TAVR / Aortic Valve Replacement Open Heart Surgery:** Your breathing may become easier; you may be less fatigued with activity and your swelling may be lessened. **ICD / Pacemaker:** Abnormal heart rhythms will be better controlled, and your heart rate will be in a normal range for your heart instead of beating too slow or fast.	Comfort care is not designed to prolong life. However, your quality of life during your last hours to months can be improved.

Options:	Non-Invasive Treatment / Support	Invasive Treatment / Support
Risks and side effects of treatment and special considerations	**ACE Inhibitors and ARBs:** Adverse effects: Dry cough (ACE-I), rash, taste disturbances, increased potassium, hypotension, and angioedema. **Beta Blockers:** Adverse effects: May feel more fatigued initially. Caution should be used in patients with recent cardiogenic shock, reactive airway disease, or asymptomatic bradycardia. **Diuretics:** Adverse effects: Electrolyte abnormalities, fluid depletion, and dehydration. **Aldosterone Blockers:** Adverse effects: May include increased breast size in men (spironolactone) and high potassium. Contraindicated in patients with creatinine >2.5 in men or >2.0 in women or serum potassium >5.0. Needs frequent lab monitoring.	**TAVR / Aortic Valve Replacement Open-Heart Surgery:** Major complications are uncommon, but could include: • Continued valve stiffness or narrowness • Leakage in the valve that was treated • Heart muscle or valve damage requiring open heart surgery • Bleeding, infection, damage to blood vessels or nerves • Abnormal heart rhythm • Heart attack or stroke • A reaction to anesthetic or dye • Death (rare) **ICD / Pacemaker:** • Bleeding from incision or catheter insertion site • Damage to the vessel at the catheter insertion site • Infection of the incision or catheter site • Pneumothorax—If the nearby lung is accidently punctured during the procedure • Problems caused by electronic devices (ICD-specific) **ICD Protection Considerations:** • Avoid letting anything hit or rub your ICD • Avoid strong electromagnetic fields (MRI machines, induction furnaces, welding equipment, high-intensity power lines/radio towers, and combustion motors, and don't touch spark plugs or a distributor of a running car) • Don't linger around anti-theft detection devices • Be careful with your cell phone or MP3 player • Keep computers and small household appliances at least 6 inches away from ICD