General Considerations

1.0 WHAT IS IT?

Women with heart disease are more likely to have a problem during pregnancy than women with a normal heart. Assessing the risk of pregnancy is best done prior to pregnancy.
Questions to Ask When Considering Pregnancy if you have Heart Disease:

1. What are the risks of pregnancy for the birthing parent?
2. Which medications are safe during pregnancy?
3. What are the late effects of pregnancy on the heart?
4. What is the overall prognosis for the birthing parent?
5. What are the risks for the fetus/neonate?
6. For birthing parents with congenital heart disease, what is the probability of transmission of congenital heart disease?
7. Where should care be delivered during pregnancy?

2.0 HOW SAFE IS IT FOR ME TO BECOME PREGNANT?

Every pregnancy carries some risk for complications and this risk may be increased by your underlying heart disease. Every person's heart condition is different and therefore the safety of pregnancy differs too. Before proceeding with trying to have a baby you should discuss your specific condition and the details of your situation with a heart specialist who knows about the care of women with heart disease in pregnancy.

3.0 ISSUES FOR THE MOTHER

3.1 Risks of heart problems during the pregnancy

Birthing parents with some heart conditions are at increased risk for other medical problems including high blood pressure (medical term: hypertension), bleeding after delivery (medical term: postpartum hemorrhage), or blood clots (medical term: deep vein thrombosis or pulmonary embolus).

The main heart complications that arise during pregnancy in women with heart disease are:

- Heart rhythm disturbances (medical term: arrhythmias)
- Weakening of the heart muscle (medical term: heart failure)
- Heart infections (medical term: endocarditis)
- Strokes

- Heart attacks (medical term: myocardial infarction)
- Death

There are several issues that need to be considered when determining risk of heart problems during pregnancy:

- **Your underlying heart condition:** Some heart conditions are associated with more pregnancy complications than others.
- **Other heart changes:** Some heart changes make pregnancy more difficult to tolerate, such as heart muscle weakness (medical term: ventricular dysfunction)**,** narrowed heart valves (medical term: stenosis)**,** leaky heart valves (medical term: regurgitation)**,** high blood pressure in the lungs (medical term: pulmonary hypertension
- **Your overall fitness:** If you easily become winded with exercise, you may have more difficulty with the stress of pregnancy.
- **Your oxygen levels:** If your oxygen levels are low, you may have more difficulty with the stress of pregnancy.
- **History of cardiac problems:** If you have had problems with abnormal heart rhythm (medical term: arrhythmias), heart failure (medical term: heart failure) and/or admission to hospital for heart-related issues, you have an increased risk for complications during pregnancy.

3.2 Medication safety

Some medications are not safe to use during pregnancy. Do not stop medications without first checking with your doctor but do check your medications out before pregnancy so you will have a plan. If you did not do that, then do so as soon as you know you are pregnant.

3.3 Late effects of pregnancy on the heart:

Pregnancy may increase the risk of heart issues for people in their 40s and 50s, including fluid retention, e, abnormal heart rhythms, heart attacks, and strokes. The causes are not yet well understood and are the focus of ongoing research.

There are a few heart conditions where pregnancy has been shown to sometimes permanently damage the heart. For instance, in women with peripartum cardiomyopathy with weakened heart muscle, the pregnancy in which that diagnosis was made, or a later pregnancy, can permanently weaken the heart muscle. Women with transposition of the great arteries who have had Mustard or Senning operations can develop weakened heart muscle during pregnancy and in some such women, the heart does not fully recover after the pregnancy, or they can develop persistently leaky tricuspid valves after pregnancy. Women with aortic valve narrowing (stenosis) may need valve surgery earlier in life if they have had a pregnancy.

3.4 What is the overall prognosis for the birthing parent?

You long term outlook is important when deciding to have children. It is also important for your partner to know your long-term outlook. Will you be well enough to care for your family throughout their growing-up years? The answer to this question differs for different people, so you should discuss this with your cardiologist and make sure you understand the answer that applies specifically to you.

4.0 ISSSUES FOR THE BABY

4.1 Overall risks to the baby

Some cardiac conditions are associated with higher rates of miscarriage. The main complications that occur in babies of mother with heart conditions are early births (medical term: premature delivery) and low birth weight babies (medical term: small for gestational age birth weight). Prematurity is the leading cause of health complications in newborn babies. Death of the baby before or early after birth can occur, though this is quite rare. Your own good health is the most important factor in ensuring the well-being of your baby.

4.2 If you have congenital heart disease, what is the chance your baby will have a heart condition?

Congenital heart diseases are heart defects that are present at birth. They can be passed down (inherited) from other family members. In the general population, the risk of having a baby with congenital heart disease is about 1%. If a parent has congenital heart disease, the risk increases, but there is a wide range of risk, between 5-50%. The exact risk of having a child with an underlying heart condition depends on the specific type of heart condition of the parent, and the way it is passed down.

5.0 MEDICAL CARE DURING PREGNANCY AND DELIVERY

5.1 Where should I be followed?

Some pregnant people with heart disease will need to be followed in specialized Cardio-Obstetrics clinics because their risks of having a heart problem during pregnancy are higher.
Travelling to and from Cardio-Obstetrics can be a challenge. Many Cardio-Obstetrics clinics are supported by a social worker who may be able to offer assistance if the travel is burdensome.

5.2 What can I do and expect during pregnancy?

Your heart specialist will arrange for check up visits during your pregnancy, usually at least two (16-20 weeks, and 28-32 weeks). In addition to your clinic visits, your doctor will arrange for ultrasounds of the heart (medical term: echocardiogram) to help determine how your heart is adapting to the pregnancy.

It is important that you pay attention to symptoms during your pregnancy. Notify your doctor if you develop any worrying symptoms such as shortness of breath, swelling of your legs, or heart palpitations.

If your symptoms are worrying and you cannot get in touch with your doctor, go to your nearest emergency department. It is helpful to keep a letter from your doctor explaining your condition so that other health care professionals can better help you in an emergency situation.

Labour and delivery should be planned with your heart specialist and your obstetrician. Generally, vaginal delivery is recommended because there are lower risks of bleeding and infection, even in people with heart conditions. Good pain management is important.