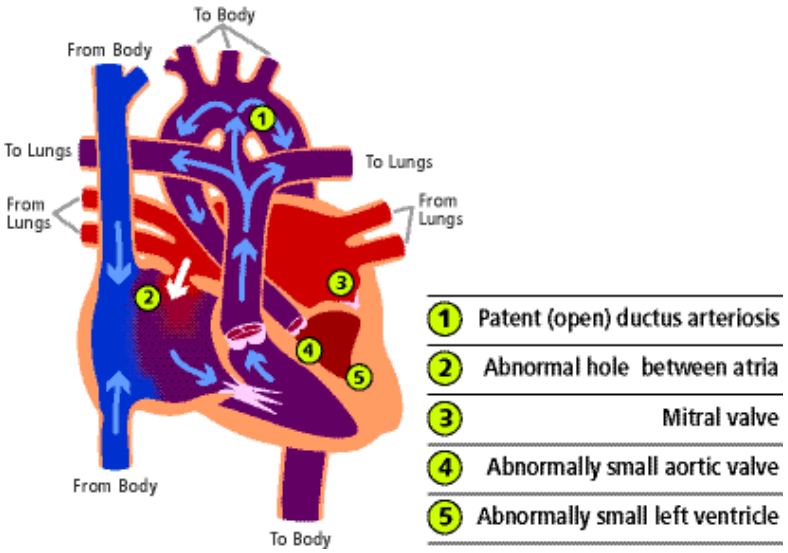
MICHIGAN MEDICINE
UNIVERSITY OF MICHIGAN

FETAL DIAGNOSIS AND TREATMENT CENTER

Prenatal Care for Hypoplastic Left Heart Syndrome

Hypoplastic left heart syndrome (HLHS) refers to the underdevelopment of the left side of the heart, including the aorta, aortic valve, mitral valve and the left ventricle. The hypoplastic left heart is unable to pump enough blood to meet the body's demands and requires surgery shortly after birth. HLHS occurs in about 1 in every 5,000 births. Two-thirds of those affected are boys. More than 85% of HLHS patients treated at Michigan Medicine survive to discharge, making C.S. Mott Children's Hospital a worldwide leader in the treatment of HLHS. Advances in technology have led to increased ability to diagnose HLHS in infants **before birth**. At Michigan Medicine's Fetal Diagnosis and Treatment Center, maternal fetal medicine specialists (doctors who specialize in caring for high-risk pregnancies) work in close collaboration with the fetal heart specialists from our Congenital Heart Center to provide unparalleled prenatal diagnosis and treatment alternatives for mothers of infants diagnosed with HLHS.



Diagnosis of HLHS

Prenatal ultrasound can identify a problem with the baby's heart. The diagnosis of HLHS is made by fetal echocardiogram as early as 16 weeks gestation. Due to the high number of mothers referred to our fetal heart center from throughout the nation, our fetal heart specialists have an unparalleled level of experience accurately diagnosing HLHS prenatally.

Fetal treatment for HLHS

Fetal treatment is available for select fetuses with HLHS and a restrictive atrial septal defect. Potential candidates for fetal cardiac intervention will receive a comprehensive evaluation at Michigan Medicine's fetal heart center. The fetal cardiac procedure is highly dependent on fetal position and is performed percutaneously. Mother receives epidural anesthesia. A balloon catheter is inserted to open the atrial septal defect, or a tiny stent may be deployed and left in place to keep the area open. This procedure may prevent irreversible damage to the blood vessels in the lungs and prevent the need for emergent, high-risk intervention at birth. This therapy may lead to improved heart development.

Delivery of babies with HLHS

Unless there is a special birth plan, a vaginal delivery is recommended and a cesarean section is reserved for obstetric indications. It is recommended that the delivery is planned at a hospital that is prepared for high-risk deliveries and also includes a neonatal intensive care, pediatric cardiology and pediatric cardiothoracic services. This will help facilitate coordination of care between specialties and permit access to other emergency services if needed. Michigan Medicine is one of only a few centers nationwide at which the birth center is co-located within a comprehensive children's hospital. This unique setting allows for seamless integration between our private-room birth center, state-of-the-art newborn intensive care unit (NICU), and pediatric cardiothoracic intensive care unit in one convenient location.

Treatment for HLHS after birth

Michigan Medicine's Congenital Heart Center offers comprehensive treatment and long-term care for babies born with HLHS.

Can HLHS happen again with another pregnancy?

The majority of HLHS cases are due to a random (sporadic) event; however, in some families, there is an increased risk for future affected pregnancies. The approximated genetic risk for siblings of a child with isolated HLHS is 3%. If a chromosome change is identified, the chance of HLHS with future pregnancies is dependent on the type of chromosome change. Prenatal diagnostic testing may be available in some cases. Your doctor and a genetic counselor will meet with you and discuss your family's risk.

Take the next step

If you have questions about the fetal heart program at C.S. Mott Children's Hospital, would like to schedule an appointment or if we can be of further assistance in any way, please call 1-877-475-6688.