The Heart Institute at Cincinnati Children’s Hospital Medical Center offers a robust program for pediatric patients with inherited arrhythmias, and for families who are seeking answers following a child’s sudden cardiac arrest or death. Our Familial Heart Rhythm Clinic team takes a holistic approach to care, providing a unique depth of expertise in electrophysiology and genetics.

Areas of Expertise

- Long QT syndrome (LQTS)
- Catecholaminergic polymorphic ventricular tachycardia (CPVT)
- Brugada syndrome
- Short QT syndrome
- Arhythmogenic cardiomyopathy (ARVC or ARVD)
- Idiopathic ventricular fibrillation
- Sudden unexplained cardiac arrest
- Known genetic change or mutation predisposing to an inherited arrhythmia

An Integrated, Holistic Approach to Care

The Familial Heart Rhythm Clinic provides comprehensive, multidisciplinary care for children with arrhythmias. Our team of electrophysiologists, electrophysiology nurses and board-certified genetic counselors work collaboratively to consider arrhythmia from a holistic, family-based perspective. They integrate clinical evaluation, family history, cardiac testing and genetic testing when making screening and medical management recommendations.

In addition, the team offers diagnostic and genetic evaluation for adults with arrhythmias and works closely with adult cardiologists and other referring providers. We also help families who have experienced a relative’s sudden cardiac arrest or death — our team can investigate the underlying cause, determine whether family members are at risk, and provide treatment recommendations as needed.
Thorough Diagnostic and Medical Management Services for Children

When a child is referred to our program for arrhythmia care, we conduct a physical exam and thorough review of his or her medical and family history. Our experienced electrophysiology team can perform a number of non-invasive and invasive diagnostic tests as indicated. These can include:

- Electrocardiograms
- Exercise testing
- Holter monitoring
- Drug challenge testing
- Invasive electrophysiology studies
- Loop recorder implants

As part of the evaluation, we also may perform genetic testing on the patient or family members.

Following a diagnosis of arrhythmia, our team provides a comprehensive treatment plan that can include medical therapy, lifestyle modifications and genetic counseling, as well as interventions such as ablation and implantable devices such as a pacemaker or cardioverter defibrillator.

Our team can provide comprehensive medical management for pediatric patients, or simply perform genetic testing and electrophysiology studies as part of the care provided by a referring physician. While our team does not offer comprehensive medical management for adults, we can offer diagnostic and genetic evaluation for adults working closely with the patient’s adult cardiologist or other referring provider.

We provide detailed summaries of any test results to the patient’s pediatrician or cardiologist to ensure continuity of care. The Familial Heart Rhythm Clinic team offers long-term follow-up, and can assist with the transition to adult providers as needed.

Extensive Support for Families Affected by Sudden Cardiac Arrest and Death

Sudden cardiac arrest and death (SCA/D) are uncommon in young people, but they have a severe impact on families, care providers and the community. Family members want to know the underlying cause, not only to experience closure, but to address the potential of heritability and risk of sudden death for surviving relatives. Our team has the knowledge and expertise to provide education, support and medical management for families in this situation.

Identifying the cause of SCA/D can involve conducting a thorough investigation of the deceased’s medical records, including autopsy reports, and utilizing blood and tissue samples for genetic testing. When the cause of SCA/D is confirmed, the team may recommend and perform genetic testing and counseling for family members in order to provide risk stratification.

In rare cases, the cause of SCA/D remains unknown. In this case, our team may recommend genetic testing and further cardiac screening, which can yield helpful information for families.