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October 2019

Dear Families,

We want to make you aware of a screening program developed by Beaumont Hospital for student's ages 13-19 involved in vigorous activities and organized sports. Our **Hurley Teen Health Check** Student Heart Screening Program combines a simple health history and noninvasive screening to look for signs of hypertrophic cardiomyopathy (HCM). This is a serious heart condition that is the leading cause of sudden cardiac death in young athletes. HCM affects approximately one in 500 people, and does not usually have any symptoms. The stress on the heart during strenuous activities puts our students at higher risk for sudden death.

Along with the Thomas Smith Memorial Foundation, Hurley Children's Hospital is offering this screening **FREE OF CHARGE** to students on **Saturday, October 19<sup>th</sup> from 9:00am to 2:00pm**. The event will be held at **Flushing Middle School, 8100 W. Carpenter Rd., Flushing, MI 48433**

**You must pre-register to participate.** Call 810.262.7123 to register.

Students will undergo a quick screening that will include a review of the health history questionnaire that you will need to complete at home. They will have their blood pressure checked and an electrocardiogram (ECG) will be performed. A cardiologist will evaluate each student. The doctor will listen to the student's heart and may choose to perform echocardiogram, a noninvasive picture of the heart.

To participate in the **Hurley Teen Health Check** Heart Screening Program you will need to complete the attached paperwork and return it with your child on the day of the screening. If forms are missing or incomplete, we will be unable to screen your child. **Please note that screenings take a minimum of 30 minutes and could take up to 90 minutes if it is decided the student needs an echocardiogram.**

The Forms Are:

1. Completed Student/Family Health History Questionnaire signed by both a parent and the student
2. Consent to Treatment Form signed by a parent

The data we collect may be used by researchers at Hurley Medical Center and Beaumont Hospital to add to the scientific knowledge of sudden cardiac arrest in young athletes. The data will be reported anonymously. Student privacy and confidentiality will be maintained. Registration for the screening is required. To register, please call **810-262-7123**.

Sincerely,  
Hurley Children's Hospital

## HISTORY QUESTIONNAIRE

Student's Name \_\_\_\_\_ Birth Date \_\_\_\_\_

Height \_\_\_\_\_ Weight \_\_\_\_\_ Gender \_\_\_\_\_

1. Has it been more than two years since you had a physical exam that included a blood pressure reading and listening to your heart?	YES	NO
2. Has a physician or your parents ever told you that you have a heart murmur?	YES	NO
3. Has a physician ever suggested that you not participate in athletic competition?	YES	NO
4. Have you had chest pain/pressure, dizziness, racing, or "skipped beats" at rest or with exercise?	YES	NO
5. Have you ever fainted or passed out during exercise or after having been startled?	YES	NO
6. Have you ever fainted or passed out after exercise?	YES	NO
7. Have you ever been told that you have high blood pressure, high cholesterol, or diabetes?	YES	NO
8. Have you ever been diagnosed with unexplained seizures or exercise-induced asthma?	YES	NO
9. Do you use or have you ever used cocaine or anabolic steroids, or do you smoke?	YES	NO
10. Has anyone in your family had sudden, unexpected death before age 45?	YES	NO
11. Has anyone in your immediate family had unexplained fainting or seizures?	YES	NO
12. Has a physician diagnosed anyone in your family with an abnormally thickened heart, weakened heart or Marfan syndrome?	YES	NO
13. Have you ever used an inhaler?	YES	NO
14. Do you cough after exercise?	YES	NO
15. What sport(s) do you plan on playing?		

If the answer to any of the above questions is yes, please give more details: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_  
Student Signature (date)

\_\_\_\_\_  
Parent/Guardian Signature (date)



## Program Consent



**Student's Name** \_\_\_\_\_

**Program Goals:**

Hurley Children's Hospital, through its Emergency/Trauma Departments is offering a community-based screening program for high school students. Cardiovascular pre-participation screening is the systematic practice of medically evaluating large, general populations of athletes prior to participation in sports for the purpose of identifying or raising suspicion of abnormalities that could provoke disease progression or sudden death (AHA Scientific Statement 2007).

The purpose of the screening is to attempt to identify any pre-existing heart conditions that could potentially increase the student's risk when participating in vigorous physical activity and/or athletic competition.

**Screening Consent:**

I understand that the screening examination and tests offered by Hurley Children's Hospital do not diagnose cardiac disease, and that any sign or symptom found means that my child needs further medical evaluation (full history, physical examination and diagnostic testing) to determine the cause of the sign or symptom. Additionally, I understand that Hurley Children's Hospital will notify me of the findings. I understand that Hurley Children's Hospital will not provide any further tests or follow-up care without a medical professional order or referral after this screening. I also understand that it is my responsibility to arrange for my child's follow-up care if indicated, and that this screening is not a substitute for a complete pre-activity/athletic competition evaluation by my child's physician.

I understand that the Program will be conducted by Hurley Children's Hospital, and I consent to my child receiving the following screening evaluation:

- **Medical History**
  - Pre-printed questionnaire
  - Completed by parents prior to screening day
- **Vital Sign Monitoring** — Clinical staff will obtain blood pressure, body weight and review medical history information
- **Electrocardiogram (ECG)** — Performed at rest with patches placed on surface of skin. The test maps the rate, rhythm and functions of the heart, and prints a tracing for physician review and interpretation.
- **Physician Review and Examination** — A physician will review the screening findings as described above and perform a limited physical examination. The physician may recommend a limited echocardiogram.
- **Echocardiogram** — This test will be performed at the direction of the evaluating physician; it will not be performed on each student. An echocardiogram is an ultrasound image created by using a Doppler wand across the chest skin.

I understand that a written report of the screening findings will be provided. I agree that Hurley Children's Hospital is not responsible to arrange for any further tests or care for my child, and has made no guarantees or promises to me related to the screening provided.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Address

\_\_\_\_\_  
Address

## Frequently Asked Questions

### **Q. What is Hypertrophic Cardiomyopathy?**

Hypertrophic Cardiomyopathy (HCM) is a condition that causes the heart muscle to become thickened, making it harder for the heart to pump blood effectively. This may prevent the heart from getting enough blood and oxygen during exercise, which could trigger a cardiac arrest and death.

### **Q. What is the cause of Hypertrophic Cardiomyopathy?**

The actual cause of HCM is not known, however it is commonly an inherited condition that results in genetic defects that control growth of the heart muscle.

### **Q. How common is Hypertrophic Cardiomyopathy?**

HCM is a relatively uncommon disorder, and is estimated to affect 1 in 500 people.

### **Q. What are common symptoms of Hypertrophic Cardiomyopathy?**

Not everyone with HCM will demonstrate signs or symptoms of the disorder. However, symptoms associated with HCM include chest pain, dizziness, fainting, heart failure, hypertension (high blood pressure), lightheadedness, skipping or racing heart, shortness of breath (with activity or when lying down), and fatigue.

### **Q. How can Hypertrophic Cardiomyopathy be detected?**

Initial signs of HCM can be detected through an electrocardiogram (ECG). In those with an ECG suggestive of HCM, the diagnosis can be made utilizing an echocardiogram, or ultrasound of the heart.

### **Q. How does the Hurley Teen Health Check Screening program differ from pre-participation sports physical?**

Pre-participation sports physicals differ in intensity and scope. The Hurley Teen Health Check Screening program offers a more comprehensive focus on the heart, looking for signs of HCM, or other potentially dangerous heart ailments that may raise a student's risk of sudden cardiac arrest. Combined with a health history questionnaire focused on the family and individual's heart history, the Hurley Teen Health Check Screening program uses an electrocardiogram (ECG) and sometimes an Echocardiogram (Echo) more intently focus on heart abnormalities.

### **Q. What is an electrocardiogram (ECG)?**

An ECG is a painless test that evaluates the electrical activity of the heart. It is a short test, taking only minutes to perform. Tracings of the electrical activity of the heart are obtained by having trained personnel attach electrodes to the chest, which are connected to the ECG machine via lead wires. These wires help transmit the electrical activity back to the ECG machine and transform the electrical impulses into waveforms. These waveforms can then be evaluated for abnormalities by the physician.

### **Q. What is an echocardiogram?**

The echocardiogram (or echo) is an ultrasound of the heart. The echo utilizes sound waves to produce a picture of the heart. This picture can then be used to determine valve structure, heart wall thickness and the pumping ability of the heart.

# Frequently Asked Questions

(Continued)

**Q. What happens if the screening results for my child come back abnormal?**

A report of the screening results will be sent home to the student's parents or guardian for you to share with your family physician. If an abnormality is found that results in a "Stop" activity recommendation, the parents will be notified and consulted immediately by the physician.

**Q. How much does the Hurley Teen Health Check Screening program cost?**

Hurley Teen Health Check Screenings are provided free of charge as a community service offering. This includes a full report of the screening, a review by a physician and an ECG. A quick look echo will also be provided, if clinically indicated.

**Q. How can such valuable tests be offered at no charge?**

This program can be provided at no cost to the students due to the volunteer efforts of the physicians and staff. In addition, philanthropic donations and Hurley Children's Hospital have provided funds for the purchase of equipment and supplies needed for the screening.