**Abstract 14**

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**Title:** Heart School: Nurses Teaching Heart Healthy Behavior and Early Heart Attack Care (EHAC) by Partnering with Schools

**Background:**
When the Trenton Health Team (THT), a collaboration of the city's healthcare organizations and social services, completed its first Community Health Needs Assessment (CHNA), one finding was the identification of Trenton residents as a high risk population for cardiovascular disease. Black males are twice as likely to die from heart disease compared with white males in Mercer County. Thirty-nine percent of all Trenton residents are obese, while 50% of its school children in every age category are obese (this compares to 21% of school aged children nationally). It is well known that cardiovascular disease is the leading cause of death among both men and women in the United States, killing an average of one American every 37 seconds. One in three American adults has cardiovascular disease and yet many risk factors (such as smoking, sedentary behavior, and obesity) for cardiovascular disease can be modified. Based on this information, the Chest Pain Center (CPC), which serves the diverse socioeconomic population within Mercer County (population 366,000, 226 square miles) was challenged to reach out to the community in order to educate its school aged children on the risk factors for developing cardiovascular disease and Early Heart Attack Care (EHAC). The Heart School answered this challenge by creating a program that is nurse driven, and partners with elementary schools in Trenton and neighboring towns to provide cardiovascular education.

**Methods:**
The CPC is part of Capital Health (CH), a hospital system located in Mercer County, NJ. The Heart School is modeled after two other successful CH programs (Bike Safety, Stroke School). The program was piloted in January 2014 and targets to 4th and 5th grade students. Heart School is taught by Capital Health nurses. The Heart School curriculum was developed using data from the CHNA and EHAC materials and was approved by the Trenton Board of Education. The program is designed to address the educational goals of recognizing risk factors, modifying behavior, and acting when symptoms of ACS are identified. Program duration is 45 minutes and class sizes are limited to 30 students. The Heart School booklet (funded by Capital Health Woman in Philanthropy grant) is used to guide instruction. Models of the heart, coronary arteries, and lungs are used to review the circulatory system. The program includes a discussion on healthy snack choices and exercise, using posters and visual aids. Children are taught to call 9-1-1 for an emergency, using a simulated emergency. Pre and post tests are given to all students. The results from these tests and teacher evaluations are used
for program improvement. Information on EHAC and risk factors is given to each student. Children are instructed to share the information they learn with their care givers as a take home assignment.

Results:
In its inaugural year (2014), the Heart School curriculum was presented by nurses in 16 schools in Mercer County. It reached more than 900 students and faculty. Comparison of the pre and post presentation quizzes showed a significant increase in awareness about heart disease and prevention including: where does a heart attack occur in the body- 84% pretest, 90% post-test, identifying the signs of a heart attack- 52% pretest, 75% post-test, knowing to call 9-1-1 if you think someone is having a heart attack, 90% pretest, 96% post-test, name two ways to stay healthy, 84% pretest, 97% post-test. We believe our pretest numbers may be higher because we have been doing Stroke School for 3rd and 4th grade students in the same schools since the 2009-2010 school year. With each year the program is presented, the awareness for heart disease and prevention will increase as the children and faculty share what they have learned with families and friends. Heart School has been featured in local newspapers and other local publications presenting various avenues to increase awareness in the communities we serve.

Conclusion:
As heart disease is a primary cause of debilitation and the leading cause of death in the United States and positive outcomes for patients are directly linked to prompt care, the program can truly be considered life-saving. The Heart School was developed with a mission to educate the community on the risk factors for Acute Coronary Syndrome (ACS), recognition of symptoms, and calling 9-1-1 promptly if these symptoms are present. The curriculum was developed using proven educational information from leading organizations in cardiovascular health, including the Society of Cardiovascular Patient Care (SCPC). Heart School could not be successful without the support of the Trenton Board of Education, the school nurses and teachers in our region, the Capital Women in Philanthropy, Capital Health Community Education team, and the Chest Pain Center at Capital Health. We are proud that during our accreditation visit SCPC surveyors recommended Heart School as an innovative community education program. The Heart School will continue to grow and develop to reach our goal of increased awareness and a reduction in ACS within our high-risk community.