One in three American adults (67 million people) suffer from high blood pressure, and approximately half of patients with hypertension have uncontrolled blood pressure leading to costs of about $46 billion annually for health care services, medications, and loss of productivity at work. Adherence to antihypertensives is generally poor, contributing to the number of patients not managing their high blood pressure. Educating patients about high blood pressure and the role that medications and lifestyle changes play is critical to improving patient understanding and management of high blood pressure.

### Aims
- Educate people on the dangers of high blood pressure and to stress the importance of medication adherence and living a healthy lifestyle
- Use an interactive device to help demonstrate the effects of high blood pressure on the heart
- Assess the effectiveness of a blood pressure teaching device on educating individuals on high blood pressure and its impact on health.

### Materials and Methods

#### Participants
- Recruited at health screening events through the American Pharmacists Association Academy of Student Pharmacists (APHA-ASP)

#### Study Procedure
- Participants were randomized to high blood pressure education with or without the device.
- Both groups received education verbally and visually about basic blood pressure readings, risk factors, complications and options to improve health outcomes.
- A seven item survey was utilized to assess knowledge of and attitudes regarding hypertension management prior to and after education.

#### Statistical Analysis
- Pre and post scores for each item were compared for each of the groups using Wilcoxon Signed Ranks Test.
- Mann Whitney U test was performed on the difference scores of each item to compare the control and treatment.

### Discussion & Conclusion
- To the authors’ knowledge, this is the only known device to physically simulate controlled and uncontrolled blood pressure.
- Device used at the Jane Pauley Community Health Center, Indianapolis, during Hypertension Education classes. Determined to be anecdotally effective in demonstrating difference between healthy and unhealthy hearts.
- Analysis of results has indicated that the device has a positive affect on heart education comprehension
- By providing individuals with a tangible model of the heart’s pumping process, the novel educational device has potential to enhance knowledge and empower patients with better understanding of concepts associated with hypertension.
- Future research with College of Nursing for diversity in participants. Evaluation should also include items assessing the efficacy of education using the device and its effect on adherence to blood-pressure medications.
- Collaborate with the American Heart Association and offer the tool for use by other health educators.

### References