

# **Progress Report - Week 4**

**Title:** Stabilizer Device for Intra-Cardiac Echocardiography (ICE) to Assist Structural Heart Interventional Procedures

**Client:** Dr. Amish Raval

**Advisor:** Dr. Darilis Suarez-Gonzalez

**Team:** Sara Morehouse (Leader)

Max Aziz (Communicator)

Noah Hamrin (BWIG & BPAG)

Kaden Kafar (BSAC)

**Date:** October 3, 2024

## **Problem Statement:**

Intracardiac echocardiography (ICE) is a technique commonly used during catheter-based interventional procedures to treat congenital heart disease, valvular heart disease and myocardial disease. Typically, the ICE catheter is advanced into the right atrial from a femoral vein, where it is positioned for imaging purposes. A separate catheter to perform the interventional procedure such as a transeptal needle or Watchman left atrial appendage occluder delivery system is then introduced. Many times, the ICE catheter drifts out of place, the imaging perspective is lost and the ICE catheter needs to be readjusted. Therefore, there exists a need for a simple re-sterilizable device to stabilize a variety of commercially available ICE catheters during interventional procedures. The device must prevent movement of the ICE catheter so that it does not migrate out of place when in use.

## **Brief Status Update:**

This week, the team worked on completing our Preliminary Presentation. This involved compiling our designs and evaluation of them into a presentation that will be delivered this Friday, October 4.

## **Difficulties / Advice Requests:**

N/A at this time.

## **Current Design:**

N/A at this time.



Progress Reports	X	X	X	X										
PDS		X												
Design Matrix			X											
Prelim presentation				X										
Final Poster														
<b>Meetings</b>														
Client	X													
Advisor	X		X	X										
<b>Website</b>														
Update	X	X	X	X										

**Previous week’s goals and accomplishments:**

- Goal: Complete and present Preliminary Design Presentation
  - The presentation is completed and will be presented Friday, October 4.
- Goal: Continue development of the final design and capture our work in the Preliminary Design Report.
  - The team focused on completing our presentation this week, and will be working on the report in the next few days.

**Activities:**

Name	Date	Activity	Time (h)	Week Total (h)	Sem. Total (h)
Sara	10/1	Worked on Preliminary Presentation	2	2	9
Max	10/1,10/2	Worked on presentation	2	2	9
Noah	9/30	Worked on preliminary presentation	2	2	9
Kaden	10/1,10/3	Worked on presentation, worked on solidworks model	3	3	9