Title: Hydrocephalus Shunt Valve

Names: Emma Alley, Andrew Miller, Karl Fetsch, Catharine Flynn

Date: 3/31/17-4/6/17

Problem Statement: When the heart beats, it approximately moves blood at a rate of 1000 ml/min. Only about 1 ml/min enters the blood brain barrier and is later reabsorbed. For patients with hydrocephalus, the body's ability to reabsorb the fluid is significantly diminished, causing pressure to accumulate in the skull. In order to decrease the intracranial pressure, hydrocephalus patients must have surgery to insert a shunt valve to allow for fluid drainage. The current valves are not without fault, and fail 40% of the time. The goal of this project is to improve upon mechanical shunt valves by incorporating ambient pressure like in US patent 9526879.

Summary of Team Roles and Accomplishments:

- *Emma Alley, Leader*: Set up meeting times
- *Andrew Miller, Communicator/BPAG:* Contacted client about meeting and contacted people about 3D printing
- *Karl Fetsch, BWIG*: No updates to the webpage were needed this week.
- *Catharine Flynn, BSAC*: BSAC meetings as necessary

Summary of Design Accomplishments: The Team has had a fabrication meeting at Home Depot in order to learn more about O-rings and materials we can buy.

Activities:

Name	Total Hours	Activities
Emma Alley	3	2017/04/2 Fabrication meeting (2.5 Hr.) 2017/04/3 Fabrication research (.5 Hr.)
Andrew Miller	4	2017/04/2 Fabrication meeting (2.5 Hr.) 2017/04/5 Fabrication meeting (1.5hrs)
Karl Fetsch	4	2017/04/2 Fabrication meeting (2.5 Hr.) 2017/04/5 Fabrication meeting (1.5hrs)
Catherine Flynn	4	2017/04/2.5 Fabrication meeting (2 Hr.) 2017/04/5 Fabrication

		meeting (1.5hrs)

Statement of Team Goals: The team plans on buy materials from Home Depot to build the prototype

Individual Goals:

- *Emma:* Plan the tentative schedule for moving forward and schedule meetings
- *Andrew:* Contact the client about team meetings
- *Karl:* Update the website as necessary
- *Catherine:* Attend BSAC meetings as necessary.

Difficulties: The O-rings have specific equations that dictate their usability. This prevented us from buying O-rings on Sundau.

Project Schedule/Timeline:

Week (starts on Fridays)	**Goals Before the Start of the Week**
April 7	Have everything ordered for the design
April 14	Build a Prototype and plan for testing
April 21	Testing

Expenses: The team has not made any purchases yet.