

# Progress Report - Week 2

**Title:** Vaginal Self-Swab Device to Minimize Contact Contamination

**Client:** Dr. Jean Riquelme

**Advisor:** Dr. Megan McClean

**Team:**

Sara Morehouse (Leader)

Cherry Qiu (Communicator)

Katherine Kafkis (BWIG and BSAC)

Adam Berdusco (BPAG)

**Date:** February 7, 2024

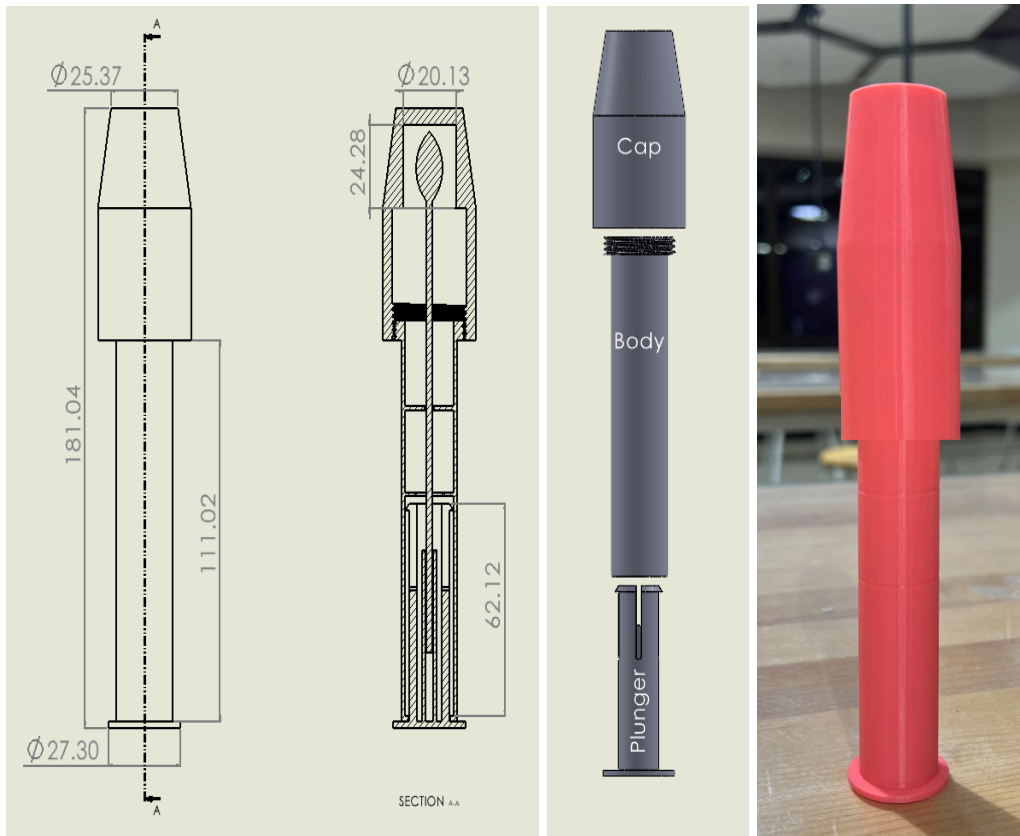
## Problem Statement:

Quality sexual health is important for every woman to sustain, but with women ages 15-24 accounting for 43% of undiagnosed STI cases, the system supporting women's sexual health could use some improvement (CDC). The team has developed a novel self-swab STI testing device that allows women the privacy of swabbing themselves without the potential discomfort of a physician present. This was conceived with the goal in mind of making STI testing more accommodating while reducing contamination of the testing environment. However, the current design has issues with media leaking from the device after use, as well as with the aesthetics of the design. Additionally, the device requires the addition of a thin, puncturable film to the cap to contain transport media. The team is tasked with modifying the original design to address the issues currently being faced while still seeking to limit contamination of the device and testing environment as well as account for patient comfort.

## Brief Status Update:

This week the team continued background research on the topic, with the focus on requirements for the design. We met with the client and discussed design requirements for the semester, and also updated the Product Design Specifications to reflect the need to prevent leakage and the goal for a sustainable material.

## Current Design:



The current design was developed last semester and includes a plunger, body and cap. The prototype was 3D-printed and assembled with the plunger being inserted into the bottom of the body, and the cap screws onto the top of the body. A swab is inserted through the body and into the plunger.

## Materials and Expenses:

Item	Description	Manufacturer	Mft Pt#	Vendor	Vendor Cat#	Date	#	Cost Each	Total	Link
-									\$0.00	
-									\$0.00	
-									\$0.00	
-									\$0.00	
-									\$0.00	
								<b>TOTAL:</b>	<b>\$0.00</b>	



<b>Meetings</b>																
Client			X													
Advisor	X	X	X													
<b>Website</b>																
Update	X	X	X													

### Previous week's goals and accomplishments:

- Goal: Complete our initial research and compile sources we can refer to throughout the semester as we make design changes
  - This was accomplished as we continued research this week, but will be an ongoing goal as the project progresses.
- Goal: Review the previous semester's Product Design Specification (PDS) and use our new research to make edits and update the PDS to be relevant going forward
  - We updated the PDS with changes that better reflect the needs of the project going forward.

### Activities:

Name	Date	Activity	Time (h)	Week Total (h)	Sem. Total (h)
Katherine	2/6/24	Looked over the PDS and made necessary edits	1	2	5
	2/8/24	Conducted research on O-ring seals	1		
Sara	2/7/24	Edited PDS and reviewed the document overall	0.5	2.5	4
	2/8/24	Researched o-ring compression seals and injection molding	2		
Cherry	2/7/24	Updated PDS for this semester's goals	1	1	2.5
Adam	2/6/24	Updated PDS to align with the current semester's goals	1.5	2.5	4.5
	2/8/24	Researched methods for sizing o-rings	1		

