

Novel Negative Pressure Wound Therapy Device for Rhytidectomy Recovery

Clients: Ms. Nada Botros

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Team: Bryan Heaton (Leader)

Meghan Kaminski (Communicator)

Dhruv Nadkarni (BWIG)

Serena Evers (BSAC)

Harshad Gunasekar (BPAG)

Date: September 5, 2025 - September 12, 2025

Problem Statement

Hematoma remains the most common and severe complication after rhytidectomy due to the facial flap's limited blood supply, and current prevention methods are inconsistently effective. There is a need for a specialized, anatomically compatible negative pressure wound therapy solution to reduce fluid buildup and improve surgical outcomes in facelift procedures.

Brief Status Update

The team held their first client meeting with Ms. Botros on Thursday morning and asked all preliminary questions. Next steps for the team are beginning the PDS, continuing preliminary research, and beginning to formulate design ideas.

Summary of Weekly Team Member Design Accomplishments

- Team:
 - Attended initial advisor meeting
 - Attended the initial group meeting
 - Created a contact point between the group
 - Began research relevant to the project
 - Initial Client Meeting
- Bryan Heaton
 - Conducted preliminary research related to negative pressure wound therapy
 - Led first client meeting with Ms. Botros
- Meghan Kaminski
 - Initial email sent to client
 - Initial client meeting scheduled for 9/11
 - Began initial research
- Serena Evers
 - Initial client meeting
 - Preliminary research on rhytidectomy, negative pressure wound therapy, and hematoma formation
- Harshad Gunasekar
 - Initial Group Meeting
 - Began initial research into rhytidectomy and possible solutions such as NPWT
 - Initial Client Meeting
- Dhruv Nadkarni
 - Set up the project website
 - Began initial research

Weekly/Ongoing Difficulties

N/A

Upcoming Team and Individual Goals

- Team:
 - Continue background research
 - Begin work on PDS
- Bryan Heaton
 - Begin researching current attempts to use NPWT on rhytidectomy patients
 - Develop understanding of current market state of NPWT
- Meghan Kaminski
 - Schedule a client meeting on 9/17
 - Continue researching NPWT usage on rhytidectomy patients
 - Further understand the rhytidectomy procedure
- Serena Evers

- Develop further understanding of the rhytidectomy procedure
 - Locate any competing designs or previous research of NPWT for facial surgeries
- Harshad Gunasekar
 - Research existing solutions and patents for NPWT,
 - Pros and Cons of already existing products on the market
 - Further understand rhytidectomies and the complications that arise from them
- Dhruv Nadkarni
 - Continue research into procedure and current products in the market

Project Timeline

Project Goal	Deadline	Team Assigned	Progress	Completed
Product Design Specification (PDS)	September 19, 2025	All	0%	
Design Matrix	September 26, 2025	All	0%	
Preliminary Presentations	October 3, 2025	All	0%	
Preliminary Deliverables	October 8, 2025	All	0%	
Show and Tell	October 31, 2025	All	0%	
Poster Presentations	December 5, 2025	All	0%	
Final Deliverables	December 10, 2025	All	0%	

Expenses

Item	Description	Manufacturer	Part Number	Date	QTY	Cost Each	Total	Link	
Component 1									
Component 2									
Component 3									
TOTAL:								\$0.00	