

Pediatric kidney transplant surgical instrument development

Progress report #1

Date: 9/10/2026

Client: Dr. Kelly Collins

Advisor: Professor Shawn Gomez

Team - *KidneyKrew*:

Brannick Larson - *BPAG*

Ishita Bhardwaj - *Team Leader*

Lily Walden - *BSAC*

Madison Poza - *BWIG*

Mariamawit Tefera - *Communicator*

Noa Biener - *Team Leader*

Problem statement:

The objective of this project is to develop a scaled version of vascular clamps for transplant surgeries of adult kidneys into pediatric patients and test them using a kidney simulation model with modifiable wound depth and vessel size.

Brief status update:

The team is currently in the literature search phase. The team has begun to conduct research about the project with a focus on the surgical procedure and instruments of the transplant process of an adult kidney into a paediatric patient. Additionally, the team is developing questions and preparing to meet with the client.

Goals

Major team goals for the next week

1. Come up with a more defined problem statement for the PDS and future assignments
2. Contact the client and speak to her about her specific issues with the current surgical device and her hopes for what we can achieve while also ascertaining more information about the resources she can provide us. Come up with a list of questions to ask the client during this meeting.

Next week's individual goals

- Brannick Larson
 - Brainstorm client questions, and conduct research broadly on our project and the procedure. Additionally, engage in the client meeting and take notes on information which could help in design
- Ishita Bhardwaj
 - Come up with questions to ask the client, attend the client meeting and take notes during it, continue research on the procedure of the transplant as well as the instruments used
- Lily Walden
 - Come up with questions to ask the client, do more research about the procedure
- Madison Poza
 - Research about the broad topics of the project and competing products & come up with client questions
- Mariamawit Tefera
 - Do more extensive research about competitive designs and already existing products/solutions
 - Start brainstorming prototype design ideas based on the information we gathered from the client meeting
- Noa Biener
 - Come up with client questions to ask in the first client meeting, attend the first client meeting to get a more descriptive idea of the expected model, research topics related to the surgical procedure and instrument as well as competing designs

Detailed accomplishments

Previous week's goals and accomplishments

- First group meeting
- Communicated with client regarding first meeting
- Wrote out our problem statement

Activities

Name	Date	Activity	Time (h)	Week Total (h)	Sem. Total (h)
Lily Walden	9/8/2026	Research	1	1	1
Madison Poza	9/9/2026	Research	2	2	2
Noa Biener	9/10/2026	Group Meeting and Questions Research Client Meeting	1 1 1	3	3
Mariamawit Tefera	9/10/2026	Research	3	3	3
Ishita Bhardwaj	9/10/2026	Research, Group meeting, Client meeting	3	3	3
Brannick Larson	9/10/2026	Research, group and client meeting	3	3	3

Difficulties / advice requests:

The group has currently encountered no challenges and does not require any advice at this time.

Current design

No prototyping or designing has been done at this phase of the project.

Materials and expenses

Item	Description	Manufac-turer	Mft Pt#	Vendor	Vendor Cat#	Date	#	Cost Each	Total	Link
Category 1										
									\$0.00	
									\$0.00	
Category 2										
									\$0.00	
									\$0.00	
								TOTAL:	\$0.00	