

Medication Delivery and Use in Home-Based Hospital Care

(Medication Delivery)

Date: 10/15/2026 - 10/22/2026

Client: Jennifer Woodard

Advisor: Randy Bartels

Team:

Aariel Moore - Team Leader, ajmoore4@wisc.edu

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Problem statement

Older adults and others with reduced grip strength, dexterity, or vision frequently cannot open blister-packaged medication, particularly peel-back foils. Existing aids either require substantial force, fail on peel-away packaging, or are too large, costly, or hazardous for personal use. As a result, patients drop pills, use sharp tools, or miss doses. A portable, low-force, low-cost tool is needed that safely opens both peel-back and push-through blister packaging without modifying the package or exposing sharp edges.

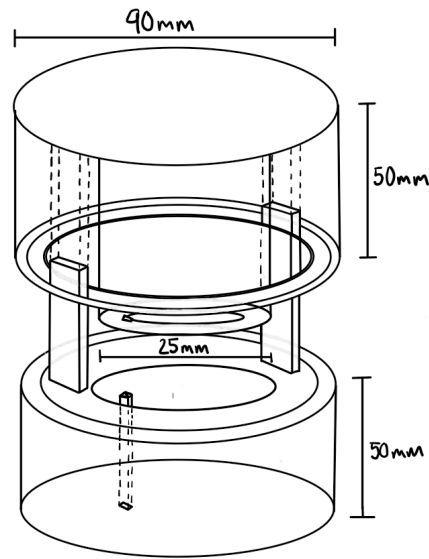
Brief status update

The team has met outside of class to 3D print a prototype. We ended up choosing an alternative design to print as our original design was unethical with regards to our problem statement. Future client meetings to discuss progress have been scheduled to discuss this design. Future testing of this new prototype has been planned.

Difficulties / advice requests

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Current design



Materials and expenses

Item	Description	Manufacturer	Mft Pt#	Vendor	Vendor Cat#	Date	#	Cost Each	Total	Link
Category 1: Lever Design										
PLA	Lever Design							\$0.02	\$1.94	
PLA	Rods and Hex Nuts								\$0.19	
Category 2: Push Cut Pop										
PLA	Top Part								\$2.74	
PLA	Bottom Part								\$2.01	
PLA	Push, Cut, Pop Design							\$0.02	\$4.14	
								TOTAL:	\$0.00	

Goals

Major team goals for the next week

1. Begin Testing
2. Finish Required Training
3. Continue advancing design

Next week's individual goals

- Ariel Moore
 - Be ready for show and tell
 - Do required training
 - Keep testing
- Alayna Allsop
 - Prepare for show and tell
 - Make adjustments to prototype
 - Complete required training
- Caiden Krzmarzick
 - Prepare prototype for show and tell
 - Finish and upload required training
 - Continue problem solving final design
- Sascha Jameson
 - Prepare for show and tell
 - Continue testing prototypes
 - Meet with group
- Sila Olcay
 - Continue to work on required trainings
 - Continue testing prototypes
 - Come up with possible solutions for final design
- Sarvesh Anandhaganesen
 - Continue to work on required trainings
 - Continue testing on prototypes
 - Brainstorm areas of improvement for design ideas

Timeline

Task	Sept				Oct					Nov				Dec	
	4	10	17	24	1	8	15	22	29	5	12	19	26	3	10
Project R&D															
Empathize	X	X	X	X	X	X	X	X							
Background...		X	X				X								
Prototyping						X	X	X							
Testings								X							
Deliverables															
Progress Reports	X	X	X	X	X	X	X	X							
Prelim presentation					X										
Final Poster															
Meetings															
Client				X	X			X							

Advisor			X	X	X	X	X								
Website															
Update	X	X	X	X	X	X	X	X							

Filled boxes = projected timeline

X = task was worked on or completed

Detailed accomplishment

Previous week's goals and accomplishments

- Ariel Moore
 - Finished solid working
 - 3D printed two design
 - Began testing
- Alayna Allsop
 - CAD work
 - 3D printed a potential design assembly
 - Began testing
- Caiden Krzmarzick
 - Continued required training
 - Drafted and sent emails
 - Began testing at meetings
- Sascha Jameson
 - Communicated with team members
 - Researched potential design materials
- Sila Olcay
 - Continued required training
 - Client meeting
 - Began testing prototypes
- Sarvesh Anandhaganesen
 - Testing of prototypes
 - Improvement brainstorming
 - Client meeting

Activities

Name	Date	Activity	Time (h)	Week Total (h)	Sem. Total (h)
Ariel Moore	10/22/2026	Solidworking, 3D Printing, Testing	3	3	27
Alayna Allsop	10/22/2026	CAD, 3D Printing, Testing	4	4	24
Caiden Krzmarzick	10/22/2026	Research, Meetings, Training	3	3	23
Sarvesh Anandhagansen	10/22/2026	Testing, Meetings, Refinement	3	3	19

BME Design: 200, 300, 301, 400 and 402

Sila Olcay	10/22/2026	Testing, Meetings, Trainings	4	4	22
Sascha Jameson	10/22/2026	Research	2	2	20