

Tackling Period Poverty for Homeless Women

Each month **250,000+** homeless women struggle to manage their menstrual hygiene due to **Period Poverty**¹

Methods Homeless Women Use to Access Menstrual Products

Survival Stealing

- Sometimes it's the only choice due to high prices, urgent needs, and other challenges.

Makeshift

- Using unhygienic materials to replace menstrual products, from socks and plastic bags to repurposing pads into tampons.
- Increases risk of gynecological infections.

Shelter Donations

- 2/3 of homeless women rely on donations.²
- Inconsistent supplies.
- Reports of staff overly gatekeeping products and harassing women.
- Free menstrual product kits offer limited options that may not meet their needs.

Buying

- Nearly 50% of homeless women choose between buying food or menstrual products.³
- Difficult due to repeated costs on a limited budget and stigma limiting store access.
- Many wear menstrual products longer than recommended duration to save money.

Nothing

- Compromises their health and appearance, leaving them with blood-stained clothes.
- Creates a catch-22, as visible stains undermine their efforts to appear clean and not homeless, further stigmatizing them.

Defining Period Poverty



The inability to consistently access menstrual products



Lacking the privacy to change menstrual products




Lacking access to safely wash oneself



Lacking access to proper menstrual product waste disposal


Market Review

Disposable Menstrual Products




- ✓ Relatively affordable purchase (\$5-15).
- ✓ Convenient and easy to use.
- ✗ Repeated monthly purchases add up, making it costly.
- ✗ Lasts 4-8 hours before disposal.

Reusable Menstrual Products



- ✓ One-time purchase, making it **highly cost-effective**.
- ✓ Requires fewer changes (access to bathrooms) per day compared to disposables.
- ✓ **Cups and cloth pads can last up to 7-10 years.**
- ✗ Higher upfront cost (\$18-35).
- ✗ Needs regular cleaning and drying.
- ✗ Improper cleaning risks gynecological issues.
- ✗ Menstrual cups have a steep learning curve.

Vending Machines



- ✓ Great source of free pads/tampons
- ✗ Some menstrual product machines still require payment.
- ✗ Limited availability in restrooms or completely absent.
- ✗ Users must find and access a restroom amid stigma and location barriers.

User Needs

Based on...

200+
Questionnaire Responses

30+
Peer-Reviewed Literature

24
Survey Responses

5
Interviews with Homeless Women

2
Interviews with Shelter Staff

Accessibility

25% of survey respondents want menstrual products that are easier to access.

Peace of Mind

Reduced anxiety and worry about their ability to care for themselves.

Affordability

50% of survey respondents want menstrual products that are affordable or not financially burdensome to obtain and use.

Independence

To not rely on another person or organization for certain aspects of their menstrual care.

...and most importantly, to feel and be clean.

OPPORTUNITY! A homeless woman-friendly reusable menstrual product, addressing their urgent needs for affordability and accessibility.

Design Criteria

The menstrual product needs to:

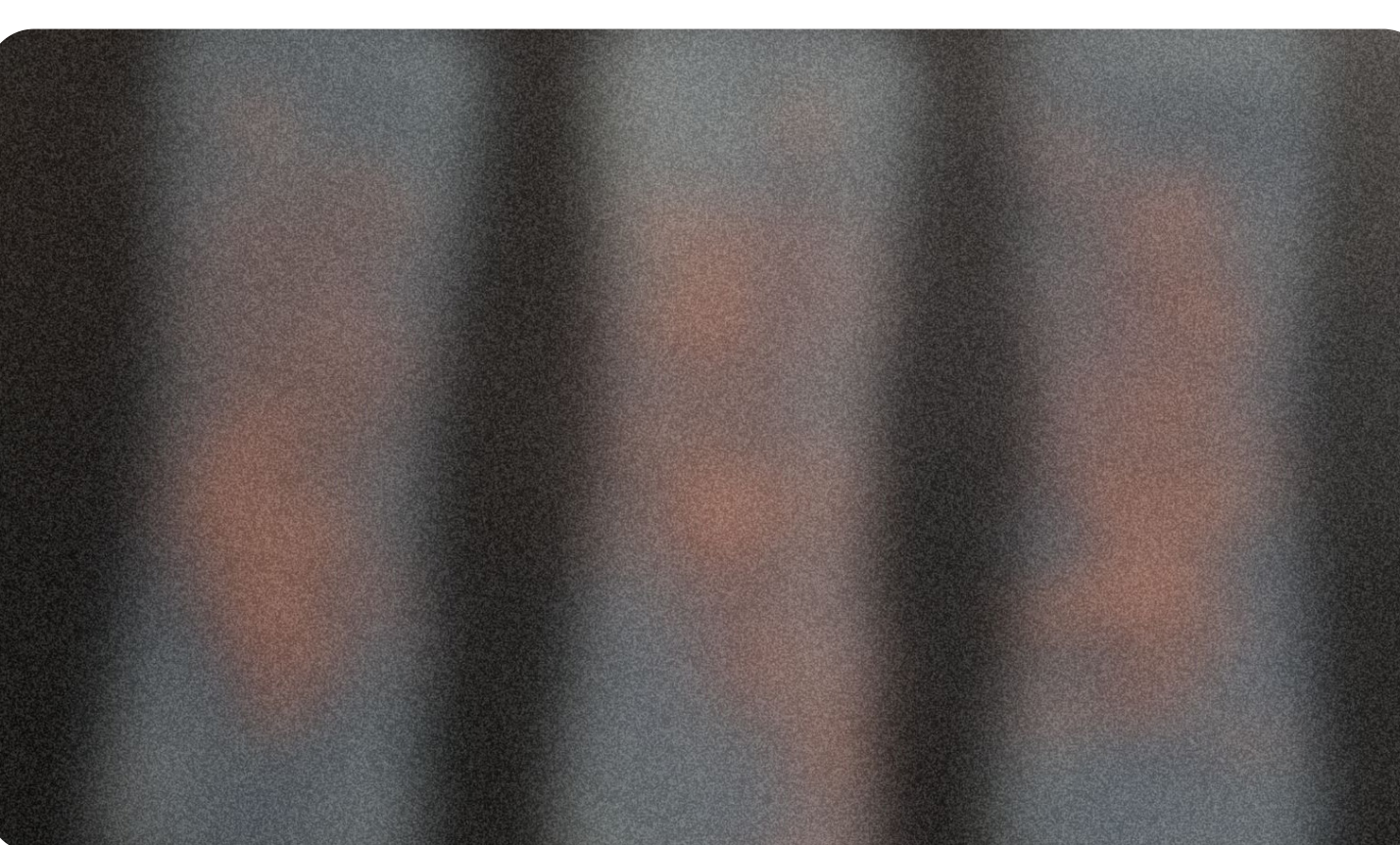
- Efficiently **collect and manage** blood.
- Be **easy to clean** and tend to.

- Eliminate reliance** on donations, theft, or frequent purchases.
- Usage **must not exhaust** the limits of their abilities and resources.

- Be **discreet, portable, compact, and 'forgettable'** between cycles.
- Require less than a bottle of water** and quickly dry during the cleaning process.

Testing and Development

1 Identifying optimal structural designs for blood collection and management, while preventing leaks.

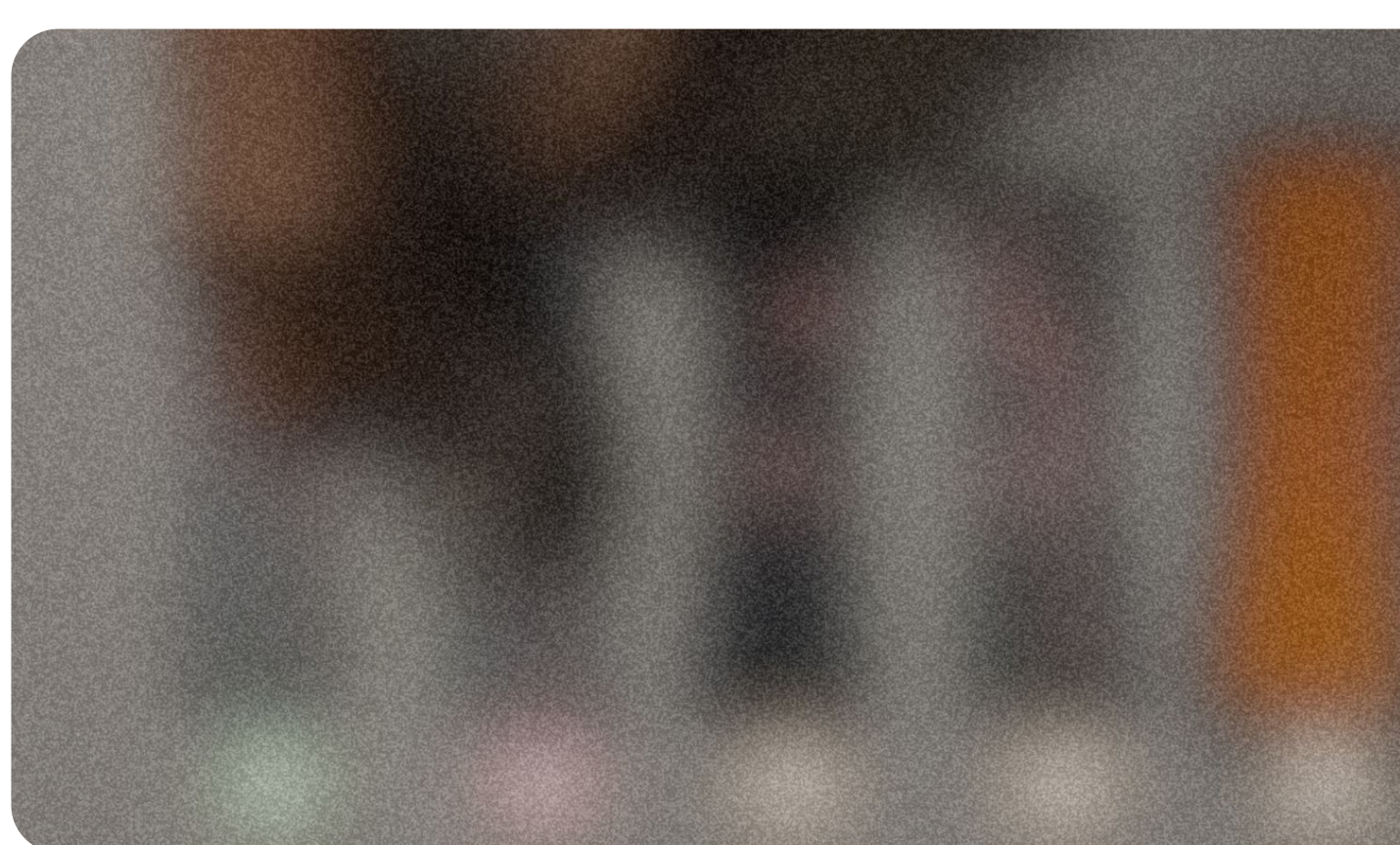


RESULTS

Surface pattern capable of securely holding up to 70ml of blood and tissue- 7x more than regular sized pads/tampons!

NEXT: Improve airflow, ensure overflow prevention and refine surface treatment for more efficient wicking and aesthetics.

2 Investigating minimal maintenance cleaning methods.




RESULTS

Can be cleaned with **less than 5 oz of water** and scrubbed using itself without water, adapting to women with either consistent or inconsistent access to water!

NEXT: Improve anti-microbial properties to reduce potential smells.

3 Usability tests focusing on comfort, wearability, and functionality.



RESULTS

Comfortable with immediate cooling sensation. **Can be stored within itself offering security and privacy while taking up minimal space!**

NEXT: Refine product form to contour closer to the inner thighs and adjust pad body thickness.

What Homeless Women Say

A collection of quotes from interviews, surveys, and questionnaires.

"I used a rag that I found on the side of the road. It was not the most sanitary but its all I had. Luckily starvation made my periods pretty light."

"...when you're a woman you're going to want to take a shower on your period, **it's difficult.**"

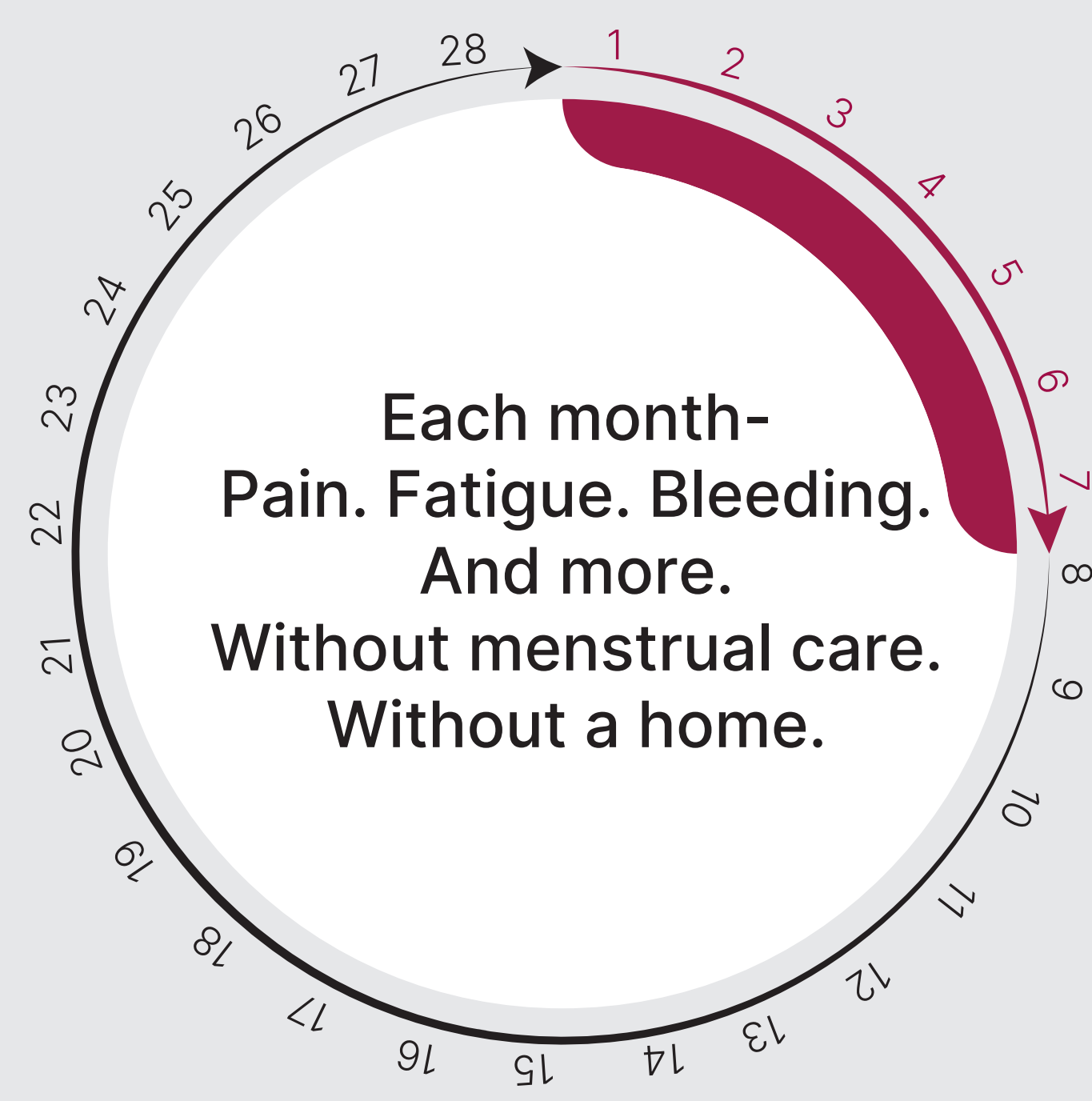
"You had to learn how to half-ass taking care of yourself and **be presentable to the world, when the world looks at you like you're dirt...** and it sucks."

"Women have been here a long time. We know what's coming. I'm surprised there isn't more help out there."

"Sometimes stealing them was a necessity because when you're forced to live like that, **you do what you gotta do to feel even remotely human...**"

"Who can afford 6 to 10 dollar bag of pads when you could buy food or gas?"

Menstrual Cycle



Moving Forward

- Extensive user validation testing with homeless women from local shelters.
- Develop high quality prototype for patent process.
- Apply for grants or social impact funding to support future production and distribution.
- Partner with nonprofits, shelters, and healthcare organizations for wider reach

Sources
1. <https://endhomelessness.org/homelessness-in-america/homelessness-statistics/state-of-homelessness/>
2. Carras-Castillo et al., 2024
3. Maroko et al., 2021

ROUND 1

ROUND 2

Further exploration and testing revealed that **applying traits found in menstrual cups to menstrual pads significantly alleviated pain points, supported, and filled the market gap** for those who are unable or prefer not to use insertable products like tampons or menstrual cups.