Product Requirement Document (PRD)
MediShare

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Vision

For individuals facing the financial burden of medical costs and families seeking closure from the remnants of their loved ones' battles, MediShare is a new healthcare redistribution service that provides affordable access to essential medications. Unlike traditional pharmacies or donation programs, we offer a platform where surplus medicines are vetted by healthcare professionals for safety and efficacy before being made available to those in need. This ensures trust and peace of mind for both donors and recipients, making medication management more compassionate and sustainable.

Motivation

Customer Segments

Individuals with surplus medication:

Many individuals complete their treatment courses or undergo changes in their medication dosage, often resulting in an excess of expensive, unused medication. The idea extends to situations where a relative has passed away, leaving behind medications slated for disposal. Similarly, this concept refers to individuals who have medical equipment they no longer need, whether it be after recovery or due to an upgrade in their medical coverage. According to our survey of 18 people, 72% expressed a willingness to "donate" or "sell" their medications, especially if it benefits someone truly in need (See Appendix A for survey results). Our hypothesis suggests that instead of disposing or hoarding unused medications, individuals can benefit from them by selling to MediShare. This approach ensures that surplus medication is used to help someone in urgent need.

Underprivileged Patients:

Numerous individuals with chronic illnesses face challenges in affording their medication, either due to financial constraints, lack of insurance coverage, or inadequate support from their insurance plans, resulting in insufficient coverage for essential medications. These patients encounter difficulties in accessing the necessary medication due to a lack of resources. After conversing with a few individuals from India, the common sentiment was that they would be willing to purchase medications if the products were validated by a professional and offered at a significantly lower price. This insight underscores a potential solution to address the financial

challenges faced by individuals in obtaining essential medications. Our hypothesis poses that instead of contending with the financial strain associated with acquiring these medications, individuals facing these challenges could leverage the services of MediShare to access unused, expensive medications at a more affordable price. This approach not only provides a viable solution to the financial barriers but also ensures the efficient and ethical redistribution of surplus medications to those in need.

Homebound Elderly Patients:

Elderly individuals dealing with chronic illnesses and confined to their homes necessitate a convenient medication delivery service that brings their prescribed medications directly to their doorstep. When coupled with more affordable pricing, the integration of MediShare could significantly enhance the accessibility and affordability of essential medications for this demographic. This not only caters to the unique needs of homebound elderly patients but also addresses financial considerations, making healthcare more inclusive and accessible to a vulnerable segment of the population.

To validate our hypothesis, we conducted interviews with 20 potential buyers and 18 potential sellers. Buyers were presented with inquiries such as:

- “Where do you currently buy the medication, you need?”
- “Have you ever faced difficulties in buying medications due to cost? Can you share your experience?”
- “What concerns do you have with buying unused and sealed medicines (verified by a professional) for cheaper through a validated and approved platform?”

Sellers were presented with inquiries such as:

- "How many strips of unopened medicines do you dispose of quarterly?"
- “What do you do with your medicines/medical equipment once your treatment is over?"
- "Have you considered giving away your unused medications? What would influence this decision?"

Early adopters of MediShare may differ from mainstream users particularly as they may include friends and family of the app creators. This connection can foster a higher level of trust in our product, creating a foundation of confidence and openness to embracing the concept of minimizing medication wastage. The familial or friendly relationship with the app creators may lead these early adopters to be more actively involved in the app's initial stages, providing valuable feedback and insights. Their association with the creators might also mean they are more willing to try out the platform, acting as advocates who help build the initial user base.

Mainstream users engaging with the app are likely to place a significant emphasis on cost-effectiveness and affordability. In their interactions with MediShare, they may express a need for additional assurances regarding the app's reliability, recognizing the importance of entrusting their health and well-being to MediShare's validation process. We acknowledge that establishing customer trust is a gradual process and understand the necessity for transparency in the validation process. This transparency ensures users understand how their medications are verified, fostering

confidence in the platform. By emphasizing both cost-effectiveness and transparent validation, we aim to create an environment where mainstream users feel secure, supported, and assured in their use of the MediShare app.

Personas:

Revathi, recently widowed due to her husband's passing from a cardiovascular disease, faces the dilemma of having numerous untouched medications leftover from his prolonged illness. Being from a middle-class background, she encounters difficulty in disposing of these costly medications. However, the emotional weight attached to these medicines serves as constant reminder of her late husband and causes her to feel unsettled. In search of a solution, Revathi seeks a platform where she can sell the unused medication, ensuring they find utility in the hands of individuals who genuinely need them, thereby transforming a poignant reminder into a source of support for others in need.

Janaki, a dedicated house servant in India, diligently works across multiple households with a singular goal – to accumulate funds for her daughter's essential asthma medication. Diagnosed with severe asthma at a tender age, Janaki's daughter requires consistent and often costly medication. Compounded by the fact that Janaki and her family lack insurance coverage due to their work in various households, the financial burden intensifies as they must purchase medications at full price. Due to these financial constraints, Janaki actively seeks a platform that could provide her access to the necessary medication at a more affordable cost. Her pursuit reflects the pressing need for solutions that can alleviate the economic hardships faced by individuals like her, ensuring that essential healthcare remains within reach despite financial limitations.

Unmet Needs

Individuals with surplus medication:

Customers currently face a dilemma in dealing with expensive and unused medications they no longer need, as there is a lack of an efficient and responsible solution. The options are either to store the medications in the hopes of future use, which takes up valuable space and risks waste, or to discard them, leading to environmental and financial concerns. This underscores the pressing need for a streamlined platform that enables individuals to repurpose or share their surplus medications. Such a solution would not only address the challenges of medication waste and storage but also provide an ethical means for individuals to contribute to the well-being of others in need, fostering a more sustainable and accessible healthcare system.

Underprivileged Patients:

There is a lack in the accessibility and affordability of vital medications for individuals dealing with chronic illnesses. Many of them encounter challenges in affording their necessary medications due to various factors such as financial constraints, lack of insurance coverage, or inadequate support from their insurance plans. The existing gaps in the healthcare system leave

these individuals with insufficient coverage for the medications crucial for managing their chronic conditions. As a result, there is a pressing need for solutions that address these barriers, ensuring that individuals with chronic illnesses can access and afford the medications they require for effective management of their health, thereby improving overall well-being and quality of life.

Homebound Elderly Patients:

There is also a lack of a convenient medication delivery service tailored to elderly individuals dealing with illnesses and confined to their homes. This calls for a service that can efficiently bring prescribed medications directly to their doorstep. A tailored service will promote their well-being and independence.

Existing Solutions

The prevalent solutions in the healthcare landscape focus on patient payment programs, strategically designed to provide financial assistance or facilitate recurring payments with the aim of increasing the likelihood of receiving the full payment. These programs often offer the flexibility for patients to break down their outstanding balance and make monthly payments, allowing for early payoff before the deferment period concludes. However, the critical limitation of these approaches is their inability to cater to individuals facing the challenge of affording necessary, expensive medications regularly. While they offer a structured payment plan, it does not effectively reduce the overall cost for individuals; it merely outlines a method for gradual full payment over time. Furthermore, these solutions overlook the issue of individuals who have incurred significant expenses on medications but no longer require them, leaving these individuals without a practical means to recoup some of their costs or assist others in need. There exists a clear gap in the current healthcare system that requires innovative solutions addressing affordability, ongoing financial support, and responsible disposal of expensive medications.

Differentiation

MediShare is a healthcare platform designed to facilitate the redistribution of surplus medication among individuals, addressing the challenge of medication waste and promoting affordability and accessibility. In terms of pharmaceutical companies in the Indian market, while there are various companies producing and distributing medications, their focus is primarily on manufacturing and selling drugs rather than facilitating the redistribution of surplus medication. Additionally, MediShare provides a centralized platform specifically for individuals to share their excess medication, which may not be a primary focus or service offered by traditional pharmaceutical companies in India. The table below describes potential competitors, highlighting key goals and features and comparing them to the concept of Medi-Share:

Features	**MediShare (Our app)**	MrMed.in[5]	Sparsh by Dr Reddy's [6]	SaveMed[7]	MedMaze[8]
Primary Goal	Users can sell unused, unopened prescriptions to MediShare Affordable prices for buyers	Provide financial assistance to help these patients access drugs for little or no cost	Patient assistance program to help economically challenged patients' complete chemotherapy treatment.	Helps donors find and gather unused medicines in a collection hub, sort them out and give it to the people in need.	Enables donors to give unused medicines to government hospitals, which sell them at discounted rates to those in need.
Lower Selling Prices	Yes	Yes	Yes	Yes	Yes
Get Paid to Donate	Yes	No	No	No	No
Prescription Delivery/ Collection	Yes. Prescriptions are collected and delivered at your doorstep	Prescriptions are delivered to your doorstep	No. Only online services and multiple physical stores	Donors are required to submit the medicines at the designated collection centers	Buyers collect medicines directly from government hospitals
Medicine Validation	Yes. Tested by third party professionals	Yes. Bought from Pharma companies	Yes. Government approved Pharma company	Not mentioned.	Not mentioned.
Automated Chat Service	Yes. If questions are complex, will be redirected to a call service	Yes	No	No	No
Collaboration with Pharmacies	No. The focus is on collecting medications from individuals	Yes	Multiple business and Pharma partners	No	Reportedly collaborating with government

	to reduce wastage.				hospitals, but no visible evidence.
Active Company (Marketing)	Yes	Yes	Yes	Last active project on Dec 9, 2021	No
Geographical reach	Gujarat	All of India	Global Reach	Collection hubs located in Bangalore and Chennai	Not mentioned

Why Now?

Technological advancements, particularly in healthcare and app development, may enhance the feasibility and security of a medication-sharing platform. Evolving healthcare policies that support responsible medication sharing and environmental sustainability could create a conducive regulatory environment. Increased awareness of the environmental impact of medication waste, coupled with a societal shift towards community-driven healthcare solutions, may foster a more receptive audience. Financial strains in healthcare, such as rising medication costs and gaps in insurance coverage, could drive individuals to actively seek alternative and more affordable healthcare options. Internally, changes in the team's capabilities, resources, or strategic direction could further contribute to the opportune moment for launching MediShare.

Verbal/Visual Walkthrough of Use Cases

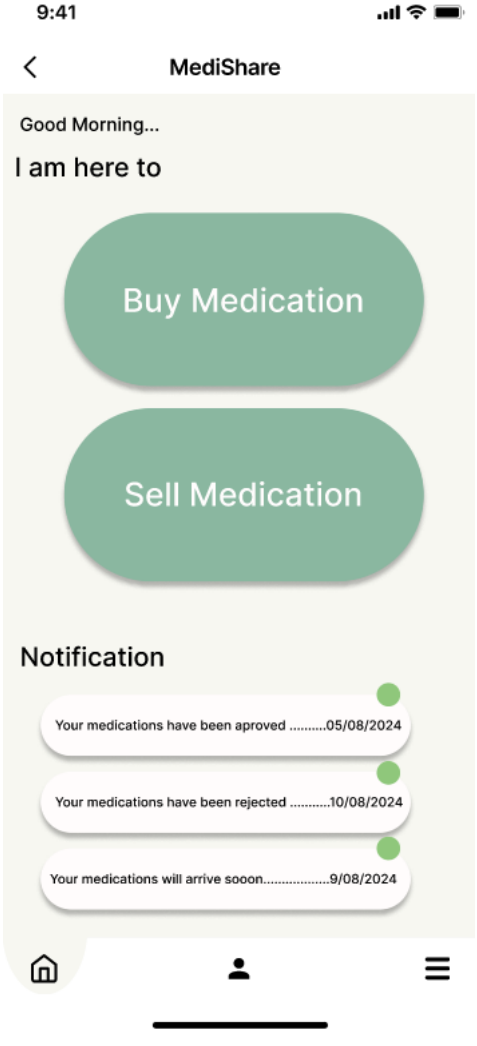
Refer to Appendix B for:

1. Sign Up
2. Sign In
3. Medication fails verification.
4. Medication fails quality check.

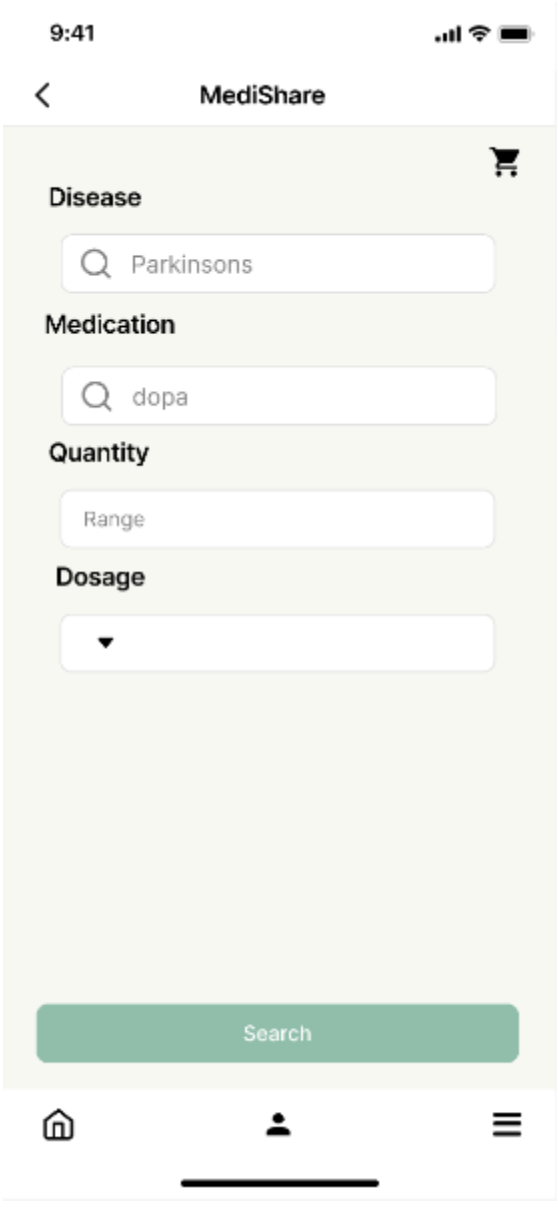
Use Case 1

A single mother who recently had to face significant financial hardships due to unexpected medical bill for her youngest child. The user needs to purchase medication prescribed but for a lesser price.

1. Opens the app, that leads to the homepage where the user chooses to buy or sell medication.



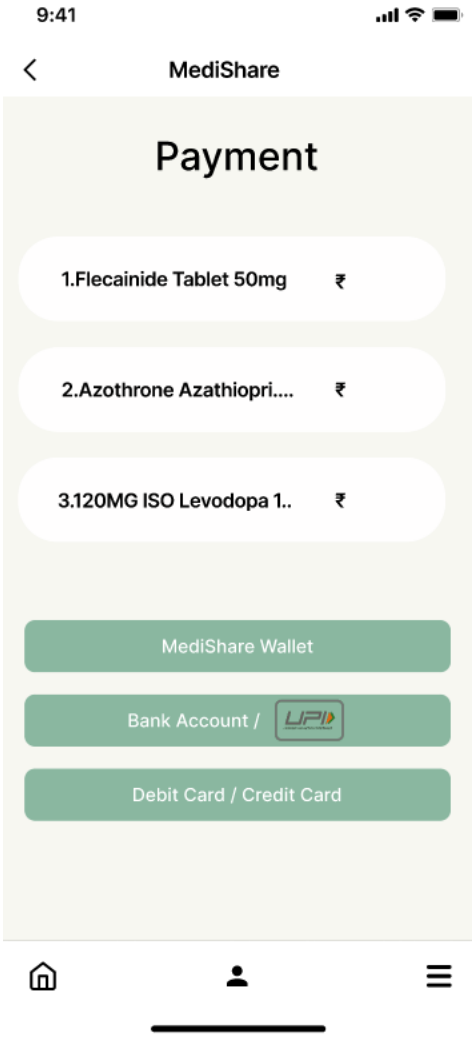
2. The user searches and adds the necessary medication into the cart.



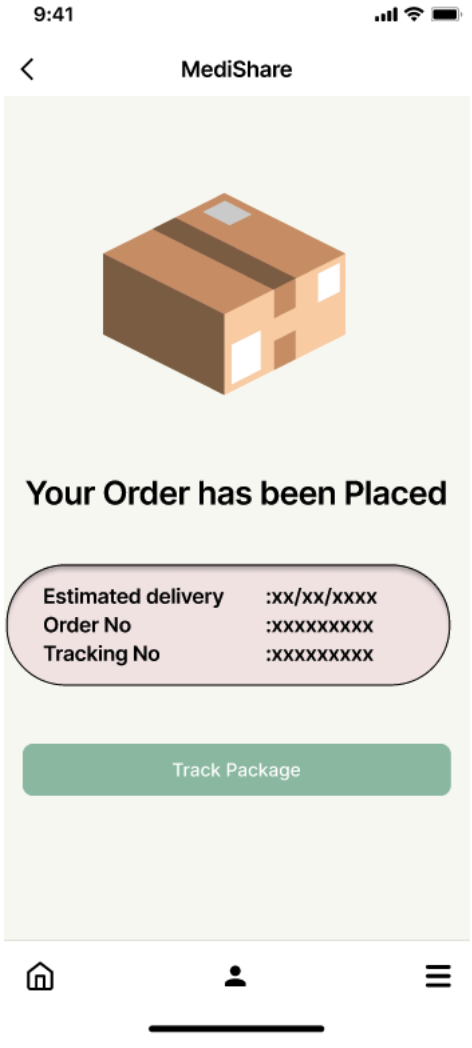
3. The user is able to view search results for available medication.

4. The user is able to add medication to the cart and view it before checkout.

5. The user proceeds to the payment page where the user has the option to pay from MediShare wallet, Bank transfer/UPI or even using their Debit/credit Card to checkout out the medicines.



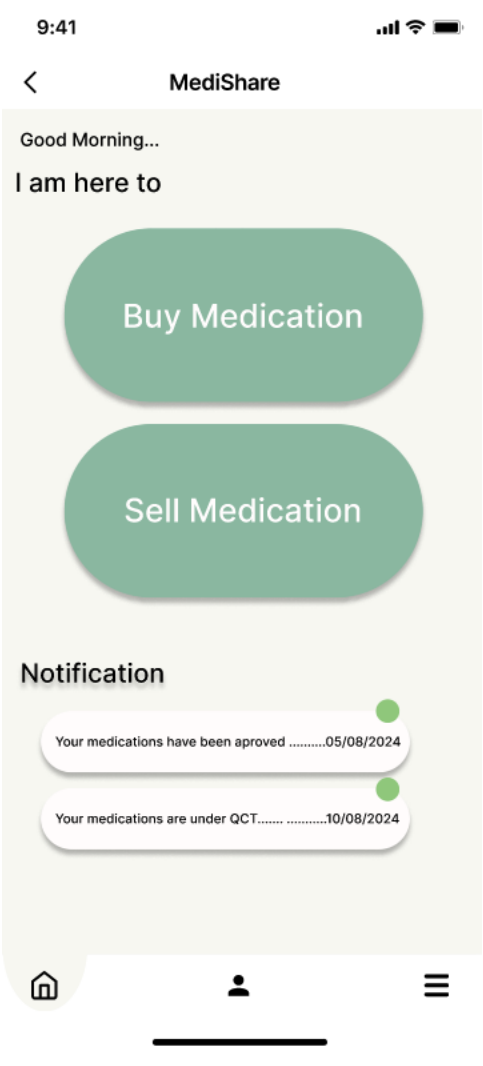
6. The user gets the confirmation and details of their delivery.



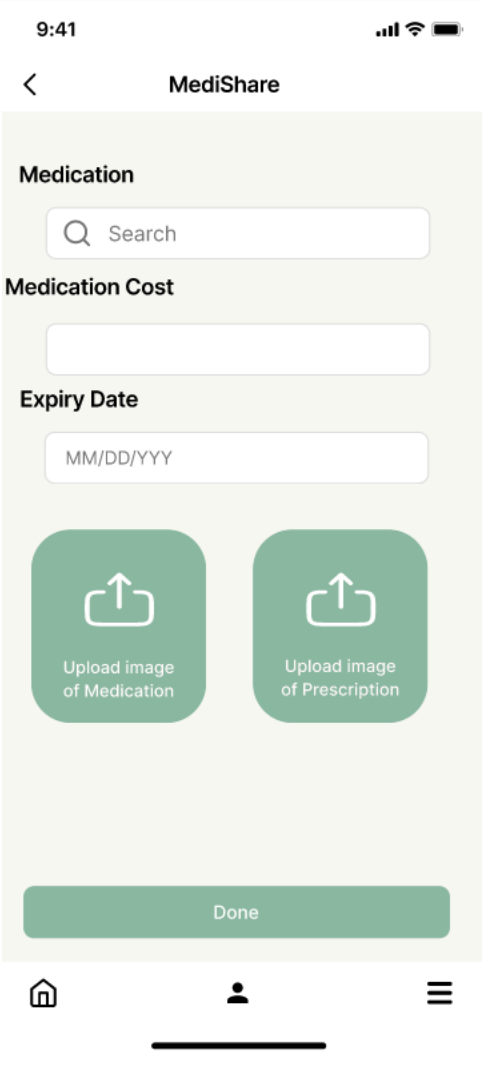
Use Case 2

An individual has leftover medication and decides to sell it to MediShare while aiming to make some profit and help someone in need. They proceed to:

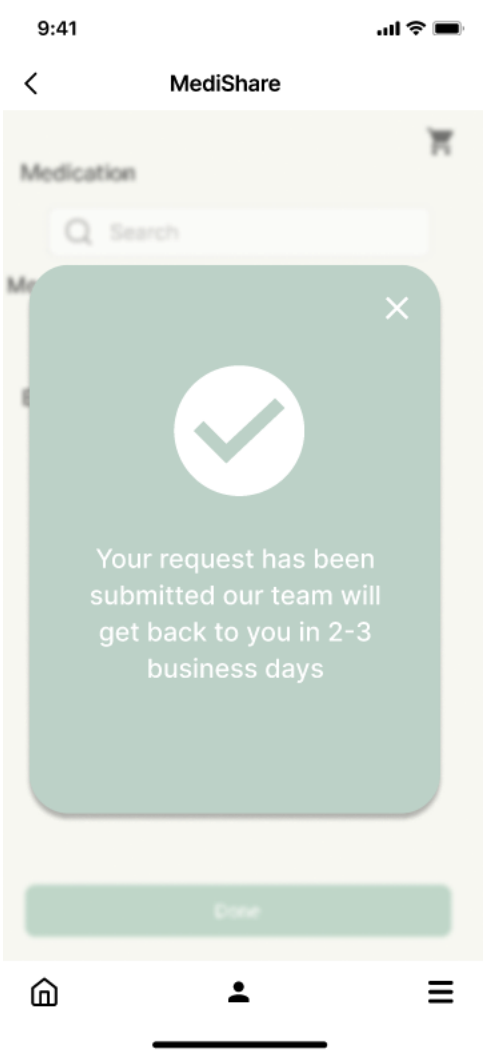
1. Open the app, where the user gets a summary of this purchase and sale.



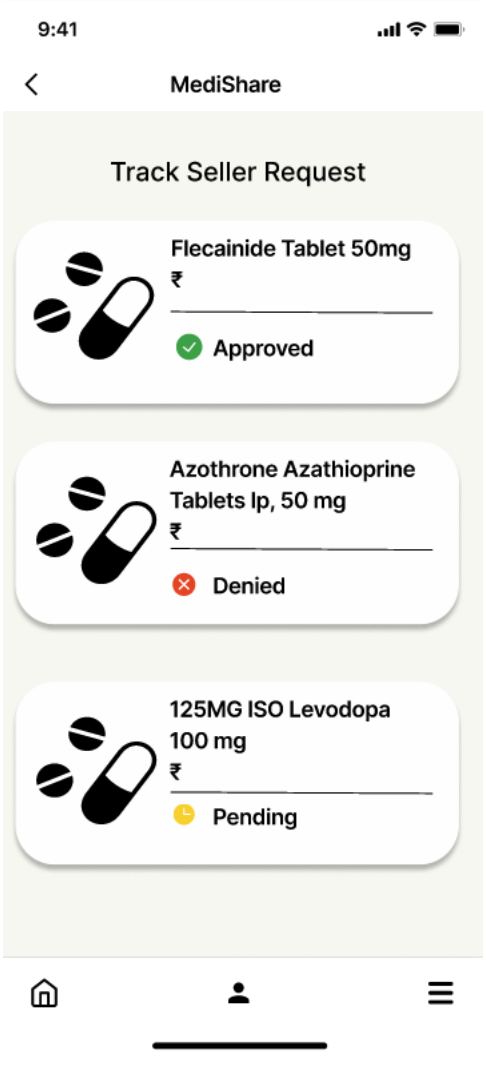
2. Click “sell medication” and enter the necessary details. User uploads a picture of the medication and prescription.



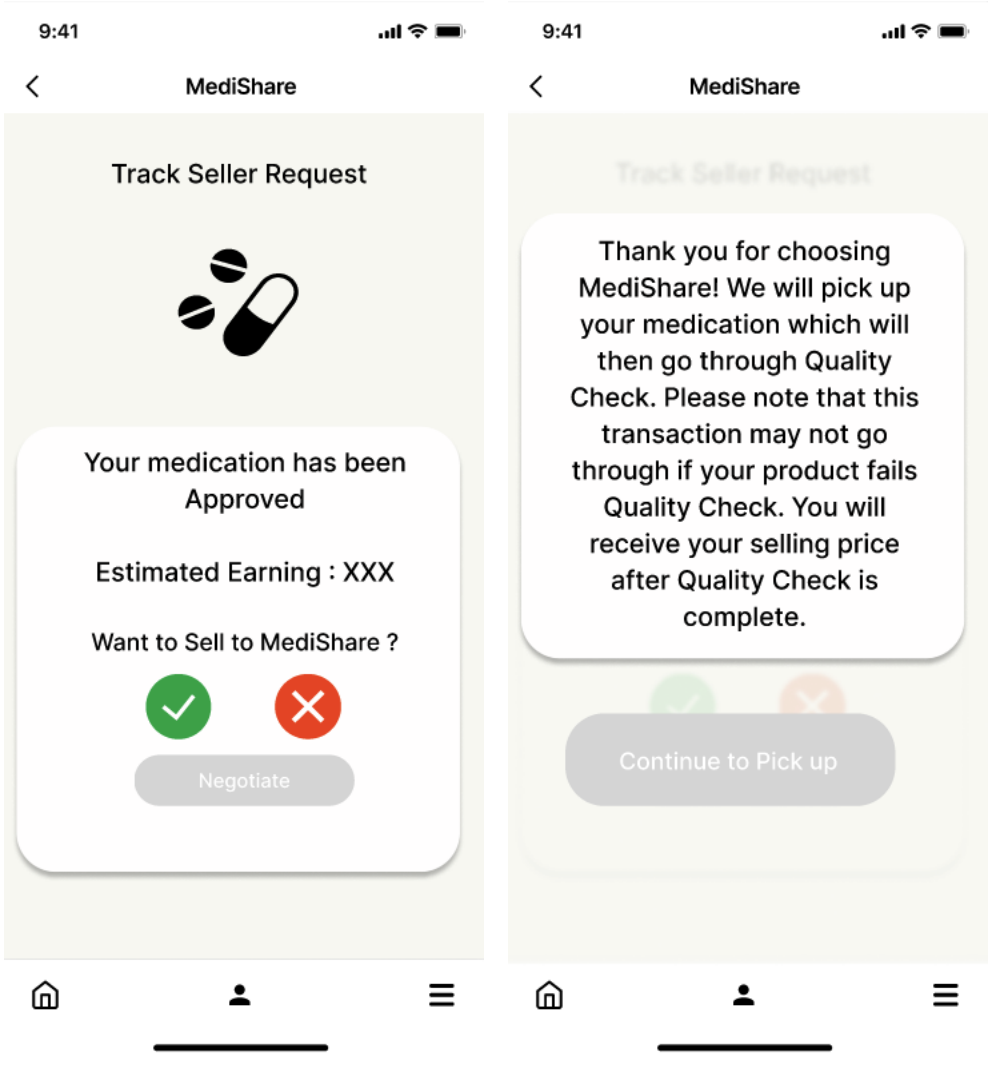
3. User submits a request.

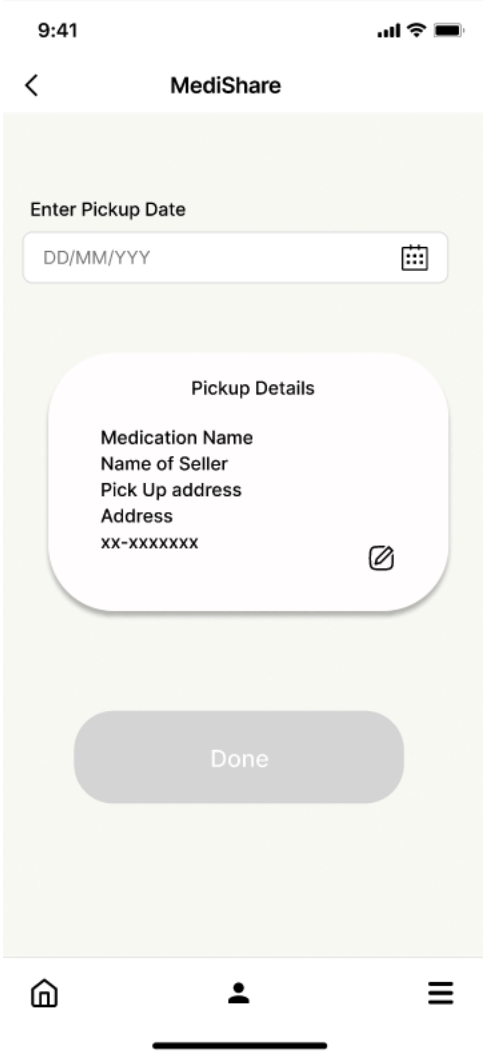


4. The user can also track the status of the medication which they had previously uploaded to see if it has been approved to the quality control phase.

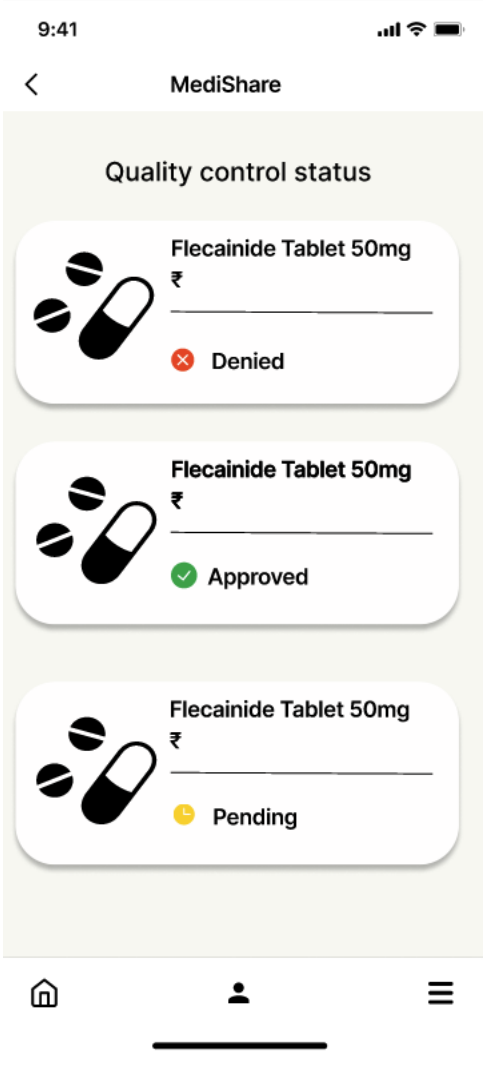


5. The approved medication shall be picked for quality control test.

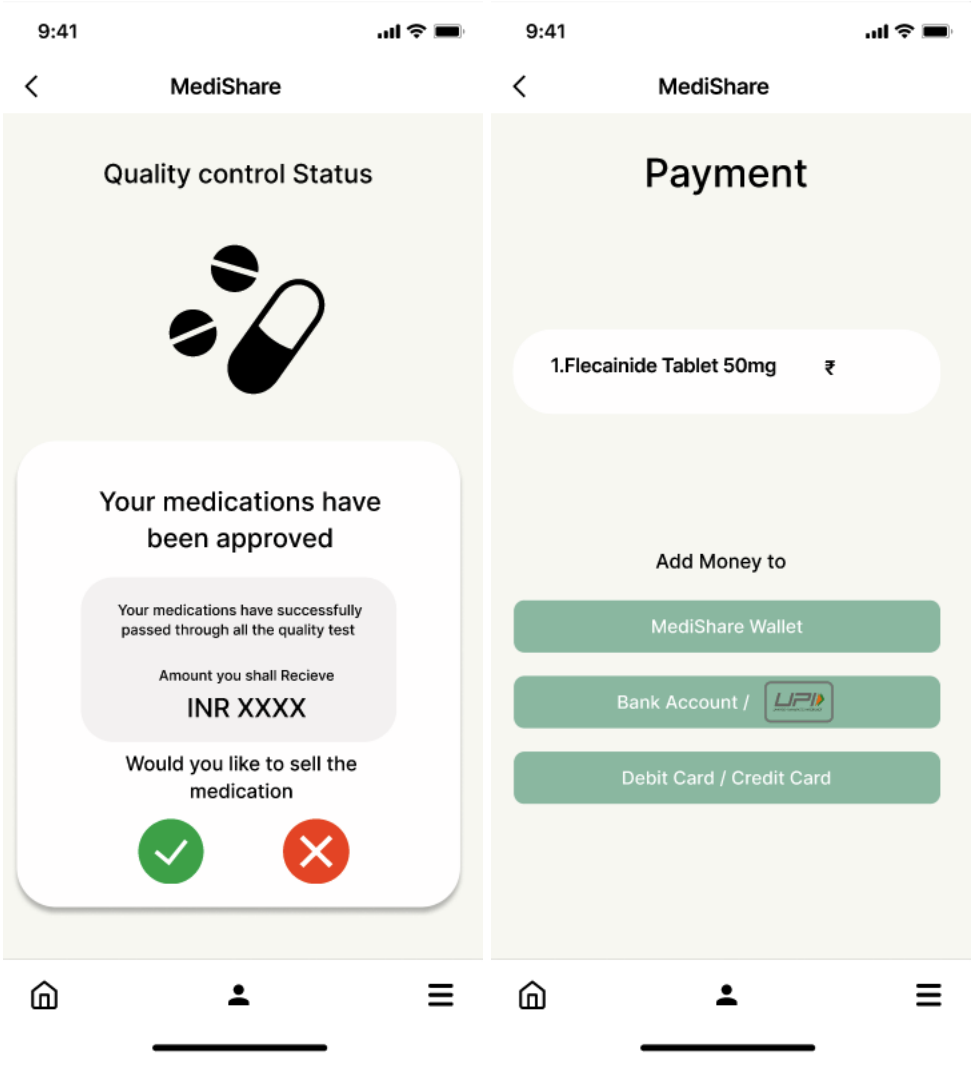


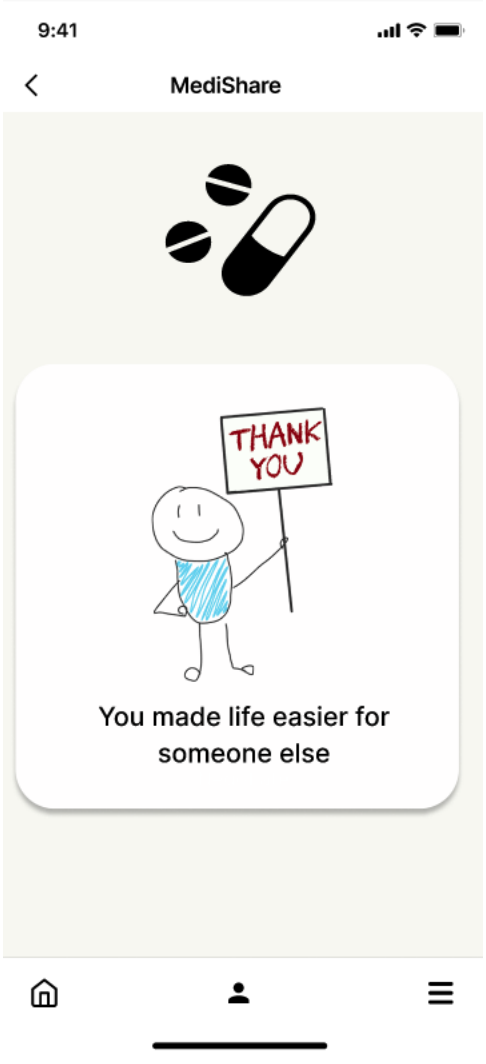

9:41
MediShare
Enter Pickup Date
DD/MM/YYY
Pickup Details
Medication Name
Name of Seller
Pick Up address
Address
xx-xxxxxxx
Done

6. Then the user can check the quality control status to see if it’s been approved



7. Then they can navigate to the payment option to receive money for the approved medication





** The case of the medication not being approved is provided in appendix**

Detailed Design & Features Description

Design Principles

- Trust and Safety/ Transparency
- Consistency in design and visual appeal
- Minimal User Input to Complete a Core task.
- Scalable

Features/information architecture

Feature	Detail	Dependencies	Priority
Registration (Refer Appendix)	Users create an account by providing necessary personal and medical information, which may include identity verification for security purposes.	MediShare must build the backend services for authentication and secure storage of personal data.	P0
Login (Refer Appendix)	This page allows the user to enter their username and password to login to their profile. Also, the forgot password section to recover their account.	MediShare must build the backend services for authentication and secure storage of personal data.	P0
Homepage view (Refer Walkthrough of use cases)	Users can choose to be a seller or a buyer.	N/A	P0
Medication Dashboard	Sellers submit detailed information about their medication through a guided submission process. Each listing undergoes a quality check process, which includes verification against medical databases to ensure authenticity and compliance with regulations.	• Mechanism to ensure adherence to the Indian Drugs and Cosmetics Act for medication selling and trading. This could involve implementing checks against banned medication lists. • Users should have used the	P2

	The medication will then be posted on a dashboard personalized to the user.	application once to get recommendations based on their usage.	
Search and Filter Medications	Users can search for needed medications using filters such as diseases, medication, quantity, dosage, and price.	MediShare must implement search algorithms, user interface elements for displaying search results.	P0
Payment gateway integration (Refer Walkthrough of use cases)	Detailed view of each medication listing, including seller information, medication details.	Secure transaction processing system, user interface for displaying detailed listings.	P0
User Profiles	Personalized user profiles as either a buyer or a seller showing transaction history, listed medications, and preferences.	Details based on the Sign up from user and more details regarding medical status added during signup or updated later	P0
In-app chat support	Users can inquire about medication listings, get help with using the app, report issues, or request information about transactions and delivery status through the in-app chat support option.	Product development team should develop an extensive knowledge base so that support agents can provide timely and accurate support.	P0
Wallet (Refer Walkthrough of use cases)	The wallet will store and hold all the rewards/credit points earned which could be used as cash for any type of future payments.	• User must make transactions to earn reward points. • Users must link or set up the wallet with banks and credit cards thus to start off with transactions.	P1
Referral reward (Refer Walkthrough of use cases)	This feature will allow a user to share a referral link to their connections and earn	New users must create their account through the referral	P0

	a reward upon a successful referral i.e. users installing and completing a transaction.	code during account creation.	
Push notifications	This feature will share customized and personalized push notifications outside the app for user engagement and updates regarding available medicines and offers.	User must switch on alerts so that the push notifications are activated.	P2

v1 aka Minimum Viable Product (MVP)

P0- Critical Features

Sign Up	Go through the process of account creation
Login in	User can access their profile anytime
Profile Verification	Users can set up and verify their profile, which is crucial for initiating transaction
Homepage view	Choose to be a buyer or a seller
Profile Setup	Customize one's profile according to updated medication requirement.
Medication Search and Filtering	A feature allowing users to find medications they need based on various criteria like disease type, dosage, and price.
Quality Control Status	Users can check the status of medicine under verification
Payment Options	Integrate Bank and wallets for easy buying and selling
Notification	Updates the user needs to know
Referral reward	Users get a reward when a new user uses a referral code
Seller request status	Enables sellers to monitor the status of their product requests to sell to MediShare.
In app chat support	User can clear their queries, all in one place through an automated chat support.

P1- Nice to haves:

24/7 on call support	User can clear their queries, by talking to a live customer care agent.
Medication dashboard	Users can view medication based on previous search and orders
Knowledgebase repository	User can learn more about the medication redistribution process as well as the MediShare app.
Credit based reward	User gets redeemable credits to make future purchases

vNext

Medication Subscription
Offer a subscription service for recurring medications to ensure continuous access without having to reorder every time.

Expansion to Other Diseases
Research and gradually introduce services for other chronic diseases.

Community Support Forum
Create a platform for users to share their experiences, support each other, and discuss their conditions and treatments and even share medicines and equipment if appropriate.

vLongTerm

Regional Expansion
After establishing a solid user base in Gujarat, consider expanding services to neighboring regions, adjusting offerings based on regional health trends.

Partnership with Local Pharmacies
Partner with local pharmacies to facilitate faster delivery and broader medication availability.

Roadmap / Timing

MediShare will launch the Alpha version by May of 2024 and work on the various test cases to later launch the Beta version by September 2024. Once we have successfully updated changes, based on the feedback we will gear up for full launch to final users by May 2025

Milestone	Timing	Key Activities
Alpha Launch Objective: Validate the technical feasibility and user experience of the MediShare platform through an internal demonstration.	May 2024	• Develop a functional prototype of the MediShare app and website. • Conduct user testing and gather feedback. • Refine the platform based on the feedback and iterate on the design and functionality.
Beta Launch Objective: Launch a limited beta version of MediShare to gather real-world feedback and validate the concept with a small user base.	September 2024	• Onboard a select group of early adopters, including potential buyers and sellers. • Gather user feedback on the platform's usability, medication validation process, and overall experience. • Continuously improve the platform based on the beta user feedback.
MVP – V1 Launch Objective: Launch to all end users to deliver essential features after optimizing early adopters' feedback	May 2025	• Gathering in-depth feedback on the platform's functionality, user experience, and overall concept. • Collaborating with regulatory bodies to ensure compliance with relevant

		healthcare and environmental policies. • Establish robust quality control and medication validation processes to ensure user trust and safety.
Optimization – V2 Launch Objective: Continuously monitor the platforms performance, user engagement, and market trends to identify areas for improvement and optimization.	December 2026	• Analyze user feedback, usage data, and market insights pain points and opportunities for enhancement. • Implement iterative updates and improvements to the platform, including user experience, medication management, and operational efficiency. • Explore opportunities for geographic expansion partnerships, and diversification of services to better serve the evolving needs of the target audience. • Regularly assess the competitive landscape and adjust the strategic direction as needed to maintain a strong market position.

Scenarios for Service Introduction

Scenario	Alpha Launch	Beta Launch	Full Launch
Target Population	• Friends and family of the app creators • Early adopters with close ties to the team	• Potential buyers (e.g. individuals facing financial constraints in accessing medications) • Potential sellers (e.g. individuals with surplus medications)	• Underprivileged patients with chronic illnesses face affordability challenges. • Homebound elderly patients requiring convenient medication delivery.
Alternatives Considered	• Broader initial launch to the public.	• Gradual geographic expansions (e.g. launching in a single region first)	• Exclusive focus on underprivileged patients or homebound elderly. • Expansion into adjacent services (e.g. medical equipment, telehealth)
Rationale for Chosen Approach	• Early adopters may be more actively involved in providing valuable	• The beta launches allow the team to address any issues or concerns before a wider public release.	• Reaching a broader audience, including underprivileged patients and homebound elderly

	feedback.		individuals, allows MedShare to address significant gaps in the healthcare system.
User Feedback Integration	• Gather in-depth feedback on the platform's technical functionality, user experience and overall concept • Implement iterative improvements based on the alpha user feedback before the beta launch.	• Analyze user feedback on the platform's usability, medication validation process, and overall experience. • Continuously refine the platform based on the beta user feedback to prepare for the full launch.	• Continuously monitor user feedback, usage data, and market insights to identify pain points and opportunities for enhancement. • Implement iterative updates and improvements to the platform, including user experience, medication management, and operational efficiency.
Usability Testing	• Conduct extensive usability testing with the alpha user group to identify and address any technical or user experience issues.	• Perform in-depth usability testing with the beta user group, focusing on the medication validation process, transaction flows, and overall user satisfaction.	• Ongoing usability testing with a diverse set of users, including underprivileged patients and homebound elderly individuals, to ensure the platform remains user-centric and accessible
Scalability Considerations	• Develop a scalable medication collection and distribution network to support the beta launch.	• Evaluate the platform's ability to handle increased user traffic, medication inventory, and transaction volumes during the transaction volumes during the transition to the full launch. • Enhance the platform's scalability through improved automation and	• Implement robust scalability measures to support rapid user base expansion, medication inventory growth, and geographic reach. • Leverage cloud-based infrastructure, AI-powered automation to ensure the platform can scale efficiently.

		streamlined processes.	
Marketing and Awareness	• Targeted outreach to the app creators personal and professional networks to generate initial awareness and interest in the alpha launch. • Leverage the app creators' existing reputation and connections to build trust and credibility.	• Implement a focused marketing campaign to attract potential buyers and sellers, highlighting the platforms affordability, safety, and environmental benefits. • Leverage social medic, targeted advertising to reach the beta user base.	• Launch a comprehensive, multi-channel marketing and awareness campaign to attract a wider user base, including underprivileged patients and homebound elderly individuals. • Utilize a mix of digital marketing, traditional advertising, and community outreach to maximize visibility and reach.

The proposed roadmap is considered the right approach for several reasons:

1. **Validation and Feedback –** The alpha and beta launches allow the MediShare team to thoroughly validate the platforms technical feasibility, user experience, and overall concept before a wider rollout, reducing the risk of issues or user dissatisfaction during the full launch.
2. **Diverse User Base –** By targeting both underprivileged patients and homebound elderly individuals during the full launch, MediShare can cater to a broader range of users with varying needs, fostering a more inclusive and comprehensive healthcare solution.
3. **Competitive Advantage –** The proposed roadmap allows MediShare to establish itself as a pioneering and innovative platform in the healthcare redistribution space, potentially gaining a competitive edge over alternative solutions that may follow a more gradual or limited approach.

Metrics

Metric	Description and Computation
Monthly Transaction Users (MTS)	This metric helps in understanding how many unique users engage in transactions within a given month, providing insights into user activity and app performance over time. $MTS = \frac{Number\ of\ unique\ users\ who\ completed\ transactions\ in\ a\ month}{Number\ of\ Active\ users\ per\ month} \times 100$
Net Promoter Score (NPS)	NPS is used to measure customer loyalty and satisfaction with a product, service, or brand. It's based on a single question: "On a scale of 0 to 10, how likely are you to recommend our service to a friend or colleague?" Promoters (scoring 9-10) are highly satisfied customers likely to recommend the product/service, while Passives (scoring 7-8) are satisfied but less enthusiastic, and Detractors (scoring 0-6) are dissatisfied and may spread negative feedback. $NPS = \frac{\#promoters - \#detractors}{\#people\ who\ patrticipated\ in\ feedback} \times 100$
Monthly Customer Retention rate	Used to measure the percentage of customers that we retain over a specific period. This is often a sign of customer satisfaction and loyalty. It's an important metric for us as it typically costs less to retain existing customers than to acquire new ones, and loyal customers are more likely to make repeat purchases and recommend the business to others. $Rention\ rate = \frac{\#users\ at\ the\ end\ of\ the\ month - \#users\ aquired\ during\ the\ month}{\#users\ at\ the\ start\ of\ the\ month} \times 100$
Monthly Inventory to Sales Ratio	As MediShare sources its inventory directly from users, it's crucial to monitor the alignment between our sales and procurement activities. This involves assessing how effectively the medications acquired from users are being sold within a given timeframe. By closely tracking this correlation, we can ensure efficient inventory management and optimize our procurement strategies to meet the demands of our marketplace effectively. This metric allows us to gauge the efficiency of our inventory turnover and identify any potential discrepancies between procurement and sales, enabling us to make data-driven decisions to enhance operational efficiency and maximize revenue. $= Total\ Monthly\ Sales \div \left[\frac{Start\ inventory\ value + End\ inventory\ value}{2}\right]$ Or = Total Monthly Sales/ Average Monthly Inventory Value
Net Revenue	Determines whether MediShare is achieving a break-even point or generating a profit. Rev = Sales – Costs
Active Monthly Users	Used primarily to calculate other metrics. Measuring active users per month is crucial for understanding engagement levels and retention rates, providing insights into the platform's performance and potential for growth. This metric serves as a key indicator of user satisfaction, revenue generation, and the overall health of the platform.
Customer Acquisition	Total expense to acquire a new customer, including marketing, sales, and promotional costs. It helps businesses assess marketing effectiveness and

Cost	allocate resources efficiently.
Market penetration rate within target segments.	Measures the proportion of a specific target segment that uses a company's product or service compared to the total market size within that segment. $= \frac{\#users\ in\ the\ target\ customer\ segment}{Total\ number\ of\ potential\ users\ in\ the\ target\ segment} \times 100$
Medication verification turnaround time	The average duration for a medicine to complete the verification process before being picked up from the prospective seller.
Quality Check turnaround time	The average duration required for a medication to complete the quality check process.
Churn Rate	The percentage of customers or subscribers who cancel or do not use their service after the initial use

International

At present, our primary focus lies within the state of Gujarat, India, aligning with our current target demographic and adherence to Indian healthcare regulations. Our initial expansion efforts will be directed towards scaling up operations within the Indian market, particularly focusing on the slums within the country, where the need for affordable healthcare solutions is acute

Expanding internationally poses challenges due to the variability of healthcare laws and regulations across different countries. To navigate this complexity, thorough research is essential to understand the nuances of each healthcare system and ensure compliance with local regulations. Additionally, we must gauge the receptiveness of target customers in each country to the concept of purchasing surplus medications from individuals. This involves assessing cultural attitudes towards medication reuse and resale, as well as building trust and credibility within new markets.

While internationalization presents significant opportunities for growth, it also entails careful consideration of potential hurdles, including regulatory hurdles, cultural differences, and market acceptance. Therefore, our approach will be cautious and strategic, with a focus on sustainable expansion that aligns with our mission to increase accessibility to affordable healthcare globally. As for the timeline for international versions of MediShare, it will depend on the pace of our research, market analysis, and strategic planning, with the goal of ensuring successful entry into new markets while maintaining the integrity of our platform and services.

Projected Costs

Personnel Costs:

Personnel	Average Hourly Wage (USD)	Average Annual Salary (USD)	Number Needed	Duration (Estimated)	Estimated Expense (3 months) (USD)
Product Manager	59	113280	1	3 months	28320
Engineering Manager	55	105600	1	3 months	26400
Senior Software Engineer	65	124800	2	3 months	31200
Software Engineer	57	118560	2	3 months	29640
Associate Software Engineer	52	109440	2	3 months	27360
UI/UX designers	45	86400	3	3 months	21600
Senior Software Engineer (Testing/QA)	51	97920	2	3 months	24480
Software Engineer (Testing/QA)	43	82560	2	3 months	20640
Healthcare Professionals	43	82560	2	3 months	20640
Total			**17**		**230280**

Lab, Inventory Setup and other Operating Costs:

Category	Cost (3 months) (USD)
Lab and Inventory Space Setup	20000
Lab Equipment and Instruments	2000
Insurance Premiums	2000
Utility Installation	1000
Inventory Costs	3000
Medication Distribution Expenses	6000
Marketing and User Acquisition	5000
Legal, Compliance and Security	4000
Total	**43000**

IT Infrastructure and Maintenance Costs:

Expense Head	Cost (USD)	Duration	Total (USD)
Servers	$320 / month	3 months	960
Push Notifications	$10 / month	3 months	30
Payment Gateways	$160 / month	3 months	480
App Store	$99 / year	3 months	99
Play store fees	$25	3 months	25
Total			**1594**

IT Equipment Costs

Item	Average Cost of Procurement	Number Needed	Total Cost (USD)
Business Laptops	1000	17	17000
IT peripherals	150	17	2550
Printer/Scanner/Copier	600	2	1200
Mobile Phone for testing	800	4	3200
Total			**23950**

Enterprise Software and Licenses Costs:

Item	Average Cost of Procurement	Number Needed	Total Cost (USD)
MS Office 365	$23/user/month	17	1173
Jira Cloud (Premium Tier)	$14/user/month	15	630
CRM Tools	$25	10	250
Postman (API testing)	$99/user/month	10	2970
Total			**5023**

Total Operational Costs (One Quarter – 3 months)

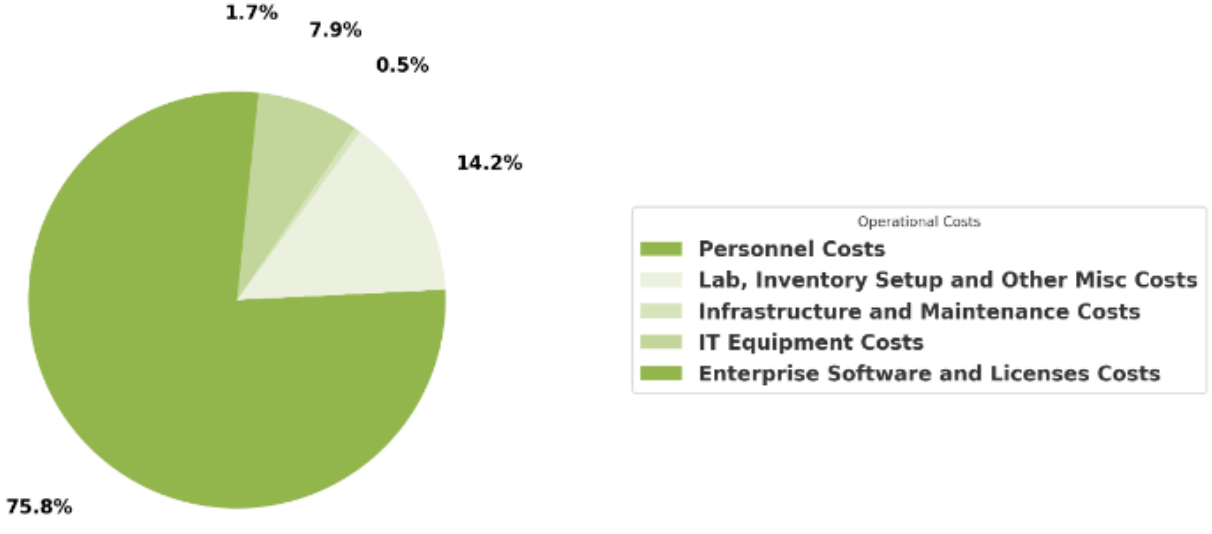
= Personnel Costs + Lab, Inventory Setup and other Misc Costs + Infrastructure and Maintenance Costs + IT Equipment Costs + Enterprise Software and Licenses Costs

= $230280 + $43000 + $1594 + $23950 + $5023
= $303847

Assumptions:

- A technologically complex product would require us to hire top talent for development
- App will be launched on Play store as well as App Store
- For infrastructure, we plan to utilize Amazon Web Services (AWS)
- 6 developers, 4 QA folks, 3 UI/UX designers and 2 Healthcare Professionals for Quality Testing would be working on this project
- Development is only 50% of the total effort.

Pie-Chart: Projected COSTS for Q1



Operational Needs

For MediShare to operate smoothly, the company will require operational support from the following parties:

1. **Medication pickup and drop-off service with Integrated Tracking System:**
    a. At MediShare, we are committed to enhancing the convenience and accessibility of medication redistribution by facilitating the pickup of medications from our sellers and ensuring prompt delivery to our buyers.
    b. To do so, we would need a delivery and pick-up service in place that operates efficiently and reliably, ensuring timely collection of medications from sellers and prompt delivery to buyers. Additionally, implementing advanced tracking and monitoring systems would enable us to provide real-time updates to both sellers and buyers, enhancing transparency and accountability in our delivery operations.
2. **Quality Assurance Team:**
    a. Prior to adding medications to our inventory, they undergo a meticulous quality assessment to guarantee their safety and efficacy for resale and use.

b. MediShare relies on a dedicated team of quality assurance professionals equipped with a comprehensive system designed to thoroughly evaluate the condition and authenticity of each medication. This system is built upon a deep understanding of pharmaceutical standards, ensuring that only products meeting stringent criteria are approved for redistribution. Our quality assurance process is essential to maintaining the trust and confidence of our customers, prioritizing their health and well-being above all else. This will be vital to the company's functionality; therefore, this would be an ongoing commitment.

3. **Medical Waste Management Company:**
    a. When individuals sell medication to MediShare, they initiate the process by providing a photo of the unopened medications and inputting the expiry date. Subsequently, a MediShare representative reviews the submitted information and image to validate the medication's details before approving its pickup. Upon collection, the medication undergoes a rigorous quality assessment to ensure its safety for redistribution. If a medication fails the quality check, the seller is promptly notified, and they have the option to reclaim the product. If the seller chooses not to reclaim the medication, MediShare responsibly arranges for its proper disposal.
    b. Effective disposal of unwanted medication necessitates collaboration with a reputable medical waste management company. This partnership ensures that medications deemed unfit for redistribution are handled and disposed of in compliance with environmental regulations and safety standards. By engaging with such specialized partners, MediShare maintains its commitment to ethical and sustainable medication management practices, safeguarding both public health and environmental well-being. This will be vital to the company's functionality; therefore, this would be an ongoing commitment.
4. **User Privacy:**
    a. Given that MediShare handles sensitive medical documents and the needs of our users, it is imperative that we establish and uphold a comprehensive privacy protocol to safeguard their confidentiality and trust. This entails implementing stringent data encryption measures, access controls, and regular security audits to ensure the utmost protection of user information. Additionally, transparent communication regarding our privacy practices and user rights will foster a culture of accountability and respect for privacy within our platform.

Addressing Caveats/risks

Risk	Description	Mitigating factors
Privacy Concerns	MediShare's handling of sensitive medical data may raise privacy issues if not adequately protected.	• Implement robust data encryption protocols. • Ensure strict access controls and limited data sharing. • Comply with HIPAA regulations to safeguard patient information.
Legal/ Patent Risks	Legal challenges related to intellectual property rights or patent infringements could pose a threat to the service.	• Conduct thorough patent searches before offering medications. • Obtain legal advice to ensure compliance with all relevant laws and regulations. • Secure necessary licenses for distributing medications.
Piracy Concerns	Unauthorized distribution or replication of medications could lead to piracy concerns, impacting the services credibility and legality.	• Implement stringent tracking mechanisms for distribution. • Conduct regular audits to detect any unauthorized activities. • Collaborate with law enforcement agencies to combat piracy effectively.
Interdependencies with Key Internal Systems	Relying on interconnected systems for medication checking and distribution can be risky if these systems fail or get hacked.	• Establish backup systems and disaster recovery plans to ensure continuity. • Regularly update and

		maintain internal systems to mitigate risks of failure or cyberattacks. • Conduct thorough testing of interdependent systems to identify and address any weakness proactively.
Availability of Required 3rd party compliments	Dependence on third-party providers for essential services or medications may lead to disruptions if these complements are not readily available or reliable.	• Diversify partnerships with multiple third-party providers to mitigate supply chain risks. • Maintain open communication channels with suppliers to address any potential shortages or issues promptly.
Supply chain Disruptions	Disruptions in the supply chain, whether due to shortage or logistical issues, could impact the availability of essential medicines through the service.	• Maintain strong relationships with multiple suppliers. • Monitor supply chain performance regularly to address potential issues proactively.
Ethical Concerns	Ethical dilemmas related to medication redistribution, such as equitable access and fair allocation, could impact the service's reputation.	• Establish clear guidelines for medication allocation based on medical need. • Ensure transparency in recipient and donor selection processes.

Appendix A- Survey Results

Two surveys were conducted: one aimed at prospective users and the other directed towards potential donors. Table 1 describes the responses from potential users.

User Survey Analysis: Potential Buyer	
Q1: "Where do you currently buy the medication you need?"	
Local Pharmacy	13
Government Clinic	2
Private Clinic	2
Online Pharmacy	2
Q2: "Have you ever faced difficulties in buying medications due to cost? Can you share your experience?"	
Yes	7
No	13
Q3: "Have you faced any difficulties in obtaining medications, such as issues with collection or delivery methods?"	
Yes	10
No	10
Q4: Concerns with buying sealed and unused medicines for cheaper through a subsidized platform	
Quality	2
None	11
Reliability	7

Table 1: Interview responses from Potential Buyers

Using this data our team was able to make visuals like graphs to simplify our findings. For example, Figure 1 describes where potential users currently buy their medication.

Figure 1: Depiction of where potential buyers currently buy their medication

Based on the data presented it is evident that 68% of customers currently obtain their prescriptions from local pharmacies, 10% prefer government clinics, 11% opt for private clinics, and the remaining percentage purchase medications online. This information helps identify competitors and assess whether individuals are already using platforms to manage medical expenses. Additionally, it offers insights into medication expenditure by distinguishing between those visiting government versus private clinics.

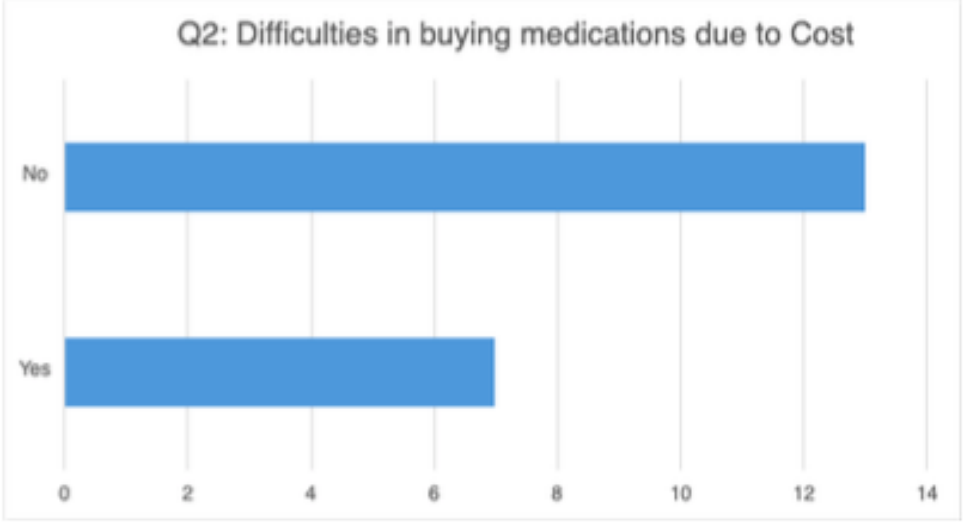


Figure 2: Number of people facing difficulties in purchasing medication due to cost

The second survey question asks about challenges in affording mediations. While many respondents didn't report difficulties, this may be due to limited interviews with our target buyer segments, affluent individuals. Some without insurance faces affordability issues. However, this subset doesn't fully reflect market needs. Future interviews will include individuals from homeless shelters or non-profit healthcare organizations in India for a broader market understanding.

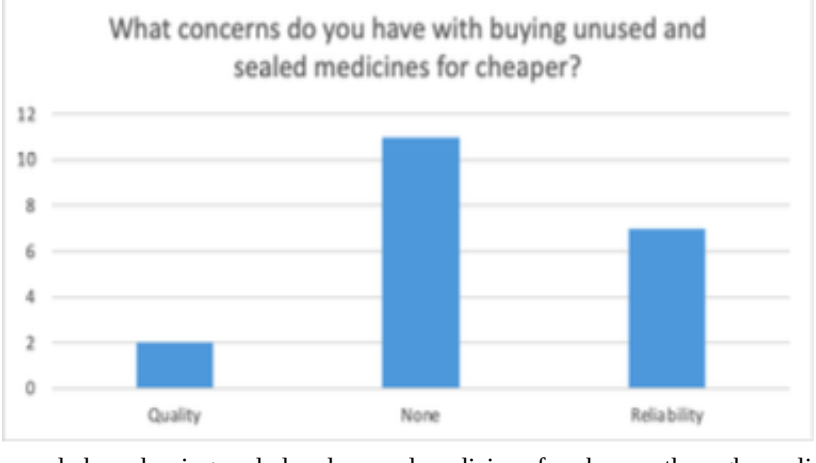


Figure 3: Concerns people have buying sealed and unused medicines for cheaper through a validated and approved platform.

We also explored customer concerns about buying subsidized medications from a certified platform. While many respondents trust the process if the platform is verified and medications are quality checked, some individuals expressed worries about potential drug abuse and the overall quality of subsidized medications. This feedback helps us understand diverse perspectives in our target audience and address specific concerns, guiding our strategy to build trust with buyers.

responses:	18
User Survey Analysis : Potential Seller	
Q1: "How many unopened medicines do you dispose of quaterly"	
1-2 Strips	7
3-5 Strips	5
6-10 Strips	2
11-15 Strips	1
16-20 Strips	1
None	2
"What do you do with your medicines/medical equipment once your treatment is over?"	
Keep them with me for potential future use	7
Throw them out	7
Give them to someone who needs them	4
Q3: "Have you considered donating your unused medications? What would influence this decision?"	
Yes	13
No	5

Table 2: Interview responses from Potential Sellers

Using this data, our team was able to make visuals like graphs to make it easier to understand. For example, Figure 4 illustrates the practices of potential sellers in managing their prescription medication when no longer required.

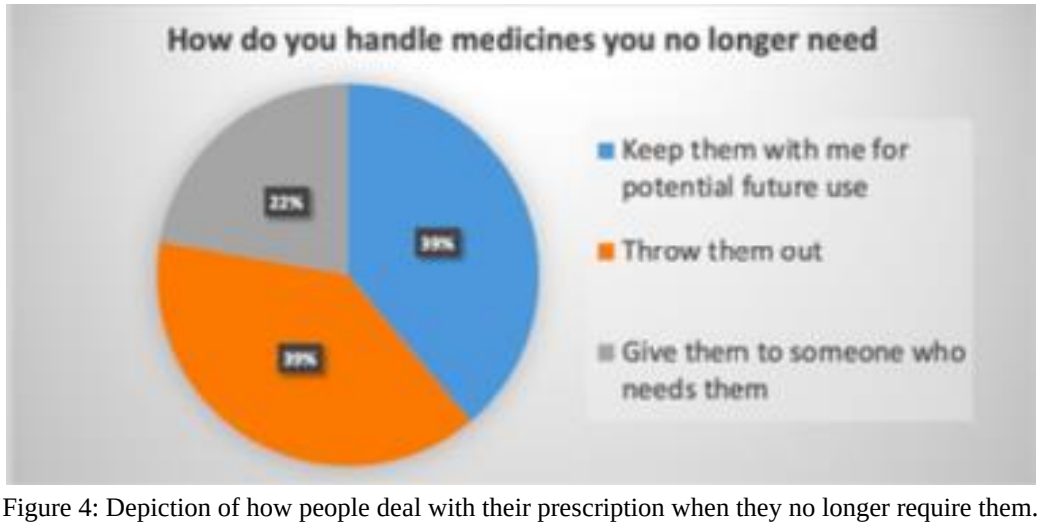


Figure 4: Depiction of how people deal with their prescription when they no longer require them.

Figure 4 outlines how individuals manage their unused prescriptions. The data shows that 39% keep them for future use, 39% dispose of them, and 22% donate to those in need. This information is crucial for understanding medication disposal practices and guides us in promoting the donation of unused medications to reduce wastage.

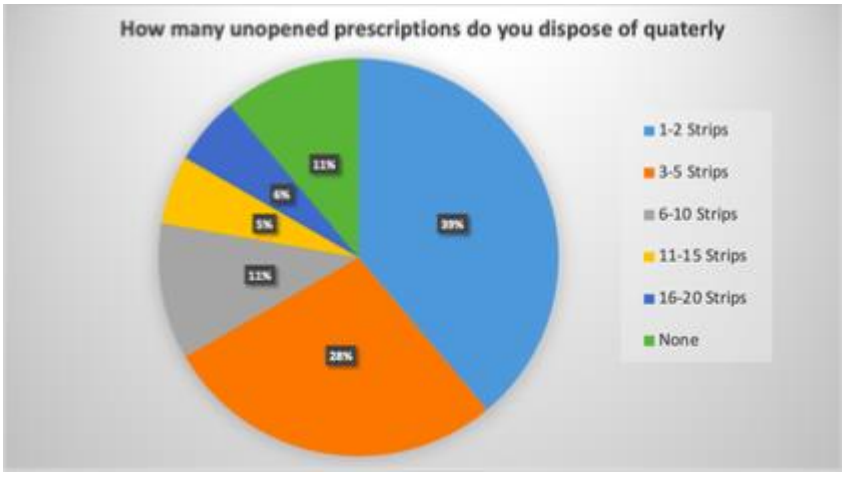


Figure 5: Number of unopened prescriptions disposed quarterly.

Figure 5 shows how often individuals dispose of unopened prescription medication quarterly. Around 40% discard 1-3 strips, 28% dispose of 3-5 strips, and 11% do not dispose of any medication. This data helps gauge market behavior and reveals substantial wastage. It also hints at the volume of medications that could be repurposed for those in need or the monetary value by specifying the types of medicines discarded.

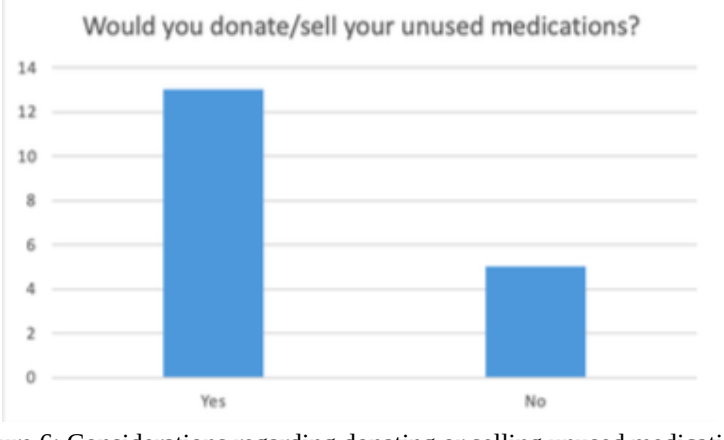
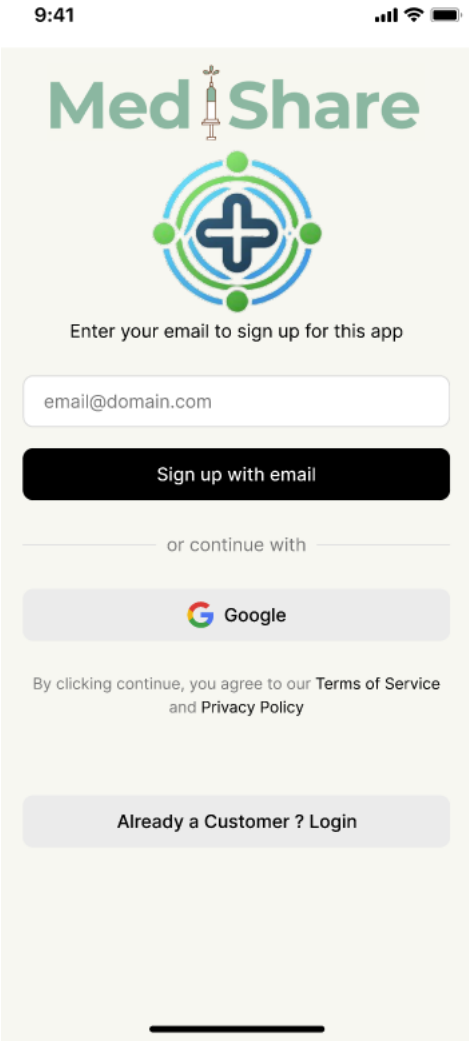


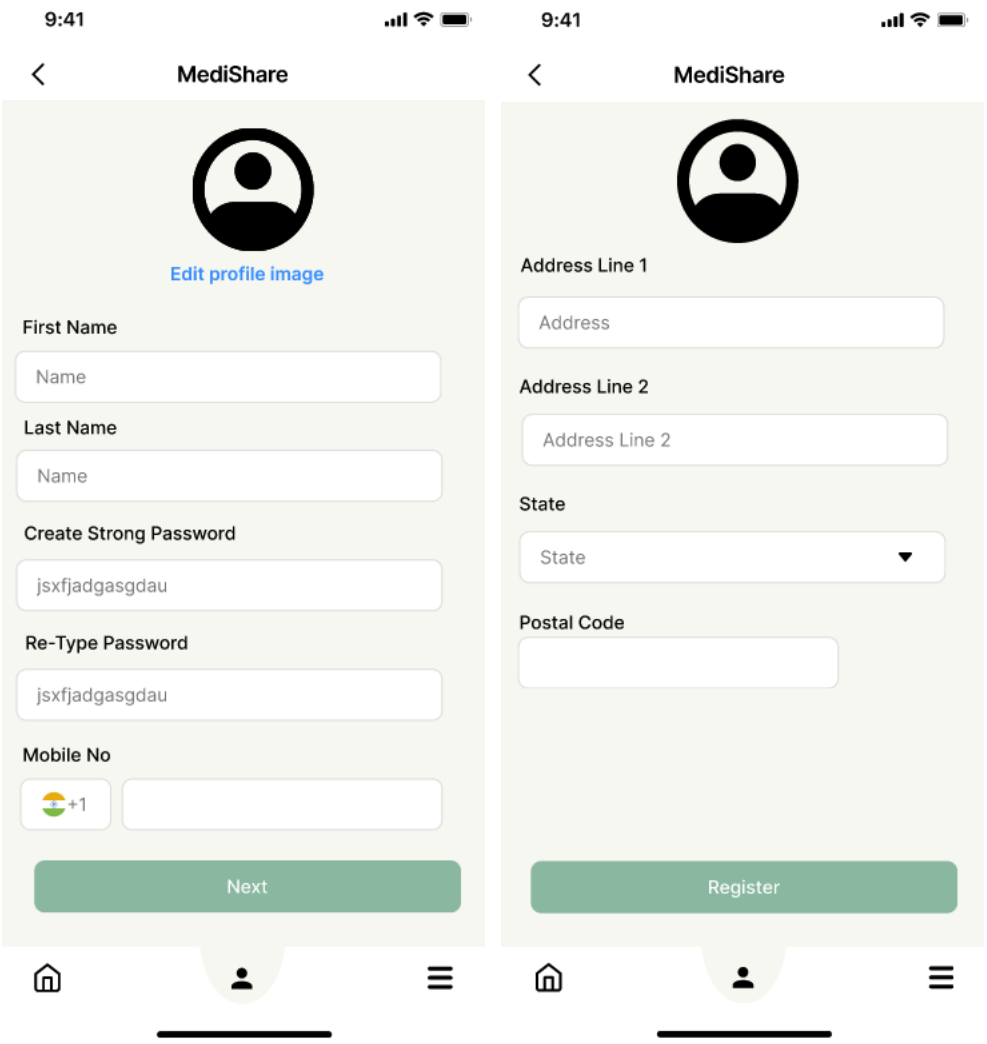
Figure 6: Considerations regarding donating or selling unused medication.

To support our goal of subsidizing medication expenses, we asked potential sellers about their readiness to sell or donate unopened, unexpired medications they have. While most showed eagerness to participate, a few had reservations possibly due to legal concerns, trust issues, or lack of awareness. Concerns about medication quality due to improper storage were also noted. Understanding these factors is crucial is improving our platform's strategy and increasing overall participation.

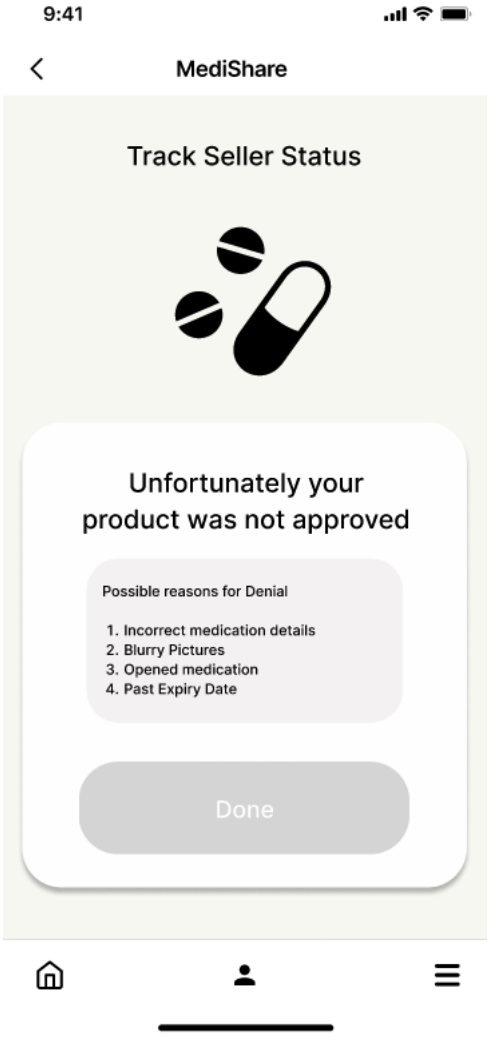
Appendix B- Prototype Walkthrough

1.Sign Up flow and Registration

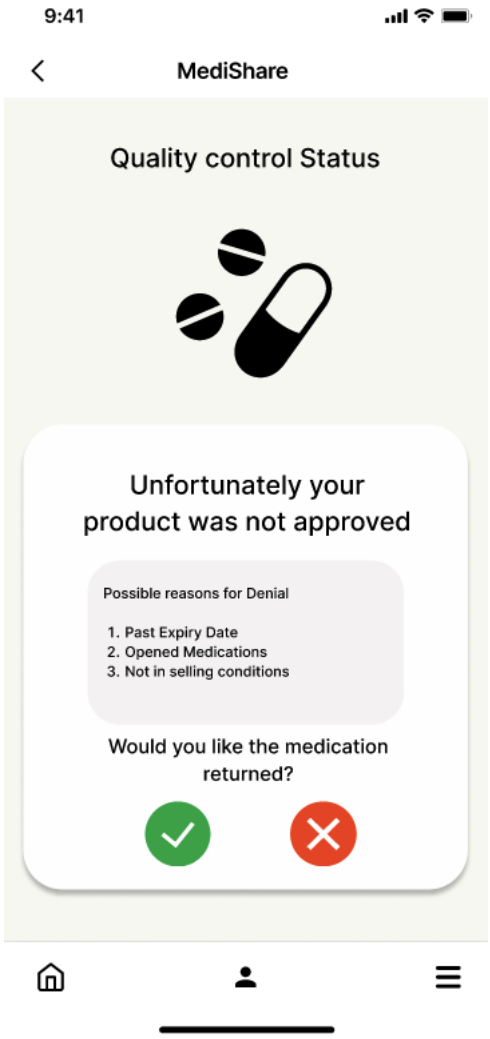



9:41
MediShare
Edit profile image
First Name
Name
Last Name
Name
Create Strong Password
jsxfjadgasgdau
Re-Type Password
jsxfjadgasgdau
Mobile No
+1
Next
9:41
MediShare
Address Line 1
Address
Address Line 2
Address Line 2
State
State
Postal Code
Register

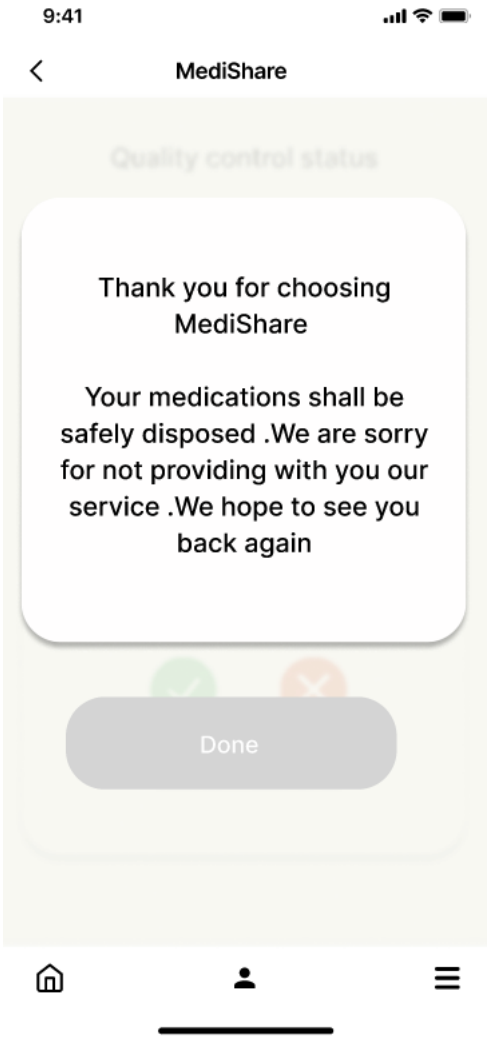
2. When the Seller Request is denied



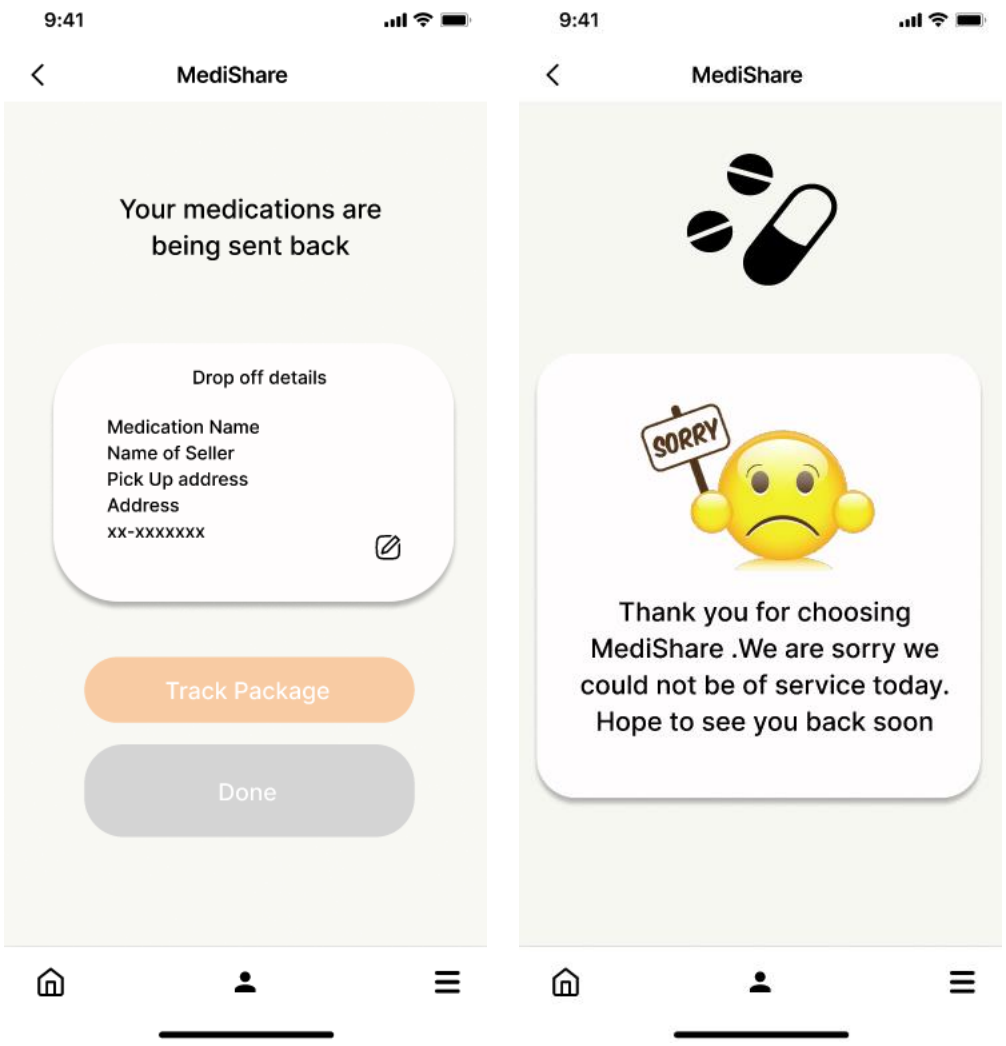
3.When the Quality control gets denied



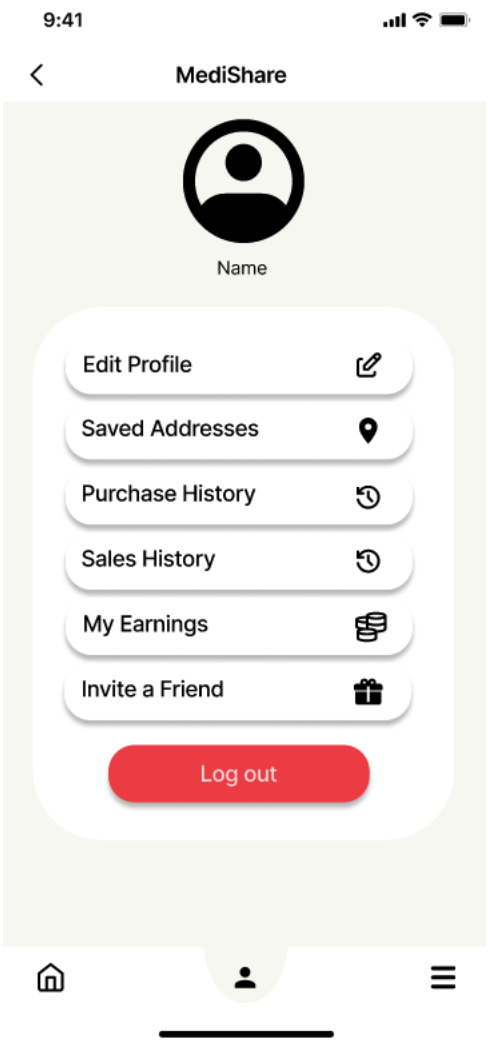
4.When the Seller is ok with disposing

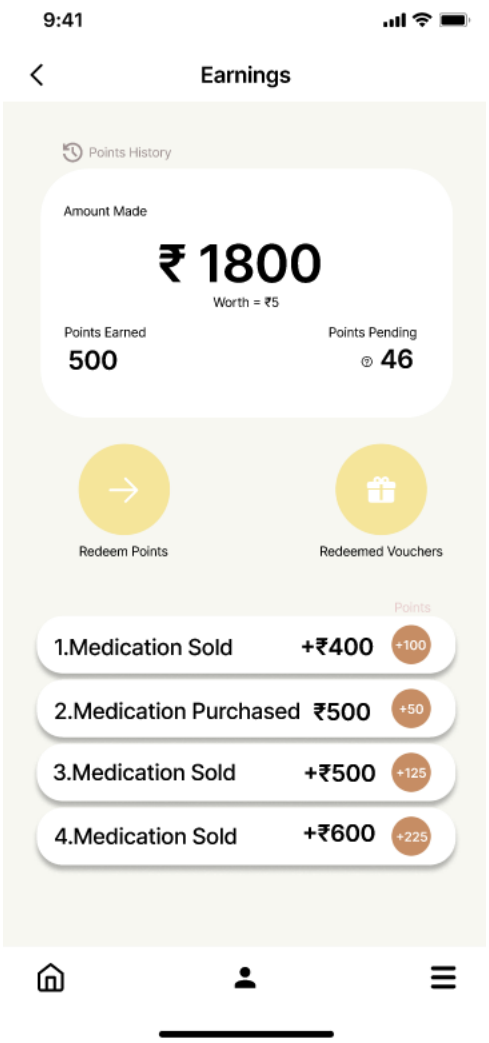


5.When the Seller asks to return the medication

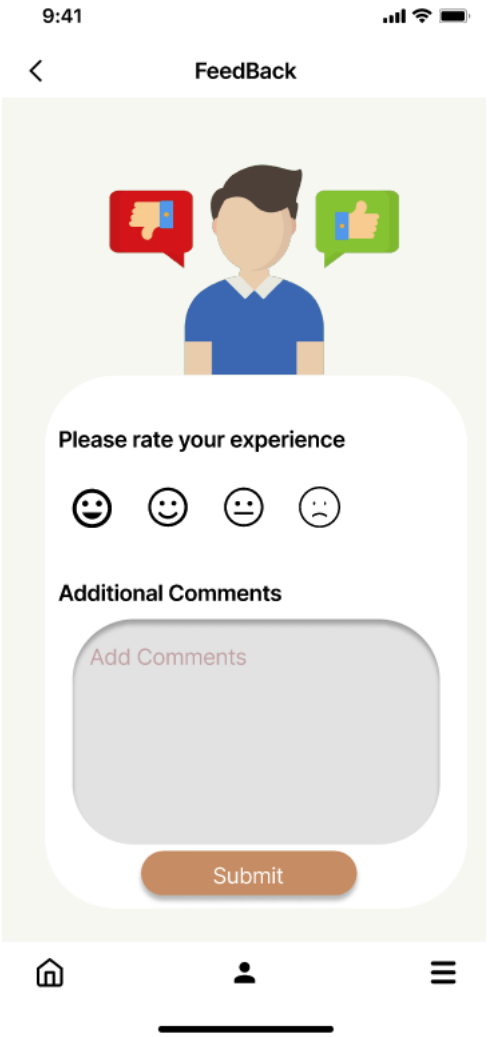


6.Profile and Rewards





7.Customer Feedback



View High Fidelity Prototype here