

A Comprehensive Review of Medicine Donation Website

Malik Muzamil Ishaq
Computer Science and Engineering
Chandigarh University
Mohali, India
muzamilmalik754@gmail.com

Kumari Anushka
Computer Science and Engineering
Chandigarh University
Mohali, India
anushkakashyap0911@gmail.com

Aditi Gupta
Computer Science and Engineering
Chandigarh University
Mohali, India
aditipankaj100@gmail.com

Abhishek
Computer Science and Engineering
Chandigarh University
Mohali, India
sheokandabhi569@gmail.com

Navratan Kumawat
Computer Science and Engineering
Chandigarh University
Mohali, India
navaratan2105@gmail.com

Samiksha Kumawat
Computer Science and Engineering
Chandigarh University
Mohali, India
k.samiksha2003@gmail.com

Abstract—In order to address healthcare inequities and guarantee that leftover medications help those in need, it has become clear in recent years that effective and trustworthy systems are required to allow pharmaceutical donations. This paper describes a project that sought to create a user-friendly website devoted to expediting the donation of medical supplies. Constructed with an emphasis on user experience, the platform incorporates safe data processing, intuitive design, and strong backend features. It serves as a link between donors—who frequently have extra, expired medications—and recipients, who can include hospitals, NGOs, and private citizens. The website uses sophisticated search algorithms to match requirements with available funds and provides real-time tracking to guarantee transparency. The website's potential to reduce drug waste and scarcity is shown by early data following debut, which show a notable rise in effective medicine contributions and a noteworthy level of user involvement. By means of this effort, the initiative embodies the convergence of technology and compassion, clearing the path for a healthcare environment characterized by accessibility and inclusivity.

Keywords—Healthcare, Medicine, Donation, Hospital, Scarcity.

I. INTRODUCTION

In a time when digital technology is essential to solving world problems, the field of healthcare philanthropy will greatly benefit from creative online solutions. In many regions of the world, access to necessary medications is still a major problem that is made worse by things like knowledge gaps, logistical difficulties, and economic discrepancies. In light of this, the Medicine Donation Website Project was created with the intention of filling in these gaps and making sure that medications get to the people who need them the most.

The Medicine Donation Website acts as a central location for people, pharmacies, hospitals, and other healthcare facilities to donate their leftover, unopened prescription drugs. Healthcare professionals, non-governmental organisations, and residents of underprivileged areas can then make use of these contributions. The platform not only tackles medical waste but also makes it easier to redistribute life-saving drugs to impoverished communities by optimising the process of pharmaceutical donation and distribution.

Beyond the actual distribution of medications, this project exemplifies shared responsibility and a sense of community. It emphasises how digital platforms have the power to organise resources, promote teamwork, and bring about significant change. As we embark on this massive project, we see a time when no one lacks access to necessary medications because of financial constraints and when technology is used to address the most urgent needs of humanity.

In this case, the clients would be the people or organisations helping to make donations and medicine distributions to those in need possible. It acts as a hub for the donation of extra or unused pharmaceuticals and medical supplies by people, groups, and healthcare facilities. These donations can subsequently be given to people or communities in need of access to reasonably priced healthcare.

In order to improve healthcare access and lower medication waste, it is necessary to set up a platform where donors and receivers can communicate, organise, and simplify the process of donating extra or unused medications to people and communities in need. A number of significant considerations, including access

to medication, reducing medicine waste, humanitarian aid, community support, corporate social responsibility initiatives, and public health, make a website for drug donations necessary. Access to Medication, Reducing Medicine Waste, Humanitarian Assistance, Community Support, CSR Initiatives[10], Public Health Initiatives, and Environmental Impact are just a few of the significant considerations that make a website for medicine donation necessary.

The current problems surrounding medical donation websites encompass a wide range of concerns in the areas of technology, ethics, and logistics. Digital privacy and security are the most important issues in an increasingly digital world. Because contributors and recipients exchange private and possibly sensitive information, these platforms must have strong security measures in place due to the risk of data breaches. Additionally, the COVID-19 pandemic's continued effects have upset the dynamics of drug supply and demand, forcing these platforms to reassess and modify their distribution plans. Furthermore, Transparency is also desperately needed since more and more contributors want to follow their contributions to make sure the intended recipients receive them. The difficulty of maintaining quality control to make sure donated medications are authentic, kept securely, and still work is exacerbated by this. As the platform becomes more widely used, issues pertaining to regional, cultural, and legal variations among nations become more prominent. In summary, websites that facilitate the donation of medicines are essential to the world's healthcare system, but in order to continue being reliable and successful in their work, they must constantly change and adapt to new issues.

II. LITERATURE SURVEY

This website uses products or leftover resources that can be used again to help those who are less fortunate. Numerous depressed people from numerous non-governmental organisations (NGOs) that will recognise our client's kindness can be found on our page. The complete history of their file will be visible to the client. World Health Organisation Library Cataloguing in Publication: Guidelines for Donating Remedies, Revised 2010, World Health Organisation[8]. The Data Guidelines for Remedies Donations were revised in 2010.

- a. Getting ready for the distribution and supply of pharmaceuticals.
- b. The distribution and provision of necessary pharmaceuticals.
- c. Relief initiatives after disasters.
- d. Accidents.
- e. Relationships between institutions matter.
- f. The World Health Organization's recommendations (ISBN 978-92-4 150198-9) have a rating of 330. Three editions were released: 1996 for the first edition, 1999 for the second, and 2011 for the third.

The World Health Organisation (WHO) developed this third version of the Guidelines for Remedies Donation in cooperation with significant international organisations engaged in development assistance and humanitarian relief. The purpose of the Guidelines is to raise the standard of medication donations for disaster relief and foreign development assistance. Given that donation preparation entails the use of appropriate remedies, both donors and recipients are interested in it.

One of the websites that has contributed money to promote health analysis and the expense of treating the poorest people is the MESCO Social and Environmental Management Organisation. India was established on April 28, 2000[9], with the notion that equal access to resources is the foundation of civilization. Regardless of their circumstances, everyone should have an equal opportunity to succeed in life. This is not accurate; however, the growth rate of India's varied economy was 10.91% during 2016–17 as contrast to 8.50% in the period 2015–16. Additionally, with a rate of expansion of 9.5% compared to Asia's growth rate of 7.5%, India has generated a sizable population of the richest people[3]. and currently, 36% of the country's under-five youngsters lack adequate nutrition, and anaemia concerns 51% of women that are of reproductive age. 350 million Indians are still facing an open migration crisis due to the unavailability of sanitary facilities, 18,000 million Indian communities still lack accessibility to water storage sites, and 33 million children are not in school and are sufferers of various sorts of child abuse[4]. Express to India your wish to change this diversity. They achieve this by bringing together organisations that seek to improve the world and donors. Within a family, poverty has many detrimental repercussions that last for generations. By ensuring money or offering education for a generation, breaking the cycle of birth defects may help households.

India is a large country, and we are proud of its people. If everyone pledges to assist, we will be strong enough to overcome our obstacles. We know enough to know that if we follow the path, society as a whole will need support. Give to a Friendship NGO[6] and make incredible use of your savings to improve or help people's lives. Friendship: The bond of friendship is an international social work initiative that is motivated by the idea that everyone will have an equal chance to live in dignity and hope in the future, especially the silent and difficult-to-reach people.

The idea of friendship hasn't changed much in the last 20 years, but it's more important than ever as the world struggles with more serious global problems including injustice, environmental destruction, extreme destitution, inequalities, and solitude.

Medical services are provided by Medshare.org[1] - Med Share: A nonprofit organisation called Med Share works to improve the quality of life for people, the environment, and local communities by controlling the delivery of increasingly more medications,

supplies, and services at the local level for those in need. Med Share provides live resource training, health care service delivery specialists, and medical organisations that assist those in need in order to enable the expansion of health size administration while retaining viability.

The Med Share distribution of executive medical and mechanical items has improved health, healing, and the prospect of better lives for innumerable patients as well as hundreds of people worldwide, all while lowering the performance of our country.

There are potential in certain nations, such as increased internet usage, the development of ICT-based applications, and the acceptance of telemedicine, where the main challenges are ICT service availability rates, data quality and quantity, and appropriate use[5]. In a different study, Roxane al. makes the case that disabled people's perceptions of eHealth's simplicity of use and wastefulness motivate them to support it in both urban and rural clinics across Eastern Cape Town, South Africa. Furthermore, studies on health services were carried out to gauge the likelihood of their improved utilisation.

III. RELATED WORK

TABLE I. RELATED WORK OF MEDICINE DONATION WEBSITE

Name of the paper	Author Name	Advantages	Disadvantages	Publisher	Year
A Webportal for Medicine Distribution among Poverty-stricken People	Chowdhury Nawrin Ferdous	1. Many needy people will get cured.	1. This application requires an active internet connection.	7 IEEE Region 10 Humanitarian Technology Conference	2020
Online Medicine Donation System	Nitesh Godhichor	1. It will help to maintain records of medicines.	1. User needs to put correct data or else it behaves abnormally.	International Journal of Creative Research Thoughts (IJCRT)	2021
A Web Portal for Medicine Donation to NGO's and Check availability of Medicine in NGO's	Shivam Ramanvar	1. It helps poor people for medication.	1. This application requires an active internet connection.	International Journal of Research in Engineering.	2021
Online Medicine Donation Portal	Sanket Rajendrakumar More	1. It will help to maintain records of medicines.	1. User needs to put correct data or else it behaves abnormally.	International Journal of Advance Research, Ideas and Innovations in Technology.	2021

IV. DESIGN FLOW

It's a commendable idea to create a website for medication donations, but in order to make sure it works, it needs to be carefully considered what features it should have. The qualities that such a website should ideally have are listed below:

1. **User Registration and Profile:** Permit users to register with a minimal amount of information; Provide users with the ability to edit their contact information and manage their profiles.

2. **Dashboard for Donor and Recipient:** Provide donors and recipients different dashboards; While recipients can request specific prescriptions, donors can list the meds that are available.

3. **Search and list:** Provide users with the ability to look up available medications by name, ailment, or region. List surplus medications that donors have extra of by adding information like name, quantity, and expiration date.

4. **Drug Verification:** Verify through a method that given medications are authentic and safe to use.

5. **User Reviews and Ratings:** In order to foster a sense of community among contributors and recipients, permit users to provide comments and ratings.

6. **Privacy & Security:** To guarantee the protection of users' personal information, implement data security and privacy features.

7. **Inventory management:** This function allows payers to keep track of the medications they have on hand.

8. **Drug Information:** Give thorough details about different medications, including their applications, adverse effects, and safe storage.

9. **Support and FAQ:** Provide a section with answers to frequently asked questions as well as contact details for users who require help.

10. **User regulations and Guidelines:** Clearly indicate the regulations regarding donations, terms of use, and website guidelines.

11. **Mobile Response:** To reach a larger audience, make sure the website is mobile-friendly.

12. **Social Media Integration:** To promote more involvement, let users post about their charitable endeavours on social media.

13. **Donation History:** Maintain a record of users' prior contributions and demands for accountability and transparency.

The intended audience, regional laws, and the website's unique objectives should all be taken into account while critically evaluating these elements. Prioritising key features and taking the platform's scalability into account are crucial for possible future expansion. Additionally, because donated pharmaceuticals are sensitive, please take extra precautions regarding user privacy and security.

Along with a strong digital marketing plan, promoting such a platform can entail collaborations with neighbourhood

pharmacies, medical facilities, and non-profit organisations. In order to guarantee that all donated medications are safe for use and given appropriately, strong collaboration with law enforcement and medical specialists is vital.

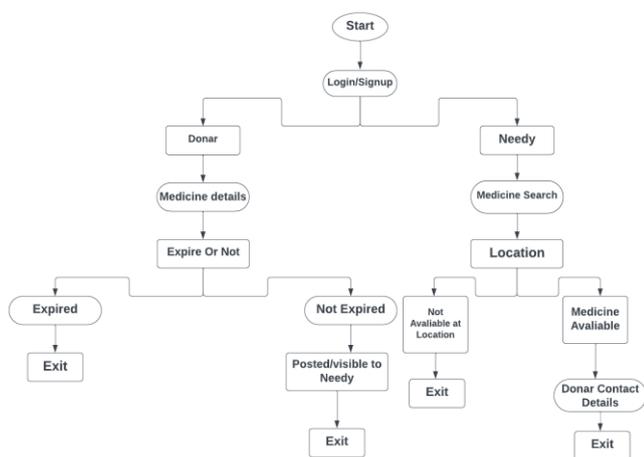


Fig 1. Flowchart Used in Building up the Website.

V. TOOLS AND TECHNOLOGIES

An implementation plan for an intervention aimed at building up the medicine donation website could involve the following tools and technologies:

4.1 PHP: A popular server-side scripting dialect for web development is PHP (Hypertext Preprocessor). It is perfect for processing forms, connecting to databases, and building interactive pages on the internet because it enables developers to incorporate dynamic code into HTML. Because PHP is free, open source, cross-platform, and has a large community, it's a popular choice for developing apps for the web and websites. The most recent version of PHP is 8.2.0, which was released on December 8, 2022.

4.2 My SQL: A popular freely available relational database management system (RDBMS) for managing and archiving structured data is MySQL. It provides a stable and effective framework for a range of applications, including big business systems and tiny websites. Because of its scalability, speed, and dependability, MySQL is a popular option for online applications, systems for managing content, and data-driven software. It also offers SQL for information searching and manipulation.

4.3 Sublime Text Editor 3: Popular and very configurable, Sublime Text's interface is a fast and effective text editor. It is compatible with Windows, macOS, and Linux and provides developers and programmers with a distraction-free interface. Because Sublime Text is adaptable with so many packages and plugins available, users can customise it to meet their own needs.

It is a preferred option for coding and textual editing work because of its responsiveness and adaptable features. Although it is a fantastic editor straight out of the box, its true value lies in the ability to customise settings and use Package Control to increase its capability.

4.4 Apache: Apache is the most widely used web server software. The Apache Software Foundation creates and oversees Apache, which is free and open source software. It runs on 67% of the world's web servers. It is rapid, trustworthy, and safe. Through the use of extensions and components, it may be extensively configured to meet the needs of a wide range of different scenarios. The web server used by most WordPress hosting providers is Apache. But WordPress works with a variety of web servers as well.

VI. METHODOLOGY

An implementation plan for an intervention aimed at building up the medicine donation website could involve the following methodology:

Begin

Step 1: User Registration

- Gather user data (username, email address, password, and role, either recipient or donor).
- Verify user information and look for duplicate accounts.
- Create a special user ID for the person who has registered.
- Maintain user data in the database.

Step 2: User Login

- Request that users provide their password and email address to log in.
- Check the database against the user's credentials.
- Permit access to the recipient's or donor's dashboard.

Step 3: Dashboard Access

- Show a dashboard with choices according to the user's role (receiver or donor).
- Medication listings, listing viewing and editing, and recipient communication are all available to donors.
- Recipients have the ability to look up medications, request donations, and get in touch with donors.

Step 4: Listing of Medicines (Donor)

- Donors may specify the medications they would like to give, including the brand, amount, and expiration date and condition.
- These postings are kept in the donor's profile section of the database.

Step 5: Recipient's Medicine Search & Request

- Recipients can peruse available listings or conduct a targeted search for particular medications.
- Recipients can email requests for donations to donors, indicating the amount required.

Step 6: Communication

- Set up a messaging system so that potential donations can be discussed between donors and recipients.
- Show alerts for new communications in real time.

Step 7: Contribution Confirmation

- The donor verifies the transaction after the parties have reached an agreement on a contribution.
- The portal offers instructions on how to safely exchange and utilise medications, along with details on meeting places and times.

Step 8: User Reviews and Comments

- Following a successful donation, users have the option to post reviews and comments.
- Users' reputations on the platform are influenced by their reviews.

Step 9: Optional Medicine Verification

- A group of professionals or dependable individuals can confirm the legitimacy and security of given medications.
- Although it is not required, verification can improve platform safety and confidence.

Step 10: Compliance & Data Privacy

- Put in place robust data protection procedures to preserve user data and uphold legal compliance, which includes following pharmaceutical rules.

Finish

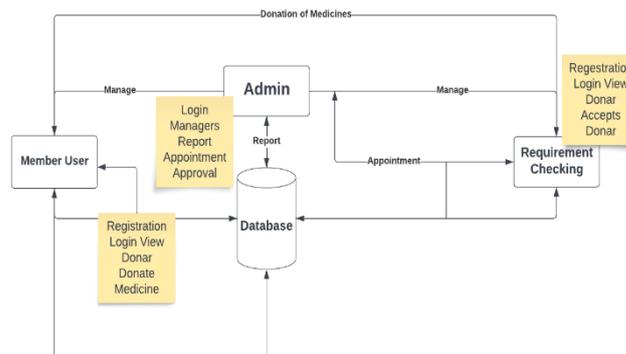


Fig 2. Flowchart Representing the Website.

VI. RESULT AND DISCUSSIONS

A medication donation website acts as a vital link between people who have extra prescription drugs and those who are in need, improving access to healthcare and cutting down on medication wastage. It serves as an educational center, raising awareness of the importance and procedures surrounding medicine donation, in addition to its main purpose of facilitating donations. It guarantees the effectiveness and safety of donated pharmaceuticals for recipients by establishing strict safety regulations. In addition, the platform increases its influence and reach by encouraging a feeling of community, openness, and even the potential to spark partnerships with healthcare organizations. Essentially, this type of website is essential to maximizing the availability of medical services and advancing comprehensive community health.

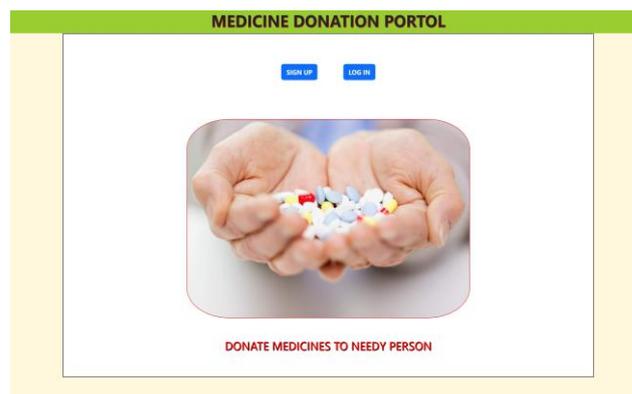


Fig 3: Figure Representing the Medicine Donation Portal.

The above figure represents the interface of the medicine donation portal which is a dedicated online network which was created to close the gap between people who have extra, expired prescription drugs and people who are in urgent need of them. Acknowledging the dual problem of pharmaceutical waste and many people's inability to buy important prescriptions, the portal offers a safe, efficient, and transparent way for pharmaceuticals to be donated and received.

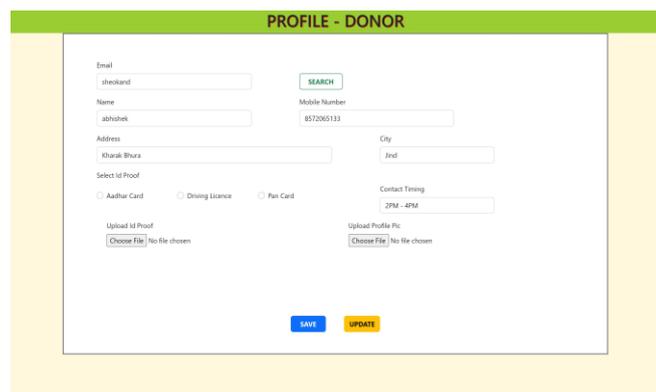


Fig 4: Figure Representing the Profile Interface.

Users are able to sign up as recipients or donors. Donors enumerate the available medications, making sure they are undamaged and within the expiration date. Following a verification procedure, recipients can request or be paired with appropriate pharmaceuticals based on their needs. The gateway requires stringent examinations of the given medications, including cross-referencing them with a database of authorized drugs and confirming their expiration, in order to guarantee safety and compliance.

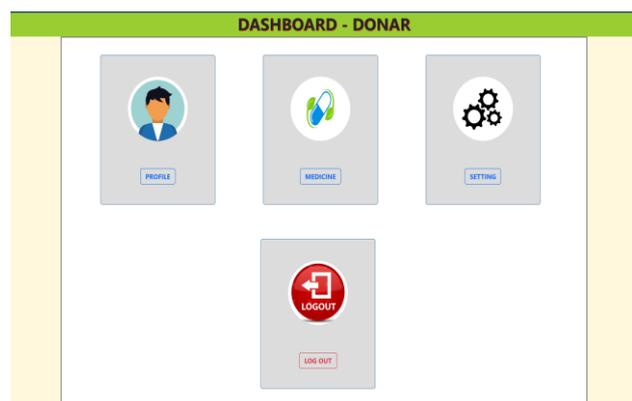


Fig 5: Figure Representing the Dashboard.

The Medicine Donation Dashboard is a user-friendly interface that provides a thorough overview of the actions related to medicine donation. The dashboard offers real-time data, analytics, and functions that facilitate the donation process to donors, recipients, and administrators managing the system.

VII. CONCLUSION

The latest time has started. People from every background and literacy levels are growing more and more concerned about their own health. It is depressing to read that those living in poverty have little money and hence cannot commit much time to maintaining their health care routine. NGOs including Our Website do incredible work by giving people in need free medical care. However, rather than expensive cures, patients almost always receive treatment. This article gives a quick rundown of the planning and creation of an online platform that will be very popular and greatly facilitate access to medical facilities for people who require them.

We have entered the modern period. People who are wealthy or not, educated or not, are conscious of their own health these days. It is disheartening to realise that impoverished individuals are unable to prioritise their health care due to financial constraints. The government is showing great initiative by giving the impoverished free medical care. Most of the time, though, they will get therapy rather than pricy medications.

VIII. ACKNOWLEDGMENT

We would like to extend our sincere gratitude to the committed academics, researchers, and practitioners whose fundamental work on medicine donation enhanced this evaluation. We would also like to thank our connected institutions for their persistent support and our reviewers for their insightful remarks. We also thank NGOs and medical professionals for their insightful comments that deepened our understanding.

IX. REFERENCES

[1] S. Jahan and M. M. H. Chowdhury, "mhealth: A sustainable healthcare model for developing world," American Journal of Modeling and Optimization, vol. 2, no. 3, pp. 73–76, 2014.

[2] R. Hoque, M. Mazmum, and Y. Bao, "e-health in bangladesh: current status, challenges, and future direction," Int Tech Manag Rev, vol. 4, no. 2, pp. 87–96, 2014.

[3] Department of Health Organs for transplants. A report from the Organ Donation Taskforce. London: DH, 2008.

[4] Department of Health The potential impact of an opt out system for organ donation in the UK. A report from the Organ Donation Taskforce. London: DH, 2008.

[5] BMA press release archive BMA briefing paper - presumed consent for organ donation.

[6] Boseley S. Taskforce opposes 'presumed consent' for organ donors. 18 November 2008.

[7] The Royal College of Surgeons Policy position regarding organ donation. February 2013.

[8] WHO. Guidelines for Medicine Donations. 3rd ed. 2011

[9] IRJET-V7450 International Research Journal of Engineering and Technology (IRJET)

[10] International journal of Creative research thoughts (IJCRT)

[11] Kuppuswamy, V.; Bayus, B.L. Crowd funding Creative Ideas: The Dynamics of Project Backers. In the Economics of Crowd funding: Startups, Portals and Investor Behavior, 1st ed.

[12] UDIT AGGARWAL. (2023). ONLINE MEDICINE DONATION SYSTEM. *Vidhyayana - An International Multidisciplinary Peer-Reviewed E-Journal - ISSN 2454-8596*, 8(5).

[13] Agrawal, A.; Catalini, C.; Goldfarb, A. Crowd funding: Geography, Social Networks, and the Timing of investment Decisions. *J. Econ. Manag. Strat.* 2015,24, 253–274. [CrossRef]

[14] Sasaki, S. Majority size and conformity behavior in charitable giving: Field evidence from a donationbased crowd funding platform in Japan. *J. Econ. Psychol.* 2019,70, 36–51. [CrossRef]

[15] Prashar A, Gupta P. How to build trust in Gen Y in online donation crowdfunding: an experimental study. *Behaviour & Information Technology* 2023