IJIRCCE

e-ISSN: 2320-9801 | p-ISSN: 2320-9798

INTERNATIONAL JOURNAL OF INNOVATIVE RESEARCH

IN COMPUTER & COMMUNICATION ENGINEERING

Volume 11, Issue 5, May 2023

INTERNATIONAL STANDARD SERIAL NUMBER INDIA

Impact Factor: 8.379

International Journal of Innovative Research in Computer and Communication Engineering

| e-ISSN: 2320-9801, p-ISSN: 2320-9798| www.ijircce.com | |Impact Factor: 8.379 |

|| Volume 11, Issue 5, May 2023 ||

| DOI: 10.15680/IJIRCCE.2023.1105102 |

ShareCure: Medical Equipment and Unused Medicine Donation Web Portal

Shardul Khairnar, Parth Gadewar, Prasanna Gangakhedkar, Utkarsha Mendhe, Mayuri Khade

BE Student, Dept. of Computer, Sinhgad College of Engineering, Pune, Maharashtra, India

BE Student, Dept. of Computer, Sinhgad College of Engineering, Pune, Maharashtra, India

BE Student, Dept. of Computer, Sinhgad College of Engineering, Pune, Maharashtra, India

BE Student, Dept. of Computer, Sinhgad College of Engineering, Pune, Maharashtra, India

Assistant Professor, Dept. of Computer, Sinhgad College of Engineering, Pune, Maharashtra, India

ABSTRACT: The objective of this initiative is to address the pressing issue of the lack of affordable medication for individuals who are unable to procure expensive drugs for themselves or their loved ones. The platform also facilitates blood donation by enabling donors to register their willingness to donate. Furthermore, the portal emphasizes the donation of medical equipment, not only to those in need but also to organizations that can make a meaningful contribution to the treatment of those who cannot afford medical care due to exorbitant costs.The project's success will rely on the contributions of three key stakeholders. First and foremost, the administrator will oversee all content uploaded to the platform, including prescriptions. Secondly, donors and the needy will play pivotal roles, with donors providing details of their surplus medication, and the needy accessing this information. The platform's objective is to eliminate obstacles such as NGOs that can impede access to medication for the needy, instead acting as an intermediary that connects individuals with nearby donors. The project aims to manage and promote the donation of unused medication to economically disadvantaged individuals while ensuring the validity and accuracy of the information provided by both donors and recipients through an end-to-end connection.

KEYWORDS: Medical Equipment, Unused medicines, Blood Donor, Donation, Donor, Needy

I. INTRODUCTION

Presently, India has a considerable population living in extreme poverty, struggling to afford medical care and medication. Consequently, many individuals endure various illnesses and succumb to death. Moreover, some individuals overdose on medication, even after recuperation, causing severe health issues. Additionally, the wastage of medicines, either through disposal or expiration, adds to the mounting expenses of the National Health System. However, when correctly managed, medicine and medical equipment donations can potentially save lives and alleviate suffering. Similarly, blood donation can also have a significant impact. Effective donation practices can lead to reduced development fund costs, allowing these resources to be utilized elsewhere. The "Medical Equipment and Unused Medicine Donation System" acts as a bridge between a large network of pharmaceutical donations and individuals in need of free medication. With the increasing usage of the internet, it has become relatively easy for users to access and use this website. While there are several existing donation sites, they may not meet the required standards and may require additional manual data processing. We can leverage technology to address the mentioned challenges and create a user-friendly website. Additionally, we can analyze pharmaceutical waste concerning illnesses, aiding in waste reduction efforts.

II. RELATED WORK

In [1] The Author used the concept of a web donation portal has been taken into consideration in which an NGO is considered as a medium for donation of the medicines.In [2] The Author proposes an application that helps donors to donate the medicine they want to donate very easily and rapidly.In [3] The Author specifically focuses on collecting unused medicines from people who have recovered from the disease. After collecting them they will be handed over to the NGOs' and then individuals who need they can get them for free.In [4] The Author solves the problem where many people stop their medicine dose after some time and the left-over medicines are thrown away in the form of garbage, while some people do not get needed medication.In [5] The Author specifically aims on providing free medicines to needy people. The idea is simple: Medicines are get collected and given to the NGOs' and whoever needs them can

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collect the medicines for free from them. In [6] The Author reviews studies undertaken for awareness and is very helpful to initiate effective waste management programs.In [7] The Author identifies that medical equipment should always be in working condition and should be changed with new ones whenever necessary, but some low-income countries do not have that much money they can buy all new equipment as a problem and focus on how to solve the problem.

The Author find out that Getting rid of unused and specially expired medicine is among the most important parts of the lifecycle of medicine[8]. Consuming expired medicine leads can lead to death a problem and aims atthe disposal of expired medicine. In [9] The Authorconducted a study to assess knowledge, practice, and awareness towards disposal of left-over medications among the general public visiting tertiary care hospitals. In [10] The Author includes various safe and unsafe ways of disposal of pharmaceuticals. In [11] The Author aim's is to review the prevalence of unused medicines at home and to find the reason behind this. In [12] The Author proposes a project for fulfilling the needs regarding the availability of medicines to poor people, developers have developed a portal called Give Med. where anyone can donate medicines by getting themselves registered.In [14] The Author realizes that Many treatments need blood most of which are dangerous. Artificial blood is yet to discover a problem and focuses on solving the problem in various ways.

Table 1 displays various web portal that works in the field of the Health Sector for providing medical and donation help to poor people

Sr. No	Name of the Web portal	Services provided
1.	Friendship.ngo [13]	Friendship. NGO donates medicines in different parts of the world including Bangladesh
2.	GiveIndia [15]	GiveIndia Takes donations in the form of money to create a fund for medical diagnosis for poor people.
3.	Sirum [16]	Sirum distributes medications purchased with donated funds to approved safety-net pharmacies or clinics to assist patients who are unable to pay for their prescription medications.
4.	Uday Foundation [17]	Uday Foundation manages a program for donating medicine to benefit poor people across India.
5.	Sharemeds.org [18]	Sharemeds.org Donates the Medicines to Ngo

Table 1: Existing Web Portals For Donation

While Going through Research Work, We have also conducted A Survey to get knowledge about What People do with their unused medicine. In this survey,a total of 73 Responses got received. Here 49% of people said that their Unused Medicine Remains in the house. While 29 % of People said that they throw away their unwanted unused medicine. Also, we got the result that 11% of People Donate their Medicine and 7% of People Said that they Gave their Unused Medicine to their relatives

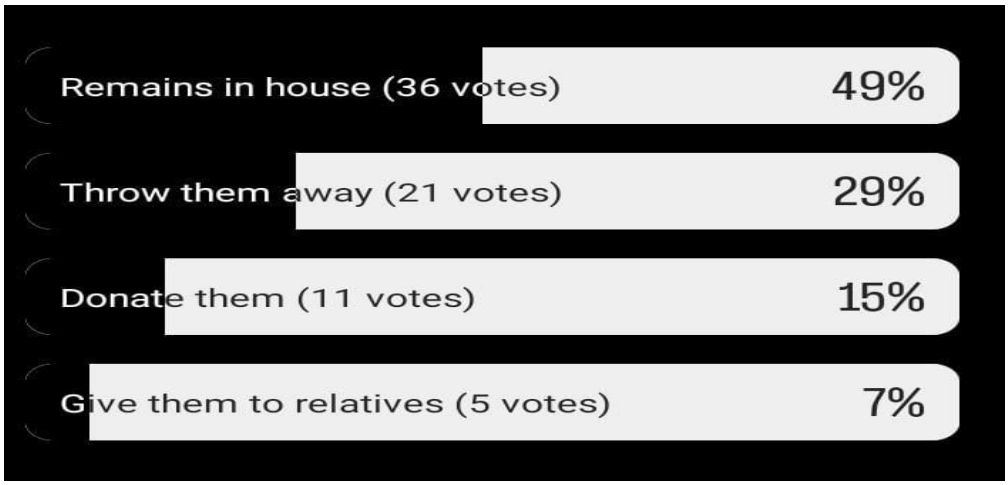

Figure 1: Result Obtained Through Survey

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Based on the results obtained from the survey, it has been found that a significant proportion of people tend to retain unused medicine, resulting in its wastage. Furthermore, it has been observed that the existing resources are inadequate to ensure optimal utilization of such unused medicine, primarily because their distribution primarily occurs through non-governmental organizations (NGOs), which may not have the capacity to reach out to a broader section of the population.

After conducting a thorough analysis of the problem at hand, we have decided to establish a web portal named "SureCare". This platform will enable users to donate medicine and medical equipment directly to individuals who require them, thus reducing the time and effort required by the beneficiaries.

III. SYSTEM DESCRIPTION

The goal of this project is to promote the donation of extra medicines and medical equipment to underprivileged individuals. The process involves establishing a complete connection between donors and recipients to ensure the validity and truth of the transaction. Donors can add information about their surplus medication and equipment, and may also express interest in donating blood. Recipients can search for their prescribed medication on the website, and if a match is found, the system will display potential donors. Before providing the donation, the administrator verifies the prescription's authenticity and the recipient's circumstances. This approach ensures a trustworthy and reliable exchange between the donor and the recipient

Our Web portal Named ShareCure provided three services are:

- Unused medicine donation

In this feature, Donors must provide information about their unused medication, and those in need must provide a valid medical prescription. If the two sets of information match, the recipient will receive information about the relevant donor.

- Unused medical equipment donation

In this Feature, The person who has unused medical equipment has to provide his information on the portal, and the user who requires this medication has to provide a photograph of a valid prescription and the equipment. Then our system matches the information and assists the required person.

- Blood donor finder

Our System also providesa feature for finding Blood donors, for which the person who is willing to donate blood has to provide his blood group information on the portal. On the other side, the person who needs the blood has to put his requirement on a portal and then the admin will verify it and send donor information to the needy.

IV. SYSTEM DESIGN

Within this section, we have elaborated on the fundamental architecture of our system and presented an overview of our website. To illustrate the architecture, we have included Figure 1, which serves as an Architecture Diagram. ShareCure operates through four key components: Admin, Doctor, User, and NGO. Users can either be Donors, who are willing to donate medicine, or Needy Persons, who require medicine. The Doctor plays a crucial role in the ShareCure system, as they provide the final approval for the user-provided information. NGOs can also utilize our website to monitor available medicine for donation. The Admin is responsible for controlling the workflow of the system and therefore plays a vital role in the functioning of our web portal.

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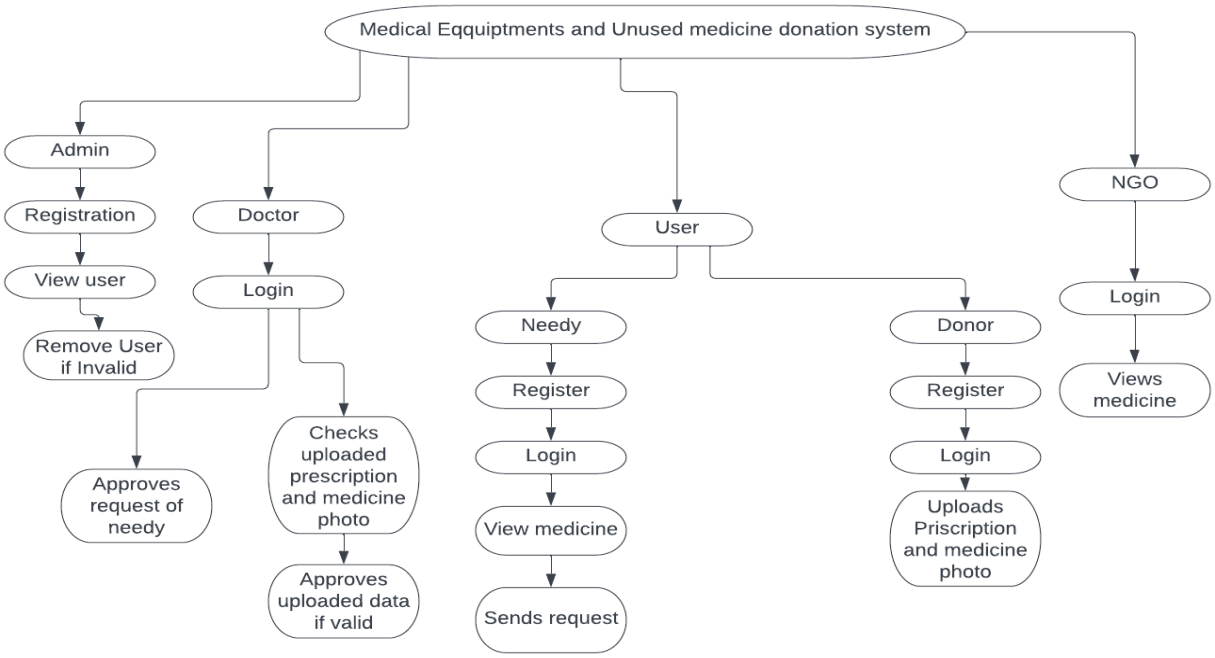

Figure 2:System Architecture

IV. RESULTS

The Working flow of the website ShareCure is Shown in Figure 2 The Web portal is built as per the workflow shown in the figure. The HomePage of the ShareCure is shown in Figure 3.

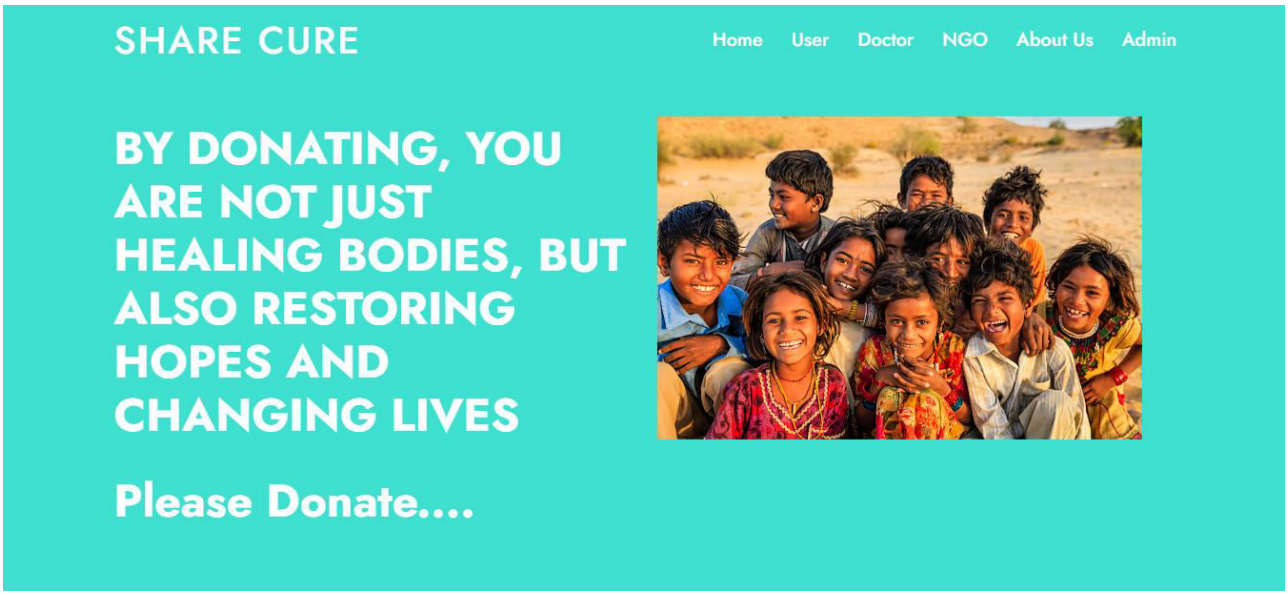

Figure 3 : Home Page

Figure 4 shows the UserHome Page. On this Page, We Have Provided Direct Links to the Services Provided by ShareCure. i.e., Medicine Donation, Medical Equipment Donation, and Blood Donationby Clicking on this link Users can get access to these services. User Can log in or register with the link provided on theUser Home Page.

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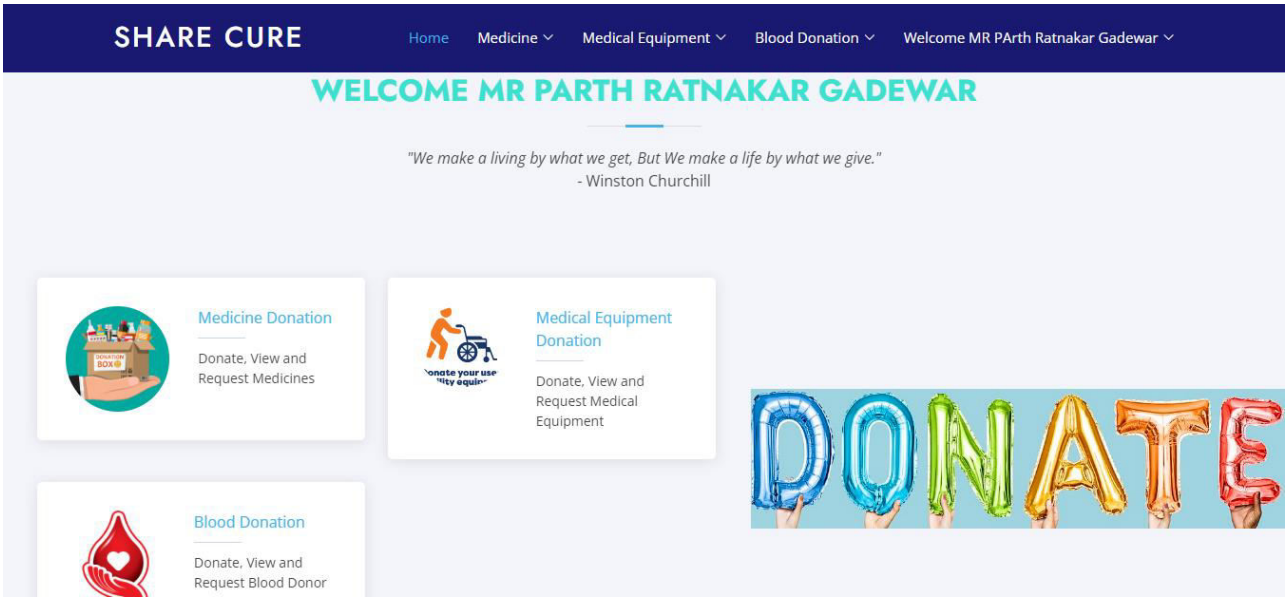

Figure 4 : User Home Page

Figure 5 Shows One of the Key Features of ShareCure in which the person who needs the medicine can search from the available list of the medicine. Once the User's requirement gets matched User Can See the Contact details of that particular donor and can contact directly with the user. If the Needy Person Requirement Doesn't Match ShareCure Provides a List of Medical Stores from where the needy person can get his required medicine

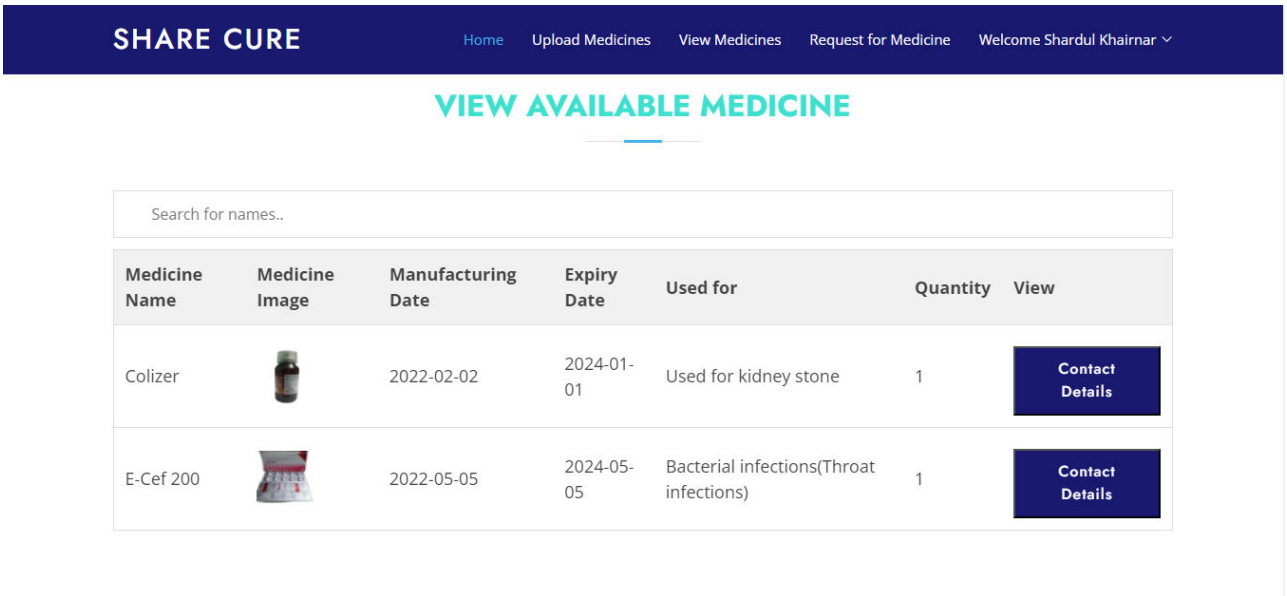

Figure 5: View Medicine Page

Here is a table that shows how Share Cure is different and better than the existing system available.

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Donation System Name	Medicine Donation	Blood Donation	Medical Equipment Donation	Doctor's Authorization	Direct Contact with Donor
ShareCure	Yes	Yes	Yes	Yes	Yes
Friendship.ngo	Yes	No	No	No	No
GiveIndia	Yes	No	No	No	No
Sirum	Yes	No	No	No	No
Uday Foundation	Yes	No	Yes	No	No
Sharemeds.org	Yes	No	No	No	No

Table 2. Comparison between Existing and Our WebPortal

V. CONCLUSION AND FUTURE WORK

In contrast to most web portals for medicine donation, which are linked with Non-government Organizations (NGOs) to facilitate the distribution of medicines, ShareCure aims to provide direct access to donors for users with the latest features available. Our system eliminates the need for NGOs to act as intermediaries, allowing the needy to directly contact the donor of unused medicines. Through an easy-to-use navigation system, users will feel comfortable and empowered to donate and receive medicines and equipment.ShareCure collects information on medicines, medical equipment, and blood from donors, while also obtaining requirements from the needy. The portal then verifies the information and connects the relevant donor with the needy individual. If the information provided does not match, our system locates nearby medical stores for the needy person. Our user-friendly approach sets us apart from other internet systems and provides numerous benefits to our users.

In the near future,Pharmaceutical companies can donate unused medicines that are close to their expiry dates. Such partnerships can ensure that the donated medicines are of high quality and meet the required standards.Blockchain technology can be used to enhance the transparency and security of the donation system. A blockchain-based system can provide a tamper-proof record of all donations, ensuring that the donated medicines and equipment are being used for their intended purpose. The future scope of the donation system is to develop a mobile application. The mobile application can provide users with more features such as location-based services, notification alerts, and personalized donation history. This can make the system more user-friendly and increase its adoption.Currently, medical equipment and unused medicine donation system are available to users in specific regions. The future scope of the system is to expand its reach to other regions and countries. This expansion will increase the number of potential donors and beneficiaries, making the system more effective

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ISSN INTERNATIONAL STANDARD SERIAL NUMBER INDIA

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