

# Pills Aid: A Web Portal for Medicine Donation to NGO's and Check availability of Medicine in NGO's

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**Abstract:** Many people living in extreme poverty live in India. It is difficult for poor or low-income people to pay for their medication and health care. As a result, they live in various diseases and as a result the number of deaths increases daily. On the other hand, there are a number of people who are overdosing on drugs even after they have stopped taking medication. Here, we have set up a website for donating medicines to NGO's. This program will help people to donate their unused medicines to NGO's and NGO's can distribute them to people who need them. This site will help reduce the cost of national health services by making better use of unused drugs and helping poor or low-income people to get better health care. The site was also assisted in assessing the availability of essential medicines for nearby NGO's.

**Keywords:** Distribution of medicines, Website, NGOs, Health service.

## 1. Introduction

Life is an important issue in the human race. Recently, many people have suffered from health problems. In developing countries, health care is an essential part of life. Due to a shortage of doctors and paramedics, people in developing countries have limited access to health care facilities. Therefore, health care is in high demand in these countries.

India is one of the developing countries. India has expanded public health and programs Raisin and organizations in the private sector. Also, access to health services in India following the merger plays important roles:

1. India is a populous country. The population of India is around 1.38 billion since 2020. The population of India is 382 people per sq. km [1].
2. There are an estimated 1.34 doctors per 1,000 Indian citizens, according to the World Health Organization (WHO) [2].
3. Poverty eradicates the well-being of the people and the poverty of the nation while creating public health fears. About 6.7% of the total population of India lives below the national poverty line (average income of US \$ 2 per day). [3].

Because in these competitions, people living below the poverty line do not pay for health care goals. Apart from the "drug dosage" is the most important thing for most of them.

Therefore, they cannot afford medicines and suffer from several types of illnesses, and several people donate their lives. People living in extreme poverty can afford many types of medicine if needed and can also keep medicines after use.

Here, we aimed to create a web site, which could help collect unused, unused medicines from donors through NGOs, and provide for the poor or low-income people and Accredited physicians could recommend medicines for poor or low-income people who use this site. We also help monitor the availability of essential medicines for NGO's.

## 2. Literature Research

This part of the literature study ultimately presents some facts based on the speculative study of many writers who work in this way.

[5] Giveindia.org, Donate to the Fund to support the medical analysis and treatment costs of the poorest people - MESCO Social and Environmental Management Organization:

Give India was established on 28 April 2000 with the assurance that equal opportunities are the cornerstone of civilization. All people should have the same opportunity to prosper in life, no matter what their circumstances.

However, this is not true. The diversified economy in India saw a growth rate of 10.91% in 2016-17 compared to 8.50% in 2015-16. India has also created a high rate of the most expensive people with a growth rate of 9.5% compared to the Asian growth rate of 7.5%.

And to date, 36% of less than five children in India are malnourished\*, 51% of women of childbearing age are concerned about anaemia\*, 33 million children do not go to school and work in various forms of child abuse, \* 350 million Indians still face and the problem of open evacuation due to the unavailability of sanitation facilities, \* and nearly 18,000 million villages in India still lack access to water storage facilities. Give India the interest to change this diversity. They do this by bringing together people who want to donate and organizations that work to make a difference.

The effects of poverty are many and affect families for generations. Educating one generation or providing for income can help families reduce the cycle of birth defects.

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India is high on people. Our people are our heads and if each of us promises to give regularly, we will be strong enough to solve our problems. We can be confident enough that as a society we will need support if we are pursuing a way of life.

[6] Friendship NGO, Donate - Saving to support or improve life in an amazing way - Friendship NGO:

Friendship is a global Social Work movement led by a vision of a world in which people, especially those who are hard to reach and unspoken, have an equal chance of living with dignity and hope.

The Social Purpose Organization (SPO) is an organization that deals with social problems and always puts the interests of the communities it serves first.

The idea of friendship is almost unchanged over the past 20 years and is more important than ever in a world that is facing increasing global challenges such as exclusion, environmental hardship, extreme poverty, inequality and injustice.

[7] Medshare.org, Provide Medical Services - Med Share:

Med Share is a charity that actively helps to illuminate the quality of life of people, communities and our planet by providing and directing the delivery of more and more medical supplies and services to communities in need around the world.

Med Share supports increasing the size of the health system and maintaining sustainability by providing live resource training and providing services to health care organizations and medical professionals assisting people in need.

Med Share's distribution of powerful medical and mechanical products has reduced our nation's performance and brought health, recovery and the promise of better lives to 100 countries and countless patients.

They work with hospitals, distributors and manufacturers to collect and redistribute medical products to appropriate health care facilities in underserved communities.

### 3. Proposed Plan

In this section, we have talked about how the system is designed and built. We have followed two consecutive steps that include,

1. Develop a doctrinal structure.
2. Develop a web site.

#### A. Theory Design

This section focuses on the conceptualisation of our program which is an illustration of a program that forms key concepts that can be used to know, understand and imitate our program. The web-based program will be a space between users and authorized sources (NGOs) that will deliver medicines to the poor. Sponsors can donate their medications through this web-portal and registered physician can recommend medications for their patients who cannot afford these expensive medications.

Participants in our program are providers of pharmacists, recipients who will receive free medicine and linking resources that any NGO can respond to by maintaining a list of drugs, donor details, recipient's information, availability of drugs and can respond by collecting drugs from donors and prescribing prescribed drugs to recipients and thus complete the program.

NGO's and pharmacist or provider need to create an account

on our software side where the system will be able to verify the account and all information provided by the provider and NGOs. In this process the registration name, address, registration as email and password will be mandatory. The conceptual system is depicted in figure 1.

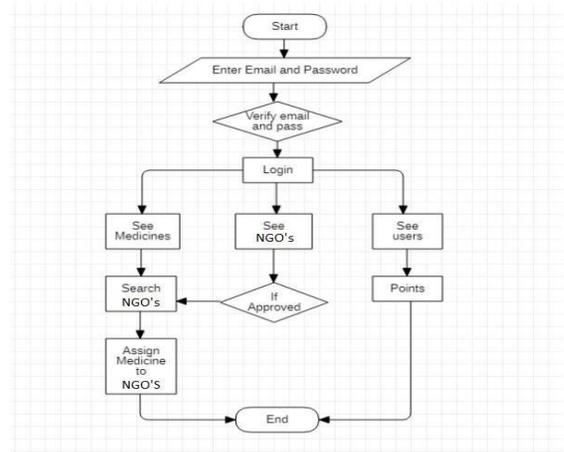


Fig. 1. Portal Use Case diagram

At the same time the recipient can receive the medication from the NGOs in person by showing the official prescription given to the doctors for the treatment. Alternatively- the patient needs to call a doctor registered with the program and if the patient is unable to pay for the medication the doctor may request the medication through the program and suggest visiting the NGO on this order. to get medicine. Therefore, recipients do not need direct access to the portal which solves their power and technology issues related to smart phones and internet usage. Prior to delivering the medication to recipients, the administrator concerned checked the availability of the prescribed medication. Therefore, the program will meet the needs of program participants.

#### B. Website Developing

This section shows the part how we build a site. We divide the development phase into three parts:

1. Database and Server End
2. Security Features
3. User Display

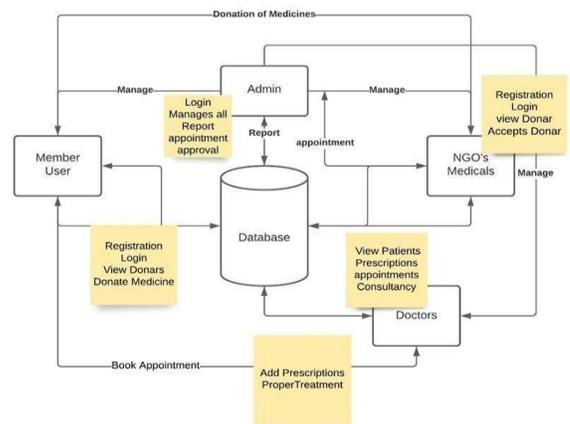


Fig. 2. System architecture diagram

Table 1  
Summary results of user experience (UX)

Participants	Average level of satisfaction	Recommend the system to others (Avg. score)	Future use (Avg. score)
Donor (x=4)	3.5	3.00	3.75
Donor (x=4)	3.0	3.25	3.25
Admin (x=4)	3.25	2.75	3.00
Receiver (x=4)	3.00	3.00	3.70
Total (x=16)	3.19	3.75	4.38

Table 2  
Summary results of the usability test

Participants	Task	TCT (Sec.)	Wrong Navigation (frequency)	Asking Help (frequency)	Input Error (frequency)	System Error	Task Completion Status
Doctor (x=4)	Prescribe medicine for patients with low income	123.6	2.25	1.5 (2 part. ask for 2 times, other 2 ask for 1 times)	1 (Medicine quantity exceeds the limit)	1 (internet failure)	Successfully Completed (2 part. needs 2 trials, others need single trial)
Donor (x=4)	Fill up form for donating medicine with login	80.00	1.75	2.00 (2 part. ask for 2 times, 1 ask for 3 times, another 1 ask for 1 times)	1 (Expiry Date Missing)	0	Successfully Completed (1 part. needs 2 trials, others need single trial)
Admin (NGO workers, n=4)	Medicine distribution to the low-income people	15.5	1.25	1.75 (2 part. ask for time, 1 ask for times, another 1 ask for 3 times)	1 (wrong password)	0	Successfully completed (all need single trial)
Total		73.03	1.75	1.75	3	1	

### 1) Database and Server End

First, we prepared the ER (Entity Relationship) database recipient's according to the requirements of our site and used the database on the MYSQL server with sufficient security barriers to prevent unauthorized access. For security purposes on this site, we have used two separate credentials (administrator and user) so that no one can easily access or complete the existing high quality control panel information. The control panel verifies the delivery of the program from the user database and keeps the entire system up to date.

### 2) Security Features

Users are required to register initially to access web portal services and their registration will end after verifying all the required information as doctors will be verified with their registration number. We used basic HTTP authentication (using the password hash () PHP function) that authorizes a strong user encrypted password verified by the current email address with encrypted message. Session-based login will be valid until the user is logged out or the system is unavoidably removed after the exact time the session is over. Therefore, to enable these types of security features, we have tried to make the web-portal more reliable and secure for users.

### 3) User Interface

In the portal, secure access is provided to customize user information where the content of the web portal varies according to user standards (donor/NGO/receiver). It has compatibility of devices and browsers simultaneously arranged in a user-friendly way to make it easier to access the real user.

In the development of portal technology, we have used HTML, CSS, JavaScript, jQuery, PHP etc. What makes the site work better with users? Checked everything circling the scanner inside the information table is called the scanning cycle, that is going to be harder and faster. The productivity management module scans the information table endlessly to determine when files need to be viewed. when testing is

required, the module returns the data to the information table and sends it to the visible cloud machine, performing the required actions before returning the information file back to the production management module. when production is lost, the production management module begins the construction of another input.

## 4. Results and Discussion

The resulting conclusion is shown in table 1 and table 2. From Table II, we found that all participants completed the task successfully in a short period of time and the majority of members completed one trial. No portal error other than an internet failure occurred and the frequency of the installation error was lower compared to all indicators of direct operation. Required TCT, incorrect navigation and frequent request for assistance were low; therefore, they finished the job well.

In the table 1, showed that user fulfilment scores collected for all users (doctor, donor, manager, and recipient) were very high. They were very much intent on allowing this program for others and their willingness to use it in the future was also frustrating which represents a good level of satisfaction.

From open-ended questions, we have found that everyone is welcome to say that this tool will introduce new ways to provide better health services to the poor or low-income people. Briefly from the experimental study, we found that the system is functional, efficient, useful and satisfying for all users.

## 5. Conclusion

The present tense has begun. All people, right or wrong, educated or uneducated now know about their health. It is sad to know that poor people cannot afford to take care of their health care system because of their low income. The government is doing much good by providing free medical care to the poor. But in most cases, they are receiving treatment and

not expensive medicine. So, the big step is nothing to them. This paper brings an overview of the design and development of a web system, which will work best and will receive a significant contribution to accessing the health service of these poor or low-income people.

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