



BLOOD BANK MANAGEMENT SYSTEM

Pathology

Dr. Ajit Pal Singh

Assistant Professor, Department of Medical Lab Technology, School of Allied Health Sciences, Sharda University, Greater Noida, U.P.

ABSTRACT

Blood is a constantly circulating fluid providing the body with nutrition, oxygen, and waste removal. Blood is mostly liquid, with numerous cells and proteins suspended in it. Making blood thicker than pure water. The average person has about 5 liters of blood. It forms an integral part in mankind life, because one the most important function it performs is transportation of need oxygen to various parts and also helps in removing carbon dioxide from human body. This knowledge of importance of human blood plays a very important role in healthcare centers in reviving many patients such as accidental, gun shot or in operation theatre. Department of Transfusion medicine plays a very important role in separating the blood components such as plasma, platelets, packed red cells. Each and every component present in a blood plays a specific role. The patients with less Hemoglobin level need to be transfused with packed red cells, and patients with low platelet count needs to be transfused with Platelets, and since plasma contains coagulation factors can be vert useful during operation and many more patient’s needs. The Department of Transfusion medicine plays a very important role in meeting all the blood requirement for all the healthcare system. To make things more accurate and managing blood requirements more systemically blood bank management systems are introduced. These systems store data of blood donors and as well as blood stored in different blood banks and hospitals. So that whenever blood is required, they can get access to blood easily.

KEYWORDS

Online blood donation, Online blood requesting, maintain database. Hospitals, patients

INTRODUCTION

As we all know about the need of blood hence it became very important to fulfill its need when it’s required in the minimum possible time. So now with the help of these blood bank systems it will be easy to find blood and its product in nearby areas. These systems also update the data time to time so that there will be no mistake.

In blood bank management systems, there is a database which have all information of blood donors and blood banks so whenever any receiver wants blood then the system checks all compatible blood availability in the database and works according to that. This (Fig.1) is a example of a normal blood bank management system. The below figure is just showing working of a normal system but many researchers made many advancements in their own systems to make this process more easy and more efficient. I have seen many different kinds of systems and from them a few are explained in this paper.

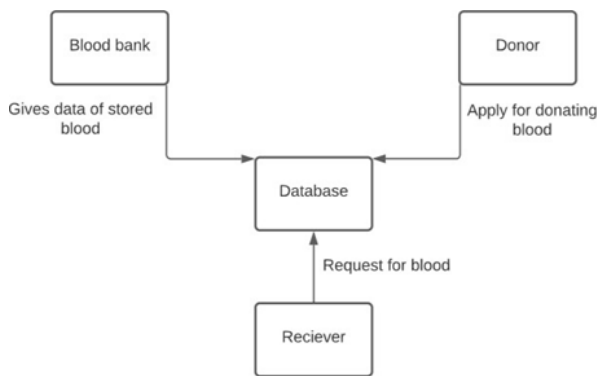


Figure 1: Working of blood bank management system

LITERATURE SURVEY

In literature survey some of the projects are explained. All these projects are on blood bank management systems means how to manage blood banks how can a recipient can access to blood more easily than previous old traditional methods.

Many peoples try to improve blood bank working in their own ways and these are some them.

- a. In “Short message service (SMS) based blood bank” by G. Muddu Krishna & S. Nagaraju (2016) [1]. They proposed a system in which services of blood bank will be accessed via SMS. If someone needed blood then they have to request for blood via SMS and then packet count module of their system will check for availability of blood and response will be given by data processing

- module.
- b. In “Automated online blood bank database” by Muhammad Arif; S. Sreevas; K. Nafseer; R. Rahul (2012) [2]. They come up with direct call routing technique by using asterisk. In this every blood bank consist of a database and that will be managed by central server. When someone in need of blood call on their tollfree no. they will directly get connected to a donor and after receiving blood from that donor name of that donor will be kept on hold for 8 weeks.
- c. In “Benefits of management information system in blood bank” by Dr. Sharad Maheshwari and Vikas Kulshreshtha [3]. They discuss about the beneficiaries of the blood bank management information system. They show advantages and benefits of these systems.
- d. In “MBB: A life saving application” by Ramakant Gawande; Narendra Gupta; Nikhil Thengadi [4]. They come up with a system to link all donors and help in controlling blood transfusion process. Their system will also maintain database which hold data of donors and blood according to their city and further by their locality.
- e. In “Blood donation and life saver: blood donation app” by Anish Hamlin M R; Albert Mayan J [5]. They introduced a system where when someone wants blood, they login into their app and by GIS they can get details of nearby blood donors. They also can donate blood by registering themselves.
- f. In “Android blood bank” by professor Snigdha, Pratiksha Lokhande, Siddhi Kesar and Pranita More [6]. came up with an android app in which updates information about donor’s time to time and also it shows all the blood banks near to user location. In this admin controls and have all information of the app.
- g. In “A study on blood bank management system” by A. Clemen Teena, k. Sankar, S. Kannan [7]. They made a system through which they can manage information about donors and patients. So that whenever blood is needed, they can use this information as blood bank authorized officers have access to this information.

SR. No.	PROJECTS	PROPOSED WORK	REVIEW
1.	Short message service (SMS) by Muddu Krishna and S. Nagaraju	Access to blood via an SMS service	Easy to use and access
2.	Automated online blood bank database by Muhammad Arif, S. Sreevas, K. Nafseer and R. Rahul	Contact donor via Toll free no.	It can contact only donors not blood bank
3.	Benefits of management information system in blood bank by Dr. Sharad Maheswari and Vikas Kulshreshtha	compare between all existing Blood bank management systems	Talks only about advantages

4.	MBB: A life saving application by Ramakant Gawande, Narendra Gupta and Nikhil Thengadi	To link all Donors and help controlling inblood transfusion process	Data is divided according to different areas
5.	Blood donation and life saver: blood donation app by Anish Hamlin M R and Albert Mayan	Login in app and get information of blood donors	Uses GIS for user to login and can see details of all donors at a time
6.	Android blood bank by Professor Snigdha, Pratiksha Lokhande, Siddhi Kasar and Pranita More	Android app which has information of all blood banks and donors	Users can get information about blood banks in their near by areas
7.	A study on blood bank management system by A. Clemen Teena, k. Sankar, S. Kannan	System to manage information about donors and patients and only authorized personals have authority to use that information	Easy access of information as well security

### CONCLUSION

Now we have many researches on blood bank management there are many different ways to help people by technology as these systems are example of that. But as we can see there are many options available to get blood but still many peoples can't get blood in required time. Most of the blood bank management systems works only for regular blood groups not for special blood groups like 'HH' and most of them don't have centralized form of systems. Some of them works only for donors and some of only for blood banks but a blood unit have major three resources donors, blood banks and hospitals. So, it is necessary to make a system which combines all these three units into a system and create a database which have record of all blood units in hospitals, blood banks and as well as all donors who wants to donate blood.

### REFERENCES

- [1] G. Muddu Krishna; S. Nagaraju(2016), "Design and implementation of short message service (SMS) based blood bank", 2016 International Conference on Inventive Computation Technologies (ICICT)
- [2] Muhammad Arif; S. Sreevas; K. Nafseer; R. Rahul (2012) "Automated online Blood bank database", 2012 Annual IEEE India Conference (INDICON)
- [3] "Benefits of Management Information System in Blood Bank" by 1, Vikas Kulshreshtha, 2, Dr. Sharad Maheshwari 1, Research Scholar, 2, Associate Professor 2 1, Singhania University, Jhunjhunu, Rajasthan, India 2, Government Engineering College Jhalawar, Rajasthan, India
- [4] The Optimization of Blood Donor Information and Management System by Technopedia P. Priya 1, V. Saranya 2, S. Shabana 3, Kavitha Subramani 4 Department of Computer Science and Engineering, Panimalar Engineering College, Chennai, India 1, 2, 3, 4
- [5] Anish Hamlin M R, Albert Mayan J (2016), "Blood Donation And Life Saver-Blood Donation App", 2016 International Conference on Control, Instrumentation, Communication and Computational Technologies (ICCICCT)
- [6] "Android Blood Bank" by Prof. Snigdha 1, Varsha Anabhavane 2, Pratiksha lokhande 3, Siddhi Kasar 4, Pranita More 5 Lecturer, Information Technology, Atharva College of Engineering, Mumbai, India 1 Student, Information Technology, Atharva College of Engineering, Mumbai, India 2, 3, 4, 5
- [7] "A Study on Blood Bank Management System" by A. Clemen Teena, K. Sankar and S. Kannan, Department of MCA, Bharath University, Selaiyur, Chennai-73, Tamil Nadu, India