LITERATURE SURVEY

DOMAIN: Cloud Application Development
PROJECT: Plasma Donor Application
TEAM LEAD: Keshav Adithya S P
TEAM MEMBERS: Sriram Raju M, Naveen Kumar S, Abubakar Siddick K

ABSTRACT:

During COVID-19, the requirement for plasma became high and finding a perfect donor became very difficult for the patients who are in need. Plasma donation is one of the scientific ways in which we can help reduce mortality or help people affected by COVID19 from recovered patients. In the absence of an approved antiviral treatment plan for a fatal COVID-19 infection, plasma therapy is an experimental approach to treat COVID19-positive patients and help themrecover faster. In the recommendation system, the donor who wants to donate plasma can donate by uploading their COVID-19 certificate and theblood bank can see the donors who have uploaded the certificate and can make a requestto the donor and the hospital can register/log in and search for the necessary things. Plasma is from a blood bank and they can request a blood bank and obtain plasma from the blood bank.

INTRODUCTION:

The main goal of our project is to design a user-friendly web application that help those affected by COVID19 by donating plasma from patients who have recovered without approved antiretroviral therapy planning for deadly COVID19 infection, plasma therapy is an experimental approach to treat those COVID-positive patients and help them recover faster. Therapy is considered reliable and safe. If a particular person has fully recovered from COVID19, they are eligible to donate their plasma.

As we all know, the traditional methods of finding plasma, one must find out for oneself by looking at hospital records and contacting donors have been recovered, sometimes may not be available at home and move to other places. In this type of scenario, the health of those who are sick becomes worse. Therefore, it is not considered a rapid process to find plasma. The main purpose of the proposed system, the donor who wants to donate plasma can

simply upload their covid19 traced certificate and can donate the plasma to the blood bank, the blood bank can apply for the donor and once the donor has accepted the request, the bloodbank can add the units they need and the hospital can also send the request to the blood bank that urgently needs the plasma for the patient and can take the plasma from the blood bank.

LITERATURE SURVEY:

Several experiments have been carried out over the years by different groups of researchers. Here are some of the following groups:

Author Name: Chenguang Shen, PhD; Zhaoqin Wang, PhD; Fang Zhao, PhD

Result:

In this preliminary uncontrolled case series of 5 critically ill patients with COVID-19 and ARDS, administration of convalescent plasma containing neutralizing antibody was followed by improvement in their clinical status. The limited sample size and study design preclude a definitive statement about the potential effectiveness of this treatment, and these observations require evaluation in clinical trials.

Author Name: Ripathis S, Kumar V, Prabhakar A, Joshi S, Agarwal A

Result:

Microscale PassivePlasma Separation: A Review of Design Principles and Microdevices," J. Micro mech Micro 25 (8): 083001; Plasma separation is of great importance in the fields of diagnosis and healthcare. Due to the lagging transition to microscale, these recent trends are a rapid shift towards shrinking complex macro processes.

Author Name: TakeakiIshizawa MD, PhD; KiyoshiHasegawa MD, PhD; Nelson HirokazuTsuno MD, PhD

Result:

PAPD was safe in patients with underlying liver disease and can be beneficial in simulating the liver synthetic function in advance of the operation. Autologous fresh frozen plasma transfusion was effective for avoiding allogeneic blood products in liver resection for hepatocellular carcinoma.

CONCLUSION:

Plasma is a liquid portion of blood; it is a mixture of water, proteins, and salts. Antibodies are proteins made by the body in response to an infection. People fully rescued from COVID19 are encouraged to donate plasma, which can help to increase the lifespan of other patients because their plasma contains antigens which help the affected person to recover faster. These immunoglobulins give your immune system a way to fight the virus when you are sick, so your plasma can be used to help others fight off illness. Individuals who must fully resolve symptoms for at least 14 days prior are eligible to donate. Thus, this application will act as a connecting bridge between donor and recipient.