



REPORT ON BLOOD DEMAND MANAGEMENT BY RAGAT CHAHIYO HOTLINE

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Ragat Chahiyo Hotline- Background

Managing blood at times of emergencies is always a hassle for patient's families in Nepal where blood demands are always higher than the number of blood donations¹. 2020 has been a year of hardship for everyone. With the onset of COVID-19 and the hassle for blood management even worsened at the initial phases of the pandemic when all donation events were canceled and people intending to come out to donate were ever decreasing due to the fears of the virus². Blood donation is necessary with or without the pandemic, and thus many voluntary groups and organizations like BLODAN, Blood for Nepal, Bloodpal, Youth for Blood, Friends of Rh-Negative Group, and *Hamro* LifeBank function cohesively to motivate donors and help individuals find blood during blood emergencies in every possible situation.

Hamro Life Bank (HLB) is a non-profit organization under the Rumsan Group of Companies. *Hamro* LifeBank aims to minimize patients' stress with digital intervention in the blood banking sector in Nepal. While its major focus is on digital transformation, its Ragat Chahiyo Hotline was initiated in early 2020 out of necessity after having stepped into the blood world. HLB facilitates people to get blood and disseminates blood information to minimize the stress that they go through the blood management process. American Nepal Medical Foundation (ANMF) has supported the development and setup of a blood information dispatch system that helps the hotline function efficiently.

Receiving blood demands at Ragat Chahiyo Hotline

Ragat Chahiyo Hotline receives blood demands through direct calls or via its social media handles and also through the website of *Hamro* Life Bank. After receiving the blood demand, all the required details including requisition form are collected from the patient family. The next step is to figure out the availability of the required blood type and component for which a follow up is done with the blood banks. If found, the requestor is called right away to collect it from the particular blood bank. In case of the unavailability of the required blood type in the blood banks,, the blood donor search is carried out and the process starts by using the available donor database. Help from other volunteer organizations and groups is also taken when needed. Once the blood request is fulfilled, the feedback is collected from the requestors so as to improve the hotline service and make the process more efficient. All of our processes are initiated and supported by our system called BIDS (Blood Information Dispatch System) - the build of which is supported by ANMF. BIDS keeps track of all requests made to us and captures and maintains donor and patient information.

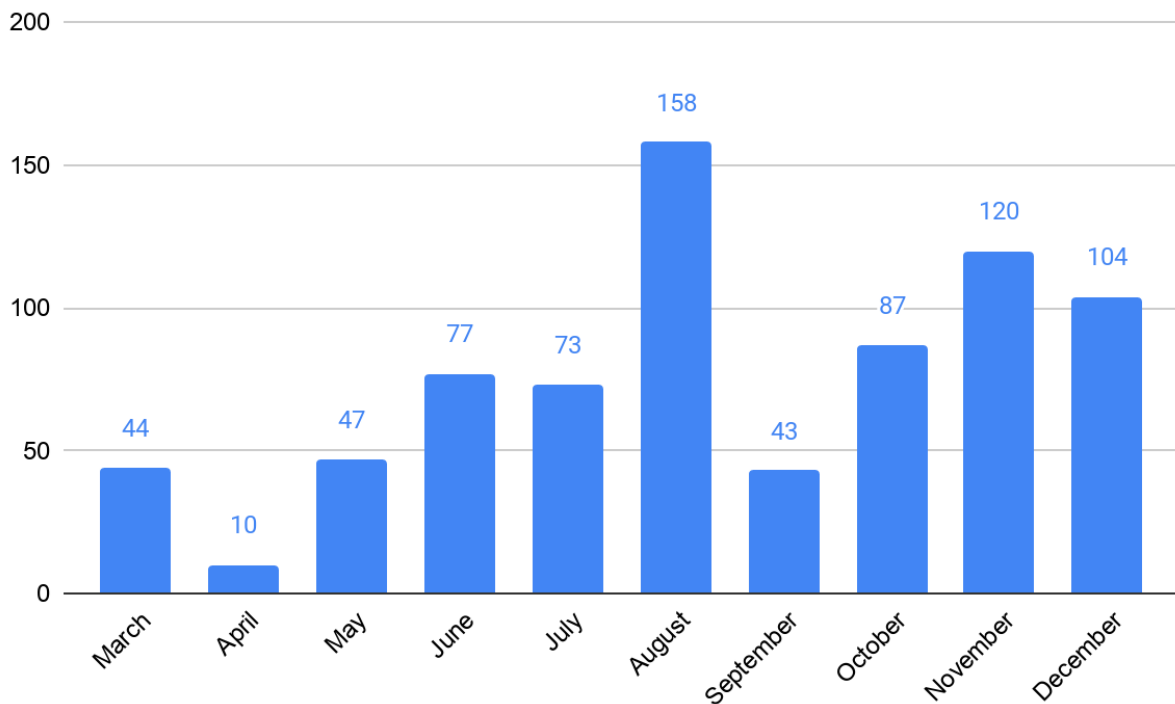
¹ "Kathmandu's blood banks are running out of blood.." 1 May. 2019, <https://kathmandupost.com/health/2019/05/01/kathmandus-blood-banks-are-running-out-of-blood>. Accessed 23 Mar. 2021.

² "Capital's blood banks running on low reserves - The Himalayan Times." 25 May. 2020, <https://thehimalayantimes.com/kathmandu/capitals-blood-banks-running-on-low-reserves>. Accessed 23 Mar. 2021.

Blood Demand Management

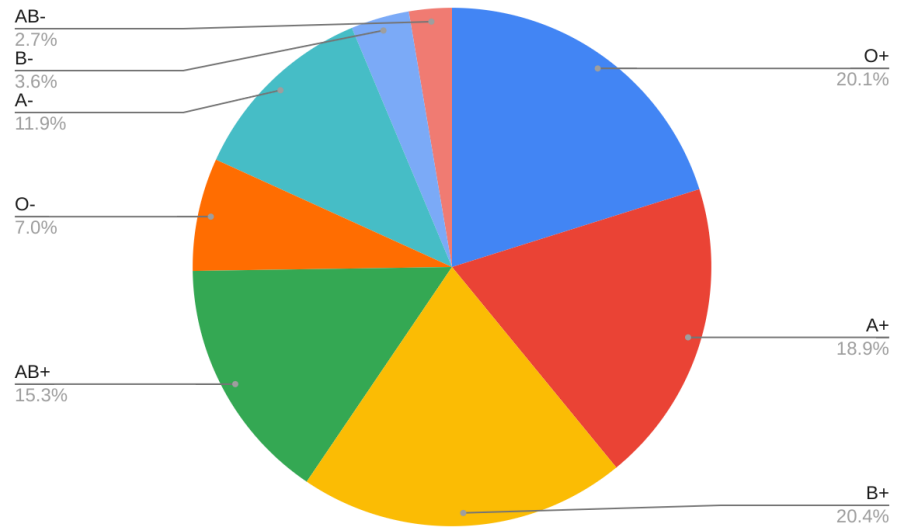
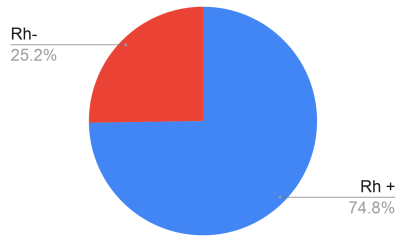
This report contains a summary of blood demand management through Ragat Chahiyo Hotline including blood requests by blood type and feedback collected from the blood requesters in the year 2020. A total of 763 blood demands were received by the hotline in 2020. Feedback received from the blood requestors are also included here.

Blood Request Patterns



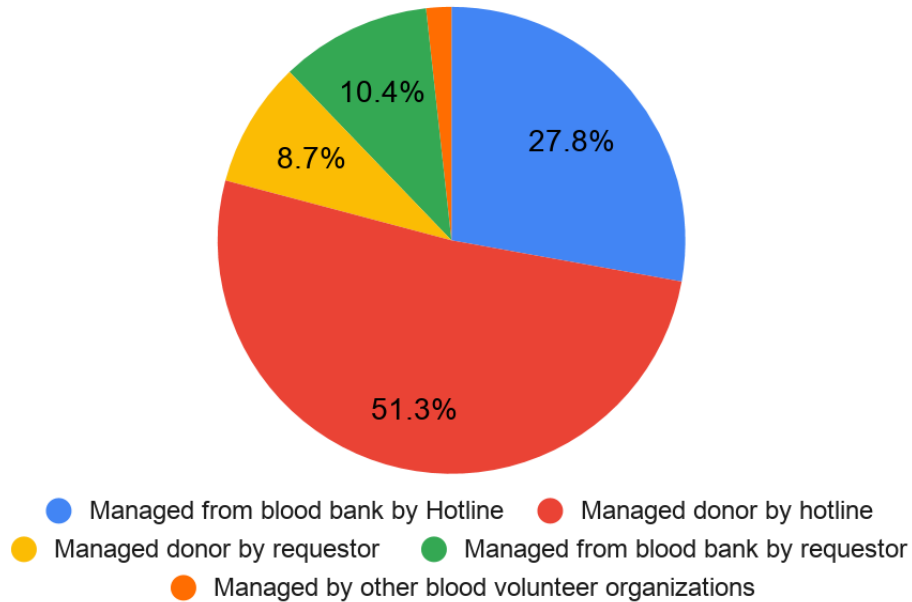
The hotline officially started in March and at the end of the same month a nationwide lockdown due to rapidly increasing COVID infections was declared. That is why a sudden decline of blood requests were observed in the month of April (10) when almost all the medical procedures were halted except for a few undeniable cases like pregnancy, Thalassemia, Dialysis etc. But after a few months when hospitals started with the halted medical procedures a sudden rise in the blood demand was seen in August (158) with a maximum blood demand requested. Because of the ongoing chaos and fears of COVID it was one of the most stressful periods for blood management. However, with many door to door collection by volunteer organizations blood banks got back again to normal blood stocks and blood requests fell accordingly.

Requested Blood Type



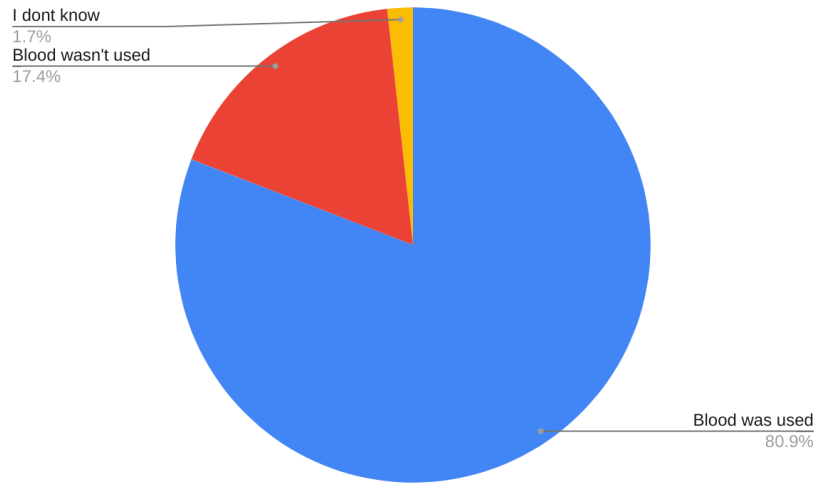
The demand pattern of blood groups shows that about 75% of blood demands received is of Rh+ blood type which is also in line with the fact that the positive blood group population is higher, about 97% of the total population in Nepal. Because the Rh+ population is higher, demand for this group will definitely be higher. In total, B+ requests were highest followed by O+, A+, AB+, A-, O-, B- and AB-.

Blood Management

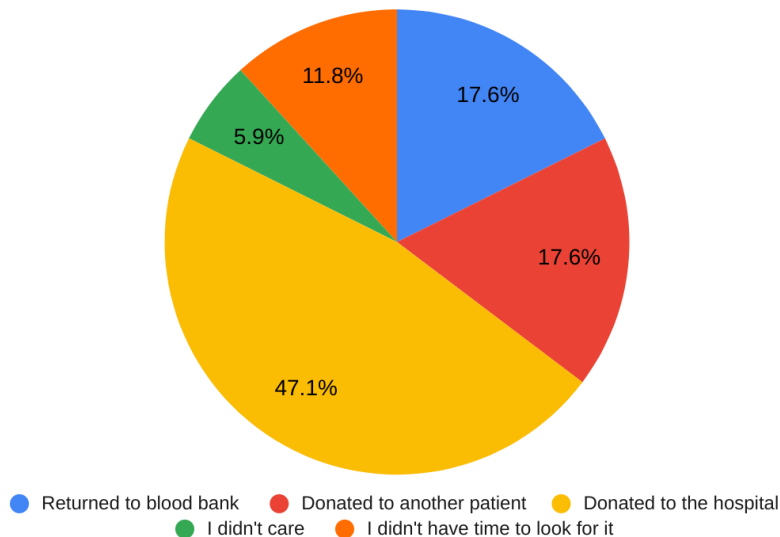


As mentioned earlier, the donor database of the hotline is securely managed in the Blood information dispatch system which can be easily used when needed. Donors were managed for 51.3% of blood demands received. The process of calling blood banks to know their blood stock and good coordination with the blood banks helped fulfill 27.8% of the blood demands. About 19% of the requests were managed by the requestors themselves either from blood banks (10.4%) or donors (8.7%). In total, for most blood demands received, replacement donations were required which indicate a shortage of blood in blood banks against its demand. Thus blood banks need to focus more on donor awareness and retainment to increase their supply.

Blood Usage



Blood usage is often questioned because no end-to-end data of the blood supply chain is available in Nepal. Nobody knows how much of the collected/donated blood is used and how much goes to waste. According to the feedback collected from blood requesters, blood was used for 80.9% of requests while the blood was not used for 17.4% of requests. Also 1.7% of the requesters didn't know about its usage.



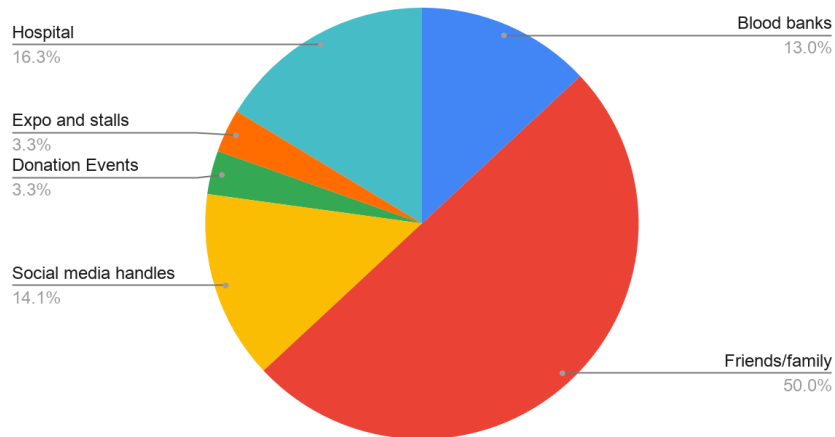
Only folks who've needed blood understand the hardship and stress of managing it, and thus most requesters whose blood were unused intend to make use of it by donating to the hospitals (47.1%) or other patients (17.6%) or returning to the blood bank (17.6%). Many people find it a hassle to go back to the blood bank to return the blood so they usually prefer donating. Lack of awareness or the stress that patients' families go through during the blood emergency might be

the reason 5.9% didn't care about the unused blood and 11.8 % of requesters didn't have time to look for it.

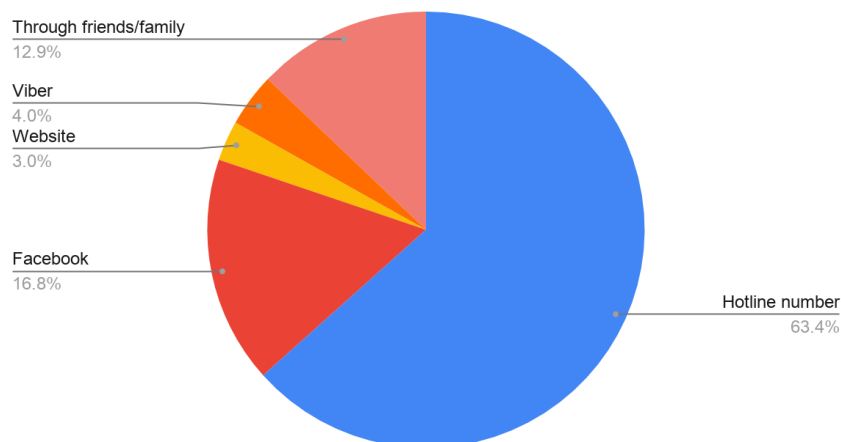
Blood quality gets affected when they are transported several times and the absence of knowledge of cold chain maintenance on patients' families adds to the blood wastage. Thus, to minimize further wastage and maintain quality of the blood products, ideally blood banks or hospitals or professionally trained individuals should be responsible to manage or transport the blood products rather than patient families themselves.

Hotline Reach and Channels

How did you know about Hotline?



How did you reach out mostly?

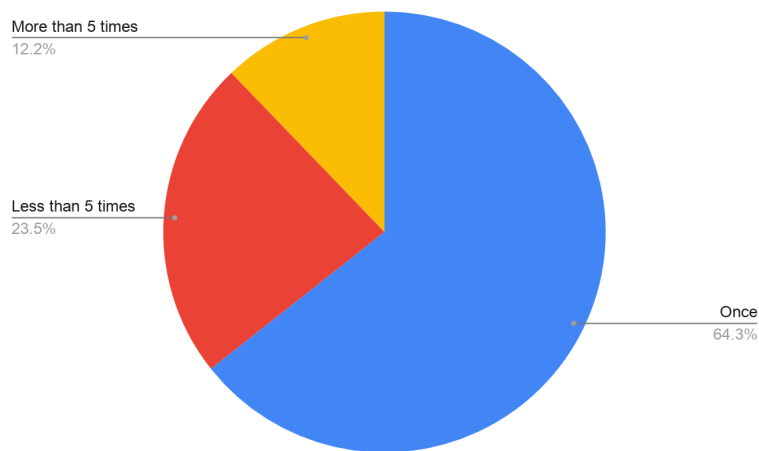


Most of the requesters knew about the hotline service through their friends and family (49.1%) followed by the hospital referrals (16.7%) and social media handles of HLB (15.8%). HLB has been active on social media platforms including Facebook, Instagram and Twitter to make

people aware of the importance of blood donation, share blood stories, blood related facts, upcoming blood donation drives etc. Some hospitals and blood banks (13.2%) share the hotline number to patient's families to help people find blood. A few number of requests (5%) were also funneled from donation events and expos.

Most of the requestors reached out to the hotline through direct phone calls (63.4%). 16.8% of people reached out through Facebook messages, 12.9% through friends and family, 3.0% through websites and 4.0% through viber. Through our survey, we found out that the requestors are mostly stressed while they are searching the blood and talking to someone helps them have their calm. This might possibly be the reason most requestors called on the hotline number to request for blood. Many requestors also find social media handles easier to communicate and place their blood demands.

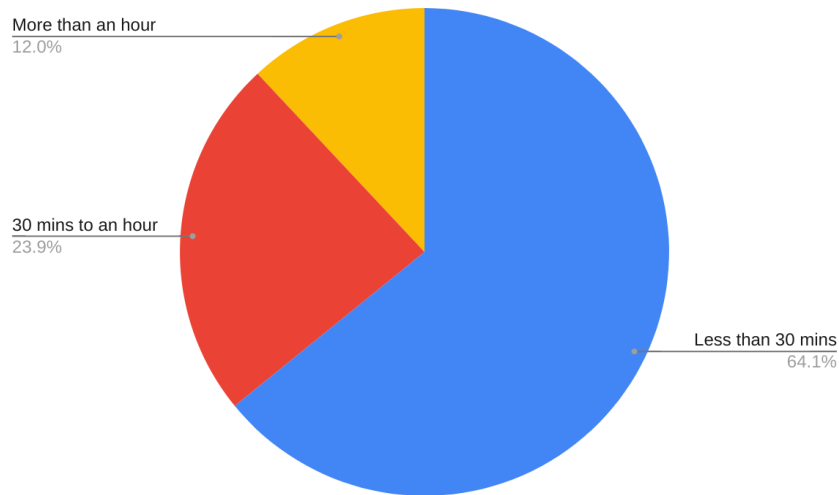
Frequency of Blood Request Received



Most people requested blood once (65.2%) followed by less than 5 times (21.7%) and more than 5 times (13.0%). People who requested more than 5 times were mostly patients with leukemia, kidney patients undergoing dialysis treatment and anemic patients.

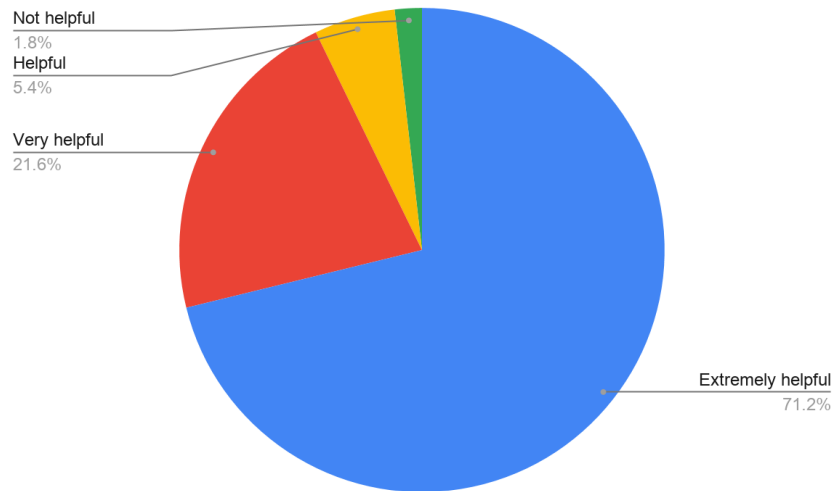
Responsiveness of Hotline

According to 64.3% of requestor, the time taken by HLB team to respond was less than 30 minutes, and 23.5% of the requestor said the time taken by HLB team to respond was 30 minutes to an hour and 12.2% said it took more than an hour.

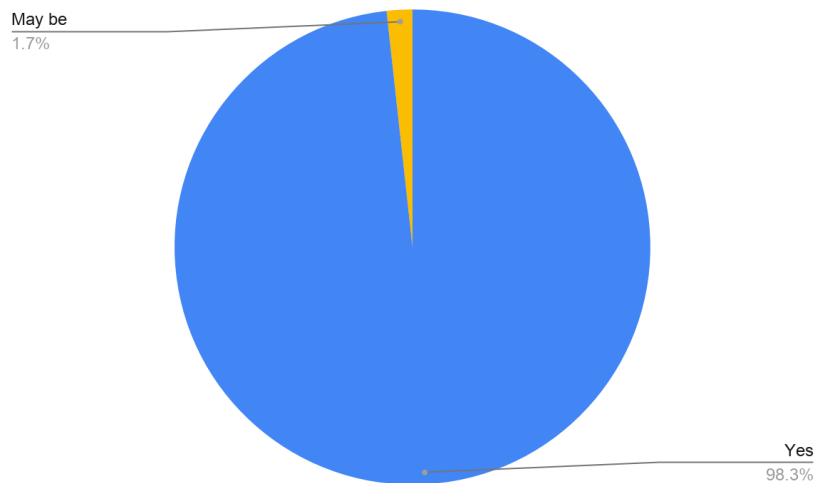


The hotline has been able to help manage most blood demands within 30 mins (64.1%) which is quite impressive. The reason it took more than an hour for HLB to respond may be because we were not providing 24 hrs services in 2020. So the requests at night would have been mostly addressed in the morning. To meet all these requests on time, HLB has started giving 24 hrs services. Also due to COVID-19 pandemic, it has been more challenging to convince the donors to donate blood as well. The donor pool was lower than usual which took extra time and effort to manage the blood demands. Similarly, finding Rh negative blood donors is more time consuming compared to positive donors as its pool is already smaller.

Helpfulness of Hotline

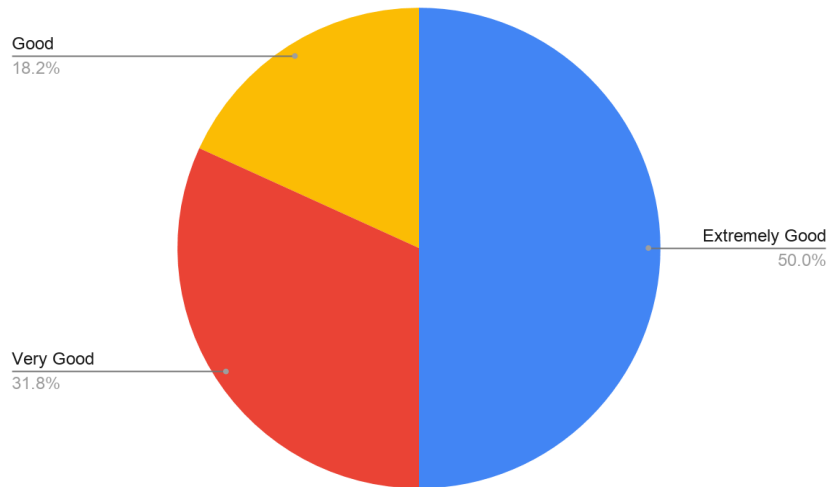


Most of the people, 71.2 percent to be specific are satisfied and found the hotline extremely helpful during the blood needs. The hotline not only helps people manage blood but also provides blood related information like donation protocols, event updates, blood bank details etc. to the requesters, donors and any interested individual.



The hotline has helped many people in need for blood or blood related information. Most of the requesters (98.3%) wanted to recommend the hotline, for they know the pain and stress of finding blood and believe that the hotline might help them reduce the stress they go through.

Donor's Response



All the donors managed through the hotline are well communicated about the condition of the patient and process of donation. Thus, all donors were good and above while responding to the patients families. 50% of donors responded extremely well, 31.8% of donors responded well and 18.2% of donors responded well.

Testimonials

Every blood request has a story behind it and it's always rewarding for the team to be able to make an impact. Here are some testimonials from patients and their families:

"I had to arrange blood at any cost to save my mother. I heard about HLB from my friend. I owe to the HLB and the donors who helped me save my mother's life in that difficult situation." - Om Prakash Subedi

"म आफै पनि नियमित डोनर हो । मैले ८२ पटक दान गरि सकेको थिएँ, तर निगेटिभ ग्रुपको रगत मेरो आफन्तलाई चाहिएको बेलामा HLB बाट सहज तरिकाबाट र छिटो सहयोग पाईयो ।" - बिक्रम श्रेष्ठ

"अपरिचित ठाउँमा पनि असहज स्थितिमा रगत सहजै प्राप्त गर्न सकियो यसको लागि म धेरै धेरै धन्यवाद तथा आभार प्रकट गर्छु ।" - बिजय पुन

"I would like to thank you for helping me in the time of great difficulty. Because of you my patient was able to get complete care. Your work is much appreciated, you were available at any time of the day. Your service is what we all look for."- Rajendra Adhikari

"It was stressful when blood was immediately needed during lockdown. The support from HLB was like you got a god in real needy time !" -Naresh Subedi

Conclusion and Recommendations

Ragat Chahiyo Hotline in general shares the stress with the patients' families in need for blood and helps make their blood management journey easier. The ride so far has been an emotional roller coaster for all the team, mostly to the hotline operators. The experience of handling hundreds of blood requests in a year, collecting feedback received from patients, donors and all the related stakeholders has encouraged and helped us grow and be more efficient.

There are a few recommendations listed below.

- Requesters shall be made aware of how to deal with the unused blood which might lessen chances of blood wastage.
- Hospitals and blood banks should be well informed of the hotline service so that more people can take benefits of the service.
- The blood shortage in the blood banks makes it obvious that they should be more active on the blood donation events and motivation activities that would encourage blood donors so as to meet the blood supply according to the demand.
- Donor databases should be increased to make the donor search process easier and faster.
- Donor motivation activities like providing transportation services, recognition etc should be conducted regularly.
- Feedbacks must be taken from blood donors too.
- Collecting and transporting blood should be done by a professional rather than patient family themselves.