

Analysis on blood bank success

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Executive Summary

The main objective of this report is to know more about the blood bank.

Based on the history of the blood bank, how they improve along time, to make Blood Bank @ Health Science Authority (HSA) to be what it is now, one of the top ranking blood bank in the world.

Introduction- history of Blood Bank @ HSA

During 1939, an emergency blood collection is need in due to the threat of the Second World War in Europe. It is then it comes to many people, about the important of having a healthy amount of blood stock in the blood in the nation. Singapore Blood Transfusion Service is officially open on June 1949, at Singapore General Hospital, Outram Road. On 1 April 2001, when the HSA was established, the Singapore Blood Transfusion Service was renamed as the Centre for Transfusion Medicine (CTM), one of the 8 professional centres of HSA. Now, the blood donation suite in the current HSA building, located at 11 Outram Road, is now known as the Bloodbank@HSA.

Overview

Importance of having a blood bank in Singapore

Blood is required during bone marrow transplants for leukaemia patients, for some patients that need regular blood transfusions, also during some daily surgeries and for accident victims. In Singapore, we required about 350 units of blood daily. Also during some emergency situation, it is important to have enough blood on standby. Blood could not be storage in the open for long, so it is important to have a blood bank that could help to extend the usage of

the blood for future usage, especially those blood type that are not commonly found.

Partnership with organisation

Red Cross Blood Donor Recruitment Programme

In 1995, Red Cross Blood Donor Recruitment Programme officially started to be a fully mobile programme, to complementing the role of the Centre for Transfusion Medicine, Health Sciences Authority in organising bloodmobiles, to help to meet national blood needs. On 1st April 2001, Singapore Red Cross (SRC) was officially appointed as the National Blood Donor Recruiter by HSA.

On 14th April 2001, an official ceremony was held at the Ngee Ann City Civic Plaza to help in the launching of the “ National Blood Donor Recruitment Programme” and between the Singapore Red Cross and the Health Sciences Authority (HSA), a Memorandum of Understanding (MOU) was signed, as a recognition of their partnership in the National Blood Programme.

Through the partnership with SRC, Blood Bank@ HSA has a much easier job in meeting the daily amount of blood need by Singapore. The SRC will mainly focus on the following three main functions in the National Blood Programme; Recruit and retain blood donors, Promote and Educate to increase the general public’s awareness on the importance of blood donation and Organisation of blood drives within the community. While the Centre for Transfusion Medicine (CTM), a professional centre of HSA will do the testing of the physical collection of blood, and distribution of blood to hospitals in Singapore.

Blood donation Recruitment

Basically there are two way to donate blood, one way to go down to the Blood Bank @ HSA, to have a walk-in blood donation drive. Another is going for the blood donation recruitment drive that would be held near the residential area, which is the Red Cross Blood Donor Recruitment Programme.

Blood Donation at Blood Bank

The members of the public could go down to Outram Park, the location where Health Science Authority is located and that is where the current Blood Bank is located at. The member of the public could just walk into the Blood Bank, do the processes like filling a form that is need for registration purpose, taking some health check and measurement of our body weight, take a blood test to measure the Hb level in blood. After all this, donor may move on to check his or her veins and donate blood.

Mobile blood donation

As people might find that it might be quite troublesome to go from one end of the Singapore to Blood Bank @ HSA, just to donate blood, and often people would use that as an excuse to refuse to donate blood. So SRC having the Red Cross Blood Donor Recruitment Programme, which would be held within the community, for example on 2nd Tuesday of the month, there would one Red Cross Blood Donor Recruitment Programme, held in the Woodlands Regional Library. To many people who are living near there, and want to donate, this would be a great convenience to them. At the mobile

blood donation, the whole processes are done similarly to those at Blood Bank @HSA.

My personal experience in about the blood donation drive:

On 18th March 2010, which is my first attempt to go and donate blood in the blood donation at Changi General Hospital, and decided donate blood with one of my friends who happens to be having attachment there. Sadly, in the end of the day, both of us are not eligible to donate blood, due to different reasons. For me, I was not eligible to donate blood, due to my fine veins. While my friend not eligible to donate blood, due to the Hb level in her blood. As we both are not eligible to donate blood during that time; we are given some tips by some of doctor there, on what we can do to make us more eligible during our next attempt to donate blood.

On June 2010, I decided to go to Blood bank @ HSA, to have my second attempt of blood donation, but this time I went by myself, as most of my friend are too much with their academic matters. Over there, the main processes are about the same which the mobile donations drive. Due to my record of having fine vein in my first attempt, I was to check with the nurses there on my vein, if I am able to donate blood. After checking, I was allowed to continue with checking of my body weight, Hb level in my blood. After which I was told to go inside the blood donation suite. Over there, the nurse told me some do and don after blood donation, and I was given a box of iron supplement that I was to consume after the blood donation, to replenish the amount of blood in my body.

After some while, the nurse found a vein that could be use to extract the blood out. The nurse first use an alcohol swap to clean the area, before having an jab that is a local painkiller to ensure that I will not feel an pain during the blood donation. However, after nurse managed to get some blood sample from me that would use to check if my blood is suitable to be use.

However, out of sudden my blood starts to stop flowing toward the needle, instead it is flowing through the tissue, resulting some inter-bleeding. Good thing, the nurse is took notice of it very fast, informed me about it and stop whole blood donation process. She quickly informed a doctor there to take a look at my injuries and at the same time, got a cold pad to apply cold pressure on the injured part to reduce the swelling. After a while, the nurse give me some medicated cream to be applied on the area will be blue-black, she also teach me how to apply the cream properly. As advised by the nurse, I went home to have a good rest, and avoid to carry too much of heavy weight on my left hand, the hand that I use to donate blood.

Methods in Blood Storage

Common blood group, those Rh positive blood groups, are stored in blood bank refrigerators are controlled to operate in the range of 4-6 oC for the maximum of 42days or frozen for up to 10 years. Blood bank not just frozen the red blood cell, fresh plasma can also be frozen, which can be stored for up to 1 year.

Cryopreservation Programme makes use of high concentration glycerol, followed by freezing at low temperature like -80 oC in some special ultra-low freezer. The rare blood types are not the only things that are conserved

under the programme, processes bone marrow and Peripheral Blood Stem Cells (PBSC) for patients undergoing bone marrow transplant. They preserve by using Dimethylsulphoxide (DMSO) and frozen at -196 oC in special liquid nitrogen freezers.

Methods that they use increase the amount of blood donation

They try to increase the awareness of the members of the public, in the important of blood donation. They have some posters designed, to tell the members of public how important it is. They also try to increase the awareness through advertisement during some commercial breaks. In the advertisement, they pointed out what some common issues that make Singaporeans do not want to donate blood, like because they do not care or they have donate once so there is no need to donate again, etc. So they try to get rid of this mindset in their mind.

Also our national blood donor recruiter, the Singapore Red Cross, may make appeals for blood donors of specific blood groups from time to time. Such appeals will be for specific blood groups that are currently in short supply (e. g. O+ or A -), or they might be needed by patients with rare blood groups. In times of need, suitable donors might be contacted via phone, SMS or mail. This would able to make sure that there is enough stock of blood in the blood, especially those rare blood type.

Analysis- SWOT analysis

Strength

The strength of the Blood Bank @HSA is that they are able to keep themselves up to standard, as they have some exchange programmes from with people from AABB. The people from AABB would come regular to the blood bank to have regular check if the blood bank is up to standard. Also based on my personal experience, the staffs over that the Blood Bank @HSA are very experienced and very alert, during some special situation, like my case, internal bleeding. When such things happen, they know what to do and take action fast. With this, it makes people to feel safe and secure to donate blood. To maintain the health amount of blood in the blood bank, they would send a sms to the donor to invite them to the next mobile donation drive.

Weakness

The weakness of the Blood Bank @HSA is that they are quite weak in the recruitment of blood donor, despite having working with SRC; sometime they still have some hard time maintaining a healthy stock amount in blood bank. This is due the awareness on the importance of blood donation among the member of the public is still very weak. Or they might think once they have donated once, the stock in the blood bank would be more than enough. So Blood Bank @HSA and SRC still have long way to go in reaching out to the member of the public.

Opportunities

In comparison of Blood Bank @HSA with other blood bank, blood bank in hospital, Blood Bank @HSA has a better advantage, as they have partnership

with SRC, and is more known to the member of the public. Most of the people who donate blood in the hospital are to prepare themselves for a surgery that would need plenty of blood, or they are saving their love one. While those who donated in the blood bank @HSA, are those who have the passion to save someone who might be a stranger to them. Also the technology used at Blood Bank @HSA are more advanced in comparison with those in hospital

Threat

Blood banks in hospitals are somehow like a threat to the Blood Bank @HSA. However, the greatest threat that the Blood Bank @HSA faced, is from the member of the public. This is because when there is some talks organised to help in the increasing of the public's awareness on the importance of blood donation, but still they might choose to ignore the talk, the amount of blood in the blood bank will decrease rapidly, as less and less people are donating blood. This would make the blood bank being unable to meet the purpose of setting up a blood bank.

Recommendation

A possible method to improve the awareness of blood donation, by having some blood donation drive talks in some of the school, like junior collages, polytechnic and universities, more youths would come to know more about the blood donation drive. Also having some talk in some RC would be good, to talk to the resident living in different area, especially to those residents who have thoughts that blood donation is not important, as there is always enough blood supplies in the blood bank, also there is no need to donate

blood, when there is no need for it. We should try to get rid of that mindset in the entire elderly mind.

Here is a personal experience that I have received from some of my relatives, when I asked about how much they know about blood donation drive. A small number of them would soon remember see an advertisement that they see about blood donation, “ give blood, and give life”. This shows much the advertisement could do over a period of time. I think now would be a good time to start to improve the awareness once again.

Personal reflection

Choosing Blood Bank @ HSA, might have been rare and unusual choice to many people, as not much of people, actually know that there is a blood bank in Singapore, letting aside the use of having a blood bank. In actual fact, I also do not know the existence of Blood Bank @HSA, until I joined Red Cross Society during my secondary school years, through that I have volunteered to help out during the mobile blood donation which one of them happen to be held in Singapore Zoological Garden on 2008.

Through the period of being a volunteer, I begin to realize the important of a blood bank in a nation. Also directly or indirectly, it has awakened my interest in blood banking, and being keen to find out some possible way, to help make improvement blood. With the interest and the passion to find out more in haematology, I choose to study Diploma in Biomedical Science.

Conclusion- Maintain of success of Blood Bank @HSA

Some main factors that are affecting the success of the blood bank, are the ability to follow the standard operation procedures in the blood bank, maintaining a high level of safety for the donors, recipient, and the staffs working there. Another key factor that make Blood Bank @HSA to be so successful, would be the unconditionally support from the champion donors, who are donors donating their blood on regular basics.

As the time go by, Blood Bank @HSA make improvement in making sure that they are keeping themselves up to the standard, they follow the guideline from American Association of Blood Banks (AABB). There is an accreditation program from AABB, which promotes the highest standard of care for patients and donors in all aspects of blood banking, transfusion medicine, hematopoietic, cellular and gene therapies, transplantation, and relationship testing. Blood Bank @HSA often would revise back on different areas that they can improve on, and making it possible, this lead to one reason why Blood Bank @HSA is able to be one of the top ranking blood banks.