

## Day 2: November 10, 2015

Dr. Pham Tuan Duong, Deputy Director, NIHBT welcomed delegates to the second day of the meeting.

### **Japanese experience: Marketing strategy development to increase repeaters &**

### **Plenary discussion: How to increase blood donor repeaters**

#### **Topic 1: Communication strategies**

Prof. Miyazaki noted that communication strategies and efforts to increase blood donor repeaters are closely related. He first presented the situation in Japan, before opening up the floor for discussion. Japan is the fastest aging country in the world, meaning that more people need blood, while fewer people are available to donate blood. It is projected that by 2027 there will be a shortfall of one million blood donors in Japan, if current trends continue. The Japanese government and Japanese Red Cross are working to increase the number of repeater donors and also looking into new iPS technologies to create blood derived cells, such as platelets. Until such technologies become viable it will be important to continue to make efforts to increase repeaters.

The amount of blood collected annually is equal to the number of donors multiplied by the times of donation per donor. The frequency of the times of donation is an area that requires efforts. Already in Japan repeaters account for the major portion of blood collected in Japan. Approximately 21.4% of all donors in Japan account for 65.5% of all blood collected. It can therefore be appreciated that it is critical in Japan to make efforts to increase repeaters.

Recently the Japanese Red Cross engaged in survey, asking a question “Why do you repeatedly donate your blood?” The overwhelmingly most prevalent response was “I want to give my blood for a good cause” (70%), followed by “I heard that the blood for transfusion is in short supply” (51%), “I want to check my blood test result” (37%), and “I can get some sweets and juice” (30%). The reason for first-time blood donors is often different to the motivation for repeater donors.

The Japanese Red Cross is engaged in efforts to register first-time donors in a donor club. These donors are contacted via e-mail, etc., when blood stocks are low, (such as “We need type A blood today!”) as a means of motivating repeat donations. In order to increase young donors, TV and radio campaigns are being implemented that target people in their 20s.

#### **Discussion**

Ms. Tan asked about the profile of the donors who are repeaters in Japan. Prof. Miyazaki responded that most donors are in their 40s. Twenty years ago they started to donate in response to the first Japanese Red Cross “Donate at 20” campaign. However, the donation trend is falling in people in their 20s and 30s. What was encouraging, however, is that after the Great East Japan Earthquake that young people donated blood.

Dr. Ngo Manh Quan asked about the motivation for receiving “blood test results” among donors. Prof. Miyazaki responded that the motivation to become a mobile donor is to gain basic information on an annual basis about their blood test results.

With regard to HIV, people found to be positive are not officially informed, but are monitored. Ten to 20 years ago concerns peaked about HIV, which prompted people to give blood out of a desire to find out whether they were HIV positive or negative. However, to prevent high-risk donors from coming to donate blood the results of HIV testing are not shared. In place of the Japanese Red Cross the government has initiated a separate HIV test.

Dr. Nalupta noted that in the Philippines the blood centers send blood that tests positive to the National Reference Library for confirmation. The Government has HIV-AIDS counselors available and once HIV is confirmed the blood service provides initial counselling.

Ms. Poo Lay Hoon noted that the system in Singapore is similar to the Philippines. Once a case of HIV is identified, it is confirmed with further testing before the patient is informed. Initial counseling can be provided by the blood service, but then further services are provided by the government at the CDC.

A participant from Vietnam asked about emergency media campaigns in Japan and additionally asked whether famous people are used for the purposes of promotion and publicity. She also asked whether Facebook or Twitter are used to promote repeat donations.

Prof. Miyazaki responded that there are no emergency media campaigns in Japan on a national level, as stocks are monitored and efforts made to boost donors prior to the situation reaching critical levels. Blood donor recruitment drives are conducted on a local level to boost temporary or localized shortfalls in donors. Nationwide campaigns are generally targeted at certain age ranges and social media are well-utilized.

Returning to the topic of HIV, Dr. Hok noted that the NBTC in Cambodia can inform a positive donor and refer them to the relevant support services.

Dr. Seong noted that test-seeking behavior is discouraged in Malaysia. Similarly to Singapore, a false declaration act makes it illegal to engage in false representation. If a positive result is confirmed the patient is recalled by letter (but not told what the reason is in the letter).

Dr. Tola (Cambodia) asked what strategies and challenges are faced in Japan in boosting numbers of repeaters. Prof. Miyazaki responded that a key issue is to boost young donors, given that the young population is dwindling. This makes it even more of a challenge to promote donation, particularly given that blood donation is perceived as being a stable system that is not in need of support, unlike other charities. Although each country has different problems, many challenges are shared. Dr. Tola noted that in Cambodia a large portion of the population is young and asked what other methods are used to promote young donors in Japan, in addition to social media. Prof. Miyazaki responded that in addition to social media there is a young donors club, which implements events and shares information. A radio program aimed at young people also features a promotion campaign to donate blood. In this short radio program patients are asked to report on the personal benefits of blood donations. There are very strict information privacy laws in Japan, but some patients are willing to share their experiences of blood donation. The Japanese Red Cross is trying to make it more transparent about how blood is used.

A participant from Vietnam asked about disaster plans for blood transfusion and how stocks are ensured in times of emergency.

Prof. Miyazaki responded that there is no specific program to cover disasters. However, following the Great East Japan Earthquake in 2011 there were no significant blood shortages and also donor numbers increased. It is very difficult to prepare for an unforeseen disaster. Inventories at each blood center are monitored and managed and can be distributed around the country with relative ease.

Dr. Truong Thi Kim Dung noted that HIV testing is implemented in Vietnam and if a positive test is confirmed the patient is recalled and then referred to counselors and to further medical services. Occasionally false positives cause problems, therefore patients are recalled and the situation is explained to them, after which they are referred to physicians. Although all blood is tested for HIV, the results are not informed to patients in order to maintain privacy. In Ho Chi Minh 100% of donors are voluntary and three different volumes of blood are collected. She asked whether Vietnam should abandon 250ml and move to 350ml and 400ml donations only.

Prof. Miyazaki responded that in Japan counseling is not provided directly by the Japanese Red Cross. Public health institutes have counseling services and there is also a HIV/AIDS counseling service, both of which are separate from the blood service. In Japan there are two volumes for

collection – 200ml and 400ml. Currently more than 95% of donations comes from 400ml collections. 200ml donations are now limited to people with small body size. He expressed doubt as to whether it was necessary to change the system in Vietnam.

Dr. Seong noted that in Malaysia even if a donor doesn't want to be informed, if they are confirmed as having one of the TTIs it is a legal requirement to inform the government from a public health perspective. Once a positive case is identified the Ministry of Health will track the donor to provide counseling and provide support and medical care. In order to respond to potential biological false reactions, all counselors are required to be qualified doctors.

Deputy Director Pham referred to the side effects of blood donation, mostly for young ladies, such as anemia, etc. Dr. Seong responded that in Malaysia anemia is due to low hemoglobin and in mobile blood collection people with low hemoglobin are identified and iron tablets are given to help sustain hemoglobin levels.

Mr. Bray noted that according to the presentation almost 40% of donors are female in Singapore, but in many countries the proportion of women donors is significantly lower. This is due to low body weight, but it may be that media campaigns may be not targeted at women.

Prof. Miyazaki noted that approximately 10% of candidates at blood centers cannot donate blood due to anemia. Women are limited to making two 400ml donations a year, whereas men are limited to three 400ml donations. Iron tablets are not distributed in Japan.

Ms. Tan asked about donation "mileage" schemes in Japan. Prof. Miyazaki responded that the Japanese Red Cross acknowledges the number of donations in terms of "mileage," but "gifts" are only extremely small or token gestures, such as a piece of paper.

Dr. Seong asked about the lower age limit for donation in Japan. Prof. Miyazaki responded that the lower limit is 16.

## **Plenary discussion: How to increase blood donor repeaters**

### **Topic 2: Donor care activities**

Ms. Tan encouraged delegates to think about blood donors and how they can be cared for before during and after donation. There are three constructs that need to be considered: 1) Mental care of blood donors; 2) Emotional care of blood donors; and 3) Physical care of blood donors.

In terms of pre-donation, mental care is very important and it is vital to prepare donors for donation. Emotional care is required also prior to donation. In terms of during donation, physical care is very important as people are concerned about the pain that may be involved. Post-donation the emotional care is very important as patients are generally relieved to have successfully concluded donation.

Mr. Teo noted that care for first-time and repeat donors will be different. Dr. Nalupta agreed, noting that first-time donors will need to be provided with the facts and details of blood donation. Some concerns that donors may have is the danger of infection during extraction and whether needles are sterile.

Ms. Tan agreed that in order to respond to the mental state of first-time donors in such a situation it is important to provide thorough information.

A participant from Cambodia asked about mental care during blood donation. He noted people are generally afraid of needles and blood and care needs to be given to people to overcome such fears. It is important for a patient to be given the confidence that he or she is being taken care of. Ms. Tan agreed that "TLC" (tender loving care) is key to assuaging donors' concerns.

Dr. Rothmony suggested that physical and mental care should come first, followed by emotional care. Pre-donation care is important to promote understanding. During donation the experience of patients is extremely important to ensure the retention of donors.

Dr. Seong noted that it is important to make donors feel important and safe. It is important to smile and make people feel safe and establish a relationship from the beginning. Pre-donation activities should focus mainly on mental and emotional aspects. Care during donation is characterized by physical care, including local anesthetic to reduce discomfort.

Ms. Tan asked a question to countries that work to convert family replacement donors (FRD) to voluntary donors (VNRD) and asked whether this donor care construct (mental, emotional, physical care) could be used to motivate donors to become voluntary donors.

Dr. Hok responded that efforts are underway in Cambodia to convert FRD to VNRD. In these efforts emotional care is very important and staff need to be able to explain how VNRD can also be utilized as a means of helping relatives who need blood. For donor care a smile is most important. Ms. Tan noted that in Cambodia there has been significant progress made in converting FRD and VNRD.

Dr. Truong Thi Kim Dung noted that the actions of physicians and nurses are critical in blood donation services in order to make donors feel secure and welcome. After donation donors are provided with drinks and snacks and sometimes may be provided with a small gift. She asked whether donors should be provided with souvenirs or gifts that are common to the whole country and may create further motivation to donate.

Ms. Tan noted that every country is different and therefore the snacks and juice provided will be different. At the main collection center in Singapore there is a cafeteria that provides a selection of food and drink. When Singapore conducted a survey about donation there were many complaints about the cafeteria, but no complaints about the juice and biscuits at the mobile blood stations.

With regard to gifts, Ms. Tan referred to the situation in Korea, where centers started to compete among each other concerning the free gifts provided. Also young people are no longer coming forward in Korea as they question why their blood is only worth a small gift. Ms. Tan noted that donors in Korea were therefore encouraged to donate their book voucher gift (or similar small gift) for donating blood to another good cause. This approach proved to be popular.

Ms. Tan noted that in some countries in Asia it is the culture to give a gift in return for receiving something, but this may conflict with the concept of VNRD. However, simple gifts could be acceptable under VNRD program, including a pen, or similar item. Other measures for gift giving could be to reward people on their birthday, or multi-time donors ("mile-stone donors"). If people are rewarded for "saving lives" (bronze, silver, gold) they will be incentivized to continue to give.

In terms of post-donation care Ms. Tan asked about the physical care of the donor and what approaches are needed to ensure donors return.

Dr. Ngo Manh Quan noted that NIHBT has various approaches to support and care for patients, which delegates had seen on their tour of the facility the previous day. Dr. Rothmony noted that in post-donation care the donors at NIHBT are provided with advice about how to maintain their health.

Ms. Tan noted that blood donors generally do not like to take iron tablets and measures need to be taken to promote the taking of iron tablets. In Singapore donors are provided with iron-fortified multivitamins.

*Coffee break*

## **Plenary discussion: How to increase blood donor repeaters**

### **Topic 3: How to maintain blood supply stably?**

Dr. Nalupta noted that all countries have to overcome the challenges of providing sufficient and equitable supplies of blood and blood products of the highest quality and safety. Unfortunately, self-sufficiency and stable and equitable distribution of blood stocks is not yet a reality in many countries. The urgent need to establish strategies and mechanisms to achieve this goal is needed.

Typically countries in the high income group where health care systems are more developed and where VNRD is associated with sufficient supply there is a stable blood donor base. On the other end of the scale, there are many countries in the world where supply of blood and blood products are insufficient and unstable. These are in countries in the low and medium income group, where supply is met partly with VNRD as well as with replacement donors and paid donors. Clearly the demand for blood often depends on the state of development of local healthcare systems. Despite some successes in strategies and mechanisms, stable blood supply is still difficult to achieve.

Self-sufficiency of blood and blood products means that the national needs of patients for blood are met in a timely manner and that patients have equitable access to transfusion services, and that the products are obtained from VNRD.

Challenges for a stable and self-sufficient blood supply are the following: 1) Lack of clear national policy and government commitment; 2) Increasing needs and demands for supply of blood and blood products remain a challenge, and 3) Decreasing donor database due to aging in the blood donor pool. The commitment of the national government for self-sufficiency for VNRD and a collaborative approach to policy development is essential.

Each and every country has to share their experience on how to maintain a stable blood supply. Dr. Nalupta noted that in the Philippines there are strict measures to maintain a daily national blood inventory system. There is a nerve center at national headquarters, to which national centers and stations report stock inventories at 9am and 4pm daily. For stations that have three days or less stock an appeal is made for blood donations. She asked other countries how they maintain stable blood supplies.

### **Discussion**

Mr. Bray noted that many of the countries in the region are developing rapidly and there are improvements year on year in healthcare and access to health services. This means that the pressures on health services are continuing to increase. Many of the challenges are at the policy and strategic level and it should be a government policy and commitment to maintain a stable blood supply.

Ms. Tan noted that there is a WHO directive on appropriate use of blood and it is essential to maintain sufficient stocks. To ensure sufficiency in blood supply should not be the sole responsibility of blood services, and, as Mr. Bray had noted, it should be the responsibility of government to create policies and structures. It is not particularly a case of collecting for collecting's sake, but collecting to meet demand.

Dr. Nalupta noted that it is important also to educate clinicians about appropriate use of blood.

Dr. Seong noted that in Malaysia there is a national policy to ensure sufficient blood supply. The national policy stipulates sufficiency, quality and safety. Secondly, it is necessary to have national blood inventory management and the ability to identify safe levels and critical levels, which will enable the blood service to mobilize blood stocks and transfers where and when necessary. Continuous promotion is the cornerstone of stable blood supply. It is also important to educate donors on the importance of continuous donation. Malaysia is also moving towards patient blood management in order to reduce demand.

Dr. Ngo Manh Quan noted that the Red Cross engages in promotion activities and sends a plan to the NIHBT, which is responsible for collection. In some months there are frequent blood drives by the Red Cross and other months there are no drives, making it difficult for the NIHBT to maintain stable supplies. This issue of collection vs. recruitment promotion is one that requires attention.

Ms. Tan noted that an issue faced by Singapore was that a relatively high proportion of the blood collected was not usable. At the end of 1990s the government proposed that the Singapore Red Cross take on the role of the national blood donor recruiter. The job of the blood services group at blood collection centers is to collect, store and distribute blood supplies. The blood donor recruitment program was initiated by the Singapore Red Cross and it maintains its identity within the National Blood Program, with the government being responsible for safety, etc. As the Red Cross is accepted as part of the national blood program, the government provides a grant to manage the national blood recruitment program. This ensures that there are clear KPIs. As a national society the Red Cross takes responsibility for ensuring sufficient supplies. With the collection center staff joint efforts are made to work toward KPIs. The partnership between the government and Red Cross is like a marriage, with the government being the husband and the wife being the Red Cross.

A participant from Vietnam noted that the experience of Singapore sets a very good example. In Vietnam the Steering Committee sets targets and based on these work is engaged with the Red Cross to ensure that targets are met in various provinces. Blood centers need to work closely with steering committees and the Red Cross in each province to ensure the stable supply of blood. It is also important to manage the use of blood and produce components that are good enough for hospitals and clinicians to use. There are increasing needs for blood components in hospitals as health services become increasingly sophisticated and therefore supply sufficiency and stability is a key requirement.

Dr. Hok reported that there are strategies to monitor blood collection in every blood center in Cambodia and the number of mobile blood collections and blood center collections are monitored weekly. The blood supply in blood centers is not stable in Cambodia, but monitoring of collection is in place.

Dr. Seong responded to a question from Dr. Ngo Manh Quan about critical and safe levels, noting that in Malaysia the levels are in response to WHO requirements, with three-day supply being considered critical and seven-day supply considered as safe. Ms. Tan noted that the three-day supply level is also considered the critical level in Singapore too. Singapore has started an inventory response team, which stipulates that all hospitals will have three-days' supply of blood and the blood service will also maintain a three-day stock. Efforts are now being made to ensure that supplies remain within the critical and safe levels (between three and nine-day stocks). When levels fall to five or four days the system to boost stocks is initiated.

## **Plenary discussion: How to increase blood donor repeaters**

### **Topic 4: How to retain walk-in blood donors in remote and island areas?**

Dr. Ngo Manh Quan noted that in the Southeast Asian region there are many islands and 70% of the region is mountainous. In order to ensure blood for islands and mountain regions it is important to have available blood products and be close to a blood center. However, on isolated islands it may be difficult to ensure equipment and electricity supply. Therefore it is important to have emergency supply structures in place. This also presents challenges in terms of transportation.

Dao Ly Son island in Vietnam has a population of 5,000 and is two hours by boat from the mainland. Ha Giang city is approximately 300km north of Hanoi and the northernmost town of Ha Giang province is 150km north of Ha Giang city, which takes two hours by boat. A solution in Vietnam is to use walk-in blood donation, which is the collection of blood in emergency situations from people who are identified as being healthy. Walk-in donors should be people who are prepared to be called on to donate blood to meet a particular emergency. With regard to how many

walk-in blood donors are required, this will depend on blood demand, the frequency of blood use, the local population and the capacity of the regional to meet demand. For example, for less than 5,000 residents approximately 20 to 30 walk-in donors are required.

The procedure to establish and activate walk-in donors involves screening for TTIs, with health checks being conducted annually to ensure that the identified walk-in donors remain healthy.

Lessons learned are that the tests for TTIs have to be screened at least every 12 months. The number of members for each panel is 50-70 people. The hospital is responsible for recording each donor's personal data and ensuring the list is kept up to date, as well as recruiting donors.

Dr. Ngo Manh Quan posed questions for other countries to consider, including: What problems are being faced with blood safety for clinical purposes in rural and island areas? How to ensure blood and blood products for rural and/or remote areas?

### **Discussion**

Dr. Douangchanh Kongphaly noted that in Laos a walk-in blood bank was implemented six years ago, supported by the German Red Cross. At the time training was provided at the district level on blood donor recruitment and committees for blood donor recruitment at the district level were established. Training and education is provided on the importance of giving blood and donors register to become walk-in donors. In Laos there are no prior measures to test for TTIs, with only blood type being tested. Testing for TTIs is conducted after donation. If the provincial level does not have supplies for the district level, the Red Cross calls in walk-in donors.

Dr. Ngo Manh Quan noted that serology tests require at least two hours, which is too long in an emergency. He therefore asked how post donation TTI testing can respond to emergency situations. Dr. Douangchanh Kongphaly responded that TTIs are tested using rapid testing methods.

Mr. Bray added that the storage facilities at the district facilities are significant and there are facilities for storage of units at the district level. Another challenge in Laos is for transport from the provincial to district level, which sometimes requires public transport to be relied on.

Dr. Seong noted that it is important to have a national contingency plan in place that will enable implementation of a plan in the case of emergency. In the case of disasters Malaysia does not implement blood collection in disaster-affected areas, but rather implements blood drives in unaffected areas. The blood is then mobilized and channeled to affected areas. Malaysia suffered the largest flooding in 20 years this year and people were very quick to come forward to donate blood. If blood supply can be maintained at a seven-day level it is possible to respond in an emergency situation, assuming that the majority of refrigeration units, etc., are functioning. Another factor that needs consideration in emergency situations is safety. It is for this reason that Malaysia conducts full serological testing and does not implement rapid tests. During the flooding this year, blood was flown by army helicopter from Kuala Lumpur to the disaster zone.

Prof. Miyazaki noted that Japan does not have a walk-in blood donor system. In Nagasaki there are many outlying islands that take several hours to reach by boat. The Japanese Red Cross maintains a three-day supply nationally and this will be sufficient to cover a disaster situation. Every day the Red Cross monitors the volume of products used in all areas, including isolated island regions. Island facilities are given a slightly higher volume of products to cover any delays in transportation. This results in some products not being used, but this wastage is already calculated into the provision system for outlying islands.

Dr. Nalupta noted that with regard to problems with blood safety, serological testing is used in the Philippines and rapid testing is not used. The Philippine Red Cross uses hub and spoke testing, with blood centers being strategically located across all regions nationally. As noted previously, inventory levels are checked twice daily and in cases of disaster or other emergency.

Prof. Tri thanked delegates for their input. He noted that Vietnam faces a variety of difficult challenges and has very isolated regions, in islands and mountains. The way of organizing blood donation and transfusion services is very different in rural areas in comparison to urban regions such as Hanoi. This is why the walk-in donor system has been developed to respond to needs in rural and isolated areas.

Prof. Miyazaki asked how often people on the walk-in donor list were asked to come and donate blood. Dr. Ngo Manh Quan responded that it depends on the region, but by and large each person is called maybe once a year. Also, if more blood is needed, after the walk-in donor has covered the initial immediate demand, blood products are dispatched from blood centers.

Ms. Tan asked why blood recruitment drives are not implemented to ensure stocks and obviate the need for walk-in donors. Dr. Ngo Manh Quan responded that weather conditions may prevent standard procedures from being implemented, which is why walk-in donors are used. Ms. Tan suggested that walk-in donors could be called on to make a regular donation annually and also be called on in emergency situations.

Dr. Seong asked what percentage of walk-in donors on the list become actual walk-in donors, and what percentage of walk-in donors are tested positive for TTIs. Dr. Ngo Manh Quan responded that 30% of walk-in donors are asked to make regular donations. In the course of a year approximately 70% of listed walk-in donors are actually called. TTI positive donors are an issue, accounting for approximately 10% of first-time donors.

#### **Future collaboration among Asian countries for self-sufficiency based on voluntary non-remunerated donation (VNRD)**

Prof. Miyazaki stressed the importance of continuing to engage in collaborative efforts on VNRD. The reason the countries have gathered at this meeting is to continue joint efforts to achieve 100% VNRDs.

#### **Closing addresses**

Prof. Miyazaki expressed his appreciation to all delegates for their attendance and active participation. He noted that there had been tremendously productive discussions at the meeting, which had helped all participating countries to understand the situation in each country. It is to be hoped that new ideas or the systems used in other areas will help countries face up to and respond to challenges, as many challenges are shared among the countries of the region. Networking of people in charge of blood donation is important in order to achieve the goal of 100% VNRD. In closing, Prof. Miyazaki expressed his appreciation to Prof. Tri and all his colleagues at NIHBT for their gracious hospitality and excellent arrangements for the meeting.

Prof. Tri thanked all delegates for attending the meeting and expressed appreciation to Nagasaki University for collaborating on the organization of the meeting. He concurred with the words of Prof. Miyazaki, noting the need for ongoing and ever stronger collaboration between the countries in the region. He asked all participants to consider hosting the meeting in the future as a beneficial means of sharing information.



アジア諸国の献血制度の構築と普及に関する研究

(H26-地球規模 A-指定-001)

分担研究：アジアにおける献血活動の現状調査に関する研究

分担研究者：福吉 潤 キャンサースキャン・社長

研究要旨

WHO 世界保健機関では、2020 年までに全ての国が 100%献血を実施し、原料血液を確保することを求めているが、開発途上国を中心に未達成の国が多い。我が国では 1964 年のライシャワー事件をきっかけに、政府閣議決定がなされ、日本赤十字社を中心として献血制度と血液需給システムが整備された。その結果、輸血用血液製剤は 1974 年に、血漿分画製剤は 1990 年に、原料血液を献血による自給を達成した。こうした我が国の経験は、世界各国へ献血活動推進のモデルとして提示できるものである。

本研究の前身として、平成 23 年度から 3 年間、カンボジア王国を対象に献血思想の普及のためのパイロットプロジェクトを実施した結果、首都圏大学一斉献血キャンペーンが行われ、若者主体の献血活動の盛り上がりを期待させた。

この実績を周辺アジア諸国へ広げるために本年度も献血に関する第二回目の国際会議を開催し、アジア諸国の献血活動の実情と問題点を共有した。その会議において、これまで本班が実施してきた活動内容と昨年度の第一回国際会議の内容を総括し、各国の献血担当者に提示した。

総括した。この発表を通じて、アジア各国の献血担当者に本会議の意義を明確に提示することができた。

A. 研究目的

我が国の 1970 年代及び 80 年代の献血制度の構築と普及に関する経験とノウハウ、また、カンボジアモデルを完成させ、周辺国に両方の経験を伝達していく。以って、開発途上国における献血制度の普及を促進するという国際貢献を図っていくことが本研究の目的である。これまでの前身の研究において、カンボジアの大学生を対象を絞り、重点的に献血の重要性を訴え、学生自身の献血キャンペーンを支援したところ、首都 7 大学の同時献血活動が可能となるなど、一定の成果を上げることができた。今後は研究班としてこうした活動をカンボジア以外のアジア諸国へも展開することを目標としている。

そのため、昨年度はカンボジアのプノンペンに於いてアジアを中心に 7 カ国の献血担当者を集めた国際会議を開催し、各国の献血事情を、問題点を共有し、意見を交わした。今回、第二回目の国際会議を開催するに当たり、本班のこれまでの活動、昨年度の第一回国際会議内容を

B. 研究方法

本研究全体の主要計画は以下の 3 点である。

1. カンボジアにおける大学献血キャンペーンモデルの定着化を図る。
2. カンボジア王国献血思想普及 5 カ年 Action Plan の策定に着手する。
3. 周辺国を巻き込んだ国際会議やワークショップを開催し、モデルケースの伝達をする。

[3]を進めるためにベトナムのハノイにある国立血液学・輸血学研究所(National Institute of Hematology and Blood Transfusion, NIHBT)において第二回目の国際会議を開催した。

第二回会議の開始に当たって、最初の発表としてこれまでの本班の活動、及び昨年度の第一回国

際会議の内容、会議の様様を記録したスライドを提示した。

### C. 研究結果

2014年11月24日、25日、カンボジアのプノンペンにおいてアジア諸国の献血活動に携わる関係者を招いて献血に関する第一回の国際会議を開催した。参加国は、マレーシア、ラオス、フィリピン、ベトナム、カンボジア、オーストラリア、日本の7カ国で、それぞれの献血活動担当者が参加し、意見を交換した。第一回の国際会議を通じて、VNRBDに関する各国の取り組み状況が提示された。

会議の大きな結論は以下の通りであった。

1) VNRBDを達成するために、国ごとの献血システムの状況、献血の現状、取り組みについて情報交換し、それぞれが理解を深めることが必要であると考えられた。

2) いずれの国に於いてもVNRBDが安全な血液製剤を確保するために欠かせないことを再確認した。

3) こうした会議を基にして、参加各国が繋がりを深めることが必要と考えられる。

以下、各国の献血の基本状況である。

#### (1) カンボジア

カンボジアにおいて献血におけるVNRBDの占める割合は35%程度であり、その定着はまだ、達成されていない。輸血後HBV感染症率も高く、VNRBDの推進を図る必要がある。

#### (2) マレーシア

国内には国立血液センターは一方所だが、130あまりの保健省管轄病院があり、そのうち120病院が献血センターを有しており、多くの施設が献血活動に参加する状況である。ほぼ、VNRBDを達成しつつある。

#### (3) ラオス

山間の国家という状況があり、都市間の移動には地形的な障害がある。血液製剤の運搬も同様である。カンボジアと同様、学生を中心に献血活動に力を入れているが、血液製剤の需要も高ま

っており、献血の推進が求められている。

#### (4) フィリピン

7000以上の諸島からなる国家であり、献血活動、血液の製剤化と分配に独特の問題を抱えている。リーダーとサポーターのグループ(1名+43名)を作り、末端までの献血思想の普及を図っている。

#### (5) ベトナム

VNRBDは献血の90%を超えている。Massive blood donation dayとして多数者からの献血を実施する「特別日」を年に数回実施している。

### D & E. 考察及び結論

アジア諸国による第二回の献血活動に関する国際会議に当たり、本班のこれまでの活動と昨年で開催された第一回国際会議の内容をまとめて提示した。

カンボジア以外のアジア諸国の献血状況は、国家の状態、地理的要因などによって様々であるが、いずれにおいてもVNRBD達成が安全な血液製剤の安定的供給に欠かせないことは変わらない。

VNRBD推進と維持のために様々な手立てを考える必要があるが、こうした国際会議を通じて情報交換することは重要であると思われる。

本班のカンボジアでの活動は、プノンペン大学生の持続的、かつ自主的な献血活動へと繋がってきており、こうした地道な支持がVNRBDの達成に重要であることをあらためて認識した。今後、アジアの諸国に於いて具体的な方法は違ってもVNRBDが推進されることを目標に活動を続けてゆく必要を感じた。

### F. 健康危険情報

(総括研究報告書にまとめて記入)

### G. 研究発表

なし

H. 知的財産権の出願・登録状況(予定を含む)  
なし

資料2  
ベトナムでの会議発表

9 Nov 2015  
 @ National Institution of Hematology and Blood Transfusion  
 Hanoi, Vietnam

## Summary report of last year's meeting at Phnom Penh

## Asian Meeting for self-sufficiency in blood and blood product based on Voluntary Non-remunerated Donation (VNRD)

24 -25 November 2014,  
Phnom Penh Hotel, Cambodia

### Background of the meeting

- Universal access to safe blood and blood products is an essential component of health-care provision.
- Resolution WHA63.12 urged WHO Member States to take all necessary steps to establish sustainable blood and plasma programmes with **the aim of achieving self-sufficiency**.
- WHO, Cambodian National Blood Transfusion Center (NBTC), and Nagasaki University were collaborating together to expand the participation of youth in VNRD since 2011, and had a **significant progress owing to the efforts by university students in Phnom Penh**.
- To expand the progress of our efforts for VNRD, the meeting was held to **share our information and experiences among ASIAN countries** to further expand VNRD.

### Objectives of the meeting

- **To share experiences** on different strategies and mechanisms for working towards self-sufficiency in safe blood and blood products based on VNRD.
- **To review evidence, gaps, challenges and trends** in donation, safety, ethics, access, sufficiency and self-sufficiency in blood and blood products.
- **To identify the need for priority actions** to achieve this goal at national, regional and global levels.

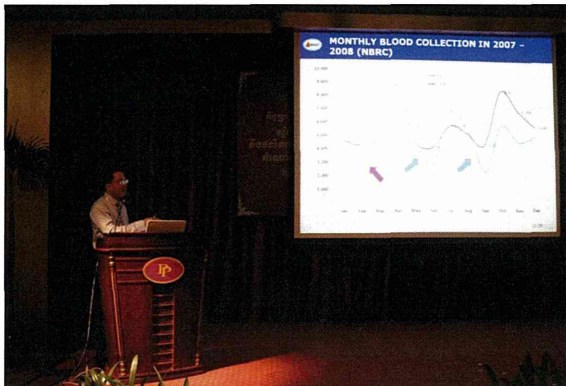
### Participated countries

- Cambodia
- Lao PDR
- Malaysia
- Philippines
- Thailand
- Vietnam
- Australia
- Japan

Day 1		Day 2	
9:40 AM <small>(15' presentation and 15' Q&amp;A)</small>	"Collaboration between NBTC and Nagasaki University" Dr. Jun Fukuyoshi, Japan	9:00 AM	Plenary Discussion of experiences and lessons learned from the experiences in Asian countries Panelist: Representatives of countries
10:00 AM		11:00 AM	
10:15 AM <small>(15' presentation and 15' Q&amp;A)</small>	"Towards self-sufficiency in blood and blood products based on VNRD: Global status, challenges and strategies" Dr. Sek Mardy, Technical Officer for Transfusion Safety, WHO in Cambodia	11:30 AM	Future collaboration among Asian countries for self-sufficiency based on Voluntary Non-remunerated Donation (VNRD) Chaired by Prof. Shinjiro Nozaki, Nagasaki University
10:45 AM <small>(15' presentation and 15' Q&amp;A)</small>	"Current Situation of blood safety in Cambodia. Challenges and strategies" Dr. Hok Kim Cheng, NBTC Director		Closing address: Prof. Yasushi Miyazaki Dr. Hok Kim Cheng, High level figure from the MoH
11:15 AM <small>(15' presentation and 15' Q&amp;A)</small>	"Voluntary blood donation among youth in university - Cambodian model" Representatives of 7 leading universities in Phnom Penh	12:00 PM	
12:00 PM			
1:30PM - 5:30PM <small>(15' presentation and 15' Q&amp;A)</small>	Case Study in Asian Countries: "Voluntary Blood Donation & Current situation of blood safety in Asia" Malaysia Lao PDR Philippines Thailand Vietnam Australia Japan		







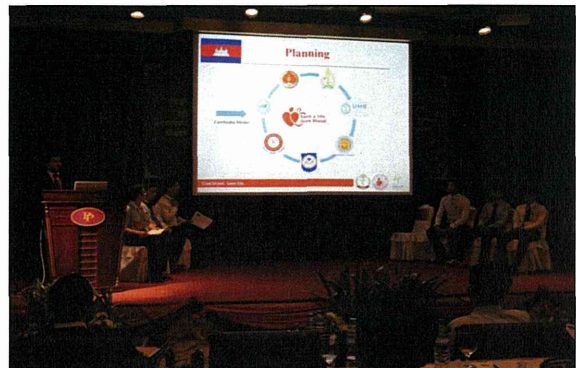
Dr Ngo Manh Quan, Head of Donor Recruitment, National Institute of Hematology and Blood Transfusion, Vietnam, presented "Voluntary Blood Donation & Current situation of blood safety in Vietnam"



Ms Clara Hilson, Marketing Officer, Australian Red Cross Blood Service, Australia, Presented "Voluntary Blood Donation & Current situation of blood safety in Australia"



Mr Masahiro Takikawa, Director, Blood Donation Promotion Division, Blood Service Headquarters, Japanese Red Cross Society, presented "Voluntary Blood Donation & Current situation of blood safety in Japan"



Representatives from the 7 Universities presented "Voluntary blood donation among youth in university - Cambodian model"



アジア諸国の献血制度の構築と普及に関する研究

(H26-地球規模 A-指定-001)

分担研究：我が国における安定的献血ドナーの確保に関する研究

分担研究者：瀧川 正弘 日本赤十字社・献血推進課長  
野崎慎仁郎 長崎大学国際連携研究戦略本部・教授

研究要旨

WHO 世界保健機関では、2020 年までに全ての国が 100%献血を実施し、原料血液を確保することを求めているが、開発途上国を中心に未達成の国が多い。我が国では 1964 年のライシャワー事件をきっかけに、政府閣議決定以降、日本赤十字社を中心として献血制度と血液需給システムが整備され、輸血用血液製剤は 1974 年に、血漿分画製剤は 1990 年に、原料血液を献血による自給を達成した。当時、我が国は開発途上国であったといえるが、社会啓発と教育によって献血制度を構築普及できるという我が国の経験は、世界各国へモデルとして提示できるものである。しかし、国内の急速な超高齢化に伴い、献血需要の増加と同時に献血可能人口の減少が予想され、現状の献血者の動向が続けば、西暦 2027 年には国内で献血ドナー不足に至るといふ将来予想が立てられている。これに対応するため、日本赤十字を中心として 2020 年を目指してドナーのプロモーションに力を入れている。リピータードナーを増やすことが主たる目的であり、その中には（1）リピートドナークラブの設置、（2）はがきや手紙による依頼、（3）稀な血液型の場合の直接の電話による献血依頼、などが予定されている。今後は様々なドナーデータを一元管理してこうした策に対応できるようにしていく。

こうした社会の高齢化は現在のアジア諸国で見られるものではないが、将来的にはどの国に於いても起こりうることであり、こうした内容を第二回の国際会議に於いて発表した。

A. 研究目的

WHO 世界保健機関では、2020 年までに全ての国が 100%献血を実施し、原料血液を確保することを求めているが、開発途上国を中心に未達成の国が多い。我が国では 1964 年のライシャワー事件をきっかけに、政府閣議決定以降、日本赤十字社を中心として献血制度と血液需給システムが整備され、輸血用血液製剤は 1974 年に、血漿分画製剤は 1990 年に、原料血液を献血による自給を達成した。当時、我が国は開発途上国であったといえるが、社会啓発と教育によって献血制度を構築普及できるという我が国の経験は、世界各国へモデルとして提示できるものであった。

こうして、確実な VNRBD を達成し、現在に至るまでそれを維持してきたが、国内は急速な超高齢化社会に突入しており、ドナー年齢上限を 69

才までに引き上げるなどの対策がとられているが、献血需要の増加と同時に献血可能人口の減少が予想されている。そして、現状の献血者の動向が続けば、西暦 2027 年には国内で献血ドナー不足に至るといふ将来予想が立てられている。

こうした事態に対応するため、現在の献血ドナー、献血状況を分析すると共に、日本赤十字社を中心として、これに対応するための方策を考える必要がある。また、こうした社会の高齢化は現在のアジア諸国で見られるものではないが、将来的にはどの国に於いても起こりうることであり、こうした内容を第二回の国際会議に於いて発表した。

B. 研究方法

1) 現在の国内献血者の動向についての統計データを用いて、献血者の年齢を中心に分析

2) 限られたドナーに対して有効に献血を依頼する方策について検討

## C. 研究結果

### 1) 現在の国内献血者の動向

国内の献血ドナー数は1980年代には800万人を超えていたが、90年代に入って徐々に減少し、2014年では500万人程度と約65%程度になっている。しかし、400ml採血の導入やアフエーシス採血の導入によって200万%程度の献血血液量を確保できている。

しかし、ドナーの年齢層を見てみると、10代、20代の割合が減少しており、これは人口構成比率からみても減っていることが判る。特に若年献血ドナーの減少は国内では重要な問題である。30代のドナーが40代になる際には1%程度の減少率でしかないが、20代ドナーが30代になる際には22.3%の減少が見られている。この10年間でそれぞれの人口は0.5%、1.7%しか減っていないことから、若年ドナー割合は人口減少比率より相当に高く減少していると言える。

高齢化社会では疾患罹患が増え、外科的手術の増加など血液製剤の需要増加が予想される。しかし、こうしたドナーの動向が続けば、西暦2027年には国内で献血ドナー不足に至るという将来予想が立てられている。

### 2) 献血ドナー確保の方策について

社会の高齢化に伴う若年人口の減少と、それに伴う献血可能人口の自然減少は簡単に対応できる問題ではない。そのため、献血ドナー確保のためは、リピータードナーを増加させる（リピーター率の増加）ことが重要となる。そのため、日本赤十字では「献血推進2020 (Blood Donation Promotion 2020)」として活動を始めており、将来的にも安定した血液製剤の供給を諮っている。具体的な方策は以下の通りである。[1]10代から30代のドナー推進をはかる。これらの年齢層に、まず、献血に参加して貰うことで、長期間にわたるリピータードナー候補を掘

り起こすことが大きな目的である。

[2]小学校、中学校、高校における献血推進活動を行うことで、教育の一環としての「献血による血液製剤自給」の重要性を国民に周知させる事が目的である。

### [3]リピータードナーの確保

リピータードナーを確保するために、リピータードナークラブの設置、はがきや手紙による献血の依頼、稀な血液型が必要な場合の電話による献血依頼を実施する。こうした活動を通じて全てのドナーが年に2回の献血に参加してもらえることを目標としている。

こうしたドナーへの依頼、情報交換はこれまで統一的には実施されていなかった。今後、リピータードナーの確実なマネジメントのために献血情報とドナークラブの情報、さらに同時に血液センターでの血液需要情報も合わせて一元的に管理する必要がある。そのためのデータベースの構築が進んでいる。

## D & E. 考察および結論

日本はアジア諸国の中では早期に100% VNRBDを達成し、1970年代には献血による輸血用血液製剤の自給を開始できた。さらに、その後1990年代には血液製剤を自給できるよう担ってそれを維持してきた。しかし、社会の高齢化はドナーサイド、血液製剤の需要サイド両方に大きな影響を及ぼしている。さらに、若年者における血液自給についての意識の低下がうかがわれる。これと関連したドナー活動への参加が減っていることは、社会の高齢化に加えて将来的に献血を維持し続ける上で大きな問題と考えられる。

これに対応するためには、(1)若年者における献血意識の向上、(2)リピータードナーの増加、の二つの方策が重要である。日本赤十字社ではそのためにさまざまな対応策を立てているが、若年者では育ってきた環境で既に献血制度と血液供給制度が確立されており、これも意識の低さの一原因と思われる。あらためて若年層への働きかけ（献血の重要性の再認識）が重要であろう。

さらに、リピータードナーを増加させ、しか



し、献血者への心理的な圧力とならない働きかけを実施するための、血液需要、ドナー情報を完全に一元的に管理することが求められる。

こうした対策を今から始めることによって将来的にも安定した輸血血液の供給が可能になることを期待している。

アジア諸国では VNRBD を目指して活動する国々がある一方で、日本は新たな問題に直面しつつあると言えるだろう。

プが期待される。

F. 健康危険情報  
(総括研究報告書にまとめて記入)

G. 研究発表  
なし

H. 知的財産権の出願・登録状況(予定を含む)  
なし


### 資料3

ベトナム国際会議での発表資料

## Measure for Future Stable Supplies in Japan

### -Securing Repeat Donors-

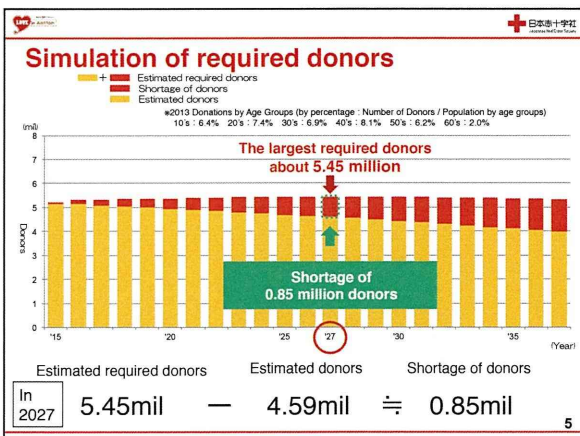
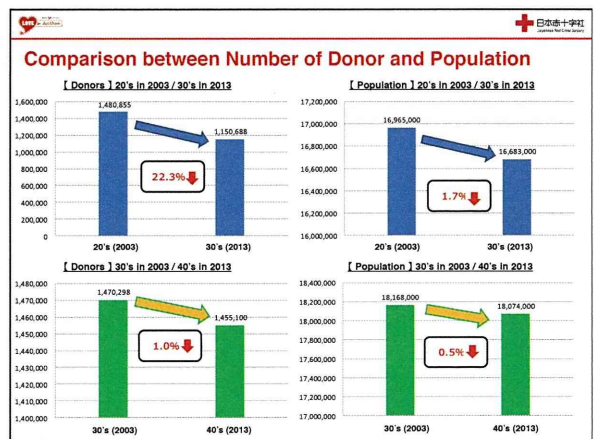
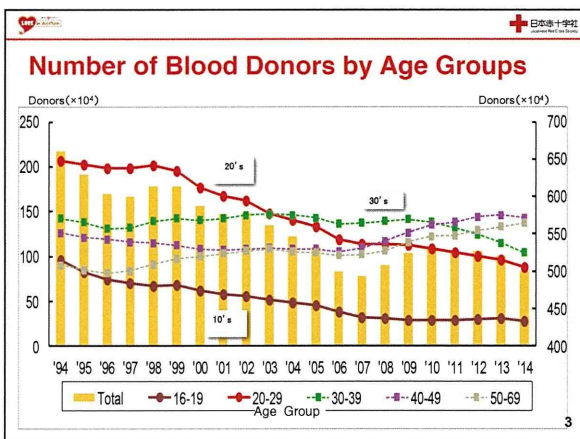
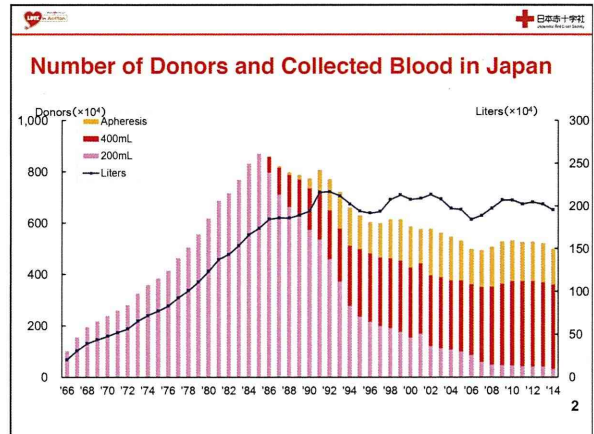
The 2<sup>nd</sup> Asian Meeting for self-sufficiency of blood and blood product based on  
Voluntary Non-remunerated Blood Donation (VNRBD)



日本赤十字社  
Japanese Red Cross Society


**Blood Service Headquarters  
Blood Donation Promotion  
Division**

Masahiro Takikawa 1



### Measure for future stable supplies

## Blood Donation Promotion 2020



- Promotion to 10's – 30's
- Promotion to elementary, junior high, and high school students
- Promotion of securing repeat donors

6

Measure for future stable supplies

## Blood Donation Promotion 2020

- Promotion to 10's – 30's
- Promotion to elementary, junior high, and high school students
- Promotion of securing repeat donors

6

Securing Repeat Donors

**Repeat Donor**  
= donor who donates more than twice a year

- Repeat Donor Club**
  - Essential of repeat donation in Japan
- Demand by postcard / letter**
  - Effective mean of bloodmobile (whole blood donation)
- Demand by direct phone call**
  - Effective mean of elimination of temporary blood types imbalance
  - For rare blood groups (Rh(-) / HLA)

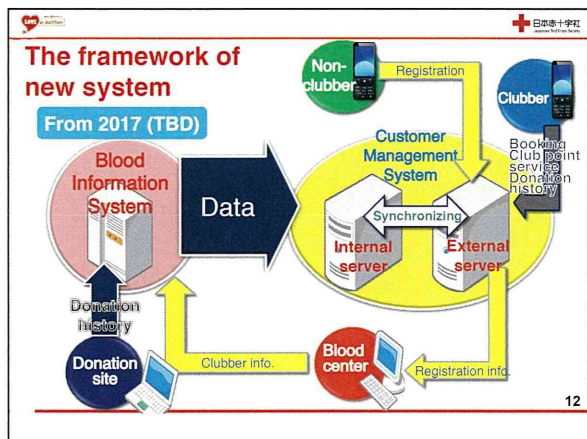
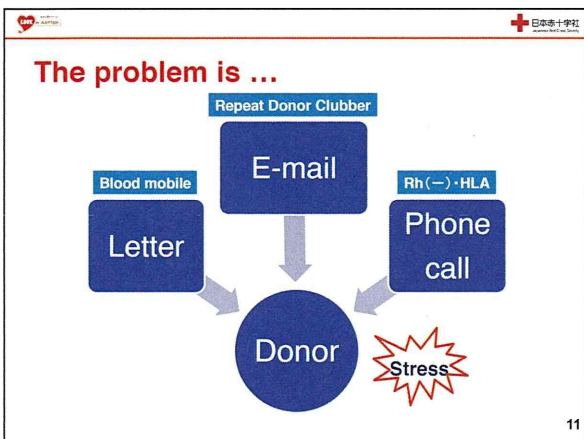
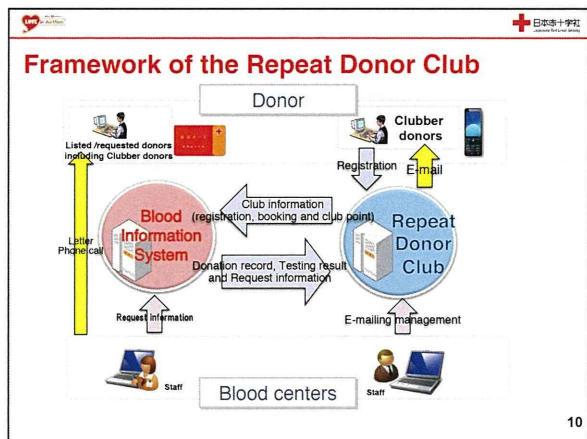
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Securing Repeat Donors

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13