THE 2ND ASIAN MEETING FOR SELF-SUFFICIENCY OF BLOOD AND BLOOD PRODUCTS BASED ON VOLUNTARY NON-REMUNERATED DONATION

SUMMARY

November 9-10, 2015

National Institute of Hematology and Blood Transfusion, Vietnam

THE 2ND ASIAN MEETING FOR SELF-SUFFICIENCY OF BLOOD AND BLOOD PRODUCTS BASED ON VOLUNTARY NON-REMUNERATED DONATION

AGENDA

Day 1: November 9, 2015	
9:00 am	**Opening ceremony: (30 min)** • Welcome remarks by Prof Yasushi Miyazaki, Nagasaki University • Opening remarks by Prof. Nguyen Anh Tri, Director of NIHBT, Vietnam • Opening remarks by Prof. Le Quang Cuong, Vice Minister, Ministry of Health, Vietnam
9:30 am	**Group photo**
9:40 am	**Report on past activities** By Nagasaki University
	Voluntary blood donation among youth in university – Cambodia model By Eang Rothmony, PharmD, PhD, University of Health Sciences, Cambodia
10:10 am	**Global status of blood supply, challenges and strategies** By Dr. Sek Mardy, Technical Officer – Transfusion Safety, WHO Representative in Cambodia
10:30 am	**Coffee break**
10:40 am	**Japan's experience: Measures for future stable supplies in Japan – securing repeat donors** By Mr. Masahiro Takikawa, Blood Service Headquarters, Japanese Red Cross
11:00 am	**Case studies in Asian countries: "Country reports and their efforts and experiences in increasing blood donor repeaters"** Malaysia: Dr. Wool Seong, National Blood Centre Singapore: Mr. Robert Teo Wei Long, Singapore Red Cross Vietnam: Dr. Ngo Manh Quan, NIHBT
12:00 pm	Discussion
12:30 pm	**Lunch**
1:45 pm	**Case studies in Asian countries (continued)** Cambodia: Dr. Kimcheng Hok, National Blood Transfusion Center Lao PDR: Mr. Phenthong Banchanthavong, Lao Red Cross Philippines: Dr. Christie Monina M. Nalupta, Philippine Red Cross
2:45 pm	**Coffee break**
3:00 pm	**NIHBT Tour**
4:00 pm	**Discussion**
5:00 pm	**Conclusion session for case studies**
Day 2: November 10, 2015	
8:30 am	**Japanese experience: Marketing strategy development to increase repeaters** By Prof. Yasushi Miyazaki, Nagasaki University
8:50 am	**Plenary discussion: How to increase blood donor repeaters** Topic 1: Communication strategies Topic 2: Donor care activities
10:00 am	**Coffee break (15 min)**
10:15 am	**Plenary discussion: How to increase blood donor repeaters** Topic 3: How to maintain blood supply stably? Topic 4: How to retain walk-in blood donors in remote and island areas?
11:25 am	**Future collaboration among Asian countries for self-sufficiency based on voluntary non-remunerated donation (VNRD)**
12:00 pm	**Closing address:** • Prof Yasushi Miyazaki, Nagasaki University • Prof Nguyen Anh Tri, Director of NIHBT
12:30 pm	**Lunch**

SUMMARY OF MEETING

Day 1: November 9, 2015

Opening Ceremony

Welcome remarks

Dr. Ngo Manh Quan welcomed all delegates to the Second Asian Meeting for Self-Sufficiency of Blood and Blood Products based on Voluntary Non-remunerated Donation (VNRD). It was noted that in 2014, the WHO and Nagasaki University had collaborated to hold the first meeting in Cambodia, in collaboration with the Cambodian National Blood Transfusion Center (NBTC). The representatives of seven countries exchanged information on blood donation. This, the second meeting, was being co-organized by the National Institute of Hematology and Blood Transfusion (NIHBT), Ministry of Health of Vietnam and Nagasaki University. The participants, including distinguished officials of the Ministry of Health, were introduced.

Prof. Yasushi Miyazaki noted that it was a great privilege to hold the second meeting in Hanoi, which is being jointly organized by NIHBT, Ministry of Health of Vietnam, Ministry of Health, Labour and Welfare (MHLW) of Japan, the World Health Organization (WHO), the Japanese Red Cross and Nagasaki University. He noted that timely access to blood is a very important issue and self-sufficiency of blood products based on VNRD is highly necessary. Many countries are still on the way to obtaining sufficient products. One of the reasons is the lack of programs for VNRD. Efforts have been implemented since 2011 in Phnom Penh to promote VNRD among youth in Cambodia. This program resulted in great success and the experiences of Cambodia will be presented in this meeting. Campaigns for blood donations among Cambodian students were implemented by students in seven universities in Phnom Penh. This is one of the ways to make VNRD sustainable. In order to share experiences in Cambodia with other Asian countries the first meeting was held in Cambodia. As Dr. Ngo Manh Quan had noted in his introductory remarks, representatives from seven Asian countries participated in the meeting and information was exchanged about the situation in the various countries. The previous meeting had made it clear that there are different situations and problems in each country, but there are also common issues. Networking in Asian countries regarding VNRD is helpful for all to address common issues.

Prof. Miyazaki noted that in this two-day meeting it is hoped that efforts to expand VNRD will be exchanged and valuable discussions will take place.

Opening remarks

Prof. Nguyen Anh Tri, Director of NIHBT, Vietnam, noted that it was an honor to organize and host the second meeting. The efforts of Nagasaki University for giving NIHBT the honor of holding this meeting are highly appreciated. The objective of the meeting is to share experiences. During the meeting the delegates will have a chance to learn about the experiences of Japan and international and local specialists. It is to be hoped that all the participants will join in active discussions on ensuring blood safety in Vietnam and other countries. By organizing this meeting Vietnam seeks to gain further partners in blood transfusion. Prof. Tri expressed his thanks to the Ministry of Health of Vietnam and to the Vietnam Red Cross for their support in organizing the meeting.

Prof. Le Quang Cuong, Vice Minister, Ministry of Health of Vietnam, noted that he was delighted to attend the second meeting. On behalf of the Minister of Health he welcomed all delegates. Ensuring self-sufficiency of blood and blood products is an important challenge for many countries and therefore this meeting is very timely and much appreciated. The Minister of Health assigned responsibility for blood transfusion and hematology to the NIHBT and the first VNRD day was held in Vietnam in 1994. This program has since gone on to achieve tremendous results. Vietnam has developed blood centers in major cities and regional and provincial blood transfusion services.

Blood collection in various forms is being organized, through mobile blood drives and using various large media campaigns, among other measures. Activities have been organized at every level nationally since 2006. Through this conference it is hoped that the sharing of lessons and experiences will help others to achieve VNRD.

Report on past activities

Dr. Jun Fukuyoshi, Nagasaki University team, reported that the first meeting was held in Phnom Penh, Cambodia in November 2014. Universal access to safe blood and blood products is an essential component of healthcare provision. A resolution of the WHO urges member states to take all necessary steps to establish sustainable blood and plasma programs is the aim of achieving self-sufficiency. WHO, Cambodian National Blood Transfusion Center and Nagasaki University have collaborated to expand the participation of youth in VNRD in Cambodia since 2011, and have made significant progress owing to the efforts of university students in Phnom Penh. The meeting in 2014 was held to expand progress on VNRD and to share information and experiences among ASEAN countries to further enhance VNRD. The objectives of the meeting were to share experiences on different strategies and mechanisms for working towards self-sufficiency in safe blood and blood products based on VNRD and to review evidence, challenges and trends in donation, as well as safety, ethics, access, sufficiency and self-sufficiency in blood and blood products and to identify the need to prioritize actions to achieve this goal at national, regional and global levels.

The outcomes of the meeting were the recognition of the situations regarding VNRD of each participating country, exchange of information of national systems, strategies, mechanisms and resources of Asian countries to achieve self-sufficiency in safe blood and blood products based on VNRD, and the establishment of strong unity among participating countries for future collaboration.

Voluntary blood donation among youth in university – Cambodia model

Dr. Eang Rothmony, University of Health Sciences, Cambodia, reported that seven universities in Cambodia had worked together on a campaign to promote voluntary blood donations among youth in universities, titled “Big Challenges for Great Universities.”

The campaign was composed of three main phases. Firstly, prior to the campaign many meetings were held to help promote understanding about the underlying strategy. Surveys were also implemented prior to the campaign and materials were prepared for activities. Entertainment was also planned that would attract youth.

During the campaign, operations were conducted to coordinate and facilitate all processes. Information was provided to blood donors and care provided after donation. Media coverage was also implemented.

After the campaign, meetings were held for feedback and reports were made to university leaders and the National Blood Transfusion Center (NBTC). Awareness was raised through social media and keys for success and challenges were identified. A certificate was given to all volunteers and peer education was provided for volunteers.

The key messages of the campaign were identified as “Youth, humanity and hope,” “Donating blood is saving lives,” “My heart, my blood, my nation,” and “Give blood, give hope.”

In terms of the campaign results, in response to the question “Have you ever donated blood?” prior to the campaign the response rate was only 11%, whereas after the campaign it increased to 23%.

Keys for success of the campaign were support from government and university leadership, the creation of strong teams with clear objectives and strategies, the conducting of education and entertainment activities, the planning of clear objectives and ensuring motivation.

Challenges that remain include feelings of concern among voluntary donors feeling about transparency of blood use, some donors being worried with health problems after donation or being afraid of needles and blood, or discouragement from parents and relatives. There is a general lack of awareness of the importance of VNRD.

In terms of recommendations for future activities, it will be important to increase awareness of the importance of VNRD among youth in other universities to maintain repeat donors, increase transparency in blood use to win public trust, increase the blood service availability for patients in need, and create donor recognition.

In terms of recommendations for future campaigns it is hoped that strong support from university leaders and national leaders will be provided. In addition, good collaboration and coordination between students and existing blood donor coordinators in the university is needed. Another key requirement for future success is "edutainment." Good budget management based on existing resources is also essential.

"Towards self-sufficiency in blood and blood products based on VNRD: Global status, challenges and strategies"

Dr. Sek Mardy, Technical Officer – Transfusion Safety, WHO Representative Office in Cambodia, noted that the need for blood and blood products is rising. In high and middle income countries the need is driven by increasingly sophisticated medical and surgical procedures. In low-income countries the majority of transfusions are for road traffic accidents, complications during pregnancy and childbirth, and management of trauma and congenital blood disorders.

The WHO has called for increases in voluntary blood donors to save millions of lives: "The best way to guarantee a safe and adequate supply of blood and blood products for transfusion is to have a good supply of regular donations by voluntary unpaid blood donors."

Every year 108 million blood donations are made globally and approximately half of these are made in high income countries, which account for only 18% of the global population. The blood donation rate is an important indicator for blood availability in a country. There is a marked difference in blood availability between low-income and high-income countries. The median blood donation rate per 1,000 population is 36.8 in high-income countries and 11.7 in middle-income countries. 75 countries report collecting fewer than 10 donations per 1,000 population. The age distribution of blood donors is very important for creating recruitment strategies. Proportionally there are more 18-24 year olds who donate blood in low and middle-income countries than in high-income countries. 73 countries collected more than 90% of VNRD; however, 72 countries collected less than 50% of VNRD. There has been an increase in voluntary unpaid donors by 8.6 million from 2004 to 2012 and there have also been various successes in VNRD, including in Vietnam, which increased VNRD from just one-third of total supplies to 96.2% in just 10 years.

There are many challenges in blood safety and availability. These include: lack of safe blood donors and low donation rates, weak voluntary non-remunerated blood donor programs, discarding of more than five million whole blood/red cells globally per year, stringent donor selection criteria reducing the pool of eligible donors, and an aging donor population impacting blood supply.

In terms of the risk of transfusion-transmitted infections, there is a high risk of transfusion-transmitted HIV and hepatitis B and C in developing countries. There is also limited capacity in processing and poor quality systems, relating to capacity to provide patients with the different blood components they require being limited and the absence of quality systems.

In terms of a response, it is important to improve blood safety and availability. This includes: Establishment of a national blood system with well-organized and coordinated blood transfusion services; collection of blood plasma and other blood components from low-risk, regular, voluntary

unpaid donors; quality-assured screening of all donated blood for transfusion-transmissible infections and systems for processing blood into blood products as appropriate; rational use of blood and blood products to reduce unnecessary transfusions and minimize the risks associated with transfusion; and step-wise implementation of effective quality systems, including quality management, standards, good manufacturing practices, documentation, and training of all staff.

Discussion

Dr. Ngo Manh Quan asked about the results for 2015 that had been achieved in Cambodia through the university-based campaign. Dr. Rothmony responded that the campaign is ongoing and now the original students have graduated they have gone out into the community to further promote donations. New intake students are being recruited to engage in activities and now the program has become self-sustaining.

Dr. Ngo Manh Quan asked about repeat rates in the Cambodia university program. Dr. Rothmony noted that the universities rely on educational activities, because once people have a better understanding of blood transfusion they tend to repeat their donation activities. Therefore education activities are very important and efforts in this area have proved to be very effective.

Dr. Mardy noted that in 2013 when the campaign concluded, it was expected that the number of blood donations from the campaign in 2014 would be higher than 2013. However, the result was that there was no significant increase. A key question, therefore, is how to encourage students to become repeat donors.

Ms. Cecilia Tan from Singapore Red Cross congratulated Cambodia on the success of its efforts. She noted that one of the factors for success is the involvement of various stakeholders. She made a comment about sustainability and ensuring repeaters. In low and middle-income countries the number of young donors is very high, but once they join the workforce after graduation the number of donors reduces to below that of high-income countries. One possible response measure would be to encourage community corporate responsibility. It would be useful if companies could be encouraged to promote blood donations among their employees.

Dr. Truong Thi Kim Dung, Ho Chi Minh Hospital of Blood Transfusion and Hematology, noted that Vietnam has made significant achievements in recent years. Every year about 200,000 units are collected in Ho Chi Minh City, a great majority of which is from students. It is important to conduct blood donation campaigns to encourage students to participate. She asked about efforts to encourage students to engage in blood donation on a daily basis and to continue donating blood after graduating from university. She also noted that in Ho Chi Minh City there is a strategy for voluntary blood donation, which is focused on whole blood.

Prof. Miyazaki noted that in Japan there is a university student club to promote donations, which is based on completely voluntary activities. It is very important to promote education. Prof. Miyazaki noted that Mr. Takikawa would be presenting on this topic later in the meeting. In terms of blood component donation, it is important to educate the population on this topic as it would improve donation efficiency. Donors in Japan are made aware of the importance of blood components. The repeater percentage is much higher in blood component donors. The question of how to promote repeaters is a key theme for this meeting. It is important to exchange information about efforts in each country to promote whole blood donation and blood component donation.

A participant from Hanoi noted that research has been conducted on the barriers to blood donation in universities in Hanoi. It has been found that students are worried about non transparency of blood use. He asked about the type of media campaigns that are likely to be effective to promote donations.

Dr. Rothmony responded that the same concerns existed in Cambodia, because not everyone has access to information about the use of blood donated. Therefore efforts have been promoted to boost transparency. Educational seminars are implemented to enhance understanding about the

importance of blood donation. For media campaigns, Facebook is heavily used, which covers most students. In addition, student days are held, and blood donation is promoted on these days.

Dr. Mardy added to Dr. Rothmony's comment, noting that transparency of blood use has been a significant issue. Next year the focus for the blood service in Cambodia is to establish a committee that will work on efforts to enhance transparency and gain public trust.

Coffee break

Japan's experience: Measures for future stable supplies in Japan – securing repeat donors

Mr. Masahiro Takikawa, Blood Service Headquarters, Japanese Red Cross, noted that securing repeat donors is an important topic for Japan in ensuring stable supplies of blood and blood products. In 1986 400ml donations were introduced in addition to 200ml donations and since that time the proportion of 400ml donations has increased. In terms of the age range of blood donors, the number of donors in their 40s has increased, but the number of donors in their 30s has dropped off significantly. This means that there has been a 22.3% decrease in blood donation among those who were in their 20s ten years ago and who are now in their 30s now. It is important to take action to ensure that there are sufficient donors in the future. A simulation conducted by the Japanese Red Cross shows that if current trends continue there will be a shortage of 0.85 million donors in 2027. The MHLW and Japanese Red Cross have established specific mid-term goals for boosting blood donation. This program is termed "Blood Donation Promotion 2020." This program includes promoting blood donation to persons from their teens to their 30s, promoting blood donation to elementary, junior high and high school students, and promotion efforts to secure repeat donors.

A repeat donor is defined as someone who donates more than twice a year. Efforts to ensure repeat donations include a "Repeat Donor Club," as well as requests by postcard or direct phone calls. The use of phone calls to request donations is used as an effective means of eliminating temporary blood type imbalances. The postcard request method entails significant cost, and measures have been implemented to move to notifications via e-mail.

With regard to the "Repeat Donor Club," blood centers contact club members directly to request blood donations. Club members receive a specially designed donation card and information via e-mail. The Repeat Donor Club office also sends information about events. However, sometimes donors may receive multiple communications via letter, e-mail and phone call, which creates stress for the donors themselves. The new data system, which is scheduled to be put into operation in 2017, aims to streamline operations and prevent multiple communications to donors. This system will contribute to ensuring stable blood supplies in the future.

Discussion

Dr. Rothmony noted that the Repeat Donor Club is a very effective means of securing repeaters and Cambodia is also considering measures to establish a similar club. He asked about benefits of club membership in Japan and what measures are implemented to recruit members. Dr. Miyazaki responded that the incentive to join the club is the management of the donors' blood data and results. Members can access past blood donation data via the internet at any time. Dr. Rothmony asked whether providing information about blood tests raises concerns about recruiting high-risk donors. Dr. Miyazaki noted that this was not the case as screening is conducted.

Ms. Cecilia Tan noted the sharp drop-off in donations between those in their 20s and 30s and asked why this was the case in Japan. She also referred to donor stress caused by multiple communication channels and asked why social media are not more actively utilized. Prof. Miyazaki responded that the stress was caused because the three separate communication methods did not share the same database, meaning that donors were contacted on multiple occasions. This is why

a new system will be introduced by 2017 that will unify the system and ensure that donors are not contacted on multiple occasions. Dr. Fukuyoshi responded to the question about the drop-off in donors between their 20s and 30s. It is assumed that the engagement of the people in their 30s is weak. General social awareness of blood shortages is low and this is a challenge that needs addressing.

A participant from Vietnam asked which method of communication is most effective and also asked about the success rate of these methods of communication. Prof. Miyazaki responded that postcard or letter has a response rate of 30-40%, whereas the phone call method results in a response rate of 70%. However, the phone call method is only used for rare blood groups or to correct a temporary imbalance in blood type needs.

A participant from Vietnam asked about the system for donor care. He asked whether the system is operated by the Red Cross or by blood centers. He also asked about methods to promote repeaters if they do not respond to initial communications, either by mail or phone call. Prof. Miyazaki responded that the blood donation centers are operated by the Red Cross. With regard to requests, if potential donors do not respond to two requests, no further requests are made, in order not to create undue stress for donors.

Case studies in Asian countries: "Country reports and their efforts and experiences in increasing blood donor repeaters"

Malaysia: Marketing strategy for increasing regular blood donors

Dr. Wooi Seong, National Blood Centre, Malaysia, noted that blood donation in Malaysia is by VNRD, with 99-100% of donations being made by VNRD, according to WHO statistics. In 2014 close to 700,000 donations were received and in terms of the proportions of regular and new donors in Malaysia, regular (repeat) donors account for approximately 60% of the donor base. Different states around the nation perform differently and have various challenges. Kuala Lumpur accounts for 25-30% of all donations. The National Blood Centre of Malaysia has seen blood collection volumes steadily rise, from 70,000 donations in 1998 to almost 180,000 donations in 2014. The proportion of repeat and new donors was approximately 50:50 in 2008 and it was recognized that efforts needed to be made to retain donors. Efforts since then have seen the proportion of repeat donors rise to 62% in 2014. One-quarter of all donations are from students. The majority of blood donors have previously been in the 18-24 year group. However, in 2014 there was a shift in age distribution of donors from the 18-24 year group to the 25-34 year group. This demonstrates that recruitment drives and awareness campaigns that were started early in younger year groups translates into greater volumes of donations in older age groups in future years.

Conventional marketing strategies that are used include pamphlets, posters, banners, newspapers, radio and television. Over the years it has been realized that marketing strategies evolve and focus has shifted to activities that educate and raise awareness, which is one of the keys to blood donation marketing strategies. There is a need to inculcate blood donation as a culture and lifestyle and new donors need to be encouraged to become regular donors. It is important to create a pleasant experience before, during and after blood donation. Moves are being implemented to transform from a hospital service to a hospitality-oriented service, which aims to create a positive image of blood donation. There is also a need to engage and collaborate with blood donors and ensure that donation is convenient and accessible for all.

Specific marketing activities that have been launched in recent years include: calling donors by phone, using websites and social media, and creating blood donation mobile apps. Another measure that has been implemented to boost donation is the extension of National Blood Centre opening hours. Blood donation talks are conducted in schools, colleges, universities and offices. Blood donation campaigns are implemented regularly in similar areas. Corporate social responsibility (CSR) is also utilized as a means of encouraging companies to promote donation

among their employees. Celebrities are also recruited to act as figureheads for donation activities, including at such events as World Blood Donor Day. Malaysia has also created Whole Blood Donor Day and Apheresis Week as other events, which are timed to coincide with seasons when blood stocks are usually running low. In terms of CSR, one of Malaysia's largest malls has agreed to provide space for a blood donation suite within the mall, which is run by the National Blood Centre. This provides convenience to shoppers. Also convenient for donors is the blood donation bus, which attracts further donors. Educational and study tours to the National Blood Centre are also promoted.

Singapore: Increasing donor retention through marketing initiatives

Mr. Robert Teo, Blood Donor Recruitment Programme, Singapore Red Cross noted that the blood donor population makes up less than 2% of Singapore's residential population, which is a challenge for the recruitment program. First-time donors make up 29% of the donor pool, with repeat donors accounting for 39% of all donors. Demand for blood and blood products is likely to increase in the future, as the society of Singapore ages. More than 22,000 units of blood will be needed annually by 2030. In terms of the total number of donors, there were 70,824 donors in 2013 and 68,868 donors in 2014. However, if the first-time donors in 2013 could have been retained this would have ensured an increase in the following year's repeat donors. A key challenge, therefore, is to boost efforts in retaining repeaters.

One of the difficulties in retaining donors is competition with other charities. The number of registered charities in Singapore has risen significantly over the previous decade. Blood donation is also well-established in Singapore and this may lead to a tendency for younger people to consider that blood donation is already successful and be therefore more inclined to support other charities.

Challenges for blood donation therefore include attrition of first-time and regular donors and the crowded charity landscape, in addition to accessibility of blood donation sites. The response to these challenges is to highlight the importance of blood donation through emotional engagement, ensure accessibility of blood donation aligned with donor lifestyle, show appreciation for donors while installing a regular-donation mindset, and engage donors as advocates.

Marketing activities and initiatives include the creation of thank-you videos and printed ads. The purpose of these videos is to achieve emotional engagement and highlight to donors the real-life impact of their donations and highlight to non-donors the need for blood by people like themselves. Another initiative is the issuance of a thank-you card to donors. The purpose of this card is similarly to create emotional engagement and instill a regular donation mindset. This card conveys to donors the appreciation from beneficiaries and reminds them of their next donation date. The card features different beneficiaries, with a mix of circumstances and conditions.

Another marketing initiative aiming to retain donors is to provide giveaways. The purpose of this initiative is to express appreciation to donors and instill a regular donation mindset. This Christmas season a series of fridge magnets will be distributed to donors as a thank you gift. Other seasonal events that are focused on include Halloween, Chinese New Year, Hari Raya and Deepavali, all with the purpose of aligning donation with donor lifestyles and expressing appreciation to donors.

When reaching out to youth donors the Red Cross Connection app has proved to be effective, including message alerts and event updates, as well as a blood-stock impact tracker. The blood-stock impact tracker makes it possible to target specific donors in response to need.

The #Needleface campaign in Singapore is an initiative to create a regional/global success story like the Ice Bucket Challenge. The campaign shows videos of the faces of people when having a needle stuck in their arm for the first time and is intended to create online buzz about the blood donation campaign in Singapore.

Discussion
A participant from Vietnam asked about the Singaporean marketing campaign and the content that is used to persuade donors to donate blood and the way different donors are targeted. She asked which marketing activity is the best one to retain donors.

Mr. Teo responded that emotional engagement is very important, but the content depends on the target audience. For example, in schools, the focus is on youth-friendly language that is not overloaded with medical terms. It is important to tailor content for corporate or religious organizations. The focus on corporate and religious organizations is CSR, namely encouraging these organizations to make a contribution to society by helping with blood donations.

Dr. Seong responded that in the case of Malaysia, media content will depend on the target group. For example, when targeting university students it is important to focus on the fun side of donation. It is important to engage with student leaders. It is also important to use media to dispel concerns about blood donation and make it more accessible.

Ms. Tan asked about the percentage of retention for new donors in Malaysia. Mr. Seong responded that although he did not have the specific figure, the National Blood Centre is working on ways and means of quantifying retention rates, which would provide a good means of evaluating the effectiveness of media campaigns.

Dr. Truong Thi Kim Dung thanked Malaysia and Singapore for their presentations, noting that the two countries are implementing very positive and dynamic messages that are accessible to young people. She also highly evaluated the initiative by Singapore to provide thank-you cards from beneficiaries to donors. The Repeat Donor Club initiative in Japan is also interesting. In Vietnam there are also clubs for repeat blood donors. She asked if there are regular meetings for club members in Japan.

Prof. Miyazaki responded that the virtual donor club connects everyone via mail or SNS. Another initiative is the Action Club, which brings together university students for a major meeting once a year.

A participant from Cambodia asked Malaysia about challenges currently being faced and asked Singapore about the kind of blood products for which there is demand.

Dr. Seong responded that challenges being faced include shortages of blood and it is therefore important to build up strategies to build up blood reserves at seasons when shortages are predicted. Different marketing tools exist and in Malaysia the e-mail method has not proved effective (less than 5% repeaters). It is important to ensure that out of the limited budget available a good proportion of funds is targeted for donor retention, in addition to recruitment. It is important to be creative and innovative and move with the times and technology.

Mr. Teo responded the broad breakdown of blood usage in Singapore is 31% general surgery, 25% general medical, 14% orthopedic, 14% cardiothoracic, 10% hematology, 6% accident and emergency.

Lunch

Case studies in Asian countries (continued)

Cambodia: Country report and efforts and experiences in increasing repeater blood donors
Dr. Hok Kimcheng noted that with a population of approximately 15 million the donation rate in Cambodia is relatively low, with three donations per 1,000 population. The system is in transition,

with one public National Blood Transfusion Centre (NBTC), 21 public provincial centers and one hospital blood bank. The five-year national strategic plan is based upon a comprehensive blood system assessment (2011/12) and provides a system-wide technical framework for blood program delivery. The National Blood Program is guided by a five-year national strategic plan 2013-17.

In terms of hospital and patient blood management, key achievements in 2013 and 2014 include the formulation of national clinical guidelines, and training for trainers, as well as the transfer of programs to local ownership.

In terms of community and donor motivation, key achievements in 2013 and 2014 include the formulation of a national strategy for donor recruitment, the production of consistent branding and signage, as well as demand and supply planning and mobile collection planning.

In terms of creating a nationally coordinated blood service, an 18-month lab plan for testing, components, quality, cold chain, equipment and staff training have been implemented, and automated testing platforms have been selected. Efforts have been made to improve laboratory work flow, including serology and samples. A new facility funded by US PACOM has opened in 2015 and a national center in Phnom Penh and two regional centers in Kampong Cham and Siem Reap are also due to be opened.

In terms of key indicators, VNRD across the entire country stood at 33.6% in 2014, down slightly from 2013. The regular donor rate stood at 10%. Infectious disease markers are gradually reducing, going down from 8.4% in 2012 to 6.1% in 2014.

Blood demand is increasing year by year, by approximately five to six percent. With regard to VNRD management and strategy, the objectives are to work with provinces to identify barriers to VNRD and find solutions. In addition the strategy calls for the establishment of provincial voluntary blood donation steering committees. These committees will work to convert family replacement donation (FRD) to VNRD and promote VNRD targeted at youth. Another key point in VNRD management and strategy is to incorporate VNRD education into the national education curriculum, including B2C engagement with the Ministry for Youth, Education and Sports.

The NBTC is working to improve transfusion safety, with a focus on donor selection, using revised donor selection guidelines. Pre-donation screening is also being enhanced, with an improved donor questionnaire and staff training. Improved testing algorithms are also being used in the laboratory environment.

A very important current challenge is to recruit and retain VNRD and blood donation campaigns are generally successful in boosting donations when they are implemented. However, the bigger challenge is to secure repeat blood donors. The goal of the NBTC is to achieve a consistent decrease of family replacement donors over time and corresponding increase in VNRD to meet demand. Management activities include stock management, education of NBTC and hospital staff, and education of family replacement donors to return as voluntary donors.

In collaboration with the union of Youth Federations of Cambodia the “Youth contributions to Blood Donation Promote Towards 100% VNRD by 2020” program is to be launched from 2016. A blood donor club will be established in 2016.

In terms of next steps for Cambodia’s blood program, the aim is to continue to implement the strategic plan, identify barriers to implementation, and work with local stakeholders to develop sustainable solutions.

Discussion

Ms. Tan noted that 2020 is five years from now and achieving 100% VNRD will be difficult to achieve in that time. She asked what specific initiatives were being planned to achieve the target of 100% VNRD by 2020 in Cambodia. Dr. Hok responded that strategic plans are reviewed each year.

The mission of the Union of Youth Federations of Cambodia is to promote education on healthcare and healthcare service delivery. Although the plan to achieve 100% VNRD is very ambitious, Dr. Hok noted that it is important to have dreams.

Dr. Seong noted that the statistics that have been shown for Cambodia are very impressive, showing consistent improvement. Dr. Hok responded that demand for blood is increasing every year and the NBTC is seeking to boost donations over the next few years.

Lao PDR: Country progress report on Lao blood services

Mr. Phengthong Banchanthavong, Lao Red Cross National Blood Transfusion Centre (NBTC), reported that the Lao Red Cross National Blood Transfusion service has been carrying out its blood program since 1995, which plays a leading role in providing safe and adequate blood supply. It is fully responsible for blood donor recruitment, retention, collection, processing, testing and supply of blood and blood components to hospitals. The blood program is implemented at one national center, three regional blood centers, 13 provisional blood centers and 17 blood storage units in district hospitals and six military hospitals.

In terms of blood donation in 2014 the NBTC collected 53.16% of the total, with provincial centers collecting 46.84%. Students account for 56.28% of all donations. Of total donations, 65% are made by male donors, significantly higher than the donations by female donors.

An Action Plan for 2014 set a mobile blood campaign target of 35,200, which was narrowly missed (35,017 units). However, in terms of training activities, a total of 119 donor recruiters were trained at the provincial level (supported by Singapore Red Cross), 366 youth were trained from 30 high schools and three universities in Vientiane. In addition, 26 annual meetings with target groups worked to set up a plan and calendar for mobile blood collection.

In terms of donor recruitment and retention activities, annual planning for establishing a plan and calendar for blood donor recruitment is conducted at the central and provincial level. Meetings are held with key focal points to plan activities before conducting mobile blood donation. Blood campaigns are conducted on special days, such as Red Cross Day, World Blood Donor Day and Lao national holidays.

Issues and challenges being faced include: increasing demand of blood supply due to increases in population and development in cities; the need to provide health products and other supporting materials quickly and efficiently; systematic screening of every blood unit; high-quality preparation of blood products; and the need to build infrastructure and energize resource mobilization.

A future plan is to continue to work to improve the health status of the Lao population by providing sustainable access to safe and adequate blood supply; meeting the WHO recommendation of at least 1% of total population donation per year, as well as 100% VNRD; and implementing quality management of blood services at all levels. Other areas of the action plan include strengthening provisional blood centers to provide safe and sufficient blood supply; creating additional blood storage units at the district level; and promoting blood donation via social media.

Discussion

Ms. Tan noted that the number of repeat donors had increased very significantly. She asked how that retention of repeat donors was achieved. Mr. Phengthong Banchanthavong responded that staff are recruited and these staff are well motivated to recruit people, which has proven to be very effective.

Philippines: Blood services in the Philippines – how to increase repeat donations

Dr. Christine Monina M. Nalupta, Philippine Red Cross, noted that the mission of the National Voluntary Blood Services Program is to be a national and efficient networking of blood service

facilities based on voluntary blood donation that will ensure safe, adequate, timely and accessible blood supply and the rational use of blood in the Philippines through advocacy, professional education and research. The service is run under a tripartite organization, consisting of the Department of Health, Philippine Red Cross, and the Philippine Blood Coordinating Council. Blood service facility categories are: blood center, blood banks, blood collecting units and blood stations. The Philippines Red Cross has as its motto: "To become the leading provider of safe and quality blood in the Philippines.

There has been a steady increase in general blood donation. In order to ensure blood safety, centralized blood testing is implemented, including a platform of five TTIs, with nucleic acid testing in the pipeline. The VNRD rate is 84%. In 2014 repeat donations stood at 79.83% of the total.

With regard to the question of how to increase repeat donations, the power of cyber-media, radio and television all need to be harnessed. The Philippines is engaged in partnership with TV/media personalities, who are being recruited as "Blood Governors"

Strategies to advocate and promote VNRD include common strategies, such as letters, phone calls and e-mails, in addition to newer strategies in information and communication technology, such as SMS broadcasts and viral marketing. Viral marketing is the latest craze and has high networking penetration, with a personal touch, with the power to link "friends of friends of friends." On the day that the SMS service went live, more than 380,000 followers tweeted about it. In November a national blood donation drive will again be implemented using this service.

Another strategy is the partnership with colleges and universities titled PLEDGE 25, or otherwise known as the Red Cross Youth (RCY). Under PLEDGE 25 programs members are aged 18-25, who pledge to regularly donate up to four times a year. PLEDGE 25 partners are the Commission on Higher Education, Sanggunian KABATAAN Federation, and the Philippine Association of Colleges and Universities. This is a key project that is used to promote donor recruitment and retention partnership at work.

The RC143 (community) program aims to recruit 1+43 members in every village, school and workplace to mobilize the power of humanity. As RC143 Blood Service Volunteers the members are expected to advocate and recruit voluntary unpaid blood donations, become regular and standby blood donors when needed, organize a weekly village-based voluntary mobile blood donation, and recruit blood Samaritan donors.

A government project is the Advocacy and Promotion of VNRD to use school children as blood donation advocates. The aim of the program is to integrate voluntary blood donation in the curricula of primary and secondary school students.

The Philippines celebrates World Blood Donor Day each year and also organizes a blood donation month. In order to have better recruitment capabilities it is important to gain various types of certification. The Philippine Red Cross has gained ISO9001 certification for its quality management system.

Discussion

A participant from Vietnam asked about the Philippines experience in implementing activities across multiple islands and how disaster response is made. Dr. Nalupta responded that the Philippine Red Cross has 82 blood service facilities, each situated strategically. Although the Philippines is an island country, each region is represented by a Red Cross blood supply station. If there is shortfall in a certain location, the national Red Cross blood inventory system makes it clear which facilities are reaching a critical level.

Dr. Seong observed that RC143 is an important example of community involvement. He noted, however that blood collection is still less than 1%, and asked whether the Philippines is self-sufficient. He also asked about response to disasters and how the system copes. Dr. Nalupta

responded that the Red Cross had a hard time managing its logistics in the immediate aftermath of the typhoon disaster the previous year. It took five days until a blood products/blood bank refrigerator and generator could be provided to the disaster zone, due to space restrictions on cargo aircraft. It was only the Red Cross that had blood facilities in Leyte in the post-disaster environment. With regard to the poor blood collection rate of less than 1%, although there is certainly room for improvement, there are no reports from the government that people are dying due to lack of blood supply.

Vietnam: Self-sufficiency of blood and blood products based on VNRD in Vietnam

Dr. Ngo Manh Quan, NIHBT, reported that blood collection has achieved significant improvements in Vietnam in recent years. The percentage of VNRD is 96.24%. Repeat blood donors are a challenge for Vietnam, and the current proportion of total donors is about 31% for repeaters. TTIs screening is also demonstrating improved results year by year. For example, in 2006 the percentage for HBsAg – HBV stood at around 7%, whereas in 2014 the percentage had fallen to 2.11%.

Before 1994 less than 15% of blood demand was being met and more than 90% of blood was taken from paid donors, with no TTIs screening. In the space of little over 20 years this situation has improved to the current situation today, where over 96% of blood is sourced through VNRD. A national steering committee and stakeholders also take an active role in VNRD activities. The National Steering Committee on VNRD oversees provincial, district and commune-level steering committees, which collaborate with regional, area and hospital blood banks, as well as other institutions, including universities.

In terms of the impact of centralization of blood service, following the establishment of five regional blood centers, 10 area blood centers and 70 hospital blood banks, the rate of VNRD by NIHBT has risen to 98.17% in 2014. Challenges that remain include the need to find solutions to stabilize monthly blood collection. Seasonal campaigns are planned that coincide with festivals and holidays, including the Pink Spring Festival. A nationwide campaign is the “Red Journey,” which is implemented across the country. Other massive blood collection events are held throughout the year, resulting in increases in collection results. Vietnam also holds evens on June 14, World Blood Donor Day. Various volunteers are also encouraged to participate in VNRD programs.

In terms of the plan for the future, the overall target for 2020 is to achieve donations from 2% of the population, with VNRD at 100%. This will entail efforts to recruit more new donors and retain donors, establish blood donation laws, organize campaigns, and improve donor services. Another vital factor is to expand collaboration and boost regional and international linkage and exchange.

Coffee break

NIHBT Tour

The delegates toured NIHBT. The delegates were split into three groups, with each group visiting the Department of Recruitment and Planning, the Blood Donation Department, the Blood Component Department and the Blood Screening Department of NIHBT.

Discussion & closing of case study session

Prof. Miyazaki had a question for Dr. Ngo Manh Quan. He noted that Dr. Ngo had detailed specific campaigns at certain times of the year. He noted that in such cases it is likely that there would be huge spike in the space of one or two days and asked how this spike is averaged out.

Dr. Ngo Manh Quan responded that it is at these specific times of the year that severe shortages generally occur. These efforts are also aimed at promoting donor retention. These efforts generally prove effective and help to cover any shortfall and do not usually create issues of stock management.

Dr. Seong and Ms. Tan asked Dr. Ngo Manh Quan about the Pink Spring Festival, noting that there was a significant deferral rate. Dr. Ngo Manh Quan responded that this was due to the sheer volume of donors on the day. Prof. Tri added that prior to 2008 there was a severe lack of blood, particularly around national holiday periods. He noted that the festival was created as a means of promoting blood donations, but blood donation is not the only purpose, nor are people obliged to give blood. The first purpose of the festival is for people to enjoy themselves and also to attract potential donors to the event. Similar festivals are held in regions around Hanoi, which have improved the blood collection situation in regional Vietnam.

A participant from Vietnam noted that the Chinese New Year festival is also held in Vietnam. He asked about the situation in Laos, Cambodia, Malaysia, etc., and whether they have similar challenges at festive times during the year.

Dr. Seong noted that shortages used to be faced during major festive seasons in Malaysia, including Chinese New year and Hari Raya. This was also compounded by the fact that these festive periods coincide with school holidays. Strategies that have been implemented include forecasting of blood stock levels over festive periods. Blood inventory management is very important. In addition, efforts are made to promote donations prior to festive seasons, such as "Donate a pint of blood before you go home for the holidays." As noted in the Singapore presentation it is important to engage people emotionally.

Mr. Phengthong Banchanthavong noted that his center focuses on activities to collect blood prior to festive events such as new year, or prior to school holidays. More efforts are needed to promote such recruitment drives via SMS, etc.

Dr. Hok noted that Cambodia has many national holidays throughout the year, making it difficult to collect blood during festive periods. Prior to each public holiday the National Blood Transfusion Centre (NBTC) makes plans to dispatch mobile blood collection units as a means of supplementing stocks. In terms of the current situation, efforts are being made to improve collection activities on weekends, in response to requests from stakeholders.

Prof. Tri referred to the presentation by Prof. Rothmony in the morning session about the collaboration among seven universities in Phnom Penh and asked about the advantages of such collaborative activities.

Dr. Rothmony responded that the collaborative activities among the seven universities worked so well because efforts were implemented prior to the launch of the campaign. Preparations were fully implemented to provide education and awareness about the importance of blood donation. As blood donations can decrease during school and university holidays it is important to stress to students the importance of continuing to donate regularly (four times a year for men and three times a year for women).

Prof. Tri noted that students are extremely receptive to the importance of blood donation and understanding of the purpose of collecting blood. It is therefore important to work to educate students and gain their trust with regard to the blood donation system.

Prof. Miyazaki noted that Malaysia, Laos and Cambodia also have shortage periods, similarly to Vietnam, but they make specific planning efforts to take advantage of their particular advantages to overcome the shortfalls. He noted that the experience of these countries demonstrates that there are various solutions to issues faced and innovation and creativity are important requirements.

Prof. Miyazaki and Prof. Tri thanked delegates and closed the first day of the meeting.

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. Pooh 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 is 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 if 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.