WEEKLY EPIDEMIOLOGICAL REPORT

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Blood donation safety

Background

Blood transfusion is a life saving measure. The health care system of every country should ensure safe and adequate blood transfusion services. Policy and legislation of a country play a major role in ensuring sustainability of a safe blood transfusion system in a country. WHO recommends all activities related to blood transfusion, from collection of blood to distribution of blood products be coordinated at the national level. It is reported that in 2013, 122 countries had a national blood policy while, 105 had legislative coverage for blood transfusion activities.
Approximately 112.5 million blood donations are collected globally where half is from high income countries. Amount of blood donations are strongly associated with the country's income level. High income countries account for about 16,000 blood donations per collection centre while it is around 5,400 in low and middle income countries.

Blood donors

Global statistics show that women account for only 30% of blood donations, although this varies in some regions. In 18 out of the 118 reporting countries, blood donation contribution from women was less than 10%. It has shown that there is a trend of high contribution from youth in low and middle income countries compared to high income countries. A study done in Brazil stated that many people do not donate blood due to the fear of getting anaemic and due to the lack of knowledge on duration between two consecutive blood donations.

Types of blood donors

There are 3 groups of blood donors.

voluntary unpaid donors

family/replacement donors

paid donors

Since it was found that voluntary unpaid donors are the safest out of the above three groups, World Health Assembly resolution requested all its' member states to make voluntary unpaid donors the base of national blood system in order to increase the safety of national blood system. It has been shown that the number of voluntary unpaid blood donors are increasing in significant numbers in low and middle income countries. World blood donor day falls on 14th June every year to appreciate blood donors around the world and to raise awareness of public on the importance of their contribution to this.

Blood screening

Even though blood donation of voluntary unpaid donors who donate blood on a regular basis is known to be safer than other donors, some voluntary donors too could be seropositive for transfusion transmissible diseases. Because of that, blood screening should be carried out irrespective of the type of donor.

It is mandatory to screen blood for HIV, hepatitis B, hepatitis C and syphilis before transfusion, as recommended by WHO. But out of the reporting countries, 13 countries failed to screen blood for at least 1 of the above mentioned diseases. One of the main reasons for not screening was inadequacy of test kits. The rate of screening in high income countries was 99.6% in high

Contents

income countries compared to 66% in low income countries. The screening rate in upper middle income countries and lower middle income countries lie in between these two figures. Therefore the prevalence of transfusion transmissible infections is also very low in high income countries due to high screening rates. It is also mandatory to test blood for ABO grouping and RhD antibody detection to ensure compatibility.

Clinical use of blood

A reasonable amount of unnecessary blood transfusions are practised worldwide. This leads to increased number of serious adverse events following transfusion, transfusion-transmissible infections and unavailability of blood products for patients who are really in need. WHO has recommended development of a system to monitor transfusion process in this regard. Accordingly, countries have developed national guidelines, transfusion committees, systems of reporting adverse reactions to transfusions and haemovigilance systems. Clinical audits to detect deviations from standards are also being conducted is some countries.

There is a big difference in the age range of patients transfused in high income and low income countries. In high income countries 76% who are transfused are above 65 years while in low income countries 65% are children below 5 years. The reason for this gap is that the indication for blood transfusion in high income countries is mainly as supportive care in major surgeries, severe trauma and haematological malignancies while it is to treat severe childhood anaemia in low income countries.

WHO response

The increasing number of transfusion transmissible infections and the unavailability of blood products brought the attention of WHO to take immediate actions to save people. In order to ensure universal safety and availability of blood, WHO set integrated strategies as follows;

Establishment of national blood system, national blood policies and legislations in favour of safe, sufficient and timely blood transfusions.

Encourage collection of blood from low risk regular voluntary unpaid donors to ensure safety of blood products and effective donor management.

Screening of all donated blood for transfusion transmissible diseases and confirmation of all screening positive donors. Blood grouping and compatibility testing. Establishing systems for processing blood in to blood products.

Minimize unnecessary blood transfusions and use of alternatives for transfusions.

Implementation of systems to assess the quality of blood transfusion systems, good manufacturing practices, documentation and staff training

WHO provides assistance to all its' member countries in developing national blood systems, development of policies and in rendering technical guidance. The WHO global database on Blood Safety (GDBS), which was established in 1998 collects and analyses data on safety of blood transfusion globally. A standard questionnaire is sent to responsible authorities of all countries to collect information on issues related to blood transfusion. These data, together with data gathered during on site visits by experts are published on WHO websites. This provides an account on current status of blood transfusion services around the world.

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Table 1: Selected notifiable diseases reported by Medical Officers of Health 24th – 30th Mar 2018 (13th Week)

RDHS Division	Dengue Fever		Dysentery		Encephalitis		Enteric Fever		Food Poisoning		Leptospirosis		Typhus Fever		Viral Hepatitis		Human Rabies		Chickenpox		Meningitis		Leishmania-sis		WRCD	
	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B	T*	C**
Colombo	75	2274	0	19	0	3	1	16	0	5	6	50	0	3	0	2	0	0	26	222	1	18	0	1	**62**	**100**
Gampaha	29	1354	0	13	0	3	0	8	0	9	4	75	0	2	1	4	0	0	19	240	0	11	1	3	**74**	**100**
Kalutara	26	1050	1	19	0	2	0	1	1	32	10	114	0	2	0	4	0	0	9	175	1	24	0	1	**55**	**100**
Kandy	52	933	1	19	0	4	0	1	3	5	0	12	1	31	2	7	0	0	14	106	0	7	0	6	**61**	**100**
Matale	7	276	2	5	0	1	0	0	0	10	1	14	0	1	0	3	0	0	0	11	0	3	1	30	**61**	**100**
NuwaraEliya	1	49	0	4	0	1	0	5	0	2	3	8	6	47	0	8	0	0	1	85	1	11	0	0	**24**	**100**
Galle	9	272	0	10	0	5	0	0	0	2	15	105	1	11	1	1	0	1	14	69	0	13	1	4	**18**	**80**
Hambantota	25	371	0	4	0	0	0	1	0	4	3	15	0	20	0	0	0	0	5	86	0	2	4	162	**72**	**100**
Matara	13	351	0	11	0	3	0	3	6	20	2	52	2	12	0	2	0	0	7	102	0	3	3	111	**56**	**100**
Jaffna	28	1157	1	41	0	0	1	18	3	177	0	4	3	191	0	0	0	0	6	104	0	5	0	0	**33**	**93**
Kilinochchi	4	97	1	7	0	1	0	8	0	0	0	1	0	3	0	0	0	1	2	20	0	0	0	0	**44**	**100**
Mannar	0	20	1	10	0	0	0	2	0	2	0	1	0	0	0	0	0	0	1	13	0	1	0	0	**35**	**100**
Vavuniya	8	167	0	2	0	3	1	19	0	7	1	13	0	6	0	0	0	1	2	14	0	1	2	2	**56**	**100**
Mullaitivu	1	25	0	2	0	0	0	5	0	9	0	5	0	2	0	0	0	0	0	2	0	0	0	1	**14**	**83**
Batticaloa	115	1642	3	56	0	4	1	2	0	9	2	11	0	1	0	1	0	1	2	43	0	7	0	0	**62**	**100**
Ampara	0	52	0	12	0	0	0	1	0	1	2	18	0	0	0	3	0	0	4	65	0	4	0	1	**68**	**100**
Trincomalee	10	244	2	17	0	0	0	2	0	7	1	15	0	9	0	1	0	0	1	73	0	1	0	6	**34**	**92**
Kurunegala	13	990	2	38	2	5	0	4	0	2	2	36	0	6	3	6	0	1	11	161	0	27	7	65	**70**	**100**
Puttalam	12	931	1	14	0	4	0	3	0	4	0	10	0	6	0	1	0	0	0	43	1	26	1	1	**76**	**100**
Anuradhapura	4	289	2	15	0	2	0	1	0	6	0	45	1	12	0	2	0	0	7	122	1	6	10	107	**43**	**100**
Polonnaruwa	3	82	0	9	0	1	0	0	0	6	1	47	0	0	0	1	0	0	6	62	0	4	3	52	**71**	**92**
Badulla	6	144	0	37	0	1	0	5	0	5	7	45	2	21	0	8	0	0	4	196	0	27	0	2	**50**	**100**
Monaragala	5	386	0	31	0	2	0	1	0	2	4	94	2	45	0	5	0	0	5	52	0	6	0	12	**57**	**100**
Ratnapura	20	531	1	49	0	19	1	7	0	2	13	98	0	13	0	5	0	1	6	97	2	36	5	94	**40**	**100**
Kegalle	22	406	0	18	1	5	0	2	4	54	0	31	2	28	0	6	0	0	4	108	0	13	1	2	**67**	**100**
Kalmune	17	943	0	15	0	0	0	1	0	13	0	1	0	0	0	1	0	0	13	56	0	3	0	1	**46**	**100**
SRILANKA	**505**	**15036**	**18**	**477**	**3**	**69**	**5**	**116**	**17**	**395**	**77**	**920**	**20**	**472**	**7**	**71**	**0**	**6**	**169**	**2327**	**7**	**259**	**39**	**664**	**54**	**98**

Source: Weekly Returns of Communicable Diseases (WRCD).

*T=Timeliness refers to returns received on or before 30th March , 2018 Total number of reporting units 342 Number of reporting units data provided for the current week: 330 **C****-Completeness

A = Cases reported during the current week. **B** = Cumulative cases for the year.

Table 2: Vaccine-Preventable Diseases & AFP

24th - 30th Mar 2018 (13th Week)

Disease	No. of Cases by Province									Number of cases during current week in 2018	Number of cases during same week in 2017	Total number of cases to date in 2018	Total number of cases to date in 2017	Difference between the number of cases to date in 2018 & 2017
	W	C	S	N	E	NW	NC	U	Sab					
AFP*	01	00	01	00	00	00	00	00	00	02	01	13	26	- 50 %
Diphtheria	00	00	00	00	00	00	00	00	00	00	00	00	00	0 %
Mumps	00	00	01	00	01	01	01	01	01	06	05	92	83	10.8 %
Measles	02	00	01	00	02	00	00	00	00	05	02	34	92	- 63 %
Rubella	00	00	00	00	00	00	00	00	00	00	00	04	05	- 20 %
CRS**	00	00	00	00	00	00	00	00	00	00	00	00	00	0 %
Tetanus	00	00	00	00	01	00	00	00	00	01	01	07	06	16.67 %
Neonatal Tetanus	00	00	00	00	00	00	00	00	00	00	00	00	00	0 %
Japanese Encephalitis	00	00	00	00	00	00	00	01	00	01	00	13	21	- 38.1%
Whooping Cough	00	00	00	00	01	00	00	00	00	01	00	09	04	125 %
Tuberculosis	16	00	00	00	06	07	04	18	04	55	98	1816	1944	- 6.5 %

Key to Table 1 & 2

Provinces: **W**: Western, **C**: Central, **S**: Southern, **N**: North, **E**: East, **NC**: North Central, **NW**: North Western, **U**: Uva, **Sab**: Sabaragamuwa.

RDHS Divisions: **CB**: Colombo, **GM**: Gampaha, **KL**: Kalutara, **KD**: Kandy, **ML**: Matale, **NE**: Nuwara Eliya, **GL**: Galle, **HB**: Hambantota, **MT**: Matara, **JF**: Jaffna, **KN**: Killinochchi, **MN**: Mannar, **VA**: Vavuniya, **MU**: Mullaitivu, **BT**: Batticaloa, **AM**: Ampara, **TR**: Trincomalee, **KM**: Kalmunai, **KR**: Kurunegala, **PU**: Puttalam, **AP**: Anuradhapura, **PO**: Polonnaruwa, **BD**: Badulla, **MO**: Moneragala, **RP**: Ratnapura, **KG**: Kegalle.

Data Sources:

Weekly Return of Communicable Diseases: Diphtheria, Measles, Tetanus, Neonatal Tetanus, Whooping Cough, Chickenpox, Meningitis, Mumps., Rubella, CRS,

Special Surveillance: AFP* (Acute Flaccid Paralysis), Japanese Encephalitis

CRS =**Congenital Rubella Syndrome

NA = Not Available

Dengue Prevention and Control Health Messages

Look for plants such as bamboo, bohemia, rampe and banana in your surroundings and maintain them free of water collection.

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ON STATE SERVICE

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