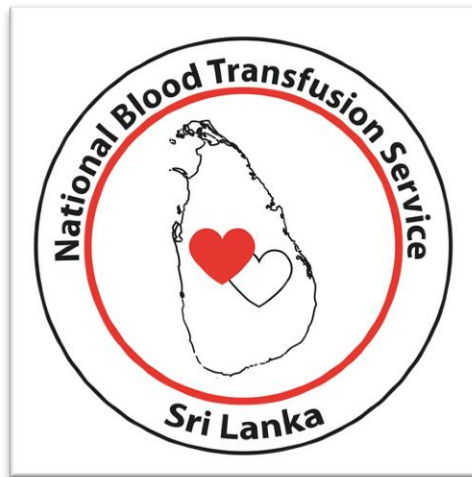


# **ANNUAL STATISTICS REPORT 2016**

**NATIONAL BLOOD TRANSFUSION SERVICE**

**SRI LANKA**



Planning and Statistics Unit  
National Blood Transfusion Service

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## **Introduction**

National Blood Transfusion Service (NBTS), Sri Lanka is a fully government owned special campaign coming under the Ministry of Health. It is the sole supplier of blood and blood products to all government hospitals and majority of private sector hospitals. There are 98 functioning Hospital Based Blood Banks & 2 Standalone Blood Centers affiliated to 19 cluster centers, depending on the geographic distribution.

\* 2 New Blood Banks were established in 2016 – Kiribathgoda & Kattankudy

\* In 2017, planning to open 10 Blood Banks – Siyabalannduwa, Nintavur, Medavachchiya, Eravur, Chavakachcheriya, Deniyaye Theldeniya, Kebethigollawa, Welikanda & Galgamuwa.

## **Vision**

To be a unique model for the world securing Quality assured blood services, through a nationally coordinated system.

## **Mission**

To ensure the quality, safety, adequacy and cost effectiveness of the blood supply and related laboratory, clinical, academic and research in accordance with national requirement and WHO recommendations .

## **National Blood Transfusion Service**

The Director NBTS being the chief executive officer of the organization, who is responsible for implementation and supervision of the common decisions taken by the organization.

The majority of NBTS staffs are affiliated with the 19 cluster centers across the country. Each cluster centre is headed by Consultant Transfusion Physician or a senior medical officer. Each centre also has a Consultant Transfusion Physician who gives clinical guidance.

This report compiles the consolidated statistics of the performance of the blood banks of the National Blood Transfusion Services for the year 2016.

## Geographical distribution of blood banks -2016

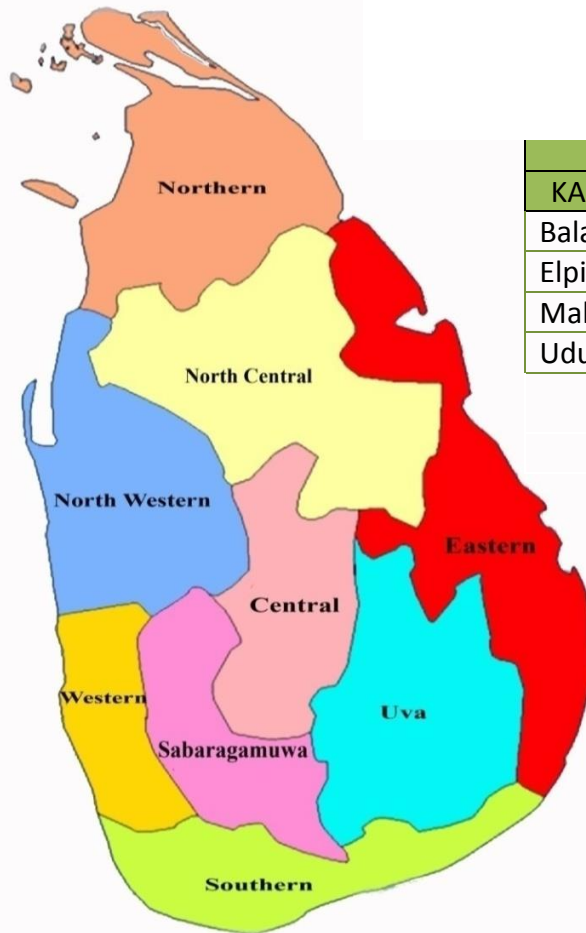
North Central
ANURADHAPURA
Medirigiriya
Padaviya
Polonnaruwa
Thabuttegama

Northern	
VAVNIYA	JAFFNA
Mannar	Killinochchi
Chettikulam	Mulathiv
	Point Pedro
	Thelippalai

Eastern		
BATTICALOA	TRINCOMALEE	AMPARA
Valachchenai	Kantale	Akkarepattu
Kattankudy	Kinniya	Dehiattakandiya
	Muththur	Kalmunai North
		Kalmunai South
		Mahaoya
		Sammanthurai
		Pothuvil

North Western
KURUNEGALA
Dambadeniya
Kuliyapitiya
Nikaweratiya

Central
KANDY
Dabulla
Gampola
Matale
Nawalapitiya
Rikillagaskada
PERADENIYA
Warakapola
Kegalle
Mawanella
Dikkoya
NuwaraEliya



Southern	
KARAPITIYA	KAMBURUGAMUWA
Balapitiya	Kamburupitiya
Elpitiya	Matara
Mahamodara	Walasmulla
Udugama	HAMBANTOTA
	Tangalle
	Tissamaharama

Sabaragamuwa
RATNAPURA
Balangoda
Embilipitiya
Kahawatta

Uva
BADULLA
Bibila
Diyathlawala
Mahiyangana
Monaragala
Welimada
Wellawaya

Western				
NBC	CNTH	CHILAW	CIM	KALUTARA
NHSL	Gampaha	Marawila	Awissawella	Horana
CSHW	Wathupitiwala	Negambo	Homagama	Kethumathi
CSTH	Welisara	Puttlam	Karawanella	Panadura
DMH	Meerigama	Kalpitiya		
LRH	Minuwangoda			
SJGH	Kiribathgoda			
Accident Service				
IDH-Angoda				
CETH-Mulleriyawa				
NINDT-Maligawaththa				
Army Hospital				

## Blood Collection in 2016

Table 1: Details of Blood Collection (*in Units*)

Cluster		Blood bank	No. of mobiles	Total mobile collection	Total In-house collection	Total Collection
Ampara	1	Ampara	113	5,585	803	6,388
	2	Akkaraipattu	12	654	404	1,058
	3	Dehiaththakandiya	29	1,986	287	2,273
	4	Kalmunai AM (S)	18	1,322	216	1,538
	5	Kalmunai Base(N)	17	682	249	931
	6	Mahaoya	11	452	165	617
	7	Samanthurai	5	285	67	352
	8	Pottuvil	0	0	110	110
Anuradhapura	9	Anuradhapura	270	21,795	1,049	22,844
	10	Polonnaruwa	142	9,485	623	10,108
	11	Padaviya	16	1,710	157	1,867
	12	Medirigiriya	0	0	107	107
	13	Thambuththegama	0	0	0	0
Badulla	14	Badulla	201	13,905	794	14,699
	15	Monaragala	92	5,866	331	6,197
	16	Diyathalawa	41	2,251	131	2,382
	17	Mahiyanganaya	15	815	198	1,013
	18	Bilila	0	0	0	0
	19	Welimada	0	0	0	0
	20	Wellawaya	0	0	0	0
Batticaloa	21	Batticaloa	120	5,198	861	6,059
	22	Valachchenai	0	0	0	0
	23	Kattankudy	0	0	35	35
Chilaw	24	Chilaw	83	5,626	371	5,997
	25	Negambo	72	4,574	236	4,810
	26	Puttlam	39	2,233	165	2,398
	27	Marawila	21	1,366	118	1,484
	28	Kalpitiya	0	0	0	0
CIM	29	CIM	212	22,103	1,625	23,728
	30	Avissawella	11	787	731	1,518
	31	Homagama	16	944	136	1,080
	32	Karawanella	0	0	0	0

Cont...

Cluster		Blood bank	No. of mobiles	Total mobile collection	Total In-house collection	Total Collection
CNTH	33	CNTH	178	14,716	503	15,219
	34	Gampaha	75	4,048	464	4,512
	35	Wathupitiwala	57	3,619	255	3,874
	36	Minuwangoda	44	3,270	5	3,275
	37	Meerigama	2	147	37	184
	38	Welisara	0	0	0	0
Hambanthota	39	Hambanthota	31	2,005	205	2,210
	40	Tangalle	10	556	77	633
	41	Tissamaharama	0	0	0	0
Jaffna	42	Jaffna	99	3,620	2,035	5,655
	43	Mullaitive	21	1,988	126	2,114
	44	Tellippalai	30	827	71	898
	45	Killinochchi	24	792	344	1,136
	46	Point Pedro	19	691	186	877
Kalutara	47	Kaluthara	124	7,245	221	7,466
	48	Horana	35	2,562	125	2,687
	49	Kethumathie	35	1,945	219	2,164
	50	Panadura	0	0	130	130
Kamburugamuwa	51	Kamburugamuwa	186	17,147	257	17,404
	52	Matara	51	3,040	216	3,256
	53	Kamburupitiya	0	0	31	31
	54	Walasmulla	0	0	0	0
Kandy	55	Kandy	235	24,081	1,674	25,755
	56	Gampola	24	1,584	134	1,718
	57	Matale	45	2,616	148	2,764
	58	Nawalapitiya	20	1,473	136	1,609
	59	Dambulla	31	2,413	394	2,807
	60	Rikillagaskada	0	0	236	236
Karapitiya	61	Karapitiya	216	17,779	681	18,460
	62	Elpitiya	14	760	143	903
	63	Balapitiya	12	939	97	1,036
	64	Mahamodara	8	509	11	520
	65	Udugama	0	0	0	0

Cont...



Cluster		Blood bank	No. of mobiles	Total mobile collection	Total In-house collection	Total Collection
Kurunegala	66	Kurunegala	303	27,642	1,720	29,362
	67	Kulliyapitiya	58	4,257	349	4,606
	68	Dambadeniya	30	2,135	127	2,262
	69	Nikaweratiya	16	1,145	213	1,358
Colombo	70	NBC	780	64,470	4,850	69,320
	71	NHSL	101	6,606	572	7,178
	72	CSTH	47	2,734	290	3,024
	73	SJGH	41	3,067	133	3,200
	74	Accident Service	0	0	0	0
	75	CSHW	0	0	0	0
	76	DMH	0	0	0	0
	77	IDH-Angoda	0	0	0	0
	78	LRH	0	0	0	0
	79	Maligawatta	0	0	0	0
	80	Mulleriyawa	0	0	0	0
	81	Army Hospital	0	0	180	180
Peradeniya	82	Peradeniya	165	10,724	374	11,098
	83	Kegalle	67	4,994	209	5,203
	84	Nuwaraeliya	37	1,744	230	1,974
	85	Mawenella	19	1,377	77	1,454
	86	Dikkoya	0	0	0	0
	87	Warakapola	0	0	0	0
Rathnapura	88	Rathnapura	176	11,578	515	12,093
	89	Embilipitiya	38	2,758	119	2,877
	90	Balangoda	8	540	174	714
	91	Kahawatta	0	0	67	67
Trincomalee	92	Trincomalee	66	4,543	397	4,940
	93	Kanthale	0	0	102	102
	94	Kinniya	0	0	0	0
	95	Muthur	0	0	0	0
Vavuniya	96	Vavuniya	53	3,224	295	3,519
	97	Mannar	10	383	135	518
	98	Chettikulam	0	0	0	0
		<b>Total</b>	<b>5,197</b>	<b>383,917</b>	<b>30,258</b>	<b>414,175</b>

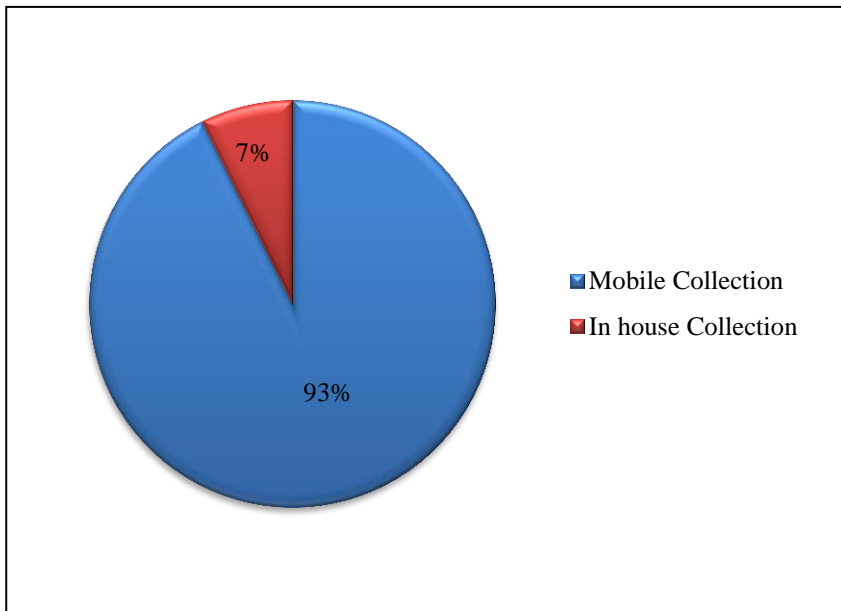


Figure 1: Distribution of total blood collection by mode of collection

### Yearly Improvement of blood collection

Table 2: Comparison of Annual Blood Collection

Year	Voluntary collection	Replacement collection	Total collection
2012	349,423	2,182	351,605
2013	380,808	0	380,808
2014	380,367	0	380,367
2015	395,500	0	395,500
2016	414,175	0	414,175

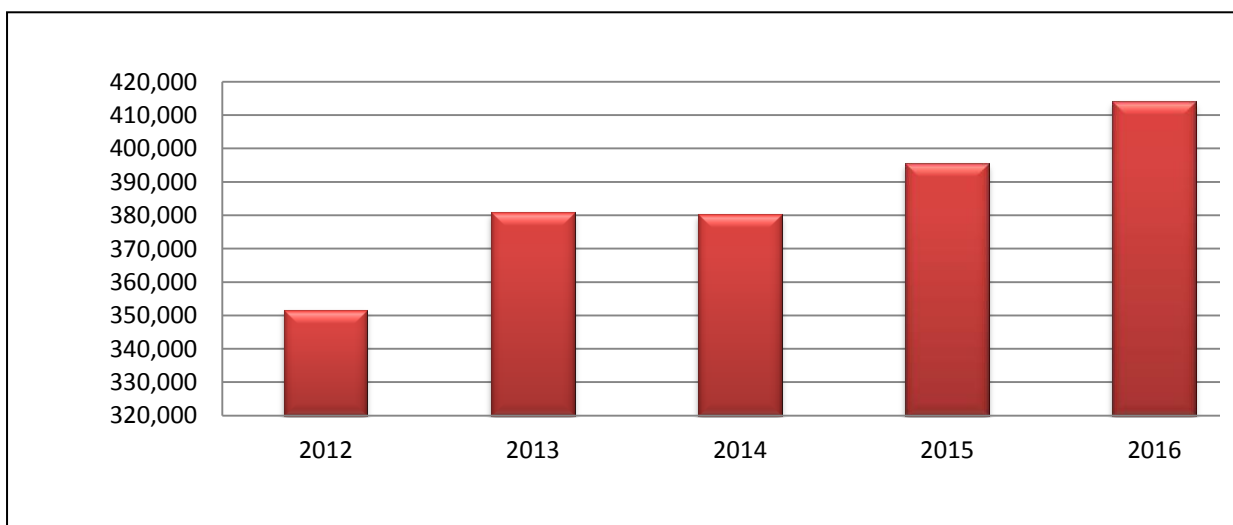


Figure 2: Yearly improvement of blood collection

## Blood Collection in Cluster wise

Table 3: Total blood collection cluster wise

Cluster	No. of mobiles	Total mobile collection	Total in-house collection	Total Collection
Ampara	205	10,966	2,301	13,267
Anuradhapura	428	32,990	1,936	34,926
Badulla	349	22,837	1,454	24,291
Batticaloa	120	5,198	896	6,094
Chilaw	215	13,799	890	14,689
CIM	239	23,834	2,492	26,326
CNTH	356	25,800	1,264	27,064
Hambanthota	41	2,561	282	2,843
Jaffna	193	7,918	2,762	10,680
Kalutara	194	11,752	695	12,447
Kamburugamuwa	237	20,187	504	20,691
Kandy	355	32,167	2,722	34,889
Karapitiya	250	19,987	932	20,919
Kurunegala	407	35,179	2,409	37,588
Colombo	969	76,877	6,025	82,902
Peradeniya	288	18,839	890	19,729
Rathnapura	222	14,876	875	15,751
Trincomalee	66	4,543	499	5,042
Vavuniya	63	3,607	430	4,037
<b>Total</b>	<b>5,197</b>	<b>383,917</b>	<b>30,258</b>	<b>414,175</b>

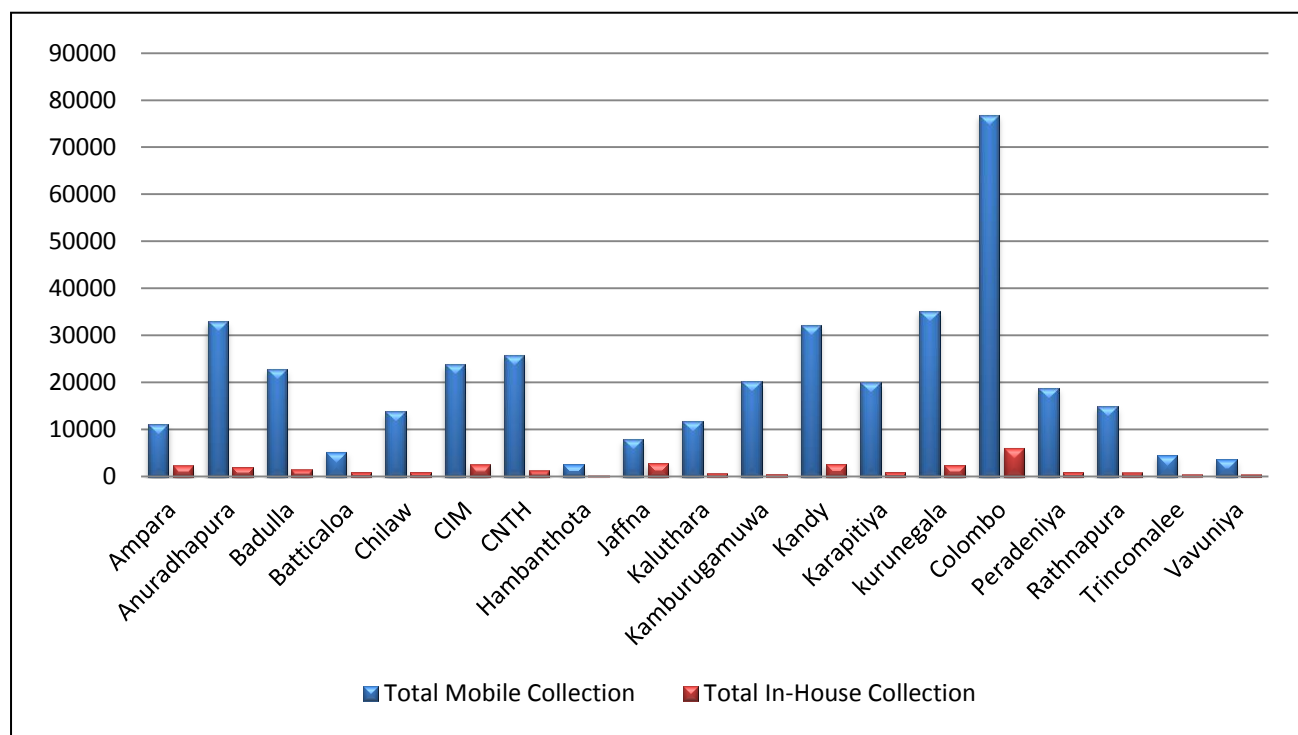


Figure 3: Total blood collection cluster wise

## Comparison of Cluster collection with previous year

Table 4: Comparison of cluster blood collection with previous year

Cluster	2015	2016
Ampara	12,135	13,277
Anuradhapura	34,347	34,947
Badulla	22,752	24,291
Batticaloa	5,567	6,092
Chilaw	13,920	14,689
CIM	26,866	26,326
CNTH	22,626	27,064
Hambanthota	1,779	2,843
Jaffna	11,915	10,680
Kaluthara	12,788	12,447
Kamburugamuwa	20,981	20,691
Kandy	33,158	34,940
Karapitiya	20,580	20,919
Kurunegala	34,521	37,588
Colombo	80,536	82,902
Peradeniya	18,740	19,729
Rathnapura	13,189	15,745
Trincomalee	5,071	5,042
Vavuniya	4,029	4,037
<b>Total</b>	<b>395,500</b>	<b>414,175</b>

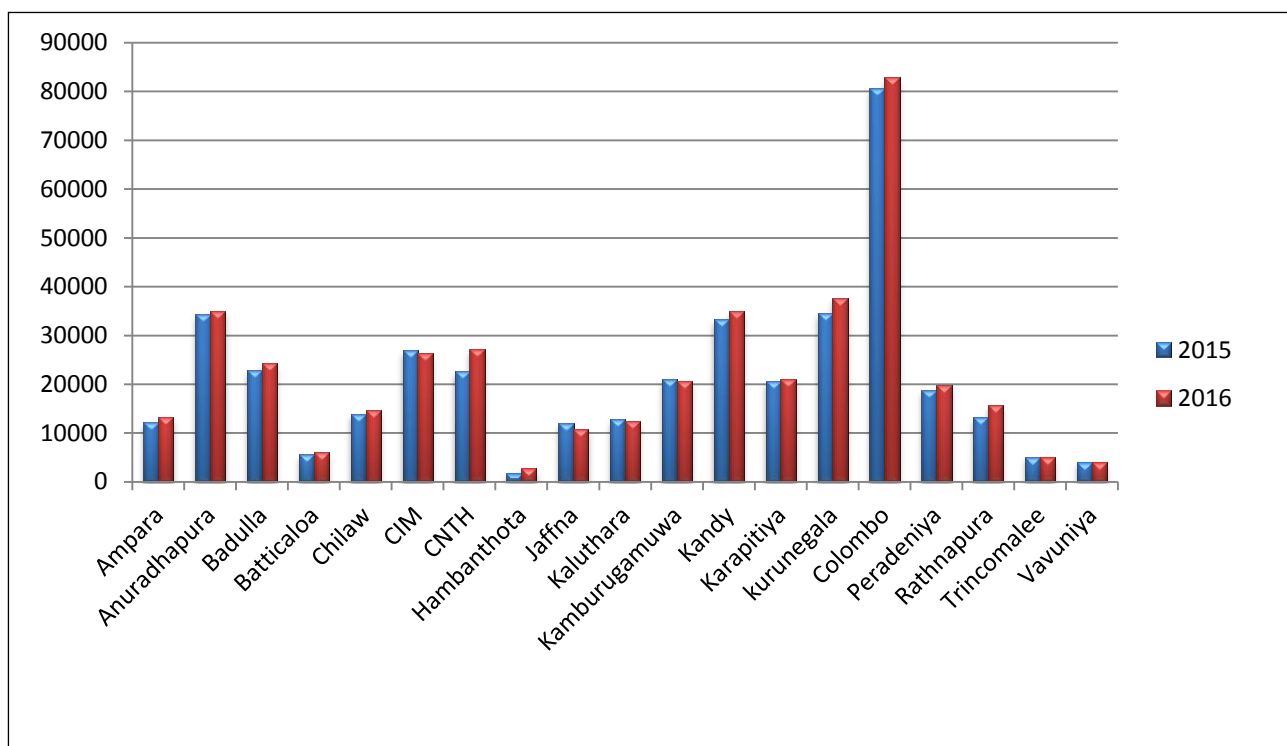


Figure 4: Comparison of cluster blood collection with previous year

## Monthly Blood Collection

Table 5: Monthly variation total blood collection

Month	No of mobiles	Mobile collection	In house collection	Total Collection
January	389	31,032	2,699	33,731
February	390	31,366	1,186	33,552
March	459	30,475	2,247	32,722
April	383	25,735	2,513	28,248
May	340	32,674	3,233	35,907
June	401	30,213	2,647	32,860
July	448	32,866	2,306	35,172
August	454	32,923	2,230	35,153
September	453	31,449	2,676	34,125
October	503	34,936	2,598	37,534
November	508	36,981	2,545	39,526
December	469	33,267	2,378	35,645
<b>Total</b>	<b>5,197</b>	<b>383,917</b>	<b>30,258</b>	<b>414,175</b>

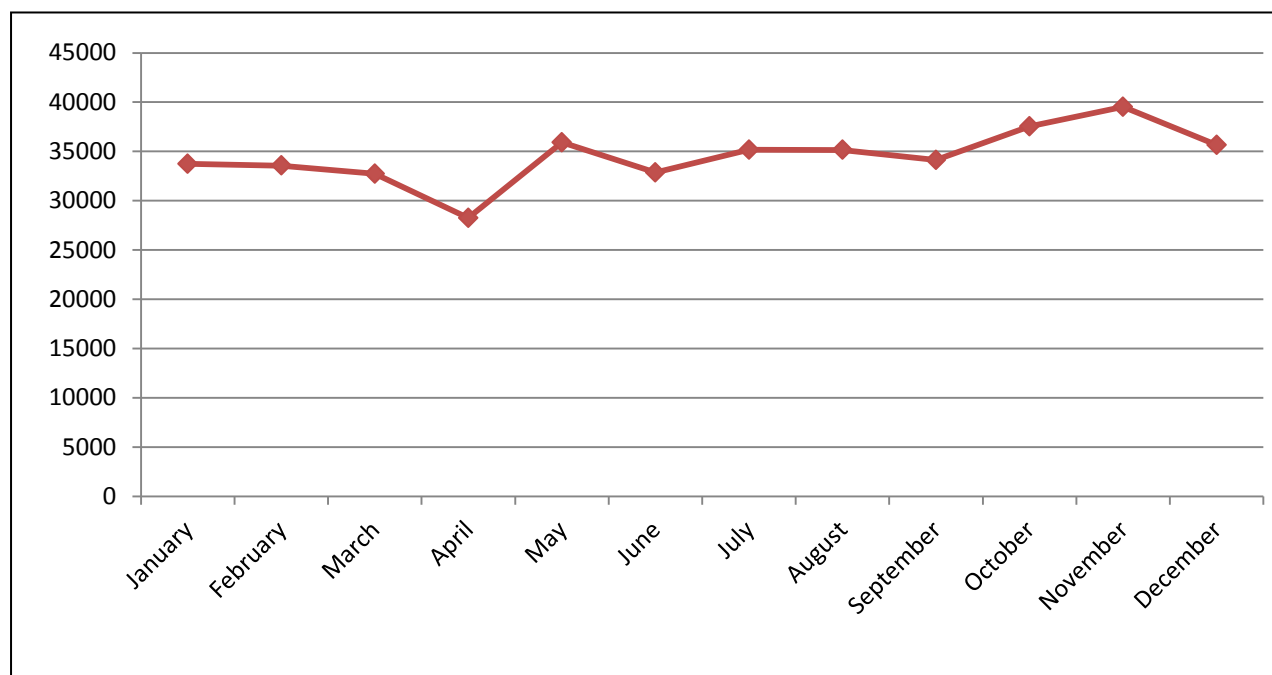


Figure 5: Monthly variation of blood collection

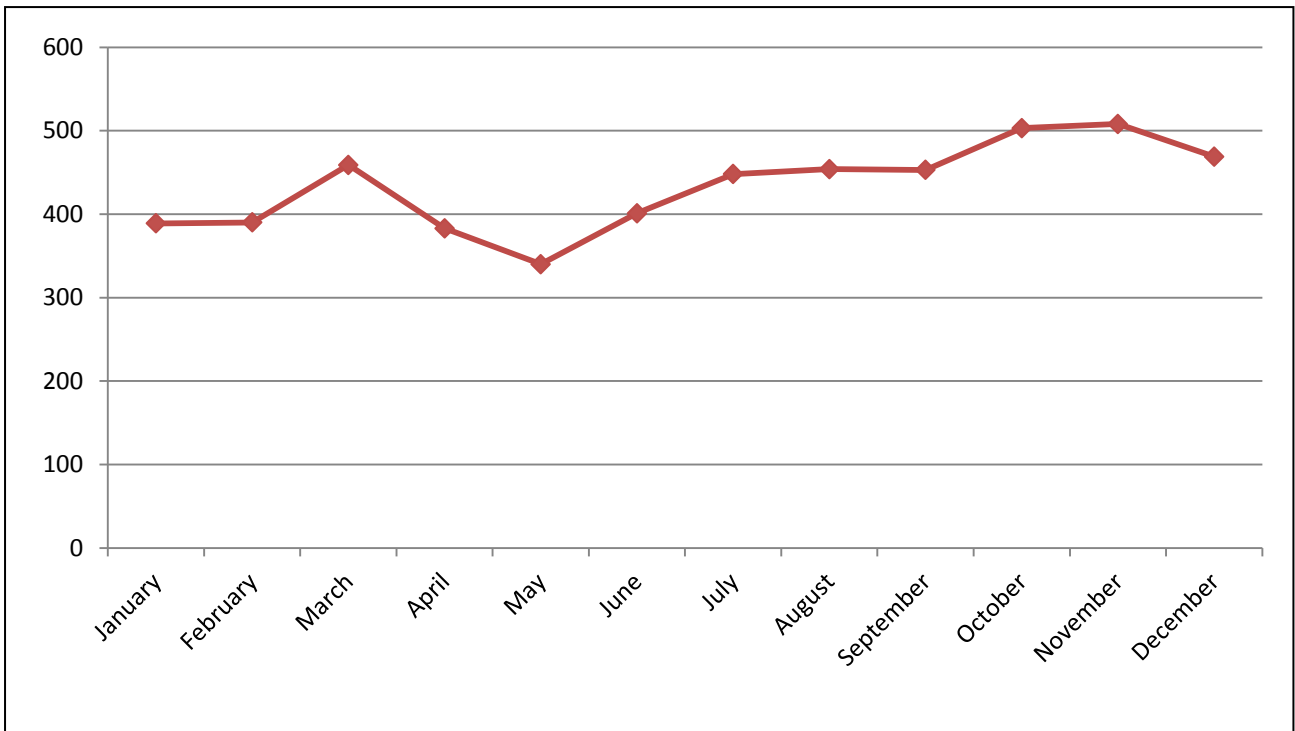
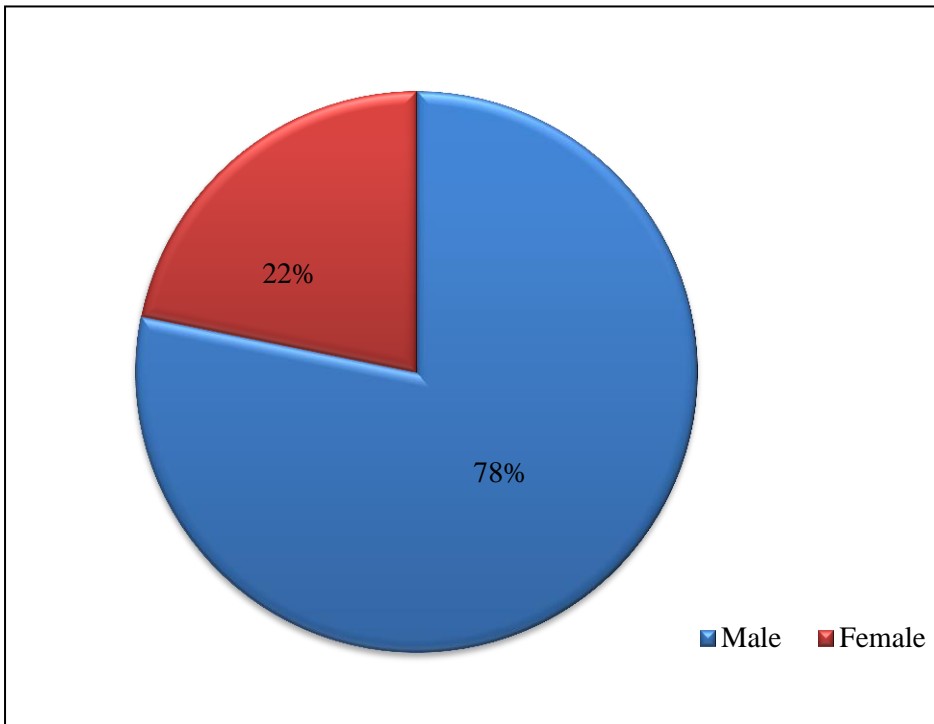


Figure 6: Monthly variation of number of mobiles

**Gender wise distribution of blood collection**



Male- 323,864 (78%)  
 Female- 90,311 (22%)

Figure 7: Gender difference in blood donation in Sri Lanka

## ABO and Rh group distribution of blood collection

Table 6: ABO and Rh group distribution of blood collection

	A	B	AB	O	Bombay O	Other	Total
Rh D Positive	85,601	109,232	22,134	173,510	40	63	<b>390,580</b>
Percentage	20.66%	26.37%	5.34%	41.89%	0.009%	0.015%	<b>94.30%</b>
Rh D Negative	5,318	6,225	1,285	10,733	0	0	<b>23,561</b>
Percentage	1.28%	1.50%	0.31%	2.59%	0%	0%	<b>5.68%</b>
Weak D	28	0	0	6	0	0	<b>34</b>
Percentage	0.006%	0%	0%	0.001%	0%	0%	<b>0.008%</b>
<b>Total</b>	<b>90,947</b>	<b>115,457</b>	<b>23,419</b>	<b>184,249</b>	<b>40</b>	<b>63</b>	<b>414,175</b>

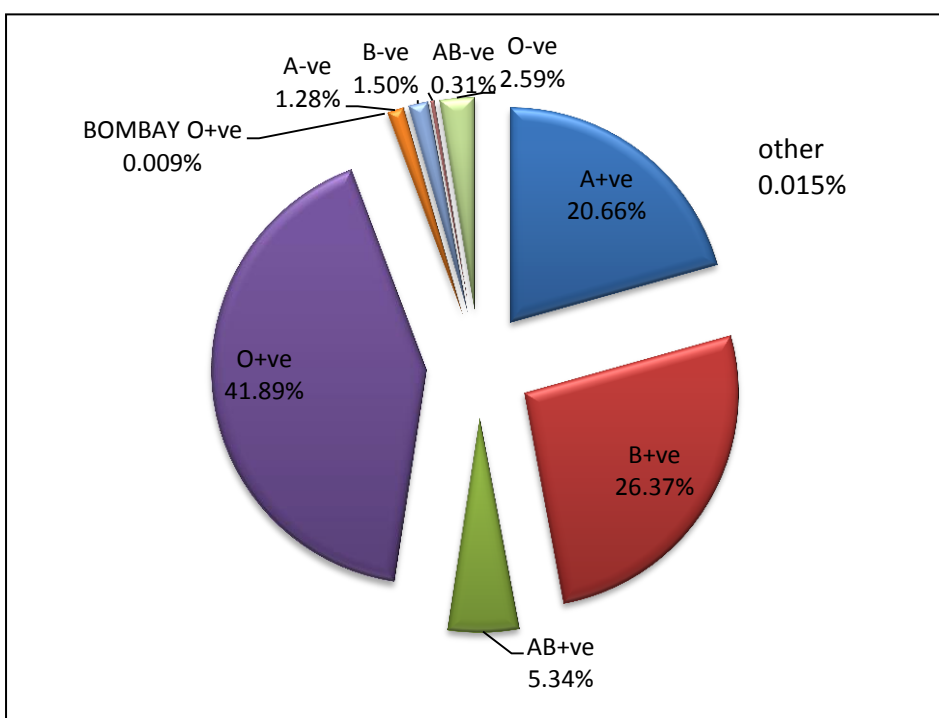


Figure 8: ABO and Rh distribution of donor population

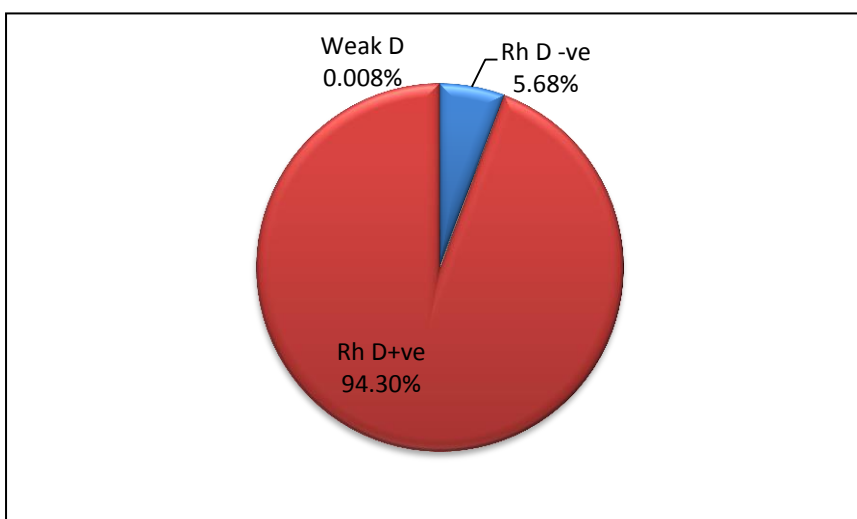


Figure 9: Rh distribution of donor population

## Preparation of Components

Table 7: Details of Component Production

Cluster		Blood Bank	RCC	PLT	FFP	CRYO	Stored Plasma	CSP
Ampara	1	Ampara	11,932	5,476	10,818	3415	85	393
	2	Akkaraipattu	400	0	0	0	0	0
	3	Dehiaththakandiya	74	0	0	0	0	0
	4	Kalmunai AM(S)	336	0	0	0	119	0
	5	Kalmunai Base(N)	230	0	0	0	234	0
	6	Mahaoya	160	0	0	0	0	0
	7	Pottuvil	0	0	0	0	0	0
	8	Samanthurai	85	0	0	0	85	0
Anuradhapura	9	Anuradhapura	27,438	12,348	27,439	5371	0	5280
	10	Medirigiriya	89	0	0	0	0	0
	11	Padaviya	1,437	0	0	0	0	0
	12	Polonnaruwa	9,821	2,380	9,965	1061	0	0
	13	Thambuththegama	0	0	0	0	0	0
Badulla	14	Badulla	19,687	13,922	19,614	2001	24	527
	15	Bibilla	0	0	0	0	0	0
	16	Diyathalawa	0	0	0	0	0	0
	17	Mahiyanganaya	0	0	0	0	0	0
	18	Monaragala	7,863	4,603	4,296	547	0	334
	19	Welimada	0	0	0	0	0	0
	20	Wellawaya	0	0	0	0	0	0
Batticaloa	21	Batticaloa	6,062	5,109	5,352	1889	488	208
	23	Kattankudy	0	0	0	0	0	0
	22	Valachchenai	0	0	0	0	0	0
Chilaw	24	Chilaw	367	5	325	0	63	0
	28	Kalpitiya	0	0	0	0	0	0
	25	Marawila	119	0	118	0	0	0
	26	Negambo	198	0	73	0	125	0
	27	Puttlam	358	0	358	0	0	0
CIM	29	CIM	24,109	24,552	24,106	0	0	0
	30	Awissawella	794	0	739	0	0	0
	31	Homagama	964	175	395	8	0	0
	32	Karawanella	0	0	0	0	0	0
CNTH	33	CNTH	17,460	8,561	15,320	4764	520	4834
	34	Gampaha	555	0	453	0	13	5
	37	Meerigama	0	0	0	0	0	0
	36	Minuwangoda	0	0	0	0	0	0
	35	Wathupitiwala	9,127	1,511	5,329	5296	85	177
	38	Welisara	0	0	0	0	0	0



Cluster		Blood Bank	RCC	PLT	FFP	CRYO	Stored Plasma	CSP
Colombo	76	NBC	79,341	74,000	73,541	22232		7163
	78	SJGH- Kotte	3,144	1,656	2,837	305	0	305
	79	CSTH	181	0	180	0	0	0
	81	CSHW	0	0	0	0	0	0
	80	DMH	0	0	0	0	0	0
	84	Accident Serv.	0	0	0	0	0	0
	86	IDH-Angoda	0	0	0	0	0	0
	82	LRH	0	0	0	0	0	0
	85	Maligawatta	0	0	0	0	0	0
	83	Mulleriyawa	0	0	0	0	0	0
	77	NHSL	0	0	0	0	0	0
	87	Army Hospital	177	177	177	0	0	0
Hambanthota	52	Hambanthota	1,293	713	1,448	130	0	130
	54	Tangalle	15	0	0	0	0	0
	53	Tissamaharama	0	0	0	0	0	0
Jaffna	39	Jaffna	15,749	7,175	9,753	2699	100	701
	40	Kilinochchi	964	545	611	0	0	0
	41	Mullative	206	0	197	0	0	0
	42	Point Pedro	784	0	0	0	784	0
	43	Thellippalai	0	0	0	0	0	0
Kaluthara	44	Kaluthara	8,953	2,963	17,419	870	0	654
	45	Horana	125	0	110	0	0	0
	46	Kethumathie	112	0	121	0	0	0
	47	Panadura	126	0	126	0	0	0
Kamburugamuwa	48	Kamburugamuwa	21,360	9,876	18,894	7067	33	1429
	49	Kamburupitiya	0	0	0	0	0	0
	50	Matara	0	0	0	0	0	0
	51	Walasmulla	0	0	0	0	0	0
Kandy	55	Kandy	26,739	15,453	25,994	5019	0	761
	58	Dambulla	2,860	0	394	0	2106	132
	59	Gampola	436	0	392	0	0	0
	56	Matale	2,996	2,200	2,897	202	82	106
	57	Nawalapitiya	1,144	117	871	0	0	0
	60	Rikillagaskada	224	0	0	0	8	1
Karapitiya	67	Karapitiya	21,379	12,633	18,118	1014	311	710
	68	Balapitiya	890	0	0	0	890	0
	69	Elpitiya	903	0	0	0	899	0
	70	Mahamodara	0	0	0	0	70	0
	71	Udugama	0	0	0	0	0	0

Cont...

Cluster		Blood Bank	RCC	PLT	FFP	CRYO	Stored Plasma	CSP
Kurunegala	72	Kurunegala	30,329	21,150	29,852	2592	0	2592
	73	Dambadeniya	2,125	0	843	0	1147	0
	74	Kuliyapitiya	3,904	0	3,537	0	352	0
	75	Nikaweratiya	1,298	0	0	0	1215	0
Peradeniya	61	Peradeniya	11,395	11,057	11,414	1348	0	475
	65	Dikkoya	0	0	0	0	0	0
	63	Kegalle	5,253	2,703	3,841	1204	0	915
	64	Mawenella	464	0	0	0	0	0
	62	Nuwaraeliya	2,059	0	1,943	0	0	0
	66	Warakapola	0	0	0	0	0	0
Rathnapura	88	Rathnapura	13,982	5,309	12,789	3507	0	702
	89	Balangoda	0	0	0	0	0	0
	90	Embilipitiya	2,843	0	1,909	0	0	0
	91	Kahawatta	0	0	0	0	0	0
rincomalee	92	Trincomalee	4,890	2,275	4,105	789	0	789
	93	Kanthale	0	0	0	0	0	0
	94	Kinniya	0	0	0	0	0	0
	95	Muthur	0	0	0	0	0	0
Vavuniya	96	Vavuniya	365	0	0	0	0	0
	97	Chettikulam	0	0	0	0	0	0
	98	Mannar	286	0	286	0	0	0
		<b>Total</b>	<b>408,959</b>	<b>248,644</b>	<b>369,299</b>	<b>73,330</b>	<b>9,838</b>	<b>29,323</b>

Table 8: Component preparation and comparison with previous years.

	2013	2014	2015	2016
RCC	380,760	379,774	393,348	408,959
Platelets	189,879	220,335	244,071	248,644
FFP	282,231	344,091	344,788	369,299

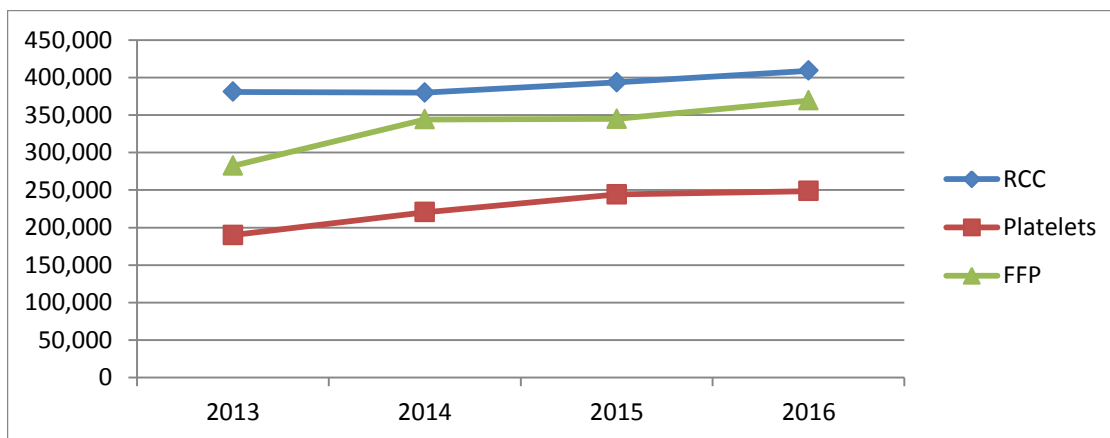


Figure 10: Comparison of blood component preparation

## **Platelet Aphaeresis Donations- 2016**

Table 9: Platelet aphaeresis donations

<b>Blood Bank</b>	<b>No. of procedures</b>	<b>No. of Units collected</b>
Ampara	36	234
Anuradhapura	4	25.4
Army Hospital	6	34
Badulla	55	477.4
Batticaloa	153	1089
CIM	479	4603
CNTH	44	495
Jaffna	35	218
Kamburugamuwa	2	20
Kandy	184	2336
NBC	739	8559.1
<b>Total</b>	<b>1,737</b>	<b>18,090.9</b>

## Statistics of RCC Cross matches & Issues

Table 10: Distribution of red blood cell requests, cross matches and issues

Cluster		Blood Bank	Requests	Cross match	Issues	CM%	C:I ratio
Ampara	1	Ampara	8,586	6,990	4,770	81%	1.5
	2	Akkaraipattu	3,334	3,324	835	100%	4.0
	3	Dehiatthakandiya	2,888	2,851	1,184	99%	2.4
	4	Kalmunai AM(S)	3,641	3,511	1,081	96%	3.2
	5	Kalmunai Base(N)	3,317	2,732	1,064	82%	2.6
	6	Mahaoya	1,157	1,135	482	98%	2.4
	7	Pottuvil	606	603	190	100%	3.2
	8	Samanthurai	2,216	1,669	517	75%	3.2
Anuradhapura	9	Anuradhapura	51,579	35,159	19,715	68%	1.8
	10	Medirigiriya	2,139	2,051	934	96%	2.2
	11	Padaviya	1,202	1,149	989	96%	1.2
	12	Polonnaruwa	22,529	22,662	8,097	101%	2.8
	13	Thambuttegama	3,786	3,344	1,225	88%	2.7
Badulla	14	Badulla	22,835	14,783	11,010	65%	1.3
	15	Bilila	3,177	3,116	1,263	98%	2.5
	16	Diyatalawa	5,912	5,912	2,917	100%	2.0
	17	Mahiyanganaya	4,959	8,538	2,982	172%	2.9
	18	Monaragala	14,005	14,132	6,407	101%	2.2
	19	Welimada	941	1,200	698	128%	1.7
	20	Wellawaya	1,040	999	798	96%	1.3
Batticaloa	21	Batticaloa	17,835	17,835	7,360	100%	2.4
	22	Valachchenai	2,056	2,103	888	102%	2.4
	23	Kattankudy	0	0	0	0%	0.0
Chilaw	24	Chilaw	14,142	9,196	5,416	65%	1.7
	25	Marawila	7,717	7,267	2,403	94%	3.0
	26	Negambo	13,738	9,415	3,275	69%	2.9
	27	Puttalam	9,665	9,786	3,703	101%	2.6
	28	Kalpitiya	0	0	0	0%	0.0
CIM	29	CIM	27,842	27,369	18,150	98%	1.5
	30	Avissawella	12,584	12,491	3,213	99%	3.9
	31	Homagama	7,839	7,240	1,988	92%	3.6
	32	Karawanella	5,396	5,531	2,133	103%	2.6
CNTH	33	CNTH	47,223	30,757	15,478	65%	2.0
	34	Gampaha	20,501	10,583	4,920	52%	2.2
	35	Wathupitiwala	13,463	12,032	3,325	89%	3.6
	36	Minuwangoda	198	199	122	101%	1.6
	37	Meerigama	530	532	372	100%	1.4
	38	Welisara	4,841	4,769	2,402	99%	2.0

Cont...

Cluster		Blood Bank	Requests	Cross match	Issues	CM%	C:I ratio
Jaffna	39	Jaffna	24,279	11,418	8,735	47%	1.3
	40	Killinochchi	5,141	5,228	2,137	102%	2.4
	41	Mullaitive	1,421	1,320	557	93%	2.4
	42	Point Pedro	1,891	1,700	631	90%	2.7
	43	Thellippallai	2,476	2,245	1,946	91%	1.2
Kaluthara	44	Kaluthara	12,939	6,837	3,531	53%	1.9
	45	Horana	12,078	9,755	3,015	81%	3.2
	46	Kethumathie	4,106	1,437	574	35%	2.5
	47	Panadura	5,221	5042	2,167	97%	2.3
Kamburugamuwa	48	Kamburugamuwa	0	0	0	0%	0.0
	49	Matara	14,579	9,158	6,170	63%	1.5
	50	Kamburupitiya	2,143	2,140	669	100%	3.2
	51	Walasmulla	398	414	240	104%	1.7
Hambanthota	52	Hambanthota	14,558	14,723	4,455	101%	3.3
	53	Tangalle	8,996	8,846	2,257	98%	3.9
	54	Thissamaharama	3,124	3,169	1,022	101%	3.1
Kandy	55	Kandy	72,691	36,523	21,439	50%	1.7
	56	Dambulla	9,945	9,311	2,901	94%	3.2
	57	Matale	12,667	12,151	3,219	96%	3.8
	58	Nawalapitiya	9,805	9,513	2,018	97%	4.7
	59	Gampola	4,873	7,288	2,351	150%	3.1
	60	Rikillagaskada	1,831	1,792	373	98%	4.8
Peradeniya	61	Peradeniya	24,669	25,769	8,099	104%	3.2
	62	Warakapola	701	624	442	89%	1.4
	63	Kegalle	17,052	15,900	4,859	93%	3.3
	64	Mawanella	5,358	5,545	1,395	103%	4.0
	65	Dikkoya	1,504	2,504	1,019	166%	2.5
	66	NuwaraEliya	8,742	8,742	2,555	100%	3.4
Karapitiya	67	Karapitiya	50,764	82,267	15,988	162%	5.1
	68	Balapitiya	7,227	7,416	1,764	103%	4.2
	69	Elpitiya	7,168	7,342	2,061	102%	3.6
	70	Mahamodara	10,356	13,808	1,989	133%	6.9
	71	Udugama	766	668	496	87%	1.3
Kurunegala	72	Kurunegala	68,878	63,052	30,085	92%	2.1
	73	Dambadeniya	4,289	4,006	988	93%	4.1
	74	Kuliyapitiya	9,335	9,444	4,086	101%	2.3
	75	Nikaweratiya	6,644	6,057	2,194	91%	2.8

Cont...

Cluster		Blood Bank	Requests	Cross match	Issues	CM%	C:I ratio
Colombo	76	NBC	17,242	16,473	6,893	96%	2.4
	77	NHSL	67,143	42,103	23,330	63%	1.8
	78	Accident Service	34,270	26,789	8,520	78%	3.1
	79	CSTH	38,891	10,488	9,422	27%	1.1
	80	CSHW	12,266	12,570	1,878	102%	6.7
	81	DMH	9,809	9,735	1,058	99%	9.2
	82	SJGH-Kotte	20,839	10,938	5,079	52%	2.2
	83	LRH	14,628	16,065	6,511	110%	2.5
	84	Army Hospital	3,856	3,577	1,060	93%	3.4
	85	IDH-Angoda	4,365	4,086	765	94%	5.3
	86	Mulleriyawa	2,630	3,532	732	134%	4.8
	87	Maligawatta	2,955	3,063	1,201	104%	2.6
Rathnapura	88	Rathnapura	29,909	13,517	9,841	45%	1.4
	89	Balangoda	5,815	6,124	1,145	105%	5.3
	90	Embilipitiya	11,491	11,645	3,682	101%	3.2
	91	Kahawatta	3,386	3,238	1,205	96%	2.7
Trincomalee	92	Trincomalee	8,768	10,430	3,540	119%	2.9
	93	Kantale	1,903	1,866	616	98%	3.0
	94	Kinnaya	1,140	1,140	340	100%	3.4
	95	Muthur	819	819	326	100%	2.5
Vavuniya	96	Vavuniya	9,784	9,477	3,704	97%	2.6
	97	Chettikulam	372	380	298	102%	1.3
	98	Mannar	2,672	6,603	1,028	247%	6.4
<b>Total</b>			<b>1,118,987</b>	<b>940,777</b>	<b>382,907</b>	<b>84%</b>	<b>2.5</b>

#### Total issues of other blood component

	FFP	Platelets(WBD/AP)	Cryo	CSP/Plasma	Buffy coat
Issues	156,363	143,695	54,995	10,184	2,838

## Screening of donated blood for Transfusion Transmitted Infections (TTI tests)

Table 11: Prevalence of TTI and comparison with previous years

Year	2012	2013	2014	2015	2016
Total Collection	351,605	380,808	380,367	395,500	414,175
HIV (scr.+ve)	529	625	648	646	696
Prevalence	0.15%	0.16%	0.17%	0.16%	0.17%
HIV (Conf. +ve)	16	16	26	21	25
Prevalence	0.004%	0.004%	0.007%	0.005%	0.006%
Hepatitis B (rpt. +ve)	405	273	394	409	505
Prevalence	0.12%	0.07%	0.10%	0.10%	0.12%
Hepatitis C (rpt. +ve)	1025	953	657	800	847
Prevalence	0.30%	0.25%	0.17%	0.2%	0.20%
VDRL +ve	892	1,016	1,265	1,125	1,027
Prevalence	0.25%	0.27%	0.33%	0.28%	0.25%
TPPA +ve	170	180	152	175	152
Prevalence	0.05%	0.05%	0.04%	0.04%	0.04%
MP +ve	0	0	0	0	0
Prevalence	0%	0%	0%	0%	0%

(Scr.+ve) - Screening positive; (conf.+ve) – confirmed positive; (rpt.+ve) – repeat positive; MP- Malaria parasites; VDRL – Venereal Disease Research Laboratory ; TPPA- *Treponema pallidum* particle agglutination assays )

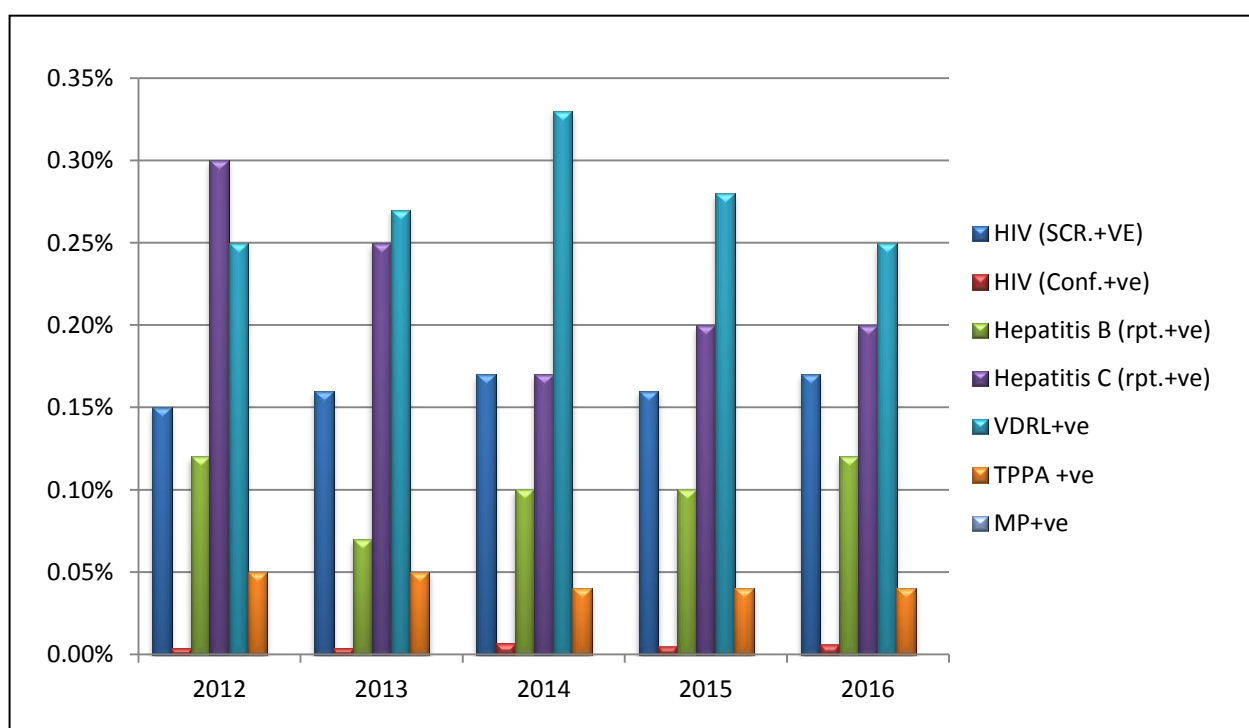


Figure 11: Prevalence of TTI and comparison with previous years

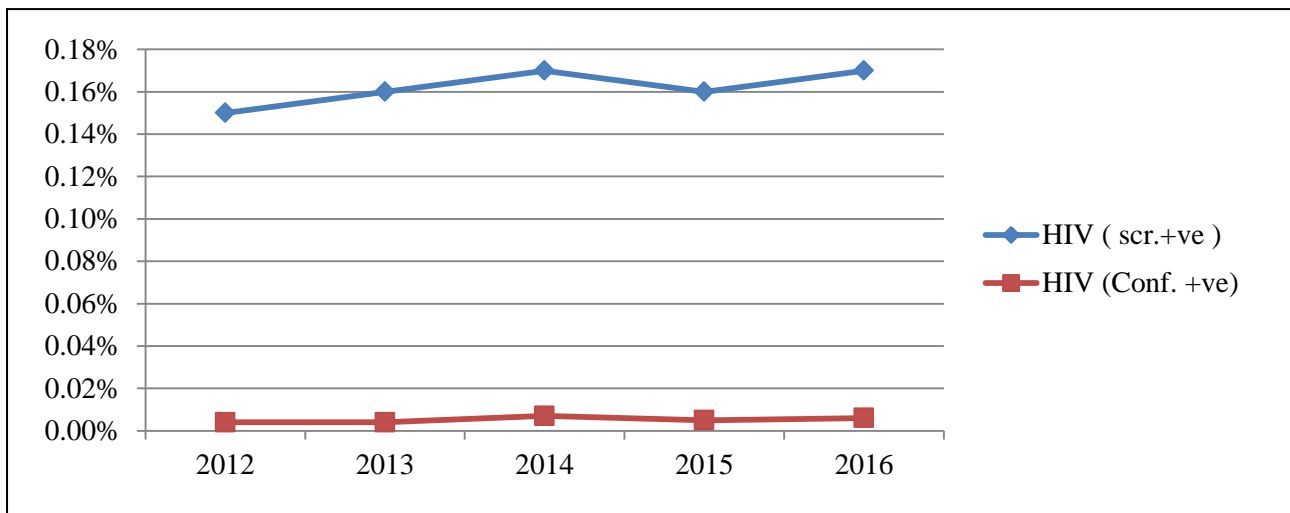


Figure 12: HIV screening positive and confirmed positive prevalence in total collected blood

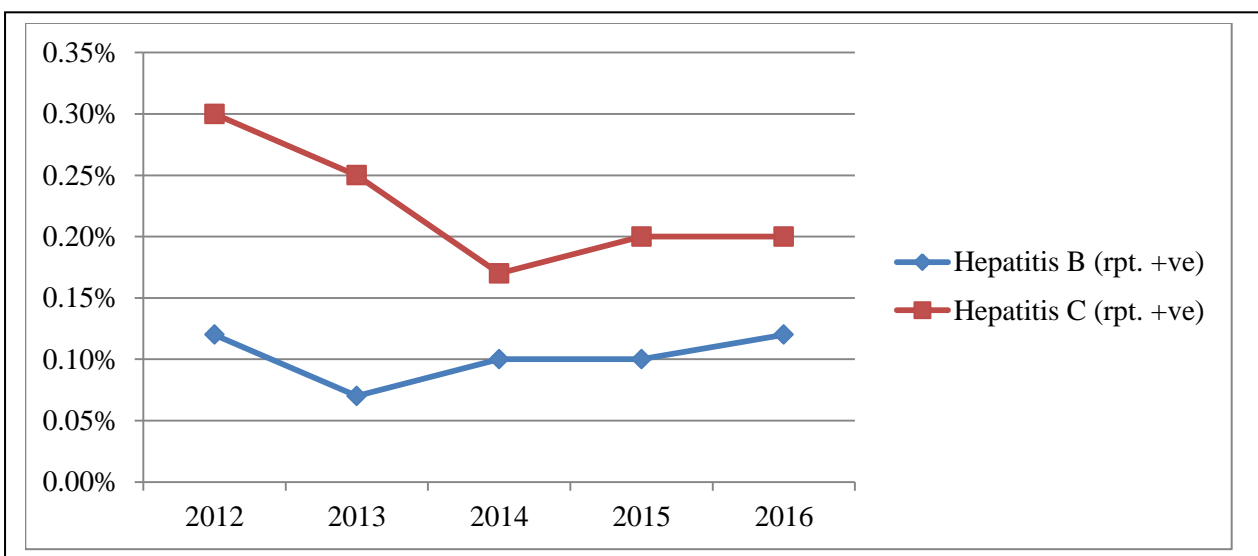


Figure 13: Hepatitis prevalence in donated blood

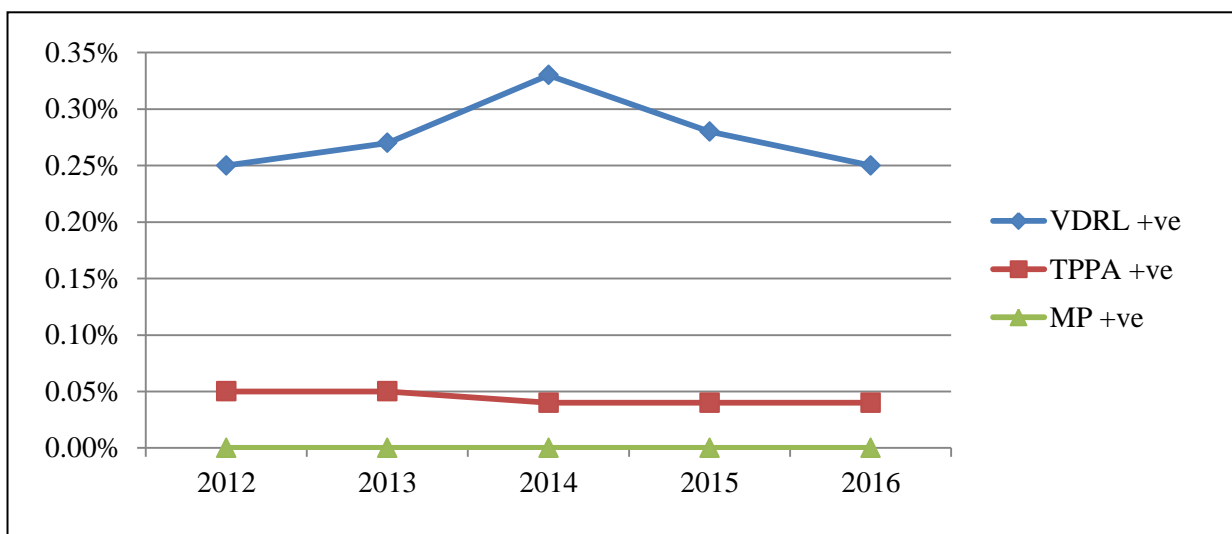


Figure 14: Comparison of VDRL, TPPA and MP positive prevalence



## Red Cell Concentrate (RCC) discards

Table 12: RCC discards by blood banks

Cluster		Blood Bank	Screening Positive	Past expiry	Insufficient	High risk	Pack damage	Other	Total Discards
Ampara	1	Ampara	189	200	7	0	12	64	472
	2	Akkaraipattu	2	0	0	0	2	0	4
	3	Dehiatthakandiya	0	9	0	0	2	0	11
	4	Kalmunai AM(S)	0	2	0	0	0	0	2
	5	Kalmunai Base(N)	1	5	0	0	0	0	6
	6	Mahaoya	1	0	0	0	0	0	1
	7	Pothuvil	0	0	0	0	0	0	0
	8	Samanthurai	1	10	0	0	0	0	11
Anuradhapura	9	Anuradhapura	283	335	0	0	1	7	626
	10	Medirigiriya	0	22	0	0	0	14	36
	11	Padaviya	11	34	19	11	0	0	75
	12	Polonnaruwa	107	103	0	12	3	126	351
	13	Thambuttegama	0	14	0	0	4	2	20
Badulla	14	Badulla	107	171	0	0	0	4	282
	15	Bibilla	0	0	0	0	2	52	54
	16	Diyatalawa	35	67	22	0	2	22	148
	17	Mahiyanganaya	11	59	2	0	2	0	74
	18	Monaragala	58	95	0	0	4	3	160
	19	Welimada	0	16	0	0	2	0	18
	20	Wellawaya	0	8	0	0	0	2	10
Batticaloa	21	Batticaloa	112	149	0	0	0	25	286
	22	Valachchenai	0	0	0	0	0	0	0
	23	kattankudy	0	0	0	0	0	0	0
Chilaw	24	Chilaw	2	92	0	0	52	63	209
	25	Marawila	15	92	3	2	1	1	114
	26	Negambo	0	133	0	0	0	65	198
	27	Puttalam	21	57	17	0	0	0	95
	28	Kalpitiya	0	0	0	0	0	0	0
CIM	29	CIM	214	146	0	4	10	112	486
	30	Avissawella	5	175	1	1	0	0	182
	31	Homagama	0	7	9	4	0	0	20
	32	Karawanella	0	63	0	0	1	3	67
CNTH	33	CNTH	233	1,348	47	0	375	59	2,062
	34	Gampaha	0	106	19	63	0	16	204
	35	Wathupitiwala	9	196	0	19	2	19	245
	36	Minuwangoda	0	0	0	0	0	0	0
	37	Meerigama	0	0	0	0	0	0	0
	38	Welisara	0	90	0	0	0	0	90

Cluster		Blood Bank	Screening Positive	Past expiry	Insufficient	High risk	Pack damage	Other	Total Discards
Jaffna	39	Jaffna	110	189	19	2	23	30	373
	40	Killinochchi	6	15	3	0	0	1	25
	41	Mullaitive	3	22	8	6	3	0	42
	42	Point Pedro	3	19	0	1	0	0	23
	43	Thelippallai	8	11	1	3	0	0	23
Kaluthara	44	Kaluthara	80	31	39	6	17	8	181
	45	Horana	0	108	24	16	0	20	168
	46	Kethumathie	29	39	11	2	3	1	85
	47	Panadura	0	47	0	0	1	0	48
Kamburugamuwa	48	Kamburugamuwa	262	1,010	0	0	1	7	1280
	49	Kamburupitiya	0	195	0	0	0	1	196
	50	Matara	0	49	11	1	1	65	127
	51	Walasmulla	0	0	0	0	0	4	4
Hambantota	52	Hambanthota	0	406	24	26	0	37	493
	53	Thissamaharama	0	215	0	0	1	0	216
	54	Tangalle	0	45	4	0	0	23	72
Kandy	55	Kandy	182	193	10	30	8	43	466
	56	Dambulla	27	72	2	0	0	4	105
	57	Nawalapitiya	7	372	8	2	2	0	391
	58	Gampola	12	234	9	3	5	19	282
	59	Rikillagaskada	0	89	0	0	1	1	91
	60	Matale	29	319	0	0	2	10	360
Peradeniya	61	Peradeniya	7	515	76	5	14	30	647
	62	Mawanella	0	3	5	9	0	3	20
	63	Dikkoya	0	12	0	0	0	1	13
	64	NuwaraEliya	0	124	16	15	4	0	159
	65	Kegalle	0	31	8	20	1	10	70
	66	Warakapola	0	7	0	0	3	0	10
Karapitiya	67	Karapitiya	148	604	0	0	3	49	804
	68	Balapitiya	4	96	0	0	0	2	102
	69	Elpitiya	0	9	0	0	0	0	9
	70	Mahamodara	0	194	8	0	0	0	202
	71	Udugama	0	0	0	0	0	5	5
Kurunegala	72	Kurunegala	385	524	0	2	129	35	1075
	73	Dambadeniya	21	36	7	0	1	1	66
	74	Kuliyapitiya	43	19	11	0	1	0	74
	75	Nikaweratiya	3	24	0	0	0	1	28

Cont...

Cluster		Blood Bank	Screening Positive	Past expiry	Insufficient	High risk	Pack damage	Other	Total Discards
Colombo	76	NBC	576	5,775	728	24	27	188	7,318
	77	Accident Serv.	0	683	0	0	0	0	683
	78	CSHW	0	32	0	0	1	3	36
	79	CSTH	4	30	1	0	0	1	36
	80	DMH	0	21	0	0	1	1	23
	81	IDH-Angoda	0	5	0	0	0	0	5
	82	LRH	0	10	0	0	1	5	16
	83	Mulleriyawa	0	8	0	0	0	0	8
	84	NHSL	0	580	0	0	3	0	583
	85	SJGH- Kotte	31	237	20	2	34	7	331
	86	Army Hospital	0	40	0	0	0	0	40
	87	Maligawatta	0	80	0	0	0	0	80
Rathnapura	88	Rathnapura	247	172	9	0	5	41	474
	89	Balangoda	0	170	0	0	0	0	170
	90	Embilipitiya	23	418	31	0	5	0	477
	91	Kahawatta	0	0	0	0	0	0	0
Trincomalee	92	Trincomalee	57	294	6	1	5	21	384
	93	Kantale	0	0	0	0	0	0	0
	94	Kinnaya	0	0	0	0	0	0	0
	95	Muthur	0	0	0	0	0	0	0
Vavuniya	96	Vavuniya	62	156	20	0	2	3	243
	97	Chettikulam	0	0	0	0	0	0	0
	98	Mannar	11	150	10	1	8	11	191
		<b>Total</b>	<b>3,797</b>	<b>18,543</b>	<b>1,275</b>	<b>293</b>	<b>793</b>	<b>1,351</b>	<b>26,052</b>
		Percentage	14.57%	71.18%	4.89%	1.12%	3.04%	5.19%	

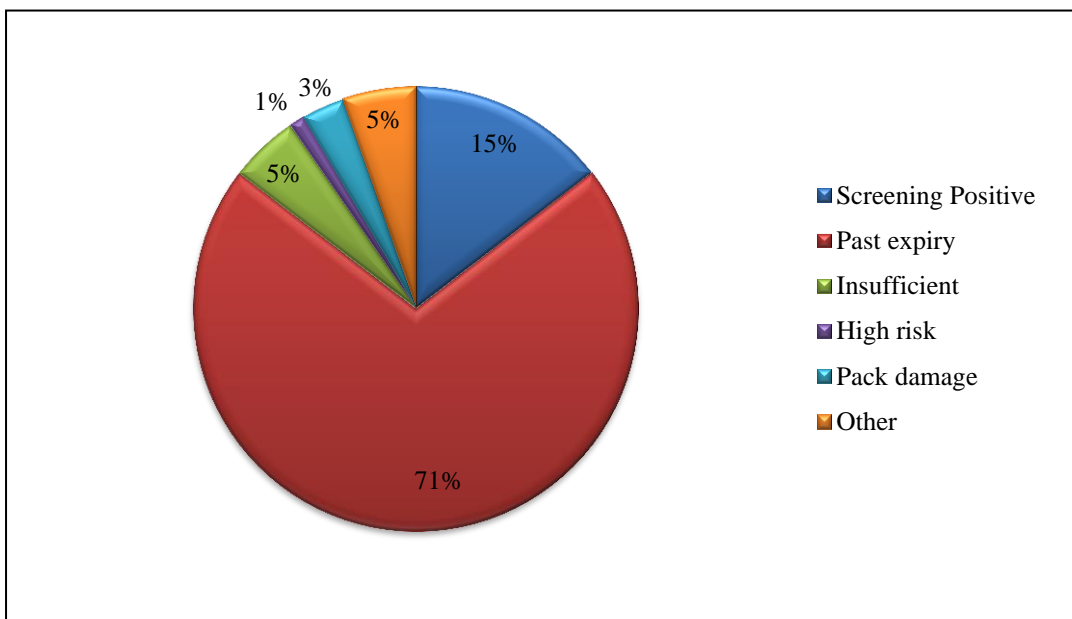


Figure 15: Distribution of RCC discards percentage wise

Table 13: Comparison of RCC discards with previous years

Year	Passed expiry discards	Screening positives	Other	Total Discards
2012	21,150	2,973	4,223	28,346
2013	34,769	2,843	3,895	41,507
2014	22,703	3,287	6,116	32,106
2015	20,124	3,930	4,350	28,404
2016	18,545	3,797	3,711	26,052

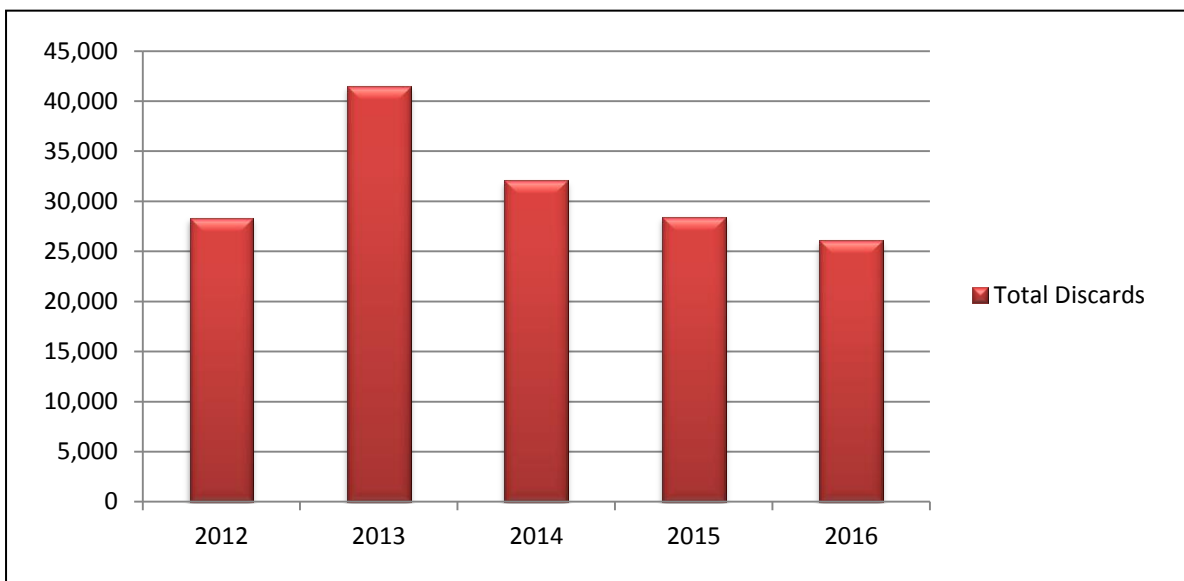


Figure 16: Comparison of total RCC discards with previous

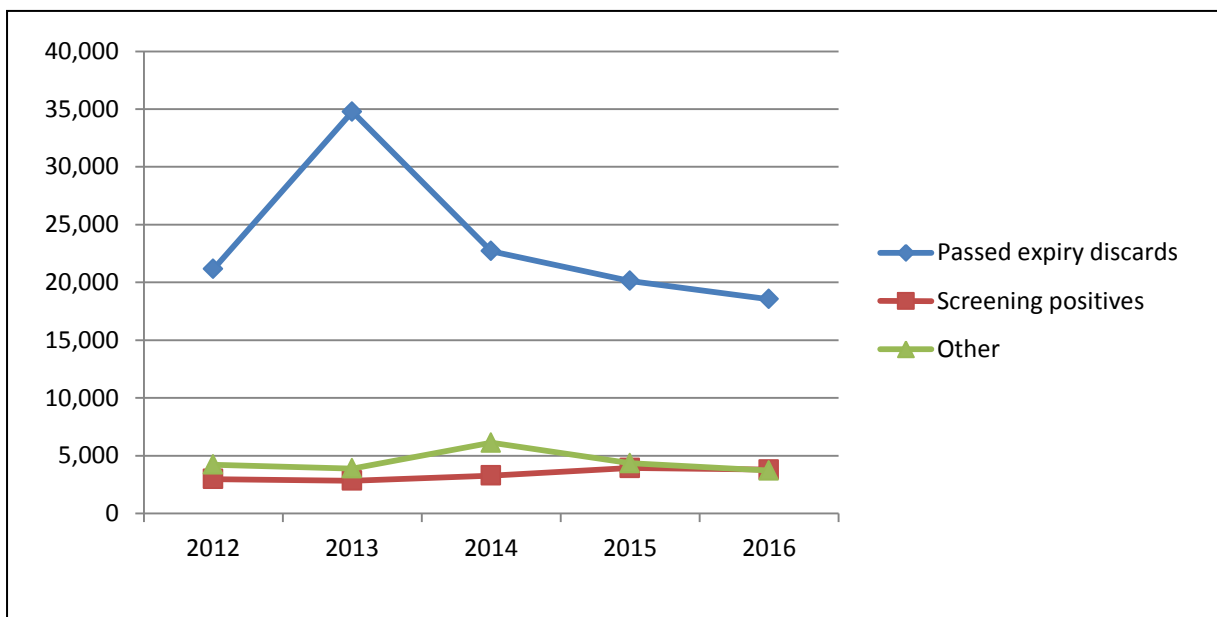


Figure 17: Comparison of RCC discards with previous years

## Statistics of HLA Laboratory

Table 14: Comparison of HLA Statistics

<b>Typing and cross matches</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>
Class 1	2293	2288	2015
Class 11	2297	2214	1777
Cross match	1365	1471	2490
B27	352	194	319
PRA (Class I , Class II )	179	295	484
<b>Transplantation</b>			
Kidney (Patients ,Donor)	2455	2094	1589
Bone Marrow (Patients, Donors)	192	108	167
AP donor	11	32	171
Cadaveric Donors	7	15	11

PRA - Panel reactive antibodies

## Statistics of Reference Immunohaematology Laboratory

Table 15: Comparison of Reference Immunohaematology laboratory statistics.

<b>Test category</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>
Difficult compatibility testing	2413	2656	2767
Antenatal Screening	1640	1263	3266
Antibody titrations	243	394	241
DAT profile	637	603	702
Extended phenotypes	303	439	414
Cold agglutination titration	38	154	47
Iso haemagglutination test	80	54	97
Haemolysin test	26	55	97
Confirmation of Bombay O	111	22	15
Elution studies	30	26	30
Transfusion reaction investigations	14	49	21

Table 16: Reference lab detailed investigations

<b>Investigations</b>	<b>2016</b>
Blood Grouping (ABO & Rh D)	3,799
DAT	3,060
Antibody Identification	2,333
Enzyme Panels	33
ABO/Rh Group Confirmation	167
Donath-Landsteiner Test (DL)	9
Cross Matching	
-IAT (LISS)	604
-IAT (NISS)	217
-PW IAT	472
Titration	161
Rh Phenotyping	3401

### **Statistics of Reagent Laboratory**

Table 17: Comparison of Statistics of reagent preparation

<b>Reagents prepared</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>
PBS working solution (L)	5565	7785	3965
PBS stock solution (L)	620	810	3965
Alsevers solution(l)	148	172	274
Antibody screening cells(mL)	39,255	45,650	162,800
Anti A1 (ml)	482.5	775	1450
Anti H (ml)	327.5	475	1125
ABO reverse grouping cells (ml)	28,275	3,7625	120,200

## Quality Management Unit

Table 18: Quality Monitoring of Blood Components

Items	Number of procedures performed											
	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec
<b>Red Cell Products</b>												
RCC-without AS	30	40	30	25	12	25	40	30	30	30	30	30
RCC-BCR-AS	25	35	26	25	11	20	40	25	25	25	25	25
<b>Platelet Products</b>												
PC-PRPD	25	40	35	25	35	27	45	35	35	30	30	30
PC-BCD	30	29	30	25	30	36	45	35	25	25	23	25
PC-Apheresis	10	10	15	10	12	15	15	15	15	10	10	10
FFP	10	-	-	-	-	-	-	-	-	-	-	-
Cryo	-	-	-	-	-	-	-	-	-	-	-	-
<b>Reagent cells</b>												
A,B,O Cells	1	1	1	1	1	1	1	1	2	2	2	1
Antibody Screening Cells	1	1	3	3	1	1	1	2	3	3	1	30
<b>Incident Investigations related to;</b>												
RCC	-	2	7	6	9	1	3	4	3	1	-	-
Platelet Concentrate	-	2	1	3	1	3	1	-	1	2	-	1
FFP	-	1	-	-	-	-	-	-	-	1	-	-
Cryo	-	-	-	-	-	-	-	-	-	-	-	-
Other	-	-	-	1	-	1	-	-	-	-	-	-
<b>Quality Monitoring for HBBs</b>												
RCC	-	-	-	-	-	-	-	-	-	-	1	-
Platelet concentrate	-	-	-	-	-	-	-	-	-	-	2	-
FFP	-	-	-	-	-	-	-	-	-	-	-	-
Cryo	-	-	-	-	-	-	-	-	-	-	-	-
<b>Special Studies</b>	1	-	-	-	1	1	1	-	-	-	-	-
<b>Conducting NEQAS Programs (Sample kit preparation)</b>												
NEQAS(BGS) Program	-	-	-	110	-	-	-	-	-	-	-	110
NEQAS(TTI) Program	-	-	-	-	20	-	-	-	-	-	-	20
<b>Evaluations</b>												
Blood bags	-	-	-	-	-	-	-	-	2	-	-	-
Reagent antisera	-	-	-	-	-	9	5	-	-	-	3	-
Other consumables	-	-	1	1	-	-	1	2	-	-	-	3

Table 19: Quality control Laboratory Performance 2016

Test	Number of tests performed											
	Jan	Feb	Mar	Apr	May	Jun	July	Aug	Sep	Oct	Nov	Dec
Full Blood Count	130	160	210	130	146	170	240	160	160	142	148	137
PH testing	120	155	160	125	120	124	196	156	155	137	136	125
Blood culture	14	-	12	-	-	2	5	3	34	3	3	8
Plasma Hb testing	55	77	75	65	43	46	96	66	65	60	57	55
DAT	3	3	9	9	3	3	3	6	9	9	6	9
Antibody screening	3	3	9	9	3	3	3	6	9	9	6	9
Examination under microscope	6	6	12	12	6	6	6	9	15	15	12	12
Factor VIII assay	10	-	-	-	-	-	-	-	-	-	-	-
Fibrinogen assay	10	-	-	-	-	-	-	-	-	-	-	-

## Statistics of Teaching and Training Unit

Table 20:

A: Training programs conducted for Staff categories of NBTS

Staff Category	Duration	No of Trainees
Medical Officer's	6 weeks	12
	4 Weeks	77
	2 Weeks (RHO)	16
	2 Weeks (Refreshers)	2
	<b>Total</b>	<b>107</b>
Nursing officers	4 Weeks	6
	2 Weeks	34
Medical laboratory Technicians	8 Weeks 8 Weeks-ongoing	} 22
Public health Inspectors	8 Weeks(Refresher)	1
	8 Weeks	9
Public health Laboratory Technician	10 days	1
Blood bank drivers	3 days	4
	1 day(Refresher)	14
Junior Staff	1 Week	27



## B: Foreign delegates

Programme	Duration	No of trainees
Training on safe blood transfusion for a team from Bangladesh	2 Day	8
<b>AATM trainees</b>		
Medical officers	3 Weeks	2
MLT	4 Weeks	1

## C: Others Staff Categories

Staff Category	Duration	No of Trainees
1. Post graduate Hematology diploma trainees.	3 months	7
2. Post graduate virology Trainees	2 weeks	1
3. Medical Students		
-USJP	(3 days ×3 Groups)	167
-Colombo Faculty		235
( Medical Students ,Faculty of Medicine, University of Colombo, Infectious & parasitic disease module)	01 day	14
4. BSc. Nursing graduates	1 Week	14
5. Nursing Students NTS –Colombo	1 & 4 Weeks	157
6. NINDT NO- Orientation program on HLA Lab	1 day	20
7. Intern pharmacists	1 day	33
8. Navy Health Assistants	1 day	44
9. Public Health Inspectors Diploma Trainees - NIHS	1 day	89
10.SPFI trainees - NIHS	1 day	35
11. Medical Laboratory Technicians		
BSc Medical Laboratory Sciences 7 <sup>th</sup> batch- USJP		28
BSc. Medical Laboratory Sciences 8 <sup>th</sup> batch- USJP		28
BSc. Medical Laboratory Sciences 8 <sup>th</sup> batch- KDU		31
BSc. Medical Laboratory Sciences-University of Peradeniya		9
MLT school Trainees- NIHS Kaluthara		23
MLT school trainees-Peradeniya		23
<b>Total</b>		<b>958</b>

## Work Shops Conducted by the Teaching & Training Unit

Programme	Duration	No of trainees
Frozen Red Cell facility- Hands on training program Dr.Martine Smith Mr. Johan Lager berg	1 Week	15
AABB Quality Management system, AABB Accreditation program AAABB Standards for cellular Therapy Services 7 <sup>th</sup> ED	2 Weeks	30
Leucoreduction of blood products – AAMT Sri Lanka Chapter	1 day	123
CME programme on Immunohaematology & TTI testing By Ortho Clinical Diagnostics		
- Medical officers	1 day	43
- MLT	1 day	53
HLA Training – Luminex 200	5 days	9
Spectra optia training – AP & TPE	1 day	25
<b>Total</b>		<b>298</b>

## **The project of NAT facility at National Blood Centre**

### **Introduction:**

Nucleic Acid Testing (NAT) was introduced to the National Blood Centre (NBC) by the State of Art Technology Project funded by the government of the Netherlands.

Nucleic Acid Testing directly amplifies and detects the genetic material (DNA or RNA) of viruses in order to screen for the existence of transfusion transmitted infections in donated blood ( Eg: Human Immunodeficiency Virus-HIV, Hepatitis B Virus-HBV and Hepatitis C Virus-HCV).

### **Advantages in implementing NAT in the National Blood Transfusion Service:**

Even though the high cost for the infrastructure and consumables, NAT provides the following advantages,

- Safeguard the blood safety furthermore in reducing the window period by early detection of viral infections and before appearance of antibodies.
- Fulfills an International requirement for the provision of plasma products for Plasma Fractionation Plants.
- Detects mutant, variant viruses that may not be detected by antibody detection methods.

### **Review Report of Nucleic Acid Testing (NAT) facility at National Blood Centre (NBC) – up to 31<sup>st</sup> December 2016**

#### **Testing summary:**

- NAT testing were done for the samples collected in- house or from mobile campaigns conducted by the NBC.
- Following table summarizes the testing done up to 1<sup>st</sup> January 2017.

Table 21:

<b>Total tests performed</b>	<b>Tested samples</b>
49,726	42,675

## **Stem Cell Transplantaion.**

- ❖ Hematopoietic stem cell transplantation (HSCT) is the transplantation of multi potent hematopoietic stem cells, usually derived from
  - Bone marrow
  - Peripheral blood
  - Umbilical cord blood, which may be of autologous or allogeneic in origin.
- ❖ It is most often performed for patients with certain haematological malignancies, such as multiple myeloma or leukemia and for congenital disorders of the blood and bone marrow such as thalassemia and sickle cell disease.
- ❖ Advantages of the peripheral stem cell transplant :-
  - Less invasive than Bone Marrow harvesting
  - No need of anesthesia

### Procedure:-

- I. On the 24<sup>th</sup> of October 2016, the Stem Cell Transplantation was initiated.
- II. There were 4 procedures, which was done for 2 patients diagnosed with Multiple Myeloma. All these 4 procedures were done at the Regional Blood Centre, Apeksha Hospital, Maharagama.
- III. Processing of harvested Stem Cell product was done at NBC, and the Teaching & Training was done by Australian Delegates by the St.Vincet's Hospital, Sydney.

### Procedures:

1. Initial 2 procedures were done under the supervision by the Foreign Delegates.
2. 2<sup>nd</sup> patients transplantation was done by the local team.

Outcome: - Both the Stem Cell Transplantations were done successfully in December 2016.

## **PATHOGEN INACTIVATION of Platelets:**

The possibility of transmitting infectious organisms via blood products and plasma derivatives (donor derived or contaminated microorganism) is a major public health concern worldwide.

Ability to ensure the safety of the blood supply, with donor screening and laboratory testing is limited because it requires prior knowledge of the possible infectious agents, and development of effective laboratory tests for each agent. In addition to that there is no method to prevent transmission of infections during window period.

Pathogen Inactivation is a proven method in preventing risk of Transfusion Transmitted Infection and bacterial contamination.

There are two main techniques for pathogen inactivation

### A. Chemical Inactivation

Eg: Solvent Detergent Treatment (SDT): -

Used mainly on products and Lyses Cell Membrane and viral envelopes leading to more than 5.4 to 6.0 log reductions of sensitive pathogens.

### B. Photo Chemical Treatment

This is applicable to plasma and platelet products, currently available methods include Intercept & Mirasol.

Pathogen Inactivation at NBC currently practice Intercept on pooled platelets.

Table 22 :

Month	No of PI pools	Issues	Discards
December	14	14	0
<b>TOTAL</b>	14	14	0

### **Advantages of pathogen Inactivation-**

1. Reduce the risk of TTI
2. Increase the shelf life of platelets up to 7 days
3. There is evidence that it prevents transfusion Associated Graft Versus Host Disease.
4. Irreversibly damage Nucleic Acid & Inactivates Micro Organism & Leucocyte.

## **FROZEN RED CELL (FRC)**

Red Blood Cells (RBC) can be frozen and stored for up to 10 years.

There are two methods for frozen red cell: -

1. High Glycerol method ( frozen red cells are stored at - 86C<sup>0</sup>)
2. Low Glycerol method ( frozen red cells are stored at - 120C<sup>0</sup>)

This technique has many advantages.

- Frozen Red Cell (FRC) have long shelf life
- A stock of rare Blood Groups (Such as Bombay O) can be frozen and preserved for future usage.
- Patients with special conditions such as multiple red cell antibodies who require blood will get benefits out of this.

Since 2015, NBTS Sri Lanka also started this practice of freezing Red Blood Cells, Like developed countries.

International and local training programs have been conducted on this technology and many programs are scheduled in the year 2016.

Currently a validation program is being conducted at NBC on Frozen Red Cell technology.

Table: 23

<b>No of Red Cell Units Frozen</b>		<b>No of Red Cell Units Deglycerolized</b>	
Bombay O Rh D Positive units	7	O Rh D Positive Units	8
A Rh D Positive Units	1		
<b>TOTAL</b>	<b>8</b>	<b>TOTAL</b>	<b>8</b>

**Note: -**

As fresh Blood has been available there was no demand to use Frozen Red Cell Units.