



Supply of Blood for Transfusion in Latin American and Caribbean Countries 2010 and 2011



**Pan American
Health
Organization**

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Supply of Blood for Transfusion in Latin American and Caribbean Countries 2010 and 2011



**Pan American
Health
Organization**
Regional Office of the
World Health Organization



**Medicines and Health Technologies Unit
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Table of Contents

Country Codes.....	ix
Abbreviations.....	xi
I. Introduction.....	1
References.....	3
Number of Blood Units Officially Reported by the Countries and Territories to the Pan American Health Organization, 2010-2011.....	4
Table I-1. Blood Units.....	4
II. 2010.....	7
Table II-1. Regional Summary , 2010.....	7
Table II-2. Subregional Summary, 2010.....	7
III. Latin American Countries, 2010.....	9
Table III-1. Blood Collection, 2010.....	9
Table III-2. Blood Collection from Allogeneic Donors, 2010.....	10
Figure III-1. Blood Collection Ranked from Greatest to Least by Voluntary Donations, Latin America, 2010 (Percentage).....	11
Table III-3. Selection of Allogeneic Donors, 2010.....	12
Table III-4. Selection of Allogeneic Donors, 2010.....	13
Figure III-2. Deferred Donors by Allogeneic Donor Type, Latin America, 2010 (Percentage).....	14
Table III-5. Efficiency of Blood Processing, 2010.....	15
Table III-6. Coverage of Screening for Infectious Markers, 2010 (Percentage).....	16
Table III-7. Number of Units Not Screened for Infectious Markers, 2010.....	16
Table III-8. Proportion of Reactive/Positive Units, 2010 (Percentage).....	17
Figure III-3. Proportion of Reactive/Positive Units for Five Markers, Latin America, 2010 (Percentage).....	18
Table III-9a. Number of Availability of Blood Components, 2010 - Separation into Components.....	19
Table III-9b. Number of Availability of Blood Components, 2010 - Blood and Blood Components Discarded.....	20
Table III-10. Availability of Blood Components, 2010 (Percentage).....	21
Figure III-4. Blood and Blood Components Discarded, Latin America, 2010 (Percentage).....	22
Table III-11. Organization of the National Blood System, 2010.....	23
Table III-12. Organization of the National Blood System, 2010.....	24
Table III-13. Organization of the National Blood System, 2010.....	25
Table III-14. Organization of the National Blood System, 2010.....	26
Table III-15. Countries with One Hundred Percent Screening for Infectious Markers, 2010.....	27
Table III-16. National Staff Who Submitted Official Reports to the Pan American Health Organization - Latin American Countries, 2010.....	28
IV. Caribbean Countries, 2010.....	31
Table IV-1. Blood Collection, 2010.....	31
Table IV-2. Blood Collection from Allogeneic Donors, 2010.....	32
Figure IV-1. Blood Collection Ranked from Greatest to Least by Voluntary Donations, Caribbean, 2010 (Percentage).....	33
Table IV-3. Selection of Allogeneic Donors, 2010.....	34

Table IV-4. Selection of Allogeneic Donors, 2010	35
Figure IV-2. Deferred Donors by Allogeneic Donor Type, Caribbean, 2010 (Percentage).....	36
Table IV-5. Efficiency of Blood Processing, 2010.	37
Table IV-6. Coverage of Screening for Infectious Markers, 2010 (Percentage).....	38
Table IV-7. Number of Units Not Screened for Infectious Markers, 2010.	38
Table IV-8. Proportion of Reactive/Positive Units, 2010 (Percentage).....	39
Figure IV-3. Proportion of Reactive/Positive Units, Caribbean, 2010 (Percentage).	40
Table IV-9a. Number of Availability of Blood Components, 2010 - Separation of Components.....	41
Table IV-9b. Number of Availability of Blood Components, 2010 - Blood and Blood Components Discarded	42
Table IV-10. Availability of Blood Components, 2010 (Percentage).....	43
Figure IV-4. Blood and Blood Components Discarded, Caribbean, 2010 (Percentage).	44
Table IV-11. Organization of the National Blood System, 2010.....	45
Table IV-12. Organization of the National Blood System, 2010.....	46
Table IV-13. Organization of the National Blood System, 2010.....	47
Table IV-14. Organization of the National Blood System, 2010.....	48
Table IV-15. Countries with One Hundred Percent Screening for Infectious Markers, 2010.....	49
Table IV-16. National Staff Who Submitted Official Reports to the Pan American Health Organization - Caribbean Countries, 2010.	50
V. 2011.....	53
Table V-1. Regional Summary, 2011.	53
Table V-2. Subregional Summary, 2011.....	53
VI. Latin American Countries, 2011.....	55
Table VI-1. Blood Collection, 2011.....	55
Table VI-2. Blood Collection from Allogeneic Donors, 2011	56
Figure VI-1. Blood Collection Ranked from Greatest to Least by Voluntary Donations, Latin America, 2011 (Percentage).....	57
Table VI-3. Selection of Allogeneic Donors, 2011	58
Table VI-4. Selection of Allogeneic Donors, 2011	59
Figure VI-2. Deferred Donors by Allogeneic Donor Type, Latin America, 2011 (Percentage).....	60
Table VI-5. Efficiency of Blood Processing, 2011	61
Table VI-6. Coverage of Screening for Infectious Markers, 2011 (Percentage).....	62
Table VI-7. Number of Units Not Screened for Infectious Markers, 2011	62
Table VI-8. Proportion of Reactive/Positive Units, 2011 (Percentage).....	63
Figure VI-3. Proportion of Reactive/Positive Units for Five Markers, Latin America, 2011 (Percentage).....	64
Table VI-9a. Number of Availability of Blood Components, 2011 - Separation into Components.	65
Table VI-9b. Number of Availability of Blood Components, 2011 - Blood and Blood Component Discarded	66
Table VI-10. Availability of Blood Components, 2011 (Percentage).....	67
Figure VI-4. Percentage of Blood and Blood Components Discarded, Latin America, 2011 (Percentage)	68
Table VI-11. Organization of the National Blood System, 2011	69
Table VI-12. Organization of the National Blood System, 2011	70
Table VI-13. Organization of the National Blood System, 2011	71
Table VI-14. Organization of the National Blood System, 2011	72
Table VI-15. Countries with One Hundred Percent Screening for Infectious Markers, 2011	73

Table VI-16. National Staff Who Submitted Official Reports to the Pan American Health Organization - Latin American Countries, 2011	74
VII. Caribbean Countries, 2011	77
Table VII-1. Blood Collection, 2011	77
Table VII-2. Blood Collection from Allogeneic Donors, 2011	78
Figure VII-1. Blood Collection Ranked from Greatest to Least by Voluntary Donations, Caribbean, 2011 (Percentage).....	79
Table VII-3. Selection of Allogeneic Donors, 2011	80
Table VII-4. Selection of Allogeneic Donors, 2011	81
Figure VII-2. Deferred Donors by Allogeneic Donor Type, Caribbean, 2011 (Percentage).	82
Table VII-5. Efficiency of Blood Processing, 2011.	83
Table VII-6. Coverage of Screening for Infectious Markers, 2011 (Percentage).....	84
Table VII-7. Number of Units Not Screened for Infectious Markers, 2011	84
Table VII-8. Proportion of Reactive/Positive Units, 2011 (Percentage).....	85
Figure VII-3. Proportion of Reactive/Positive Units, Caribbean, 2011 (Percentage).	86
Table VII-9a. Number of Availability of Blood Components, 2011 - Separation into Components.	87
Table VII-9b. Number of Availability of Blood Components, 2011 - Blood and Blood Components Discarded	88
Table VII-10. Availability of Blood Components, 2011 (Percentage).....	89
Figure VII-4. Blood and Blood Components Discarded, Caribbean, 2011 (Percentage).....	90
Table VII-11. Organization of the National Blood System, 2011.....	91
Table VII-12. Organization of the National Blood System, 2011.....	92
Table VII-13. Organization of the National Blood System, 2011.....	93
Table VII-14. Organization of the National Blood System, 2011.....	94
Table VII-15. Countries with One Hundred Percent Screening for Infectious Markers, 2011	95
Table VII-16. National Staff Who Submitted Official Reports to the Pan American Health Organization - Caribbean Countries, 2011.	96
VIII. Specific Summaries - Latin American Countries.	99
Table VIII-1. Argentina (ARG).	99
Table VIII-2. Bolivia (BOL).	100
Table VIII-3. Brazil (BRA).....	101
Table VIII-4. Chile (CHI).....	102
Table VIII-5. Colombia (COL).	103
Table VIII-6. Costa Rica (COR).....	104
Table VIII-7. Cuba (CUB).....	105
Table VIII-8. Dominican Republic (DOR).....	106
Table VIII-9. Ecuador (ECU).	107
Table VIII-10. El Salvador (ELS).	108
Table VIII-11. Guatemala (GUT).....	109
Table VIII-12. Honduras (HON).....	110
Table VIII-13. Mexico (MEX).....	111
Table VIII-14. Nicaragua (NIC).....	112
Table VIII-15. Panama (PAN).....	113
Table VIII-16. Paraguay (PAR)	114
Table VIII-17. Peru (PER).....	115

Table VIII-18. Uruguay (URU).....	116
Table VIII-19. Venezuela (VEN).....	117
IX. Specific Summaries - Caribbean Countries	119
Table IX-1. Anguila (ANU).....	119
Table IX-2. Antigua and Barbuda (ANI).....	120
Table IX-3. Aruba (ARU).....	121
Table IX-4. Bahamas (BAH).....	122
Table IX-5. Barbados (BAR).....	123
Table IX-6. Belize (BLZ).....	124
Table IX-7. Bermuda (BER).....	125
Table IX-8. British Virgin Islands (BVI).....	126
Table IX-9. Cayman Islands (CAY).....	127
Table IX-10. Curaçao (CUR).....	128
Table IX-11. Dominica (DOM).....	129
Table IX-12. French Departments of America (FDA).....	130
Table IX-13. Grenada (GRA).....	131
Table IX-14. Guyana (GUY).....	132
Table IX-15. Haiti (HAI).....	133
Table IX-16. Jamaica (JAM).....	134
Table IX-17. Montserrat (MOT).....	135
Table IX-18. Saint Kitts and Nevis (SKT).....	136
Table IX-19. Saint Lucia (STL).....	137
Table IX-20. Saint Vincent and the Grenadines (STV).....	138
Table IX-21. Suriname (SUR).....	139
Table IX-22. Trinidad and Tobago (TRT).....	140
Table IX-23. Turks and Caicos Islands (TCI).....	141
X. Subregional Summaries.	143
Table X-1. Number of Units Collected.....	143
Table X-2. Screening - Central America and Spanish-Speaking Caribbean.....	144
Table X-3. Screening - Caribbean.....	144
Table X-4. Screening - Andean Community.....	145
Table X-5. Screening - Southern Cone.....	145
Table X-6. Screening - Mexico.....	145
Table X-7. Screening - Brazil.....	146
Table X-8. Availability of Components - Central America and Spanish-Speaking Caribbean.....	146
Table X-9. Availability of Components - Caribbean.....	146
Table X-10. Availability of Components - Southern Cone.....	147
Table X-11. Availability of Components - Mexico.....	147
Table X-12. Availability of Components - Brazil.....	147
Annex A. Evaluación del Plan Regional de la Organización Panamericana de la Salud para la Seguridad de las Transfusiones 2006-2010.	149
Annex B. PAHO Document CD51/INF/5, 51st Directing Council, 2011.	153
G. Regional Initiative and Plan of Action for Transfusion Safety 2006-2010: Final Evaluation.....	153

Tables and Figures of Annex B.....	161
Table B-1. Number of Blood Processing Centers and Number of Units Processed per Year, Latin American Countries 2005 and 2009.....	161
Table B-2. Indicators of Performance, National Blood Systems in the Caribbean and Latin America.....	162
Table B-3. Blood Collection in the Caribbean and Latin American Countries, 2005 and 2009.....	163
Figure B-1. Blood Availability Rates and Maternal Mortality Ratios, Selected Caribbean and Latin American Countries 2009.....	164
Table B-4. Blood Units Separated into Components (Proportion of Red Blood Cells Prepared), Caribbean and Latin American Countries, 2005 and 2009.....	165
Table B-5. Coverage of Screening for Markers of Transfusion-Transmissible Infectious, Caribbean and Latin American Countries, 2005 and 2009 (Percentage).....	166
Table B-6. Number of Units of Red Blood Cells and Whole Blood Transfused, According to Age of Patients, Countries that Submitted Data, 2009.....	167

Country Codes

ANU	Anguilla	FDA	French Departments of America
ANI	Antigua and Barbuda	GRA	Grenada
ARG	Argentina	GUT	Guatemala
ARU	Aruba	GUY	Guyana
BAH	Bahamas	HAI	Haiti
BAR	Barbados	HON	Honduras
BLZ	Belize	JAM	Jamaica
BER	Bermuda	MEX	Mexico
BOL	Bolivia	MOT	Montserrat
BRA	Brazil	NIC	Nicaragua
BVI	British Virgin Islands	PAN	Panama
CAY	Cayman Islands	PAR	Paraguay
CHI	Chile	PER	Peru
COL	Colombia	SKT	Saint Kitts and Nevis
COR	Costa Rica	STL	Saint Lucia
CUB	Cuba	STV	Saint Vincent and the Grenadines
CUR	Curaçao	SUR	Suriname
DOM	Dominica	TCI	Turks and Caicos Islands
DOR	Dominican Republic	TRT	Trinidad and Tobago
ECU	Ecuador	URU	Uruguay
ELS	El Salvador	VEN	Venezuela

Abbreviations

CRYO	Cryoprecipitate
FFP	Fresh frozen plasma
FP	Frozen plasma
HBsAg	Hepatitis B virus surface antigen
HCV	Hepatitis C virus
HIV	Human immunodeficiency virus
HTLV	Human T cell lymphotropic virus
PL	Platelets
RBC	Red blood cells
WB	Whole blood
NR	Not reported

I. Introduction

In September 2005, the 46th Directing Council of the Pan American Health Organization (PAHO) approved the Regional Plan of Action for Transfusion Safety 2006-2010. The purpose of the plan is to contribute to the reduction of mortality and the improvement of patient care in Latin America and the Caribbean by making safe blood for transfusion available in a timely manner for all patients who need it (1, 2).

The Regional Plan has the following objectives:

1. Assure appropriate collection and preparation of blood components in sufficient quantities to treat the patients who need blood transfusions.
2. Assure timely access to blood components in the patients who need blood transfusions.
3. Assure the highest level of safety of blood products to avoid the transmission of infectious diseases and other untoward effects associated with transfusions.
4. Promote the appropriate clinical use of blood.
5. Improve the efficiency of national resources.

In order to achieve its objectives, the Regional Plan adopted the following four strategies:

- A. Planning and management of the national blood network system.
- B. Promotion of voluntary blood donation.
- C. Quality assurance.
- D. Appropriate use of blood and blood components.

The Regional Plan approved in 2005 made reference to the Strategic and Programmatic Orientations 1999-2002 (3) and, therefore, has ten indicators of progress. In 2008, the 48th Directing Council added three more and modified the one related to the goal of voluntary donation (4, 5); thus, the current indicators are:

- a. 100% of the countries will have defined a specific entity within the normative level of their ministries of health as responsible for planning, oversight, and the overall efficient operation of the national blood system.
- b. 100% of the countries will have a national estimate of requirements for blood and blood components, by geographical areas and times of the year.
- c. 100% of the countries will have revised their legal and regulatory framework.
- d. 100% of the Latin American countries will have implemented regional blood collection and processing systems to cover the needs of patients from geographically distinct areas.
- e. 100% of the countries will have terminated remunerated and replacement blood donation, with the goal of 100% voluntary, altruistic, non-remunerated blood donation.
- f. 100% of the countries will have established a network of volunteers to educate the community, promote voluntary blood donation, and service blood donors.
- g. 100% of the countries will have implemented a quality assurance plan that comprises all blood services in the country.
- h. All blood banks must participate in quality control programs.
- i. 100% of the units of blood for transfusion should be tested for hepatitis B and C, syphilis, *T. cruzi*, and HIV infection.

- j. 95% of all units of blood collected will be fractionated into components.
- k. 100% of the countries will have implemented national guidelines for the clinical use of blood in all transfusion services.
- l. 100% of the countries will have established a hemovigilance program to assess the impact of transfusions on patients' health.
- m. 100% of the countries will have operational transfusion committees.

The Directing Council, moreover, requested the Director to report periodically to the Governing Bodies on the progress made in implementing the Regional Plan of Action for Transfusion Safety, including its limitations (2), with the instruction to prepare annual reports on the situation of blood transfusion safety in the Region (5).

Prior to the approval of the Regional Plan, the situation of the national blood programs in 36 countries and territories was summarized in "Supply of Blood for Transfusion in the Caribbean and Latin American Countries in 2005. Baseline Data for the Regional Plan of Action for Transfusion Safety 2006-2010" (6). Subsequently, PAHO published data for 2006 and 2007 from a smaller number of countries and/or territories in *"Supply of Blood for Transfusion in the Caribbean and Latin American Countries in 2006 and 2007. Progress since 2005 of the Regional Plan of Action for Transfusion Safety"* (7, 8).

The Evaluation of the Regional Plan of Action for Transfusion Safety 2006-2010 conducted in 2011 concluded that while some countries have advanced greatly in achieving 100% voluntary donations, progress has been slow and insufficient in the majority of the countries (9). As of 2009, only nine countries and territories reported that greater than 50% of the units collected had been obtained from voluntary donations (10). The Evaluation recommends the consolidation of blood collection, screening, and processing; reaching 100% voluntary, and in large part repetitive, donations; the implementation of total quality systems. By achieving these fundamental objectives, the Region will ensure timely access to safe blood in sufficient quantities (9).

The Regional Plan 2014-2018 will focus on the following key areas:

1. Promoting an appropriate environment political, social, and economic to ensure effective integration and sustainable of Blood National Program and services within the national health system
2. Achieving adequate blood safety by promoting voluntary non-remunerated and repetitive blood donation.
3. Strengthening quality management at the national blood system, including National Blood Program, Blood Services and Transfusion Services.
4. Strengthening health surveillance, haemovigilance, monitoring, and evaluation.

The present publication summarizes the situation of national blood programs from 2010 to 2011, using the updated data furnished to PAHO by the national health authorities. As a result, there are variations in the information that were summarized in earlier publications (6, 7). Adhering to the criteria of the PAHO Strategic Plan 2008-2012 (11), 40 countries or territories are considered, including the British Overseas Territories, the Dutch Overseas Caribbean Territories, and the French Departments of America.

The table lists the countries and territories and indicates the numbers of units of blood that, according to official reports to PAHO, were collected in each of them during the period of 2010-2011. It shows that Antigua and Barbuda, Barbados, and Grenada have not sent reports to PAHO for 2010 and 2011. The Bahamas, Turks and Caicos Islands, Trinidad and Tobago, and the French Departments of America did not report for the year 2010. In the case of the Dutch Overseas Caribbean Territories, Curaçao collects, processes, and provides the necessary components for transfusions to Aruba.

References

1. Pan American Health Organization. 46th Directing Council. Progress Report on the Regional Initiative for Blood Safety and Plan of Action for 2006-2010. Document CD46/16, 26-30 September 2005.
2. Pan American Health Organization. 46th Directing Council. Progress Report on the Global Safe Blood Initiative and Plan of Action 2005-2010. Resolution CD46.R5, 29 September 2005.
3. 25th Pan American Sanitary Conference. Strategic and Programmatic Orientations for the Pan American Sanitary Bureau, 1999-2002. Washington, D.C., 21-25 September 1998.
4. Pan American Health Organization. 48th Directing Council. Improving Blood Availability and Transfusion Safety in the Americas. Document CD48/11, 29 September to 3 October 2008.
5. Pan American Health Organization. 48th Directing Council. Improving Blood Availability and Transfusion Safety in the Americas. Resolution CD48.R7, 2 October 2008.
6. Pan American Health Organization. Technology and Health Service Delivery Area. Essential Medicines, Vaccines, and Health Technologies. Supply of Blood for Transfusion in the Caribbean and Latin American Countries in 2005. Base Line Data for the Regional Plan of Action for Transfusion Safety 2006-2010. Technical Document Series, Access to Quality Products. 2007.
7. Pan American Health Organization. Technology, Health Care, and Research Area. Health Technologies for Quality of Care. Supply of Blood for Transfusion in the Caribbean and Latin America Countries in 2006 and 2007. Progress since 2005 of the Regional Plan of Action for Transfusion Safety. Technical Document Series. Monitoring and Evaluation. 2009.
8. Pan American Health Organization. Technology, Health Care, and Research Area. Health Technologies for Quality of Care. Supply of Blood for Transfusion in the Caribbean and Latin American Countries 2006, 2007, 2008 and 2009. Progress since 2005 of the Regional Plan of Action for Transfusion Safety. Technical Document Series. Monitoring and Evaluation. 2010.
9. Pan American Health Organization. Evaluación del Plan Regional de la OPS para la Seguridad de las Transfusiones 2006-2010. 2011.

10. Pan American Health Organization. 51st Directing Council. Regional Initiative and Plan of action for Transfusion Safety 2006-2010: Final Evaluation. Document CD51/INF/5, 30-45. 2011.
11. Pan American Health Organization/World Health Organization. Strategic Plan 2008-2012. Official Document No. 328. Washington, D.C., 2008.

Number of Blood Units Officially Reported by the Countries and Territories to the Pan American Health Organization, 2010-2011

Table I-1. Blood Units

Country	2010	2011
Antigua and Barbuda*	1,321	NR
Argentina	1,012,680	1,101,438
Bahamas	NR	7,287
Barbados*	4,781	NR
Belize	4,558	4,617
Bolivia	73,254	79,960
Brazil	3,267,551	3,356,382
British Territories	4,169	4,782
<i>Anguilla</i>	134	165
<i>Bermuda</i>	2,456	2,412
<i>British Virgin Islands</i>	445	422
<i>Cayman Islands</i>	1,006	1,020
<i>Montserrat</i>	128	89
<i>Turks and Caicos Islands</i>	NR	674
Chile	227,301	230,308
Colombia	692,485	710,825
Costa Rica	71,192	71,090
Cuba	384,472	393,325
Dominica	877	1,043
Dominican Republic	94,884	99,148

(Continued)

Table I-1. (Continued)

Country	2010	2011
Ecuador	173,748	211,818
El Salvador	84,287	90,760
French Departments of America	NR	21,800
<i>Guadeloupe, Martinique, and French Guyana</i>	NR	21,800
Grenada*	1,426	NR
Guatemala	92,385	105,803
Guyana	7,738	6,361
Haiti	14,899	19,751
Honduras	63,878	66,457
Jamaica	28,402	27,307
Mexico	1,699,885	1,768,065
Netherlands Antilles	10,371	9,450
<i>Aruba</i>	2,830	2,835
<i>Curaçao</i>	7,541	6,615
Nicaragua	74,842	73,912
Panama	51,552	54,427
Paraguay	72,647	74,079
Peru	234,566	141,202
Saint Kitts and Nevis	425	368
Saint Lucia	2,078	2,304
Saint Vincent and the Grenadines	1,043	1,157
Suriname	10,884	10,917
Trinidad and Tobago	NR	17,613
Uruguay	92,734	95,812
Venezuela	418,996	416,346
Total	8,976,311	9,275,914

*Countries who did not report 2010 or 2011 data; 2009 data is shown in place of 2010.

NR = Not reported.

II. 2010

Table II-1. Regional Summary, 2010

Variable	Caribbean Countries	Latin American Countries	Caribbean and Latin American Countries
Blood units collected	92,972	8,883,339	8,976,311
Number of voluntary, non-remunerated donors	49,684	3,666,702	3,716,439
Voluntary, non-remunerated donors (%)	53.44	41.28	41.40
Number of remunerated donors	0	7,182	7,182
Remunerated donors (%)	0	0.08	0.08
Screening for HIV (%)	100	99.6	99.6
Screening for HBsAg (%)	100	99.6	99.6
Screening for HCV (%)	98.96	99.6	99.6
Screening for syphilis (%)	100	99.6	99.6
Screening for <i>T. cruzi</i> (%)	NR	92.1	NR
Screening for HTLV I-II (%)	93.46	68.1	68.31

NR = Not reported.

Table II-2. Subregional Summary, 2010

Variable	Central America and Spanish-Speaking Caribbean	Caribbean	Andean Community	Southern Cone	Mexico	Brazil
Blood units collected	917,492	92,972	1,593,049	1,405,362	1,699,885	3,267,551
Number of voluntary, non-remunerated donors	552,692	49,684	656,445	338,218	40,385	2,078,962
Voluntary, non-remunerated donors (%)	60.24	53.44	41.21	24.07	2.38	63.62
Number of remunerated donors	6,820	0	362	0	0	0
Remunerated donors (%)	0.74	0	0.02	0	0	0
Screening for HIV (%)	100	100	99.83	100	98	100
Screening for HBsAg (%)	100	100	99.81	100	98	100
Screening for HCV (%)	100	98.96	99.82	100	98	100
Screening for syphilis (%)	100	100	99.81	100	98	100
Screening for <i>T. cruzi</i> (%)	47.75	NR	99.82	100	87	100
Screening for HTLV I-II (%)	29.61	93.46	69.06	100	0	100

NR = Not reported.

III. Latin American Countries, 2010

Table III-1. Blood Collection, 2010

Country	Total Units Collected	Number of Donors			
		Autologous	Allogeneic		
			Voluntary	Replacement	Remunerated
ARG	1,012,680	23,280	269,466	719,934	0
BOL	73,254	69	24,088	49,097	0
BRA*	3,267,551	43,871	2,078,962	1,144,718	0
CHI	227,301	NR	50,754	176,547	0
COL	692,485	964	538,950	152,571	0
COR	71,192	53	43,844	27,295	0
CUB	384,472	0	384,472	0	0
DOR	94,884	47	22,865	69,893	2,079
ECU	173,748	37	66,665	107,398	0
ELS**	84,287	0	8,663	75,624	0
GUT	92,385	50	4,382	87,953	NR
HON	63,878	27	10,118	53,396	337
MEX	1,699,885	1,761	40,385	1,657,739	0
NIC	74,842	0	74,842	0	0
PAN***	51,552	89	3,506	18,252	4,404
PAR	72,647	55	17,998	54,594	0
PER****	234,566	874	10,075	NR	362
URU	92,734	NR	NR	NR	NR
VEN	418,996	NR	16,667	NR	NR

*Data provided solely by 26 blood centers.

**Total units collected does not include 557 donations by apheresis.

***Partial information. 25,301 of the units collected were not classified by donor type.

****In 2010, 223,255 of the units collected were not classified by donor type.

NR = Not reported.

Table III-2. Blood Collection from Allogeneic Donors, 2010*

Country	Number of Units Collected	Type of Allogeneic Donor (Percentage)		
		Voluntary	Replacement	Remunerated
ARG	989,400	27.23	72.77	0
BOL	73,185	32.91	67.09	0
BRA	3,223,680	64.49	35.51	0
CHI	227,301	22.33	77.67	0
COL	691,521	77.94	22.06	0
COR	71,139	61.63	38.37	0
CUB	384,472	100	0	0
DOR	94,837	24.11	73.7	2.19
ECU	173,711	38.38	61.38	0
ELS	84,287	10.28	89.72	0
GUT	92,335	4.75	95.25	0
HON	63,851	15.84	83.63	0.53
MEX	1,698,124	2.38	97.62	0
NIC	74,842	100	0	0
PAN**	51,463	6.8	35.47	8.56
PAR	72,592	24.79	75.21	0
PER***	233,692	4.31	NR	0.15
URU	92,734	NR	NR	NR
VEN	418,996	4	NR	NR

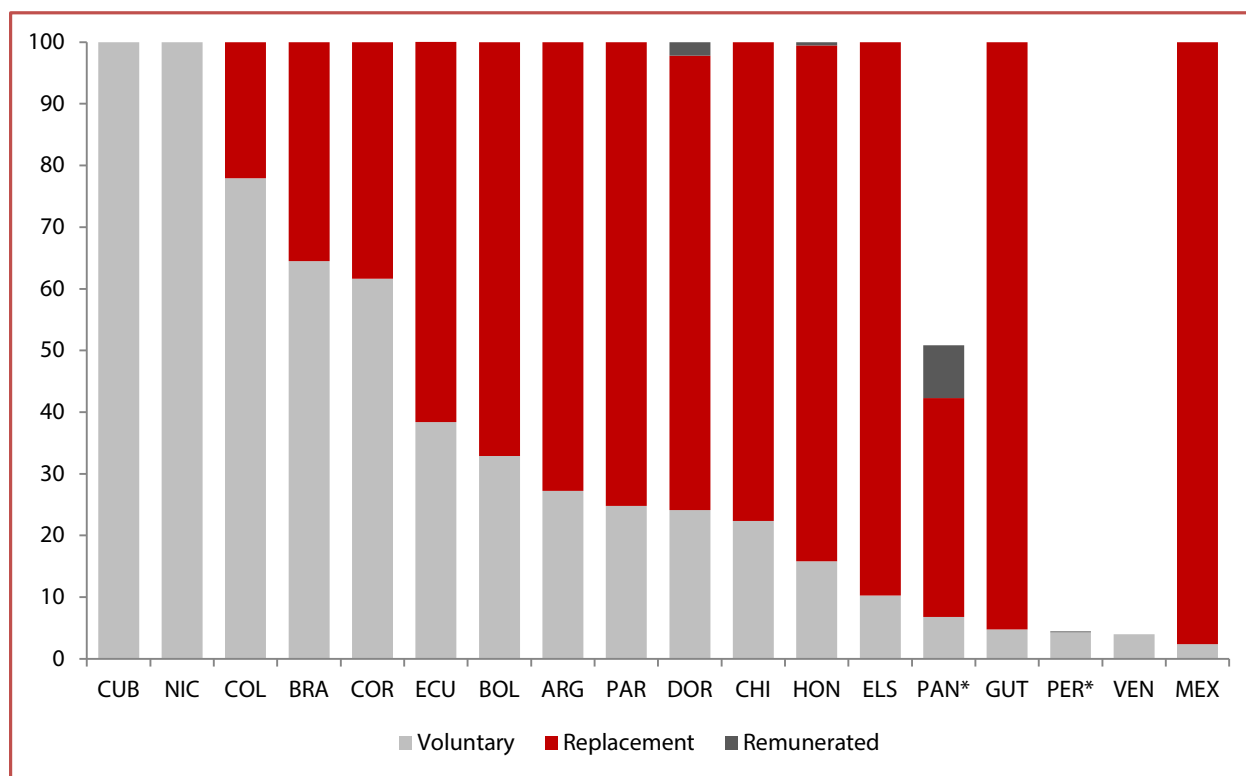
*Autologous donors not included.

**Partial information. 25,301 of the units collected were not classified by donor type.

***In 2010, 223,255 of the units collected were not classified by donor type.

NR = Not reported.

Figure III-1. Blood Collection Ranked from Greatest to Least by Voluntary Donations, Latin America, 2010 (Percentage)



* Partial information.

Table III-3. Selection of Allogeneic Donors, 2010*

Country	Number Of Units Collected	Number of Allogeneic Donors					
		Voluntary		Replacement		Remunerated	
		Interviewed	Deferred	Interviewed	Deferred	Interviewed	Deferred
ARG	989,400	291,000	21,534	873,000	153,066	NR	NR
BOL	73,185	33,707	9,619	73,659	24,562	0	0
BRA	3,223,680	2,408,235	329,273	1,507,413	362,695	0	0
CHI	227,301	64,054	13,300	227,853	51,306	0	0
COL	691,521	NR	NR	NR	NR	NR	NR
COR	71,139	61,546	17,702	33,693	6,398	0	0
CUB	384,472	402,422	17,950	0	0	0	0
DOR	94,837	28,011	5,146	88,229	18,336	4,415	2,336
ECU	173,711	87,861	16,029	148,225	33,039	0	0
ELS	84,287	10,852	2,189	105,453	29,829	0	0
GUT	92,335	5,229	847	134,196	46,243	0	0
HON	63,851	12,178	2,060	71,599	18,203	395	58
MEX	1,698,124	60,578	20,193	2,486,609	828,870	0	0
NIC	74,842	84,324	9,482	0	0	0	0
PAN**	51,463	NR	NR	NR	NR	NR	NR
PAR	72,592	18,235	237	58,010	3,381	0	0
PER	233,692	12,959	2,884	NR	NR	512	150
URU	92,734	33,830	NR	75,395	NR	NR	NR
VEN	418,996	NR	NR	NR	NR	NR	NR

*Autologous donors not included.

**Reported a total of 73,678 donors interviewed and 1,355 deferred donors.

NR = Not reported.

Table III-4. Selection of Allogeneic Donors, 2010*

Country	Number of Units Collected	Voluntary		Replacement		Remunerated	
		Number Interviewed	Percentage Deferred	Number Interviewed	Percentage Deferred	Number Interviewed	Percentage Deferred
ARG	989,400	291,000	7.40	873,000	17.53	NR	NR
BOL	73,185	33,707	28.54	73,659	33.35	0	0
BRA	3,223,680	2,408,235	13.67	1,507,413	24.06	0	0
CHI	227,301	64,054	20.76	227,853	22.52	0	0
COL	691,521	NR	NR	NR	NR	NR	NR
COR	71,139	61,546	28.76	33,693	18.99	0	0
CUB	384,472	402,422	4.46	0	0	0	0
DOR	94,837	28,011	18.37	88,229	20.78	4,415	52.91
ECU	173,711	87,861	18.24	148,225	22.29	0	0
ELS	84,287	10,852	20.17	105,453	28.29	0	0
GUT	92,335	5,229	16.2	134,196	34.46	0	0
HON	63,851	12,178	16.92	71,599	25.42	395	14.68
MEX	1,698,124	60,578	33.33	2,486,609	33.33	0	0
NIC	74,842	84,324	11.24	0	0	0	0
PAN**	51,552	NR	NR	NR	NR	NR	NR
PAR	72,592	18,235	1.30	58,010	5.83	0	0
PER	234,043	12,959	22.25	NR	NR	512	29.3
URU	92,734	33,830	NR	75,395	NR	NR	NR
VEN	418,996	NR	NR	NR	NR	NR	NR

*Autologous donors not included.

**Reported a total of 73,678 donors interviewed and 1,355 deferred donors.

NR = Not reported.

**Figure III-2. Deferred Donors by Allogeneic Donor Type,
Latin America, 2010 (Percentage)**

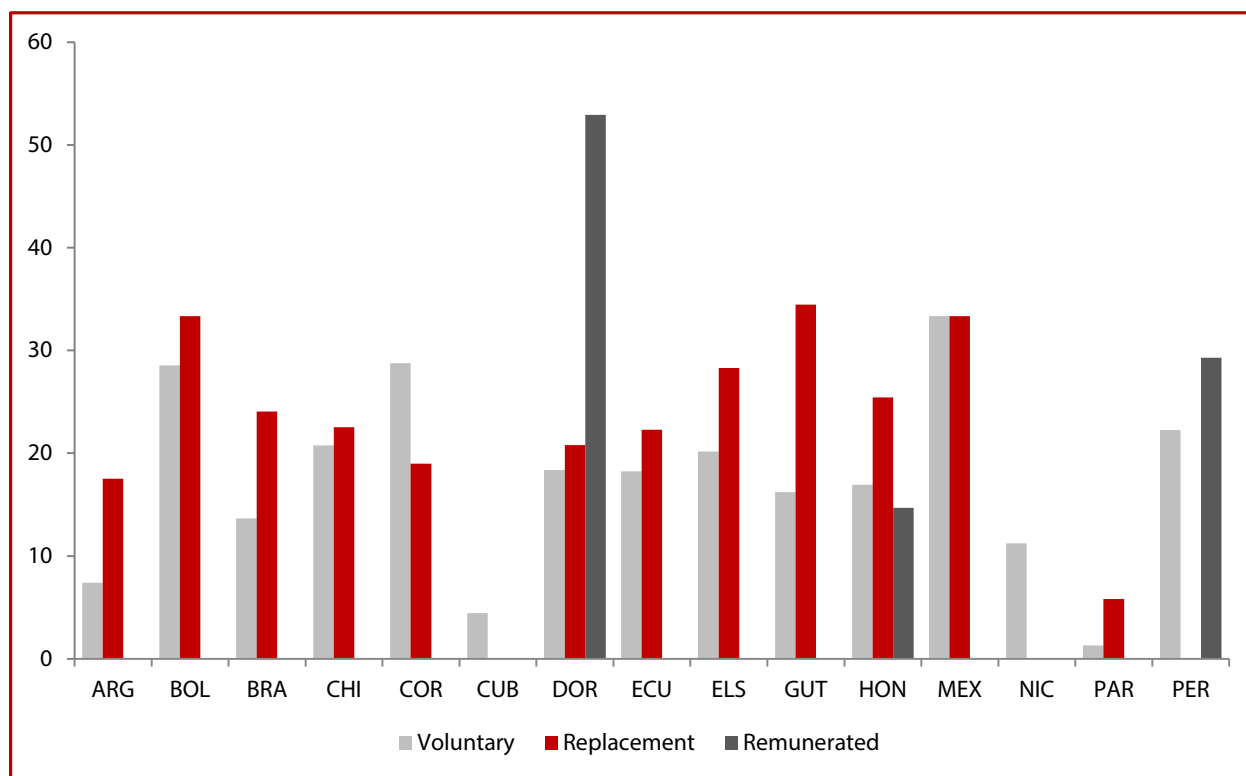


Table III-5. Efficiency of Blood Processing, 2010

Country	Number of Units Collected	Number of Collecting Centers	Number of Processing Centers	Annual Processing per Bank	Daily Processing per Bank (260 Days)
ARG	1,012,680	364	284	3,566	13.71
BOL	73,254	20	20	3,663	14.09
BRA	3,267,551	585	571	5,723	22.01
CHI	227,301	76	49	4,639	17.84
COL	692,485	91	91	7,610	29.27
COR	71,192	34	30	2,373	9.13
CUB	384,472	46	46	8,358	32.15
DOR	94,884	63	63	1,506	5.79
ECU	173,748	17	17	10,220	39.31
ELS	84,287	29	29	2,906	11.18
GUT	92,385	62	60	1,540	5.92
HON	63,878	27	24	2,662	10.24
MEX	1,699,885	560	NR	3,036	11.68
NIC	74,842	3	2	37,421	143.93
PAN	51,552	26	17	3,032	11.66
PAR	72,647	44	8	9,081	34.93
PER	234,566	235	88	2,666	10.25
URU	92,734	65	60	1,546	5.94
VEN	418,996	313	313	1,339	5.15

NR = Not reported.

**Table III-6. Coverage of Screening for Infectious Markers, 2010
(Percentage)**

Country	HIV	HBsAg	HCV	Syphilis	<i>T. cruzi</i>	HTLV I-II	Anti-HBc
ARG	100	100	100	100	100	100	100
BOL	100	100	100	100	100	NR	NR
BRA	100	100	100	100	100	100	100
CHI	100	100	100	100	100	100	NR
COL	100	100	100	100	100	65	65.6
COR	100	100	100	100	100	100	100
CUB	100	100	100	100	NR	NR	NR
DOR	100	100	100	100	NR	100	NR
ECU	100	100	100	100	100	NR	14.8
ELS*	100	100	100	100	100	NR	NR
GUT	100	100	100	100	100	NR	NR
HON	100	100	100	100	100	87.4	88.2
MEX	98	98	98	98	87	NR	NR
NIC	100	100	100	100	100	NR	NR
PAN	100	100	100	100	100	97	100
PAR	100	100	100	100	100	100	100
PER**	98.82	98.73	98.76	98.74	98.75	98.53	98.78
URU	100	100	100	100	100	100	100
VEN	100	100	100	100	100	100	100

*Included in screening, 557 donors by apheresis.

**Units received for screening 234,566; but screened for: HIV 231,798; HBsAg 231,592; HCV 231,663; syphilis 231,610; *T. cruzi* 231,629; Anti-HBc 231,698.

NR = Not reported.

Table III-7. Number of Units Not Screened for Infectious Markers, 2010*

Country	HIV	HBsAg	HCV	Syphilis	<i>T. cruzi</i>
MEX	33,962	33,962	33,962	33,962	220,756
PER	2,768	2,974	2,903	2,956	2,937
Total	36,730	36,939	36,865	36,918	223,693

*Except HTLV I-II and Anti-HBc.

Table III-8. Proportion of Reactive/Positive Units, 2010 (Percentage)

Country	HIV	HBsAg	HCV	Syphilis	<i>T. cruzi</i>	HTLV I-II	Anti-HBc
ARG	0.34	0.3	0.47	0.91	3.13	0.43	2.7
BOL	0.15	0.26	0.34	0.92	2.32	NR	NR
BRA	0.36	0.2	0.29	0.71	0.18	0.17	1.93
CHI	0.04	0.02	0.03	0.95	0.16	0.13	NR
COL	0.29	0.19	0.5	1.54	0.41	0.4	2.07
COR	0.024	0.077	0.065	0.16	0.045	0.013	1.76
CUB	0.03	0.41	1.34	0.62	NR	NR	NR
DOR	0.25	1.07	0.37	0.56	NR	0.24	NR
ECU	0.43	0.35	0.52	0.86	0.19	NR	0.19
ELS*	0.05	0.16	0.1	1.36	1.61	NR	NR
GUT	0.46	0.67	0.94	2.56	1.34	NR	2.91
HON	0.18	0.24	0.47	1.04	1.65	0.25	4.65
MEX	0.26	0.17	0.56	0.45	0.39	NR	NR
NIC	0.06	0.24	0.33	0.86	0.22	NR	NR
PAN	0.05	0.15	0.48	1.1	0.5	0.25	1.5
PAR	0.54	0.4	0.41	7.96	2.55	0.21	3.33
PER	0.41	0.46	0.76	1.34	0.62	1.23	4.4
URU	0.09	0.1	0.34	0.57	0.23	0.11	1.17
VEN	0.26	0.66	0.36	1.84	0.32	0.19	3.11

*Included in screening, 557 donors by apheresis.

NR = Not reported.

Figure III-3. Proportion of Reactive/Positive Units for Five Markers, Latin America, 2010 (Percentage)

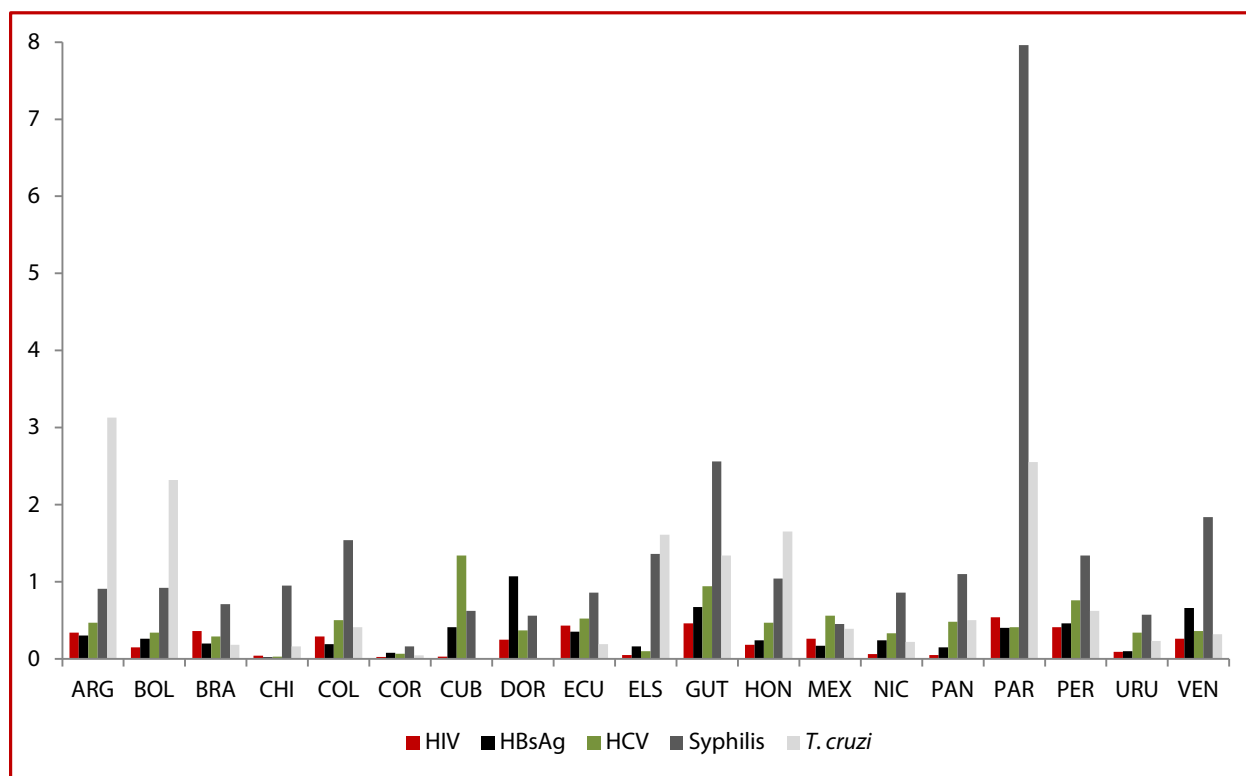


Table III-9a. Number of Availability of Blood Components, 2010 - Separation into Components

Country	Units Received	RBC	FFP	FP	CRYO	PL
ARG	989,400	938,049	266,604	622,075	19,750	404,590
BOL	73,254	67,983	53,729	8,951	3,434	25,919
BRA	3,223,680	NR	NR	NR	NR	NR
CHI	227,301	212,702	159,983	42,084	17,984	138,027
COL	692,485	668,164	516,680	111,722	37,263	321,476
COR	59,897	59,897	17,036	NR	17,586	52,069
CUB	NR	NR	NR	NR	NR	NR
DOR	123,846	41,880	6,644	4,805	35	4,657
ECU	173,748	160,656	149,391	NR	10,067	60,064
ELS*	84,844	79,195	67,064	NR	9,919	53,284
GUT	84,983	76,284	44,101	NR	562	28,966
HON	63,878	24,308	23,155	NR	1,333	19,535
MEX	1,641,103	1,556,635	1,253,323	303,312	103,485	681,673
NIC	74,842	72,379	72,379	NR	3,069	36,073
PAN	54,427	NR	NR	NR	NR	NR
PAR	72,647	54,028	45,977	7,547	1,938	33,629
PER	234,566	193,916	157,057	NR	23,506	133,404
URU	92,734	NR	NR	NR	NR	NR
VEN	61,342	370,481	310,340	87,865	27,724	221,288

*Included in screening, 557 donors by apheresis.

NR = Not reported.

**Table III-9b. Number of Availability of Blood Components, 2010 -
Blood and Blood Components Discarded***

Country	WB	RBC	FFP	FP	CRYO	PL
ARG	23,272	146,369	23,995	55,987	5,250	71,390
BOL	832	4,179	17,437	6,484	1,364	9,925
BRA	NR	NR	NR	NR	NR	NR
CHI**	NR	4,227	NR	NR	NR	NR
COL	4,756	47,004	272,006	82,618	11,175	113,450
COR	45	4,433	13,102	NR	9	16,336
CUB	NR	NR	NR	NR	NR	NR
DOR	4,274	942	3,953	0	18	373
ECU	3,699	5,399	65,059	NR	2,388	13,227
ELS***	1,296	4,671	9,460	NR	63	7,756
GUT	482	8,380	8,934	NR	211	7,675
HON	3,380	5,616	11,004	NR	69	4,099
MEX	47,104	101,128	480,330	337,368	16,285	193,530
NIC	1,492	1,349	40,867	3,204	359	12,507
PAN	NR	NR	NR	NR	NR	NR
PAR	3,225	10,526	12,873	5,865	142	13,874
PER	1,917	14,384	63,775	NR	1,914	31,678
URU	3,931	0	548	NR	0	12,789
VEN	NR	NR	NR	NR	NR	NR

*Outdated units.

**Data that will be reported as of 2012.

***Included in screening, 557 donors by apheresis.

NR = Not reported.

Table III-10. Availability of Blood Components, 2010 (Percentage)

Country	Percentage Separated into Components					Percentage Blood and Blood Components Discarded					
	RBC	FFP	FP	CRYO	PL	WB	RBC	FFP	FP	CRYO	PL
ARG	94.81	26.95	62.87	2	40.89	47.14	15.6	9	9	26.58	17.65
BOL	92.8	73.35	12.22	4.69	35.38	15.9	6.15	32.45	72.44	39.72	38.29
BRA	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CHI	93.58	70.38	18.51	7.91	60.72	0	1.99	NR	NR	NR	NR
COL	96.49	74.61	16.13	5.38	46.42	24.62	7.03	52.64	73.95	29.99	35.29
COR	100	28.44	NR	29.36	86.93	14.8	7.4	76.91	NR	0.05	31.37
CUB	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
DOR	33.82	5.36	3.88	0.03	3.76	NR	2.25	59.5	0	51.43	8.01
ECU	92.46	85.98	NR	5.79	34.57	NR	3.36	43.55	NR	23.72	22.02
ELS	93.34	79.04	NR	11.69	62.8	25.11	5.9	14.11	NR	0.64	14.56
GUT	89.76	51.89	NR	0.66	34.08	5.54	10.99	20.26	NR	37.54	26.5
HON	38.05	36.25	NR	2.09	30.58	8.54	23.1	47.52	NR	5.18	20.98
MEX	94.85	76.37	18.48	6.31	41.54	2.87	6.5	38.32	100	15.74	28.39
NIC	96.71	96.71	NR	4.1	48.2	2.06	1.86	56.46	NR	11.7	34.67
PAN	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
PAR	74.37	63.29	10.39	2.67	46.29	17.32	19.48	28	77.71	7.33	41.26
PER	82.67	66.96	NR	10.02	56.87	0.82	7.42	40.61	NR	8.14	23.75
URU	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
VEN	88.42	74.1	20.97	6.62	52.81	NR	NR	NR	NR	NR	NR

NR = Not reported.

Figure III-4. Blood and Blood Components Discarded, Latin America, 2010 (Percentage)

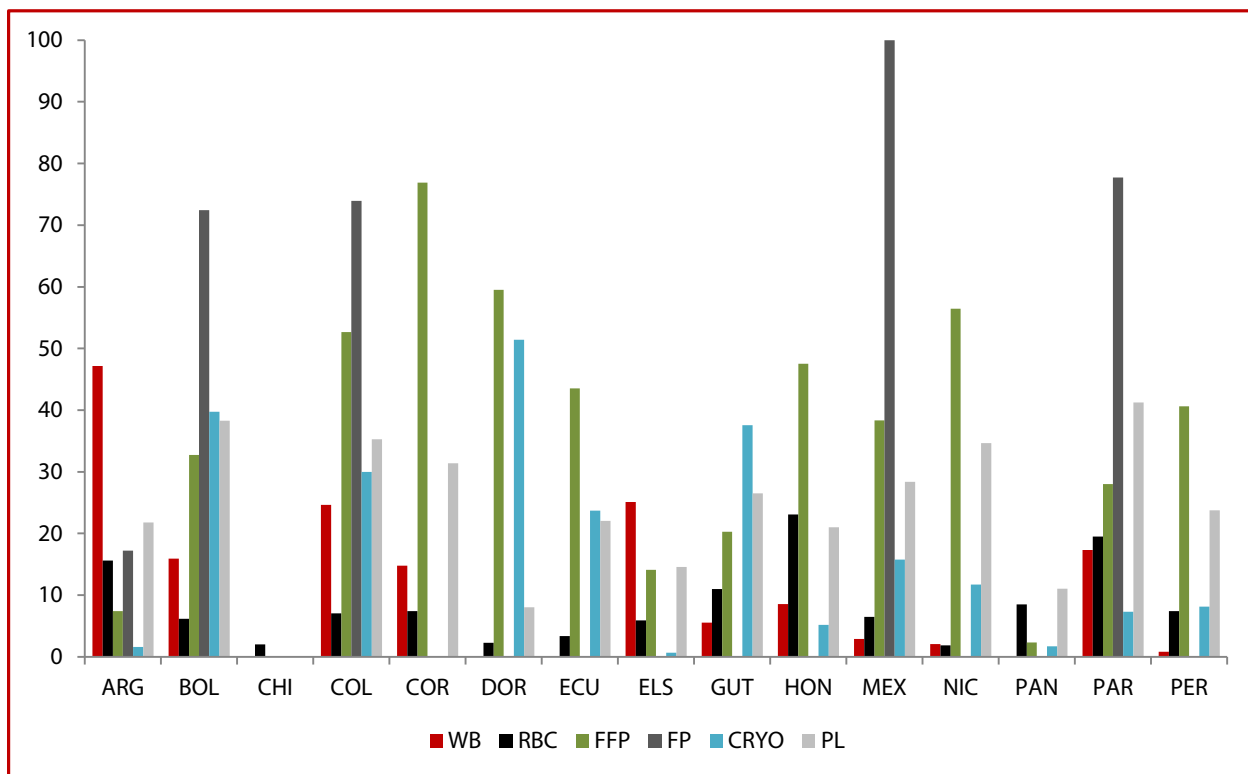


Table III-11. Organization of the National Blood System, 2010

Country	Specific Law	Responsible Unit	Specific Budget	National Policy	National Commission
ARG	Yes	Yes	Yes	Yes	Yes
BOL	Yes	Yes	No	Yes	Yes
BRA	Yes	Yes	Yes	Yes	Yes
CHI	Yes	Yes	Yes	Yes	Yes
COL	Yes	Yes	Yes	Yes	Yes
COR	No	No	No	No	No
CUB	Yes	Yes	No	Yes	Yes
DOR	Yes	Yes	No	Yes	Yes
ECU	Yes	Yes	Yes	Yes	No
ELS	No	Yes	No	Yes	No
GUT	Yes	Yes	Yes	Yes	Yes
HON	Yes	Yes	Yes	Yes	Yes
MEX	Yes	Yes	Yes	Yes	No
NIC	Yes	NR	Yes	Yes	Yes
PAN	No	Yes	No	No	Yes
PAR	Yes	Yes	Yes	Yes	Yes
PER	Yes	Yes	Yes	No	No
URU	Yes	No	No	No	No
VEN	Yes	Yes	No	No	No

NR = Not reported.

Table III-12. Organization of the National Blood System, 2010

Country	Reference Center	National Plan	Donor Norms	Operation Norms	Clinical Guidelines	Service Registration
ARG	Yes	Yes	Yes	Yes	Yes	No
BOL	Yes	Yes	Yes	Yes	Yes	Yes
BRA	No	No	Yes	Yes	Yes	Yes
CHI	Yes	Yes	Yes	Yes	Yes	Yes
COL	Yes	Yes	Yes	Yes	Yes	Yes
COR	Yes	No	No	No	No	Yes
CUB	Yes	Yes	Yes	Yes	Yes	Yes
DOR	No	Yes	Yes	Yes	No	Yes
ECU	NR	No	No	No	Yes	Yes
ELS	Yes	Yes	Yes	Yes	Yes	Yes
GUT	Yes	Yes	Yes	Yes	Yes	Yes
HON	No	No	Yes	Yes	Yes	No
MEX	Yes	Yes	Yes	Yes	Yes	Yes
NIC	NR	Yes	Yes	Yes	Yes	NR
PAN	Yes	No	Yes	Yes	No	Yes
PAR	Yes	Yes	Yes	Yes	Yes	Yes
PER	No	No	Yes	Yes	Yes	Yes
URU	Yes	No	No	Yes	Yes	Yes
VEN	Yes	No	Yes	Yes	No	No

NR = Not reported.

Table III-13. Organization of the National Blood System, 2010

Country	Quality Assurance Policy	National Quality Assurance Program	External Evaluation Serology-TTI	External Evaluation Immuno-hematology	Inspection Program	Continued Education
ARG	No	No	Yes	No	No	Yes
BOL	Yes	Yes	Yes	No	Yes	Yes
BRA	Yes	Yes	Yes	Yes	Yes	Yes
CHI	Yes	Yes	Yes	Yes	Yes	Yes
COL	Yes	Yes	Yes	Yes	Yes	Yes
COR	No	No	No	No	No	Yes
CUB	Yes	Yes	Yes	Yes	Yes	Yes
DOR	Yes	Yes	Yes	No	Yes	No
ECU	No	No	Yes	No	No	No
ELS	Yes	Yes	Yes	Yes	Yes	Yes
GUT	No	No	No	No	Yes	Yes
HON	No	No	No	No	No	No
MEX	Yes	Yes	Yes	Yes	Yes	Yes
NIC	Yes	Yes	No	No	Yes	Yes
PAN	No	No	Yes	No	No	No
PAR	Yes	Yes	No	No	Yes	Yes
PER	Yes	No	Yes	No	Yes	No
URU	No	No	Yes	No	No	No
VEN	No	No	Yes	No	No	Yes

NR = Not reported.

Table III-14. Organization of the National Blood System, 2010

Country	Staff Certification	Service Accreditation
ARG	Yes	Yes
BOL	Yes	Yes
BRA	Yes	Yes
CHI	Yes	Yes
COL	Yes	Yes
COR	Yes	Yes
CUB	Yes	Yes
DOR	No	No
ECU	No	No
ELS	No	No
GUT	Yes	No
HON	No	No
MEX	Yes	Yes
NIC	Yes	NR
PAN	No	No
PAR	No	Yes
PER	No	No
URU	No	No
VEN	No	No

NR = Not reported.

Table III-15. Countries with One Hundred Percent Screening for Infectious Markers, 2010*

Country	HIV	HBsAg	HCV	Syphilis	<i>T. cruzi</i>	Five Markers	HTLV I-II	Anti-HBc
ARG	ARG	ARG	ARG	ARG	ARG	ARG	ARG	ARG
BOL	BOL	BOL	BOL	BOL	BOL	BOL		
BRA	BRA	BRA	BRA	BRA	BRA	BRA	BRA	BRA
CHI	CHI	CHI	CHI	CHI	CHI	CHI	CHI	
COL	COL	COL	COL	COL	COL	COL		
COR	COR	COR	COR	COR	COR	COR	COR	COR
CUB	CUB	CUB	CUB	CUB				
DOR	DOR	DOR	DOR	DOR			DOR	
ECU	ECU	ECU	ECU	ECU	ECU	ECU		
ELS	ELS	ELS	ELS	ELS	ELS	ELS		
GUT	GUT	GUT	GUT	GUT	GUT	GUT		
HON	HON	HON	HON	HON	HON	HON		
NIC	NIC	NIC	NIC	NIC	NIC	NIC		
PAN	PAN	PAN	PAN	PAN	PAN	PAN		PAN
PAR	PAR	PAR	PAR	PAR	PAR	PAR	PAR	PAR
URU	URU	URU	URU	URU	URU	URU	URU	URU
VEN	VEN	VEN	VEN	VEN	VEN	VEN	VEN	VEN
17	17	17	17	17	15	15	8	7

*Proportion of units received.

**Table III-16. National Staff Who Submitted Official Reports
to the Pan American Health Organization -
Latin American Countries, 2010**

Country	Name	Position	Address
Argentina	Mabel Maschio	Coordinadora General Plan Nacional de Sangre	Ministerio de Salud de la Nación Av. 9 de Julio 1925, 9º Piso Ciudad Autónoma de Buenos Aires Tel.: 54 11 4379 9435 E-mail: mmaschio@msal.gov.ar
Bolivia	María del Carmen García De Luna Orozco	Coordinadora Nacional del Programa Nacional de Sangre	Programa Nacional de Sangre Ministerio de Salud y Deportes La Paz Tel.: 591-2-2115542 E-mail: clinicasgarcia@hotmail.com
Brazil	Bárbara de Jesus Simoes	Assessora da Gestão da Informação	Coordenação Geral de Sangue e Hemoderivados do Ministério da Saúde SAF Sul - Edifício Premium Torre II nº andar sala 202 Brasília Tel.: 55 (61) 3315-6169 E-mail: sangue@saude.gov.br
Chile	Cristina Cárdenas	Coordinadora Nacional de Servicios de Sangre	Ministerio de Salud Mac iver 541, Santiago Centro, Chile Tel.:56-2-5781911 E-mail: mcardenas@minsal.cl; mlarrondo@minsal.cl
	Milton Larrondo	Presidente Comisión Nacional de Sangre y Tejidos	
Colombia	Mauricio Beltrán Durán	Coordinador Red Nacional Bancos de Sangre	Instituto Nacional de Salud Av. Calle 26, # 51-20 Tel.: (1) 2207700, Ext 1254 – 1255 Línea Gratuita: 018000 113400 E-mail: mbeltrand@ins.gov.co; mbermudez@ins.gov.co
Costa Rica	Gerardo Solano Elizondo	Unidad de Servicios de Salud de Atención Directa a las Personas	Ministerio de Salud Oficinas Centrales San José Tel.: 506-2222-9115 E-mail: gsolanoe@ministeriodesalud.go.cr
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(Continued)

Table III-16. (Continued)

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IV. Caribbean Countries, 2010

Table IV-1. Blood Collection, 2010

Country	Total Units Collected	Number of Donors			
		Autologous	Allogeneic		
			Voluntary	Replacement	Remunerated
ANU	134	3	13	118	0
ANI*	1,321	3	66	1,252	0
ARU	2,830	0	2,830	0	0
BAH	NR	NR	NR	NR	NR
BAR*,**	4,781	119	716	3,946	0
BLZ	4,558	0	457	4,101	0
BER	2,456	11	2,445	0	0
BVI	445	0	0	445	0
CAY	1,006	0	1,006	0	0
CUR	7,541	0	7,541	0	0
DOM	877	2	33	842	0
FDA	NR	NR	NR	NR	NR
GRA*	1,426	5	370	1,051	0
GUY	7,738	NR	6,113	1,625	0
HAI	14,899	NR	12,501	2,398	0
JAM	28,402	0	3,123	25,279	0
MOT	128	1	127	0	0
SKT	425	0	51	374	0
STL	2,078	8	1,352	718	0
STV	1,043	31	56	956	NR
SUR	10,884	0	10,884	0	0
TCI	NR	NR	NR	NR	NR
TRT	NR	NR	NR	NR	NR

*2009 data.

**Not included 50 platelets apheresis collected and screened.

NR = Not reported.

Table IV-2. Blood Collection from Allogeneic Donors, 2010*

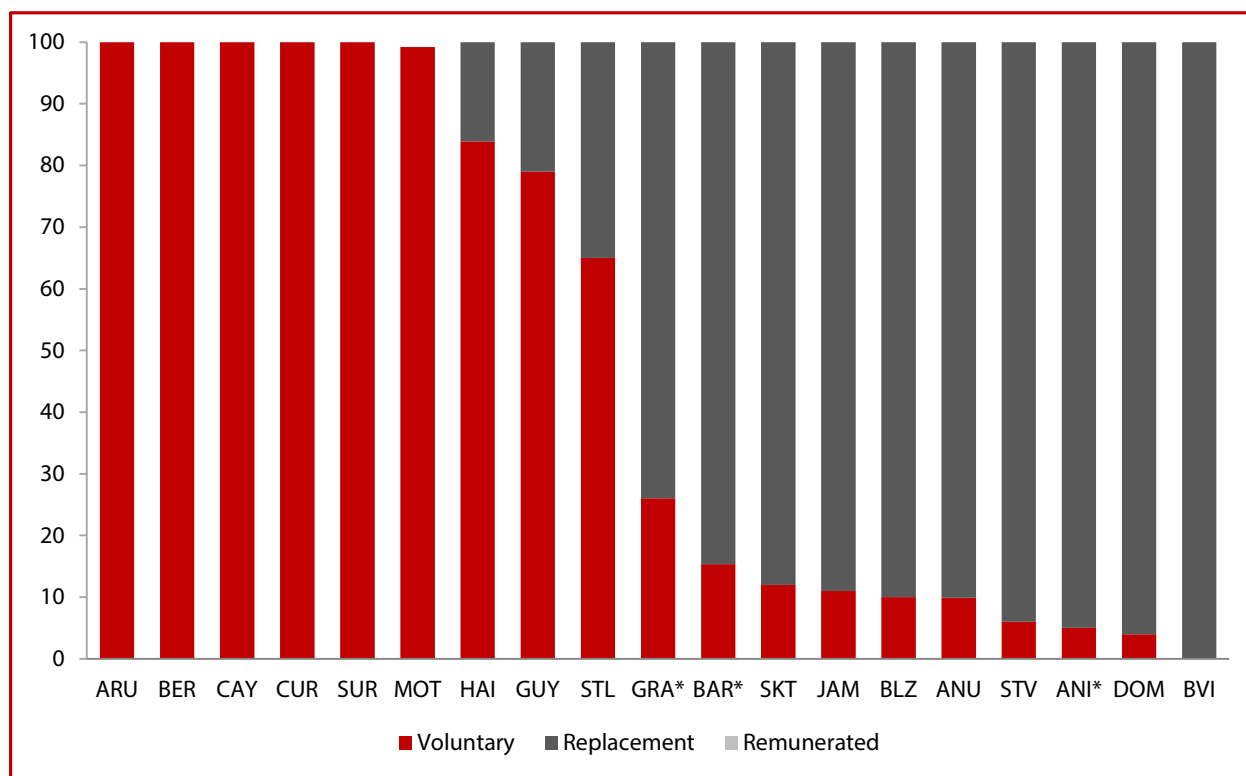
Country	Number of Units Collected	Type of Allogeneic Donor (Percentage)		
		Voluntary	Replacement	Remunerated
ANU	131	9.92	90.08	0
ANI**	1,318	5.01	94.99	0
ARU	2,830	100	0	0
BAH	NR	NR	NR	NR
BAR**	4,662	15.36	84.64	0
BLZ	4,558	10	90	0
BER	2,445	100	0	0
BVI	445	0	100	0
CAY	1,006	100	0	0
CUR	7,541	100	0	0
DOM	875	4	96	0
FDA	NR	NR	NR	NR
GRA**	1,421	26.04	73.96	0
GUY	7,738	79	21	0
HAI	14,899	83.9	16.1	0
JAM	28,402	11	89	0
MOT	127	99.22	0	0
SKT	425	12	88	0
STL	2,070	65	35	0
STV	1,012	6	94	NR
SUR	10,884	100	0	0
TCI	NR	NR	NR	NR
TRT	NR	NR	NR	NR

*Autologous donors not included.

**2009 data.

NR = Not reported.

Figure IV-1. Blood Collection Ranked from Greatest to Least by Voluntary Donations, Caribbean, 2010 (Percentage)



*2009 data.

Table IV-3. Selection of Allogeneic Donors, 2010*

Country	Number of Units Collected	Number of Allogeneic Donors					
		Voluntary		Replacement		Remunerated	
		Interviewed	Deferred	Interviewed	Deferred	Interviewed	Deferred
ANU	131	NR	NR	NR	NR	0	0
ANI**	1,318	68	2	1,441	189	0	0
ARU	2,830	2,850	20	0	0	0	0
BAH	NR	NR	NR	NR	NR	NR	NR
BAR**	4,662	NR	NR	NR	NR	0	0
BLZ	4,558	578	121	5,837	1,736	0	0
BER	2,445	2,720	275	0	0	0	0
BVI	445	NR	NR	NR	NR	0	0
CAY	1,006	1,119	113	0	0	0	0
CUR	7,541	7,586	45	0	0	0	0
DOM	875	33	0	1,238	396	0	0
FDA	NR	NR	NR	NR	NR	NR	NR
GRA**	1,421	408	38	1,212	161	0	0
GUY	7,738	7,380	1,267	1,930	305	0	0
HAI	14,899	NR	NR	NR	NR	NR	NR
JAM	28,402	4,414	1,291	35,541	10,262	0	0
MOT	127	142	21	0	0	0	0
SKT	425	71	20	536	162	0	0
STL	2,070	1,946	594	1,065	347	0	0
STV	1,012	64	8	1,314	358	NR	NR
SUR	10,884	12,370	1,486	0	0	0	0
TCI	NR	NR	NR	NR	NR	NR	NR
TRT	NR	NR	NR	NR	NR	NR	NR

*Autologous donors not included.

**2009 data.

NR = Not reported.

Table IV-4. Selection of Allogeneic Donors, 2010*

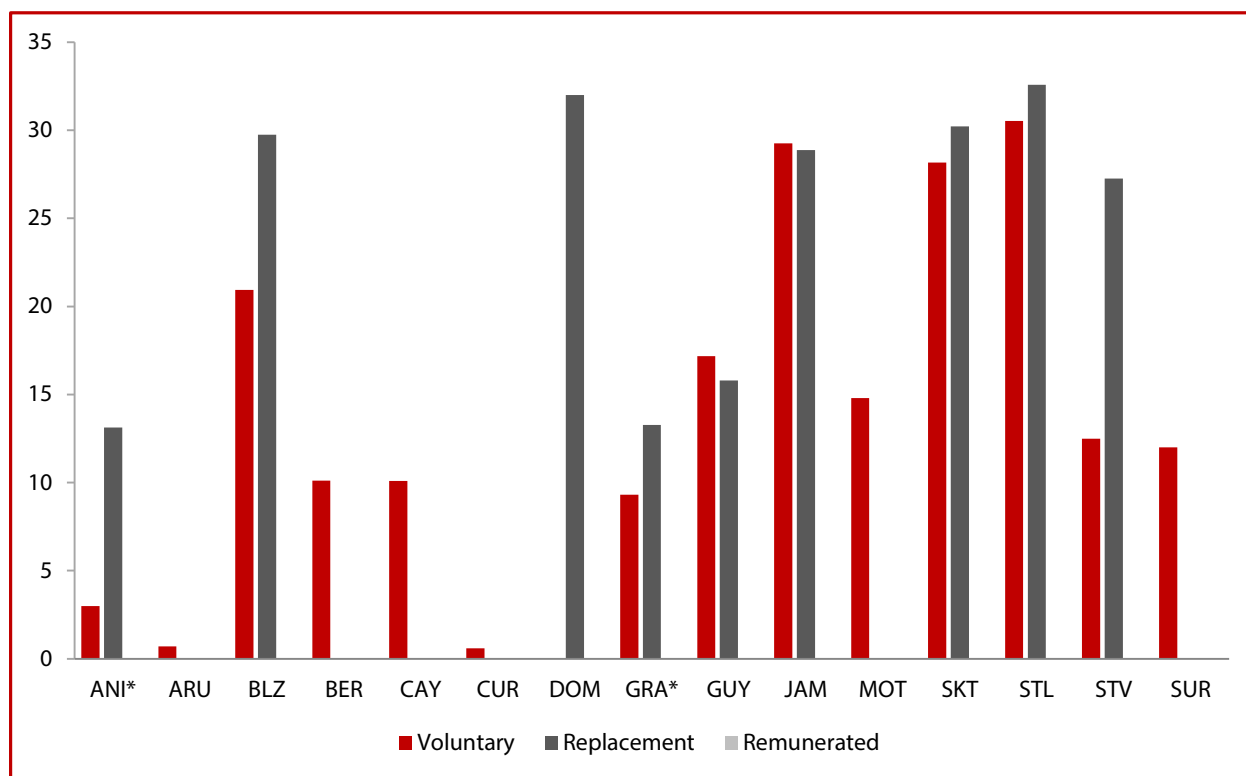
Country	Number of Units Collected	Voluntary		Replacement		Remunerated	
		Number Interviewed	Percentage Deferred	Number Interviewed	Percentage Deferred	Number Interviewed	Percentage Deferred
ANU	131	NR	NR	NR	NR	0	0
ANI**	1,318	68	3	1,441	13.12	0	0
ARU	2,830	2,850	0.70	0	0	0	0
BAH	NR	NR	NR	NR	NR	NR	NR
BAR**	4,662	NR	NR	NR	NR	0	0
BLZ	4,558	578	20.93	5,837	29.74	0	0
BER	2,445	2,720	10.11	0	0	0	0
BVI	445	NR	NR	NR	NR	0	0
CAY	1,006	1,119	10.10	0	0	0	0
CUR	7,541	7,586	0.59	0	0	0	0
DOM	875	33	0.00	1,238	31.99	0	0
FDA	NR	NR	NR	NR	NR	NR	NR
GRA**	1,421	408	9.31	1,212	13.28	0	0
GUY	7,738	7,380	17.17	1,930	15.80	0	0
HAI	14,899	NR	NR	NR	NR	NR	NR
JAM	28,402	4,414	29.25	35,541	28.87	0	0
MOT	127	142	14.79	0	0	0	0
SKT	425	71	28.17	536	30.22	0	0
STL	2,070	1,946	30.52	1,065	32.58	0	0
STV	1,012	64	12.50	1,314	27.25	NR	NR
SUR	10,884	12,370	12.01	0	0	0	0
TCI	NR	NR	NR	NR	NR	NR	NR
TRT	NR	NR	NR	NR	NR	NR	NR

*Autologous donors not included.

**2009 data in place of 2010.

NR = Not reported.

Figure IV-2. Deferred Donors by Allogeneic Donor Type, Caribbean, 2010 (Percentage)



*2009 data.

Table IV-5. Efficiency of Blood Processing, 2010

Country	Number of Units Collected	Number of Collecting Centers	Number of Processing Centers	Annual Processing per Bank	Daily Processing per Bank (260 Days)
ANU	134	1	1	134	0.52
ANI*	1,318	2	NR	659	2.5
ARU	2,830	1	1	2,830	10.88
BAH	NR	NR	NR	NR	NR
BAR*	4,662	1	NR	4,662	17.9
BLZ	4,558	6	7	651	2.5
BER	2,446	1	1	2,446	9.4
BVI	445	1	1	445	1.71
CAY	1,006	2	2	503	1.93
CUR	7,541	1	1	7,541	29
DOM	877	1	1	877	3.37
FDA	NR	NR	NR	NR	NR
GRA*	1,421	1	NR	1,421	5.5
GUY	7,738	5	1	7,738	29.76
HAI	14,899	30	1	14,899	57.30
JAM	28,402	10	1	28,402	109.24
MOT	128	1	1	128	0.49
SKT	425	2	2	213	0.82
STL	2,078	3	1	2,078	7.99
STV	1,043	1	1	1,043	4.01
SUR	10,884	6	1	10,884	41.86
TCI	NR	NR	NR	NR	NR
TRT	NR	NR	NR	NR	NR

*2009 data.

NR = Not reported.

Table IV-6. Coverage of Screening for Infectious Markers, 2010 (Percentage)

Country	HIV	HBsAg	HCV	Syphilis	HTLV I-II
ANU	100	100	100	100	0
ANI*,**	100	100	93.10	100	0
ARU	100	100	100	100	100
BAH	NR	NR	NR	NR	NR
BAR*,***	100	100	100	100	100
BLZ	100	100	100	100	NR
BER	100	100	100	100	100
BVI	100	100	100	100	85.39
CAY	100	100	100	100	100
CUR	100	100	100	100	100
DOM	100	100	NR	100	100
FDA	NR	NR	NR	NR	NR
GRA*	100	100	100	100	100
GUY	100	100	100	100	100
HAI	100	100	100	100	100
JAM	100	100	100	100	100
MOT	100	100	100	100	100
SKT	100	100	100	100	0
STL	100	100	100	100	100
STV	100	100	100	100	100
SUR	100	100	100	100	100
TCI	NR	NR	NR	NR	NR
TRT	NR	NR	NR	NR	NR

*2009 data.

**HCV testing could not be done on all units due to unavailability of reagent. Screened units 1,318.

***Not included 50 platelets apheresis collected and screened.

NR = Not reported.

Table IV-7. Number of Units Not Screened for Infectious Markers, 2010

Country	HIV	HBsAg	HCV	Syphilis	HTLV I-II
ANU					131
ANI*			91		1,318
BVI					65
SKT					425
Total			91		1,939

*2009 data.

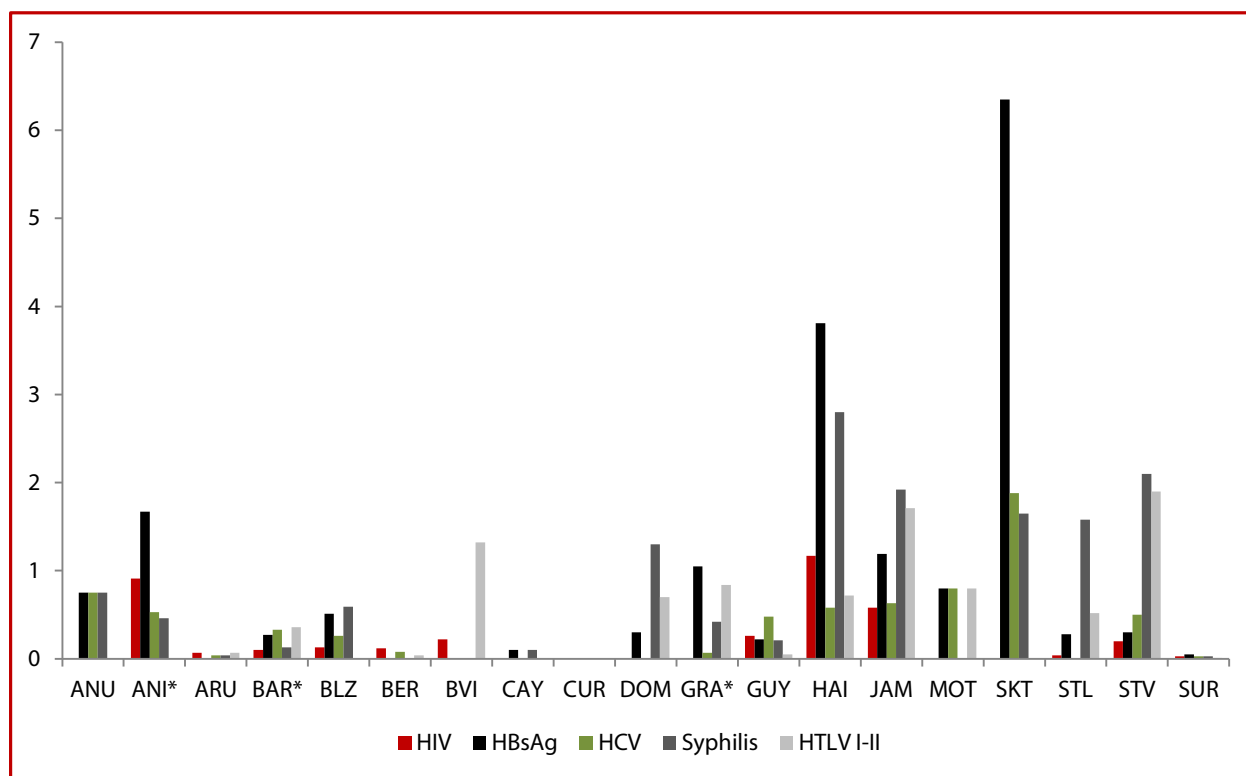
Table IV-8. Proportion of Reactive/Positive Units, 2010 (Percentage)

Country	HIV	HBsAg	HCV	Syphilis	HTLV I-II
ANU	0	0.75	0.75	0.75	NR
ANI*	0.91	1.67	0.53	0.46	NR
ARU	0.07	0	0.04	0.04	0.07
BAH	NR	NR	NR	NR	NR
BAR*	0.10	0.27	0.33	0.13	0.36
BLZ	0.13	0.51	0.26	0.59	NR
BER	0.12	0	0.08	0	0.04
BVI	0.22	0	0	0	1.32
CAY	0	0.1	0	0.1	0
CUR	0	0	0	0	0
DOM	0	0.3	NR	1.3	0.7
FDA	NR	NR	NR	NR	NR
GRA*	0	1.05	0.07	0.42	0.84
GUY	0.26	0.22	0.48	0.21	0.05
HAI	1.17	3.81	0.58	2.8	0.72
JAM	0.58	1.19	0.63	1.92	1.71
MOT	0	0.8	0.8	0	0.8
SKT	0	6.35	1.88	1.65	NR
STL	0.04	0.28	0	1.58	0.52
STV	0.2	0.3	0.5	2.1	1.9
SUR	0.03	0.05	0.03	0.03	0.01
TCI	NR	NR	NR	NR	NR
TRT	NR	NR	NR	NR	NR

*2009 data.

NR = Not reported.

**Figure IV-3. Proportion of Reactive/Positive Units
Caribbean, 2010 (Percentage)**



*2009 data.

Table IV-9a. Number of Availability of Blood Components, 2010 - Separation of Components

Country	Units Received	RBC	FFP	FP	CRYO	PL
ANU	134	90	NR	NR	NR	NR
ANI*	1,318	809	135	48	0	141
ARU	2,755	2,755	2,213	0	0	801
BAH	NR	NR	NR	NR	NR	NR
BAR*	4,781	1,799	1,781	NR	18	1,745
BLZ	4,558	1,855	1,164	691	0	846
BER	2,445	2,257	465	0	0	113
BVI	445	203	203	0	NR	NR
CAY	1,006	807	248	NR	NR	NR
CUR	7,541	7,541	5,520	0	0	750
DOM	877	810	495	NR	57	222
FDA	NR	NR	NR	NR	NR	NR
GRA*	1,426	1,426	176	0	3	35
GUY	NR	NR	NR	NR	NR	NR
HAI	14,899	12,075	95	NR	NR	NR
JAM	28,402	12,843	11,740	1,667	1,955	4,449
MOT	128	110	0	0	0	0
SKT	425	61	61	NR	NR	NR
STL	2,078	2,019	716	0	0	702
STV	1,043	1,011	230	0	0	44
SUR	9,998	9,996	1,867	0	0	1,665
TCI	NR	NR	NR	NR	NR	NR
TRT	NR	NR	NR	NR	NR	NR

*2009 data.

NR = Not reported.

**Table IV-9b. Number of Availability of Blood Components, 2010 -
Blood and Blood Components Discarded***

Country	WB	RBC	FFP	FP	CRYO	PL
ANU	12	NR	NR	NR	NR	NR
ANI**	76	21	39	0	NR	12
ARU	0	69	0	0	0	750
BAH	NR	NR	NR	NR	NR	NR
BAR**	225	105	121	NR	NR	313
BLZ	357	109	4	60	0	439
BER	63	144	147	0	NR	99
BVI	NR	NR	NR	NR	NR	NR
CAY	50	55	223	NR	NR	2
CUR	0	200	0	0	0	288
DOM	20	62	NR	NR	NR	165
FDA	NR	NR	NR	NR	NR	NR
GRA**	0	186	21	NR	NR	6
GUY	NR	NR	NR	NR	NR	NR
HAI	NR	NR	NR	NR	NR	NR
JAM	1,967	NR	NR	NR	NR	NR
MOT	1	28	0	0	0	0
SKT	64	14	22	NR	NR	NR
STL	5	170	110	0	0	371
STV	10	70	59	0	0	21
SUR	2	38	69	0	0	194
TCI	NR	NR	NR	NR	NR	NR
TRT	NR	NR	NR	NR	NR	NR

*Outdated units.

**2009 data.

NR = Not reported.

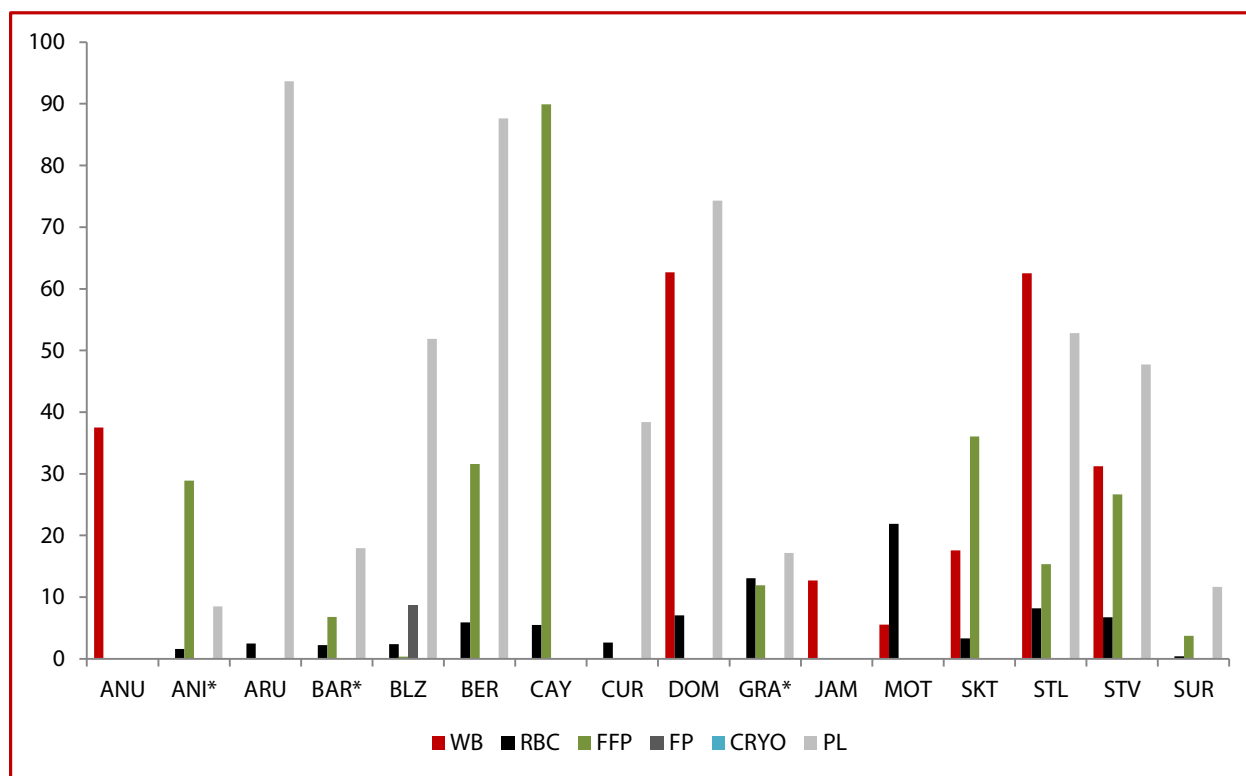
Table IV-10. Availability of Blood Components, 2010 (Percentage)

Country	Percentage of Separated into Components					Percentage of Blood and Blood Components Discarded					
	RBC	FFP	FP	CRYO	PL	WB	RBC	FFP	FP	CRYO	PL
ANU	67.16	NR	NR	NR	NR	37.5	NR	NR	NR	NR	NR
ANI*	61.38	10.24	3.64	0	10.70	5.76	2.6	28.89	0	NR	8.51
ARU	100	80.33	0	0	29.07	0	2.5	0	0	0	93.63
BAH	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
BAR*	37.63	37.25	NR	0.38	36.50	7.75	5.84	6.79	NR	NR	17.94
BLZ	40.7	25.54	15.16	0	18.56	13.21	5.88	0.34	8.68	0	51.89
BER	92.31	19.02	0	0	4.62	NR	6.38	31.61	0	0	87.61
BVI	45.62	45.62	0	NR	NR	NR	NR	NR	NR	NR	NR
CAY	80.22	24.65	NR	NR	NR	NR	6.82	89.92	NR	NR	NR
CUR	100	73.2	0	0	9.95	0	2.65	0	0	0	38.4
DOM	92.36	56.44	NR	6.5	25.31	62.69	7.65	NR	NR	NR	74.32
FDA	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
GRA*	100	12.34	0	0.21	2.45	0	13.04	11.93	NR	NR	17.14
GUY	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
HAI	81.05	0.64	NR	NR	NR	NR	NR	NR	NR	NR	NR
JAM	45.22	41.34	5.87	6.88	15.66	12.71	NR	NR	NR	NR	NR
MOT	85.94	0	0	0	0	5.56	25.45	0	0	0	0
SKT	14.35	14.35	NR	NR	NR	17.58	22.95	36.07	NR	NR	NR
STL	97.16	34.46	0	0	33.78	62.5	8.42	15.36	0	0	52.85
STV	96.93	22.05	0	0	4.22	31.25	6.92	25.65	0	0	47.73
SUR	99.98	18.67	0	0	16.65	NR	0.38	3.7	0	0	11.65
TCI	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
TRT	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR

*2009 data.

NR = Not reported.

Figure IV-4. Blood and Blood Components Discarded, Caribbean, 2010 (Percentage)



*2009 data.

Table IV-11. Organization of the National Blood System, 2010

Country	Specific Law	Responsible Unit	Specific Budget	National Policy	National Commission
ANU	No	No	No	No	No
ANI*	No	No	No	No	No
ARU	No	No	Yes	No	Yes
BAH	NR	NR	NR	NR	NR
BAR*	No	No	No	Yes	No
BLZ	Yes	Yes	No	Yes	Yes
BER	No	No	No	No	No
BVI	No	No	No	No	No
CAY	No	No	No	No	No
CUR	Yes	No	Yes	Yes	Yes
DOM	No	No	No	No	No
FDA	NR	NR	NR	NR	NR
GRA*	No	No	No	No	No
GUY	Yes	Yes	Yes	Yes	Yes
HAI	No	No	No	No	No
JAM	Yes	Yes	Yes	Yes	Yes
MOT	No	Yes	No	No	No
SKT	No	No	No	No	No
STL	No	No	No	No	No
STV	No	No	No	No	Yes
SUR	Yes	No	Yes	No	Yes
TCI	NR	NR	NR	NR	NR
TRT	NR	NR	NR	NR	NR

*2009 data.

NR = Not reported.

Table IV-12. Organization of the National Blood System, 2010

Country	Reference Center	National Plan	Donor Norms	Operation Norms	Clinical Guidelines	Service Registration
ANU	No	No	Yes	No	No	No
ANI*	No	No	No	No	No	No
ARU	Yes	Yes	Yes	No	Yes	No
BAH	NR	NR	NR	NR	NR	NR
BAR*	No	No	No	Yes	Yes	No
BLZ	Yes	Yes	Yes	Yes	Yes	No
BER	No	No	Yes	No	No	Yes
BVI	No	No	Yes	No	No	No
CAY	No	No	No	Yes	No	No
CUR	Yes	Yes	Yes	No	Yes	No
DOM	No	No	Yes	No	No	No
FDA	NR	NR	NR	NR	NR	NR
GRA*	No	No	No	No	No	No
GUY	Yes	Yes	Yes	Yes	Yes	Yes
HAI	No	No	No	No	No	No
JAM	Yes	Yes	Yes	Yes	Yes	No
MOT	No	No	No	No	Yes	Yes
SKT	Yes	No	No	No	No	Yes
STL	Yes	No	Yes	Yes	No	No
STV	No	No	Yes	No	No	No
SUR	No	No	Yes	No	No	Yes
TCI	NR	NR	NR	NR	NR	NR
TRT	NR	NR	NR	NR	NR	NR

*2009 data.

NR = Not reported.

Table IV-13. Organization of the National Blood System, 2010

Country	Quality Assurance Policy	External Evaluation Serology-TTI	External Evaluation Immunochemistry	Inspection Program	Continued Education
ANU	No	Yes	No	No	No
ANI*	NR	NR	NR	NR	NR
ARU	Yes	Yes	Yes	Yes	Yes
BAH	NR	NR	NR	NR	NR
BAR*	No	No	Yes	No	No
BLZ	Yes	Yes	Yes	Yes	No
BER	Yes	No	Yes	Yes	Yes
BVI	No	No	No	No	No
CAY	No	Yes	Yes	No	Yes
CUR	Yes	Yes	Yes	Yes	Yes
DOM	No	Yes	Yes	No	No
FDA	NR	NR	NR	NR	NR
GRA*	No	Yes	Yes	No	No
GUY	Yes	Yes	Yes	Yes	No
HAI	No	No	No	Yes	Yes
JAM	Yes	Yes	No	No	Yes
MOT	No	Yes	No	No	No
SKT	No	Yes	No	No	No
STL	No	Yes	No	No	No
STV	No	Yes	Yes	No	No
SUR	No	Yes	No	No	Yes
TCI	NR	NR	NR	NR	NR
TRT	NR	NR	NR	NR	NR

*2009 data.

NR = Not reported.

Table IV-14. Organization of the National Blood System, 2010

Country	Staff Certification	Service Accreditation
ANU	No	NR
ANI*	NR	NR
ARU	Yes	No
BAH	NR	NR
BAR*	Yes	No
BLZ	No	No
BER	Yes	Yes
BVI	Yes	No
CAY	Yes	No
CUR	Yes	No
DOM	No	No
FDA	NR	NR
GRA*	No	No
GUY	Yes	No
HAI	No	No
JAM	Yes	No
MOT	No	No
SKT	NR	No
STL	No	No
STV	No	No
SUR	Yes	No
TCI	NR	NR
TRT	NR	NR

*2009 data.
NR = Not reported.

Table IV-15. Countries with One Hundred Percent Screening for Infectious Markers, 2010*

Country	HIV	HBsAg	HCV	Syphilis	HTLV I-II	Five Markers
ANU	ANU	ANU	ANU	ANU		
ANI**	ANI	ANI		ANI		
ARU	ARU	ARU	ARU	ARU	ARU	ARU
BAR**	BAR	BAR	BAR	BAR	BAR	BAR
BLZ	BLZ	BLZ	BLZ	BLZ		BLZ
BER	BER	BER	BER	BER	BER	BER
BVI	BVI	BVI	BVI	BVI		
CAY	CAY	CAY	CAY	CAY	CAY	CAY
CUR	CUR	CUR	CUR	CUR	CUR	CUR
DOM	DOM	DOM		DOM	DOM	
GRA**	GRA	GRA	GRA	GRA	GRA	GRA
GUY	GUY	GUY	GUY	GUY	GUY	GUY
HAI	HAI	HAI	HAI	HAI	HAI	HAI
JAM	JAM	JAM	JAM	JAM	JAM	JAM
MOT	MOT	MOT	MOT	MOT	MOT	MOT
SKT	SKT	SKT	SKT	SKT		SKT
STL	STL	STL	STL	STL	STL	STL
STV	STV	STV	STV	STV	STV	STV
SUR	SUR	SUR	SUR	SUR	SUR	SUR
19	19	19	17	19	14	15

*Proportion of units received.

**2009 data.

**Table IV-16. National Staff Who Submitted Official Reports
to the Pan American Health Organization -
Caribbean Countries, 2010**

Country	Name	Position	Address
Anguila	Everette Duncan	Coordinator Laboratory Services	Princess Alexandra Hospital Stoney Ground Tel: 1 264 497 2551 E-mail: evie@anguillanet.com
Antigua and Barbuda*	Condon Jarvis	Chief Medical Technologist	Mount St. John's Medical Center Queen Elizabeth Highway, St. John's Tel: 268 484 2700 E-mail: cejarvis@msjmc.org
Aruba	A.J. Duits	Medical Director	Blood Bank Foundation Aruba Dr. Horacio Oduber Hospital #1 Tel: 002975874260 E-mail: ajduits@gmail.com
Barbados*	Priscilla Jordan	Medical Laboratory Technologist	Queen Elizabeth Hospital Martindales Road, St. Michael Tel: 246 436 6450 Ext: 6124 E-mail: woodon261@hotmail.com (personal)
Belize	Joy Robateau	Supervisor	Belize National Blood Transfusion Services Princess Margaret Drive, Belize City Tel: 501 224 5010 E-mail: j_robateau@yahoo.com
Bermuda	Eyitayo Fakunle, Dawnette Been, Susan De Verteuil y Simonette Carey	Blood Transfusion Team	Bermuda Hospital Board Department of Pathology, King Edward VII Memorial Hospital, Paget DV 04, Bermuda Tel: (441) 2391419 or (441) 3317370 E-mail: eyitayo.fakunle@bhb.bm; dawnette.been@bhb.bm
British Virgin Islands	Allene Brewley-Roach	Laboratory Director	Peebles Hospital (BVI Health Services Authority) #32 Main Street, Road Town, Tortola, BVI Tel.: 284-852-7571 E-mail: peebleslab@hotmail.com
Cayman Islands	Judith Clarke	Acting Laboratory Manager	Cayman Islands Health Services Authority 95 Hospital Road, P.O Box 915 Grand Cayman KY1-1103 Tel.: 345 244 2669 E-mail: judith.clarke@hsa.ky
Curaçao	Ashley John Duits	Director	Red Cross Blood Bank Foundation Pater Euwensweg 36, Curazao Tel: +59994618433 E-mail: ajduits@gmail.com
Dominica	Nina Pierre		Blood Bank, Medical Laboratory, Princess Margaret Hospital Tel.: 767 448 2231 Ext: 2144 E-mail: pmhlab@cwdom.dm
Grenada*	Everlyn Peters	Senior Laboratory Technologist	Pathology Laboratory, General Hospital Grand Etang Rd., St. George's Tel: 473 440 5578 E-mail: grensuv@spiceisle.com
Guyana	Nadia Lia	Director	National Blood Transfusion Services (NBTS) Lamaha East Streets, Georgetown, Guyana Tel.: 223 7182 E-mail: nlia@health.gov.gy

(Continued)

Table IV-16. (Continued)

Country	Name	Position	Address
Haiti	Ernst Noel	Director	Programme National de Securite Transfusionnelle 111, Rue Saint Honore Port-au-Prince, Haiti Tel.: 509 22274136, 509 22274137 E-mail.: bloodsafetyht@yahoo.fr, mohbloodsafetyprogra@ bloodsafety mspp.org
Jamaica	Jennifer Thame	Acting Director	National Blood Transfusion Service 21 Slipe Pen Road, Kingston, Jamaica Tel.:876-9225181 E-mail: jenthame@yahoo.com
Montserrat	Raymond Samuels	Senior Medical Technologist	Glendon Hospital Transfusion Service St. Johns Tel: 6644912552/2802 E-mail: samuelsr@gov.ms
Saint Kitts and Nevis	Andrea Williams	Medical Technologist	St. Kitts-Nevis National BloodTransfusion Services Buckley's Site, Bassetrre, St.Kitts Tel.: 18694652551 ext 149 E-mail.: pathlab@yahoo.com
Saint Lucia	Veronica Lee	Medical Technologist/Blood Bank Manager	Saint Lucia Blood Bank Service Victoria Hospital, Castries, St. Lucia Tel.:758 452 5430 E-mail: slubloodbank@gmail.com
Saint Vincent and the Grenadines	Dalrie Cole-John	Medical Technologist of the Blood Bank	Milton Cato Memorial Hospital Blood Bank Bentick Square, Kingstown, St. Vincent Tel.: 784 45611
Suriname	Maria Tjon A. Loi	Medical Director	National Blood Bank Suriname Red Cross Society Rode Kruislaan 24 Tel: 597 499175 / 497483 E-mail: directeur_bloedbank@surinameredcross.sr

*2009 data.

V. 2011

Table V-1. Regional Summary, 2011

Variable	Caribbean Countries	Latin American Countries	Caribbean and Latin American Countries
Blood units collected	134,757	9,141,157	9,275,914
Number of voluntary, non-remunerated donors	75,771	3,767,731	3,843,502
Voluntary, non-remunerated donors (%)	56.23	41.22	41.44
Number of remunerated donors	0	7,124	7,124
Remunerated donors (%)	0	0.08	0.08
Screening for HIV (%)	100	99.71	99.71
Screening for HBsAg (%)	100	99.71	99.71
Screening for HCV (%)	99.23	99.68	99.68
Screening for syphilis (%)	100	99.7	99.71
Screening for <i>T. cruzi</i> (%)	NR	92.38	NR
Screening for HTLV I-II (%)	81.52	67.54	67.74

NR = Not reported.

Table V-2. Subregional Summary, 2011

Variable	Central America and Spanish-Speaking Caribbean	Caribbean	Andean Community	Southern Cone	Mexico	Brazil
Blood units collected	954,922	134,757	1,560,151	1,501,637	1,768,065	3,356,382
Number of voluntary, non-remunerated donors	559,227	75,771	745,579	418,736	43,297	2,000,892
Voluntary, non-remunerated donors (%)	58.56	56.23	47.79	27.89	2.45	59.61
Number of remunerated donors	7,049	0	75	0	0	0
Remunerated donors (%)	0.74	0	0	0	0	0
Screening for HIV (%)	100	100	99.41	100	99	100
Screening for HBsAg (%)	100	100	99.41	100	99	100
Screening for HCV (%)	100	99.23	99.28	100	99	100
Screening for SYPHILIS (%)	100	100	99.4	100	99	100
Screening for <i>T. cruzi</i> (%)	48.43	NR	99.41	100	89	100
Screening for HTLV I-II (%)	29.74	81.52	66.12	100	0	100

NR = Not reported.

VI. Latin American Countries, 2011

Table VI-1. Blood Collection, 2011

Country	Total Units Collected	Number of Donors			
		Autologous	Allogeneic		
			Voluntary	Replacement	Remunerated
ARG	1,101,438	26,804	365,748	708,886	NR
BOL	79,960	74	28,042	51,895	0
BRA	3,356,382	2,776	2,000,892	1,352,714	0
CHI	230,308	NR	48,763	181,545	0
COL	710,825	426	586,361	124,038	0
COR	71,090	47	43,690	27,353	0
CUB	393,325	0	393,325	0	0
DOR	99,148	67	18,072	79,518	1,491
ECU*	211,818	36	98,866	99,070	0
ELS**	90,760	7	10,677	80,076	0
GUT	105,803	36	4,771	101,668	0
HON	66,457	10	11,548	54,529	370
MEX	1,768,065	2,384	43,297	1,722,384	0
NIC	73,912	0	73,912	0	0
PAN***	54,427	NR	3,232	19,195	5,188
PAR	74,079	36	4,225	69,818	0
PER****	141,202	141,202	90	5,751	105,430
URU	95,812	NR	NR	NR	NR
VEN	416,346	NR	26,559	389,787	NR

*Partial information. 13,846 of the total units collected were not classified by donor type.

**Total units collected do not include 783 apheresis donations.

***Partial information. 27,511 of the units collected were not classified by donor type.

****Partial information. 27,856 of the units collected were not classified by donor type.

NR = Not reported.

Table VI-2. Blood Collection from Allogeneic Donors, 2011*

Country	Number of Units Collected	Type of Allogeneic Donor (Percentage)		
		Voluntary	Replacement	Remunerated
ARG	1,074,634	34.04	65.96	NR
BOL	79,886	35.1	64.96	0
BRA	3,353,606	59.66	40.34	0
CHI	230,308	21.17	78.83	0
COL	710,399	82.54	17.46	0
COR	67,991	61.5	38.5	0
CUB	393,325	100	0	0
DOR	99,081	18.24	80.26	1.5
ECU**	211,782	49.95	50.05	0
ELS	90,753	11.77	88.23	0
GUT	105,767	4.51	96.13	0
HON	66,447	17.38	82.06	0.56
MEX	1,765,681	2.45	97.55	0
NIC	73,912	100	0	0
PAN***	54,427	5.95	35.31	9.54
PAR	74,043	5.71	94.29	0
PER****	141,112	4.08	74.71	0.05
URU	95,812	NR	NR	NR
VEN	416,346	6.38	93.62	NR

*Autologous donors not included.

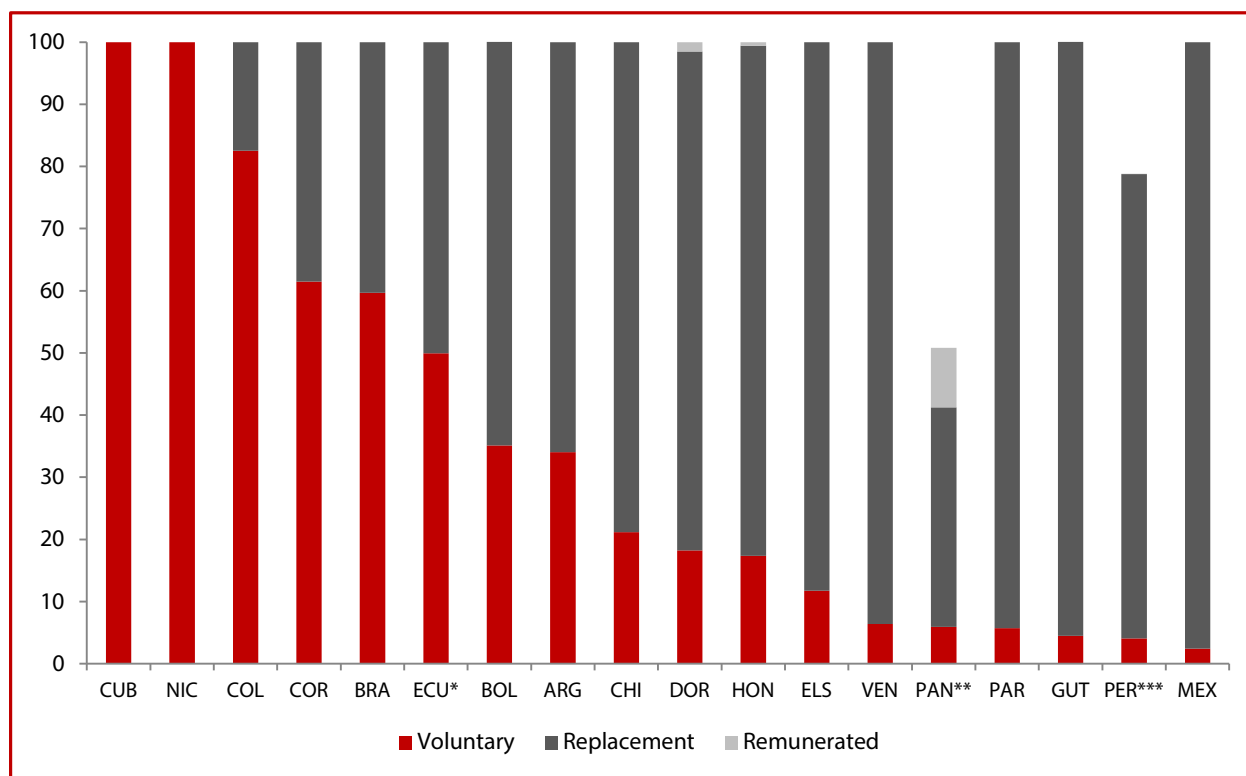
**Partial information. 13,846 of the total units collected were not classified by donor type.

***Partial information. 27,511 of the units collected were not classified by donor type.

****Partial information. 27,856 of the units collected were not classified by donor type.

NR = Not reported.

Figure VI-1. Blood Collection Ranked from Greatest to Least by Voluntary Donations, Latin America, 2011 (Percentage)



*Not including 13,846 units that were not classified by donor type.

**Not including 27,511 units that were not classified by donor type.

***Not including 27,856 units that were not classified by donor type.

Table VI-3. Selection of Allogeneic Donors, 2011*

Country	Number of Units Collected	Number of Allogeneic Donors					
		Voluntary		Replacement		Remunerated	
		Interviewed	Deferred	Interviewed	Deferred	Interviewed	Deferred
ARG	1,074,634	401,920	36,172	854,080	145,194	NR	NR
BOL	79,886	38,277	10,234	81,632	29,737	0	0
BRA	3,353,606	2,418,135	417,243	1,673,960	321,246	0	0
CHI	230,308	60,934	12,171	233,817	52,272	0	0
COL	710,399	NR	NR	NR	NR	NR	NR
COR	71,043	51,595	7,905	38,093	10,740	0	0
CUB	393,325	412,408	19,083	0	0	0	0
DOR	99,081	22,752	4,680	100,568	21,050	2,372	881
ECU	211,782	121,717	23,222	134,524	29,386	0	0
ELS	90,753	12,662	1,985	111,721	31,642	0	0
GUT	105,767	5,771	1,000	151,902	50,234	0	0
HON**	66,447	1,248	104	43,074	10,291	432	62
MEX	1,765,681	64,946	21,649	2,583,576	861,192	0	0
NIC	73,912	82,049	8,137	0	0	0	0
PAN***	54,427	NR	NR	NR	NR	NR	NR
PAR	74,043	4,484	255	74,904	5,008	0	0
PER	141,112	8,863	3,112	163,933	58,503	181	106
URU	95,812	45,317	NR	77,002	NR	NR	NR
VEN	416,346	NR	NR	NR	NR	NR	NR

*Autologous donors not included.

**Missing information from the Honduran Red Cross. Therefore, the results do not match.

***Reported a total of 77,851 donors interviewed and 11,522 deferred donors.

NR = Not reported.

Table VI-4. Selection of Allogeneic Donors, 2011*

Country	Number of Units Collected	Voluntary		Replacement		Remunerated	
		Number Interviewed	Percentage Deferred	Number Interviewed	Percentage Deferred	Number Interviewed	Percentage Deferred
ARG	1,074,634	401,920	9	854,080	17	NR	NR
BOL	79,886	38,277	26.74	81,632	36.43	0	0
BRA	3,353,606	2,418,135	17.25	1,673,960	19.19	0	0
CHI	230,308	60,934	19.97	233,817	22.36	0	0
COL	710,399	NR	NR	NR	NR	NR	NR
COR	71,043	51,595	15.32	38,093	28.19	0	0
CUB	393,325	412,408	4.63	0	0	0	0
DOR	99,081	22,752	20.57	100,568	20.93	2,372	37.14
ECU	211,782	121,717	19.08	134,524	21.84	0	0
ELS	90,753	12,662	15.68	111,721	28.32	0	0
GUT	105,767	5,771	17.33	151,902	33.07	0	0
HON**	66,447	1,248	8.33	43,074	23.89	432	14.35
MEX	1,765,681	64,946	33.33	2,583,576	33.33	0	0
NIC	73,912	82,049	9.92	0	0	0	0
PAN***	54,427	NR	NR	NR	NR	NR	NR
PAR	74,043	4,484	5.69	74,904	6.69	0	0
PER	141,112	8,863	35.11	163,933	35.69	181	58.56
URU	95,812	45,317	NR	77,002	NR	NR	NR
VEN	416,346	NR	NR	NR	NR	NR	NR

*Autologous donors not included.

**HON: Missing information from the Honduran Red Cross. Therefore, the results do not match.

***PAN: Reported a total of 77,851 donors interviewed and 11,522 deferred donors.

NR = Not reported.

Figure VI-2. Deferred Donors by Allogeneic Donor Type, Latin America, 2011 (Percentage)

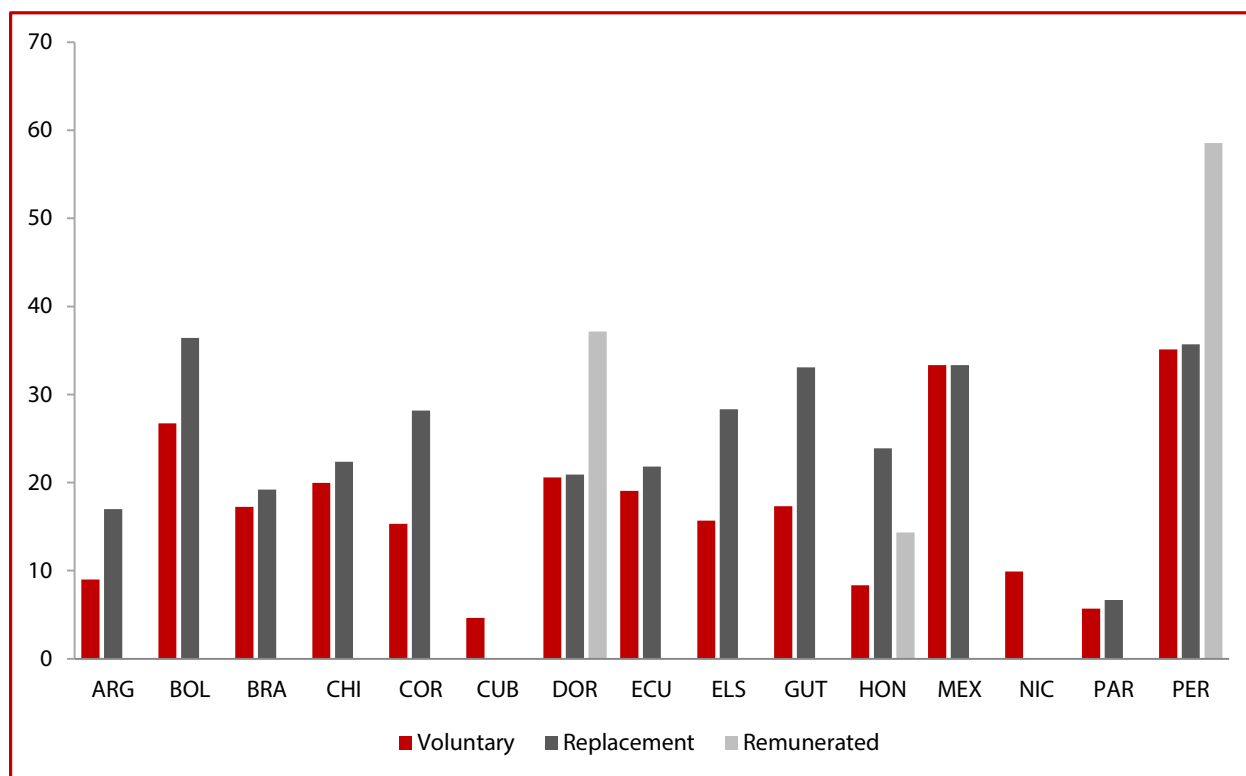


Table VI-5. Efficiency of Blood Processing, 2011

Country	Number of Units Collected	Number of Collecting Centers	Number of Processing Centers	Annual Processing per Bank	Daily Processing per Bank (260 Days)
ARG	1,101,438	364	284	3,878	14.92
BOL	79,960	19	19	4,208	16.19
BRA	3,356,382	585	571	5,878	22.61
CHI	230,308	76	49	4,700	18.08
COL	710,825	94	94	7,562	29.08
COR	71,090	34	30	2,370	9.11
CUB	393,325	46	46	8,551	32.89
DOR	99,148	58	58	1,709	6.57
ECU	211,818	17	17	12,460	47.92
ELS	90,760	27	27	3,361	12.93
GUT	105,803	62	58	1,824	7.02
HON	66,457	22	20	3,323	12.78
MEX	1,768,065	558	NR	3,169	12.19
NIC	73,912	3	2	36,956	142.14
PAN	54,427	26	17	3,202	12.31
PAR	74,079	57	11	6,734	25.9
PER	141,202	NR	NR	NR	NR
URU	95,812	75	60	1,597	6.14
VEN	416,346	313	313	1,330	5.12

NR = Not reported.

Table VI-6. Coverage of Screening for Infectious Markers, 2011 (Percentage)

Country	HIV	HBsAg	HCV	Syphilis	<i>T. cruzi</i>	HTLV I-II	Anti-HBc
ARG	100	100	100	100	100	100	100
BOL	100	100	100	100	100	0	0
BRA	100	100	100	100	100	100	100
CHI	100	100	100	100	100	100	NR
COL	100	100	100	100	100	68	69.4
COR	100	100	100	100	100	100	100
CUB	100	100	100	100	NR	NR	NR
DOR	100	100	100	100	NR	100	NR
ECU	100	100	99	100	100	0	18
ELS*	100	100	100	100	100	NR	NR
GUT	100	100	100	100	100	NR	43.45
HON	100	100	100	100	100	92	NR
MEX	99	99	99	99	89	NR	NR
NIC	100	100	100	100	100	NR	NR
PAN	100	100	100	100	100	96.7	100
PAR	100	100	100	100	100	100	100
PER**	94	94	94	94	94	93.86	93.98
URU	100	100	100	100	100	100	100
VEN	100	100	100	100	100	100	100

*783 units collected by apheresis included in calculations of screening.

**Reported 140,407 units received for screening. Screened for: HIV 132,022; HBsAg 132,018; HCV 132,054; syphilis 131,902; *T. cruzi* 132,022; Anti-HBc 131,956; HTLV I-II 131,788.

NR = Not reported.

Table VI-7. Number of Units Not Screened for Infectious Markers, 2011*

Country	HIV	HBsAg	HCV	Syphilis	<i>T. cruzi</i>
ECU			1,973		
MEX	17,657	17,657	17,657	17,657	194,225
PER	8,385	8,389	8,353	8,505	8,385
Total	26,042	26,046	27,983	26,162	202,610

*Except HTLV I-II and Anti-HBc.

Table VI-8. Proportion of Reactive/Positive Units, 2011 (Percentage)

Country	HIV	HBsAg	HCV	Syphilis	<i>T. cruzi</i>	HTLV I-II	Anti-HBc
ARG	0.26	0.26	0.52	0.74	2.96	0.27	2.1
BOL	0.20	0.25	0.33	0.71	2.16	NR	NR
BRA	0.33	0.17	0.32	0.81	0.2	0.13	1.73
CHI	0.03	0.02	0.03	1.22	0.19	0.14	NR
COL	0.25	0.16	0.55	1.45	0.56	0.47	2.12
COR	0.15	0.1	0.62	0.59	0.34	0.75	2.53
CUB	0.02	0.32	0.63	0.69	NR	NR	NR
DOR	0.22	0.98	0.29	0.55	NR	0.3	NR
ECU	0.33	0.26	0.35	0.63	0.18	NR	0.2
ELS*	0.06	0.16	0.13	1.1	1.68	NR	NR
GUT	0.26	0.36	0.65	2.1	0.97	NR	3.15
HON	0.2	0.2	0.52	0.79	1.1	0.23	2.21
MEX	0.22	0.16	0.56	0.51	0.36	NR	NR
NIC	0.06	0.24	0.2	0.77	0.24	NR	NR
PAN	0.59	0.67	0.58	1.3	0.67	0.3	1.7
PAR	0.74	0.37	0.4	8.03	2.92	0.17	3.86
PER	0.22	0.41	0.44	1.11	0.46	1.08	4.70
URU	0.13	0.15	0.37	0.49	0.39	0.11	1.15
VEN	0.23	0.53	0.32	1.81	0.33	0.21	3.12

*783 units collected by apheresis included.

NR = Not reported.

Figure VI-3. Proportion of Reactive/Positive Units for Five Markers, Latin America, 2011 (Percentage)

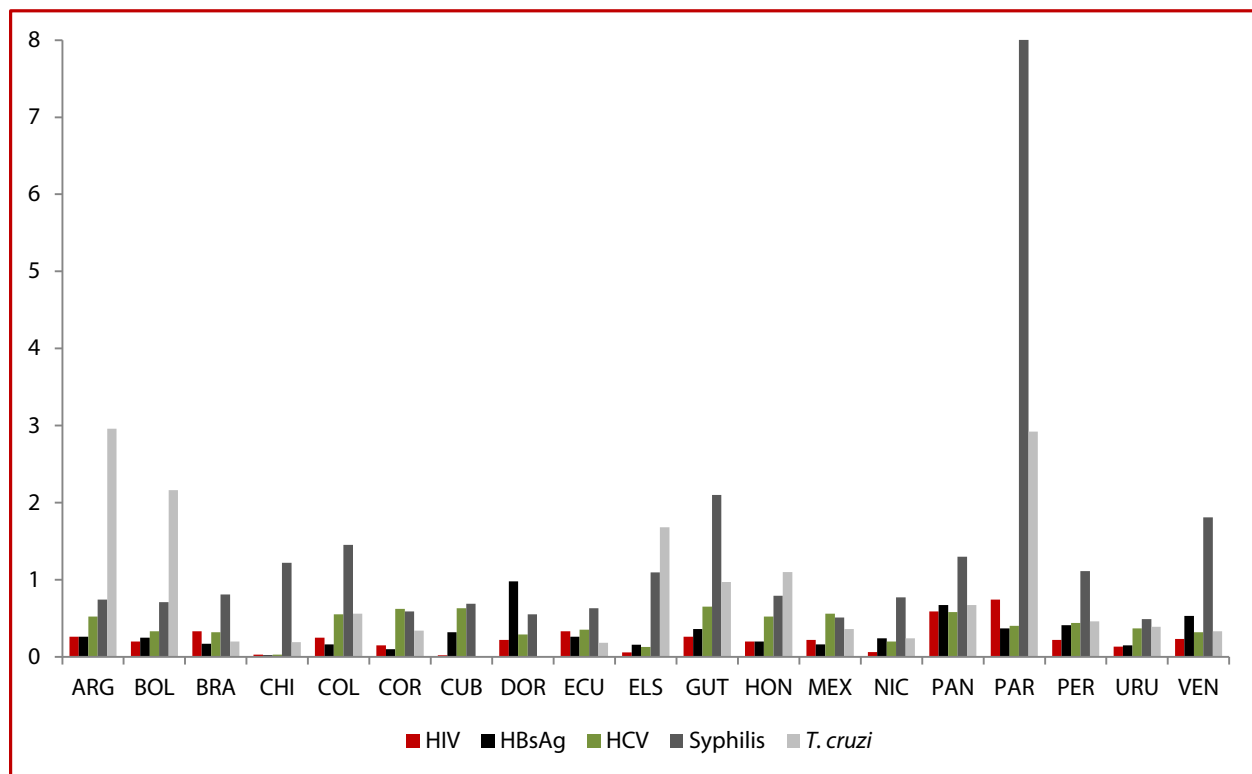


Table VI-9a. Number of Availability of Blood Components, 2011 - Separation into Components

Country	Units Received	RBC	FFP	FP	CRYO	PL
ARG	1,074,634	1,028,695	321,118	682,577	30,115	545,517
BOL	79,960	75,551	75,551	NR	5,956	29,248
BRA	3,012,219	2,857,994	2,493,545	396,592	127,183	1,627,882
CHI	230,308	225,247	198,246	42,711	18,217	143,797
COL	710,825	709,645	557,971	105,040	51,762	319,094
COR	66,766	65,947	65,947	NR	12,945	50,450
CUB	NR	NR	NR	NR	NR	NR
DOR	99,148	49,241	9,339	4,968	2,947	7,457
ECU	211,818	190,443	133,746	NR	6,490	65,732
ELS*	91,543	88,637	69,150	NR	11,343	50,938
GUT	98,023	89,772	49,392	NR	623	38,423
HON	66,457	26,879	25,536	NR	1,872	20,583
MEX	1,706,771	1,622,876	1,297,014	325,862	95,249	717,081
NIC	73,912	70,439	30,698	NR	2,990	35,229
PAN	54,427	42,990	18,639	NR	14,552	30,700
PAR	74,079	55,865	44,155	NR	1,758	32,244
PER	141,202	120,318	88,132	NR	11,720	68,038
URU	95,812	NR	NR	NR	NR	NR
VEN	416,346	395,529	338,866	38,693	37,652	338,666

*783 units collected by apheresis included.

NR = Not reported.

**Table VI-9b. Number of Availability of Blood Components, 2011 -
Blood and Blood Component Discarded***

Country	WB	RBC	FFP	FP	CRYO	PL
ARG	21,454	183,892	16,700	65,987	2,532	140,635
BOL	983	3,641	15,530	6,432	1,364	8,578
BRA	104,122	381,548	1,142,018	317,753	9,100	425,800
CHI**	NR	NR	NR	NR	NR	NR
COL	10,995	66,549	363,784	94,613	10,352	136,743
COR	565	7,174	12,175	NR	1	15,989
CUB	NR	NR	NR	NR	NR	NR
DOR	6,838	834	5,476	0	0	1,145
ECU	2,360	7,874	47,100	NR	882	9,249
ELS***	1,167	4,963	11,245	NR	218	6,675
GUT	3,948	10,805	14,526	NR	176	13,420
HON	3,117	3,830	20,270	NR	81	3,887
MEX	50,948	107,299	521,807	337,368	15,481	217,555
NIC	1,533	1,940	3,119	39,940	336	12,151
PAN	378	3,062	429	NR	251	5,223
PAR	3,934	9,692	9,001	NR	107	14,557
PER	1,237	4,938	9,513	9,240	236	5,868
URU	3,982	0	617	NR	0	12,581
VEN	NR	NR	NR	NR	NR	NR

*Outdated units.

**Data that will be reported as of 2012.

***783 units collected by apheresis included.

NR = Not reported.

Table VI-10. Availability of Blood Components, 2011 (Percentage)

Country	Percentage Separated into Components					Percentage Blood and Blood Components Discarded					
	RBC	FFP	FP	CRYO	PL	WB	RBC	FFP	FP	CRYO	PL
ARG	95.73	29.88	63.52	2.8	50.76	41.95	17.88	5.2	9.67	8.41	25.78
BOL	94.49	94.49	NR	7.45	36.58	24.06	4.82	20.56	NR	22.9	29.33
BRA	94.88	82.78	13.17	4.22	54.04	87.19	13.35	45.8	80.12	7.16	26.16
CHI	97.8	86.08	18.55	7.91	62.44	0	NR	NR	NR	NR	NR
COL	99.83	78.5	14.78	7.28	44.89	82.08	9.38	65.2	90.07	20	42.85
COR	98.77	98.77	NR	19.39	75.56	0.85	10.88	18.46	NR	0.01	31.69
CUB	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
DOR	49.66	9.42	5.01	2.97	7.52	NR	1.69	58.64	0	0	15.35
ECU	89.91	63.14	NR	3.06	31.03	NR	4.13	35.22	NR	13.59	14.07
ELS	96.83	75.54	NR	12.39	55.64	1.27	5.6	16.26	NR	1.92	13.1
GUT	91.58	50.39	NR	0.64	39.2	57.88	12.04	29.41	NR	28.25	34.93
HON	40.45	38.42	NR	2.82	30.97	4.69	14.25	79.38	NR	4.33	18.88
MEX	95.08	75.99	19.09	5.58	42.01	2.99	6.61	40.23	100	16.25	30.34
NIC	95.3	41.53	NR	4.05	47.66	2.12	2.75	10.16	NR	11.24	34.49
PAN	78.99	34.25	NR	26.74	56.41	NR	7.12	2.3	NR	1.72	17.01
PAR	75.41	59.61	NR	2.37	43.53	41.62	17.35	20.39	NR	6.09	45.15
PER	85.21	62.42	NR	8.3	48.18	1.54	4.1	10.79	NR	2.01	8.62
URU	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
VEN	95	81.39	9.29	9.04	81.34	NR	NR	NR	NR	NR	NR

NR = Not reported.

Figure VI-4. Percentage of Blood and Blood Components Discarded, Latin America, 2011 (Percentage)

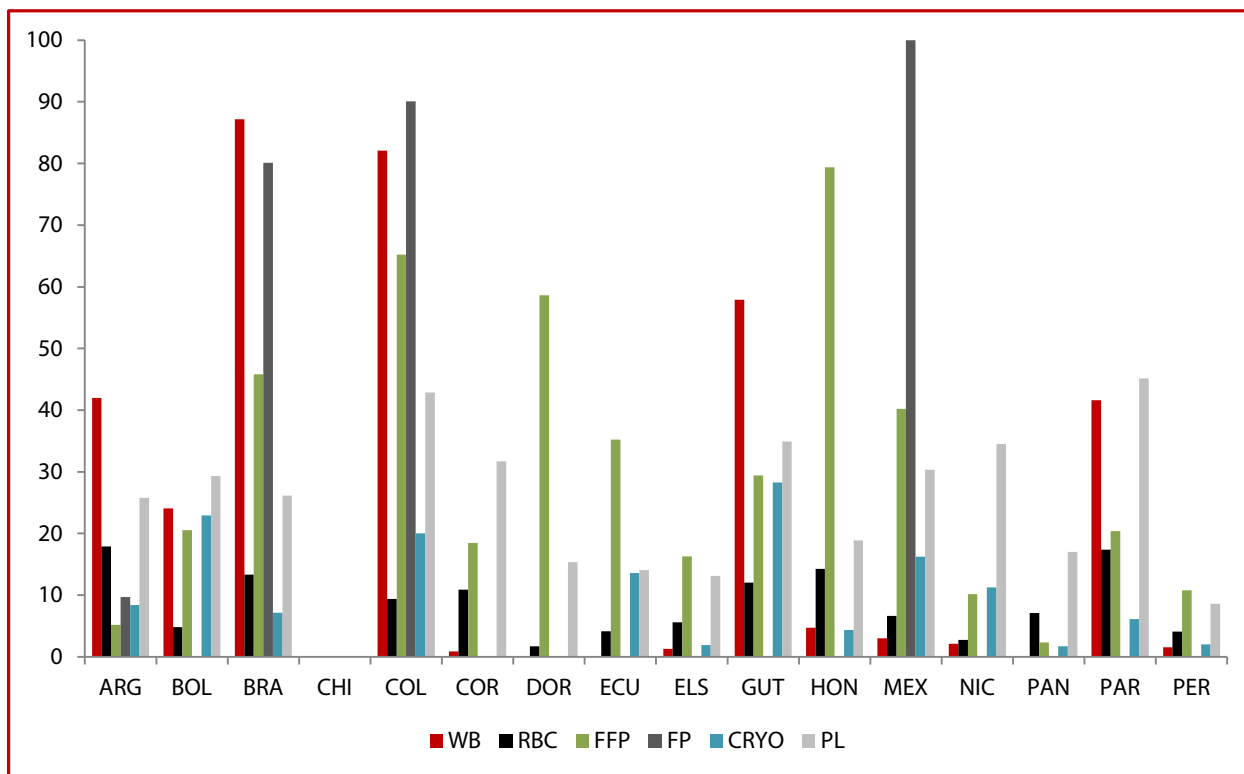


Table VI-11. Organization of the National Blood System, 2011

Country	Specific Law	Responsible Unit	Specific Budget	National Policy	National Commission
ARG	Yes	Yes	Yes	Yes	Yes
BOL	Yes	Yes	Yes	Yes	Yes
BRA	Yes	Yes	Yes	Yes	Yes
CHI	Yes	Yes	Yes	Yes	Yes
COL	Yes	Yes	Yes	Yes	Yes
COR	No	No	No	No	No
CUB	Yes	Yes	No	Yes	Yes
DOR	Yes	Yes	No	Yes	Yes
ECU	Yes	Yes	Yes	Yes	No
ELS	No	Yes	No	No	No
GUT	Yes	Yes	Yes	Yes	Yes
HON	Yes	Yes	Yes	Yes	Yes
MEX	Yes	Yes	Yes	Yes	No
NIC	Yes	Yes	Yes	Yes	Yes
PAN	No	Yes	No	No	Yes
PAR	Yes	Yes	Yes	Yes	Yes
PER	Yes	Yes	Yes	No	No
URU	Yes	NR	NR	NR	NR
VEN	Yes	Yes	No	No	No

NR = Not reported.

Table VI-12. Organization of the National Blood System, 2011

Country	Reference Center	National Plan	Donor Norms	Operation Norms	Clinical Guidelines	Service Registration
ARG	Yes	Yes	Yes	Yes	Yes	Yes
BOL	Yes	Yes	Yes	Yes	Yes	Yes
BRA	No	No	Yes	Yes	Yes	Yes
CHI	Yes	Yes	Yes	Yes	Yes	Yes
COL	Yes	Yes	Yes	Yes	Yes	Yes
COR	Yes	No	No	Yes	No	Yes
CUB	Yes	Yes	Yes	Yes	Yes	Yes
DOR	No	Yes	Yes	Yes	No	Yes
ECU	NR	No	No	No	Yes	Yes
ELS	Yes	Yes	Yes	Yes	Yes	Yes
GUT	Yes	Yes	Yes	Yes	Yes	Yes
HON	Yes	No	Yes	Yes	Yes	No
MEX	Yes	Yes	Yes	Yes	Yes	Yes
NIC	Yes	Yes	Yes	Yes	Yes	Yes
PAN	Yes	No	Yes	Yes	No	Yes
PAR	Yes	Yes	Yes	Yes	Yes	Yes
PER	No	No	Yes	Yes	Yes	Yes
URU	Yes	NR	NR	Yes	Yes	Yes
VEN	Yes	No	Yes	Yes	No	No

NR = Not reported.

Table VI-13. Organization of the National Blood System, 2011

Country	Quality Assurance Policy	National Quality Assurance Program	External Evaluation Serology-TTI	External Evaluation Immuno-hematology	Inspection Program	Continued Education
ARG	Yes	No	Yes	No	Yes	Yes
BOL	Yes	Yes	Yes	Yes	Yes	Yes
BRA	Yes	Yes	Yes	Yes	Yes	Yes
CHI	Yes	Yes	Yes	Yes	Yes	Yes
COL	Yes	Yes	Yes	Yes	Yes	Yes
COR	No	No	Yes	Yes	No	No
CUB	Yes	Yes	Yes	Yes	Yes	Yes
DOR	Yes	Yes	Yes	No	Yes	No
ECU	No	No	Yes	No	No	No
ELS	Yes	Yes	Yes	Yes	No	Yes
GUT	No	No	No	No	Yes	Yes
HON	No	No	No	No	No	No
MEX	Yes	Yes	Yes	Yes	Yes	Yes
NIC	Yes	Yes	No	No	Yes	Yes
PAN	No	No	Yes	No	No	No
PAR	Yes	Yes	No	No	Yes	Yes
PER	Yes	No	Yes	No	Yes	No
URU	NR	NR	Yes	NR	NR	NR
VEN	No	No	Yes	No	No	Yes

NR = Not reported.

Table VI-14. Organization of the National Blood System, 2011

Country	Staff Certification	Service Accreditation
ARG	Yes	Yes
BOL	Yes	Yes
BRA	Yes	Yes
CHI	Yes	Yes
COL	Yes	Yes
COR	No	Yes
CUB	Yes	Yes
DOR	No	No
ECU	No	No
ELS	No	No
GUT	Yes	No
HON	No	No
MEX	Yes	Yes
NIC	Yes	No
PAN	No	No
PAR	No	Yes
PER	No	No
URU	NR	NR
VEN	No	No

NR = Not reported.

**Table VI-15. Countries with One Hundred Percent Screening
for Infectious Markers, 2011***

Country	HIV	HBsAg	HCV	Syphilis	<i>T. cruzi</i>	Five Markers	HTLV I-II	Anti-HBc
ARG	ARG	ARG	ARG	ARG	ARG	ARG	ARG	ARG
BOL	BOL	BOL	BOL	BOL	BOL	BOL		
BRA	BRA	BRA	BRA	BRA	BRA	BRA	BRA	BRA
CHI	CHI	CHI	CHI	CHI	CHI	CHI	CHI	
COL	COL	COL	COL	COL	COL	COL		
COR	COR	COR	COR	COR	COR	COR	COR	COR
CUB	CUB	CUB	CUB	CUB				
DOR	DOR	DOR	DOR	DOR			DOR	
ECU	ECU	ECU	ECU	ECU	ECU	ECU		
GUT	GUT	GUT	GUT	GUT	GUT	GUT		
HON	HON	HON	HON	HON	HON	HON		
NIC	NIC	NIC	NIC	NIC	NIC	NIC		
PAN	PAN	PAN	PAN	PAN	PAN	PAN		PAN
PAR	PAR	PAR	PAR	PAR	PAR	PAR	PAR	PAR
URU	URU	URU	URU	URU	URU	URU	URU	URU
VEN	VEN	VEN	VEN	VEN	VEN	VEN	VEN	VEN
16	16	16	16	16	14	14	8	7

*Proportion of units received.

**Table VI-16. National Staff Who Submitted Official Reports
to the Pan American Health Organization -
Latin American Countries, 2011**

Country	Name	Position	Address
Argentina	Mabel Maschio	Coordinadora General Plan Nacional de Sangre	Ministerio de Salud de la Nación Av. 9 de Julio 1925, 9º Piso Ciudad Autónoma de Buenos Aires Tel.: 54 11 4379 9435 E-mail: mmaschio@msal.gov.ar
Bolivia	María del Carmen García	Coordinadora Nacional del Programa Nacional de Sangre	Programa Nacional de Sangre Ministerio de Salud y Deportes Calle Claudio Sanjinez S/N Tel.: 591-2-2115542 E-mail: clinicasgarcia@hotmail.com
Brazil	Bárbara de Jesus Simoes	Assessora da Gestão da Informação	Coordenação Geral de Sangue e Hemoderivados do Ministério da Saúde SAF Sul - Edifício Premium Torre II nº andar sala 202 Brasília-DF Tel.: 55 (61) 3315-6169 E-mail: sangue@saude.gov.br
Chile	Cristina Cárdenas	Coordinadora Nacional de Servicios de Sangre	Ministerio de Salud Mac Iver 541, Santiago Centro Tel.: 56-2-5781911 E-mail: mcardenas@minsal.cl; mlarrondo@minsal.cl
	Milton Larrondo	Presidente Comisión Nacional de Sangre y Tejidos	
Colombia	Mauricio Beltrán Durán	Coordinador Red Nacional Bancos de Sangre	Instituto Nacional de Salud Av. Calle 26, # 51-20 Tel.: (1) 2207700, Ext 1254 – 1255 Línea gratuita: 018000 113400 E-mail: mbeltrand@ins.gov.co
Costa Rica	Gerardo Solano Elizondo	Unidad de Servicios de Salud de Atención Directa a las Personas	Ministerio de Salud San José Tel.: 506-2222-9115 E-mail: gsolanoe@ministeriodesalud.go.cr
Cuba	José M. Ballester Santovenia	Director General	Instituto de Hematología e Inmunología San Francisco y Perla, Altahabana, Municipio Boyeros, Apartado 8070, La Habana, CP 10800 Tel.: (537) 643-8268 ó 643-8695 E-mail: ihidir@hemato.sld.cu
Dominican Republic	Sócrates E. Sosa Peña	Director del Programa Nacional de Bancos de Sangre	Secretaría de Estado de Salud Pública y Asistencia Social Av. Dr. Homero Hernandez Esq. Tiradentes, Ens. La Fé, Santo Domingo Tel: 809 541 3121 Ext. 2472-2474 E-mail: socrates.sosa@sespas.gov.do
Ecuador	Elizabeth Barona	Responsable del Programa Nacional de Sangre	Ministerio de Salud Pública República del Salvador y Suecia Tel.: 3 958 950 Ext. 640 E-mail: florelizabeth.barona@msp.gob.ec
El Salvador	Ana Vilma Guevara	Jefa Área de Área Clínica-Banco de Sangre	Unidad de Vigilancia Laboratorial Alameda Roosevelt frente al Parque Cuscatlán contiguo a H. Rosales Tel.: 503 2221 5751 E-mail: anavilmadeaguilar@yahoo.es; aguevara@mspas.gob.sv
Guatemala	Claudia María García González	Coordinadora Programa Nacional de Medicina Transfusional y Bancos de Sangre	Ministerio de Salud Pública y Asistencia Social 5 Av. 11-40 zona 11, Ciudad Guatemala Tel.: 24714523; 2322-8383, ext. 1033 E-mail: claudiamariagarcia2003@yahoo.com.mx

(Continued)

Table VI-16. (Continued)

Country	Name	Position	Address
Honduras	Inés Adela Zelaya Pineda	Jefa Departamento Bancos de Sangre y Servicios de Transfusión	Secretaría de Salud 6to. Piso, Anexo 2. Barrio el Centro, antigua calle del Mónica, frente a Farmacia Regis, Tegucigalpa Tel: 504 222 8523 E-mail: inazpin@yahoo.com
Mexico	Julieta Rojo Medina	Director General	Centro Nacional de la Transfusión Sanguínea Othon de Mendizabal 195 Col. Zacatenco del Gustavo A. Madero, México D.F CP 07360 Tel: 5119 4620 al 28 Ext. 1101 E-mail: julieta.rojo@salud.gob.mx
Nicaragua	Alcides Gonzáles Mairena	Secretario Ejecutivo Comisión Nacional de Sangre	Ministerio de Salud Complejo Concepción Palacios Managua Tel.: 2289-4700 E-mail: conasa01@minsa.gob.ni
Panama	Carlos Montero	Coordinador Médico	Programa Nacional de Sangre Ministerio de Salud Ancón, Calle Gorgas. Edificio 261. Tercer piso. Apdo. 0-6812 Panamá 1 Tel.: (507) 5129436 E-mail: sistemanacionaldesangre@hotmail.com
	Esmeralda Tuy	Coordinadora Técnica	
Paraguay	Amanda Molas	Directora del Programa Nacional de Sangre	Programa Nacional de Sangre Ministerio de Salud Pública y Bienestar Social Rca Argentina 222 entre Mcal. López y Boggiani Asunción Tel.: 595 21 606364 E-mail: pnsangre2004@gmail.com
	Nelson Marquez	Encargado de estadística	
Peru	Jorge Manuel Leiva Beraun	Coordinador Nacional	Programa Nacional de Hemoterapia y Bancos de Sangre Av. Salaverry 801, Jesus Maria, Lima Tel: 511-315-6600 E-mail: jleivab@minsa.gob.pe
Uruguay	Laura Ucar	Sub-Directora del Servicio Nacional de Sangre	E-mail: direccion.sns@asse.com.uy
Venezuela	Lia Talavera	Coordinadora del Programa Nacional de Bancos de Sangre	Centro Simón Bolívar Torre Sur Piso 8, Oficina 824, Caracas Tel: 212 408 0576 E-mail: psbancodesangre@mpgs.gob.ve

VII. Caribbean Countries, 2011

Table VII-1. Blood Collection, 2011

Country	Total Units Collected	Number of Donors			
		Autologous	Allogeneic		
			Voluntary	Replacement	Remunerated
ANU	165	1	16	148	0
ANI	NR	NR	NR	NR	NR
ARU	2,835	0	2,835	0	0
BAH	7,287	4	3,201	3,672	0
BAR	NR	NR	NR	NR	NR
BLZ	4,617	0	636	3,981	0
BER	2,412	18	2,394	0	0
BVI	422	0	0	422	0
CAY	1,020	2	1,018	0	0
CUR	6,615	12	6,603	0	0
DOM	1,043	2	93	948	0
FDA	21,800	6	21,794	0	0
GRA	NR	NR	NR	NR	NR
GUY	6,361	0	5,847	514	0
HAI	19,751	NR	13,914	5,837	0
JAM*	27,307	45	4,380	22,882	0
MOT	89	0	89	0	0
SKT	368	0	43	325	NR
STL	2,304	5	1,539	760	0
STV	1,157	17	68	1,072	NR
SUR	10,917	4	10,913	0	0
TCI	674	0	388	286	0
TRT	17,613	NR	NR	NR	NR

*Total does not include 2,187 units collected from "uniform recruits."

NR = Not reported.

Table VII-2. Blood Collection from Allogeneic Donors, 2011*

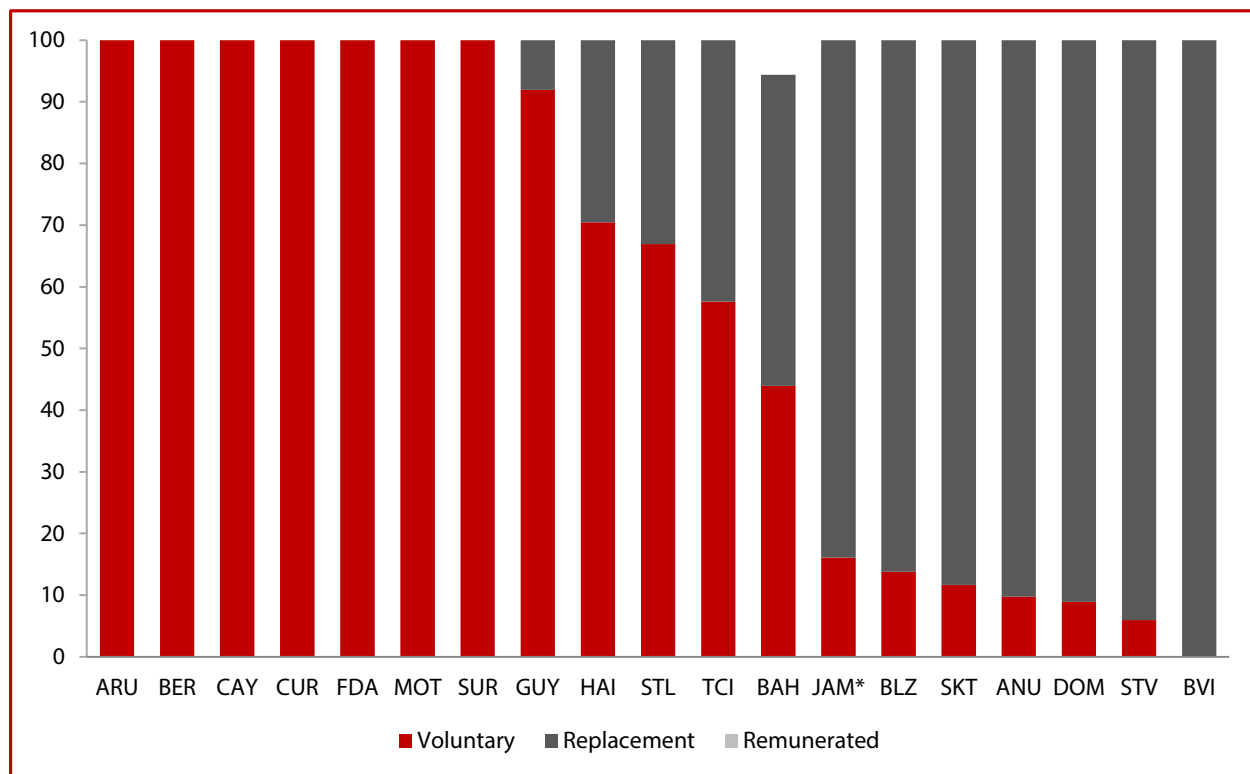
Country	Number of Units Collected	Type of Allogeneic Donor (Percentage)		
		Voluntary	Replacement	Remunerated
ANU	164	9.76	90.24	0
ANI	NR	NR	NR	NR
ARU	2,835	100	0	0
BAH	7,283	43.95	50.42	0
BAR	NR	NR	NR	NR
BLZ	4,617	13.78	86.22	0
BER	2,394	100	0	0
BVI	422	0	100	0
CAY	1,018	100	0	0
CUR	6,603	100	0	0
DOM	1,041	8.93	91.07	0
FDA	21,794	100	0	0
GRA	NR	NR	NR	NR
GUY	6,361	91.92	8.08	0
HAI	19,751	70.45	29.55	0
JAM**	27,262	16.07	83.93	0
MOT	89	100	0	0
SKT	368	11.69	88.31	NR
STL	2,299	66.94	33.06	0
STV	1,140	5.97	94.03	NR
SUR	10,913	100	0	0
TCI	674	57.57	42.43	0
TRT	17,613	NR	NR	NR

*Autologous donors not included.

**Total does not include 2,187 units collected from "uniform recruits."

NR = Not reported.

Figure VII-1. Blood Collection Ranked from Greatest to Least by Voluntary Donations, Caribbean, 2011 (Percentage)



*Does not include 2,187 units collected from "uniform recruits."

Table VII-3. Selection of Allogeneic Donors, 2011*

Country	Number of Units Collected	Number of Allogeneic Donors					
		Voluntary		Replacement		Remunerated	
		Interviewed	Deferred	Interviewed	Deferred	Interviewed	Deferred
ANU	164	NR	NR	NR	NR	NR	NR
ANI	NR	NR	NR	NR	NR	NR	NR
ARU	2,835	2,902	57	0	0	0	0
BAH	7,283	3,790	543	4,654	316	0	0
BAR	NR	NR	NR	NR	NR	NR	NR
BLZ	4,617	889	253	5,939	1,958	0	0
BER	2,394	2,699	305	0	0	0	0
BVI	422	NR	NR	NR	NR	0	0
CAY	1,018	1,138	120	0	0	0	0
CUR	6,603	6,623	20	0	0	0	0
DOM	1,041	93	0	1,452	504	0	0
FDA	21,794	25,807	4,917	0	0	0	0
GRA	NR	NR	NR	NR	NR	NR	NR
GUY	6,361	NR	NR	NR	NR	NR	NR
HAI	19,751	NR	NR	NR	NR	NR	NR
JAM	27,262	5,253	873	40,322	17,440	0	0
MOT	89	103	34	0	0	0	0
SKT	368	57	14	484	159	NR	NR
STL	2,299	2,211	672	1,229	469	0	0
STV	1,140	81	13	1,403	331	NR	NR
SUR	10,913	12,272	1,359	0	0	0	0
TCI	674	424	36	303	17	0	0
TRT	17,613	NR	NR	NR	NR	NR	NR

*Autologous donors not included.
NR = Not reported.

Table VII-4. Selection of Allogeneic Donors, 2011*

Country	Number of Units Collected	Voluntary		Replacement		Remunerated	
		Number Interviewed	Percentage Deferred	Number Interviewed	Percentage Deferred	Number Interviewed	Percentage Deferred
ANU	164	NR	NR	NR	NR	NR	NR
ANI	NR	NR	NR	NR	NR	NR	NR
ARU	2,835	2,902	1.96	0	0	0	0
BAH	7,283	3,790	14.33	4,654	6.79	0	0
BAR	NR	NR	NR	NR	NR	NR	NR
BLZ	4,617	889	28.46	5,939	32.97	0	0
BER	2,394	2,699	11.30	0	0	0	0
BVI	422	NR	NR	NR	NR	0	0
CAY	1,018	1,138	10.54	0	0	0	0
CUR	6,603	6,623	0.3	0	0	0	0
DOM	1,041	93	0	1,452	34.71	0	0
FDA	21,794	25,807	19.05	0	0	0	0
GRA	NR	NR	NR	NR	NR	NR	NR
GUY	6,361	NR	NR	NR	NR	NR	NR
HAI	19,751	NR	NR	NR	NR	NR	NR
JAM	27,262	5,253	16.62	40,322	43.25	0	0
MOT	89	103	33.01	0	0	0	0
SKT	368	57	24.56	484	32.85	NR	NR
STL	2,299	2,211	30.39	1,229	38.16	0	0
STV	1,140	81	16.05	1,403	23.59	NR	NR
SUR	10,913	12,272	11.07	0	0	0	0
TCI	674	424	8.49	303	5.61	0	0
TRT	17,613	NR	NR	NR	NR	NR	NR

*Autologous donors not included.
NR = Not reported.

Figure VII-2. Deferred Donors by Allogeneic Donor Type, Caribbean, 2011 (Percentage)

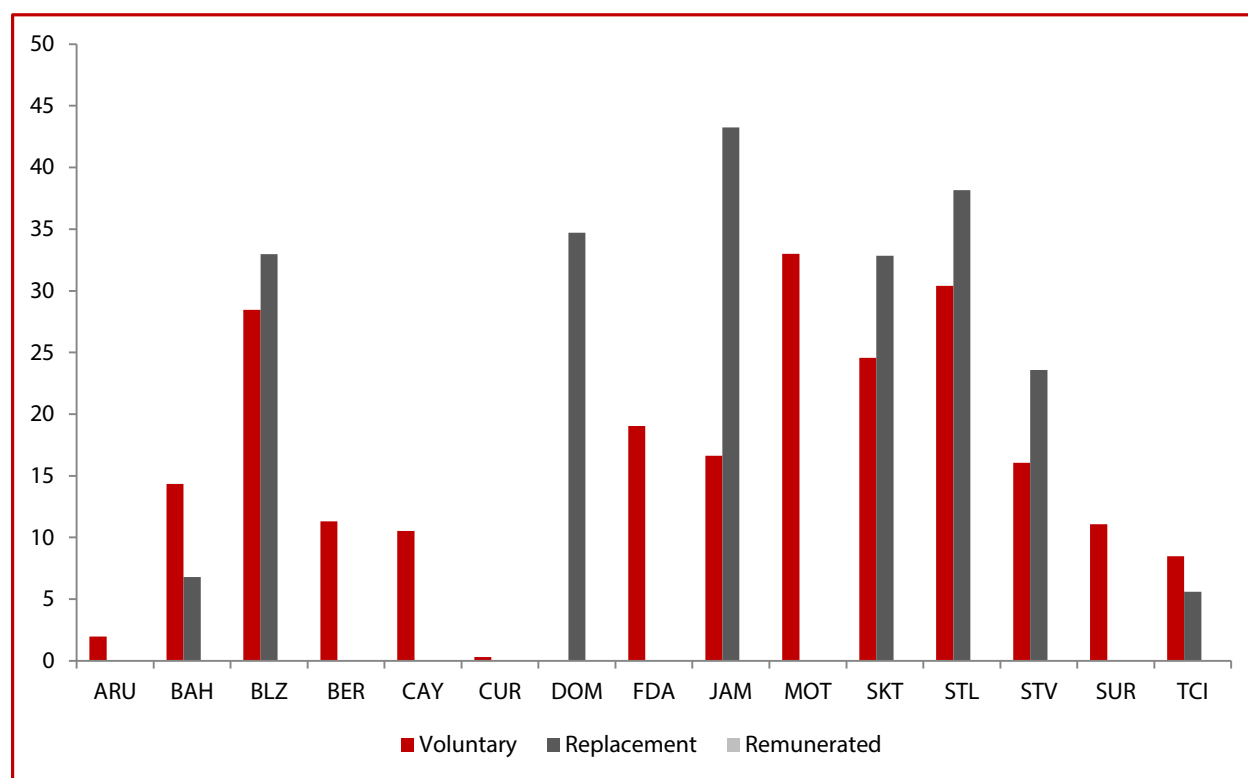


Table VII-5. Efficiency of Blood Processing, 2011

Country	Number of Units Collected	Number of Collecting Centers	Number of Processing Centers	Annual Processing per Bank	Daily Processing per Bank (260 Days)
ANU	165	1	1	165	0.63
ANI	NR	NR	NR	NR	NR
ARU	2,835	1	1	2,835	10.9
BAH	7,287	3	3	2,429	9.34
BAR	NR	NR	NR	NR	NR
BLZ	4,617	6	7	660	2.54
BER	2,412	1	1	2,412	9.28
BVI	422	1	1	422	1.62
CAY	1,020	2	2	510	1.96
CUR	6,615	1	1	6,615	25.44
DOM	1,043	1	1	1,043	4.01
FDA	21,794	2	2	10,900	41.92
GRA	NR	NR	NR	NR	NR
GUY	6,361	5	1	6,361	24.47
HAI	19,751	30	1	19,751	75.97
JAM*	27,307	10	3	9,102	35.01
MOT	89	1	1	89	0.34
SKT	368	1	1	368	1.42
STL	2,304	3	1	2,304	8.86
STV	1,157	1	1	1,157	4.45
SUR	10,917	1	1	10,917	41.99
TCI	674	1	1	674	2.59
TRT	17,613	6	3	5,871	22.58

*Total does not include 2,187 units collected from "uniform recruits."

NR = Not reported.

**Table VII-6. Coverage of Screening for Infectious Markers, 2011
(Percentage)**

Country	HIV	HBsAg	HCV	Syphilis	HTLV I-II
ANU	100	100	100	100	0
ANI	NR	NR	NR	NR	NR
ARU	100	100	100	100	100
BAH	100	100	100	100	100
BAR	NR	NR	NR	NR	NR
BLZ	100	100	100	100	NR
BER	100	100	100	100	100
BVI	100	100	100	100	100
CAY	100	100	100	100	100
CUR	100	100	100	100	100
DOM	100	100	NR	100	100
FDA	100	100	100	100	100
GRA	NR	NR	NR	NR	NR
GUY	100	100	100	100	100
HAI	100	100	100	100	NR
JAM*	100	100	100	100	100
MOT	100	100	100	100	100
SKT	100	100	100	100	NR
STL	100	100	100	100	100
STV	100	100	100	100	100
SUR	100	100	100	100	100
TCI	100	100	100	100	100
TRT	100	100	100	100	100

*Screening includes 2,187 units collected from "uniform recruits."
NR = Not reported.

Table VII-7. Number of Units Not Screened for Infectious Markers, 2011

Country	HIV	HBsAg	HCV	Syphilis	HTLV I-II
ANU					165
Total					165

Table VII-8. Proportion of Reactive/Positive Units, 2011 (Percentage)

Country	HIV	HBsAg	HCV	Syphilis	HTLV I-II
ANU	0.61	0	0	0	NR
ANI	NR	NR	NR	NR	NR
ARU	0.04	0.04	0	0.04	0.04
BAH	0.13	0.48	0.21	0.96	0.29
BAR	NR	NR	NR	NR	NR
BLZ	0.33	0.65	0.48	1.13	NR
BER	0.17	0	0.04	0.04	0
BVI	0	1.18	0.47	0	0.24
CAY	0.1	0	0.39	0.39	0.49
CUR	0.03	0	0.02	0.02	0.02
DOM	0.3	0.9	NR	1.3	1.2
FDA	NR	NR	NR	NR	NR
GRA	NR	NR	NR	NR	NR
GUY	0.16	1.57	0.31	0.77	0.82
HAI	1.08	3.52	0.58	2.66	0.72
JAM*	0.6	0.78	0.6	1	2.14
MOT	0	0	1.1	0	13.5
SKT	0	4.07	1.9	1.36	NR
STL	0.13	0.52	0	1.17	0.73
STV	0.3	0.6	0.6	1.9	3.4
SUR	0	0.02	0.02	0.05	0
TCI	0	0	0	0.15	0
TRT	0.22	0.31	0.28	1.27	0.44

*Calculations include 2,187 units collected from “uniform recruits.”
NR = Not reported.

Figure VII-3. Proportion of Reactive/Positive Units, Caribbean, 2011 (Percentage)

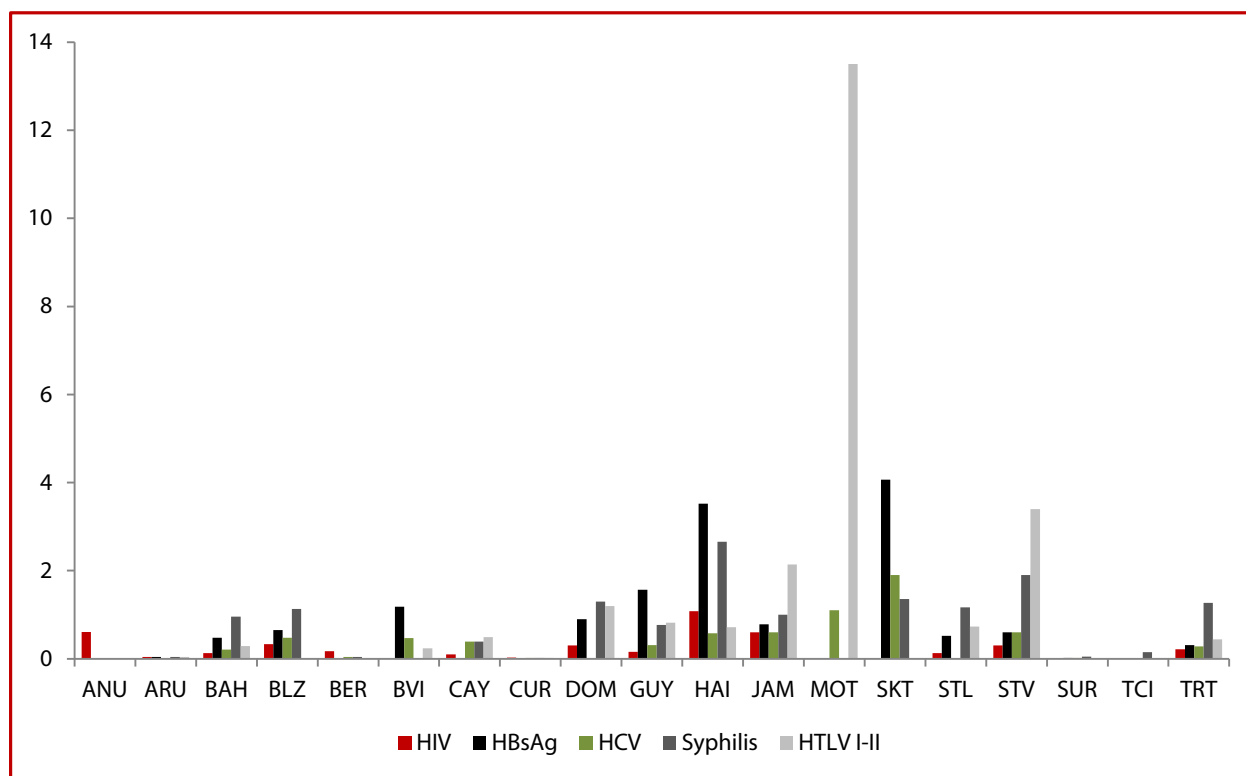


Table VII-9a. Number of Availability of Blood Components, 2011 - Separation into Components

Country	Units Received	RBC	FFP	FP	CRYO	PL
ANU	165	120	NR	NR	NR	NR
ANI	NR	NR	NR	NR	NR	NR
ARU	2,835	2,835	540	0	0	2,229
BAH	7,287	6,353	2,239	0	15	2,018
BAR	NR	NR	NR	NR	NR	NR
BLZ	4,617	1,605	604	1,001	0	603
BER	2,394	2,195	313	0	0	113
BVI	422	159	159	0	0	0
CAY	1,020	936	358	NR	NR	NR
CUR	6,603	6,291	1,505	0	0	3,059
DOM	1,043	1,005	649	NR	25	467
FDA	20,705	20,705	0	0	0	414
GRA	NR	NR	NR	NR	NR	NR
GUY	NR	NR	NR	NR	NR	NR
HAI	19,751	12,490	0	0	0	0
JAM	17,863	9,877	9,249	628	759	2,917
MOT	89	70	0	0	0	1
SKT	368	37	37	0	0	0
STL	2,304	2,300	552	183	0	1,213
STV	1,157	1,075	166	0	0	164
SUR	9,946	9,946	1,756	NR	NR	1,973
1TCI	388	155	29	0	0	5
TRT	17,613	NR	NR	NR	NR	NR

*TCI: Information incomplete; only information on units received from voluntary donations was reported.
NR = Not reported.

**Table VII-9b. Number of Availability of Blood Components, 2011 -
Blood and Blood Components Discarded***

Country	WB	RBC	FFP	FP	CRYO	PL
ANU	11	NR	NR	NR	NR	NR
ANI	NR	NR	NR	NR	NR	NR
ARU	0	61	0	0	0	622
BAH	44	127	121	0	0	266
BAR	NR	NR	NR	NR	NR	NR
BLZ	557	113	51	352	0	429
BER	56	112	67	0	0	98
BVI	NR	NR	NR	NR	NR	NR
CAY	51	99	150	NR	NR	5
CUR	NR	NR	NR	NR	NR	NR
DOM	21	25	NR	NR	NR	235
FDA	NR	NR	0	0	0	NR
GRA	NR	NR	NR	NR	NR	NR
GUY	NR	NR	NR	NR	NR	NR
HAI	NR	NR	NR	NR	NR	NR
JAM	1,537	323	NR	NR	NR	NR
MOT	8	31	0	0	0	0
SKT	71	5	5	0	NR	0
STL	5	127	96	26	0	570
STV	82	54	30	0	0	1
SUR	5	30	47	NR	NR	411
TCI**	0	0	0	0	NR	0
TRT	NR	NR	NR	NR	NR	NR

*Outdated units.

**TCI: Information incomplete; only information on units received from voluntary donations was reported.

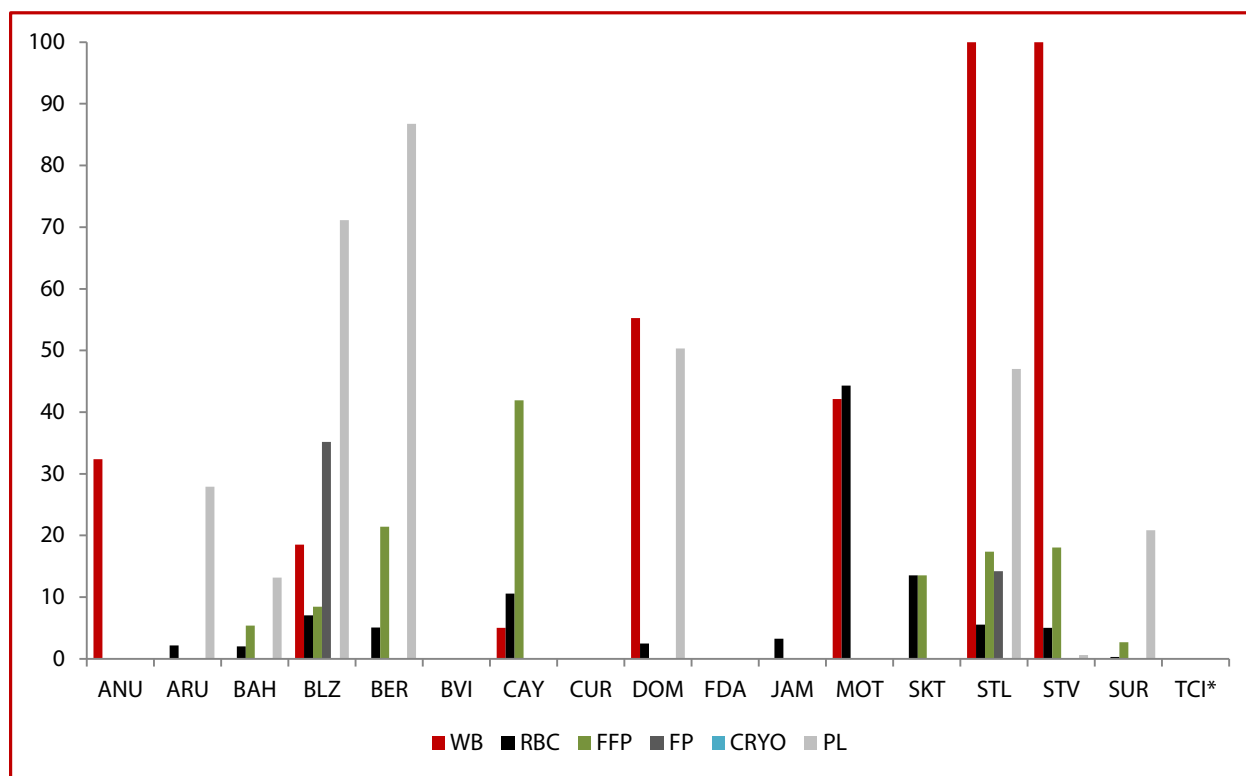
NR = Not reported.

Table VII-10. Availability of Blood Components, 2011 (Percentage)

Country	Percentage Separated into Components					Percentage Blood and Blood Components Discarded					
	RBC	FFP	FP	CRYO	PL	WB	RBC	FFP	FP	CRYO	PL
ANU	72.73	NR	NR	NR	NR	32.35	NR	NR	NR	NR	NR
ANI	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
ARU	100	19.05	0	0	78.62	0	2.15	0	0	0	27.9
BAH	87.18	30.73	0	0.21	27.69	NR	2	5.4	0	0	13.18
BAR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
BLZ	34.76	13.08	21.68	0	13.06	18.49	7.04	8.44	35.16	0	71.14
BER	91.69	13.07	0	0	4.72	NR	5.1	21.41	0	0	86.73
BVI	37.68	37.68	0	0	0	NR	NR	NR	NR	NR	NR
CAY	91.6	35.1	NR	NR	NR	5	10.58	41.9	NR	NR	NR
CUR	95.27	22.79	0	0	46.33	NR	NR	NR	NR	NR	NR
DOM	96.36	62.2	NR	2.4	44.77	55.26	2.49	NR	NR	NR	50.32
FDA	100	0	0	0	2	NR	NR	0	0	0	NR
GRA	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
GUY	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
HAI	63.24	0	NR	0	0	NR	NR	0	0	0	0
JAM	55.29	51.78	3.52	4.25	16.33	NR	3.27	NR	NR	NR	NR
MOT	78.65	0	0	0	1.12	42.11	44.29	0	0	0	0
SKT	10.05	10.05	0	0	0	NR	13.51	13.51	0	NR	0
STL	99.83	23.96	7.94	0	52.65	100	5.52	17.39	14.21	0	46.99
STV	92.91	14.35	0	0	14.17	100	5.02	18.07	0	0	0.61
SUR	100	17.66	NR	NR	19.84	NR	0.3	2.68	NR	NR	20.83
TCI*	39.95	7.47	0	0	1.29	NR	0	0	0	NR	0
TRT	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR

*TCI: Information incomplete; only information on units received from voluntary donations was reported.
NR = Not reported.

Figure VII-4. Blood and Blood Components Discarded, Caribbean, 2011 (Percentage)



*Information incomplete and based only on units collected from voluntary donors.

Table VII-11. Organization of the National Blood System, 2011

Country	Specific Law	Responsible Unit	Specific Budget	National Policy	National Commission
ANU	No	No	No	No	No
ANI	NR	NR	NR	NR	NR
ARU	No	No	Yes	No	Yes
BAH	No	No	No	No	No
BAR	NR	NR	NR	NR	NR
BLZ	Yes	Yes	No	Yes	Yes
BER	No	No	No	No	No
BVI	No	No	No	No	No
CAY	No	No	No	No	No
CUR	Yes	Yes	No	Yes	No
DOM	No	No	No	No	No
FDA	Yes	Yes	Yes	Yes	No
GRA	NR	NR	NR	NR	NR
GUY	Yes	Yes	Yes	Yes	Yes
HAI	No	No	No	No	Yes
JAM	No	Yes	No	No	Yes
MOT	No	Yes	No	No	No
SKT	No	No	No	No	No
STL	No	No	No	No	No
STV	No	No	No	No	Yes
SUR	Yes	No	Yes	Yes	No
TCI	No	Yes	No	No	No
TRT	No	Yes	Yes	No	No

NR = Not reported.

Table VII-12. Organization of the National Blood System, 2011

Country	Reference Center	National Plan	Donor Norms	Operation Norms	Clinical Guidelines	Service Registration
ANU	No	No	Yes	No	No	No
ANI	NR	NR	NR	NR	NR	NR
ARU	Yes	Yes	Yes	No	Yes	No
BAH	No	No	Yes	No	No	Yes
BAR	NR	NR	NR	NR	NR	NR
BLZ	Yes	Yes	Yes	Yes	Yes	Yes
BER	No	No	Yes	No	No	Yes
BVI	No	No	Yes	No	No	No
CAY	No	No	No	Yes	No	No
CUR	Yes	Yes	Yes	Yes	Yes	No
DOM	No	No	Yes	No	No	No
FDA	Yes	Yes	Yes	Yes	Yes	Yes
GRA	NR	NR	NR	NR	NR	NR
GUY	Yes	Yes	Yes	Yes	Yes	Yes
HAI	No	No	No	No	No	No
JAM	Yes	Yes	Yes	NR	Yes	No
MOT	No	NR	No	No	Yes	Yes
SKT	Yes	No	No	No	No	Yes
STL	Yes	No	Yes	Yes	No	No
STV	No	No	Yes	No	No	No
SUR	No	Yes	Yes	Yes	Yes	Yes
TCI	No	No	Yes	No	No	Yes
TRT	No	No	No	No	No	No

NR = Not reported.

Table VII-13. Organization of the National Blood System, 2011

Country	Quality Assurance Policy	External Evaluation Serology-TTI	External Evaluation Immunochemistry	Inspection Program	Continued Education
ANU	No	Yes	No	No	No
ANI	NR	NR	NR	NR	NR
ARU	Yes	Yes	Yes	Yes	Yes
BAH	Yes	Yes	Yes	No	No
BAR	NR	NR	NR	NR	NR
BLZ	Yes	Yes	Yes	Yes	No
BER	Yes	No	Yes	Yes	Yes
BVI	No	No	No	No	No
CAY	No	Yes	Yes	Yes	Yes
CUR	Yes	No	Yes	Yes	Yes
DOM	No	Yes	Yes	No	No
FDA	Yes	Yes	Yes	Yes	Yes
GRA	NR	NR	NR	NR	NR
GUY	Yes	Yes	Yes	Yes	No
HAI	No	No	No	Yes	Yes
JAM	No	Yes	No	No	Yes
MOT	No	Yes	No	No	No
SKT	No	Yes	No	No	No
STL	No	Yes	No	No	No
STV	No	Yes	Yes	No	No
SUR	Yes	Yes	No	No	No
TCI	No	No	No	No	No
TRT	No	Yes	No	No	No

NR = Not reported.

Table VII-14. Organization of the National Blood System, 2011

Country	Staff Certification	Service Accreditation
ANU	No	NR
ANI	NR	NR
ARU	Yes	No
BAH	No	No
BAR	NR	NR
BLZ	No	No
BER	Yes	Yes
BVI	Yes	No
CAY	Yes	Yes
CUR	Yes	Yes
DOM	No	No
FDA	Yes	Yes
GRA	NR	NR
GUY	Yes	No
HAI	No	No
JAM	No	No
MOT	No	No
SKT	No	No
STL	No	No
STV	No	No
SUR	Yes	No
TCI	No	No
TRT	No	No

NR = Not reported.

Table VII-15. Countries with One Hundred Percent Screening for Infectious Markers, 2011*

Country	HIV	HBsAg	HCV	Syphilis	HTLV I-II	Five Markers
ANU	ANU	ANU	ANU	ANU		
ARU	ARU	ARU	ARU	ARU	ARU	ARU
BLZ	BLZ	BLZ	BLZ	BLZ		
BER	BER	BER	BER	BER	BER	BER
CAY	CAY	CAY	CAY	CAY	CAY	CAY
CUR	CUR	CUR	CUR	CUR	CUR	CUR
DOM	DOM	DOM		DOM		
FDA	FDA	FDA	FDA	FDA	FDA	FDA
GUY	GUY	GUY	GUY	GUY	GUY	GUY
HAI	HAI	HAI	HAI	HAI		
JAM	JAM	JAM	JAM	JAM	JAM	JAM
SKT	SKT	SKT	SKT	SKT		
STL	STL	STL	STL	STL	STL	STL
STV	STV	STV	STV	STV	STV	STV
SUR	SUR	SUR	SUR	SUR	SUR	SUR
15	15	15	14	15	10	10

*Proportion of units received.

**Table VII-16. National Staff Who Submitted Official Reports
to the Pan American Health Organization -
Caribbean Countries, 2011**

Country	Name	Position	Address
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Bahamas	Everette Miller	Supervisor	Princess Margaret Hospital Tel.: 242-322-8077 Email: emiller@pmh.phabahamas.org
Belize	Joy Robateau	Supervisor	Belize National Blood Transfusion Services Princess Margaret Drive, Belize City Tel.: 501 224 5010 E-mail: j_robateau@yahoo.com
Bermuda	Eyitayo Fakunle, Dawnette Been, Susan De Verteuil y Simonette Carey	Blood Transfusion Team	Bermuda Hospital Board Department of Pathology, King Edward VII Memorial Hospital, Paget DV 04, Bermuda Tel.: (441) 2391419 or (441) 3317370 E-mail: eyitayo.fakunle@bhb.bm; dawnette.been@bhb.bm
British Virgin Islands	Allene Brewley-Roach	Laboratory Director	Peebles Hospital 32 Main Street, Road Town, Tortola, BVI Tel.: 284 852 7570/1/2 E-mail: peebleslab@hotmail.com
Cayman Islands	Judith Clarke	Laboratory Manager	Cayman Islands Health Services Authority 95 Hospital Road, P.O. Box 915 Grand Cayman KY1-1103 Tel.: 345 244 2669 E-mail: judith.clarke@hsa.ky
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Dominica	Nina Pierre		Blood Bank, Medical Laboratory, Princess Margaret Hospital Tel.: 767 448 2231 Ext: 2144 E-mail: pmhlab@cwdom.dm
French Departments of America	Rud Christian	Coordinateur Régional d'Hémovigilance Antilles	Agence Nationale de Sécurité du Médicament et des produits de santé Parc d'activité de Providence Dothémare 97139 ABYMES Tel.: 0590 99 44 83 E-mail: Christian.rud@ars.sante.fr
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Haiti	Ernst Noel	Director	Programme National de Sécurité Transfusionnelle 111, Rue Saint Honore Port-au-Prince, Haiti Tel.: 509 22274136, 509 22274137 E-mail: bloodsafetyht@yahoo.fr, mohbloodsafetyprogra@bloodsafety.mspp.org

(Continued)

Table VII-16. (Continued)

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Saint Lucia	Veronica Lee	Medical Technologist/Blood Bank Manager	Saint Lucia Blood Bank Service Victoria Hospital, Castries, St. Lucia Tel.: 758 452 5430 E-mail: slubloodbank@gmail.com
Saint Vincent and the Grenadines	Dalrie Cole-John	Medical Technologist of the Blood Bank	Milton Cato Memorial Hospital Blood Bank Bentick Square, Kingstown, St. Vincent Tel.: 784 45611
Suriname	Maria Tjon A. Loi	Medical Director	National Blood Bank Suriname Red Cross Society Rode Kruislaan 24 Tel.: 597 499175 / 497483 E-mail: directeur_bloedbank@surinameredcross.sr
Trinidad and Tobago	Justin Sankar	Ag MLT III	National Blood Transfusion Service 160 Charlotte Street, Port of Spain Tel.: 868 627-2619
Turks and Caicos Islands	Latricia Ingham	Laboratory Assistant	Cheshire Hall Medical Center/Public Health Lab 16 Hospital Road, Providenciales Tel.: 649-243-1281 E-mail: tcibloodbank@gmail.com

VIII. Specific Summaries - Latin American Countries

Table VIII-1. Argentina (ARG)

	2010	2011
Number of units collected	1,012,680	1,101,438
Number of autologous donors	23,280	26,804
Percentage type of allogeneic donors		
Voluntary, altruistic donors	27.23	34.04
Family/replacement donors	72.77	65.96
Remunerated donors	NR	NR
Percentage of units screened		
HIV	100	100
HBsAg	100	100
HCV	100	100
Syphilis	100	100
<i>T. cruzi</i>	100	100
HTLV I-II	100	100
Anti-HBc	100	100
Percentage of units reactive/positive		
HIV	0.34	0.26
HBsAg	0.3	0.26
HCV	0.47	0.52
Syphilis	0.91	0.74
<i>T. cruzi</i>	3.13	2.96
HTLV I-II	0.43	0.27
Anti-HBc	2.7	2.1
Percentage of units separated into components		
Packed red blood cells	94.81	95.73
Fresh frozen plasma	26.95	29.88
Frozen plasma	62.87	63.52
Cryoprecipitate	2	2.8
Platelets	40.89	50.76
Percentage of units discarded		
Whole blood	47.14	41.95
Packed red blood cells	15.6	17.88
Fresh frozen plasma	9	5.2
Frozen plasma	9	9.67
Cryoprecipitate	26.58	8.41
Platelets	17.65	25.78

NR = Not reported.

Table VIII-2. Bolivia (BOL)

	2010	2011
Number of units collected	73,254	79,960
Number of autologous donors	69	74
Percentage type of allogeneic donors		
Voluntary, altruistic donors	32.92	35.1
Family/replacement donors	67.08	64.96
Remunerated donors	0	0
Percentage of units screened		
HIV	100	100
HBsAg	100	100
HCV	100	100
Syphilis	100	100
<i>T. cruzi</i>	100	100
HTLV I-II	NR	NR
Anti-HBc	NR	NR
Percentage of units reactive/positive		
HIV	0.15	0.2
HBsAg	0.26	0.25
HCV	0.34	0.33
Syphilis	0.92	0.71
<i>T. cruzi</i>	2.32	2.16
HTLV I-II	NR	NR
Anti-HBc	NR	NR
Percentage of units separated into components		
Packed red blood cells	92.8	94.49
Fresh frozen plasma	73.35	94.49
Frozen plasma	12.22	NR
Cryoprecipitate	4.69	7.45
Platelets	35.38	36.58
Percentage of units discarded		
Whole blood	15.9	24.06
Packed red blood cells	6.15	4.82
Fresh frozen plasma	32.45	20.56
Frozen plasma	72.44	NR
Cryoprecipitate	39.72	22.9
Platelets	38.29	29.33

NR = Not reported.

Table VIII-3. Brazil (BRA)

	2010*	2011**
Number of units collected	3,267,551	3,356,382
Number of autologous donors	43,871	2,776
Percentage type of allogeneic donors		
Voluntary, altruistic donors	64.49	59.66
Family/replacement donors	35.51	40.34
Remunerated donors	0	0
Percentage of units screened		
HIV	100	100
HBsAg	100	100
HCV	100	100
Syphilis	100	100
<i>T. cruzi</i>	100	100
HTLV I-II	100	100
Anti-HBc	100	100
Percentage of units reactive/positive		
HIV	0.36	0.33
HBsAg	0.2	0.17
HCV	0.29	0.32
Syphilis	0.71	0.81
<i>T. cruzi</i>	0.18	0.2
HTLV I-II	0.17	0.13
Anti-HBc	1.93	1.73
Percentage of units separated into components		
Packed red blood cells	NR	94.88
Fresh frozen plasma	NR	82.78
Frozen plasma	NR	13.17
Cryoprecipitate	NR	4.22
Platelets	NR	54.04
Percentage of units discarded		
Whole blood	NR	87.19
Packed red blood cells	NR	13.35
Fresh frozen plasma	NR	45.8
Frozen plasma	NR	80.12
Cryoprecipitate	NR	7.16
Platelets	NR	26.16

*2010: Data reported only by 26 blood centers.

**2011: Partial information. Missing information from 2 departments in the country.

NR = Not reported.

Table VIII-4. Chile (CHI)

	2010	2011
Number of units collected	227,301	230,308
Number of autologous donors	NR	NR
Percentage type of allogeneic donors		
Voluntary, altruistic donors	22.33	21.17
Family/replacement donors	77.67	78.83
Remunerated donors	0	0
Percentage of units screened		
HIV	100	100
HBsAg	100	100
HCV	100	100
Syphilis	100	100
<i>T. cruzi</i>	100	100
HTLV I-II	100	100
Anti-HBc	NR	NR
Percentage of units reactive/positive		
HIV	0.04	0.03
HBsAg	0.02	0.02
HCV	0.03	0.03
Syphilis	0.95	1.22
<i>T. cruzi</i>	0.16	0.19
HTLV I-II	0.13	0.14
Anti-HBc	NR	NR
Percentage of units separated into components		
Packed red blood cells	93.58	97.8
Fresh frozen plasma	70.38	86.08
Frozen plasma	18.51	18.55
Cryoprecipitate	7.91	7.91
Platelets	60.72	62.44
Percentage of units discarded*		
Whole blood	0	0
Packed red blood cells	1.99	NR
Fresh frozen plasma	NR	NR
Frozen plasma	NR	NR
Cryoprecipitate	NR	NR
Platelets	NR	NR

*Data will be reported as of 2012.
NR = Not reported.

Table VIII-5. Colombia (COL)

	2010	2011
Number of units collected	692,485	710,825
Number of autologous donors	964	426
Percentage type of allogeneic donors		
Voluntary, altruistic donors	77.94	82.54
Family/replacement donors	22.06	17.46
Remunerated donors	0	0
Percentage of units screened		
HIV	100	100
HBsAg	100	100
HCV	100	100
Syphilis	100	100
<i>T. cruzi</i>	100	100
HTLV I-II	65	68
Anti-HBc	65.6	69.4
Percentage of units reactive/positive		
HIV	0.29	0.25
HBsAg	0.19	0.16
HCV	0.5	0.55
Syphilis	1.54	1.45
<i>T. cruzi</i>	0.41	0.56
HTLV I-II	0.4	0.47
Anti-HBc	2.07	1.91
Percentage of units separated into components		
Packed red blood cells	96.49	99.83
Fresh frozen plasma	74.61	78.5
Frozen plasma	16.13	14.78
Cryoprecipitate	5.38	7.28
Platelets	46.42	44.89
Percentage of units discarded		
Whole blood	24.62	82.08
Packed red blood cells	7.03	9.38
Fresh frozen plasma	52.64	65.2
Frozen plasma	73.95	90.07
Cryoprecipitate	29.99	20
Platelets	35.29	42.85

Table VIII-6. Costa Rica (COR)

	2010	2011
Number of units collected	71,192	71,090
Number of autologous donors	53	47
Percentage type of allogeneic donors		
Voluntary, altruistic donors	61.63	61.5
Family/replacement donors	38.37	38.5
Remunerated donors	0	0
Percentage of units screened		
HIV	100	100
HBsAg	100	100
HCV	100	100
Syphilis	100	100
<i>T. cruzi</i>	100	100
HTLV I-II	100	100
Anti-HBc	100	100
Percentage of units reactive/positive		
HIV	0.024	0.15
HBsAg	0.077	0.1
HCV	0.065	0.62
Syphilis	0.16	0.59
<i>T. cruzi</i>	0.045	0.34
HTLV I-II	0.013	0.75
Anti-HBc	1.76	2.53
Percentage of units separated into components		
Packed red blood cells	100	98.77
Fresh frozen plasma	28.44	98.77
Frozen plasma	NR	NR
Cryoprecipitate	29.36	19.39
Platelets	86.93	75.56
Percentage of units discarded		
Whole blood	14.8	0.85
Packed red blood cells	7.4	10.88
Fresh frozen plasma	76.91	18.46
Frozen plasma	NR	NR
Cryoprecipitate	0.05	0.01
Platelets	31.37	31.69

NR = Not reported.

Table VIII-7. Cuba (CUB)

	2010	2011
Number of units collected	384,472	393,325
Number of autologous donors	0	0
Percentage type of allogeneic donors		
Voluntary, altruistic donors	100	100
Family/replacement donors	0	0
Remunerated donors	0	0
Percentage of units screened		
HIV	100	100
HBsAg	100	100
HCV	100	100
Syphilis	100	100
<i>T. cruzi</i>	NR	NR
HTLV I-II	NR	NR
Anti-HBc	NR	NR
Percentage of units reactive/positive		
HIV	0.03	0.02
HBsAg	0.41	0.32
HCV	1.34	0.63
Syphilis	0.62	0.69
<i>T. cruzi</i>	NR	NR
HTLV I-II	NR	NR
Anti-HBc	NR	NR
Percentage of units separated into components		
Packed red blood cells	NR	NR
Fresh frozen plasma	NR	NR
Frozen plasma	NR	NR
Cryoprecipitate	NR	NR
Platelets	NR	NR
Percentage of units discarded		
Whole blood	NR	NR
Packed red blood cells	NR	NR
Fresh frozen plasma	NR	NR
Frozen plasma	NR	NR
Cryoprecipitate	NR	NR
Platelets	NR	NR

NR = Not reported.

Table VIII-8. Dominican Republic (DOR)

	2010	2011
Number of units collected	94,884	99,148
Number of autologous donors	47	67
Percentage type of allogeneic donors		
Voluntary, altruistic donors	24.11	18.24
Family/replacement donors	73.7	80.26
Remunerated donors	2.19	1.5
Percentage of units screened		
HIV	100	100
HBsAg	100	100
HCV	100	100
Syphilis	100	100
<i>T. cruzi</i>	NR	NR
HTLV I-II	100	101
Anti-HBc	NR	NR
Percentage of units reactive/positive		
HIV	0.25	0.22
HBsAg	1.07	0.98
HCV	0.37	0.29
Syphilis	0.56	0.55
<i>T. cruzi</i>	NR	NR
HTLV I-II	0.24	0.3
Anti-HBc	NR	NR
Percentage of units separated into components		
Packed red blood cells	33.82	49.66
Fresh frozen plasma	5.36	9.42
Frozen plasma	3.88	5.01
Cryoprecipitate	0.03	2.97
Platelets	3.76	7.52
Percentage of units discarded		
Whole blood	NR	NR
Packed red blood cells	2.25	1.69
Fresh frozen plasma	59.5	58.64
Frozen plasma	0	0
Cryoprecipitate	51.43	0
Platelets	8.01	15.35

NR = Not reported.

Table VIII-9. Ecuador (ECU)

	2010	2011*
Number of units collected	173,748	211,818
Number of autologous donors	37	36
Percentage type of allogeneic donors		
Voluntary, altruistic donors	38.38	49.95
Family/replacement donors	61.83	50.05
Remunerated donors	0	0
Percentage of units screened		
HIV	100	100
HBsAg	100	100
HCV	100	100
Syphilis	100	100
<i>T. cruzi</i>	100	100
HTLV I-II	NR	NR
Anti-HBc	14.8	18
Percentage of units reactive/positive		
HIV	0.43	0.33
HBsAg	0.35	0.26
HCV	0.52	0.35
Syphilis	0.86	0.63
<i>T. cruzi</i>	0.19	0.18
HTLV I-II	NR	NR
Anti-HBc	0.19	0.02
Percentage of units separated into components		
Packed red blood cells	92.47	89.91
Fresh frozen plasma	85.98	63.14
Frozen plasma	NR	NR
Cryoprecipitate	5.79	3.06
Platelets	34.57	31.03
Percentage of units discarded		
Whole blood	76.32	41.04
Packed red blood cells	3.36	4.13
Fresh frozen plasma	43.55	35.22
Frozen plasma	NR	NR
Cryoprecipitate	23.72	13.59
Platelets	22.02	14.07

*13,846 of the total units collected were not classified by donor type.

NR = Not reported.

Table VIII-10. El Salvador (ELS)

	2010*	2011**
Number of units collected	84,287	90,760
Number of autologous donors	0	7
Percentage type of allogeneic donors		
Voluntary, altruistic donors	10.28	11.77
Family/replacement donors	89.72	88.23
Remunerated donors	0	0
Percentage of units screened		
HIV	100	100
HBsAg	100	100
HCV	100	100
Syphilis	100	100
<i>T. cruzi</i>	100	100
HTLV I-II	NR	NR
Anti-HBc	NR	NR
Percentage of units reactive/positive		
HIV	0.05	0.06
HBsAg	0.16	0.16
HCV	0.1	0.13
Syphilis	1.36	1.1
<i>T. cruzi</i>	1.61	1.68
HTLV I-II	NR	NR
Anti-HBc	NR	NR
Percentage of units separated into components		
Packed red blood cells	93.34	96.83
Fresh frozen plasma	79.04	75.54
Frozen plasma	NR	NR
Cryoprecipitate	11.69	12.39
Platelets	62.8	55.64
Percentage of units discarded		
Whole blood	25.11	1.27
Packed red blood cells	5.9	5.6
Fresh frozen plasma	14.11	16.26
Frozen plasma	NR	NR
Cryoprecipitate	0.64	1.92
Platelets	14.56	13.1

*Total units collected does not include 557 donors by apheresis, but these units are included in the screening and availability of blood components data.

**Total units collected does not include 783 donors by apheresis, but these units are included in the screening and availability of blood components data.

NR = Not reported.

Table VIII-11. Guatemala (GUT)

	2010	2011
Number of units collected	92,385	105,803
Number of autologous donors	50	36
Percentage type of allogeneic donors		
Voluntary, altruistic donors	4.75	4.51
Family/replacement donors	95.25	96.13
Remunerated donors	0	0
Percentage of units screened		
HIV	100	100
HBsAg	100	100
HCV	100	100
Syphilis	100	100
<i>T. cruzi</i>	100	100
HTLV I-II	NR	NR
Anti-HBc	NR	43.45
Percentage of units reactive/positive		
HIV	0.46	0.26
HBsAg	0.67	0.36
HCV	0.94	0.65
Syphilis	2.56	2.1
<i>T. cruzi</i>	1.34	0.97
HTLV I-II	NR	NR
Anti-HBc	2.91	3.15
Percentage of units separated into components		
Packed red blood cells	89.76	91.58
Fresh frozen plasma	51.89	50.39
Frozen plasma	NR	NR
Cryoprecipitate	0.66	0.64
Platelets	34.08	39.2
Percentage of units discarded		
Whole blood	5.54	57.88
Packed red blood cells	10.99	12.04
Fresh frozen plasma	20.26	29.41
Frozen plasma	NR	NR
Cryoprecipitate	37.54	28.25
Platelets	26.5	34.93

NR = Not reported.

Table VIII-12. Honduras (HON)

	2010	2011*
Number of units collected	63,878	66,457
Number of autologous donors	27	10
Percentage type of allogeneic donors		
Voluntary, altruistic donors	15.84	17.38
Family/replacement donors	83.63	82.06
Remunerated donors	0.53	0.56
Percentage of units screened		
HIV	100	100
HBsAg	100	100
HCV	100	100
Syphilis	100	100
<i>T. cruzi</i>	100	100
HTLV I-II	87.4	92
Anti-HBc	88.2	NR
Percentage of units reactive/positive		
HIV	0.18	0.2
HBsAg	0.24	0.2
HCV	0.47	0.52
Syphilis	1.04	0.79
<i>T. cruzi</i>	1.65	1.1
HTLV I-II	0.25	0.23
Anti-HBc	4.65	2.21
Percentage of units separated into components		
Packed red blood cells	38.05	40.45
Fresh frozen plasma	36.25	38.42
Frozen plasma	NR	NR
Cryoprecipitate	2.09	2.82
Platelets	30.58	30.97
Percentage of units discarded		
Whole blood	8.54	4.69
Packed red blood cells	23.1	14.25
Fresh frozen plasma	47.52	79.38
Frozen plasma	NR	NR
Cryoprecipitate	5.18	4.33
Platelets	20.98	18.88

*Missing information from the Honduran Red Cross. Therefore, the results do not match.
NR = Not reported.

Table VIII-13. Mexico (MEX)

	2010	2011
Number of units collected	1,699,885	1,768,065
Number of autologous donors	1,761	2,384
Percentage type of allogeneic donors		
Voluntary, altruistic donors	2.38	2.45
Family/replacement donors	97.62	97.55
Remunerated donors	0	0
Percentage of units screened		
HIV	98	99
HBsAg	98	99
HCV	98	99
Syphilis	98	99
<i>T. cruzi</i>	87	89
HTLV I-II	NR	NR
Anti-HBc	NR	NR
Percentage of units reactive/positive		
HIV	0.26	0.22
HBsAg	0.17	0.16
HCV	0.56	0.56
Syphilis	0.45	0.51
<i>T. cruzi</i>	0.39	0.36
HTLV I-II	NR	NR
Anti-HBc	NR	NR
Percentage of units separated into components		
Packed red blood cells	94.85	95.08
Fresh frozen plasma	76.37	75.99
Frozen plasma	18.48	19.09
Cryoprecipitate	6.31	5.58
Platelets	41.54	42.01
Percentage of units discarded		
Whole blood	2.87	2.99
Packed red blood cells	6.5	6.61
Fresh frozen plasma	38.32	40.23
Frozen plasma	100	100
Cryoprecipitate	15.74	16.25
Platelets	28.39	30.34

NR = Not reported.

Table VIII-14. Nicaragua (NIC)

	2010	2011
Number of units collected	74,842	73,912
Number of autologous donors	0	0
Percentage type of allogeneic donors		
Voluntary, altruistic donors	100	100
Family/replacement donors	0	0
Remunerated donors	0	0
Percentage of units screened		
HIV	100	100
HBsAg	100	100
HCV	100	100
Syphilis	100	100
<i>T. cruzi</i>	100	100
HTLV I-II	NR	NR
Anti-HBc	NR	NR
Percentage of units reactive/positive		
HIV	0.06	0.06
HBsAg	0.24	0.24
HCV	0.33	0.2
Syphilis	0.86	0.77
<i>T. cruzi</i>	0.22	0.24
HTLV I-II	NR	NR
Anti-HBc	NR	NR
Percentage of units separated into components		
Packed red blood cells	96.71	95.3
Fresh frozen plasma	96.71	41.53
Frozen plasma	NR	NR
Cryoprecipitate	4.1	4.05
Platelets	48.2	47.66
Percentage of units discarded		
Whole blood	2.06	2.12
Packed red blood cells	1.86	2.75
Fresh frozen plasma	56.46	10.16
Frozen plasma	NR	NR
Cryoprecipitate	11.7	11.24
Platelets	34.67	34.49

NR = Not reported.

Table VIII-15. Panama (PAN)

	2010*	2011**
Number of units collected	51,552	54,427
Number of autologous donors	NR	NR
Percentage type of allogeneic donors		
Voluntary, altruistic donors	6.8	5.95
Family/replacement donors	35.47	35.31
Remunerated donors	8.56	9.54
Percentage of units screened		
HIV	100	100
HBsAg	100	100
HCV	100	100
Syphilis	100	100
<i>T. cruzi</i>	100	100
HTLV I-II	97	96.87
Anti-HBc	100	100
Percentage of units reactive/positive		
HIV	0.05	0.59
HBsAg	0.15	0.67
HCV	0.48	0.58
Syphilis	1.1	1.3
<i>T. cruzi</i>	0.5	0.67
HTLV I-II	0.25	0.3
Anti-HBc	1.5	1.7
Percentage of units separated into components		
Packed red blood cells	NR	78.99
Fresh frozen plasma	NR	34.25
Frozen plasma	NR	NR
Cryoprecipitate	NR	26.74
Platelets	NR	56.41
Percentage of units discarded		
Whole blood	NR	NR
Packed red blood cells	NR	8.49
Fresh frozen plasma	NR	2.3
Frozen plasma	NR	NR
Cryoprecipitate	NR	1.72
Platelets	NR	10.69

*125,301 of the total units collected were not classified by donor type. Reported 73,678 donors interviewed and 1,355 deferred donors.

**227,511 of the total units collected were not classified by donor type. Reported 77,851 donors interviewed and 11,511 deferred donors.

NR = Not reported.

Table VIII-16. Paraguay (PAR)

	2010	2011
Number of units collected	72,647	74,079
Number of autologous donors	55	36
Percentage type of allogeneic donors		
Voluntary, altruistic donors	24.79	5.71
Family/replacement donors	75.21	94.29
Remunerated donors	0	0
Percentage of units screened		
HIV	100	100
HBsAg	100	100
HCV	100	100
Syphilis	100	100
<i>T. cruzi</i>	100	100
HTLV I-II	100	100
Anti-HBc	100	100
Percentage of units reactive/positive		
HIV	0.54	0.74
HBsAg	0.4	0.37
HCV	0.41	0.4
Syphilis	7.96	8.03
<i>T. cruzi</i>	2.55	2.92
HTLV I-II	0.21	0.17
Anti-HBc	3.33	3.86
Percentage of units separated into components		
Packed red blood cells	74.37	75.41
Fresh frozen plasma	63.29	59.61
Frozen plasma	10.39	NR
Cryoprecipitate	2.67	2.37
Platelets	46.29	43.53
Percentage of units discarded		
Whole blood	17.32	41.62
Packed red blood cells	19.48	17.35
Fresh frozen plasma	28	20.39
Frozen plasma	77.71	NR
Cryoprecipitate	7.33	6.09
Platelets	41.26	45.15

NR = Not reported.

Table VIII-17. Peru (PER)

	2010*	2011**
Number of units collected	234,566	141,202
Number of autologous donors	874	90
Percentage type of allogeneic donors		
Voluntary, altruistic donors	4.31	4.08
Family/replacement donors	NR	74.71
Remunerated donors	0.15	0.05
Percentage of units screened		
HIV	98.82	94
HBsAg	98.73	94
HCV	98.76	94
Syphilis	98.74	94
<i>T. cruzi</i>	98.75	94
HTLV I-II	98.53	93.86
Anti-HBc	98.78	93.98
Percentage of units reactive/positive		
HIV	0.41	0.22
HBsAg	0.46	0.41
HCV	0.76	0.44
Syphilis	1.34	1.11
<i>T. cruzi</i>	0.62	0.46
HTLV I-II	123	1.08
Anti-HBc	4.4	4.7
Percentage of units separated into components		
Packed red blood cells	82.67	85.21
Fresh frozen plasma	66.96	62.42
Frozen plasma	NR	NR
Cryoprecipitate	10.02	8.3
Platelets	56.87	48.18
Percentage of units discarded		
Whole blood	0.82	1.54
Packed red blood cells	7.42	4.1
Fresh frozen plasma	40.61	10.79
Frozen plasma	NR	NR
Cryoprecipitate	8.14	2.01
Platelets	23.75	8.62

*In 2010, 223,255 of the units collected were not classified by donor type. Units received for screening 234,566; but screened for: HIV 231,798; HBsAg 231,592; syphilis 231,610; *T. cruzi* 231,629; Anti-HBc 231,698.

**Partial information. 27,856 of the units collected were not classified by donor type. Reported 140,407 units received for screening. NR = Not reported.

Table VIII-18. Uruguay (URU)

	2010	2011
Number of units collected	92,734	95,812
Number of autologous donors	NR	NR
Percentage type of allogeneic donors		
Voluntary, altruistic donors	NR	NR
Family/replacement donors	NR	NR
Remunerated donors	NR	NR
Percentage of units screened		
HIV	100	100
HBsAg	100	100
HCV	100	100
Syphilis	100	100
<i>T. cruzi</i>	100	100
HTLV I-II	100	100
Anti-HBc	100	100
Percentage of units reactive/positive		
HIV	0.09	0.13
HBsAg	0.1	0.15
HCV	0.34	0.37
Syphilis	0.57	0.49
<i>T. cruzi</i>	0.23	0.39
HTLV I-II	0.11	0.11
Anti-HBc	1.17	1.15
Percentage of units separated into components		
Packed red blood cells	NR	NR
Fresh frozen plasma	NR	NR
Frozen plasma	NR	NR
Cryoprecipitate	NR	NR
Platelets	NR	NR
Percentage of units discarded		
Whole blood	NR	NR
Packed red blood cells	NR	NR
Fresh frozen plasma	NR	NR
Frozen plasma	NR	NR
Cryoprecipitate	NR	NR
Platelets	NR	NR

NR = Not reported.

Table VIII-19. Venezuela (VEN)

	2010	2011
Number of units collected	418,996	416,346
Number of autologous donors	NR	0
Percentage type of allogeneic donors		
Voluntary, altruistic donors	4	6.38
Family/replacement donors	NR	93.62
Remunerated donors	NR	NR
Percentage of units screened		
HIV	100	100
HBsAg	100	100
HCV	100	100
Syphilis	100	100
<i>T. cruzi</i>	100	100
HTLV I-II	100	100
Anti-HBc	100	100
Percentage of units reactive/positive		
HIV	0.26	0.23
HBsAg	0.66	0.53
HCV	0.36	0.32
Syphilis	1.84	1.81
<i>T. cruzi</i>	0.32	0.33
HTLV I-II	0.19	0.21
Anti-HBc	3.11	3.12
Percentage of units separated into components		
Packed red blood cells	88.42	95
Fresh frozen plasma	74.1	81.39
Frozen plasma	20.97	9.29
Cryoprecipitate	6.62	9.04
Platelets	52.81	81.34
Percentage of units discarded		
Whole blood	NR	NR
Packed red blood cells	NR	NR
Fresh frozen plasma	NR	NR
Frozen plasma	NR	NR
Cryoprecipitate	NR	NR
Platelets	NR	NR

NR = Not reported.

IX. Specific Summaries - Caribbean Countries

Table IX-1. Anguila (ANU)

	2010	2011
Number of units collected	134	165
Number of autologous donors	3	1
Percentage type of allogeneic donors		
Voluntary, altruistic donors	9.92	9.76
Family/replacement donors	90.08	90.24
Remunerated donors	0	0
Percentage of units screened		
HIV	100	100
HBsAg	100	100
HCV	100	100
Syphilis	100	100
HTLV I-II	0	0
Percentage of units reactive/positive		
HIV	0	0.61
HBsAg	0.75	0
HCV	0.75	0
Syphilis	0.75	0
HTLV I-II	NR	NR
Percentage of units separated into components		
Packed red blood cells	67.16	72.73
Fresh frozen plasma	NR	NR
Frozen plasma	NR	NR
Cryoprecipitate	NR	NR
Platelets	NR	NR
Percentage of units discarded		
Whole blood	37.5	32.35
Packed red blood cells	NR	NR
Fresh frozen plasma	NR	NR
Frozen plasma	NR	NR
Cryoprecipitate	NR	NR
Platelets	NR	NR

NR = Not reported.

Table IX-2. Antigua and Barbuda (ANI)

	2010*	2011
Number of units collected	1,321	NR
Number of autologous donors	3	
Percentage type of allogeneic donors		
Voluntary, altruistic donors	5	
Family/replacement donors	95	
Remunerated donors	0	
Percentage of units screened		
HIV	100	
HBsAg	100	
HCV	93.10	
Syphilis	100	
HTLV I-II	0	
Percentage of units reactive/positive		
HIV	0.91	
HBsAg	1.67	
HCV	0.53	
Syphilis	0.46	
HTLV I-II	NR	
Percentage of units separated into components		
Packed red blood cells	61.38	
Fresh frozen plasma	10.24	
Frozen plasma	3.64	
Cryoprecipitate	0	
Platelets	10.70	
Percentage of units discarded		
Whole blood	5.76	
Packed red blood cells	2.60	
Fresh frozen plasma	28.89	
Frozen plasma	0	
Cryoprecipitate	NR	
Platelets	8.51	

*2009 data in place of 2010. HCV testing could not be done on all units due to unavailability of reagent. Screened units 1,318.
NR = Not reported.

Table IX-3. Aruba (ARU)

	2010	2011
Number of units collected	2,830	2,835
Number of autologous donors	0	0
Percentage type of allogeneic donors		
Voluntary, altruistic donors	100	100
Family/replacement donors	0	0
Remunerated donors	0	0
Percentage of units screened		
HIV	100	100
HBsAg	100	100
HCV	100	100
Syphilis	100	100
HTLV I-II	100	100
Percentage of units reactive/positive		
HIV	0.07	0.04
HBsAg	0	0.04
HCV	0.04	0
Syphilis	0.04	0.04
HTLV I-II	0.07	0.04
Percentage of units separated into components		
Packed red blood cells	100	100
Fresh frozen plasma	80.33	19.05
Frozen plasma	0	0
Cryoprecipitate	0	0
Platelets	29.07	78.62
Percentage of units discarded		
Whole blood	0	0
Packed red blood cells	2.5	2.15
Fresh frozen plasma	0	0
Frozen plasma	0	0
Cryoprecipitate	0	0
Platelets	93.63	27.9

Table IX-4. Bahamas (BAH)

	2010	2011
Number of units collected	NR	7,287
Number of autologous donors		4
Percentage type of allogeneic donors		
Voluntary, altruistic donors		43.95
Family/replacement donors		50.42
Remunerated donors		0
Percentage of units screened		
HIV		100
HBsAg		100
HCV		100
Syphilis		100
HTLV I-II		100
Percentage of units reactive/positive		
HIV		0.13
HBsAg		0.48
HCV		0.21
Syphilis		0.96
HTLV I-II		0.29
Percentage of units separated into components		
Packed red blood cells		87.18
Fresh frozen plasma		30.73
Frozen plasma		0
Cryoprecipitate		0.21
Platelets		27.69
Percentage of units discarded		
Whole blood		NR
Packed red blood cells		2
Fresh frozen plasma		5.4
Frozen plasma		0
Cryoprecipitate		0
Platelets		13.18

NR = Not reported.

Table IX-5. Barbados (BAR)

	2010*	2011
Number of units collected	4,781	NR
Number of autologous donors	119	
Percentage type of allogeneic donors		
Voluntary, altruistic donors	15	
Family/replacement donors	85	
Remunerated donors	0	
Percentage of units screened		
HIV	100	
HBsAg	100	
HCV	100	
Syphilis	100	
HTLV I-II	100	
Percentage of units reactive/positive		
HIV	0.10	
HBsAg	0.27	
HCV	0.33	
Syphilis	0.13	
HTLV I-II	0.36	
Percentage of units separated into components		
Packed red blood cells	37.63	
Fresh frozen plasma	37.25	
Frozen plasma	NR	
Cryoprecipitate	0.38	
Platelets	36.50	
Percentage of units discarded		
Whole blood	7.75	
Packed red blood cells	5.84	
Fresh frozen plasma	6.79	
Frozen plasma	NR	
Cryoprecipitate	NR	
Platelets	17.94	

*2009 data in place of 2010. Not included 50 platelets apheresis collected and screened.

NR = Not reported.

Table IX-6. Belize (BLZ)

	2010	2011
Number of units collected	4558	4617
Number of autologous donors	0	0
Percentage type of allogeneic donors		
Voluntary, altruistic donors	10.03	13.78
Family/replacement donors	89.97	86.22
Remunerated donors	0	0
Percentage of units screened		
HIV	100	100
HBsAg	100	100
HCV	100	100
Syphilis	100	100
HTLV I-II	NR	NR
Percentage of units reactive/positive		
HIV	0.13	0.33
HBsAg	0.51	0.65
HCV	0.26	0.48
Syphilis	0.59	1.13
HTLV I-II	NR	NR
Percentage of units separated into components		
Packed red blood cells	40.7	34.76
Fresh frozen plasma	25.54	13.08
Frozen plasma	15.16	21.68
Cryoprecipitate	0	0
Platelets	18.56	13.06
Percentage of units discarded		
Whole blood	13.21	18.49
Packed red blood cells	5.88	7.04
Fresh frozen plasma	0.34	8.44
Frozen plasma	8.68	35.16
Cryoprecipitate	0	0
Platelets	51.89	71.14

NR = Not reported.

Table IX-7. Bermuda (BER)

	2010	2011
Number of units collected	2,456	2,412
Number of autologous donors	11	18
Percentage type of allogeneic donors		
Voluntary, altruistic donors	100	100
Family/replacement donors	0	0
Remunerated donors	0	0
Percentage of units screened		
HIV	100	100
HBsAg	100	100
HCV	100	100
Syphilis	100	100
HTLV I-II	100	100
Percentage of units reactive/positive		
HIV	0.12	0.17
HBsAg	0	0
HCV	0.08	0.04
Syphilis	0	0.04
HTLV I-II	0.04	0
Percentage of units separated into components		
Packed red blood cells	92.31	91.69
Fresh frozen plasma	19.02	13.07
Frozen plasma	0	0
Cryoprecipitate	0	0
Platelets	4.62	4.72
Percentage of units discarded		
Whole blood	NR	NR
Packed red blood cells	6.38	5.1
Fresh frozen plasma	31.61	21.41
Frozen plasma	0	0
Cryoprecipitate	0	0
Platelets	87.61	86.73

NR = Not reported.

Table IX-8. British Virgin Islands (BVI)

	2010	2011
Number of units collected	445	422
Number of autologous donors	0	0
Percentage type of allogeneic donors		
Voluntary, altruistic donors	0	0
Family/replacement donors	100	100
Remunerated donors	0	0
Percentage of units screened		
HIV	100	100
HBsAg	100	100
HCV	100	100
Syphilis	100	100
HTLV I-II	85.39	100
Percentage of units reactive/positive		
HIV	0.22	0
HBsAg	0	1.18
HCV	0	0.47
Syphilis	0	0
HTLV I-II	1.32	0.24
Percentage of units separated into components		
Packed red blood cells	45.62	37.68
Fresh frozen plasma	45.62	37.68
Frozen plasma	0	0
Cryoprecipitate	NR	0
Platelets	NR	0
Percentage of units discarded		
Whole blood	NR	NR
Packed red blood cells	NR	NR
Fresh frozen plasma	NR	NR
Frozen plasma	NR	NR
Cryoprecipitate	NR	NR
Platelets	NR	NR

NR = Not reported.

Table IX-9. Cayman Islands (CAY)

	2010	2011
Number of units collected	1,006	1,020
Number of autologous donors	0	2
Percentage type of allogeneic donors		
Voluntary, altruistic donors	100	100
Family/replacement donors	0	0
Remunerated donors	0	0
Percentage of units screened		
HIV	100	100
HBsAg	100	100
HCV	100	100
Syphilis	100	100
HTLV I-II	100	100
Percentage of units reactive/positive		
HIV	0	0.1
HBsAg	0.1	0
HCV	0	0.39
Syphilis	0.1	0.39
HTLV I-II	0	0.49
Percentage of units separated into components		
Packed red blood cells	80.22	91.9
Fresh frozen plasma	24.65	35.1
Frozen plasma	NR	NR
Cryoprecipitate	NR	NR
Platelets	NR	NR
Percentage of units discarded		
Whole blood	NR	5
Packed red blood cells	6.82	10.58
Fresh frozen plasma	89.92	41.9
Frozen plasma	NR	NR
Cryoprecipitate	NR	NR
Platelets	NR	NR

NR = Not reported.

Table IX-10. Curaçao (CUR)

	2010	2011
Number of units collected	7,541	6,615
Number of autologous donors	0	12
Percentage type of allogeneic donors		
Voluntary, altruistic donors	100	100
Family/replacement donors	0	0
Remunerated donors	0	0
Percentage of units screened		
HIV	100	100
HBsAg	100	100
HCV	100	100
Syphilis	100	100
HTLV I-II	100	100
Percentage of units reactive/positive		
HIV	0	0.03
HBsAg	0	0
HCV	0	0.02
Syphilis	0	0.02
HTLV I-II	0	0.02
Percentage of units separated into components		
Packed red blood cells	100	95.28
Fresh frozen plasma	73.2	22.79
Frozen plasma	0	0
Cryoprecipitate	0	0
Platelets	9.95	46.33
Percentage of units discarded		
Whole blood	0	NR
Packed red blood cells	2.65	NR
Fresh frozen plasma	0	NR
Frozen plasma	0	NR
Cryoprecipitate	0	NR
Platelets	38.4	NR

NR = Not reported.

Table IX-11. Dominica (DOM)

	2010	2011
Number of units collected	877	1,043
Number of autologous donors	2	2
Percentage type of allogeneic donors		
Voluntary, altruistic donors	4	8.93
Family/replacement donors	96	91.07
Remunerated donors	0	0
Percentage of units screened		
HIV	100	100
HBsAg	100	100
HCV	NR	NR
Syphilis	100	100
HTLV I-II	100	100
Percentage of units reactive/positive		
HIV	0	0.3
HBsAg	0.3	0.9
HCV	NR	NR
Syphilis	1.3	1.3
HTLV I-II	0.7	1.2
Percentage of units separated into components		
Packed red blood cells	92.36	96.36
Fresh frozen plasma	56.44	62.2
Frozen plasma	NR	NR
Cryoprecipitate	6.5	2.4
Platelets	25.31	44.77
Percentage of units discarded		
Whole blood	62.69	55.26
Packed red blood cells	7.65	2.49
Fresh frozen plasma	NR	NR
Frozen plasma	NR	NR
Cryoprecipitate	NR	NR
Platelets	74.32	50.32

NR = Not reported.

Table IX-12. French Departments of America (FDA)

	2010	2011
Number of units collected	NR	21,800
Number of autologous donors		6
Percentage type of allogeneic donors		
Voluntary, altruistic donors		100
Family/replacement donors		0
Remunerated donors		0
Percentage of units screened		
HIV		100
HBsAg		100
HCV		100
Syphilis		100
HTLV I-II		100
Percentage of units reactive/positive		
HIV		NR
HBsAg		NR
HCV		NR
Syphilis		NR
HTLV I-II		NR
Percentage of units separated into components		
Packed red blood cells		100
Fresh frozen plasma		0
Frozen plasma		0
Cryoprecipitate		0
Platelets		2
Percentage of units discarded		
Whole blood		NR
Packed red blood cells		NR
Fresh frozen plasma		0
Frozen plasma		0
Cryoprecipitate		0
Platelets		NR

NR = Not reported.

Table IX-13. Grenada (GRA)

	2010*	2011
Number of units collected	1,426	NR
Number of autologous donors	5	
Percentage type of allogeneic donors		
Voluntary, altruistic donors	26	
Family/replacement donors	74	
Remunerated donors	0	
Percentage of units screened		
HIV	100	
HBsAg	100	
HCV	100	
Syphilis	100	
HTLV I-II	100	
Percentage of units reactive/positive		
HIV	0	
HBsAg	1.05	
HCV	0.07	
Syphilis	0.42	
HTLV I-II	0.84	
Percentage of units separated into components		
Packed red blood cells	100	
Fresh frozen plasma	12.34	
Frozen plasma	0	
Cryoprecipitate	0.21	
Platelets	2.45	
Percentage of units discarded		
Whole blood	0	
Packed red blood cells	13.04	
Fresh frozen plasma	11.93	
Frozen plasma	NR	
Cryoprecipitate	NR	
Platelets	17.14	

*2009 data in place of 2010.

NR = Not reported.

Table IX-14. Guyana (GUY)

	2010	2011
Number of units collected	7,738	6,361
Number of autologous donors	NR	0
Percentage type of allogeneic donors		
Voluntary, altruistic donors	79	91.92
Family/replacement donors	21	8.08
Remunerated donors	0	0
Percentage of units screened		
HIV	100	100
HBsAg	100	100
HCV	100	100
Syphilis	100	100
HTLV I-II	100	100
Percentage of units reactive/positive		
HIV	0.26	0.16
HBsAg	0.22	1.57
HCV	0.48	0.31
Syphilis	0.21	0.77
HTLV I-II	0.05	0.82
Percentage of units separated into components		
Packed red blood cells	NR	NR
Fresh frozen plasma	NR	NR
Frozen plasma	NR	NR
Cryoprecipitate	NR	NR
Platelets	NR	NR
Percentage of units discarded		
Whole blood	NR	NR
Packed red blood cells	NR	NR
Fresh frozen plasma	NR	NR
Frozen plasma	NR	NR
Cryoprecipitate	NR	NR
Platelets	NR	NR

NR = Not reported.

Table IX-15. Haiti (HAI)

	2010	2011
Number of units collected	14,899	19,751
Number of autologous donors	NR	NR
Percentage type of allogeneic donors		
Voluntary, altruistic donors	83.9	70.45
Family/replacement donors	16.1	29.55
Remunerated donors	0	0
Percentage of units screened		
HIV	100	100
HBsAg	100	100
HCV	100	100
Syphilis	100	100
HTLV I-II	100	NR
Percentage of units reactive/positive		
HIV	1.17	1.08
HBsAg	3.81	3.52
HCV	0.58	0.58
Syphilis	2.8	2.66
HTLV I-II	0.72	0.72
Percentage of units separated into components		
Packed red blood cells	81.05	63.24
Fresh frozen plasma	0.64	0
Frozen plasma	NR	0
Cryoprecipitate	NR	0
Platelets	NR	0
Percentage of units discarded		
Whole blood	NR	NR
Packed red blood cells	NR	NR
Fresh frozen plasma	NR	0
Frozen plasma	NR	0
Cryoprecipitate	NR	0
Platelets	NR	0

NR = Not reported.

Table IX-16. Jamaica (JAM)

	2010	2011*
Number of units collected	28,402	27,307
Number of autologous donors	0	45
Percentage type of allogeneic donors		
Voluntary, altruistic donors	11	16.07
Family/replacement donors	89	83.93
Remunerated donors	0	0
Percentage of units screened		
HIV	100	100
HBsAg	100	100
HCV	100	100
Syphilis	100	100
HTLV I-II	100	100
Percentage of units reactive/positive		
HIV	0.58	0.6
HBsAg	1.19	0.78
HCV	0.63	0.6
Syphilis	1.92	1
HTLV I-II	1.71	2.14
Percentage of units separated into components		
Packed red blood cells	45.22	55.29
Fresh frozen plasma	41.34	51.78
Frozen plasma	5.87	3.52
Cryoprecipitate	6.88	4.25
Platelets	15.66	16.33
Percentage of units discarded		
Whole blood	12.71	NR
Packed red blood cells	NR	3.27
Fresh frozen plasma	NR	NR
Frozen plasma	NR	NR
Cryoprecipitate	NR	NR
Platelets	NR	NR

*Total units collected does not include 2,187 units collected from "uniform recruits", but these units are included in the screening and availability of components data.

NR = Not reported.

Table IX-17. Montserrat (MOT)

	2010	2011
Number of units collected	128	89
Number of autologous donors	1	0
Percentage type of allogeneic donors		
Voluntary, altruistic donors	99.22	100
Family/replacement donors	0	0
Remunerated donors	0	0
Percentage of units screened		
HIV	100	100
HBsAg	100	100
HCV	100	100
Syphilis	100	100
HTLV I-II	100	100
Percentage of units reactive/positive		
HIV	0	0
HBsAg	0.8	0
HCV	0.8	1.12
Syphilis	0	0
HTLV I-II	0.8	13.48
Percentage of units separated into components		
Packed red blood cells	85.94	78.65
Fresh frozen plasma	0	0
Frozen plasma	0	0
Cryoprecipitate	0	0
Platelets	0	1.12
Percentage of units discarded		
Whole blood	5.56	42.11
Packed red blood cells	25.45	44.29
Fresh frozen plasma	0	0
Frozen plasma	0	0
Cryoprecipitate	0	0
Platelets	0	0

Table IX-18. Saint Kitts and Nevis (SKT)

	2010	2011
Number of units collected	425	368
Number of autologous donors	0	0
Percentage type of allogeneic donors		
Voluntary, altruistic donors	12	11.69
Family/replacement donors	88	88.31
Remunerated donors	0	0
Percentage of units screened		
HIV	100	100
HBsAg	100	100
HCV	100	100
Syphilis	100	100
HTLV I-II	0	0
Percentage of units reactive/positive		
HIV	0	0
HBsAg	6.35	4.07
HCV	1.88	1.9
Syphilis	1.65	1.36
HTLV I-II	NR	NR
Percentage of units separated into components		
Packed red blood cells	14.35	10.05
Fresh frozen plasma	14.35	10.05
Frozen plasma	NR	0
Cryoprecipitate	NR	0
Platelets	NR	0
Percentage of units discarded		
Whole blood	17.58	21.45
Packed red blood cells	22.95	13.51
Fresh frozen plasma	36.07	13.51
Frozen plasma	NR	0
Cryoprecipitate	NR	NR
Platelets	NR	0

NR = Not reported.

Table IX-19. Saint Lucia (STL)

	2010	2011
Number of units collected	2,078	2,304
Number of autologous donors	8	5
Percentage type of allogeneic donors		
Voluntary, altruistic donors	65	66.94
Family/replacement donors	35	33.06
Remunerated donors	0	0
Percentage of units screened		
HIV	100	100
HBsAg	100	100
HCV	100	100
Syphilis	100	100
HTLV I-II	100	100
Percentage of units reactive/positive		
HIV	0.04	0.13
HBsAg	0.28	0.52
HCV	0	0
Syphilis	1.58	1.17
HTLV I-II	0.52	0.73
Percentage of units separated into components		
Packed red blood cells	97.16	99.83
Fresh frozen plasma	34.46	23.96
Frozen plasma	0	7.94
Cryoprecipitate	0	0
Platelets	33.78	52.65
Percentage of units discarded		
Whole blood	62.5	100
Packed red blood cells	8.42	5.52
Fresh frozen plasma	15.36	17.39
Frozen plasma	0	14.21
Cryoprecipitate	0	0
Platelets	52.85	46.99

Table IX-20. Saint Vincent and the Grenadines (STV)

	2010	2011
Number of units collected	1,043	1,157
Number of autologous donors	31	17
Percentage type of allogeneic donors		
Voluntary, altruistic donors	6	5.97
Family/replacement donors	94	94.03
Remunerated donors	NR	NR
Percentage of units screened		
HIV	100	100
HBsAg	100	100
HCV	100	100
Syphilis	100	100
HTLV I-II	100	100
Percentage of units reactive/positive		
HIV	0.2	0.3
HBsAg	0.3	0.6
HCV	0.5	0.6
Syphilis	2.1	1.9
HTLV I-II	1.9	3.4
Percentage of units separated into components		
Packed red blood cells	96.93	92.91
Fresh frozen plasma	22.05	14.35
Frozen plasma	0	0
Cryoprecipitate	0	0
Platelets	4.22	14.17
Percentage of units discarded		
Whole blood	31.25	100
Packed red blood cells	6.92	5.02
Fresh frozen plasma	25.65	18.07
Frozen plasma	0	0
Cryoprecipitate	0	0
Platelets	47.73	0.61

NR = Not reported.

Table IX-21. Suriname (SUR)

	2010	2011
Number of units collected	10,884	10,917
Number of autologous donors	0	4
Percentage type of allogeneic donors		
Voluntary, altruistic donors	100	100
Family/replacement donors	0	0
Remunerated donors	0	0
Percentage of units screened		
HIV	100	100
HBsAg	100	100
HCV	100	100
Syphilis	100	100
HTLV I-II	100	100
Percentage of units reactive/positive		
HIV	0.03	0
HBsAg	0.05	0.02
HCV	0.03	0.02
Syphilis	0.03	0.05
HTLV I-II	0.01	0
Percentage of units separated into components		
Packed red blood cells	99.98	100
Fresh frozen plasma	18.67	17.66
Frozen plasma	0	NR
Cryoprecipitate	0	NR
Platelets	16.65	19.84
Percentage of units discarded		
Whole blood	NR	NR
Packed red blood cells	0.38	0.3
Fresh frozen plasma	3.7	2.68
Frozen plasma	0	NR
Cryoprecipitate	0	NR
Platelets	11.65	20.83

NR = Not reported.

Table IX-22. Trinidad and Tobago (TRT)

	2010	2011
Number of units collected	NR	17,613
Number of autologous donors		NR
Percentage type of allogeneic donors		
Voluntary, altruistic donors		NR
Family/replacement donors		NR
Remunerated donors		NR
Percentage of units screened		
HIV		100
HBsAg		100
HCV		100
Syphilis		100
HTLV I-II		100
Percentage of units reactive/positive		
HIV		0.22
HBsAg		0.31
HCV		0.28
Syphilis		1.27
HTLV I-II		0.44
Percentage of units separated into components		
Packed red blood cells		NR
Fresh frozen plasma		NR
Frozen plasma		NR
Cryoprecipitate		NR
Platelets		NR
Percentage of units discarded		
Whole blood		NR
Packed red blood cells		NR
Fresh frozen plasma		NR
Frozen plasma		NR
Cryoprecipitate		NR
Platelets		NR

NR = Not reported.

Table IX-23. Turks and Caicos Islands (TCI)

	2010	2011*
Number of units collected	NR	674
Number of autologous donors		0
Percentage type of allogeneic donors		
Voluntary, altruistic donors		57.57
Family/replacement donors		42.4
Remunerated donors		0
Percentage of units screened		
HIV		100
HBsAg		100
HCV		100
Syphilis		100
HTLV I-II		100
Percentage of units reactive/positive		
HIV		0
HBsAg		0
HCV		0
Syphilis		0.15
HTLV I-II		0
Percentage of units separated into components		
Packed red blood cells		39.95
Fresh frozen plasma		7.47
Frozen plasma		0
Cryoprecipitate		0
Platelets		1.29
Percentage of units discarded		
Whole blood		NR
Packed red blood cells		0
Fresh frozen plasma		0
Frozen plasma		0
Cryoprecipitate		NR
Platelets		0

*Partial information in availability of components data; data based only on voluntary donations.

NR = Not reported.

X. Subregional Summaries

Table X-1. Number of Units Collected

Year	Central America and Spanish-Speaking Caribbean	Caribbean	Andean Community	Southern Cone	Mexico	Brazil
2010	917,492	92,972	1,593,049	1,405,362	1,699,885	3,267,551
2011	954,922	134,757	1,560,151	1,501,637	1,768,065	3,356,382
Total	1,872,414	227,729	3,153,200	2,906,999	3,467,950	6,623,933

Autologous Donors												
Year	Central America and Spanish-Speaking Caribbean		Caribbean		Andean Community		Southern Cone		Mexico		Brazil	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
2010	266	0.03	183	0.2	1,944	0.12	23,335	1.7	1,761	0.1	43,871	1.3
2011	230	0.02	116	0.1	626	0.04	26,840	1.8	2,384	0.1	2,776	0.1
Total	496	0.03	299	0.1	2,570	0.08	50,175	1.7	4,145	0.1	46,647	0.7

Voluntary Donors												
Year	Central America and Spanish-Speaking Caribbean		Caribbean		Andean Community		Southern Cone		Mexico		Brazil	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
2010	552,692	60.24	49,684	53	656,445	41	338,218	24	40,385	2	2,078,962	64
2011	559,227	58.56	75,771	56	745,579	48	418,736	28	43,297	2	2,000,892	60
Total	1,111,919	59.4	125,455	55	1,402,024	44	756,954	26	83,682	2	4,079,854	62

Replacement Donors												
Year	Central America and Spanish-Speaking Caribbean		Caribbean		Andean Community		Southern Cone		Mexico		Brazil	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
2010	332,413	36	43,105	46	309,066	19.4	951,075	68	1,657,739	98	1,144,718	35
2011	362,339	38	40,847	30	770,220	49	960,249	64	1,722,384	97	1,352,714	40
Total	694,752	37	83,952	37	1,079,286	34	1,911,324	66	3,380,123	97	2,497,432	38

Remunerated Donors												
Year	Central America and Spanish-Speaking Caribbean		Caribbean		Andean Community		Southern Cone		Mexico		Brazil	
	Number	%	Number	%	Number	%	Number	%	Number	%	Number	%
2010	6,820	0.7	0	0	362	0.02	0	0	0	0	0	0
2011	7,049	0.7	0	0	75	0	0	0	0	0	0	0
Total	13,869	0.7	0	0	437	0.01	0	0	0	0	0	0

Table X-2. Screening - Central America and Spanish-Speaking Caribbean

Number of Units Screened							
Year	HIV	HBsAg	HCV	Syphilis	<i>T. cruzi</i>	HTLV I-II	HBC
2010	917,492	917,492	917,492	917,492	438,136	271,655	179,087
2011	954,922	954,922	954,922	954,922	462,449	284,009	171,488
Total	1,872,414	1,872,414	1,872,414	1,872,414	900,585	555,664	350,575

Percentage of Units Screened							
Year	HIV	HBsAg	HCV	Syphilis	<i>T. cruzi</i>	HTLV I-II	HBC
2010	100	100	100	100	47.75	29.61	19.52
2011	100	100	100	100	48.43	29.74	17.96

Table X-3. Screening - Caribbean

Number of Units Screened					
Year	HIV	HBsAg	HCV	Syphilis	HTLV I-II
2010	92,972	92,972	92,004	92,972	86,894
2011	134,757	134,757	133,714	134,757	109,856
Total	227,729	227,729	225,718	227,729	196,750

Percentage Of Units Screened					
Year	HIV	HBsAg	HCV	Syphilis	HTLV I-II
2010	100	100	98.96	100	93.46
2011	100	100	99.23	100	81.52

Table X-4. Screening - Andean Community

Number of Units Screened							
Year	HIV	HBsAg	HCV	Syphilis	<i>T. cruzi</i>	HTLV I-II	HBC
2010	1,590,281	1,590,075	1,590,146	1,590,093	1,590,112	1,100,229	1,130,679
2011	1,550,971	1,550,967	1,548,885	1,550,851	1,550,971	1,031,495	1,079,742
Total	3,141,252	3,141,042	3,139,031	3,140,944	3,141,083	2,131,724	2,210,421

Percentage of Units Screened							
Year	HIV	HBsAg	HCV	Syphilis	<i>T. cruzi</i>	HTLV I-II	HBC
2010	99.83	99.81	99.82	99.81	99.82	69.06	70.98
2011	99.41	99.41	99.28	99.4	99.41	66.12	69.21

Table X-5. Screening - Southern Cone

Number of Units Screened							
Year	HIV	HBsAg	HCV	Syphilis	<i>T. cruzi</i>	HTLV I-II	HBC
2010	1,405,362	1,405,362	1,405,362	1,405,362	1,405,362	1,405,362	1,178,061
2011	1,501,637	1,501,637	1,501,637	1,501,637	1,501,637	1,501,637	1,271,329
Total	2,906,999	2,906,999	2,906,999	2,906,999	2,906,999	2,906,999	2,449,390

Percentage of Units Screened							
Year	HIV	HBsAg	HCV	Syphilis	<i>T. cruzi</i>	HTLV I-II	HBC
2010	100	100	100	100	100	100	83.83
2011	100	100	100	100	100	100	84.66

Table X-6. Screening - Mexico

Number of Units Screened							
Year	HIV	HBsAg	HCV	Syphilis	<i>T. cruzi</i>	HTLV I-II	HBC
2010	1,665,887	1,665,887	1,665,887	1,665,887	1,478,900	0	NR
2011	1,750,384	1,750,384	1,750,384	1,750,384	1,573,578	0	NR
Total	3,416,271	3,416,271	3,416,271	3,416,271	3,052,478	0	

Percentage Of Units Screened							
Year	HIV	HBsAg	HCV	Syphilis	<i>T. cruzi</i>	HTLV I-II	HBC
2010	98	98	98	98	87	0	NR
2011	99	99	99	99	89	0	NR

NR = Not reported.

Table X-7. Screening - Brazil

Number of Units Screened							
Year	HIV	HBsAg	HCV	Syphilis	<i>T. cruzi</i>	HTLV I-II	HBC
2010	3,267,551	3,267,551	3,267,551	3,267,551	3,267,551	3,267,551	3,267,551
2011	3,365,382	3,365,382	3,365,382	3,365,382	3,365,382	3,365,382	3,365,382
Total	6,632,933	6,632,933	6,632,933	6,632,933	6,632,933	6,632,933	6,632,933

Percentage of Units Screened							
Year	HIV	HBsAg	HCV	Syphilis	<i>T. cruzi</i>	HTLV I-II	HBC
2010	100	100	100	100	100	100	100
2011	100	100	100	100	100	100	100

Table X-8. Availability of Components - Central America and Spanish-Speaking Caribbean

Separated Into Components						
Year	RBC	FFP	FP	CRYO	PL	
2010	353,943	230,379	4,805	32,504	194,584	
2011	433,905	268,701	4,968	47,272	233,780	
Total	787,848	499,080	9,773	79,776	428,364	

Blood and Blood Components Discarded						
Year	WB	RBC	FFP	FP	CRYO	PL
2010	10,969	25,391	87,320	3,204	729	48,746
2011	17,546	33,198	67,240	39,940	1,063	56,550
Total	28,515	58,589	154,560	43,144	1,792	105,296

Table X-9. Availability of Components - Caribbean

Separated Into Components						
Year	RBC	FFP	FP	CRYO	PL	
2010	58,467	27,109	2,406	2,033	11,513	
2011	57,449	18,156	1,812	799	14,762	
Total	115,916	45,265	4,218	2,832	26,275	

Blood and Blood Components Discarded						
Year	WB	RBC	FFP	FP	CRYO	PL
2010	2,852	1,271	815	60	0	2,660
2011	2,448	1,107	567	378	0	2,637
Total	5,300	2,378	1,382	438	0	5,297

Table X-10. Availability of Components - Southern Cone

Separated into Components					
Year	RBC	FFP	FP	CRYO	PL
2010	1,204,779	472,564	671,706	39,672	576,246
2011	1,309,807	563,519	725,288	50,090	721,558
Total	2,514,586	1,036,083	1,396,994	89,762	1,297,804

Blood and Blood Components Discarded						
Year	WB	RBC	FFP	FP	CRYO	PL
2010	30,428	161,122	37,416	61,852	5,392	98,053
2011	29,370	193,584	26,318	65,987	2,639	167,773
Total	59,798	354,706	63,734	127,839	8,031	265,826

Table X-11. Availability of Components - Mexico

Separated into Components					
Year	RBC	FFP	FP	CRYO	PL
2010	1,556,635	1,253,323	303,312	103,485	681,673
2011	1,622,876	1,297,014	325,862	95,249	717,081
Total	3,179,511	2,550,337	629,174	198,734	1,398,754

Blood and Blood Components Discarded						
Year	WB	RBC	FFP	FP	CRYO	PL
2010	47,104	101,128	480,330	337,368	16,285	193,530
2011	50,948	107,299	521,807	337,368	15,481	217,555
Total	98,052	208,427	1,002,137	674,736	31,766	411,085

Table X-12. Availability of Components - Brazil

Separated into Components					
Year	RBC	FFP	FP	CRYO	PL
2010	NR	NR	NR	NR	NR
2011	2,857,994	2,493,545	396,592	127,183	1,627,882
Total	2,857,994	2,493,545	396,592	127,183	1,627,882

Blood and Blood Components Discarded						
Year	WB	RBC	FFP	FP	CRYO	PL
2010	NR	NR	NR	NR	NR	NR
2011	104,122	381,548	1,142,018	317,753	9,100	425,800
Total	104,122	381,548	1,142,018	317,753	9,100	425,800

NR = Not reported.

Annex A.

Evaluation of PAHO's Regional Plan for Transfusion Safety 2006-2010

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Recommendations to countries

- Ensure the commitment of the countries with the Regional Plan, strengthening the increased political will and the involvement of ministries and other health authorities. It is essential that the Ministries of Health have a capable multidisciplinary team, with a exclusive dedication and a constant relationship with blood services and users of blood components as well as PAHO, which will constantly monitor the implementation of the National Plan.
- Include the private sector and the military forces in the Plan. The private sector must not compete with public sector in the recruitment of voluntary donor.
- Increase the amount of blood from voluntary donors in low rate countries to achieve a rate of 100%, mostly of regular or repeated donors, through national campaigns and institutional support. In addition, the organization must adapt blood centers and train staff to improve the care of blood donors, to facilitate this type of donation. Invest efforts in the recruitment of women and young people in order to retain them and increase the proportion of regular altruistic donors.

In order to achieve 100% altruistic donation, mostly regular or repeated, countries should formulate detailed plans for promotion and collection with intermediate, gradual and achievable annual targets. Guatemala, Honduras, Mexico, Venezuela, Peru and Dominican Republic deserve especial soporte.

- Cooperation between the Ministries of Health and Education to educate and raise awareness among children and youth, to lead a healthy life that allows them to be future volunteer donors.
- Prohibit paid donation in countries that still have it and prevent replacement donation from becoming a way to hide remunerated donation.
- Increase the percentage of repeated voluntary donors in the next plan. In order to achieve this they must have adequate national donor registries. This increase will lead to greater safety and reduction of the blood loss by contamination with consequent economic benefit (see cost objective 2).
- Implementation of management systems for the national information network and all blood services and transfusion medicine in order to keep track of donors, donations, screening, processing, distribution and all processes. The national system should provide the technology and flow of information to allow the movement of blood units in different regions

and volunteer donors access to any collection site. Also allow inventory management at a local, a regional and a national level.

- Implement in every country, a system of inventory management and daily update of all blood components, at a national level. This scheme will facilitate the full utilization of the available units, thus reducing the discard.
- Insist on the consolidation of services aiming to improve the quality, safety, cost efficiency and management of inventory. In this regard, it is appropriate to encourage horizontal cooperation between countries, especially in the Caribbean region. For the countries of Latin America it is recommended that centers process at least 25,000 to 50,000 units annually. This recommendation is even more relevant for microbiological screening and immunohematological. The consolidation will lead to a decrease of the number of discarded units currently in the region, which means a significant economic burden.
- Realization by trained and supervised staff of the standardized survey of donor selection for 100% of the candidates to donate blood. Implementation of mandatory microbiological screening for each sub-region for 100% of donors, with proven quality reagents (validation of commercially available diagnostic reagents and other supplies, such as blood bags, must be performed by the competent authority or by the person in which it was delegated). Implementation of a quality assurance program that includes operations, equipment, instruments, procedures, diagnostic reagents and other supplies.

Participation in external evaluation programs performance on microbiology screening and immunohematology results, both domestic and international. All personal, professional, technical and administrative, should receive ongoing training that must be registered, as in any other institutional activity.

- Identification and selection of a national/regional laboratory of excellence in microbiology and immunohematology, to act as a reference center, to achieve 100% participation in external evaluation programs perform services that filter blood and make pre-transfusion testing in each country.
- Develop transfusion medicine policies and appropriate use of blood in all countries through training of users / clinicians. The relevant PAHO publications will be distributed to users. National and Hospital transfusion committees that integrate quality programs in hospitals should be created.
- Support the complete use of the plasma surplus for fractionation industrially, for which it is necessary to meet the quality criteria. This objective can only be achieved after consolidation of blood services.
- Minimize the difficulties of access to continuing education for all blood services and transfusion by creating a portal for continuing education.
- Strengthen programs and plans for quality blood services (centers, banks and hospital transfusion services) based on the updated PAHO documents. To ensure compliance with these programs, ministries should implement regular inspections of all blood services (centers, banks and hospital transfusion services).
- Document the demand satisfaction at the level of all clinical services, meaning register through the computer system unfulfilled orders and establish annual surveys. These data must be submitted periodically to the Director of Blood Program / Ministry of Health.

- Advocate for the participation and support of NGOs for the implementation of the Regional Blood Plan 2012-2016.

Recommendations to PAHO

- To ensure the continuity of interest and actions of PAHO for the Regional Plan of Blood. It is essential to have a multidisciplinary team of recognized experts and a defined budget to continue the activities to ensure compliance with the objectives and monitoring the Plan.
- Enforce the participation of the PAHO Representation in the countries for support and regular systematized monitoring of the objectives established in the Regional Plan. Following the Regional Plan shall be included in the biennial work plans. We recommend a focal point in each country to monitor the progress of the Plan. This recommendation is derived from the information provided by the survey conducted by the evaluation office of PAHO in 2011 Representations, in which 15% of not being familiar with the Regional Plan. It also shows the different levels of support of the PAHO's Representative level to the Regional Plan by the failure to provide annual data in several countries.
- Formulation of a Regional Blood Plan for 2012-2016. Current progress and future plans of the countries confirm this; this is reinforced by the recent surveys (see Appendix VII). Taking into account that most countries make their national plans based on the PAHO Regional Plan, the new plan might have objectives consistent with the current situation (for example establishing that a percentage of countries have to achieve the goals in the period and also stages of progress in the consolidation of services to reach centers that process and sift at least 20,000 units per year, to achieve 100% altruistic blood donation, to achieve 70/80% of repeated voluntary donation) and glossary to avoid confusion in the definition and understanding of terms.
- Concentrate technical and financial cooperation in countries that collect fewer than 10 units per thousand population, with special emphasis on Haiti, Anguilla, Guatemala and Honduras (see Appendix II).
- Ensure and assure the distribution of PAHO publications by Ministries of Health to the relevant users (blood services and clinical services).
- Update work standards for blood services of the OPS.
- To increase the number and enhance the activities of PAHO Collaborating Centers in the sub-regions to include all aspects that contribute to the development of blood services, such as clinical and technical training.
- Strengthen Blood theme at the Representative level, including it in the Biennial Work Plan.
- Create a Technical Advisory Group to work in the development, implementation and monitoring of the 2012-2016 Plan. Members of this group should make random inspections in the countries of the region and provide advice and recommendations to the relevant health authorities.
- Advocate for the participation and support of NGOs for the implementation of the Regional Blood Plan 2012-2016.

Conclusion

Through the evaluation it has been found that if the fundamental three objectives / key strategies in the Region were fulfilled—consolidation of the collection, screening and processing of blood; 100% percent voluntary blood donation, largely repeated, and implementation of total quality systems—the possession of safe blood in sufficient quantity and timely enough manner for the Region would be achieved. If we add to these three strategies, the priority or appropriate clinical use of blood, we can conclude that the four Regional Plan strategies evaluated are still valid and a priority.

Annex B.

PAHO Document CD51/INF/5, 51st Directing Council, 2011

CD51/INF/5 (Eng.)
Page 30

G. Regional Initiative and Plan of Action for Transfusion Safety 2006-2010: Final Evaluation

Introduction

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109. In 2005, the 46th Directing Council of the Pan American Health Organization (PAHO) approved the Regional Plan of Action for Transfusion Safety 2006-2010 (1, 2). The purpose of the plan was to contribute to reducing mortality and improving patient care in Latin America and the Caribbean by making safe blood for transfusion available in a timely manner to all patients who needed it. The plan had five objectives and nine progress indicators. Although progress was made after 2005 in terms of the number and safety of blood units collected in the Region, national blood systems were considered inefficient, and access to blood was still suboptimal by 2008 (3). Therefore, Member States agreed to modify their approaches to meet the goal and objectives of the plan (4).
110. The Director of PAHO appointed an External Evaluation Team to assess advances in areas related to the Regional Plan, identify problems encountered in its implementation, and evaluate the opportunities for future action. The Team, which was operational from January to June 2011, analyzed the official national data submitted to PAHO by the countries (5-10). Process and progress indicators for each of the strategic lines of the Regional Plan were assessed. The evaluation exercise included surveys of PAHO/WHO Representatives and focal points, national health authorities, and local staff with regard to the technical cooperation program associated with the Regional Plan. The anonymous surveys were designed to elicit information on the extent of knowledge about the plan, the institutional support provided/received to meet its goals, the quality of technical publications, the efficiency of information gathering and sharing, and the factors that affected national outcomes.
111. This document summarizes the progress made by the national blood systems since 2005, as officially reported by the countries, and taking into consideration the findings of the External Evaluation Team.

Background

112. The World Health Assembly (WHA) first addressed issues pertaining to transfusion safety in 1975, urging Member States to promote the development of national blood services based on voluntary blood donation and to enact efficient legislation governing their operation. The 28th WHA also requested the Director-General to take steps to develop good manufacturing practices for blood and blood components in order to protect the health both of blood donors and of transfusion recipients (11). Three subsequent documents (12-14) stressed the importance of blood transfusion services and national transfusion programs in preventing HIV infections.
113. The 58th WHA considered availability, accessibility and safety of blood, taking a comprehensive view, (15) in 2005, and adopted Resolution WHA58.13, Blood Safety: proposal to establish World Blood Donor Day (16), which urged Member States to introduce legislation, provide adequate financing, promote multisectoral collaboration, ensure proper use of blood and support the full implementation of well-organized, nationally coordinated and sustainable blood programs with appropriate regulatory systems. At the same time, the Director-General was asked to provide support for the countries to strengthen their capacity to screen all donated blood against major infectious diseases in order to ensure the safety of all blood collected and transfused. These concepts were reiterated in 2010 (17, 18).
114. The Governing Bodies of PAHO have addressed issues of blood transfusion safety since 1998. The Strategic and Programmatic Orientations for the Pan American Sanitary Bureau 1999-2002 called for all blood for transfusion to be screened for hepatitis B and C, syphilis, *Trypanosoma cruzi*, and HIV, and for all blood banks to participate in quality control programs (19). In 1999, the Directing Council adopted Resolution CD41.R15 and urged Member States to give higher priority to blood safety; to promote the development of national blood programs and transfusion services, voluntary blood donation, and quality assurance; to strengthen blood bank infrastructure; to allocate the necessary resources; and to ensure training of medical providers in the use of blood (20, 21).
115. In 2005, the Directing Council adopted Resolution CD46.R5 urging the Member States to analyze the progress and challenges in the pursuit of sufficiency, quality, safety, and appropriate clinical practice; to adopt the Regional Plan of Action for Transfusion Safety 2006-2010; and to allocate and use resources to meet its objectives (2). In 2008, considering that the concepts of previous resolutions still applied, and recognizing that modifications in current national approaches were needed to achieve the goals set for 2010, the Directing Council adopted resolution CD48.R7 (4) in which the Member States were urged to define an entity in their ministries of health as responsible for the efficient operation of the blood system; estimate the need for blood; establish a network of volunteers to educate the community; and terminate mandatory donation, with the goal of 100% voluntary, altruistic, non-remunerated donors.

Situation Analysis

116. An analysis of the situation up to 2009 was carried out using data from 35 countries and territories (1, 5-10). Canada, the United States of America, including Puerto Rico, and the French Territories were not included in this analysis.
117. In the Caribbean subregion, where 27 blood collection and processing centers exist, only Guyana, Jamaica, Netherlands Antilles and Suriname have a legal framework for blood services. Haiti has a national blood safety program within the Ministry of Health. In all

other countries, the National Blood Transfusion Service, the National Public Health Reference Laboratory or the major hospital blood banks have the responsibility of coordinating national activities. Guyana and Haiti, which receive support from a multi-year international grant, and Netherlands Antilles and Suriname, whose blood banks are managed by the Red Cross, report having sufficient financial resources for the operation of their blood processing centers.

118. All Latin American countries except for Chile, El Salvador, and Mexico have national laws to regulate blood banks and transfusion services. However, challenges remain with regard to the steering capacity of the health authorities, even though Argentina, Bolivia, Brazil, Chile, Cuba, Dominican Republic, Guatemala, Honduras, Paraguay, Peru, Uruguay, and Venezuela have specific units within their Ministries of Health to oversee the national blood system, and the Caja Costarricense del Seguro Social, the Colombian National Institute of Health, the Ecuadorian Red Cross Hemocenter, the Unit of Laboratory Surveillance in El Salvador, the National Blood Transfusion Center in Mexico, and the National Diagnosis and Reference Center in Nicaragua are responsible for coordinating blood services in their respective countries. Human and financial resources allocated for blood transfusion at the national level are considered to be insufficient for the appropriate operation of the services.
119. In the Latin American countries, the centers that collect and process blood are part of the Ministry of Health, the Social Security, the Armed Forces, the National Police, the public sector, or national or international non-governmental organizations. The multiplicity of actors, coupled with limited oversight by health authorities, represents a major obstacle to the appropriate use of national resources.
120. One of the indicators of progress of the Regional Plan of Action 2006-2010 was that all Latin American countries would have implemented regional blood collection and processing systems to cover the needs of patients of geographically distinct areas. In 2005, there were 2,522 blood processing centers in the 19 Latin American countries. The mean number of blood units processed by center inversely correlated with availability of blood, and also with the proportion of voluntary blood donors at the national level (1), a clear indication that creating more blood banks does not result in improvements in blood availability.
121. In 2009, the number of blood processing centers in Argentina, Brazil, Chile, Colombia, Nicaragua, Paraguay, and Uruguay diminished by 351. Argentina (80 centers) and Brazil (167 centers) accounted for 70% of the reduction. In Nicaragua, the Ministry of Health closed all 21 hospital-based blood banks and set up a national network with three centers managed by the Red Cross. Costa Rica, Dominican Republic, Ecuador, Guatemala, Honduras, Mexico, and Venezuela reported a combined total of 113 more processing facilities in 2009 than in 2005 (Table 1, Annex).
122. In Latin America, the mean numbers of blood units processed per center in a year were 3,163 in 2005 and 3,974 in 2009, equivalent to 12-15 units per center per day. In general, the efficiency of the blood services is deficient in all countries other than Nicaragua, where three Red Cross centers processed 69,932 collections in 2009 (Table B-1).
123. Blood availability is determined by the extent of collection, the prevalence of infectious markers among blood donors, and the separation of whole blood units into components—red blood cells, plasma, and platelets. From 2005 to 2009, blood collection increased in the Caribbean and Latin American countries by 14%, from 8,059,960 units to 9,166,155, with the overall collection rate for those years being 145.0 and 157.4 per 10,000 inha-

bitants respectively (Table B-2). National collection rates increased more than 10% in 24 countries (range: 10.2% - 143.9%), remained unchanged in Belize, Brazil, British Territories, Costa Rica, El Salvador, Guatemala, Honduras, Uruguay, and Venezuela, and decreased in Cuba (18.7%) and Netherlands Antilles (15.7%). Despite the reductions in the two latter countries, they nevertheless showed the highest national collection rates in 2009: 359.7 and 295, respectively (Table B-3).

124. In 2005, national blood collection rates ranged from 11.5 to 442.5, with a median of 109.3. Fifteen countries had collection rates below 100 per 10,000 inhabitants. In 2009, the national rates varied from 21.4 to 359.7; the median rate was 145.3. Only eight countries, Bolivia (70.0), Dominican Republic (84.4), Guatemala (65.3), Haiti (21.4), Honduras (78.1), Jamaica (91.5), Peru (75.9) and St. Vincent and the Grenadines (93.5) collected fewer than 100 units per 10,000 inhabitants (Table B-3).
125. In 2009, the national prevalence of markers of transfusion-transmissible infections (TTI) varied from 0, in Netherlands Antilles, to 16.6% in Paraguay (median = 3.1%) (Table B-1). TTI markers were detected in 319,996 (3.5%) units. The availability of blood in the Caribbean and Latin American countries thereby dropped to 8,846,159. In addition to the eight countries with the lowest blood collection rates mentioned above, Guyana, Paraguay, and St. Kitts and Nevis had fewer than 100 units available per 10,000 inhabitants.
126. It is estimated that the 319,996 units that were discarded in 2009 because they were positive for infectious markers represented wastage of US\$ 19,919,776 (Table B-2). Factors that determine the high prevalence of markers among blood donors include poor recruitment and selection, and inadequate quality in the laboratory testing methodology.
127. Since national needs for blood for transfusion are determined by characteristics of the national health systems, by the local epidemiology of the clinical conditions that require blood transfusions, and by demographics, it is not appropriate to suggest a figure as a target for blood collection or blood availability rate. The Regional Plan of Action for Transfusion Safety 2006-2010 included the estimation of geographic and temporal needs for blood as one of its objectives.
128. There is an inverse relationship between national blood availability rates and maternal mortality ratios in the Latin American and Caribbean countries that have information on maternal deaths (22). Eight of the nine countries with maternal mortality ratios above 83 per 100,000 live births (23) have blood availability rates below 100 per 10,000 inhabitants. (Figure B-1).
129. The median proportion of blood units separated into components among Caribbean and Latin American countries was 77% in 2005, as compared to 90% in 2009, when Brazil, Cuba, El Salvador, Grenada, Netherlands Antilles, St. Lucia, St. Vincent and the Grenadines, and Suriname prepared red blood cells from at least 95% of units collected. Argentina, Colombia, Costa Rica, Dominica, Mexico, Nicaragua, and Panama reported obtaining red blood cells from 90%-94% of whole blood units. Barbados (38%), Belize (32%), Dominican Republic (39%), Honduras (39%), Jamaica (48%), and St. Kitts and Nevis (14%) prepared components from less than 50% of the blood units they collected (Table B-4).
130. Of the 11 countries with availability rates below 100 units per 10,000 inhabitants, Bolivia (89%), Dominican Republic (39%), Guatemala (87%), Guyana (74%), Haiti (52%), Honduras (39%), Jamaica (48%), Paraguay (74%), Peru (79%), and St. Kitts and Nevis (14%) prepared components from less than 90% of their units, further limiting the national availability of blood for transfusion (Tables B-3 and B-4).

131. Despite the apparent limited availability of blood at the country level, 981,253 units of red blood cells expired in 2009, at an estimated cost of \$54,950,168 (Table B-2). The multiplicity of blood collecting centers, the lack of standardized operating procedures at the hospitals and the limited oversight by health authorities contributed to this situation.
132. The Regional Plan of Action 2006-2010 aimed to improve the quality of blood components by increasing donor safety and extending the coverage and precision of laboratory testing.
133. Screening of blood for markers of transfusion-transmissible infections improved in the Region (Table B-5). In 2005, 87,875 units were not tested for HIV, a figure that had dropped to 1,708 units in 2009. The corresponding figures for hepatitis B in 2005 and 2009 were 93,949 and 1,371; and for hepatitis C, 95,962 and 2,861. For syphilis, 159,929 units went unscreened in 2005 and only 1,535 in 2009. There was also a reduction in the number of units not tested for *Trypanosoma cruzi*, declining from 959,662 in 2005 to 288,405 in 2009. However, the goal of universal screening for those agents set in 1998 remains to be achieved. Additional resources to ensure continuous access to laboratory supplies combined with a renewed commitment from countries in applying national norms will be necessary to achieve the goal of universal screening.
134. In 2009, four countries—Antigua and Barbuda, Dominica, Peru, and St. Kitts and Nevis—did not screen all blood units for hepatitis C (5). This represented the potential transfusion of 16 HCV infected units in that year compared to 482 in 2005. Peru was the only country that reported incomplete screening for HIV and HBsAg. As a consequence, 10 HIV-positive units and seven hepatitis B-positive units might have been transfused. The risk of a transfusion being contaminated by a virus in 2009 was 1:277,762 donations, compared to 1:11,784 in 2005. Mexico and Peru did not test all units for *Trypanosoma cruzi*, a fact that might have resulted in 1,187 infected units in 2009, compared to 2,362 in 2005, with the respective risks being 1:7,166 and 1:3,377.
135. These estimates are calculated based on the proportion of units not screened and the prevalence of antibodies against the virus among donors. In 2009, 36,327 donors were positive for HIV, 31,823 for hepatitis B, and 50,628 for hepatitis C. The median prevalence of hepatitis C antibodies among donors in countries with more than 50% voluntary donation was 0.3%, while in countries with less than 50% voluntary donation it was 0.5%. For the other markers, the corresponding figures were 0.1% and 0.2% for HIV, 0.2% and 0.3% for HBsAg, and 0.6% and 0.9% for syphilis.
136. There were 2,950,018 voluntary blood donors in 2005, compared with 3,308,996 in 2009, representing a 12% net increase over the five-year period. The regional proportion of voluntary blood donation, however, remained unchanged, 36.6% in 2005 and 36.1% in 2009 (Table B-2).
137. Nine countries/territories reported more than 50% voluntary donors in 2009: Colombia (65%), Costa Rica (76%), Cuba (100%), Guyana (68%), Haiti (70%), Netherlands Antilles (100%), Nicaragua (87%), St. Lucia (64%), and Suriname (100%). Twenty countries had less than 25% voluntary donations, with Antigua and Barbuda (5%), Belize (8%), Dominica (3%), Guatemala (4%), Mexico (3%), Panama (5%), Peru (5%), St. Vincent and the Grenadines (5%), and Venezuela (6%) reporting less than 10%.
138. Remunerated donors were reported in 2009 by Dominican Republic (3,300), Honduras (294), Panama (7,641) and Peru (88). The 11,323 paid donors accounted for 0.1% of all donations. The proportion of paid donors was 0.2% in 2005 (Table B-2).

139. The widespread requirement by hospitals for patients to provide blood replacement continues to be the major obstacle to voluntary blood donation. As demonstrated in Nicaragua, where replacement donation was terminated in March 2009, a well planned transition strategy that includes the active recruitment of blood donors and the participation of qualified personnel to service them can result in important changes in the blood donation system.
140. Although the purpose of the Regional Plan of Action for Transfusion Safety was to contribute to reducing mortality and improving patient care in Latin America and the Caribbean by making safe blood available in a timely manner for all those patients who need it, there is limited information on transfusion practices and outcomes. In 2009, only Anguilla, Antigua and Barbuda, Barbados, Belize, Grenada, Guyana, Paraguay, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Suriname, and three of the British Territories provided information on the age distribution of patients who received transfusions (Table B-6).
141. The limited interaction between national health authorities with transfusion services at the hospital level hinders the estimation of national needs for blood and prevents a structured allocation and efficient use of resources.
142. The External Evaluation Team made several recommendations, including the need to develop a Regional Plan of Action 2012–2017 based on the progress and lessons learned during the Initiative. It also emphasized the critical contribution of blood services to achieving Millennium Development Goals 4, 5, and 6.

Action by the Directing Council

143. The Directing Council is requested to take note of this report, to thank the members of the External Evaluation Team, and to recommend that the Regional Plan of Action on Blood Safety for 2012–2017 be included in the proposed topics for the Governing Bodies meetings to be held during 2012.

References

1. Pan American Health Organization. Progress report on the regional initiative for blood safety and plan of action for 2006-2010 [Internet]. 46th Directing Council; 2005 Sep 26-30; Washington, D.C. (USA): PAHO; 2005 (Document CD46/16) [cited 2011 June 28]. Available from: <http://www.paho.org/english/gov/cd/CD46-16-e.pdf>.
2. Pan American Health Organization. Progress report on the regional initiative for blood safety and plan of action for 2006-2010 [Internet]. 46th Directing Council; 2005 Sep 26-30; Washington, D.C. (USA): PAHO; 2005 (Document CD46.R5) [cited 2011 June 28]. Available from: <http://www.paho.org/english/gov/cd/CD46.r5-e.pdf>.
3. Pan American Health Organization. Improving blood availability and transfusion safety in the Americas [Internet]. 48th Directing Council; 2008 Sep 29-Oct 3; Washington, D.C. (USA): PAHO; 2008 (Document CD48/11) [cited 2011 June 28]. Available from: <http://www.paho.org/English/GOV/CD/cd48-11-e.pdf>.
4. Pan American Health Organization. Improving blood availability and transfusion safety in the Americas [Internet]. 48th Directing Council; 2008 Sep 29-Oct 3; Washington, D.C. (USA): PAHO; 2008 (Document CD48.R7) [cited 2011 June 28]. Available from: <http://www.paho.org/english/gov/cd/cd48.r7-e.pdf>.

5. Pan American Health Organization. Supply of blood for transfusion in the Caribbean and Latin American countries 2006, 2007, 2008, and 2009. Progress since 2005 of the Regional Plan of Action for Transfusion Safety. Washington, D.C.(USA): PAHO 2010.
6. Brasil, Ministerio da Saude. Secretaria de Atencao a Saude. Caderno de Informacao. Sangue e Hemoderivados. Producao Hemoterápica. Brasília; 2011.
7. Chile, Ministerio de Salud. Coordinación Nacional de Sangre. Programa Nacional de Sangre 2009. Santiago; 2011.
8. Ecuador, Cruz Roja Ecuatoriana. Secretaría Nacional de Sangre. Datos de sangre 2009. Quito; 2011.
9. Uruguay. Administración de Servicios de Salud del Estado. Servicio Nacional de Sangre. Programa Nacional de Sangre 2009. Montevideo; 2010.
10. Venezuela, Ministerio del Poder Popular para la Salud, Coordinación del Programa Nacional de Sangre. Programa Nacional de Sangre 2009. Caracas; 2010.
11. World Health Organization. Utilization and supply of human blood and blood products [Internet]. 28th World Health Assembly; 1975 May 13-30; Geneva, Switzerland: WHO; 1975 (Document WHA28.72) [cited 2011 June 28]. Available from: <http://www.who.int/bloodsafety/en/WHA28.72.pdf>.
12. World Health Organization. Global strategy for the prevention of AIDS [Internet]. 40th World Health Assembly; 1987 May 4-15; Geneva, Switzerland: WHO; 1987 (Document WHA40.26) [cited 2011 June 28]. Available from: <http://www.who.int/bloodsafety/en/WHA40.26.pdf>.
13. World Health Organization. Global strategy for the prevention and control of AIDS [Internet]. 45th World Health Assembly; 1992. May 4-14; Geneva, Switzerland: WHO; 1992 (Document WHA45.35) [cited 2011 June 28]. Available from: <http://www.who.int/bloodsafety/en/WHA45.35doc.pdf>.
14. World Health Organization. HIV/AIDS: confronting the epidemic [Internet]. 53rd World Health Assembly; 2000 May 20; Geneva, Switzerland: WHO; 2000 (Document WHA53.14) [cited 2011 June 28]. Available from: http://apps.who.int/gb/archive/pdf_files/WHA53/ResWHA53/14.pdf.
15. World Health Organization. Proposal for establishment of World Blood Donor Day [Internet]. 58th World Health Assembly; 2005 April 7; Geneva, Switzerland: WHO; 2005 (Document A58/38) [cited 2011 June 28]. Available from: http://www.who.int/bloodsafety/WHA.A58_38-en.pdf.
16. World Health Organization. Blood safety: proposal to establish World Blood Donor Day [Internet]. 58th World Health Assembly; 2005 May 25; Geneva, Switzerland: WHO; 2005 (Document WHA58.13) [cited 2011 June 28]. Available from: http://www.who.int/bloodsafety/WHA58_13-en.pdf.

17. World Health Organization. Availability, safety and quality of blood products [Internet]. 63rd World Health Assembly; 2010 March 25; Geneva, Switzerland: WHO; 2010 (Document A63/20) [cited 2011 June 28]. Available from: http://apps.who.int/gb/ebwha/pdf_files/WHA63/A63_20-en.pdf.
18. World Health Organization. Availability, safety and quality of blood products [Internet]. 63rd World Health Assembly; 2010 May 21; Geneva, Switzerland: WHO; 2010 (Document WHA63.12) [cited 2011 June 28]. Available from: http://apps.who.int/gb/ebwha/pdf_files/WHA63/A63_R12-en.pdf.
19. Pan American Health Organization. Strategic and programmatic orientations for the Pan American Sanitary Bureau, 1999-2002 [Internet]. 122nd Session Executive Committee; 1998 June 22-26; Washington, D.C. (USA): PAHO; 1998 (Document CE122/8) [cited 2011 June 28]. Available from: http://www.paho.org/english/gov/ce/ce122_8.pdf.
20. Pan American Health Organization. Strengthening blood banks in the region of the Americas [Internet]. 41st Directing Council; 1999 Sep 27-Oct 1; San Juan, Puerto Rico: PAHO; 1999 (Document CD41/13) [cited 2011 June 28]. Available from: http://www.paho.org/english/gov/cd/cd41_13.pdf.
21. Pan American Health Organization. Strengthening blood banks in the region of the Americas [Internet]. 41st Directing Council; 1999 Sep 27- Oct 1; San Juan, Puerto Rico: PAHO (Document CD41.R15) [cited 2011 June 28]. Available from: http://www.paho.org/english/gov/cd/ftcd_41.htm#R15.
22. Cruz JR. Reduction of maternal mortality: The need for voluntary blood donors. *Int J Gynecol Obstet* 2007; 98(3):291-293.
23. Pan American Health Organization. Health situation in the Americas. Basic Indicators.2009. PAHO, Washington, D.C. (USA), 2010. [Cited 2011 28 June]. Available from: http://new.paho.org/hq/dmdocuments/2009/BI_ENG_2009.pdf.

Tables and Figures of Annex B

Table B-1. Number of Blood Processing Centers and Number of Units Processed per Year, Latin American Countries 2005 and 2009

Country	Number of Centers		Number of Units Processed per Center per Year	
	2005	2009	2005	2009
Argentina	480	400	761	2,254
Bolivia	22	20	2,126	3,449
Brazil	562	395	6,652	9,270
Chile	78	38	2,283	5,438
Colombia	110	91	4,797	7,604
Costa Rica	17	27	3,186	2,195
Cuba	48	46	10,320	8,762
Dominican Republic	58	65	1,071	1,309
Ecuador	22	33	5,669	5,302
El Salvador	32	29	2,504	2,853
Guatemala	47	60	1,664	1,525
Honduras	22	24	2,378	2,429
Mexico	550	560	2,457	2,57
Nicaragua	24	3	2,255	23,274
Panama	26	26	1,645	1,975
Paraguay	16	11	4,706	6,075
Peru	92	90	1,953	2,453
Uruguay	76	57	1,259	1,615
Venezuela	240	302	1,495	1,528
All countries	2,522	2,277	3,163	3,974

**Table B-2. Indicators of Performance, National Blood Systems
in the Caribbean and Latin America**

Variable	2005	2009	Difference
Units collected	8,059,960	9,166,155	+ 1,106,195
Blood donation rate*	145.0	157.4	+ 12.4
Voluntary donors			
Number	2,950,018	3,308,996	+ 358,978
Percentage	36.6	36.6	0
Remunerated donors			
Number	15,507	11,323	- 4,184
Percentage	0.2	0.1	- 0.07
Units separated into components (median)	77	90	+ 13
Units with TTI markers			
Number	238,696	319,996	+ 81,300
Prevalence (median)	3.1	3.1	- 0.02
Number of expired units of red blood cells	610,375	981,253	+ 370,878
Total annual discard			
Number of units	849,071	1,301,279	+ 452,178
Estimated cost (US\$ 6/unit)	47,547,976	72,869,944	25,321,968

*Per 10,000 inhabitants.

**Table B-3. Blood Collection in the Caribbean
and Latin American Countries, 2005 and 2009**

Country	Number of Units Collected		Donation Rate	
	2005	2009	2005	2009
Antigua and Barbuda	1,020*	1,321	124.4*	153.6
Argentina	365,313	926,941	94.3	230.0
Bahamas	5,152	6,914	158.5*	202.2
Barbados	4,164*	4,781	148.2*	167.8
Belize	3,107	4,364	125.2	129.6
Bolivia	46,764	69,073	50.9	70.0
Brazil	3,738,580	3,661,647	200.9	189.0
Chile	178,079	206,676	109.3	121.8
Colombia	527,711	692,487	122.6	151.7
Costa Rica	54,170	59,336	125.2	129.6
Cuba	495,343	403,060	442.5	359.7
Dominica	757	977	105.1	133.8
Dominican Republic	62,120	85,169	65.2	84.4
Ecuador	124,724	174,960	95.5	128.4
El Salvador	80,142	82,757	132.3	134.3
Grenada	835	1,426	79.5	133.3
Guatemala	77,290	91,554	60.8	65.3
Guyana	5,267	7,700	68.9	101.0
Haiti	10,823	21,471	11.5	21.4
Honduras	52,317	58,317	75.9	78.1
Jamaica	22,155	24,881	83.0	91.5
Mexico	1,351,204	1,602,071	128.3	146.2
Netherlands Antilles	9,393	6,702	350.0	295.0
Nicaragua	54,117	69,932	99.2	121.2
Panama	42,771	51,539	132.3	149.2
Paraguay	47,060	66,873	79.7	105.3
Peru	179,721	221,266	64.6	75.9
Saint Kitts and Nevis	423	510	88.1	104.1
Saint Lucia	1,914	2,446	121.9	152.9
Saint Vincent and the Grenadines	822	982	77.5	93.5
Suriname	7,525	9,774	150.5	188.0

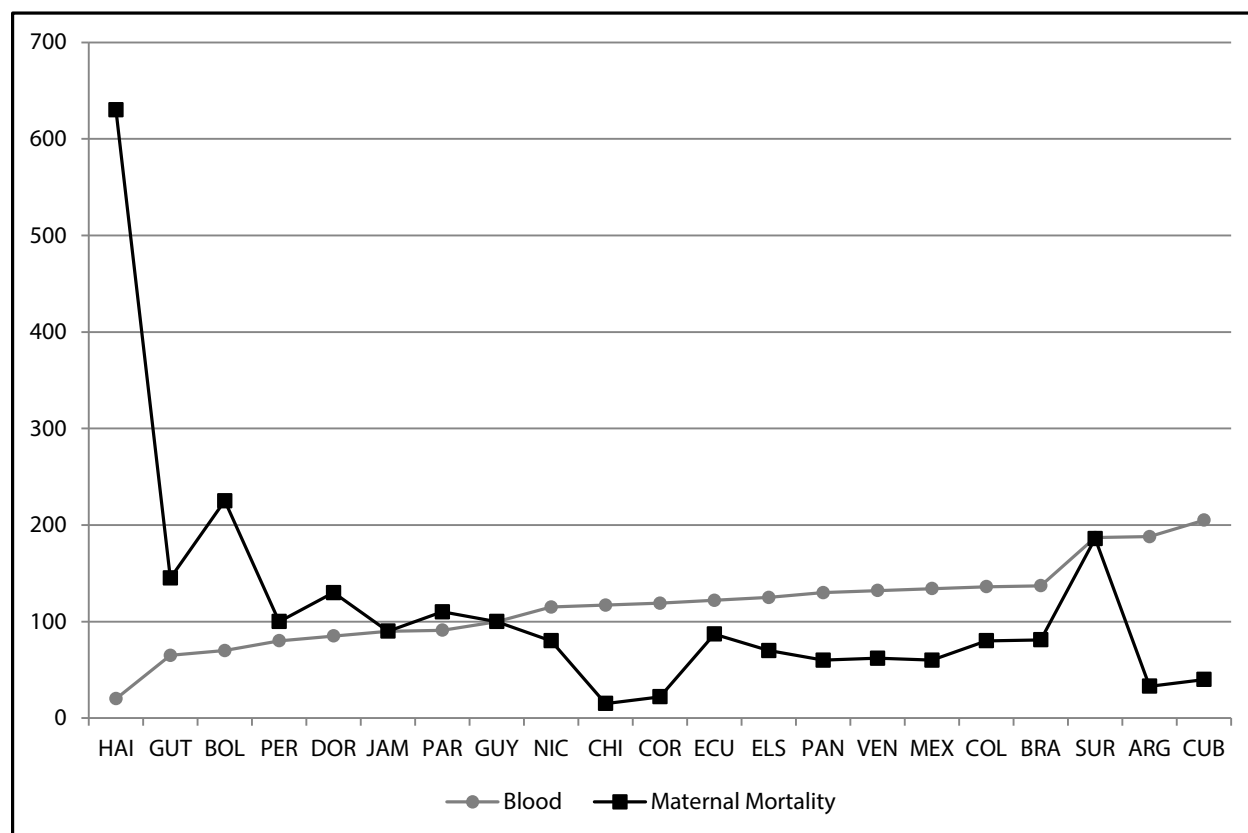
(Continued)

Table B-3. (Continued)

Country	Number of Units Collected		Donation Rate	
	2005	2009	2005	2009
Trinidad and Tobago	13,625	22,368	103.4	167.1
Uruguay	95,686	92,073	287.8	273.9
Venezuela	403,625	461,481	151.0	161.4
British Territories				
<i>Anguila</i>	114	117	87.7	83.6
<i>Virgin Islands</i>	447	484		
<i>Cayman Islands</i>	864	981	196.4	196.9
<i>Montserrat</i>	79*	94	158.0*	188.0

*Data for 2006.

Figure B-1. Blood Availability Rates and Maternal Mortality Ratios, Selected Caribbean and Latin American Countries 2009



Spearman correlation test, $p=0.002$.

**Table B-4. Blood Units Separated into Components
(Proportion of Red Blood Cells Prepared),
Caribbean and Latin American Countries, 2005 and 2009**

Country	2005	2009	Difference
Antigua and Barbuda	30*	61	+ 31
Argentina	87	90	+ 3
Bahamas	87	81	- 6
Barbados	14**	38	+ 24
Belize	35	32	- 3
Bolivia	67	89	+ 22
Brazil	38	95	+ 57
Chile	95	100	+5
Colombia	39	90	+51
Costa Rica	89	94	+5
Cuba	43**	95	+ 52
Dominica	94	92	- 2
Dominican Republic	78	39	- 39
Ecuador	77	NR	
El Salvador	93	96	+ 3
Grenada	99	100	+ 1
Guatemala	84**	87	+ 3
Guyana	62	74	+ 12
Haiti	28	52	+ 24
Honduras	32	39	+ 7
Jamaica	46	48	+ 2
Mexico	88	94	+ 6
Netherlands Antilles	100	100	0
Nicaragua	78	90	+12
Panama	33*	91	+ 58

(Continued)

Table B-4. (Continued)

Country	2005	2009	Difference
Paraguay	55	74	+ 19
Peru	72	79	+ 7
Saint Kitts and Nevis	42	14	- 28
Saint Lucia	98	100	+ 2
Saint Vincent and the Grenadines	98	97	- 1
Suriname	98	100	+ 2
Trinidad and Tobago	65**	79	+ 14
Uruguay	87	NR	
Venezuela	81	- 80	- 1
British Territories			
<i>Anguila</i>	62	61	- 1
<i>Virgin Islands</i>	NR	16	
<i>Cayman Islands</i>	83	91	+ 24
<i>Montserrat</i>	NR	1	

*Data for 2004.

**Data for 2006.

NR = Not reported.

**Table B-5. Coverage of Screening for Markers
of Transfusion-Transmissible Infections,
Caribbean and Latin American Countries, 2005 and 2009
(Percentage)**

Marker	2005	2009
HIV	98.9	99.9
HBsAg	98.9	99.9
HCV	98.8	98.9
Syphilis	98.0	99.9
<i>T. cruzi</i>	87.1	96.6

**Table B-6. Number of Units of Red Blood Cells
and Whole Blood Transfused, According to Age of Patients,
Countries that Submitted Data, 2009**

Country	Age (years)					
	< 5	5 - 14	15 - 44	45 - 59	> 59	No Data
Antigua and Barbuda	56	0	478	288	471	
Barbados	201	167	4,259	0	0	
Belize	244	144	1,566	0	0	
Grenada	46	27	347	276	466	
Guyana	203	301	2,76	924	1,756	
Paraguay	5,433	2,640	18,951	8,970	14,213	420
Saint Kitts and Nevis	0	9	9	144	86	149
Saint Lucia	0	61	59	969	545	656
Saint Vincent and the Grenadines	0	157	57	526	216	342
Suriname	0	381	263	4,349	2,171	2,569
British Territories						
<i>Anguila</i>	0	1	24	11	62	
<i>Cayman Islands</i>	3	8	258	204	416	
<i>Montserrat</i>	0	0	0	23	29	

