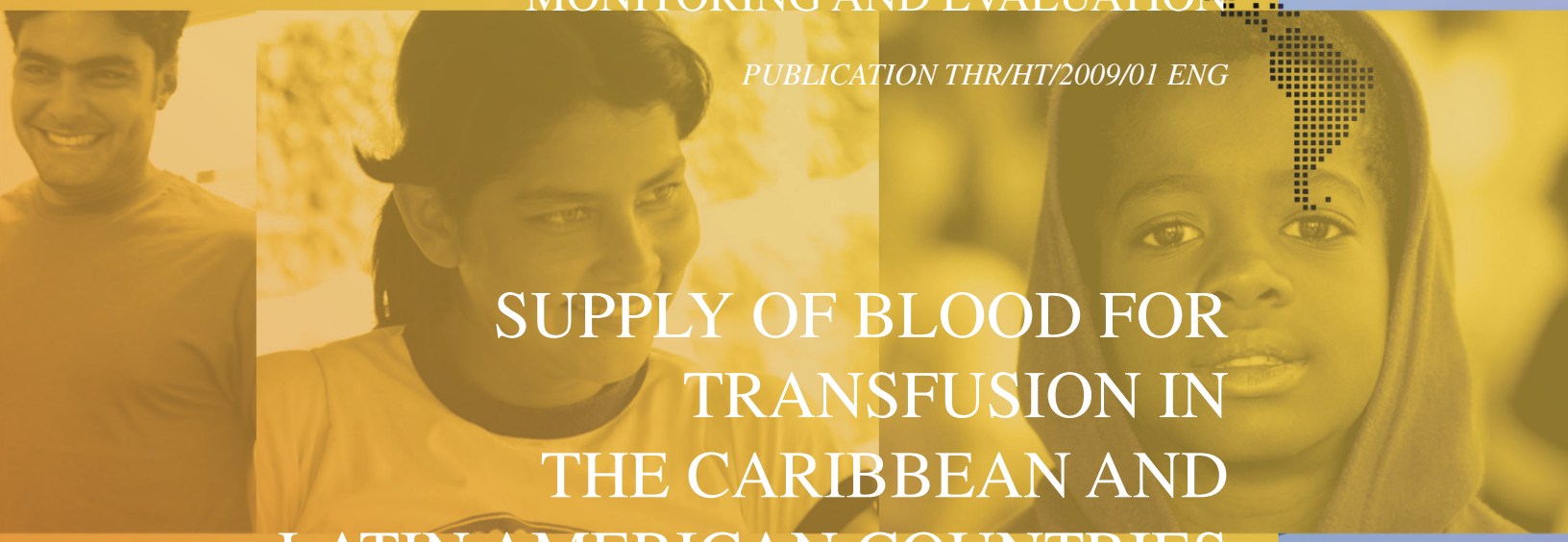
TECHNICAL DOCUMENTS

MONITORING AND EVALUATION

PUBLICATION THR/HT/2009/01 ENG



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

TECHNOLOGY, HEALTH CARE AND RESEARCH AREA
HEALTH TECHNOLOGIES FOR QUALITY OF CARE

Pan American Health Organization
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1. BLOOD BANKS – supply and distribution
2. BLOOD TRANSFUSION – trends
3. REGIONAL STRATEGIES
4. LATIN AMERICA
5. CARIBBEAN REGION

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PAHO, Washington, D.C. USA

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INTRODUCTION

The 46th Directing Council of the Pan American Health Organization (PAHO), held in Washington, D.C. in September of 2005, approved the REGIONAL PLAN OF ACTION FOR TRANSFUSION SAFETY 2006-2010, resolved to urge the Member States to officially adopt it, and requested the Director of PAHO to monitor the development of the national blood programs, and to report periodically to the Governing Bodies on the progress of implementation of such Plan.[1,2]

The purpose of the Plan is to contribute to the reduction of mortality and to the improvement of patient care in Latin America and the Caribbean, by making safe blood for transfusion available in a timely manner for all those patients who need it.[1] The indicators of progress of the Plan are:

- 100% of the countries will have a national estimate of the geographic and temporal needs for blood and blood components.
- 95% of all units of blood collected will be fractionated into components.
- 100% of the countries will have implemented a quality assurance plan that comprises all blood services in the country.
- At least 50% of the blood units collected in each country will come from voluntary, altruistic, non-remunerated donors.
- 100% of the countries will have established hemovigilance to assess the health impact of transfusions, in accordance with the national system organization and set up.
- 100% of the countries will have revised their legal and regulatory framework.
- 100% of the countries will have operational transfusion committees, in accordance with the national system organization and set up.
- 100% of the countries will have implemented guidelines for the clinical use of blood in every transfusion service.
- 100% of Latin American countries will have implemented regional blood Collection and processing systems to cover the needs of patients of geographically distinct areas.

These indicators complement the regional goals included in the Strategic and Programmatic Orientations for PAHO for 1999-2002 which were approved by the 25th Pan American Health Conference, namely to achieve universal screening of blood units and to include all blood banks in quality programs.[3] These goals have not yet been met.

The situation of the national blood programs in 36 countries and territories before the approval of the Plan was summarized in the publication "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". [4] The present document contains the information officially provided to PAHO by the health authorities of the countries of the Caribbean and Latin America for 2006 and 2007. Unfortunately, PAHO did not receive official reports for 2006 from Aruba, Belize, Bermuda, Chile, Curacao, Guatemala, Honduras, Uruguay and Venezuela; and for 2007 reports were not submitted by Argentina, Aruba, Colombia, Curacao, Barbados, Bermuda, Uruguay and Venezuela. Furthermore, some countries provided incomplete data for either of those two years –in some cases only a proportion of the blood services in the country were included in the report, while in others full sets of data were missing for the country. Under these circumstances it is impossible to assess the regional progress. It was decided, however, to present individual country summaries from 2005 to 2007, in order to allow identification of national trends in time.

The Annex contains the document "IMPROVING THE AVAILABILITY OF BLOOD AND TRANSFUSION SAFETY IN THE AMERICAS"[5], approved by the 48th Directing Council of PAHO in 2008, in its Resolution CD48.R7[6]. The document CD48/11 reiterates the need for the countries to decisively implement the Regional Plan for 2006-2010, states the intention to reach 100% voluntary blood donation, and recognizes that it is very difficult for the countries to achieve sufficiency and acceptable safety of blood if the hospitals promote replacement donation.

REFERENCES:

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2. Pan American Health Organization. 46th Directing Council. Resolution CD46.R5, 29 September 2005.
3. 25th Pan American Sanitary Conference. The Strategic and Programmatic Orientations (SPO) for the Pan American Sanitary Bureau 1999–2002. Washington, D.C.
4. 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. Series Technical Documents. Access. 2007
5. Pan American Health Organization. 48th Directing Council. Improving Blood Availability and Transfusion Safety in the Americas. Document CD48/11, 29 September -3 October 2008.
6. Pan American Health Organization. 46th Directing Council. Resolution CD48.R7, 2 October 2008.

COUNTRY CODES AND ABBREVIATIONS

COUNTRY CODES

ANU	Anguilla
ANI	Antigua and Barbuda
ARG	Argentina
ARU	Aruba
BAH	Bahamas
BAR	Barbados
BEL	Belize
BER	Bermuda
BOL	Bolivia
BRA	Brazil
BVI	British Virgin Islands
CAY	Cayman Islands
CHI	Chile
COL	Colombia
COR	Costa Rica
CUB	Cuba
CUR	Curacao
DOM	Dominica
DOR	Dominican Republic
ECU	Ecuador
ELS	El Salvador
GRA	Grenada
GUT	Guatemala
GUY	Guyana
HAI	Haiti
HON	Honduras
JAM	Jamaica
MEX	Mexico
MOT	Montserrat
NIC	Nicaragua
PAN	Panama
PAR	Paraguay
PER	Peru
SKT	Saint Kitts and Nevis
STL	Saint Lucia
STV	Saint Vincent and the Grenadines
SUR	Suriname
TRT	Trinidad and Tobago
URU	Uruguay
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
NA	Not aplicable
NR	Not reported
PL	Platelets
RBC	Red blood cells
WB	Whole blood

2006

SUMMARY 2006

SUMMARY 2006			
	CARIBBEAN COUNTRIES	**LATIN AMERICAN COUNTRIES**	**CARIBBEAN AND LATIN AMERICAN COUNTRIES**
NUMBER OF BLOOD UNITS COLLECTED	87,243	6,596,219	6,683,462
AUTOLOGOUS DONORS	355 (0.41 %)	7,015 (0.11 %)	7,370 (0.11 %)
ALTRUISTIC VOLUNTARY DONORS	21,635 (24.80 %)	2,792,259 (42.33 %)	2,813,894 (42.10 %)
REMUNERATED DONORS (%)	-	3,582 (0.05 %)	3,582 (0.05 %)
SCREENING FOR HIV (%)	100	98.68	98.69
SCREENING FOR HBsAg (%)	100	98.57	98.59
SCREENING FOR HCV (%)	98.50	98.65	98.65
SCREENING FOR SYPHILIS (%)	100	97.68	97.70
SCREENING FOR *T. cruzi* (%)	NA	86.54	86.54
SCREENING FOR HTLV I/II (%)	97.65	NA	97.65

COUNTRIES WITHOUT REPORT 2006			
		LATEST REPORT	
SUBREGION	**COUNTRY**	**YEAR**	**NUMBER OF UNITS COLLECTED**
CARIBBEAN	**ARUBA** **BELIZE** **BERMUDA** **CURACAO**	2005 2005 - 2005	2,648 3,107 - 6,745
			12,500
LATIN AMERICA	**CHILE** **GUATEMALA** **HONDURAS** **URUGUAY** **VENEZUELA**	2005 2005 2005 2005 2005	178,079 77,290 52,317 95,686 403,625
			806,997
		TOTAL	819,497

CARIBBEAN COUNTRIES 2006

TABLE 1

BLOOD COLLECTION 2006

COUNTRY	TOTAL UNITS COLLECTED	NUMBER OF DONORS			
		AUTOLOGOUS	ALLOGENEIC		
			VOLUNTARY	REPLACEMENT	REMUNERATED
ANU (1)	99	-	-	99	-
ANI	1,020	1	62	957	-
BAH	5,026	13	811	4,202	-
BAR	4,164	95	417	3,652	-
BVI	433	1	432	-	-
CAY	981	4	977	-	-
DOM	765	3	40	722	-
GRA	1,004	6	337	661	-
GUY	6,310	-	1,956	4,354	-
HAI	13,622	-	3,725	9,897	-
JAM	23,118	32	2,100	20,986	-
MOT	79	-	-	100	-
SKT	415	1	6	408	-
STL	2,028	7	1,276	745	-
STV	882	27	64	791	-
SUR (2)	7,881	-	7,881	-	-
TRT	19,771	165	1,551	18,055	-

ANU (1): The number of units collected (99) is smaller than the number of donors evaluated (345). Selected donors donate only when required for patients.
SUR (2): First time donors must wait three months before their first donation. A sample for screening is collected at the time of selection.

TABLE 2

BLOOD COLLECTION FROM ALLOGENEIC DONORS 2006 (*)

COUNTRY	NUMBER OF UNITS COLLECTED	TYPE OF ALLOGENEIC DONOR (PERCENT)		
		VOLUNTARY	REPLACEMENT	REMUNERATED
ANU (1)	99	0	100	0
ANI	1,019	6	94	0
BAH	5,013	16	84	0
BAR	4,069	10	90	0
BVI	432	100	0	0
CAY	977	100	0	0
DOM	762	5	95	0
GRA	998	34	66	0
GUY	6,310	31	69	0
HAI	13,622	27	73	0
JAM	23,086	9	91	0
MOT	79	0	100	0
SKT	414	1	99	0
STL	2,021	63	37	0
STV	855	7	93	0
SUR (2)	7,881	100	0	0
TRT	19,606	8	92	0

(*): Autologous donors not included.

ANU (1): The number of units collected (99) is smaller than the number of donors evaluated (345). Selected donors donate only when required for patients.
SUR (2): First time donors must wait three months before their first donation. A sample for screening is collected at the time of selection.

TABLE 3

SELECTION OF ALLOGENEIC DONORS 2006 (*)

COUNTRY	NUMBER OF UNITS COLLECTED	NUMBER OF ALLOGENEIC DONORS					
		VOLUNTARY		REPLACEMENT		REMUNERATED	
		INTERVIEWED	DEFERRED	INTERVIEWED	DEFERRED	INTERVIEWED	DEFERRED
ANU	99	-	-	345	65	0	0
ANI	1,019	65	3	1,226	269	0	0
BAH	5,013	863	52	4,462	260	0	0
BAR	4,069	427	10	4,384	732	0	0
BVI	432	NR	NR	-	-	0	0
CAY	977	1,064	87	-	-	0	0
DOM	762	40	-	990	268	0	0
GRA	998	393	56	879	218	0	0
GUY	6,310	NR	NR	NR	NR	0	0
HAI	13,622	4,599	874	12,583	2,686	0	0
JAM	23,086	3,150	1,050	25,000	4,014	0	0
MOT	79	-	-	NR	NR	0	0
SKT	414	NR	NR	NR	NR	0	0
STL	2,021	2,489	1,213	1,088	343	0	0
STV	855	77	13	1,007	216	0	0
SUR	7,881	7977	96	-	-	0	0
TRT	19,606	2,643	1,092	29,126	11,071	0	0

(*): Autologous donors not included.

TABLE 4

SELECTION OF ALLOGENEIC DONORS 2006 (*)

COUNTRY	NUMBER OF UNITS COLLECTED	VOLUNTARY		REPLACEMENT		REMUNERATED	
		NUMBER INTERVIEWED	PERCENT DEFERRED	NUMBER INTERVIEWED	PERCENT DEFERRED	NUMBER INTERVIEWED	PERCENT DEFERRED
ANU	99	-	-	345	19	0	0
ANI	1,019	65	5	1,226	22	0	0
BAH	5,013	863	6	4,462	6	0	0
BAR	4,069	427	2	4,384	17	0	0
CAY	977	1,064	8	-	-	0	0
DOM	762	40	0	990	26	0	0
GRA	998	393	14	879	25	0	0
HAI	13,622	4,599	19	12,583	21	0	0
JAM	23,086	3,150	33	25,000	16	0	0
STL	2,021	2,489	49	1,088	32	0	0
STV	855	77	17	1,007	21	0	0
SUR	7,881	7,977	1	-	-	0	0
TRT	19,606	2,643	41	29,126	38	0	0

(*): Autologous donors not included. Only countries with complete data.

TABLE 5

EFICIENCY OF BLOOD COLLECTION 2006 (*)

COUNTRY	NUMBER OF UNITS COLLECTED	NUMBER OF BANKS	ANNUAL COLLECTION PER BANK	DAILY COLLECTION PER BANK (260 days)
ANU	99	1	99	<1
ANI	1,019	2	510	2.0
BAH	5,013	3	1,671	6.4
BAR	4069	1	4069	15.6
BVI	432	1	432	1.7
CAY	977	2	488	1.9
DOM	762	1	762	2.9
GRA	998	1	998	3.8
GUY	6,310	6	1,052	4.0
HAI	13,622	16	851	3.3
JAM	23,086	9	2,562	9.9
MOT	79	1	79	<1
SKT	414	1	414	1.6
STL	2,021	1	2,021	7.8
STV	855	1	855	3.4
SUR	7.881	1	7,881	30.3
TRT	19,606	6	3,268	12.6

(*): Autologous donors not included. Only countries with complete data.

TABLE 6

COVERAGE (%) OF SCREENING FOR INFECTIOUS MARKERS 2006

COUNTRY	HIV	HBsAg	HCV	SYPHILIS	HTLV I/II
ANU (1)	100	100	53	100	0
ANI	100	100	100	100	0
BAH	100	100	100	100	100
BAR	100	100	100	100	100
BVI	100	100	100	100	0
CAY	100	100	100	100	100
DOM	100	100	0	100	100
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	0	100	0
SKT	100	100	0	100	0
STL (2)	100	100	100	100	100
STV	100	100	100	100	100
SUR (3)	100	100	100	100	100
TRT	100	100	100	100	100

ANU (1): Number donors screened 219 - screening for HCV started in June 06. STL (2): Number of units 2,021. SUR (3): The selected first time donors should wait three months before blood donation. A sample for screening is collected at the time of the selection.

TABLE 7					
NUMBER OF UNITS NOT TESTED FOR INFECTIOUS MARKERS 2006					
COUNTRY	**HIV**	**HBsAg**	**HCV**	**SYPHILIS**	**HTLV I/II**
ANU	-	-	47	-	99
ANI	-	-	-	-	1,020
BVI	-	-	-	-	433
DOM	-	-	765	-	-
MOT	-	-	79	-	79
SKT	-	-	415	-	415
TOTAL	-	-	1,306	-	2,046

TABLE 8					
PROPORTION (%) OF UNITS REACTIVE/ POSITIVE FOR INFECTIOUS MARKERS 2006					
COUNTRY	**HIV**	**HBsAg**	**HCV**	**SYPHILIS**	**HTLV I/II**
ANU	0.45	0	0	0.90	NA
ANI	0.30	0.40	0	0.90	NA
BAH	0.17	0.67	0.49	0.59	0.33
BAR	0.02	0.17	0.02	0.56	0.46
BVI	0	0.90	0.50	0.20	NA
CAY	0.50	0	0.20	0	0
DOM	0.10	0.30	NA	2.40	1.80
GRA	0	0.60	0.10	0.30	0.60
GUY	0.42	1.50	0.40	1.60	0.30
HAI	1.87	4.25	0.55	3.31	0.47
JAM	0.55	0.92	0.34	0.65	1.90
MOT (1)	NA	NA	NA	NA	NA
SKT	0.24	4.10	NA	1.90	NA
STL	0	0.50	0	0.80	0.40
STV	0.10	1.40	0.60	3.70	2.90
SUR	0.05	0.13	0.04	0.03	0.04
TRT	0.23	0.47	0.56	1.20	0.90

MOT (1): Donors are subjected to screening inmediately before the collection of blood units.

TABLE 9

AVAILABILITY OF BLOOD COMPONENTS 2006

COUNTRY	% SEPARATED INTO COMPONENTS					% BLOOD AND BLOOD COMPONENTS DISCARDED					
	RBC	FFP	FP	CRYO	PL	WB	RBC	FFP	FC	CRYO	PL
ANU	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
ANI	51.10	3.80	1.90	NR	0.70	8.50	0.60	0	0	NR	NR
BAH	85.10	24.10	0	0	20.60	89.00	4.80	13.60	0	0	53.90
BAR	13.00	8.10	5.20	1.10	9.80	12.20	0.30	0.70	0.30	0	4.10
BVI	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
CAY (1)	69.50	34.60	NA	NA	NA	9.40	NR	13.15	NA	NA	56.30
DOM	87.70	34.90	NR	28.60	25.80	15.90	4.20	8.60	NR	2.70	5.10
GRA	98.00	22.00	0	0	1.10	8.16	17.30	4.08	0	0	0.50
GUY	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
HAI	33.90	0.20	NR	NR	0.03	8.14	NR	NR	NR	NR	NR
JAM	50.00	30.00	10.00	10.00	10.00	NR	NR	NR	NR	NR	NR
MOT	NR	NR	NR	NR	NR	33.00	NR	NR	NR	NR	NR
SKT	NR	NR	NR	NR	NR	29.60	NR	NR	NR	NR	NR
STL	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
STV	87.60	14.80	0	0	6.00	0	10.00	20.30	0	0	53.80
SUR	97.10	13.80	0	0	19.70	2.90	1.32	1.00	0	0	5.00
TRT	70.20	58.00	0	0	58.00	1.40	4.40	7.10	0	0	5.90

CAY (1): Platelets are imported.

TABLE 10

ORGANIZATION OF THE NATIONAL BLOOD SYSTEM 2006

COUNTRY	SPECIFIC LAW	RESPONSIBLE UNIT	SPECIFIC BUDGET	NATIONAL POLICY	NATIONAL COMMISSION
ANU	NO	NO	NO	NO	YES
ANI	NO	YES	NO	NO	YES
BAH	NO	NO	NO	NO	YES
BAR	NO	NO	NO	NO	YES
BVI	NO	NO	NO	NO	NO
CAY	NO	NO	NO	NO	NO
DOM	NO	NO	NO	NO	NO
GRA	NR	NR	NR	NR	NR
GUY	NR	NR	NR	NR	NR
HAI	NO	YES	YES	YES	YES
JAM	YES	YES	YES	YES	YES
MOT	NO	YES	NO	NO	NO
SKT	NO	NO	NO	NO	YES
STL	NO	NO	NO	NO	YES
STV	NO	NO	NO	NO	YES
SUR	NO	NO	YES	NO	NR
TRT	NO	YES	NO	NO	YES

TABLE 11						
ORGANIZATION OF THE NATIONAL BLOOD SYSTEM 2006						
COUNTRY	REFERENCE SERVICE	NATIONAL PLAN	NORMS DONORS	NORMS OPERATIONS	CLINICAL GUIDELINES	BANK REGISTRATION
ANU	NO	NO	YES	YES	NO	NO
ANI	NO	NO	YES	YES	NO	NO
BAH	NO	YES	NO	NO	NO	YES
BAR	NO	NO	NR	NO	NR	NO
BVI	NO	NO	YES	YES	NO	NO
CAY	NO	NO	NO	NO	NO	NO
DOM	NO	NO	YES	NO	NO	NO
GRA	NR	NR	NR	NR	NR	NR
GUY	NR	NR	NR	NR	NR	NR
HAI	YES	YES	YES	NO	YES	NO
JAM	YES	NO	YES	YES	YES	NO
MOT	NO	NO	YES	NO	NO	NO
SKT	NO	NO	YES	NO	YES	NO
STL	YES	NO	YES	YES	NO	NO
STV	NO	NO	YES	NO	NO	NO
SUR	NO	YES	YES	YES	NO	YES
TRT	YES	NO	YES	YES	YES	YES

TABLE 12					
ORGANIZATION OF THE NATIONAL BLOOD SYSTEM 2006					
COUNTRY	QUALITY ASSURANCE POLICY	EXTERNAL EVALUATION SEROLOGY-TTI	EXTERNAL EVALUATION IMMUNOHEMATOLOGY	INSPECTION PROGRAM	CONTINUED EDUCATION
ANU	NO	YES	YES	NO	YES
ANI	YES	YES	YES	NO	NO
BAH	NO	YES	YES	NO	NO
BAR	YES	YES	YES	NO	NO
BVI	NO	NO	YES	NO	NO
CAY	NO	YES	YES	NO	YES
DOM	NR	YES	YES	NO	NO
GRA	YES	YES	YES	NR	NO
GUY	NR	NR	NR	NR	NR
HAI	YES	YES	YES	NO	YES
JAM	NO	YES	YES	NO	YES
MOT	NO	YES	YES	NO	YES
SKT	NO	YES	YES	NO	NO
STL	NO	YES	YES	NO	NO
STV	NO	YES	YES	NO	NO
SUR	YES	YES	YES	NO	NO
TRT	YES	YES	YES	NO	YES

TABLE 13		
ORGANIZATION OF THE NATIONAL BLOOD SYSTEM 2006		
COUNTRY	**STAFF CERTIFICATION**	**SERVICE ACCREDITATION**
ANU	NO	NO
ANI	NO	NO
BAH	YES	NO
BAR	NO	NR
BVI	NO	NO
CAY	YES	NO
DOM	NO	NO
GRA	NR	NR
GUY	NR	NR
HAI	NO	NO
JAM	YES	NO
MOT	YES	NO
SKT	NO	NO
STL	NO	NO
STV	NO	NO
SUR	NO	NO
TRT	YES	NO

LATIN AMERICAN COUNTRIES 2006

TABLE 1

BLOOD COLLECTION 2006

COUNTRY	TOTAL UNITS COLLECTED	NUMBER OF DONORS			
		AUTOLOGOUS	ALLOGENEIC		
			VOLUNTARY	REPLACEMENT	REMUNERATED
ARG (1)	345,502	-	37,012	308,490	-
BOL	49,954	113	13,537	36,304	-
BRA	3,129,882	-	1,815,332	1,314,550	-
COL	552,421	943	336,977	215,444	-
COR	54,170	NR	NR	NR	NR
CUB	475,959	-	475,959	-	-
ECU	124,724	NR	NR	NR	NR
ELS	80,460	-	8,604	71,856	-
MEX	1,400,137	5,506	48,600	1,346,031	-
NIC	53,970	-	24,707	29,263	-
PAN	45,650	NR	NR	NR	NR
PAR	51,153	42	4,719	46,390	2
PER (2)	174,196	411	11,714	161,615	456
DOR	64,113	-	15,098	45,891	3,124

ARG (1): Data represent the public subsector, and correspond to 50% of the National Blood System. PER (2): The number of collected units (174,196) is smaller than the number of accepted donors (195,682).

TABLE 2

BLOOD COLLECTION FROM ALLOGENEIC DONORS 2006 (*)

COUNTRY	NUMBER OF UNITS COLLECTED	TYPE OF ALLOGENEIC DONOR (PERCENT)		
		VOLUNTARY	REPLACEMENT	REMUNERATED
ARG (1)	345,502	11	89	0
BOL	49,841	27	73	0
BRA	3,129,882	58	42	0
COL	552,421	61	39	0
COR	54,170	NR	NR	NR
CUB	475,959	100	0	0
ECU	124,724	NR	NR	NR
ELS	80,460	11	89	0
MEX	1,394,631	4	97	0
NIC	53,970	46	54	0
PAN	45,650	NR	NR	NR
PAR	51,111	9	91	0.004
PER (2)	173,785	7	93	0.3
DOR	64,113	23	72	5

(*): Autologous donors not included.

ARG (1): Data represent the public subsector, and correspond to 50% of the National Blood System. PER (2): The number of collected units (174,196) is smaller than the number of accepted donors (195,682).

TABLE 3

SELECTION OF ALLOGENEIC DONORS 2006 (*)

COUNTRY	NUMBER OF UNITS COLLECTED	NUMBER OF ALLOGENEIC DONORS					
		VOLUNTARY		REPLACEMENT		REMUNERATED	
		INTERVIEWED	DEFERRED	INTERVIEWED	DEFERRED	INTERVIEWED	DEFERRED
ARG	345,502	-	-	396,527	88,037	0	0
BOL	49,841	20,755	7,218	56,657	20,353	0	0
BRA	3,129,882	1,815,332	-	1,314,550	-	0	0
COL	552,421	336,977	-	215,444	-	0	0
COR	54,170	NR	NR	NR	NR	NR	NR
CUB	475,959	506,191	30,232	-	-	-	-
ECU	124,724	NR	NR	NR	NR	NR	NR
ELS	80,460	10,718	2,114	104,182	32,326	0	0
MEX	1,394,631	58,320	9,720	1,749,840	403,809	0	0
NIC	53,970	NR	NR	NR	NR	0	0
PAN	45,650	NR	NR	NR	NR	NR	NR
PAR	51,111	4,929	210	52,071	5,681	2	0
PER	173,785	16,280	2,956	263,691	81,904	1,149	578
DOR	64,113	17,257	2,159	54,191	8,300	3,447	323

(*): Autologous donors not included.

TABLE 4

SELECTION OF ALLOGENEIC DONORS 2006 (*)

COUNTRY	NUMBER OF UNITS COLLECTED	VOLUNTARY		REPLACEMENT		REMUNERATED	
		NUMBER INTERVIEWED	PERCENT DEFERRED	NUMBER INTERVIEWED	PERCENT DEFERRED	NUMBER INTERVIEWED	PERCENT DEFERRED
ARG	345,502	NR	NR	396,527	22	0	0
BOL	49,841	20,755	35	56,657	36	0	0
CUB	475,959	506,191	6	0	0	0	0
ELS	80,460	10,718	20	104,182	31	0	0
MEX	1,394,631	58,320	17	1,749,840	23	0	0
PAR	51,111	4,929	4	52,071	11	2	0
PER	173,785	16,280	18	263,691	31	1,149	50
DOR	64,113	17,257	13	54,191	15	3,447	9

(*): Autologous donors not included. Only countries with complete data.

TABLE 5

EFICIENCY OF BLOOD COLLECTION 2006 (*)

COUNTRY	NUMBER OF UNITS COLLECTED	NUMBER OF BANKS	ANNUAL COLLECTION PER BANK	DAYLY COLLECTION PER BANK (260 days)
ARG	345,502	295	1,171	4.5
BOL	49,841	20	2,492	9.6
BRA	3,129,882	326	9,601	36.9
COL	552,421	101	5,469	21.0
COR	54,170	31	1,747	6.7
CUB	475,959	48	9,915	38.1
ECU	124,724	44	2,835	10.9
ELS	80,460	59	1,364	5.2
MEX	1,394,631	176	7,924	30.5
NIC	53,970	24	2,249	8.6
PAN	45,650	28	1,630	6.3
PAR	51,111	62	824	3.2
PER	173,785	172	1,010	3.9
DOR	64,113	57	1,189	4.3

(*): Autologous donors not included. Only countries with complete data.

TABLE 6

COVERAGE (%) OF SCREENING FOR INFECTIOUS MARKERS 2006

COUNTRY	HIV	HBsAg	HCV	SYPHILIS	*T. cruzi*	HTLV I/II	Anti-HBc
ARG	100	100	100	100	100	100	100
BOL	99.98	99.98	99.92	99.98	90.34	0	NR
BRA	NR	NR	NR	NR	NR	NR	NR
COL	99.99	100	99.99	99.99	99.99	58.60	64.40
COR	100	100	100	100	100	NR	100
CUB	100	100	100	100	NA	NR	NR
ECU	100	100	100	100	90.00	0	NR
ELS	100	100	100	100	100	NR	NR
MEX	94.09	93.60	93.98	89.39	42.62	NR	NR
NIC	91.84	91.28	91.03	91.43	89.96	NR	NR
PAN	100	100	100	100	97.90	24.70	100
PAR	99.99	99.99	99.99	99.99	99.99	49.45	90.98
PER (1)	100	100	100	100	100	100	100
DOR (2)	100	99.99	99.99	99.85	NA	88.80	NR

PER (1): Number of accepted donors 191,406; number of collected units 174,196. DOR (2): The number of screened units (HIV: 72,875 - HBsAg: 72,871 - HCV: 72,868 - Syphilis: 72,767 - HTLV: 64,713) is higher than the number of collected units.

TABLE 7

NUMBER OF UNITS NOT TESTED FOR INFECTIOUS MARKERS 2006 (*)

COUNTRY	HIV	HBsAg	HCV	SYPHILIS	*T. cruzi*
BOL	10	10	40	10	4,826
COL	55	-	55	55	55
ECU	-	-	-	-	12,472
MEX	82,748	89,609	84,288	148,555	803,399
NIC	4,405	4,704	4,837	4,624	5,421
PAN	-	-	-	-	959
PAR	5	5	5	5	5
DOR	-	6	6	96	-
TOTAL	87,223	94,334	89,231	153,345	827,137

(*) Except HTLV I/II and Anti-HBc.

TABLE 8

PROPORTION (%) OF UNITS REACTIVE/ POSITIVE FOR INFECTIOUS MARKERS 2006

COUNTRY	HIV	HBsAg	HCV	SYPHILIS	*T. cruzi*	HTLV I/II	Anti-HBc
ARG	0.30	0.47	0.95	1.14	3.99	0.27	2.90
BOL	0.11	0.40	0.66	0.90	1.93	NR	NR
BRA	NR	NR	NR	NR	NR	NR	NR
COL	0.46	0.35	0.57	1.51	0.40	0.27	2.86
COR	0.11	0.23	1.30	0.55	0.34	0.33	2.61
CUB	0.02	0.49	0.53	0.59	NA	NR	NR
ECU	0.59	0.34	0.59	0.82	0.14	NR	NR
ELS	0.10	0.24	0.32	0.83	2.17	NR	NR
MEX	0.38	0.20	0.68	0.30	0.50	NR	NR
NIC	0.84	1.32	0.47	0.90	0.89	NR	NR
PAN	0.06	0.29	0.32	0.30	0.15	0.04	NR
PAR	0.45	0.47	0.69	8.33	3.29	0.29	4.12
PER	0.51	0.51	1.22	1.90	1.02	1.52	6.05
DOR	0.58	1.22	0.47	1.04	NA	0.27	NR

TABLE 9

AVAILABILITY OF BLOOD COMPONENTS 2006

COUNTRY	% SEPARATED INTO COMPONENTS					% BLOOD AND BLOOD COMPONENTS DISCARDED					
	RBC	FFP	FP	CRYO	PL	WB	RBC	FFP	FC	CRYO	PL
ARG	90.00	51.40	35.00	7.90	52.30	NR	NR	NR	NR	NR	NR
BOL	72.30	52.40	15.70	4.60	17.70	6.04	13.33	22.94	21.90	11.87	23.93
BRA	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
COL	96.80	70.20	NR	7.20	45.10	1.20	10.35	65.10	NR	1.60	21.80
COR	92.00	0	92.00	15.00	71.00	2.84	2.48	0	21.00	0.05	12.08
CUB	43.16	7.72	2.49	8.20	6.83	NR	NR	NR	NR	NR	NR
ECU	77.20	45.60	16.70	18.30	31.50	6.00	4.92	1.85	54.90	7.20	12.80
ELS	95.00	68.00	NR	9.40	52.00	32.00	4.00	16.00	NR	4.00	10.00
MEX	91.40	69.20	19.80	6.38	37.80	2.85	5.88	22.50	18.40	1.13	8.97
NIC	68.77	47.80	3.00	0	26.42	3.99	1.53	1.54	0	0	1.70
PAN	55.00	18.30	0	3.10	22.50	1.97	1.14	0.63	0	0	7.70
PAR	63.98	39.26	9.02	4.18	25.86	6.79	3.73	3.74	2.44	0.02	5.34
PER (1)	92.02	NR	66.81	10.36	54.00	1.65	4.16	NR	38.47	12.75	29.78
DOR	32.18	4.70	9.00	0.07	6.09	2.27	0.35	3.56	0	0	0.31

PER (1): Number of eligible units separated into components 162,054.

TABLE 10

ORGANIZATION OF THE NATIONAL BLOOD SYSTEM 2006

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
COL	YES	YES	NO	YES	YES
COR	YES	YES	YES	YES	YES
CUB	YES	YES	NO	YES	YES
ECU	YES	NO	NO	NO	YES
ELS	NO	YES	NO	YES	YES
MEX	YES	YES	NO	YES	NO
NIC	YES	YES	YES	YES	NO
PAN	YES	YES	NO	NO	YES
PAR	YES	YES	YES	YES	YES
PER	YES	YES	NO	NO	NO
DOR	YES	YES	NO	YES	YES

TABLE 11						
ORGANIZATION OF THE NATIONAL BLOOD SYSTEM 2006						
COUNTRY	**REFERENCE SERVICE**	**NATIONAL PLAN**	**NORMS DONORS**	**NORMS OPERATIONS**	**CLINICAL GUIDELINES**	**BANK REGISTRATION**
ARG	NO	YES	YES	YES	NO	NO
BOL	YES	YES	YES	YES	YES	YES
BRA	YES	YES	YES	YES	YES	YES
COL	YES	YES	YES	YES	YES	YES
COR	YES	YES	YES	YES	YES	YES
CUB	YES	YES	YES	YES	YES	YES
ECU	YES	NO	YES	YES	YES	YES
ELS	YES	YES	YES	YES	YES	YES
MEX	YES	YES	YES	YES	YES	YES
NIC	YES	NO	YES	YES	YES	YES
PAN	YES	NO	NO	YES	YES	YES
PAR	YES	YES	YES	YES	YES	YES
PER	NO	NO	NO	YES	NO	YES
DOR	NO	YES	YES	YES	NO	YES

TABLE 12						
ORGANIZATION OF THE NATIONAL BLOOD SYSTEM 2006						
COUNTRY	**QUALITY ASSURANCE POLICY**	**NATIONAL QUALITY ASSURANCE PROGRAM**	**EXTERNAL EVALUATION SEROLOGY-TTI**	**EXTERNAL EVALUATION IMMUNOHEMATOLOGY**	**INSPECTION PROGRAM**	**CONTINUED EDUCATION**
ARG	YES	YES	YES	NO	NO	YES
BOL	YES	YES	YES	NO	YES	YES
BRA	YES	NR	NR	YES	YES	YES
COL	NO	NO	YES	NO	YES	YES
COR	YES	YES	YES	NO	YES	YES
CUB	YES	YES	YES	YES	YES	YES
ECU	NO	NO	YES	YES	YES	NO
ELS	YES	YES	YES	NO	NO	YES
MEX	YES	NO	YES	YES	NO	YES
NIC	NO	YES	YES	NO	NO	YES
PAN	NO	NO	YES	YES	YES	YES
PAR	YES	NO	NO	NO	YES	YES
PER	NO	NO	NO	NO	YES	NO
DOR	YES	YES	YES	NO	YES	NO

TABLE 13		
ORGANIZATION OF THE NATIONAL BLOOD SYSTEM 2006		
COUNTRY	**STAFF CERTIFICATION**	**SERVICE ACCREDITATION**
ARG	YES	YES
BOL	YES	YES
BRA	YES	YES
COL	YES	NO
COR	YES	YES
CUB	YES	YES
ECU	NO	NO
ELS	NO	NO
MEX	NO	NO
NIC	NO	NO
PAN	NO	YES
PAR	NO	YES
PER	NO	YES
DOR	NO	NO

NATIONAL STAFF WHO SUBMITTED OFFICIAL INFORMATION

NATIONAL STAFF WHO SUBMITTED OFFICIAL INFORMATION TO THE PAN AMERICAN HEALTH ORGANIZATION CARIBBEAN COUNTRIES 2006

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2007

SUMMARY 2007

SUMMARY 2007			
	CARIBBEAN COUNTRIES	**LATIN AMERICAN COUNTRIES**	**CARIBBEAN AND LATIN AMERICAN COUNTRIES**
NUMBER OF BLOOD UNITS COLLECTED	93,133	4,263,035	4,356,168
AUTOLOGOUS DONORS	193 (0.21 %)	32,390 (0.76 %)	32,583 (0.75 %)
ALTRUISTIC VOLUNTARY DONORS	31,035 (33.32 %)	1,558,970 (36.57 %)	1,590,005 (36.50 %)
REMUNERATED DONORS (%)	-	11,509 (0.27 %)	11,509 (0.26 %)
SCREENING FOR HIV (%)	100	99.53	99.54
SCREENING FOR HBsAg (%)	99.72	98.17	98.2
SCREENING FOR HCV (%)	95.32	98.36	98.3
SCREENING FOR SYPHILIS (%)	97.70	97.04	97.06
SCREENING FOR *T. cruzi* (%)	NA	79.79	79.79
SCREENING FOR HTLV I/II (%)	98.15	NA	98.15

COUNTRIES WITHOUT REPORT 2007			
		LATEST REPORT	
SUBREGION	**COUNTRY**	**YEAR**	**NUMBER OF COLLECTED UNITS**
CARIBBEAN	**ARUBA** **BARBADOS** **BERMUDA** **CURACAO** **SAINT KITTS AND NEVIS**	2005 2006 - 2005 2006	2,648 4,164 - 6,745 415
			13,972
LATIN AMERICA	**ARGENTINA** **COLOMBIA** **URUGUAY** **VENEZUELA**	2006 2006 2005 2005	345,502 552,421 95,686 403,625
			1,397,234
		TOTAL	1,411,206

CARIBBEAN COUNTRIES 2007

TABLE 1

BLOOD COLLECTION 2007

COUNTRY	TOTAL UNITS COLLECTED	NUMBER OF DONORS			
		AUTOLOGOUS	ALLOGENEIC		
			VOLUNTARY	REPLACEMENT	REMUNERATED
ANU (1)	114	-	-	114	-
ANI	986	3	41	942	-
BAH	5,343	20	1,230	4,093	-
BLZ	3,233	-	178	3,055	-
BVI	544	-	544	-	-
CAY	1,017	-	1,017	-	-
DOM	723	-	21	702	-
GRA	1,015	8	308	699	-
GUY	7,095	1	3,345	3,749	-
HAI	16,594	-	8,376	8,218	-
JAM	23,251	-	3,948	19,303	-
MOT	81	1	-	80	-
STL	2,216	9	1,703	504	-
STV	1,172	43	79	1,050	-
SUR (2)	8,925	2	8,923	-	-
TRT	21,017	106	1,322	19,589	-

ANU (1): The number of collected units (114) is smaller than the number of donors evaluated (437). The selected donors donate only when it is required for patients.
SUR (2): First time donors must wait three months before their first donation.

TABLE 2

BLOOD COLLECTION FROM ALLOGENEIC DONORS 2007 (*)

COUNTRY	NUMBER OF UNITS COLLECTED	TYPE OF ALLOGENEIC DONOR (PERCENT)		
		VOLUNTARY	REPLACEMENT	REMUNERATED
ANU (1)	114	0	100	0
ANI	983	4	96	0
BAH	5,323	23	77	0
BLZ	3,233	6	94	0
BVI	544	100	0	0
CAY	1,017	100	0	0
DOM	723	3	97	0
GRA	1,007	31	69	0
GUY	7,094	47	53	0
HAI	16,594	51	49	0
JAM	23,251	17	83	0
MOT	80	0	100	0
STL	2,207	77	23	0
STV	1,129	7	93	0
SUR (2)	8,923	100	0	0
TRT	20,911	6	94	0

(*) Autologous donors not included.

ANU (1): The number of collected units (114) is smaller than the number of donors evaluated (437). The selected donors donate only when it is required for patients.
SUR (2): First time donors must wait three months before their first donation.

TABLE 3

SELECTION OF ALLOGENEIC DONORS 2007 (*)

COUNTRY	NUMBER OF UNITS COLLECTED	NUMBER OF ALLOGENEIC DONORS					
		VOLUNTARY		REPLACEMENT		REMUNERATED	
		INTERVIEWED	DEFERRED	INTERVIEWED	DEFERRED	INTERVIEWED	DEFERRED
ANU	114	-	-	437	79	0	0
ANI	983	47	6	1,158	216	0	0
BAH	5,323	1,328	98	4,420	327	0	0
BLZ	3,233	203	25	4,636	1,581	0	0
BVI	544	-	-	-	-	0	0
CAY	1,017	1,137	120	-	-	0	0
DOM	723	21	0	956	242	0	0
GRA	1,007	362	54	834	135	0	0
GUY	7,094	4,345	1,000	5,663	1,914	0	0
HAI	16,594	9,996	1,620	10,800	2,582	0	0
JAM	23,251	4,052	104	22,635	3,332	0	0
MOT	80	-	-	80	0	0	0
STL	2,207	2,866	1,163	857	353	0	0
STV	1,129	81	3	1,199	149	0	0
SUR	8,923	8,935	12	NA	NA	0	0
TRT	20,911	2,287	965	32,970	13,381	0	0

(*) Autologous donors not included.

TABLE 4

SELECTION OF ALLOGENEIC DONORS 2007 (*)

COUNTRY	NUMBER OF UNITS COLLECTED	VOLUNTARY		REPLACEMENT		REMUNERATED	
		NUMBER INTERVIEWED	PERCENT DEFERRED	NUMBER INTEVIEWED	PERCENT DEFERRED	NUMBER INTERVIEWED	PERCENT DEFERRED
ANI	983	47	13	1,158	19	0	0
BAH	5,323	1,328	7	4,420	7	0	0
BLZ	3,233	203	12	4,636	34	0	0
CAY	1,017	1,137	11	-	-	0	0
DOM	723	21	0	956	27	0	0
GRA	1,007	362	15	834	16	0	0
GUY	7,094	4,345	23	5,663	34	0	0
HAI	16,594	9,996	16	10,800	24	0	0
JAM	23,251	4,052	3	22,635	15	0	0
MOT	80	-	-	80	0	0	0
STL	2,207	2,866	41	857	41	0	0
STV	1,129	81	2	1,199	12	0	0
SUR	8,923	8,935	0.1	-	-	0	0
TRT	20,911	2,287	42	32,970	41	0	0

(*) Autologous donors not included. Only countries with complete data.

TABLE 5

EFICIENCY OF BLOOD COLLECTION 2006 (*)

COUNTRY	NUMBER OF UNITS COLLECTED	NUMBER OF BANKS	ANNUAL COLLECTION PER BANK	DAILY COLLECTION PER BANK (260 days)
ANU	114	1	114	0.4
ANI	983	2	493	1.9
BAH	5,323	3	1,781	6.9
BLZ	3,233	7	462	1.8
BVI	544	1	544	2.1
CAY	1,017	2	508	2.0
DOM	723	1	723	2.8
GRA	1,007	1	1,015	3.9
GUY	7,094	7	1,013	3.9
HAI	16,594	17	976	3.8
JAM	23,251	9	2,583	9.9
MOT	80	1	81	0.3
STL	2,207	1	2,207	8.0
STV	1,129	1	1,172	4.5
SUR	8,923	1	8,923	34.3
TRT	20,911	7	3,002	11.5

(*) Donantes autólogos no incluidos. Únicamente países con datos completos.

TABLE 6

COVERAGE (%) OF SCREENING FOR INFECTIOUS MARKERS 2007

COUNTRY	HIV	HBsAg	HCV	SYPHILIS	HTLV I/II
ANU	100	100	100	100	0
ANI	100	100	100	100	0
BAH (1)	100	100	100	100	100
BLZ (2)	100	100	24.70*	100	100
BVI	100	100	100	100	0
CAY	100	100	100	100	100
DOM	100	100	0	100	100
GRA	100	100	100	100	100
GUY (3)	100	100	100	100	100
HAI	100	100	100	100	100
JAM	100	98.86	95.16	90.80	100
MOT (4)	100	100	0	100	0
STL	100	100	100	100	100
STV	100	100	100	100	100
SUR (5)	100	100	100	100	100
TRT	100	100	100	100	100

BAH (1): Autologous donors were not screened. BLZ (2): *HCV started October 2007. GUY (3): Data only on NBTS - 5,492 units. MOT (4): Donors are submitted to screening inmediately before the collection of blood units. SUR (5): 9,331 donors were screened.

TABLE 7					
NUMBER OF UNITS NOT TESTED FOR INFECTIOUS MARKERS 2007					
COUNTRY	**HIV**	**HBsAg**	**HCV**	**SYPHILIS**	**HTLV I/II**
ANU	-	-	-	-	114
ANI	-	-	-	-	986
BLZ	-	-	2,434	-	-
BVI	-	-	-	-	544
DOM	-	-	723	-	-
JAM	-	265	1,125	2,139	-
MOT	-	-	81	-	81
TOTAL	-	265	4,363	2,139	1,725

TABLE 8					
PROPORTION (%) OF UNITS REACTIVE/ POSITIVE FOR INFECTIOUS MARKERS 2007					
COUNTRY	**HIV**	**HBsAg**	**HCV**	**SYPHILIS**	**HTLV I/II**
ANU	0	0	0	0	NA
ANI	0.20	1.50	0.70	0.80	NA
BAH	0.30	0.60	0.60	0.90	0.40
BLZ (1)	0.19	0.99	0.13	0.96	NR
BVI	0	0.40	0	0.40	NA
CAY	0.30	0.00	0.20	0	0.10
DOM	NR	0.10	NA	1.40	1.40
GRA	0	0.49	0	0.01	1.67
GUY	0.26	1.65	0.50	1.30	1.46
HAI	1.41	4.64	0.47	3.39	0.62
JAM	0.43	0.82	0.32	3.46	1.60
MOT	0	0	NA	0	NA
STL	0.09	0.85	0.04	1.80	0.60
STV	0.34	0.77	1.45	3.33	2.13
SUR	0.01	0.01	0.04	0.03	0.02
TRT	0.25	0.41	0.29	1.58	0.85
BLZ (1): Anti = *T. cruzi* 0.50%.					

TABLE 9

AVAILABILITY OF BLOOD COMPONENTS 2007

COUNTRY	% SEPARATED INTO COMPONENTS					% BLOOD AND BLOOD COMPONENTS DISCARDED					
	RBL	FFP	FP	CRYO	PL	WB	RBC	FFP	FP	CRYO	PL
ANU	41.23	NR	NR	NR	NR	7.89	NR	NR	NR	NR	NR
ANI	62.90	4.10	1.90	0	3.40	8.50	0.40	0	0	NR	NR
BAH (1)	85.20	24.20	0	0	17.40	1.50	4.40	3.50	0	0	4.10
BLZ (2)	24.20	5.80	3.10	NR*	NR*	14.20	2.00	0.46	1.70	NR*	NR*
BVI	11.00	11.00	0	NR	NR	1.10	0	0	0	NR	NR
CAY (3)	84.96	26.70	NA	NA	NA*	6.00	4.10	21.70	NA	NA	0
DOM	91.00	47.00	NR	27.00	23.00	NR	NR	NR	NR	NR	NR
GRA	99.00	20.00	0	0	0.30	6.00	15.92	4.00	0	0	0
GUY (4)	85.62*	69.22*	NR*	10.92*	5.46*	1.24	5.63	1.25	NR	2.81	1.56
HAI	37.35	0.18	NR	0.02	0.03	9.53	NR	NR	NR	NR	NR
JAM	20.33	16.60	3.13	3.72	7.02	1.52	6.68	8.18	11.42	9.12	16.16
MOT	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
STL	100	27.00	0	0.05	19.00	NR	16.00	3.30	0	0.05	7.30
STV	95.70	14.80	0	0	1.40	8.00	9.10	9.20	0	0	18.80
SUR	100	17.20	0	0	20.50	4.10	0.80	0.13	0	0	32.90
TRT	69.30	26.00	NR	1.00	26.00	NR	NR	NR	NR	NR	NR

BAH (1): Autologous donors not included. BLZ (2): NR*: Not done. CAY (3): *Imported platelets. GUY (4): *Data only in NBTS 5,492.

TABLE 10

ORGANIZATION OF THE NATIONAL BLOOD SYSTEM 2007

COUNTRY	SPECIFIC LAW	RESPONSIBLE UNIT	SPECIFIC BUDGET	NATIONAL POLICY	NATIONAL COMMISSION
ANU	NO	NO	NO	NO	YES
ANI	NO	YES	NO	NO	YES
BAH	YES	NO	NO	NO	YES
BLZ	NO	YES	NO	NO	YES
BVI	NO	NO	NO	NO	NO
CAY	NO	NO	NO	NO	NO
DOM	NO	NO	NO	NO	NO
GRA	NR	NR	NR	NR	NR
GUY	NO	YES	YES	YES	YES
HAI	NO	YES	YES	YES	YES
JAM	YES	YES	YES	YES	YES
MOT	NO	NO	NO	NO	NO
STL	NO	NO	NO	NO	NO
STV	NO	NO	NO	NO	YES
SUR	NO	NO	YES	NO	NR
TRT	NO	YES	NO	YES	YES

TABLE 11						
ORGANIZATION OF THE NATIONAL BLOOD SYSTEM 2007						
COUNTRY	REFERENCE SERVICE	NATIONAL PLAN	NORMS DONORS	NORMS OPERATIONS	CLINICAL GUIDELINES	BANKS REGISTRATION
ANU	NO	NO	YES	YES	NO	NO
ANI	NO	NO	YES	YES	NO	NO
BAH	NO	YES	NO	NO	NO	YES
BLZ	YES	NO	NO	YES	YES	NO
BVI	NO	NO	NO	NO	NO	NO
CAY	NO	NO	NO	NO	NO	NO
DOM	NO	NO	YES	NO	NO	NO
GRA	NR	NR	NR	NR	NR	NR
GUY	YES	YES	YES	YES	YES	YES
HAI	YES	YES	YES	NR	YES	NO
JAM	YES	NO	YES	YES	YES	NO
MOT	NO	NO	YES	NO	NO	NO
STL	YES	NO	YES	YES	NO	NO
STV	NO	NO	YES	NO	NO	NO
SUR	NO	YES	YES	YES	NO	YES
TRT	YES	NO	YES	YES	YES	NO

TABLE 12					
ORGANIZATION OF THE NATIONAL BLOOD SYSTEM 2007					
COUNTRY	QUALITY ASSURANCE POLICY	EXTERNAL EVALUATION SEROLOGY-TTI	EXTERNAL EVALUATION IMMUNOHEMATOLOGY	INSPECTION PROGRAM	CONTINUED EDUCATION
ANU	NR	YES	YES	NO	YES
ANI	YES	YES	YES	NO	NO
BAH	NO	YES	YES	NO	YES
BLZ	NO	YES	YES	YES	NO
BVI	NO	YES	YES	NO	NO
CAY	NO	YES	YES	NO	YES
DOM	NO	YES	YES	NO	NO
GRA	NR	NR	NR	NR	NR
GUY	YES	YES	YES	NO	YES
HAI	YES	YES	YES	NO	YES
JAM	NO	YES	YES	NO	YES
MOT	NO	YES	YES	NO	NO
STL	NO	YES	YES	NO	NO
STV	NO	YES	YES	NO	NO
SUR	YES	YES	YES	NO	NO
TRT	NO	YES	YES	NO	YES

TABLE 13		
ORGANIZATION OF THE NATIONAL BLOOD SYSTEM 2007		
COUNTRY	**STAFF CERTIFICATION**	**SERVICE ACCREDITATION**
ANU	NO	NO
ANI	NO	NO
BAH	YES	NO
BLZ	NO	NO
BVI	YES	NO
CAY	YES	NO
DOM	NO	NO
GRA	NR	NR
GUY	YES	NO
HAI	NO	NO
JAM	YES	NO
MOT	NO	NO
STL	NO	NO
STV	NO	NO
SUR	NO	NO
TRT	YES	NO

LATIN AMERICAN COUNTRIES 2007

TABLE 1

BLOOD COLLECTION 2007

COUNTRY	TOTAL UNITS COLLECTED	NUMBER OF DONORS			
		AUTOLOGOUS	ALLOGENEIC		
			VOLUNTARY	REPLACEMENT	REMUNERATED
BOL	54,951	56	16,004	38,891	-
BRA (1)	1,305,785	23,013	918,644	364,128	-
CHI	238,124	-	19,329	218,795	-
COR	53,914	46	31,948	21,920	-
CUB	400,292	-	400,292	-	-
ECU	144,600	-	50,610	93,990	-
ELS	81,246	-	8,569	72,677	-
GUT	76,485	69	4,850	71,566	-
HON	52,497	54	7,941	44,383	119
MEX	1,501,641	7,967	47,041	1,446,633	-
NIC	59,755	-	23,518	36,237	-
PAN	46,947	180	2,112	35,500	9,155
PAR	54,538	61	5,690	48,787	-
PER (2)	178,060	845	14,440	162,444	331
DOR	46,590	99	7,982	36,605	1,904

BRA (1): Parcial data. Public services of the states of Paraná, Minas Gerais, Roraima, Tocantins, Ceará, Sergipe, Goiás, Mato Grosso, Mato Grosso do Sul and Amazonas. PER (2): The number of collected units (178,060) is smaller than the number of accepted donors (189,012).

TABLE 2

BLOOD COLLECTION FROM ALLOGENEIC DONORS 2007

COUNTRY	NUMBER OF UNITS COLLECTED	TYPE OF ALLOGENEIC DONOR (PERCENT)		
		VOLUNTARY	REPLACEMENT	REMUNERATED
BOL	54,895	29	71	0
BRA (1)	1,282,772	72	28	0
CHI	238,124	8	92	0
COR	53,868	59	41	0
CUB	400,292	100	0	0
ECU	144,600	35	65	0
ELS	81,246	11	90	0
GUT	76,416	6	94	0
HON	52,443	15	85	0.23
MEX	1,493,674	3	97	0
NIC	59,755	39	61	0
PAN	46,767	4	76	20
PAR	54,477	10	90	0
PER (2)	177,215	8	92	0.19
DOR	46,491	17	79	4

(*): Autologous donors not included.

BRA (1): Parcial data. Public services of the states of Paraná, Minas Gerais, Roraima, Tocantins, Ceará, Sergipe, Goiás, Mato Grosso, Mato Grosso do Sul and Amazonas. PER (2): The number of collected units (178,060) is smaller than the number of accepted donors (189,012).

TABLE 3

SELECTION OF ALLOGENEIC DONORS 2007 (*)

COUNTRY	NUMBER OF UNITS COLLECTED	NUMBER OF ALLOGENEIC DONORS					
		VOLUNTARY		REPLACEMENT		REMUNERATED	
		INTERVIEWED	DEFERRED	INTERVIEWED	DEFERRED	INTERVIEWED	DEFERRED
BOL	54,895	24,538	8,534	59,376	20,485	0	0
BRA	1,282,772	1,138,970	220,326	449,610	85,482	0	0
CHI	238,124	NR	NR	NR	NR	NR	NR
COR	53,868	NR	NR	NR	NR	NR	NR
CUB	400,292	418,000	17,708	NR	NR	0	0
ECU	144,600	NR	NR	NR	NR	0	0
ELS	81,246	10,419	1,850	104,309	31,632	0	0
GUT	76,416	NR	NR	NR	NR	0	0
HON	52,443	NR	NR	NR	NR	NR	NR
MEX	1,493,674	56,449	9,408	1,880,622	433,989	0	0
NIC	59,755	NR	NR	NR	NR	0	0
PAN	46,767	NR	NR	NR	NR	NR	NR
PAR	54,477	5,838	148	52,923	4,136	0	0
PER	177,215	21,333	5,483	245,474	72,744	555	123
DOR	46,491	9,759	1,777	46,361	9,756	2,630	726

(*): Autologous donors not included.

TABLE 4

SELECTION OF ALLOGENEIC DONORS 2007 (*)

COUNTRY	NUMBER OF UNITS COLLECTED	VOLUNTARY		REPLACEMENT		REMUNERATED	
		NUMBER INTEVIEWED	PERCENT DEFERRED	NUMBER INTEVIEWED	PERCENT DEFERRED	NUMBER INTERVIEWED	PERCENT DEFERRED
BOL	54,895	24,538	35	59,376	35	0	0
BRA	1,282,772	1,138,970	19	449,610	19	0	0
CUB	400,292	418,000	4	0	0	0	0
ELS	81,246	10,419	18	104,309	30	0	0
MEX	1,493,674	56,449	17	1,880,622	23	0	0
PAR	54,477	5,838	3	52,923	8	0	0
PER	177,215	21,333	26	245,474	30	555	22
DOR	46,491	9,759	18	46,361	21	2,630	28

(*): Autologous donors not included. Only countries with complete data.

TABLE 5

EFICIENCY OF BLOOD COLLECTION 2007 (*)

COUNTRY	NUMBER OF UNITS COLLECTED	NUMBER OF BANKS	ANNUAL COLLECTION PER BANK	DAILY COLLECTION PER BANK (260 days)
BOL	54,895	19	2,889	11.1
BRA (1)	1,282,772	519	2,472	9.5
CHI	238,124	90	2,646	10.2
COR	53,868	27	1,995	7.7
CUB	400,292	48	8,339	32.1
ECU	144,600	45	3,213	12.4
ELS	81,246	31	2,621	10.1
GUT	76,416	47	1,626	6.3
HON	52,443	24	2,185	8.4
MEX	1,493,674	196	7,621	29.3
NIC	59,755	15	3,984	15.3
PAN	46,767	26	1,799	6.9
PAR	54,477	26	2,095	8.1
PER (2)	177,215	172	1,030	4.0
DOR	46,491	54	861	3.3

(*): Autologous donors not included. Only countries with complete data.

BRA (1): Parcial results. Public service of the states of Paraná, Minas Gerais, Roraima, Tocantins, Ceará, Sergipe, Goiás, Mato Grosso, Mato Grosso do Sul and Amazonas. PER (2): The number of collected units (178,060) is less than the number of accepted donors (189,012).

TABLE 6

COVERAGE (%) OF SCREENING FOR INFECTIOUS MARKERS 2007

COUNTRY	HIV	HBsAg	HCV	SYPHILIS	*T. cruzi*	HTLV I/II	Anti-HBc
BOL	99.99	99.99	99.99	99.99	99.84	0	50.53
BRA (1)	100	100	100	100	100	NR	NR
CHI (2)	100	100	100	100	72.28	56.20	0
COR	NR	NR	NR	NR	NR	NR	NR
CUB	NR	NR	NR	NR	NA	NR	NR
ECU	100	100	100	100	100	0	0
ELS	100	100	100	100	100	NR	NR
GUT	100	100	100	100	100	0	0
HON	99.31	99.31	99.31	99.41	99.31	0	0
MEX	98.70	94.83	95.37	91.63	53.31	NR	NR
NIC	100	100	100	100	94.50	NR	NR
PAN	100	100	100	100	99.50	30.20	100
PAR	100	100	100	100	100	69.81	100
PER (3)	100	100	100	100	100	100	100
DOR (4)	100	100	100	100	NA	100	0

BRA (1): Number of screened units and informed as 100% is 918,674. CHI (2): Number of screened units for HIV-HBsAg-HCV-Syphilis is 232,818.
PER (3): Number of screened units is 184,464. DOR (4): Number of screened units is 60,269.

TABLE 7

NUMBER OF UNITS NOT TESTED FOR INFECTIOUS MARKERS 2007 (*)

COUNTRY	HIV	HBsAg	HCV	SYPHILIS	*T. cruzi*
BOL	6	6	6	6	88
CHI	-	-	-	-	66,008
HON	362	361	362	308	362
MEX	19,521	77,634	69,526	125,687	701,116
NIC	-	-	-	-	3,286
PAN	-	-	-	-	235
TOTAL	19,889	78,001	69,894	126,001	771,095

(*) Except HTLV I/II and Anti-HBc.

TABLE 8

PROPORTION (%) OF UNITS REACTIVE/ POSITIVE FOR INFECTIOUS MARKERS 2007

COUNTRY	HIV	HBsAg	HCV	SYPHILIS	*T. cruzi*	HTLV I/II	Anti-HBc
BOL	0.10	0.38	0.97	1.01	2.53	0.05	3.32
BRA	0.69	0.48	0.53	0.96	0.59	0.23	NR
CHI	0.04	0.02	NR	0.13	0.34	NR	NA
COR	0.02	0.04	0.17	0.22	0.08	0.02	1.06
CUB	NR	NR	NR	NR	NA	NR	NR
ECU	0.43	0.29	0.43	0.57	0.17	NA	NA
ELS	0.09	0.24	0.29	1.14	2.09	NR	NR
GUT	0.82	1.21	0.69	2.10	0.97	NA	NA
HON	0.25	0.43	0.43	0.75	1.06	NA	NA
MEX	0.28	0.19	0.66	0.32	0.41	NR	NR
NIC	0.26	0.32	0.62	1.02	0.21	NR	NR
PAN (1)	0.08	0.30	0.90	1.20 (1)	0.06	0.07	2.30
PAR	0.60	0.49	0.72	8.83	3.27	0.29	4.50
PER	0.39	0.49	0.81	1.43	0.77	1.11	4.61
DOR	0.40	1.33	0.42	0.68	NA	0.23	NA

PAN (1): Include units with positive and confirmed results.

TABLE 9

AVAILABILITY OF BLOOD COMPONENTS 2007

COUNTRY	% SEPARATED INTO COMPONENTS					% BLOOD AND BLOOD COMPONENTS DISCARDED					
	RBC	FFP	FP	CRYO	PL	WB	RBC	FFP	FP	CRYO	PL
BOL	38.60	26.75	5.37	2.69	12.41	12.22	8.29	30.18	20.95	4.28	23.73
BRA	84.00	14.00	74.00	7.00	46.00	3.00	13.00	12.00	37.00	1.00	21.00
CHI (1)	97.43	70.51	16.39	15.24	55.19	0	3.92	5.37 *		3.46	20.67
CUB	52.48	11.75	16.76	8.00	9.01	NR	NR	NR	NR	NR	NR
COR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
ECU	90.80	44.30	14.70	20.50	12.70	8.30	2.40	15.00	18.20	2.06	32.00
ELS	93.71	61.01	0	11.52	54.47	1.37	4.87	13.29	0.00	0.20	4.20
GUT	0	0	0	0	0	0	0	0	0	0	0
HON	70.20	58.11	0	3.78	60.26	0	0	0	0	0	0
MEX	90.73	68.70	NR	5.91	37.06	2.83	6.03	37.83	NR	19.43	26.25
NIC	67.32	56.73	8.59	2.36	55.80	38.87	2.79	1.87	0	8.73	2.31
PAN	35.40	55.00	0	3.50	21.70	1.75	1.50	0.40	0	0	8.50
PAR	58.84	45.34	6.04	5.15	36.66	5.27	5.27	4.58	1.10	0.15	6.41
PER	82.51	0	62.60	15.13	44.95	1.47	6.08	0	37.08	17.31	25.18
DOR	31.81	7.11	3.84	0.04	5.69	3.47	0.53	3.23	0	0	0.29

CHI (1): 5.37% - does not indicate if it is for FFP or FP.

TABLE 10

ORGANIZATION OF THE NATIONAL BLOOD SYSTEM 2007

COUNTRY	SPECIFIC LAW	RESPONSIBLE UNIT	SPECIFIC BUDGET	NATIONAL POLICY	NATIONAL COMMISSION
BOL	YES	YES	NO	YES	YES
BRA	YES	YES	YES	YES	YES
CHI	NO	YES	NO	NO	YES
COR	NR	NR	NR	NR	NR
CUB	YES	YES	NO	YES	YES
ECU	YES	NO	NO	NO	YES
ELS	NO	YES	NO	YES	YES
GUT	YES	YES	YES	NO	YES
HON	YES	YES	NO	YES	YES
MEX	YES	YES	NO	YES	NO
NIC	YES	YES	YES	YES	NO
PAN	NR	NR	NR	NR	NR
PAR	YES	YES	YES	YES	YES
PER	YES	YES	NO	NO	NO
DOR	YES	YES	NO	YES	YES

TABLE 11						
ORGANIZATION OF THE NATIONAL BLOOD SYSTEM 2007						
COUNTRY	**REFERENCE SERVICE**	**NATIONAL PLAN**	**NORMS DONORS**	**STANDARD OPERATIONS**	**CLINICAL GUIDELINES**	**BANKS REGISTRATION**
BOL	YES	YES	YES	YES	YES	YES
BRA	NO	NO	YES	YES	YES	YES
CHI	YES	NO	YES	YES	YES	YES
COR	NR	NR	NR	NR	NR	NR
CUB	YES	YES	YES	YES	YES	YES
ECU	YES	NO	YES	YES	YES	YES
ELS	YES	YES	YES	YES	YES	YES
GUT	YES	NO	YES	YES	NO	YES
HON	YES	YES	YES	YES	YES	NO
MEX	YES	YES	YES	YES	YES	YES
NIC	YES	NO	YES	YES	YES	YES
PAN	NR	NR	NR	NR	NR	NR
PAR	YES	YES	YES	YES	YES	YES
PER	NO	NO	NO	YES	NO	YES
DOR	NO	YES	YES	YES	NO	YES

TABLE 12						
ORGANIZATION OF THE NATIONAL BLOOD SYSTEM 2007						
COUNTRY	**QUALITY ASSURANCE POLICY**	**NATIONAL QUALITY ASSURANCE PROGRAM**	**EXTERNAL EVALUATION SEROLOGY-TTI**	**EXTERNAL EVALUATION IMMUNOHEMATOLOGY**	**INSPECTION PROGRAM**	**CONTINUED EDUCATION**
BOL	YES	YES	YES	NO	YES	YES
BRA	YES	NO	YES	YES	YES	YES
CHI	YES	YES	YES	YES	YES	NO
COR	NR	NR	NR	NR	NR	NR
CUB	YES	YES	YES	YES	YES	YES
ECU	NO	NO	YES	YES	YES	YES
ELS	YES	NO	YES	NO	YES	YES
GUT	NO	NO	YES	NO	NO	YES
HON	NO	NO	NO	NO	NO	NO
MEX	YES	YES	YES	YES	YES	YES
NIC	NO	YES	YES	NO	NO	YES
PAN	NR	NR	NR	NR	NR	NR
PAR	YES	YES	NO	NO	YES	YES
PER	NO	NO	NO	NO	YES	NO
DOR	YES	YES	YES	NO	YES	NO

TABLE 13		
ORGANIZATION OF THE NATIONAL BLOOD SYSTEM 2007		
COUNTRY	**STAFF CERTIFICATION**	**SERVICE ACCREDITATION**
BOL	YES	YES
BRA	YES	YES
CHI	NO	NO
COR	NR	NR
CUB	YES	YES
ECU	YES	NO
ELS	NO	NO
GUT	YES	NO
HON	NO	NO
MEX	NO	NO
NIC	NO	NO
PAN	NR	NR
PAR	NO	YES
PER	NO	YES
DOR	NO	NO

NATIONAL STAFF WHO SUBMITTED OFFICIAL INFORMATION

NATIONAL STAFF WHO SUBMITTED OFFICIAL INFORMATION TO THE PAN AMERICAN HEALTH ORGANIZATION CARIBBEAN COUNTRIES 2007

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COUNTRY SUMMARIES

CARIBBEAN COUNTRIES

	2005	2006	2007
ANGUILLA (ANU)			
NUMBER OF UNITS COLLECTED (1) (3)	114	99	114
NUMBER OF AUTOLOGOUS DONORS	0	0	0
PERCENT TYPE OF ALLOGENEIC DONORS			
Voluntary, altruistic donors	10	0	0
Family/Replacement donors	90	100	100
Remunerated donors	NR	0	0
PERCENT OF UNITS SCREENED (2)			
HIV	100	100	100
HBsAg	100	100	100
HCV	NR	53.00	100
Syphilis	100	100	100
HTLV I and II	100	0	0
PERCENT OF UNITS REACTIVE/ POSITIVE			
HIV	NR	0.45	0
HBsAg	NR	0	0
HCV	NR	0	0
Syphilis	0.40	0.90	0
HTLV I and II	NR	NA	0
PERCENT UNITS SEPARATED INTO COMPONENTS			
Packed red blood cells	62.00	NR	41.23
Fresh frozen plasma	NR	NR	NR
Frozen plasma	2.00	NR	NR
Cryoprecipitate	NR	NR	NR
Platelets	NR	NR	NR
PERCENT UNITS DISCARDED			
Whole blood	4.00	NR	7.89
Packed red blood cells	NR	NR	NR
Fresh frozen plasma	NA	NR	NR
Frozen plasma	NR	NR	NR
Cryoprecipitate	NA	NR	NR
Platelets	NA	NR	NR

2006 (1): The number of collected units (99) is less than the number of evaluated donors (345). The evaluated and accepted donors donate blood when it is required for patients. 2006 (2): Number donors screened 219- screening for HCV started in June 06. 2007 (3): The number of collected units (114) is less than the number of evaluated donors (437). The evaluated and accepted donors donate blood when it is required for patients.

Data submitted by: 2005: Everette Duncan, Senior Medical Technologist. 2006: Everette Duncan, Senior Medical Technologist. 2007: Everette Duncan, Senior Medical Technologist.

	2005	2006	2007
ANTIGUA AND BARBUDA (ANI)			
NUMBER OF UNITS COLLECTED	NR	1,020	986
NUMBER OF AUTOLOGOUS DONORS		1	3
PERCENT TYPE OF ALLOGENEIC DONORS			
Voluntary, altruistic donors		6	4
Family/Replacement donors		94	96
Remunerated donors		0	0
PERCENT OF UNITS SCREENED			
HIV		100	100
HBsAg		100	100
HCV		100	100
Syphilis		100	100
HTLV I and II		0	0
PERCENT OF UNITS REACTIVE/ POSITIVE			
HIV		0.30	0.20
HBsAg		0.40	1.50
HCV		0	0.70
Syphilis		0.90	0.80
HTLV I and II		NA	NA
PERCENT UNITS SEPARATED INTO COMPONENTS			
Packed red blood cells		51.10	62.90
Fresh frozen plasma		3.80	4.10
Frozen plasma		1.90	1.90
Cryoprecipitate		NR	0
Platelets		0.70	3.40
PERCENT UNITS DISCARDED			
Whole blood		8.50	8.50
Packed red blood cells		0.60	0.40
Fresh frozen plasma		0	0
Frozen plasma		0	0
Cryoprecipitate		NR	NR
Platelets		NR	NR
Data submitted by: 2006: Condon Jarvis, Chief Medical Technologist. 2007: Condon Jarvis, Chief Medical Technologist.			

	2005	2006	2007
ARUBA (ARU)			
NUMBER OF UNITS COLLECTED	2,648	NR	NR
NUMBER OF AUTOLOGOUS DONORS	8		
PERCENT TYPE OF ALLOGENEIC DONORS			
Voluntary, altruistic donors	100		
Family/Replacement donors	0		
Remunerated donors	0		
PERCENT OF UNITS SCREENED			
HIV	100		
HBsAg	100		
HCV	100		
Syphilis	100		
HTLV I and II	100		
PERCENT OF UNITS REACTIVE/ POSITIVE			
HIV	0.11		
HBsAg	0.26		
HCV	0.15		
Syphilis	0.30		
HTLV I and II	0.08		
PERCENT UNITS SEPARATED INTO COMPONENTS			
Packed red blood cells	100		
Fresh frozen plasma	45		
Frozen plasma	0		
Cryoprecipitate	0		
Platelets	100		
PERCENT UNITS DISCARDED			
Whole blood	0		
Packed red blood cells	2		
Fresh frozen plasma	8		
Frozen plasma	NA		
Cryoprecipitate	NA		
Platelets	88		
Data submitted by: 2005: Vivian Lampe, Manager			

	2005	2006	2007
BAHAMAS (BAH)			
NUMBER OF UNITS COLLECTED	5,152	5,026	5,343
NUMBER OF AUTOLOGOUS DONORS	26	13	20
PERCENT TYPE OF ALLOGENEIC DONORS			
Voluntary, altruistic donors	15	16	23
Family/Replacement donors	85	84	77
Remunerated donors	NR	0	0
PERCENT OF UNITS SCREENED (1)			
HIV	100	100	100
HBsAg	100	100	100
HCV	100	100	100
Syphilis	100	100	100
HTLV I and II	100	100	100
PERCENT OF UNITS REACTIVE/ POSITIVE			
HIV	0.26	0.17	0.30
HBsAg	0.80	0.67	0.60
HCV	0.36	0.49	0.60
Syphilis	0.53	0.59	0.90
HTLV I and II	0.28	0.33	0.40
PERCENT UNITS SEPARATED INTO COMPONENTS (2)			
Packed red blood cells	87.00	85.10	85.20
Fresh frozen plasma	30.00	24.10	24.20
Frozen plasma	NR	0	0
Cryoprecipitate	NR	0	0
Platelets	30.00	20.60	17.40
PERCENT UNITS DISCARDED			
Whole blood	74.00	89.00	1.50
Packed red blood cells	7.00	4.80	4.40
Fresh frozen plasma	15.00	13.60	3.50
Frozen plasma	NR	0	0
Cryoprecipitate	NA	0	0
Platelets	37.00	53.90	4.10
2007 (1): Autologous donors were not screened. 2007 (2): Autologous were not included.			
Data submitted by: 2005: Carolyn Azikiwe, Blood Bank Supervisor. 2006: Carolyn Azikiwe, Supervisor at Princess Margaret Hospital Blood Bank. 2007: Carolyn Azikiwe, Supervisor/ Everette Miller, Supervisor at Princess Margaret Hospital Blood Bank.			

	2005	2006	2007
BARBADOS (BAR)			
NUMBER OF UNITS COLLECTED	NR	4,164	NR
NUMBER OF AUTOLOGOUS DONORS		95	
PERCENT TYPE OF ALLOGENEIC DONORS			
Voluntary, altruistic donors		10	
Family/Replacement donors		90	
Remunerated donors		0	
PERCENT OF UNITS SCREENED			
HIV		100	
HBsAg		100	
HCV		100	
Syphilis		100	
HTLV I and II		100	
PERCENT OF UNITS REACTIVE/ POSITIVE			
HIV		0.02	
HBsAg		0.17	
HCV		0.02	
Syphilis		0.56	
HTLV I and II		0.46	
PERCENT UNITS SEPARATED INTO COMPONENTS			
Packed red blood cells		13.00	
Fresh frozen plasma		8.10	
Frozen plasma		5.20	
Cryoprecipitate		1.10	
Platelets		9.80	
PERCENT UNITS DISCARDED			
Whole blood		12.20	
Packed red blood cells		0.30	
Fresh frozen plasma		0.70	
Frozen plasma		0.30	
Cryoprecipitate		0	
Platelets		4.10	
Data submitted by: 2006: Priscilla Jordan, Medical Laboratory Technologist (DMT, BSc).			

	2005	2006	2007
BELIZE (BLZ)			
NUMBER OF UNITS COLLECTED	3,107	NR	3,233
NUMBER OF AUTOLOGOUS DONORS	0		0
PERCENT TYPE OF ALLOGENEIC DONORS			
Voluntary, altruistic donors	9		6
Family/Replacement donors	91		94
Remunerated donors	NR		0
PERCENT OF UNITS SCREENED (1)			
HIV	100		100
HBsAg	100		100
HCV (3) (4)	0		24.70
Syphilis	100		100
HTLV I and II	NR		100
PERCENT OF UNITS REACTIVE/ POSITIVE (2)(6)			
HIV	0.32		0.19
HBsAg	1.09		0.99
HCV	NA		0.13
Syphilis	0.48		0.96
HTLV I and II (3)	0		NR
PERCENT UNITS SEPARATED INTO COMPONENTS			
Packed red blood cells	35.00		24.20
Fresh frozen plasma	35.00		5.80
Frozen plasma	35.00		3.10
Cryoprecipitate (5)	NR		NR
Platelets (5)	NR		NR
PERCENT UNITS DISCARDED			
Whole blood	16.00		14.20
Packed red blood cells	3.00		2.00
Fresh frozen plasma	3.00		0.46
Frozen plasma	4.00		1.70
Cryoprecipitate	NA		NR
Platelets	NA		NR
2005 (1): All units were screened for *T. cruzi* antibodies. 2005 (2): For *T. cruzi* screening 0.45% of units were positive. 2005 (3): Not done. 2007 (4): HCV- Started October 2007. 2007 (5): NR- Not done. 2007 (6): Anti = *T. cruzi* 0.50%.			
Data submitted by: 2005: Joy Charley, Supervisor Blood Bank. 2007: Joy Robateau, Supervisor.			

	2005	2006	2007
BERMUDA (BER)			
NUMBER OF UNITS COLLECTED	NR	NR	NR
NUMBER OF AUTOLOGOUS DONORS			
PERCENT TYPE OF ALLOGENEIC DONORS			
Voluntary, altruistic donors			
Family/Replacement donors			
Remunerated donors			
PERCENT OF UNITS SCREENED			
HIV			
HBsAg			
HCV			
Syphilis			
HTLV I and II			
PERCENT OF UNITS REACTIVE/ POSITIVE			
HIV			
HBsAg			
HCV			
Syphilis			
HTLV I and II			
PERCENT UNITS SEPARATED INTO COMPONENTS			
Packed red blood cells			
Fresh frozen plasma			
Frozen plasma			
Cryoprecipitate			
Platelets			
PERCENT UNITS DISCARDED			
Whole blood			
Packed red blood cells			
Fresh frozen plasma			
Frozen plasma			
Cryoprecipitate			
Platelets			

	2005	2006	2007
BRITISH VIRGIN ISLANDS (BVI)			
NUMBER OF UNITS COLLECTED	447	433	544
NUMBER OF AUTOLOGOUS DONORS	1	1	0
PERCENT TYPE OF ALLOGENEIC DONORS			
Voluntary, altruistic donors	NR	100	100
Family/Replacement donors	100	0	0
Remunerated donors	NR	0	0
PERCENT OF UNITS SCREENED			
HIV	100	100	100
HBsAg	100	100	100
HCV	100	100	100
Syphilis	100	100	100
HTLV I and II	NR	0	0
PERCENT OF UNITS REACTIVE/ POSITIVE			
HIV	NR	0	0
HBsAg	NR	0.90	0.40
HCV	0.22	0.50	0
Syphilis	NR	0.20	0.40
HTLV I and II	NR	NA	NA
PERCENT UNITS SEPARATED INTO COMPONENTS			
Packed red blood cells	NR	NR	11.00
Fresh frozen plasma	NR	NR	11.00
Frozen plasma	NR	NR	0
Cryoprecipitate	NR	NR	NR
Platelets	NR	NR	NR
PERCENT UNITS DISCARDED			
Whole blood	2.00	NR	1.10
Packed red blood cells	NA	NR	0
Fresh frozen plasma	NA	NR	0
Frozen plasma	NA	NR	0
Cryoprecipitate	NA	NR	NR
Platelets	NA	NR	NR
Data submitted by: 2005: Allene Brewley, Laboratory Director. 2006: Allene Brewley, Laboratory Director. 2007: Allene Brewley-Roach, Laboratory Director.			

	2005	2006	2007
CAYMAN ISLAND (CAY)			
NUMBER OF UNITS COLLECTED	864	981	1,017
NUMBER OF AUTOLOGOUS DONORS	4	4	0
PERCENT TYPE OF ALLOGENEIC DONORS			
Voluntary, altruistic donors	100	100	100
Family/Replacement donors	NR	0	0
Remunerated donors	NR	0	0
PERCENT OF UNITS SCREENED			
HIV	100	100	100
HBsAg	100	100	100
HCV	100	100	100
Syphilis	100	100	100
HTLV I and II	100	100	100
PERCENT OF UNITS REACTIVE/ POSITIVE			
HIV	NR	0.50	0.30
HBsAg	NR	0	0
HCV	0.11	0.20	0.20
Syphilis	NR	0	0
HTLV I and II	NR	0	0.10
PERCENT UNITS SEPARATED INTO COMPONENTS			
Packed red blood cells	63.00	69.50	84.96
Fresh frozen plasma	26.00	34.60	26.70
Frozen plasma	NR	NA	NA
Cryoprecipitate	NR	NA	NA
Platelets (2)	NR	NA	NA
PERCENT UNITS DISCARDED			
Whole blood	NR	9.40	6.00
Packed red blood cells (1)	20.00	NR	4.10
Fresh frozen plasma	56.00	13.15	21.70
Frozen plasma	NA	NA	NA
Cryoprecipitate	NA	NA	NA
Platelets	NA	56.30	0
2005/ 2006(1): Whole blood and packed red blood cells reported together. 2006/ 2007(2): Imported Platelets.			
Data submitted by: 2005: Judith Clarke, Medical Technologist. 2006: Judith Clarke, Medical Technologist. 2007: Judith Clarke, Medical Technologist.			

	2005	2006	2007
CURACAO (CUR)			
NUMBER OF UNITS COLLECTED	6,745	NR	NR
NUMBER OF AUTOLOGOUS DONORS	13		
PERCENT TYPE OF ALLOGENEIC DONORS			
Voluntary, altruistic donors	100		
Family/Replacement donors	0		
Remunerated donors	0		
PERCENT OF UNITS SCREENED			
HIV	100		
HBsAg	100		
HCV	100		
Syphilis	100		
HTLV I and II	100		
PERCENT OF UNITS REACTIVE/ POSITIVE			
HIV	0		
HBsAg	0		
HCV	0		
Syphilis	0		
HTLV I and II	0.03		
PERCENT UNITS SEPARATED INTO COMPONENTS			
Whole blood	100		
Packed red blood cells	52.00		
Fresh frozen plasma	0		
Frozen plasma	0		
Platelets	44.00		
PERCENT UNITS DISCARDED			
Whole blood	0		
Packed red blood cells	2.00		
Fresh frozen plasma	0		
Frozen plasma	NA		
Cryoprecipitate	NA		
Platelets	5.00		
Data submitted by: 2005: Dr. A.J. Juits, Director of the Red Cross Blood Bank Foundation.			

	2005	2006	2007
DOMINICA (DOM)			
NUMBER OF UNITS COLLECTED	757	765	723
NUMBER OF AUTOLOGOUS DONORS	3	3	0
PERCENT TYPE OF ALLOGENEIC DONORS			
Voluntary, altruistic donors	5	5	3
Family/Replacement donors	95	95	97
Remunerated donors	NR	0	0
PERCENT OF UNITS SCREENED			
HIV	100	100	100
HBsAg	100	100	100
HCV	0	0	0
Syphilis	100	100	100
HTLV I and II	100	100	100
PERCENT OF UNITS REACTIVE/ POSITIVE			
HIV	0.13	0.10	NR
HBsAg	0.79	0.30	0.10
HCV	NT	NR	NA
Syphilis	2.64	2.40	1.40
HTLV I and II	1.85	1.80	1.40
PERCENT UNITS SEPARATED INTO COMPONENTS			
Packed red blood cells	94.00	87.70	91.00
Fresh frozen plasma	48.00	34.90	47.00
Frozen plasma	NR	NR	NR
Cryoprecipitate	6.00	28.60	27.00
Platelets	16.00	25.80	23.00
PERCENT UNITS DISCARDED			
Whole blood	57.00	15.90	NR
Packed red blood cells	4.00	4.20	NR
Fresh frozen plasma	8.00	8.60	NR
Frozen plasma	NA	NR	NR
Cryoprecipitate	4.00	2.70	NR
Platelets	8.00	5.10	NR
Data submitted by: 2005: Nina Pierre, Director Blood Bank. 2006: Nina Pierre, Director Blood Bank. 2007: Nina Pierre, Director Blood Bank.			

	2005	2006	2007
GRENADA (GRA)			
NUMBER OF UNITS COLLECTED	835	1,004	1,015
NUMBER OF AUTOLOGOUS DONORS	2	6	8
PERCENT TYPE OF ALLOGENEIC DONORS			
Voluntary, altruistic donors	30	34	31
Family/Replacement donors	70	66	69
Remunerated donors	NR	0	0
PERCENT OF UNITS SCREENED			
HIV	100	100	100
HBsAg	100	100	100
HCV	100	100	100
Syphilis	100	100	100
HTLV I and II	100	100	100
PERCENT OF UNITS REACTIVE/ POSITIVE			
HIV	0.12	0	0
HBsAg	1.80	0.60	0.49
HCV	0.24	0.10	0
Syphilis	1.08	0.30	0.01
HTLV I and II	0.96	0.60	1.67
PERCENT UNITS SEPARATED INTO COMPONENTS			
Packed red blood cells	99.00	98.00	99.00
Fresh frozen plasma	36.00	22.00	20.00
Frozen plasma	NR	0	0
Cryoprecipitate	NR	0	0
Platelets	5.00	1.10	0.30
PERCENT UNITS DISCARDED			
Whole blood	66.00	8.16	6.00
Packed red blood cells	10.00	17.30	15.92
Fresh frozen plasma	0.30	4.08	4.00
Frozen plasma	NA	0	0
Cryoprecipitate	NA	0	0
Platelets	12.00	0.50	0
Data submitted by: 2005: Everlyn Peters, Senior Medical Technologist. 2006: Everlyn Peters, Senior Laboratory Technologist. 2007: Everlyn Peters, Senior Laboratory Technologist.			

	2005	2006	2007
GUYANA (GUY)			
NUMBER OF UNITS COLLECTED	5,267	6,310	7,095
NUMBER OF AUTOLOGOUS DONORS	16	0	1
PERCENT TYPE OF ALLOGENEIC DONORS			
Voluntary, altruistic donors	22	31	47
Family/Replacement donors	78	69	53
Remunerated donors	0	NR	0
PERCENT OF UNITS SCREENED (2)			
HIV	100	100	100
HBsAg	100	100	100
HCV	100	100	100
Syphilis	100	100	100
HTLV I and II	0	100	100
PERCENT OF UNITS REACTIVE/ POSITIVE (2)			
HIV	0.83	0.42	0.26
HBsAg	2.01	1.50	1.65
HCV	0.46	0.40	0.50
Syphilis	0.79	1.60	1.30
HTLV I and II (1)	0	0.30	1.46
PERCENT UNITS SEPARATED INTO COMPONENTS (2)			
Packed red blood cells	62.00	NR	85.62
Fresh frozen plasma	NR	NR	69.22
Frozen plasma	NR	NR	NR
Cryoprecipitate	NR	NR	10.92
Platelets	NR	NR	5.46
PERCENT UNITS DISCARDED			
Whole blood	4.00	NR	1.24
Packed red blood cells	8.00	NR	5.63
Fresh frozen plasma	5.00	NR	1.25
Frozen plasma	4.00	NR	NR
Cryoprecipitate	0	NR	2.81
Platelets	20.00	NR	1.56
2005 (1): Not tested. 2007(2): Data only on NBTS- 5,492 units.			
Data submitted by: 2005: Clement McEwan, Medical Director. 2006: Clement McEwan, Medical Director/ Arlene Siebs, Chief Technologist Ag. 2007: Arlene Siebs, Medical Technologist.			

	2005	2006	2007
HAITI (HAI)			
NUMBER OF UNITS COLLECTED	10,823	13,622	16,594
NUMBER OF AUTOLOGOUS DONORS	0	0	0
PERCENT TYPE OF ALLOGENEIC DONORS			
Voluntary, altruistic donors	15	27	51
Family/Replacement donors	85	73	49
Remunerated donors	0	0	0
PERCENT OF UNITS SCREENED			
HIV	100	100	100
HBsAg	100	100	100
HCV	97.69	100	100
Syphilis	99.92	100	100
HTLV I and II	89.62	100	100
PERCENT OF UNITS REACTIVE/ POSITIVE			
HIV	1.58	1.87	1.41
HBsAg	3.95	4.25	4.64
HCV	0.66	0.55	0.47
Syphilis	3.13	3.31	3.39
HTLV I and II	0.96	0.47	0.62
PERCENT UNITS SEPARATED INTO COMPONENTS			
Packed red blood cells	28.00	33.90	37.35
Fresh frozen plasma	0.01	0.20	0.18
Frozen plasma	0	NR	NR
Cryoprecipitate	0	NR	0.02
Platelets	0	0.03	0.03
PERCENT UNITS DISCARDED			
Whole blood	10.00	8.14	9.53
Packed red blood cells	NR	NR	NR
Fresh frozen plasma	NR	NR	NR
Frozen plasma	0	NR	NR
Cryoprecipitate	0	NR	NR
Platelets	0	NR	NR
Data submitted by: 2005: Ernst Noel, Director National Blood Safety Program. 2006: Ernst Noel, Director National Blood Safety Program. 2007: Ernst Noel, Director National Blood Safety Program.			

	2005	2006	2007
JAMAICA (JAM)			
NUMBER OF UNITS COLLECTED	22,155	23,118	23,251
NUMBER OF AUTOLOGOUS DONORS	89	32	0
PERCENT TYPE OF ALLOGENEIC DONORS			
Voluntary, altruistic donors	10	9	17
Family/Replacement donors	90	91	83
Remunerated donors	NR	0	0
PERCENT OF UNITS SCREENED			
HIV	100	100	100
HBsAg	100	100	98.86
HCV	100	100	95.16
Syphilis	100	100	90.80
HTLV I and II	100	100	100
PERCENT OF UNITS REACTIVE/ POSITIVE			
HIV	0.50	0.55	0.43
HbsAg	0.60	0.92	0.82
HCV	0.40	0.34	0.32
Syphilis	2.30	0.65	3.46
HTLV I and II	1.60	1.90	1.61
PERCENT UNITS SEPARATED INTO COMPONENTS			
Packed red blood cells	46.00	50.00	20.33
Fresh frozen plasma	31.00	30.00	16.60
Frozen plasma	7.00	10.00	3.13
Cryoprecipitate	7.00	10.00	3.72
Platelets	9.00	10.00	7.02
PERCENT UNITS DISCARDED			
Whole blood	NR	NR	1.52
Packed red blood cells	NR	NR	6.68
Fresh frozen plasma	NR	NR	8.18
Frozen plasma	NR	NR	11.42
Cryoprecipitate	NR	NR	9.12
Platelets	NR	NR	16.16
Data submitted by: 2005: Lundie Richards, Medical Director. 2006: Lundie Richards, Director NBTS. 2007: Jennifer Thame, Director-Acting NBTS.			

	2005	2006	2007
MONTSERRAT (MOT)			
NUMBER OF UNITS COLLECTED	NR	79	81
NUMBER OF AUTOLOGOUS DONORS		0	1
PERCENT TYPE OF ALLOGENEIC DONORS			
Voluntary, altruistic donors		0	0
Family/Replacement donors		100	100
Remunerated donors		0	0
PERCENT OF UNITS SCREENED			
HIV		100	100
HBsAg		100	100
HCV		0	0
Syphilis		100	100
HTLV I and II		0	0
PERCENT OF UNITS REACTIVE/ POSITIVE (1)			
HIV		NA	0
HBsAg		NA	0
HCV		NA	NA
Syphilis		NA	0
HTLV I and II		NA	NA
PERCENT 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
PERCENT UNITS DISCARDED			
Whole blood		33.00	NR
Packed red blood cells		NR	NR
Fresh frozen plasma		NR	NR
Frozen plasma		NR	NR
Cryoprecipitate		NR	NR
Platelets		NR	NR
2006/ 2007(1): Donors are submitted to screening inmediately before the collection of blood units.			
Data submitted by: 2006: Dorothea Hazel, Epidemiologist. 2007: Brinnette Bennett, Medical Technology.			

	2005	2006	2007
SAINT KITTS AND NEVIS (SKT)			
NUMBER OF UNITS COLLECTED	423	415	NR
NUMBER OF AUTOLOGOUS DONORS	1	1	
PERCENT TYPE OF ALLOGENEIC DONORS			
Voluntary, altruistic donors	3	1	
Family/Replacement donors	97	99	
Remunerated donors	NR	0	
PERCENT OF UNITS SCREENED			
HIV	100	100	
HBsAg	100	100	
HCV	NR	0	
Syphilis	100	100	
HTLV I and II	NR	0	
PERCENT OF UNITS REACTIVE/ POSITIVE			
HIV	0.47	0.24	
HBsAg	5.67	4.10	
HCV (1)	0	0	
Syphilis	0.71	1.90	
HTLV I and II (1)	0	0	
PERCENT 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	
PERCENT UNITS DISCARDED			
Whole blood	NA	29.60	
Packed red blood cells	NA	NR	
Fresh frozen plasma	NA	NR	
Frozen plasma	NA	NR	
Cryoprecipitate	NA	NR	
Platelets	NA	NR	
2005 (1): Not tested.			
Data submitted by: 2005: Althea Aaron-Friday, Medical Technologist. 2006: Althea Aaron-Friday, Medical Technologist.			

	2005	2006	2007
SAINT LUCIA (STL)			
NUMBER OF UNITS COLLECTED	1,914	2,028	2,216
NUMBER OF AUTOLOGOUS DONORS	8	7	9
PERCENT TYPE OF ALLOGENEIC DONORS			
Voluntary, altruistic donors	82	63	77
Family/Replacement donors	18	37	23
Remunerated donors	0	0	0
PERCENT OF UNITS SCREENED (1)			
HIV	100	100	100
HBsAg	100	100	100
HCV	100	100	100
Syphilis	100	100	100
HTLV I and II	100	100	100
PERCENT OF UNITS REACTIVE/ POSITIVE			
HIV	NR	0	0.09
HBsAg	0.78	0.50	0.85
HCV	0.05	0	0.04
Syphilis	0.04	0.80	1.80
HTLV I and II	0.68	0.40	0.60
PERCENT UNITS SEPARATED INTO COMPONENTS			
Packed red blood cells	98.00	NR	100
Fresh frozen plasma	11.00	NR	27.00
Frozen plasma	44.00	NR	0
Cryoprecipitate	0.50	NR	0.05
Platelets	26.00	NR	19.00
PERCENT UNITS DISCARDED			
Whole blood	NR	NR	NR
Packed red blood cells	15.00	NR	16.00
Fresh frozen plasma	12.00	NR	3.30
Frozen plasma	93.00	NR	0
Cryoprecipitate	50.00	NR	0.05
Platelets	71.00	NR	7.30
2006 (1): Number of units screened 2,021.			
Data submitted by: 2005: Veronica Lee, Medical Technologist. 2006: Veronica Lee, Medical Technologist. 2007: Veronica Lee, Medical Technologist.			

	2005	2006	2007
SAINT VINCENT AND THE GRANADINES (STV)			
NUMBER OF UNITS COLLECTED	822	882	1,172
NUMBER OF AUTOLOGOUS DONORS	25	27	43
PERCENT TYPE OF ALLOGENEIC DONORS			
Voluntary, altruistic donors	13	7	7
Family/Replacement donors	87	93	93
Remunerated donors	NR	0	0
PERCENT OF UNITS SCREENED			
HIV	100	100	100
HBsAg	100	100	100
HCV	100	100	100
Syphilis	100	100	100
HTLV I and II	100	100	100
PERCENT OF UNITS REACTIVE/ POSITIVE			
HIV	NR	0.10	0.34
HBsAg	1.70	1.40	0.77
HCV	0.36	0.60	1.45
Syphilis	2.43	3.70	3.33
HTLV I and II	2.19	2.90	2.13
PERCENT UNITS SEPARATED INTO COMPONENTS			
Packed red blood cells	98.00	87.60	95.70
Fresh frozen plasma	20.00	14.80	14.80
Frozen plasma	NR	0	0
Cryoprecipitate	NR	0	0
Platelets	31.00	6.00	1.40
PERCENT UNITS DISCARDED			
Whole blood	42.00	0	8.00
Packed red blood cells	12.00	10.00	9.10
Fresh frozen plasma	14.00	20.30	9.20
Frozen plasma	NA	0	0
Cryoprecipitate	NA	0	0
Platelets	14.00	53.80	18.80
Data submitted by: 2005: Kamarla Questelles, Student, Medical Technologist. 2006: Dalrie Cole-John, Medical Technologist- Blood Bank. 2007: Dalrie Cole-John, Medical Technologist- Blood Bank.			

	2005	2006	2007
SURINAME (SUR)			
NUMBER OF UNITS COLLECTED (1) (2)	7,525	7,881	8,925
NUMBER OF AUTOLOGOUS DONORS	1	0	2.00
PERCENT TYPE OF ALLOGENEIC DONORS			
Voluntary, altruistic donors	100	100	100
Family/Replacement donors	NR	0	0
Remunerated donors	NR	0	0
PERCENT OF UNITS SCREENED (1) (3)			
HIV	100	100	100
HBsAg	100	100	100
HCV	100	100	100
Syphilis	100	100	100
HTLV I and II	100	100	100
PERCENT OF UNITS REACTIVE/ POSITIVE			
HIV	0.01	0.05	0.01
HBsAg	0.07	0.13	0.01
HCV	0.06	0.04	0.04
Syphilis	NR	0.03	0.03
HTLV I and II	NR	0.04	0.02
PERCENT UNITS SEPARATED INTO COMPONENTS			
Packed red blood cells	96.00	97.10	100
Fresh frozen plasma	17.00	13.80	17.20
Frozen plasma	NR	0	0
Cryoprecipitate	NR	0	0
Platelets	18.00	19.70	20.50
PERCENT UNITS DISCARDED			
Whole blood	100.00	2.90	4.10
Packed red blood cells	2.00	1.32	0.80
Fresh frozen plasma	1.00	1.00	0.13
Frozen plasma	NA	0	0
Cryoprecipitate	NA	0	0
Platelets	16.00	5.00	32.90
2006 (1): The selected first time donors should wait three months for blood donation. At the moment of the selection it is only collected a sample for screening (sample tube test). 2007 (2): First time donors must wait three months before their first donations. 2007 (3): 9,331 donors were screened.			
Data submitted by: 2005: María Tjon A. Loi, Medical Director of the National Blood Bank Suriname Red Cross Society. 2006: María Tjon A. Loi, Medical Director of the National Blood Bank Suriname Red Cross Society. 2007: María Tjon A. Loi, Medical Director of the National Blood Bank Suriname Red Cross Society.			

	2005	2006	2007
TRINIDAD AND TOBAGO (TRT)			
NUMBER OF UNITS COLLECTED	13,625	19,771	21,017
NUMBER OF AUTOLOGOUS DONORS	68	165	106
PERCENT TYPE OF ALLOGENEIC DONORS			
Voluntary, altruistic donors	13	8	6
Family/Replacement donors	87	92	94
Remunerated donors	0	0	0
PERCENT OF UNITS SCREENED (1)			
HIV	100	100	100
HBsAg	100	100	100
HCV	100	100	100
Syphilis	100	100	100
T. cruzi	NR	100	100
HTLV I and II	100	100	100
PERCENT OF UNITS REACTIVE/ POSITIVE (2)			
HIV	0.26	0.23	0.25
HBsAg	0.60	0.47	0.41
HCV	0.79	0.56	0.29
Syphilis	1.97	1.20	1.58
T. cruzi	NR	0.08	0.78
HTLV I and II	1.07	0.90	0.85
PERCENT UNITS SEPARATED INTO COMPONENTS			
Packed red blood cells	NR	70.20	69.30
Fresh frozen plasma	NR	58.00	26.00
Frozen plasma	NR	0.00	NR
Cryoprecipitate	NR	0.00	1.00
Platelets	NR	58.00	26.00
PERCENT UNITS DISCARDED			
Whole blood	NA	1.40	NR
Packed red blood cells	NA	4.40	NR
Fresh frozen plasma	NA	7.10	NR
Frozen plasma	NA	0.00	NR
Cryoprecipitate	NA	0.00	NR
Platelets	NA	5.90	NR
2005 (1): All units were screening for *T. cruzi* antibodies. 2005 (2): For *T. cruzi* 0.05 units were positives.			
Data submitted by: 2005: Kenneth Charles, Medical Director. 2006: Kenneth Charles, Medical Director. 2007: Kenneth Charles, Medical Director.			

LATIN AMERICAN COUNTRIES

	2005	2006	2007
ARGENTINA (ARG)			
NUMBER OF UNITS COLLECTED (1)	365,313	345,502	NR
NUMBER OF AUTOLOGOUS DONORS	0	0	
PERCENT TYPE OF ALLOGENEIC DONORS			
Voluntary, altruistic donors	8	11	
Family/Replacement donors	92	89	
Remunerated donors	0	0	
PERCENT OF UNITS SCREENED			
HIV	100	100	
HBsAg	100	100	
HCV	100	100	
Syphilis	100	100	
T. cruzi	100	100	
HTLV I and II	NR	100	
Anti-HBc	NR	100	
PERCENT OF UNITS REACTIVE/ POSITIVE			
HIV	0.25	0.30	
HBsAg	0.39	0.47	
HCV	0.98	0.95	
Syphilis	1.12	1.14	
T. cruzi	3.75	3.99	
HTLV I and II	NR	0.27	
Anti-HBc	NR	2.90	
PERCENT UNITS SEPARATED INTO COMPONENTS			
Packed red blood cells	87.00	90.00	
Fresh frozen plasma	61.00	51.40	
Frozen plasma	26.00	35.00	
Cryoprecipitate	22.00	7.90	
Platelets	46.00	52.3	
PERCENT UNITS DISCARDED			
Whole blood	67.00	NR	
Packed red blood cells	8.00	NR	
Fresh frozen plasma	0.06	NR	
Frozen plasma	0.03	NR	
Cryoprecipitate	10.00	NR	
Platelets	21.00	NR	
2006 (1): Data that represents the public subsector, estimating that correspond to 50% of the National Blood System practices.			
Data submitted by: 2005: Daniel Fontana, Coordinador General Plan Nacional de Sangre. 2006: Esther Mabel Maschio, Coordinadora General del Plan Nacional.			

	2005	2006	2007
BOLIVIA (BOL)			
NUMBER OF UNITS COLLECTED	46,764	49,954	54,951
NUMBER OF AUTOLOGOUS DONORS	140	113	56
PERCENT TYPE OF ALLOGENEIC DONORS			
Voluntary, altruistic donors	28	27	29
Family/Replacement donors	72	73	71
Remunerated donors	0	0	0
PERCENT OF UNITS SCREENED			
HIV	99.21	99.98	99.99
HBsAg	99.21	99.98	99.99
HCV	99.20	99.92	99.99
Syphilis	99.10	99.98	99.99
T. cruzi	99.26	90.34	99.84
HTLV I and II	0	0	NR
Anti-HBc	NR	NR	50.53
PERCENT OF UNITS REACTIVE/ POSITIVE			
HIV	0.19	0.11	0.10
HBsAg	0.47	0.40	0.38
HCV	0.75	0.66	0.97
Syphilis	0.98	0.90	1.01
T. cruzi	8.61	1.93	2.53
HTLV I and II	0	NR	0.05
Anti-HBc	NR	NR	3.32
PERCENT UNITS SEPARATED INTO COMPONENTS			
Packed red blood cells	67.00	72.30	38.60
Fresh frozen plasma	26.00	52.40	26.75
Frozen plasma	35.00	15.70	5.37
Cryoprecipitate	7.00	4.60	2.69
Platelets	16.00	17.70	12.41
PERCENT UNITS DISCARDED			
Whole blood	7.00	6.04	12.22
Packed red blood cells	6.00	13.33	8.29
Fresh frozen plasma	30.00	22.94	30.18
Frozen plasma	15.00	21.90	20.95
Cryoprecipitate	9.00	11.87	4.28
Platelets	34.00	23.93	23.73
Data submitted by: 2005: Armando Luis González Treasure, Responsable Garantía de Calidad y Hemovigilancia. 2006: María del Carmen García de Luna Orosco- Coordinadora Nacional/ Dr. Rubén Dario Roca Oyola- Responsable Técnico. 2007: María del Carmen García de Luna Orosco- Coordinadora Nacional/ Dr. Rubén Dario Roca Oyola- Responsable Técnico.			

	2005	2006	2007
BRAZIL (BRA)			
NUMBER OF UNITS COLLECTED (1)	3,738,580	3,129,882	1,305,785
NUMBER OF AUTOLOGOUS DONORS	3,759	0	23,013
PERCENT TYPE OF ALLOGENEIC DONORS			
Voluntary, altruistic donors	52	58	72
Family/Replacement donors	48	42	28
Remunerated donors	0	0	0
PERCENT OF UNITS SCREENED (2)			
HIV	100	NR	100
HBsAg	100	NR	100
HCV	100	NR	100
Syphilis	100	NR	100
T. cruzi	100	NR	100
HTLV I and II	NR	NR	NR
Anti-HBc	NR	NR	NR
PERCENT OF UNITS REACTIVE/ POSITIVE			
HIV	0.46	NR	0.69
HBsAg	0.50	NR	0.48
HCV	0.52	NR	0.53
Syphilis	0.84	NR	0.96
T. cruzi	0.61	NR	0.59
HTLV I and II	NR	NR	0.23
Anti-HBc	NR	NR	NR
PERCENT UNITS SEPARATED INTO COMPONENTS			
Packed red blood cells	38.00	NR	84.00
Fresh frozen plasma	32.00	NR	14.00
Frozen plasma	8.00	NR	74.00
Cryoprecipitate	2.00	NR	7.00
Platelets	17.00	NR	46.00
PERCENT UNITS DISCARDED			
Whole blood	NR	NR	3.00
Packed red blood cells	NR	NR	13.00
Fresh frozen plasma	NR	NR	12.00
Frozen plasma	NR	NR	37.00
Cryoprecipitate	NR	NR	1.00
Platelets	NR	NR	21.00
2007 (1): For 2007, parcial results of Brazil. Public service of the states of Paraná, Minas Gerais, Roraima, Tocantins, Ceará, Sergipe, Goiás, Mato Grosso, Mato Grosso do Sul and Amazonas. 2007 (2): Number of screened units and informed as 100% 918,674.			
Data submitted by: 2005: Vania Lucia Lima de Melo, Coordenacao da Política Nacional de Sangue e Hemoderivados. 2006: Vania Lucia Lima De Melo, Consultora del Ministerio de Salud. 2007: Danila A. Accioly Varella Barca, Assessora da Gestao da Informacao.			

	2005	2006	2007
CHILE (CHI)			
NUMBER OF UNITS COLLECTED	178,079	NR	238,124
NUMBER OF AUTOLOGOUS DONORS	178		0
PERCENT TYPE OF ALLOGENEIC DONORS			
Voluntary, altruistic donors	9		8
Family/Replacement donors	91		92
Remunerated donors	0		0
PERCENT OF UNITS SCREENED (2)			
HIV	100		100
HBsAg	100		100
HCV	100		100
Syphilis	100		100
T. cruzi	68.70		72.28
HTLV I and II	0		56.20
Anti-HBc	0		0
PERCENT OF UNITS REACTIVE/ POSITIVE			
HIV (1)	0.06		0.04
HBsAg (1)	0.04		0.02
HCV (1)	0.17		NR
Syphilis	0.50		0.13
T. cruzi	0.27		0.34
HTLV I and II	0		NR
Anti-HBc	0		NA
PERCENT UNITS SEPARATED INTO COMPONENTS			
Packed red blood cells	95.00		97.43
Fresh frozen plasma	0		70.51
Frozen plasma	88.00		16.39
Cryoprecipitate	29.00		15.24
Platelets	54.00		55.19
PERCENT UNITS DISCARDED			
Whole blood	28.00		0
Packed red blood cells	6.00		3.92
Fresh frozen plasma (3)	0		*
Frozen plasma (3)	55.00		*
Cryoprecipitate	10.00		3.46
Platelets	28.00		20.67
2005 (1): Confirmed positives. 2007 (2): Number of screened units for HIV-HBsAg-HCV-Syphilis 232,818. 2007 (3*): 5.37%- does not indicate if it is for FP or FFP.			
Data submitted by: 2005: Homero Vásquez, Departamento de Calidad en Salud. 2007: María Cristina Martínez, Secretaria Ejecutiva de la CNST.			

	2005	2006	2007
COLOMBIA (COL)			
NUMBER OF UNITS COLLECTED	527,711	552,421	NR
NUMBER OF AUTOLOGOUS DONORS	10,554	943	
PERCENT TYPE OF ALLOGENEIC DONORS			
Voluntary, altruistic donors	58	61	
Family/Replacement donors	42	39	
Remunerated donors	0	0	
PERCENT OF UNITS SCREENED			
HIV	99.99	99.99	
HBsAg	99.99	100	
HCV	99.99	99.99	
Syphilis	99.99	99.99	
T. cruzi	99.99	99.99	
HTLV I and II	0	58.60	
Anti-HBc	0	64.40	
PERCENT OF UNITS REACTIVE/ POSITIVE			
HIV	0.34	0.46	
HBsAg	0.39	0.35	
HCV	0.54	0.57	
Syphilis	1.43	1.51	
T. cruzi	0.41	0.40	
HTLV I and II	0	0.27	
Anti-HBc	0	2.86	
PERCENT UNITS SEPARATED INTO COMPONENTS			
Packed red blood cells	39.00	96.80	
Fresh frozen plasma	28.00	70.20	
Frozen plasma	0	NR	
Cryoprecipitate	3.00	7.20	
Platelets	17.00	45.10	
PERCENT UNITS DISCARDED			
Whole blood	2.00	1.20	
Packed red blood cells	10.00	10.35	
Fresh frozen plasma	69.00	65.10	
Frozen plasma	0	NR	
Cryoprecipitate	2.00	1.60	
Platelets	18.00	21.80	
Data submitted by: 2005: Mauricio Beltrán Durán, Coordinador de la Red Nacional de Bancos de Sangre. 2006: Luis Eduardo Mejía Mejía, Director General del Instituto Nacional de Salud/ Mauricio Beltrán Durán, Coordinador Red Nacional de Bancos de Sangre.			

	2005	2006	2007
COSTA RICA (COR)			
NUMBER OF UNITS COLLECTED	54,170	54,170	53,914
NUMBER OF AUTOLOGOUS DONORS	11	NR	46
PERCENT TYPE OF ALLOGENEIC DONORS			
Voluntary, altruistic donors	59	NR	59
Family/Replacement donors	41	NR	41
Remunerated donors	0	0	0
PERCENT OF UNITS SCREENED			
HIV	100	100	NR
HBsAg	100	100	NR
HCV	100	100	NR
Syphilis	100	100	NR
T. cruzi	100	100	NR
HTLV I and II	0	NR	NR
Anti-HBc	0	100	NR
PERCENT OF UNITS REACTIVE/ POSITIVE (1)			
HIV	0.03	0.11	0.02
HBsAg	0.10	0.23	0.04
HCV	0.09	1.30	0.17
Syphilis	0.18	0.55	0.22
T. cruzi	0.09	0.34	0.08
HTLV I and II	0	0.33	0.02
Anti-HBc	0	2.61	1.06
PERCENT UNITS SEPARATED INTO COMPONENTS			
Packed red blood cells	89.00	92.00	NR
Fresh frozen plasma	0	0	NR
Frozen plasma	0	92.00	NR
Cryoprecipitate	15.00	15.00	NR
Platelets	71.00	71.00	NR
PERCENT UNITS DISCARDED			
Whole blood	28.00	2.84	NR
Packed red blood cells	23.00	2.48	NR
Fresh frozen plasma	NA	0	NR
Frozen plasma	NA	21.00	NR
Cryoprecipitate	15.00	0.05	NR
Platelets	63.00	12.08	NR
2005 (1): Confirmadas positivas.			
Data submitted by: 2005: José Luis Salas Oviedo, Jefe de la Sección de Laboratorios Clínicos y Bancos de Sangre. 2006: José Luis Salas Oviedo, Jefe del Área de Laboratorios Clínicos y Bancos de Sangre. 2007: Vilma Carvajal Gutiérrez, Jefa del Área de Regulación y Sistematización de Laboratorios Clínicos y Bancos de Sangre.			

	2005	2006	2007
CUBA (CUB)			
NUMBER OF UNITS COLLECTED	495,343	475,959	400,292
NUMBER OF AUTOLOGOUS DONORS	0	0	0
PERCENT TYPE OF ALLOGENEIC DONORS			
Voluntary, altruistic donors	100	100	100
Family/Replacement donors	0	0	0
Remunerated donors	0	0	0
PERCENT OF UNITS SCREENED			
HIV	100	100	NR
HBsAg	100	100	NR
HCV	100	100	NR
Syphilis	100	100	NR
T. cruzi	NA	NA	NA
HTLV I and II	NR	NR	NR
Anti-HBc	NR	NR	NR
PERCENT OF UNITS REACTIVE/ POSITIVE			
HIV	0.02	0.02	NR
HBsAg	0.51	0.49	NR
HCV	0.60	0.53	NR
Syphilis	0.52	0.59	NR
T. cruzi	NA	NA	NA
HTLV I and II	0	NR	NR
Anti-HBc	0	NR	NR
PERCENT UNITS SEPARATED INTO COMPONENTS			
Packed red blood cells	NR	43.16	52.48
Fresh frozen plasma	NR	7.72	11.75
Frozen plasma	NR	2.49	16.76
Cryoprecipitate	NR	8.20	8.00
Platelets	NR	6.83	9.01
PERCENT UNITS DISCARDED			
Whole blood	NR	NR	NR
Packed red blood cells	NR	NR	NR
Fresh frozen plasma	NR	NR	NR
Frozen plasma	NR	NR	NR
Cryoprecipitate	NR	NR	NR
Platelets	NR	NR	NR
Data submitted by: 2005: José M. Ballester, Director. 2006: José M. Ballester, Director. 2007: José M. Ballester, Director.			

	2005	2006	2007
ECUADOR (ECU)			
NUMBER OF UNITS COLLECTED	124,724	124,724	144,600
NUMBER OF AUTOLOGOUS DONORS	NR	NR	0
PERCENT TYPE OF ALLOGENEIC DONORS			
Voluntary, altruistic donors	NR	NR	35
Family/Replacement donors	NR	NR	65
Remunerated donors	NR	NR	0
PERCENT OF UNITS SCREENED			
HIV	100	100	100
HBsAg	100	100	100
HCV	100	100	100
Syphilis	100	100	100
T. cruzi	100	90.00	100
HTLV I and II	0	0	0
Anti-HBc	0	NR	0
PERCENT OF UNITS REACTIVE/ POSITIVE			
HIV (1)	0.006	0.59	0.43
HBsAg	0.34	0.34	0.29
HCV (1)	0.01	0.59	0.43
Syphilis (1)	0.02	0.82	0.57
***T. cruzi* (1)**	0.01	0.14	0.17
HTLV I and II	0	NR	NA
Anti-HBc	0	NR	NA
PERCENT UNITS SEPARATED INTO COMPONENTS			
Packed red blood cells	77.00	77.20	90.80
Fresh frozen plasma	46.00	45.60	44.30
Frozen plasma	17.00	16.70	14.70
Cryoprecipitate	18.00	18.30	20.50
Platelets	31.00	31.50	12.70
PERCENT UNITS DISCARDED			
Whole blood	6.00	6.00	8.30
Packed red blood cells	5.00	4.92	2.40
Fresh frozen plasma	2.00	1.85	15.00
Frozen plasma	55.00	54.90	18.20
Cryoprecipitate	7.00	7.20	2.06
Platelets	13.00	12.80	32.00
2005 (1): Confirmed positive.			
Data submitted by: 2005: Marco Antonio Herdoíza Holguín, Secretario Nacional de Bancos. 2006: Marco Antonio Herdoiza Holguin, Secretario Nacional de Bancos. 2007: Marco Antonio Herdoiza Holguin, Secretario Nacional de Bancos.			

	2005	2006	2007
EL SALVADOR (ELS)			
NUMBER OF UNITS COLLECTED	80,142	80,460	81,246
NUMBER OF AUTOLOGOUS DONORS	1	0	0
PERCENT TYPE OF ALLOGENEIC DONORS			
Voluntary, altruistic donors	10	11	11
Family/Replacement donors	90	89	90
Remunerated donors	0	0	0
PERCENT OF UNITS SCREENED			
HIV	100	100	100
HBsAg	100	100	100
HCV	100	100	100
Syphilis	100	100	100
T. cruzi	100	100	100
HTLV I and II	NR	NR	NR
Anti-HBc	NR	NR	NR
PERCENT OF UNITS REACTIVE/ POSITIVE			
HIV	0.09	0.10	0.09
HBsAg	0.28	0.24	0.24
HCV	0.19	0.32	0.29
Syphilis	1.02	0.83	1.14
T. cruzi	2.40	2.17	2.09
HTLV I and II	0	NR	NR
Anti-HBc	0	NR	NR
PERCENT UNITS SEPARATED INTO COMPONENTS			
Packed red blood cells	93.00	95.00	93.71
Fresh frozen plasma	NR	68.00	61.01
Frozen plasma	NR	NR	0
Cryoprecipitate	NR	9.40	11.52
Platelets	NR	52.00	54.47
PERCENT UNITS DISCARDED			
Whole blood	6.00	32.00	1.37
Packed red blood cells	NR	4.00	4.87
Fresh frozen plasma	NR	16.00	13.29
Frozen plasma	NR	NR	0.0
Cryoprecipitate	NR	4.00	0.20
Platelets	NR	10.00	4.20
Data submitted by: 2005: Ana Vilma Guevara de Aguilar, Jefa de Área Clínica. 2006: Ana Vilma Guevara de Aguilar, Jefa de Área Clínica. 2007: Ana Vilma Guevara de Aguilar, Jefa de Área Clínica.			

	2005	2006	2007
GUATEMALA (GUT)			
NUMBER OF UNITS COLLECTED	77,290	NR	76,485
NUMBER OF AUTOLOGOUS DONORS	23		69
PERCENT TYPE OF ALLOGENEIC DONORS			
Voluntary, altruistic donors	4		6
Family/Replacement donors	96		94
Remunerated donors	0		0
PERCENT OF UNITS SCREENED			
HIV	100		100
HBsAg	100		100
HCV	100		100
Syphilis	100		100
T. cruzi	100		100
HTLV I and II	0		0
Anti-HBc	0		0
PERCENT OF UNITS REACTIVE/ POSITIVE			
HIV	0.61		0.82
HBsAg	0.80		1.21
HCV	0.93		0.69
Syphilis	2.65		2.10
T. cruzi	1.40		0.97
HTLV I and II	0		NA
Anti-HBc	0		NA
PERCENT UNITS SEPARATED INTO COMPONENTS			
Packed red blood cells	NR		0
Fresh frozen plasma	NR		0
Frozen plasma	NR		0
Cryoprecipitate	NR		0
Platelets	NR		0
PERCENT UNITS DISCARDED			
Whole blood	7.00		0
Packed red blood cells	8.00		0
Fresh frozen plasma	NA		0
Frozen plasma	11.00		0
Cryoprecipitate	0.40		0
Platelets	6.00		0
Data submitted by: 2005: Amelia Flores, Coordinadora del Programa de Medicina Transfusional y Bancos. 2007: Claudia María García González, Coordinadora del Programa de Medicina Transfusional y Bancos de Sangre.			

	2005	2006	2007
HONDURAS (HON)			
NUMBER OF UNITS COLLECTED	52,317	NR	52,497
NUMBER OF AUTOLOGOUS DONORS	52		54
PERCENT TYPE OF ALLOGENEIC DONORS			
Voluntary, altruistic donors	NR		15
Family/Replacement donors	NR		85
Remunerated donors	NR		0.23
PERCENT OF UNITS SCREENED			
HIV	100		99.31
HBsAg	100		99.31
HCV	99.84		99.31
Syphilis	100		99.41
T. cruzi	100		99.31
HTLV I and II	0		0
Anti-HBc	0		0
PERCENT OF UNITS REACTIVE/ POSITIVE			
HIV	0.24		0.25
HBsAg	0.30		0.43
HCV	0.99		0.43
Syphilis	0.98		0.75
T. cruzi	1.47		1.06
HTLV I and II	0		NA
Anti-HBc	0		NA
PERCENT UNITS SEPARATED INTO COMPONENTS			
Packed red blood cells	32.00		70.20
Fresh frozen plasma	0		58.11
Frozen plasma	24.00		0
Cryoprecipitate	3.00		3.78
Platelets	27.00		60.26
PERCENT UNITS DISCARDED			
Whole blood	NR		0
Packed red blood cells	NR		0
Fresh frozen plasma	NR		0
Frozen plasma	NR		0
Cryoprecipitate	NR		0
Platelets	NR		0
Data submitted by: 2005: Inés Adela Zelaya Pineda, Jefa del Departamento de Bancos de Sangre y Servicios de Transfusión. 2007: Inés Adela Zelaya Pineda, Jefa del Departamento de Bancos de Sangre y Servicios de Transfusión/ Elizabeth Vinella, Directora del Programa Nacional de Sangre.			

	2005	2006	2007
MEXICO (MEX)			
NUMBER OF UNITS COLLECTED	1,351,204	1,400,137	1,501,641
NUMBER OF AUTOLOGOUS DONORS	3,378	5,506	7,967
PERCENT TYPE OF ALLOGENEIC DONORS			
Voluntary, altruistic donors	4	4	3
Family/Replacement donors	96	97	97
Remunerated donors	0	0	0
PERCENT OF UNITS SCREENED			
HIV	96.62	94.09	98.70
HBsAg	96.22	93.60	94.83
HCV	96.47	93.98	95.37
Syphilis	91.31	89.39	91.63
T. cruzi	36.34	42.62	53.31
HTLV I and II	NR	NR	NR
Anti-HBc	NR	NR	NR
PERCENT OF UNITS REACTIVE/ POSITIVE			
HIV	0.29	0.38	0.28
HBsAg	0.22	0.20	0.19
HCV	0.64	0.68	0.66
Syphilis	0.24	0.30	0.32
T. cruzi	0.50	0.50	0.41
HTLV I and II	NR	NR	NR
Anti-HBc	NR	NR	NR
PERCENT UNITS SEPARATED INTO COMPONENTS			
Packed red blood cells	88.00	91.40	90.73
Fresh frozen plasma	66.00	69.20	68.70
Frozen plasma	NR	19.80	NR
Cryoprecipitate	7.00	6.38	5.91
Platelets	36.00	37.80	37.06
PERCENT UNITS DISCARDED			
Whole blood	2.00	2.85	2.83
Packed red blood cells	6.00	5.88	6.03
Fresh frozen plasma	32.00	22.50	37.83
Frozen plasma	NA	18.40	NR
Cryoprecipitate	15.00	1.13	19.43
Platelets	26.00	8.97	26.25
Data submitted by: 2005: Rafael Antonio Marín y López, Director General. 2006: C. José de Jesús Estrada Chavez, Jefe del Departamento de Metodología. 2007: Rafael Antonio Marín y López, Director General.			

	2005	2006	2007
NICARAGUA (NIC)			
NUMBER OF UNITS COLLECTED	54,117	53,970	59,755
NUMBER OF AUTOLOGOUS DONORS	0	0	0
PERCENT TYPE OF ALLOGENEIC DONORS			
Voluntary, altruistic donors	44	46	39
Family/Replacement donors	56	54	61
Remunerated donors		0	0
PERCENT OF UNITS SCREENED			
HIV	100	91.84	100
HBsAg	100	91.28	100
HCV	98.90	91.03	100
Syphilis	100	91.43	100
T. cruzi	100	89.96	94.50
HTLV I and II	0	NR	NR
Anti-HBc	0	NR	NR
PERCENT OF UNITS REACTIVE/ POSITIVE			
HIV	0.80	0.84	0.26
HBsAg	0.03	1.32	0.32
HCV	0.73	0.47	0.62
Syphilis	1.36	0.90	1.02
T. cruzi	0.90	0.89	0.21
HTLV I and II	0	NR	NR
Anti-HBc	0	NR	NR
PERCENT UNITS SEPARATED INTO COMPONENTS			
Packed red blood cells	78.00	68.77	67.32
Fresh frozen plasma	5.00	47.80	56.73
Frozen plasma	64.00	3.00	8.59
Cryoprecipitate	1.00	0	2.36
Platelets	52.00	26.42	55.80
PERCENT UNITS DISCARDED			
Whole blood	90.00	3.99	38.87
Packed red blood cells	1.00	1.53	2.79
Fresh frozen plasma	0.00	1.54	1.87
Frozen plasma	1.00	0	0
Cryoprecipitate	0.20	0	8.73
Platelets	1.00	1.70	2.31
Data submitted by: 2005: Justo Reyes Cerros, Director de Microbiología. 2006: Alcides González Mairena, Director General. 2007: Alcides González Mairena, Director General.			

	2005	2006	2007
PANAMA (PAN)			
NUMBER OF UNITS COLLECTED	42,771	45,650	46,947
NUMBER OF AUTOLOGOUS DONORS	0	NR	180
PERCENT TYPE OF ALLOGENEIC DONORS			
Voluntary, altruistic donors	3	NR	4
Family/Replacement donors	70	NR	76
Remunerated donors	27	NR	20
PERCENT OF UNITS SCREENED			
HIV	100	100	100
HBsAg	100	100	100
HCV	100	100	100
Syphilis	100	100	100
T. cruzi	97.64	97.90	99.50
HTLV I and II	0	24.70	30.20
Anti-HBc	0	100	100
PERCENT OF UNITS REACTIVE/ POSITIVE (2)			
HIV	0.07	0.06	0.08
HBsAg	0.27	0.29	0.30
HCV	0.67	0.32	0.90
Syphilis (1)	0.15	0.30	*1.20
T. cruzi	0.12	0.15	0.06
HTLV I and II	0	0.04	0.07
Anti-HBc	0	NR	2.30
PERCENT UNITS SEPARATED INTO COMPONENTS			
Packed red blood cells	NR	55.00	35.40
Fresh frozen plasma	NR	18.30	55.00
Frozen plasma	NR	0	0
Cryoprecipitate	NR	3.10	3.50
Platelets	NR	22.50	21.70
PERCENT UNITS DISCARDED			
Whole blood	NR	1.97	1.75
Packed red blood cells	NR	1.14	1.50
Fresh frozen plasma	NR	0.63	0.40
Frozen plasma	NR	0.0	0
Cryoprecipitate	NR	0.0	0
Platelets	NR	7.70	8.50
2005 (1): Confirmed positive. 2007 (2*): Include units with confirmed and positive results.			
Data submitted by: 2005: Gilma S. Bosquez, Hospital Santo Tomás. 2006: Gilma S. Bosquez, Jefa Técnica del Banco de Sangre. 2007: Heriberto Espino, Jefe Médico/ Gilma S. Bosquez, Jefa Técnica.			

	2005	2006	2007
PARAGUAY (PAR)			
NUMBER OF UNITS COLLECTED	47,060	51,153	54,538
NUMBER OF AUTOLOGOUS DONORS	56	42	61
PERCENT TYPE OF ALLOGENEIC DONORS			
Voluntary, altruistic donors	10	9	10
Family/Replacement donors	90	91	90
Remunerated donors	0.006	0.004	0
PERCENT OF UNITS SCREENED			
HIV	100	99.99	100
HBsAg	100	99.99	100
HCV	99.83	99.99	100
Syphilis	100	99.99	100
T. cruzi	99.83	99.99	100
HTLV I and II	0	49.45	69.81
Anti-HBc	0	90.98	100
PERCENT OF UNITS REACTIVE/ POSITIVE			
HIV	0.28	0.45	0.60
HBsAg	0.31	0.47	0.49
HCV	0.58	0.69	0.72
Syphilis	5.51	8.33	8.83
T. cruzi	3.30	3.29	3.27
HTLV I and II	0	0.29	0.29
Anti-HBc	0	4.12	4.50
PERCENT UNITS SEPARATED INTO COMPONENTS			
Packed red blood cells	55.00	63.98	58.84
Fresh frozen plasma	38.00	39.26	45.34
Frozen plasma	8.00	9.02	6.04
Cryoprecipitate	3.00	4.18	5.15
Platelets	24.00	25.86	36.66
PERCENT UNITS DISCARDED			
Whole blood	9.00	6.79	5.27
Packed red blood cells	5.00	3.73	5.27
Fresh frozen plasma	6.00	3.74	4.58
Frozen plasma	3.00	2.44	1.10
Cryoprecipitate	0.01	0.02	0.15
Platelets	10.00	5.34	6.41
Data submitted by: 2005: Angélica Samudio, Directora del Programa Nacional de Sangre. 2006: María Ofelia Lemir de Zelada, Coordinadora de la Red Nacional de Servicios de Sangre. 2007: Angélica Samudio, Directora/ María Ofelia lemir de Zelada, Coordinadora de la Red Nacional de Servicios de Sangre.			

	2005	2006	2007
PERU (PER)			
NUMBER OF UNITS COLLECTED (1) (4)	179,721	174,196	178,060
NUMBER OF AUTOLOGOUS DONORS	359	411	845
PERCENT TYPE OF ALLOGENEIC DONORS			
Voluntary, altruistic donors	5	7	8
Family/Replacement donors	95	93	92
Remunerated donors	0.17	0.3	0.19
PERCENT OF UNITS SCREENED (2) (5)			
HIV	76.76	100	100
HBsAg	76.34	100	100
HCV	76.38	100	100
Syphilis	76.61	100	100
T. cruzi	76.46	100	100
HTLV I and II	0	100	100
Anti-HBc	0	100	100
PERCENT OF UNITS REACTIVE/ POSITIVE			
HIV	0.51	0.51	0.39
HBsAg	0.62	0.51	0.49
HCV	0.92	1.22	0.81
Syphilis	1.30	1.90	1.43
T. cruzi	0.57	1.02	0.77
HTLV I and II	0	1.52	1.11
Anti-HBc	0	6.05	4.61
PERCENT UNITS SEPARATED INTO COMPONENTS (3)			
Packed red blood cells	NR	92.02	82.51
Fresh frozen plasma	NR	NR	0
Frozen plasma	NR	66.81	62.60
Cryoprecipitate	NR	10.36	15.13
Platelets	NR	54.00	44.95
PERCENT UNITS DISCARDED			
Whole blood	NR	1.65	1.47
Packed red blood cells	9.00	4.16	6.08
Fresh frozen plasma	33.00	NR	0
Frozen plasma	0.00	38.47	37.08
Cryoprecipitate	7.00	12.75	17.31
Platelets	26.00	29.78	25.18

2006 (1): The number of collected units (174,196) is less than the number of accepted donors (195,682). 2006 (2): Number of accepted donors 191,406; number of collected units 174,196. 2006 (3): Number of eligible units 162,054. 2007 (4): The number of collected units (178,060) is less than the number of accepted donors (189,012). 2007 (5): Number of screened units 184,464.

Data submitted by: 2005: Nelly Borja Santa Cruz, Coordinadora de PRONAHEBAS. 2006: Norberto Quezada Velásquez, Coordinador de PRONAHEBAS. 2007: Norberto Quezada Velásquez, Coordinador de PRONAHEBAS.

	2005	2006	2007
DOMINICAN REPUBLIC (DOR)			
NUMBER OF UNITS COLLECTED	62,120	64,113	46,590
NUMBER OF AUTOLOGOUS DONORS	43	0	99
PERCENT TYPE OF ALLOGENEIC DONORS			
Voluntary, altruistic donors	20	23	17
Family/Replacement donors	76	72	79
Remunerated donors	4	5	4
PERCENT OF UNITS SCREENED (1)			
HIV	100	100.0	100
HBsAg	100	99.99	100
HCV	100	99.99	100
Syphilis	100	99.85	100
T. cruzi	NA	NA	NA
HTLV I and II	0	88.80	100
Anti-HBc	0	NR	0
PERCENT OF UNITS REACTIVE/ POSITIVE			
HIV	0.42	0.58	0.40
HBsAg	1.66	1.22	1.33
HCV	0.66	0.47	0.42
Syphilis	1.00	1.04	0.68
T. cruzi	NA	NA	NA
HTLV I and II	0	0.27	0.23
Anti-HBc	0	NR	NR
PERCENT UNITS SEPARATED INTO COMPONENTS			
Packed red blood cells	78.00	32.18	31.81
Fresh frozen plasma	5.00	4.70	7.11
Frozen plasma	6.00	9.00	3.84
Cryoprecipitate	0.20	0.07	0.04
Platelets	5.00	6.09	5.69
PERCENT UNITS DISCARDED			
Whole blood	4.00	2.27	3.47
Packed red blood cells	0.60	0.35	0.53
Fresh frozen plasma	3.00	3.56	3.23
Frozen plasma	0.60	0	0
Cryoprecipitate	0	0	0
Platelets	0.30	0.31	0.29
2006 (1): The number of screened units (HIV: 72,875- HBsAg: 72,871- HCV: 72,868- Syphilis: 72,767- HTLV: 64,713) is higher than the number of collected units. 2007 (1): Number of screened units 60,269.			
Data submitted by: 2005: Sócrates E. Sosa Peña, Director del Programa Nacional de Bancos de Sangre. 2006: Sócrates E. Sosa Peña, Director del Programa Nacional de Bancos de Sangre. 2007: Sócrates E. Sosa Peña, Director del Programa Nacional de Bancos de Sangre.			

	2005	2006	2007
URUGUAY (URU)			
NUMBER OF UNITS COLLECTED	95,686	NR	NR
NUMBER OF AUTOLOGOUS DONORS	287		
PERCENT TYPE OF ALLOGENEIC DONORS			
Voluntary, altruistic donors	26		
Family/Replacement donors	74		
Remunerated donors	0		
PERCENT OF UNITS SCREENED			
HIV	100		
HBsAg	100		
HCV	100		
Syphilis	100		
T. cruzi	100		
HTLV I and II	0		
Anti-HBc	0		
PERCENT OF UNITS REACTIVE/ POSITIVE			
HIV	0.05		
HBsAg	0.17		
HCV	0.30		
Syphilis	0.54		
T. cruzi	0		
HTLV I and II	0.26		
Anti-HBc	0		
PERCENT UNITS SEPARATED INTO COMPONENTS			
Packed red blood cells	NR		
Fresh frozen plasma	NR		
Frozen plasma	NR		
Cryoprecipitate	NR		
Platelets	NR		
PERCENT UNITS DISCARDED			
Whole blood	NR		
Packed red blood cells	NR		
Fresh frozen plasma	NR		
Frozen plasma	NR		
Cryoprecipitate	NR		
Platelets	NR		
Data submitted by: 2005: Andrew Miller, Director del Servicio Nacional de Sangre.			

	2005	2006	2007
VENEZUELA (VEN)			
NUMBER OF UNITS COLLECTED	403,625	NR	NR
NUMBER OF AUTOLOGOUS DONORS	0		
PERCENT TYPE OF ALLOGENEIC DONORS			
Voluntary, altruistic donors	7		
Family/Replacement donors	93		
Remunerated donors	0		
PERCENT OF UNITS SCREENED			
HIV	100		
HBsAg	100		
HCV	100		
Syphilis	100		
T. cruzi	100		
HTLV I and II	0		
Anti-HBc	0		
PERCENT OF UNITS REACTIVE/ POSITIVE			
HIV	0.35		
HBsAg	1.25		
HCV	0.37		
Syphilis	1.13		
T. cruzi	NR		
HTLV I and II	0.61		
Anti-HBc	NR		
PERCENT UNITS SEPARATED INTO COMPONENTS			
Packed red blood cells	81.00		
Fresh frozen plasma	69.00		
Frozen plasma	10.00		
Cryoprecipitate	8.00		
Platelets	36.00		
PERCENT UNITS DISCARDED			
Whole blood	NR		
Packed red blood cells	NR		
Fresh frozen plasma	NR		
Frozen plasma	NR		
Cryoprecipitate	NR		
Platelets	NR		
Data submitted by: 2005: Maryory Chávez, Coordinadora del Programa Nacional de Bancos de Sangre.			

ANNEX

PAN AMERICAN HEALTH ORGANIZATION
WORLD HEALTH ORGANIZATION

48th DIRECTING COUNCIL
60th SESSION OF THE REGIONAL COMMITTEE

Washington, D.C., USA, 29 September-3 October 2008

Provisional Agenda Item 4.7

CD48/11 (Eng.)
6 August 2008
ORIGINAL: ENGLISH

IMPROVING BLOOD AVAILABILITY AND TRANSFUSION SAFETY IN THE AMERICAS

Background

1. Since 1975 the World Health Assembly, the World Health Organization Executive Board and the Directing Council of the Pan American Health Organization have adopted several resolutions urging Member States to promote the establishment of coordinated blood services based on voluntary non-remunerated blood donation and on quality assurance, and to enact legislation and formulate national blood policies that facilitate the cost-effective organization and operation of blood services. The Governing Bodies have made it clear that it is necessary for the Member States to focus on blood transfusion safety as a means to improve patient care and to reduce the burden of HIV and other infections in the general population.

2. In 1999 the PAHO Directing Council adopted Resolution CD41.R15 and a Plan of Action that pursued the universal screening of blood units for HIV, hepatitis B (HBV) hepatitis C (HCV), and syphilis in the Region, and for *T. cruzi* in continental Latin America, universal participation of blood banks in programs of external evaluation of performance, 50% voluntary blood donation and the monitoring of high-risk groups for transfusion-transmitted infections. These expected results were not achieved by 2005.

3. In 2005, the PAHO Directing Council adopted Resolution CD46.R5, which urged the Member States to adopt the Regional Plan of Action for Transfusion Safety 2006-2010 and requested the Director to report periodically to the Governing Bodies on the progress of its implementation.

4. A report on the challenges to achieve blood sufficiency, availability and safety in the Americas was presented to the Executive Committee during its 142nd Session in June 2008. The Executive Committee recommended that the Directing Council adopt a resolution as a means to enhance regional efforts to achieve the objective of the Regional Plan of Action for Transfusion Safety 2006-2010.

5. The objective of the Regional Plan of Action is to contribute to the reduction of mortality and to the improvement of patient care by making safe blood available in a timely manner for all those patients who need it. The Plan involves four strategies: Planning and Management of the National Blood Network System, Promotion of Voluntary Blood Donation, Quality Assurance, and Appropriate Use of Blood and Blood Components, and identified nine indicators of progress based on regional data for the period 2000-2003.

Regional Situation in 2005

Screening Coverage

6. In 2003, 99.93% of the units collected by the Latin American and Caribbean countries that officially submitted reports to the Pan American Health Organization were screened for HIV, 99.86% were screened for HBV, 99.52% were screened for HCV, and 99.84% were screened for syphilis. The proportions of units that were screened for the four markers decreased to below 99% in 2004 and 2005 (Table 1). A negative trend was also observed for *T. cruzi*: the rates of screening were 87.17%, 86.20% and 87.06% in 2003, 2004 and 2005, respectively (Table 2).

7. In 2003 there were 19 (46%) countries that reported universal screening of all markers; there were 17 (41%) and 22 (54%) countries that screened all the collected units in 2004 and 2005, respectively (Table 3). Bolivia, Colombia, Honduras, Mexico, Nicaragua, Paraguay and Peru did not test all units for markers of viral infections in 2005. Nevertheless, two countries—Mexico and Peru—contributed 98.8% and 99.6% of the units that were not screened for HIV in 2004 and 2005, respectively. Anguilla, Belize, Dominica, and Saint Kitts and Nevis reported zero screening for HCV in 2005.

External Performance Evaluation

8. The Regional Programs for External Performance Evaluation continued with support from the Spanish Agency for International Cooperation, the UKNEQAS, the International Consortium for Blood Safety, the Hemocentro in São Paulo, Brazil, and the Sevilla Transfusion Center in Spain (Tables 4 and 6). The purpose of these regional programs is to support the national reference centers that are responsible for organizing the national programs with participation of all local services. Local participation,

nevertheless, is limited: in 2003 there were 1,330 (53.01%) national centers participating in national programs for external performance evaluation of serology for transfusion-transmitted infections. The proportion of participants decreased to 46.66% and 46.42% in 2004 and 2005 (Table 5).

9. Results from both the Regional and National Programs for External Performance Evaluation indicate that the quality of screening for serological markers of transfusion-transmitted infections has improved over the last four years. Some weaknesses remain in the immunohematological assays.

Blood Donors

10. The proportion of voluntary blood donors in Latin American and Caribbean countries was 36.06% in 2003; that same year, 0.34% of blood units were collected from paid donors (Table 7). The proportion of voluntary blood donors remained unchanged between 2003 and 2005, although there was a reduction to 33.05% in 2004. Recognized paid donors accounted for only 0.19% of all units collected in 2005 (Table 7), but the actual number of individuals who receive money in exchange for their blood is unknown. In 2003, there were seven (17%) countries that reported more than 50% voluntary blood donors; Aruba, Brazil, Cayman Islands, Colombia, Costa Rica, Cuba, Curacao, Saint Lucia, and Suriname did so in 2005.

11. The median prevalence rate of infectious markers among blood donors was always higher in countries with less than 50% voluntary donation than in those countries with more than 50% voluntary donors (Table 8). Nevertheless, it is noteworthy that, while the prevalence rates of markers remained unchanged in the former group of countries, the rates for countries with more than 50% voluntary donors tended to increase from 2002 to 2005 (Table 8).

12. The higher rate of prevalence of infectious markers among donors in some countries and the larger number of units that were not screened in 2004 and 2005 resulted in higher estimates of transfusion-transmitted infections. In 2002 and 2003 the estimated numbers of HIV infections associated with transfusions were six per year. The corresponding numbers for 2004 and 2005 were 57 and 55, respectively (Table 9). There were also significant increases in the estimated number of HBV and HCV transfusion-associated infections (Table 9).

Availability and Safety of Blood for Transfusion

13. The number of blood units collected in Latin America and the Caribbean increased from 7,325,093 in 2003 to 8,059,960 in 2005 (Table 10). The corresponding donation rates were 121.5/10,000 inhabitants in 2003 and 145.0/10,000 in 2005. There

was, however, a wide range among national donation rates in 2005: the rate for Haiti was 12.7 and that for Cuba was 439.6. In all, there were 15 (42%) countries with donation rates below 100/10,000 inhabitants and five (14%) with rates above 200 (Table 13).

14. The actual availability of blood at the national level is affected by the prevalence of infectious markers among blood donors –units from donors who are found to have an infectious marker must not be used for transfusions. In 2005, the cumulative proportion of units discarded because they were reactive/positive in the laboratory tests varied from 0.03% in Curacao to 11.00% in Bolivia, with a median of 3.11% (Table 13). There were at least 3,562 (4.28%) units discarded in the Caribbean countries and 235,134 in Latin America due to reactivity/positivity in laboratory tests, although some countries did not test any of the units collected for markers of HCV and HTLVI/II and others reported the rate of donors that were confirmed as positive after being reactive in screening test. The 238,696 units discarded, at a direct cost of basic supplies of US$ 56 per unit, represented a loss of $13.4 million.

15. In the Caribbean and Latin American countries, rates of national availability of blood for transfusion are inversely related to national maternal mortality ratios and proportion of maternal deaths associated with hemorrhage.

16. In Latin America, transfusions are given primarily to treat medical and not surgical conditions; one of every seven patients who receive transfusions is under one year of age. Reduction of infant mortality, therefore, must consider availability of blood.

17. Treatment of road traffic injuries, which are predicted to increase by 67% by the year 2020, requires transfusions. Almost two thirds of blood used among patients of acute trauma is given during the first 24 hours of care. Timely availability of blood at the emergency services is a determinant factor of patient survival.

18. The risk of receiving a blood unit contaminated with HIV, HBV or HCV for lack of laboratory screening increased from 1 in 41,858 donations in 2003 to 1 in 11,784 donations in 2005 (Table 10). The risk was 8.79 times higher for HCV and 2.67 times higher for HBV than for HIV (Table 9). In continental Latin America, the risk of receiving a *T. cruzi* positive transfusion was 1 in 3,377 donations in 2005, which is similar to the risk observed in 2003 (1 in 3,330 donations) (Table 10).

Efficiency of National Blood Systems

19. In Latin America, where countries collected between 42,771 and 3,738,580 units of blood in 2005, there is a wide range in the mean number of units processed by the individual blood services in a year: from 761 units in Argentina to 10,320 in Cuba. The seven countries with lowest mean annual collection per service had an average of

11% voluntary blood donors, while the average voluntary donation was 51% in the six countries with the highest mean annual collection per service (Table 11). The mean donor deferral rate was lower, 7.9%, in the six countries with highest annual collection per service than in the other two groups of countries, 20.1% and 24.7%. Furthermore, the blood donation rate was 100.85 per 10,000 inhabitants in the group of countries with the less efficient blood collection systems, 115.90 in the intermediate group and 186.81 in the group of countries with blood services that collected a mean of 5,888 units per year (Table 11). There was no difference in the proportion of blood units discarded, which fluctuated around 10% in the three groups of countries (Table 11).

20. It is estimated that 603,950 units of red blood cells became outdated and were discarded in Latin America in 2005, for an estimated loss of $33.8 million.

21. In the Caribbean, where countries collected between 114 and 22,155 units of blood in 2005, donor deferral varied between 0% and 53%, with a median of 20%. The estimated number of deferred donors was 29,152 in 2005. Seven countries had deferral rates below 10%; the rate was between 20% and 53% in the other eight countries (Table 12). The median blood donation rate in the first group of countries was 167.6 (range 108.4 – 368.6) per 10,000 inhabitants, and 87.7 (range 12.7 – 118.9) in the second group. The median proportion of units that were reactive for any of the infectious markers was 0.90% (range 0.03% – 6.85%) in the first group and 4.09% (range 0.40% – 10.25%) in the second. Aruba, Cayman Islands, Curacao, and Suriname, the four countries with 100% voluntary blood donors, are in the first group.

22. It is estimated that 6,425 units of red blood cells became outdated and were discarded in the Caribbean countries in 2005, for a loss of $360,000. The median proportion of red blood cells discarded was 5.9% (range 2.0% – 15.7%) among countries with lower blood donor deferral rates, and 10.8% (range 1.8% – 14.7%) among countries with higher proportion of deferred donors (Table 12).

Progress since 2005

23. The Regional Plan of Action 2006-2010 has nine progress indicators:

- In order to strengthen the organizational and functional capacities of the national blood systems, the legal framework is to be revised. Argentina, Colombia, Costa Rica, Dominican Republic, Ecuador, El Salvador, Guatemala, Mexico, Nicaragua, Panama, Paraguay, Guyana, Haiti and Jamaica have either started or completed the process. Only Paraguay has enacted a revised blood law.

- To allow the development of national plans, the allocation of resources and appropriate evaluation of the national blood systems, the Regional Plan of Action

included structured surveys to estimate the geographic and temporary blood requirements and blood components in the country. Aruba, Cuba, Curacao, Haiti, Paraguay, and Suriname have those estimates. Argentina, Bahamas, British Virgin Islands, Colombia, Costa Rica, Grenada, Guatemala, El Salvador, Saint Vincent and the Grenadines have either gross or partial estimates that do not take geographic and time variables into consideration.

- Considering that sufficiency and safety of blood can only be achieved through voluntary blood donation, the countries adopted the goal of collecting more than 50% of their blood units from voluntary blood donors. Aruba, Brazil, Cayman Islands, Colombia, Costa Rica, Cuba, Curacao, Saint Lucia, and Suriname have achieved this goal.

- Argentina, Brazil, Colombia, Costa Rica, Cuba, Curacao, Haiti, Paraguay and Suriname have initiated the implementation of national quality assurance programs.

- To facilitate better patient care and planning of the national bloods systems it is necessary to develop national guidelines for the clinical use of blood. Argentina, Aruba, Belize, Bolivia, Brazil, Costa Rica, Cuba, Curacao, Ecuador, El Salvador, Guyana, Haiti, Jamaica, Mexico, Nicaragua, and Paraguay have prepared their guidelines.

- Belize, Costa Rica, Cuba, Guyana, Nicaragua and Suriname have established national blood transfusion committees.

- Brazil, Colombia, Cuba and Nicaragua have implemented hemovigilance systems.

- Colombia, Cuba, Curacao and Nicaragua have prepared components in at least 95% of the blood units collected.

- Nine Latin American countries—Argentina, Brazil, Colombia, Cuba, El Salvador, Mexico, Nicaragua, Panama and Paraguay—have designed a regionalized national system for blood collection and processing.

Lessons Learned, Enablers and Obstacles for Progress, and Recommendations

24. Progress was made in blood safety in the Region of the Americas from 2000 to 2003 (Tables 1, 2, 3, 7, 9, 10). Unfortunately, despite the fact that some countries initiated or achieved universal screening of blood for infectious markers, the overall risk of receiving a virus-contaminated transfusion—estimated by using the number of

unscreened blood units and the prevalence of infectious markers among blood donors—increased almost fourfold from 2003 to 2005 (Table 10).

25. Similarly, the proportion of voluntary blood donors in the Region increased from 15% in 2000 to 36% in 2003, but remained unchanged in the last two years (Table 7). Despite the increase in the number of voluntary blood donors, the proportion of those who are reactive/positive for infectious markers gradually increased from 2003 to 2005 (Table 8). This observation is associated with first-time or sporadic voluntary blood donors and underscores the need to pursue repeated and regular voluntary blood donation.

26. The number of blood units to be collected annually determines resources necessary to recruit blood donors, to procure supplies, and to collect, process, store and distribute blood components. It is difficult to appropriately plan and allocate national resources to blood systems when the need for blood and blood components in the country are unknown.

27. Central national health authorities have difficulties in organizing the different sectors (provincial or state authorities, social security, private and non-profit organizations) to implement national blood collection, processing and transfusion systems because the local factors that determine availability, opportunity, safety and efficacy of blood for transfusions are not taken into consideration for planning. In countries where structured efforts are being made, the political will and the technical skills of those at the normative level within the ministry of health determine the level of success. The permanent technical involvement of the PAHO Country Office is an important factor.

28. Regional work plans approved by the Directing Council in 1999 and in 2005 included the achievement of the goal of 50% voluntary blood donation. This goal was agreed upon by the national blood programs in order to induce gradual changes that would be acceptable to health workers. In retrospect, aiming for 50% voluntary blood donation results in policy, ethical and operational challenges since half of the recipient patients have to provide replacement donors; voluntary and replacement donors are handled differently by the blood services, and the access to blood in healthcare facilities is hindered by administrative processes of cost recovery. Pursuing the goal of 100% voluntary blood donation in the short term will result in the multidisciplinary operational approaches that were identified as vital in 2005.

29. Blood services need to work in three different spheres: (a) the community, to educate, recruit, select and maintain a healthy and committed donor pool; (b) within the blood processing center, as a factory of essential medicaments; and (c) the clinical services where patients are treated. Staffs with appropriate competencies, adequate

infrastructure and sufficient resources are necessary to educate and service voluntary blood donors, to manage blood processing facilities and to administer, monitor and evaluate blood transfusions.

30. The current organizational system results in a loss of financial resources, limits the efficacy of blood transfusions and has negative effects on morbidity and mortality.

31. The concepts of Resolution CD46.R5 still apply to the Region of the Americas but action is required by national authorities to implement the strategies of the Regional Plan of Action for Transfusion Safety 2006-2010, approved by the 46th Directing Council. It is recommended that the Ministries of Health support their national blood systems using the Health Agenda for the Americas 2008-2017 as the general framework.

32. Blood for transfusions should be considered an essential medicament, a national resource and a public good.

33. It is recommended that the Ministries of Health make a specific entity within their normative level responsible for the planning, oversight and overall efficient operation of the national blood system. The normative level must be clearly separated from the operational one.

34. The normative level should be staffed by personnel from multiple disciplines with competences in planning, management and public health. The National Blood Program should work closely with other groups within the Ministry of Health –Health Promotion, Maternal and Child Health, Immunization, Prevention and Control of Communicable Diseases, Cancer Prevention and Control, Adolescent Health, Pharmacovigilance, Patient Safety—and with other sectors—Ministry of Education, Ministry of Labor, Social Security.

35. The operational level should consider: (1) procurement, collection, processing and distribution of blood components, and (2) transfusion services. The processing centers should not be part of the individual hospitals. Consolidated processing facilities should be responsible for distributing sufficient blood components to a determined group of hospitals. In the smaller Caribbean countries the hospital laboratories may be used to process blood units, but the responsibility for donor education, selection and recruitment, and blood collection should be independent from the hospital administration.

36. Efforts should be made to estimate the annual national need for blood and blood components, by geographic area and by month. The national guides for clinical use of blood and the potential number of cases of the clinical conditions that require transfusions, including voluntary and involuntary injuries, should be used as the basis for the estimate. In order to cover unforeseen emergencies—natural or man-made disasters,

infectious outbreaks, emergency vaccination campaigns—it is recommended that the national blood systems have an additional stock equivalent to 4%, or two weeks, of the annual need.

37. The annual estimates of blood needs should take into consideration the expected increases in (a) numbers of the general and elderly population; (b) social inclusion of currently excluded populations; (c) road traffic injuries; and (d) local adoption of medical technologies such as organ transplants. Sufficient financial resources to collect and distribute enough blood components should be made available to the corresponding responsible unit within the Ministry of Health. National financial resources that are currently being wasted should be invested towards this effort.

38. The number of repeat donors needed in each country should be estimated at least as 50% of the national need of red blood cells. A national program should be put in place to educate and recruit healthy individuals as regular blood donors and to have them donate at least twice a year.

39. Ministries of Health should work to terminate replacement and paid donation before the end of 2010, with the goal of 100% voluntary, altruistic, non-remunerated donors, using the information obtained in the socio-anthropological surveys conducted in at least 18 of the Caribbean and Latin American countries.

40. A social network of volunteers should be established to help educate the community, to promote voluntary blood donation, and to service the donor. Youth programs, such as Pledge 25, should be given special attention.

41. National public information strategies should be developed to inform the community on the national needs for blood and blood components, the cost involved in procurement and processing of blood units, the daily level of coverage of the estimated need of blood, and the impact of transfusions on the wellbeing of the patients.

42. Hospital transfusion services should be staffed by medical specialists. Clinical laboratories in hospitals should actively participate in the evaluation of patients both before and after transfusions. Hospital transfusion committees should assess the clinical management of patients and the pertinence of hospital transfusion guidelines.

43. PAHO country offices should have staff specially dedicated to coordinating the technical cooperation given by PAHO on issues pertaining to blood transfusion safety. A coordinated approach is necessary at all levels of the Organization.

44. Local and national data on blood availability and safety and on blood transfusion efficiency should be analyzed periodically by the national health authorities and other stakeholders, including patient groups, blood donors and community volunteers.

Action by the Directing Council

45. The Directing Council, after reviewing the information provided, is invited to consider adoption of the resolution recommended by the 142nd Session of the Executive Committee, in Resolution CE142.R5 (see Annex C.)

Annexes

Table 1: Number and percent of blood units screened in the Region between 2000-2005

	2000	2003	2004	2005
Units collected (N)	6 409 596	7 325 093	7 559 080	8 059 960
Units screened for HIV	6 387 790 (99.66)	7 320 292 (99.93)	7 466 769 (98.77)	7 972 085 (98.91)
Units screened for HBV	6 387 247 (99.65)	7 315 191 (99.86)	7 460 221 (98.69)	7 966 011 (98.83)
Units screened for HCV	6 332 331 ((98.79)	7 290 038 (99.52)	7 448 173 (98.53)	7 963 998 (98.81)
Units screened for syphilis	6 381 752 (99.57)	7 313 335 (99.84)	7 383 987 (97.68)	7 900 040 (98.02)

Table 2: Number and percent of units screened for *T. cruzi* in Latin America between 2000-2005

	2000	2003	2004	2005
Units to be screened (N)	5 700 259	7 097 339	6 888 289	7 419 274
Units screened	4 502 114 (78.98)	6 251 932 (88. 09)	5 938 183 (86.20)	6 459 612 (87.06)

Table 3: Number and percent of countries reporting universal screening between 2000-2005

	2000	2003	2004	2005
HIV	31/37 (83.8)	33/38 (89.2)	29/37 (78.4)	32/36 (88.9)
HBV	30/37 (81.1)	33/38 (89.2)	29/37 (78.4)	32/36 (88.9)
HCV	19/37 (51.3)	23/38 (62.5)	20/37 (54.1)	24/36 (66.7)
Syphilis	32/37 (86.5)	33/38 (89.2)	30/37 (81.1)	31/36 (86.1)
T. cruzi	6/17 (35.3)	7/17 (41.2)	8/17 (47.1)	12/17 (70.6)

Table 4: Participation in Regional PEED for TTI between 2000-2005

	2000	2003	2004	2005
Number of Latin American countries	18	18	18	18
Number of Caribbean countries	0	18	20	20
Number of Latin American centers	20	20	20	21
Number of Caribbean centers	0	22	21	24

Table 5: Participation in national PEED for TTI between 2002-2005

	2000	2003	2004	2005
Number of centers in Latin America	4 738	2 509	3 071	2 546
Number of participating centers	1 129	1 330	1 433	1 182
% participation	23.82	53.01	46.66	46.42
Number of countries with national PEED	11	16	16	17

Table 6: Number of participants in regional PEED for immunohematology in Latin America and the Caribbean between 2000-2005

	2000	2003	2004	2005
Latin America	24	30	29	48
Caribbean	0	24	24	24

Table 7: Number and percent of voluntary and paid donors between 2000-2005

	2000	2003	2004	2005
Units collected (N)	6 409 596	7 325 093	7 559 080	8 059 960
Voluntary donors (N) (%)	989 885 (15.44)	2 641 739 (36.06)	2 498 174 (33.05)	2 950 018 (36.60)
Paid donors (N) (%)	31 725 (0.50)	24 925 (0.34)	25 398 (0.34)	15 507 (0.19)

Table 8: Median prevalence (percent) of markers for TTI according to proportion of voluntary blood donors between 2000-2005

Marker	Countries with	2000	2003	2004	2005
HIV	< 50% VBD	0.21	0.28	0.23	0.26
	> 50% VBD	0.13	0.01	0.01	0.02
HBsAg	< 50% VBD	0.60	0.60	0.62	0.60
	> 50% VBD	0.37	0.18	0.19	0.26
HCV	< 50% VBD	0.56	0.56	0.52	0.58
	> 50% VBD	0.10	0.06	0.08	0.11
Syphilis	< 50% VBD	0.97	0.92	0.97	1.00
	> 50% VBD	0.55	0.13	0.14	0.18

Table 9: Estimated indicators of blood safety between 2000-2005

Variable	2000	2003	2004	2005
HIV infections transfused (N)	30	6	57	55
Risk of HIV per 100,000 donations	0.47	0.08	0.75	0.68
HBV infections transfused (N)	1 357	22	176	147
Risk of HBV per 100,000 donations	21.18	0.30	2.32	1.82
HCV infections transfused (N)	211	147	537	482
Risk of HCV per 100,000 donations	3.29	2.00	7.10	5.98
T. cruzi infections transfused (N)	7 483	2 193	2 374	2 362
Risk of *T. cruzi* per 100,000 donations	131.23	28.22	34.46	31.88

Table 10: Availability and safety of blood between 2000-2005

	2000	2003	2004	2005
Number of units collected	6 409 596	7 325 093	7 559 080	8 059 960
Donation rate per 10,000	126.8	138.6	139.4	145.0
Risk of viral transfusion	1: 4 011	1: 41 858	1: 9 817	1: 11 784
Risk of T. cruzi transfusion	1: 762	1: 3 340	1: 3 150	1: 3 377

Table 11: Efficiency of national blood systems in Latin America, 2005

Variable	Group1 Argentina Dominican Republic Uruguay Venezuela Guatemala Panama Peru	Group 2 Bolivia Nicaragua Chile Honduras Mexico El Salvador	Group 3 Costa Rica Paraguay Colombia Ecuador Brazil Cuba
Mean number of units collected per bank	1,404	2,334	5.888
Mean GNP per capita (US $)	3,664	3,123	2,628
Population x 1,000	121,613	152,079	266,987
Units collected	1.226,526	1.762,623	4.987,588
Donation rate per 10,000	100.85	115.90	186.81
Mean voluntary donors (%)	11.0	18.5	51.3
Mean donor deferral (%)	20.1	24.7	7.9
Mean units discarded (%)	10.7	9.9	10.3

Table 12: Efficiency of national blood systems in the Caribbean, 2005

Group 1	Donor deferral rate (%)	Voluntary donors (%)	Prevalence TTI (%)	Discard rate (%)
St Kitts and Nevis	0	3	6.85	NR
Curacao	0.3	100	0.03	2.0
Aruba	2	100	0.90	2.0
Suriname	4.6	100	0.14	5.9
Bahamas	5	15	2.23	15.70
Dominica	9	5	5.41	7.1
Cayman Islands	10	100	0.11	20.0
Group 2				
St. Vincent and the Grenadines	20	13	6.68	12.7
Guyana	24	22	4.09	6.5
Grenada	26.7	30	4.20	10.8
Haiti	27	15	10.25	7.2
Belize	39.0	9	1.89	11.5
St. Lucia	39.1	82	1.55	14.7
Trinidad and Tobago	44	13	4.69	NR
Anguilla	53	10	0.40	1.8

Table 13: Blood donation rate per 10,000 inhabitants and proportion of units reactive/positive for infectious markers in 2005

Country	Donation rate	% TTI markers	Country	Donation rate	% TTI markers
Anguilla	87.7	0.40	Argentina	94.2	6.49
Aruba	367.8	0.90	Bolivia	50.9	11.00
Bahamas	159.5	2.23	Brazil	200.5	2.93
Belize	115.1	1.89	Chile	109.2	1.54*
British Virgin Islands	194.3	0.22	Colombia	115.7	3.11
			Costa Rica	125.1	0.49*
Cayman Islands	196.4	0.11	Cuba	439.6	1.65*
Curacao	368.6	0.03	Ecuador	94.3	0.39*
Dominica	109.7	5.41	El Salvador	116.5	3.98
Grenada	92.8	4.20	Guatemala	61.3	6.39
Guyana	70.1	4.09	Honduras	72.6	3.98
Haiti	12.7	10.25	Mexico	126.2	1.89
Jamaica	83.6	5.40	Nicaragua	98.6	3.82
St Kitts and Nevis	108.4	6.85	Panama	132.3	1.28
St Lucia	118.9	1.55	Paraguay	76.4	9.98
St. Vincent and the Grenadines	69.0	6.68	Peru	64.2	3.92
			Dominican Republic	69.8	3.74
Suriname	167.6	0.14	Uruguay	276.3	1.32
Trinidad and Tobago	104.4	4.69	Venezuela	150.8	3.71

* Reported tests confirmed as positive. The rest of the countries reported units that were reactive in screening tests.

PAN AMERICAN HEALTH ORGANIZATION
Pan American Sanitary Bureau, Regional Office of the
WORLD HEALTH ORGANIZATION

CD48/11 (Eng.)
Annex B

ANALYTICAL FORM TO LINK AGENDA ITEM WITH ORGANIZATIONAL AREAS	
1. Agenda Item: 4.7	**2. Agenda Title:** Improving Blood Availability and Transfusion Safety in the Americas

3. Responsible Unit: THR

4. Preparing Officer: José Ramiro Cruz

5. List of collaborating centers and national institutions linked to this Agenda item: Hemocentro/Fundacion ProSangue, Sao Paulo, Brazil; UK National External Quality Assessment Scheme; International Consortium for Blood Safety, New York; Centro de Transfusion de Sevilla, Spain; CAREC, Trinidad and Tobago; International Federation of Red Cross and Red Crescent Societies, Geneva; International Society for Blood Transfusion Regional Delegation, Caracas, Venezuela; International Blood Transfusion, London, UK; Grupo Cooperativo Ibero Americano de Medicina Transfusional; EUROsociAL, Madrid, Spain; Rotary Clubs in USA, Mexico, El Salvador, Colombia, Ecuador, Chile, Peru, Uruguay, Paraguay, St. Lucia, Cayman Islands; Health Canada, Canadian Blood Services, Hema-Quebec, Canada; USA Center for Disease Control and Prevention, Atlanta, USA; Centro Nacional de Transfusión Sanguínea, Mexico; Programa Nacional de Sangre. Instituto Guatemalteco de Seguridad Social, Guatemala; Laboratorio Central Max Bloch, Cruz Roja Salvadoreña, El Salvador; Programa Nacional de Sangre, Cruz Roja Hondureña, Honduras; Centro Nacional de Diagnóstico y Referencia, Cruz Roja Nicaraguense, Nicaragua; Dirección de Laboratorios, Caja Costarricense del Seguro Social, Costa Rica; Hospital Santo Tomás, Panama; Ministerio de la Protección Social, Instituto Nacional de Salud, Instituto Nacional de Vigilancia de Medicamentos y Alimentos, Cruz Roja Colombiana, Colombia; Programa Nacional de Bancos de Sangre, Venezuela; Ministerio de Salud, Cruz Roja Ecuatoriana, Ecuador; Programa Nacional de Sangre, Bolivia; Programa Nacional de Sangre, Cruz Roja Chilena, Chile; Programa Nacional de Hemoterapia y Bancos de Sangre, Instituto Nacional de Salud, Peru; Programa Nacional de Sangre, Paraguay; Plan Nacional de Sangre, Argentina; Centro Nacional de Transfusión, Uruguay; Coordinacion da Politica Nacional de Sangre e Hemoderivados, Agencia de Vigilancia Sanitaria, HEMOBRAS, Brazil; Instituto Nacional de Hematología e Inmunologia, Cuba; Secretaría Estatal de Salud Pública y Asistencia Social, Cruz Roja Dominicana, Dominican Republic; National Blood Safety Program, Croix Rouge Haitienne, Haiti; Princess Alexandra Hospital, Anguilla; Stichting Bloedbank, Aruba; Princess Margaret Hospital, Bahamas; Belize National Blood Transfusion Service, Belize; Peebles Hospital, BVI; Cayman Islands Hospital, CI; Red Cross Blood Bank Foundation, Curacao; Princess Margaret Hospital, Dominica; Pathology Laboratory, Grenada; National Blood Transfusion Service, Guyana; National Blood Transfusion Service, Jamaica; Joseph N. France General Hsopital, St. Kitts; St. Lucia Blood Bank Service; Milton Cato Memorial Hospital, St. Vincent; National Blood Bank, Suriname; National Blood Transfusion Service, Trinidad and Tobago.

6. Link between Agenda item and Health Agenda of the Americas:

PRINCIPLES

Human Rights, universality, access and inclusion: The Plan of Action for Transfusion Safety 2006-2010 seeks to promote sufficiency, availability, access and opportunity of blood for transfusions in the Region of the Americas, considering the human right to the best attainable level of health.

Pan American solidarity: The Plan of Action promotes cooperation among countries in the Americas with the participation of PAHO collaborating centers and professional associations.

Equity in health: The Plan of Action seeks to eliminate intra and intercountry differences in the availability,

access, opportunity, and quality of blood for transfusions with a public health approach.
Social participation: The document CD48/11 clearly states that a social network is indispensable to attain 100% voluntary blood donation and sufficiency of blood**.**

AREAS OF ACTION
Strengthening the health authority: The Plan of Action 2006-2010 comprises four strategies. The first, Planning and Management of the National Blood Network System, requires a strong leadership of the Ministry of Health. Paragraphs 27, 29, 30, 31, 33, 34, 39 of document CD48/11 refer to steering role of the Ministries of Health.

Tackling health determinants; Reducing the risk and burden of disease: Safety of blood depends primarily on the quality of the blood donor. National blood requirements depend on the overall health status of the population. Health promotion, health education and interventions to protect the population will result in safer blood donors and reduced needs for blood components. Safe blood contributes to the reduction of HIV, HBV, HCV, T. cruzi and other infections. Paragraphs 6-9, 11-18, 24, 29, 34, and 37, and tables 1-5 refer to these issues.

Increasing social protection and access to quality health services; Diminishing health inequities among countries and inequities within them: Blood availability and access vary within and among countries. The overall objective of the Plan of Action 2006-2010 is to promote equitable access considering increased social inclusion. Tables 10-13 and paragraphs 13, 14, 15, 35, 36, 37, and 41 address social protection and access to blood.

Strengthening health security: Blood for transfusions is an essential component for managing emergencies. Paragraph 36 of the document specifically refers to unforeseen emergencies.

Furthermore, document CE48/11 Reads, in paragraph 31:
"31. The concepts of Resolution CD46.R5 still apply to the Region of the Americas but action is required by national authorities to implement the strategies of the Regional Plan of Action for Transfusion Safety 2006-2010, approved by the 46th Directing Council. It is recommended that the Ministries of Health support their national blood systems using the Health Agenda for the Americas 2008-2017 as the general framework."

7. Link between Agenda item and Strategic Plan 2008-2012:

The Regional Plan of Action for Transfusion Safety addresses issues related to

SO1. To reduce the health, social and economic burden of communicable diseases –T.cruzi, HBV, HCV, HTLVI/II by improving donor selection and laboratory screening.
SO2. To combat HIV/AIDS, tuberculosis and malaria by improving donor selection and laboratory screening.
SO3. To prevent and reduce disease, disability and premature death from chronic noncommunicable conditions, violence and injuries by providing enough, safe blood in a timely manner.
SO4. To reduce mortality and improve health during key stages of life, including pregnancy, childbirth, the neonatal period, childhood and adolescence, and improve sexual and reproductive health and promote healthy aging for all individuals by promoting voluntary blood donation and by making safe blood available in a timely manner.
SO5. To reduce the health consequences of emergencies, disasters, crises and conflicts, and minimize their social and economic impact by providing blood for transfusion when necessary.

SO6. To promote health and development, and prevent or reduce risk factors such as use of tobacco, alcohol, drugs and other psychoactive substances, unhealthy diets, physical inactivity and unsafe sex, which affect health conditions by promoting the education of voluntary blood donors

SO7. To address the underlying social and economic determinants of health through policies and programs that enhance health equity and integrate pro-poor, gender-responsive, and human rights-based approaches by ensuring equitable access to safe blood

SO10. To improve the organization, management and delivery of health services by improving the planning and management of the national blood network system.

SO11. To strengthen leadership, governance and the evidence base of health systems by improving the planning and management of the national blood network system.

SO12. To ensure improved access, quality and use of medical products and technologies

8. Best practices in this area and examples from other countries within AMRO:

Canada: Organization of blood services. Aruba, Cayman Islands, Cuba, Curacao, Suriname in voluntary blood donation.

9. Financial implications of Agenda item:

Better planning and management at the country level will result in more efficient use of national resources. Around US$ 48 million were wasted in 2005 by the Caribbean and Latin American countries. Paragraphs 14, 20 and 22 refer to financial resources.

Regular and extrabudgetary funding at the regional should not be further reduced in the coming years. PAHO HQ, PWR's and Subregional initiatives should work to implement coordinated approaches of technical cooperation. Paragraph 43 of the document addresses this issue.

PAN AMERICAN HEALTH ORGANIZATION
WORLD HEALTH ORGANIZATION

142nd SESSION OF THE EXECUTIVE COMMITTEE

Washington, D.C., USA, 23-27 June 2008

CD48/11 (Eng.)
Annex C

ORIGINAL: ENGLISH

RESOLUTION

CE142.R5

BLOOD TRANSFUSION SAFETY: PROGRESS REPORT

THE 142nd SESSION OF THE EXECUTIVE COMMITTEE,

Having considered the progress report presented by the Director on Blood Transfusion Safety (Document CE142/20), which summarizes the difficulties observed in the implementation of the Regional Plan of Action for Transfusion Safety 2006-2010;

Concerned about the insufficiency and the poor quality of blood available for transfusions in the majority of countries of the Region; and

Taking into account the Health Agenda for the Americas 2008-2017,

RESOLVES:

To recommend that the Directing Council adopt a resolution along the following lines:

THE 48th DIRECTING COUNCIL,

Having considered the progress report presented by the Director on Blood Transfusion Safety (Document CD48/11), which summarizes the difficulties observed in the implementation of the Regional Plan of Action for Transfusion Safety 2006-2010;

Aware of the central role that transfusions play in the appropriate medical care of patients and in the reduction of mortality among mothers, infants, victims of traffic accidents and other traumas, patients suffering from cancer or clotting disorders, and transplant patients;

Concerned that the current levels of availability and safety of blood for transfusion in the Region are unsatisfactory;

Recognizing that the current national organizational systems limit the efficacy of blood transfusions, have negative effects on morbidity and mortality, and result in major financial losses;

Considering that the concepts of Resolutions CD41.R15 (1999) and CD46.R5 (2005) still apply to the Region of the Americas, and that action is required by national authorities to implement the strategies of the Regional Plan of Action 2006-2010, approved by the 46th Directing Council; and

Recognizing that modifications in current national approaches are needed in order to achieve the regional goals set for transfusion safety by 2010,

RESOLVES:

1. To urge Member States to:

(a) proactively implement the Regional Plan of Action for Transfusion Safety 2006-2010 by:

i. defining a specific entity within the normative level of their ministries of health as responsible for the planning, oversight and overall efficient operation of the national blood system;

ii. estimating the annual national need for blood components, taking into consideration unforeseen emergencies, expected increases of the general and elderly population, social inclusion of currently excluded populations, road traffic injuries, and local adoption of medical technologies, such as

transplants and cancer treatment, and the financial resources necessary to cover those needs;

iii. establishing a network of volunteers to educate the community and to promote voluntary blood donation and service blood donors, with special attention to youth programs;

(b) terminate replacement and paid blood donation before the end of 2010, with a goal of 100% voluntary, altruistic, non-remunerated blood donation, using the information obtained from socio-anthropological surveys conducted in the countries**,** given that blood collection should not be solely the responsibility of hospital medical teams;

(c) share best practices in the recruitment and retention of voluntary blood donors.

2. To request the Director to:

(a) cooperate with the Member States in the implementation of the Regional Plan of Action for Transfusion Safety 2006-2010 using a multidisciplinary and coordinated approach for health promotion, public education, human and patient rights, quality assurance and financial efficiency;

(b) work with Member States and international organizations to assess the implementation of the Regional Plan of Action 2006-2010 and to identify country-specific interventions needed to assure sufficiency and acceptable quality and safety of blood for transfusions at the national level;

(c) prepare annual reports on the situation of blood transfusion safety in the Region.

(Seventh meeting, 26 June 2008)

PAN AMERICAN HEALTH ORGANIZATION
WORLD HEALTH ORGANIZATION

48th DIRECTING COUNCIL
60th SESSION OF THE REGIONAL COMMITTEE

Washington, D.C., USA, 29 September-3 October 2008

CD48.R7 (Eng.)
ORIGINAL: ENGLISH

RESOLUTION

CD48.R7

IMPROVING BLOOD AVAILABILITY AND TRANSFUSION SAFETY IN THE AMERICAS

THE 48th DIRECTING COUNCIL,

Having considered the report of the Director on blood transfusion safety (Document CD48/11), which summarizes the difficulties observed in the implementation of the Regional Plan of Action for Transfusion Safety 2006-2010;

Aware of the central role that transfusions play in the appropriate medical care of patients and in the reduction of mortality among mothers, infants, victims of traffic accidents and other traumas, patients suffering from cancer or clotting disorders, and transplant patients;

Concerned that the current levels of availability and safety of blood for transfusion in the Region are unsatisfactory;

Recognizing that the current national organizational systems limit the efficacy of blood transfusions, have negative effects on morbidity and mortality, and result in major financial losses;

Considering that the concepts of Resolutions CD41.R15 (1999) and CD46.R5 (2005) still apply to the Region of the Americas, and that action is required by national authorities to implement the strategies of the Regional Plan of Action 2006-2010, approved by the 46th Directing Council; and

Recognizing that modifications in current national approaches are needed in order to achieve the regional goals set for transfusion safety by 2010,

RESOLVES:

1. To urge Member States to:

(a) proactively implement the Regional Plan of Action for Transfusion Safety 2006-2010 by:

i. defining a specific entity within the normative level of their ministries of health as responsible for the planning, oversight and overall efficient operation of the national blood system;

ii. estimating the annual national need for blood components, taking into consideration unforeseen emergencies, expected increases of the general and elderly population, social inclusion of currently excluded populations, road traffic injuries, and local adoption of medical technologies, such as transplants and cancer treatment, and the financial resources necessary to cover those needs;

iii. establishing a network of volunteers to educate the community and to promote voluntary blood donation and service blood donors, with special attention to youth programs;

(b) except in limited circumstances of emergency medical necessity, terminate replacement and paid blood donation by the end of 2010, with a goal of 100% voluntary, altruistic, non-remunerated blood donation, using the information obtained from socio-anthropological surveys conducted in the countries, given that blood collection should not be solely the responsibility of hospital medical teams;

(c) terminate mandatory patient replacement of transfused blood by the end of 2010;

(d) share best practices in the recruitment and retention of voluntary blood donors.

2. To request the Director to:

(a) cooperate with the Member States in the implementation of the Regional Plan of Action for Transfusion Safety 2006-2010 using a multidisciplinary and coordinated approach for health promotion, public education, human and patient rights, quality assurance and financial efficiency;

(b) work with Member States and international organizations to assess the implementation of the Regional Plan of Action 2006-2010 and to identify country-specific interventions needed to assure sufficiency and acceptable quality and safety of blood for transfusions at the national level;

(c) prepare annual reports on the situation of blood transfusion safety in the Region.

(Seventh meeting, 2 October 2008)

PAN AMERICAN HEALTH ORGANIZATION
WORLD HEALTH ORGANIZATION

48th DIRECTING COUNCIL

60th SESSION OF THE REGIONAL COMMITTEE

Washington, D.C., USA, 29 September-3 October 2008

CD48/11 (Eng.)
Annex D

Report on the Financial and Administrative Implications for the Secretariat of the Resolutions Proposed for Adoption by the Directing Council

1. Resolution: Blood Transfusion Safety: Progress Report.
2. Linkage to program budget **Area of work** 21; 01 **Expected result** 3; 5
3. Financial implications **a) Total estimated cost for implementation over the lifecycle of the resolution (estimated to the nearest US$ 10,000; including staff and activities): $**1,780,000 **b) Estimated cost for the biennium 2008-2009 (estimated to the nearest US$ 10,000; including staff and activities): $**1,420,000 **c) Of the estimated cost noted in (*b)* what can be subsumed under existing programmed activities?** 100%
4. Administrative implications **a) Implementation locales (indicate the levels of the Organization at which the work will be undertaken and identify the specific regions, where relevant):** HQ, Subregional Units, PWR's, and Collaborating Centers. **b) Additional staffing requirements (indicate additional required staff full-time equivalents, noting necessary skills profile):** Specific focal points for blood transfusion safety are necessary in each Subregional Unit and PWR. **c) Timeframes (indicate broad time frames for the implementation and evaluation):** The implementation of the activities started in 2005 and must continue to 2010. Regional and national progress should be assessed yearly.

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Pan American Health Organization

Regional Office of the World Health Organization

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