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PROGRESS REPORTS ON TECHNICAL MATTERS

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* Original English: sections D and G. Original Spanish: sections A, B, C, E, and F.

A. IMMUNIZATION: CHALLENGES AND OUTLOOK

Background

1. At the 50th Directing Council of the Pan American Health Organization (PAHO), the concept paper *Strengthening Immunization Programs* (Document CD50/14 (2010)) was submitted and adopted through Resolution CD50.R5. This resolution recognizes the great strides made in this area in the Region and urges the Member States to endorse national vaccination programs as a public good, while reiterating its support for the Regional Strategy for Immunization and its vision to sustain the achievements, complete the unfinished agenda, and tackle new challenges. It also calls for continued support for PAHO's Revolving Fund for Vaccine Procurement.

Progress

2. Vaccination coverage in the Region is among the highest in the world. The World Health Organization (WHO) and the United Nations Children's Fund (UNICEF) estimated coverage for the Region of the Americas in 2009 at 94% for BCG, 91% for VOP3, and 92% for DTP3 in children under one year of age, and 93% for the MMR vaccine in children aged one. However, 10 countries reported national coverage of less than 90% for DTP3, while 43% of municipalities in Latin America and the Caribbean reported coverage of under 95%.

Sustain the Achievements

3. Since 1991, our Region has been free of polio cases caused by wild poliovirus. There have been no indigenous cases of measles since 2002 or indigenous rubella or congenital rubella syndrome since 2009. In 2010, 63 cases of measles imported from other regions of the world were reported, along with 190 cases connected with imports. Measles outbreaks in Argentina and Brazil in 2010 involved people who had attended the Soccer World Cup in South Africa.

4. Given the reintroduction of polio in disease-free countries in other regions of the world and the imported cases of measles, in 2010 all the Member States analyzed the risk of the reintroduction of these diseases, the capacity for timely detection of cases or of the reintroduction of the viruses, and the capacity for timely and definitive prevention of secondary cases.

5. *Haemophilus influenzae* type b (Hib) vaccination has resulted in a dramatic reduction in the number of cases and hospitalizations from this cause, and measures to

assess the impact of the vaccine are being strengthened. It is possible that many countries have already eliminated the invasive diseases caused by Hib.

Complete the Unfinished Agenda

6. Use of the vaccine against seasonal flu in the vaccination programs of the Member States has been on the rise; 36 countries and territories now include the vaccine in their immunization scheme. Based on the lessons learned from the vaccination efforts to combat pandemic influenza H1N1 2009, the vaccination approach targeting at-risk groups, especially pregnant women, has proven to be very important.

7. Yellow fever vaccination has remained a priority in Member States where the disease is enzootic. In 2010, vaccination efforts were compromised by a drop in the supply of vaccines from producers. The situation has begun to correct itself in 2011, and it is anticipated that Member States will catch up on the vaccination of their at-risk populations.

8. Each Member State has prepared a plan of action to achieve or maintain municipal vaccination coverage of 95% or higher and to strengthen epidemiological surveillance. In this effort, the technical and financial support of the Canadian International Development Agency (CIDA) and the U.S. Centers for Disease Control and Prevention (CDC) has been key.

9. Vaccination Week in the Americas (VWA) represents an opportunity to keep vaccination on the countries' political and social agenda and to connect with vulnerable or hard-to-reach populations. In 2011, the theme of the ninth VWA is "Vaccinate your family. Protect your community." Four other regions of WHO are holding their own Vaccination Week in 2011: the European Region is holding its sixth, the Eastern Mediterranean Region, its second; and, the African and Western Pacific Regions are holding their very first. PAHO has provided technical support to the other regions through workshops, teleconferences, and field visits to share materials and information on experiences and lessons learned. The South-East Asia Region has committed to launching its own initiative in 2012, bringing us close to the goal of declaring a World Vaccination Week.

10. Haiti is at risk for the reintroduction or reemergence of vaccine-preventable diseases, especially given the fragility of its health situation following the earthquake and cholera outbreak of 2010 and the number of susceptibles that have accumulated. In light of this, PAHO, under the coordination of Haiti's Ministry of Public Health and Population, has called on other institutions and partners to work together to strengthen the country's vaccination program.

Tackle New Challenges

11. Extraordinary progress has been made in the introduction of new vaccines, which will save lives and avert expenditures. By 2010, 15 countries and territories had added the rotavirus vaccine to their regular series, 18 had the pneumococcal vaccine and 5, the human papillomavirus vaccine. Sixteen countries have sentinel surveillance centers that will enable them to assess the impact of vaccination and detect changes in the epidemiological patterns of diseases in a timely manner.

12. Through the ProVac Initiative, PAHO has continued its technical assistance to the Member States in all the aspects of decision-making in connection with new vaccines and support for the aspects related to economic studies.

13. Studies have been conducted with the Member States and technical partners to consolidate the lessons learned from the introduction of new vaccines in terms of cost-effectiveness, epidemiological impact, and the cost and surveillance of adverse events. These studies have served as a global reference.

14. Ensuring timely and adequate information on the vaccinated population, coverage, and vaccine and supply needs for the development of strategies and planning operations is one of the major challenges for vaccination programs. With support from PAHO, the Member States have promoted the creation of digital vaccination records. Some countries have had records of this type for years, and others are well into the development and execution stage. The Member States have made a commitment to sharing experiences and working together, which means that the use of digital vaccination records is likely to spread in the Region in the short term.

PAHO Revolving Fund for Vaccine Procurement

15. At the close of 2010, 40 Member States had purchased vaccines, syringes, and supplies through the Revolving Fund for Vaccine Procurement (RF). In 2010, the RF offered 45 different biologicals, with purchases totaling US\$ 510 million.

Next Steps

- (a) Sustain vaccination as a public good.
- (b) Strengthen epidemiological surveillance measures and vaccination at all levels in response to the risk that vaccine-preventable diseases already or eliminated in our Region could be reintroduced.
- (c) Strengthen communication, information, and education for the population about the benefits of vaccines and immunization.

- (d) Continue providing technical support to the Member States through the Pan American Sanitary Bureau.

Action by the Directing Council

- 16. The Directing Council is requested to take note of this progress report and offer recommendations in this regard.

B. IMPLEMENTATION OF THE GLOBAL STRATEGY AND PLAN OF ACTION ON PUBLIC HEALTH, INNOVATION, AND INTELLECTUAL PROPERTY

17. The purpose of this progress report is to provide a comprehensive overview of the way in which the *Global Strategy and Plan of Action on Public Health, Innovation, and Intellectual Property* (Resolution WHA61.21 [2008]) is being adapted to the Region of the Americas by employing a regional perspective (Resolution CD48.R15 [2008]), mentioning the principal lines of action, access, innovation, and management of intellectual property rights from a public health perspective.

18. The guiding principles of public health, innovation, and intellectual property rights expressed in the global strategy are gradually becoming an integral part of national pharmaceutical, research, and innovation policies. Subregional integration mechanisms such as the Union of South American Nations (UNASUR), the Andean Health Agency (ORAS), and MERCOSUR (and Associated States) have adopted elements of the global strategy.

19. The Member States continue to exercise leadership in the worldwide discussions on the global strategy. Especially important in this regard is the Consultative Expert Working Group on Research and Development: Financing and Coordination. In January 2011, the WHO Executive Board selected four representatives (Argentina, Brazil, Canada, and the United States of America) out of the 13 candidacies presented by the Member States of the Region of the Americas to form part of the Consultative Expert Working Group.

20. The political will and desire of the Member States and principal regional actors to cooperate has resulted in concrete cooperation activities—in particular, the modality of working in a network. The recently created Health Technology Assessment Network of the Americas, headed by the national health authorities, consists of experts from the Region's collaborating centers and reference institutions to improve the countries' ability to justify decisions on innovation and the adoption, development, and use of health technologies in health systems Through ECONMED, a bilingual electronic listserv,¹ health authorities access key information for health technology management. The Pan American Network for Drug Regulatory Harmonization (PANDRH) brings national regulatory authorities together to facilitate the drafting of regulatory standards and guidelines.² These networks address highly diverse matters and reflect different priorities

¹ To access the documents, communications, and public materials distributed by ECONMED, visit: www.paho.org/econmed

² To learn about the current situation, historical trajectory, and groups currently active in the network, visit: http://new.paho.org/hq/index.php?option=com_content&task=view&id=1054&Itemid=513&lang=en

ranging from the use of medicinal³ plants to biotechnology,⁴ from health and innovation in the Pan-Amazon region⁵ to the conducting of major clinical trials.

21. In the Region, managing intellectual property rights from a public health perspective remains a priority. Bolivia and Paraguay have adopted an instrument known as “advance consent” for evaluating patent requests. A major development has been the ceding by the U.S. National Institutes of Health of an antiretroviral drug patent to the patent pool created by the International Drug Purchase Facility (UNITAID). The flexibilities provided in the Agreement on Trade-related Aspects of Intellectual Property Rights (TRIPS) have been used in the Region: in Ecuador, with the use of mandatory licenses by the national authorities, and in Colombia, with the government’s announcement of its decision to use the parallel import mechanism.

22. Eleven Member States have begun analyzing the legal and institutional health frameworks connected with the management of intellectual property rights. The information gathered is being analyzed in each country under the aegis of the health authorities to improve coordination between health and other sectors in the management of intellectual property rights with a view to improving access and health.⁶

23. In response to the official request from the countries of the Region, PAHO has offered assistance through a range of activities in the areas of trade and access to essential medicines, supporting training workshops in Central America and the Caribbean attended by representatives of the ministries of health and other national actors. It has provided support to Argentina’s Ministry of Health in offering a course on public health and intellectual property to train public officials from the ministries, regulatory agencies, and other entities. It has also provided assistance for a study on pharmaceutical policies, the regulation of intellectual property, and access to drugs, in collaboration with CARICOM and other Caribbean countries.⁷

24. The renewed interest in promoting the creation of national innovation systems has led the countries and principal actors in the consultative processes to actively participate

³ Information available at:

http://new.paho.org/hq/index.php?option=com_content&task=view&id=1587&Itemid=513

⁴ To view the work plan, members of the Group, and latest publications, visit:

http://new.paho.org/hq/index.php?option=com_content&task=view&id=1587&Itemid=513

⁵ To view the network’s objectives and mission, visit:

<http://panamazonica.bvsalud.org/php/index.php?lang=en>

⁶ Brazil, Colombia, Costa Rica, Cuba, Ecuador, El Salvador, Guatemala, Mexico, Nicaragua, Panama, and Peru. Information on the project and its scope can be found at:

http://new.paho.org/hq/index.php?option=com_content&task=view&id=2781&Itemid=1178&limit=1&limitstart=2&lang=en

⁷ The report on the regulatory situation, management of intellectual property, and access to medicines in the CARICOM countries (and the Dominican Republic) is under review by the pertinent CARICOM bodies.

in aspects key to the implementation of the global strategy. The meeting on innovation to fight neglected diseases, which was part of the Global Forum for Health held in Cuba in November 2009, and the consultation on promoting research and development for health products, held in Panama in September 2009⁸, are clear examples of that interest.

25. The regulatory framework and capacity building to facilitate technology transfer were topics also addressed during a consultation held in Uruguay in October 2010,⁹ and another in Mexico in May 2011 on the production of influenza vaccines. Finding the right incentives to bridge the innovation gaps that impact the most vulnerable sectors of the population has also been a matter of concern. PAHO's proposal to create an incentive for innovation to fight neglected and priority diseases has sparked the countries' interest.

26. Country activities to improve access to health technology are grounded in the principle of integrating interventions in access and innovation; they include:

- (a) integrating supply systems in El Salvador and the Dominican Republic;
- (b) increasing and improving the efficiency of public drug financing through the People's Pharmacy Program in Brazil;
- (c) increasing the transparency of pharmaceutical markets through the creation and use of price banks to support public procurement of medicines in MERCOSUR, Central America, Peru, and Colombia;
- (d) evaluating current sanitary regulatory mechanisms in Mexico through the Federal Commission for Protection against Sanitary Risk (COFEPRIS), and specifically, the system for the linkage of patents and medicines to achieve access to medicines and their availability on the market;
- (e) promoting rational use by creating multidisciplinary national programs in Bahamas, Bolivia, Nicaragua, and Paraguay;
- (f) assisting the Central American countries in the negotiation and joint procurement of costly drugs, with support from the Regional Revolving Fund for Strategic Public Health Supplies, to improve access to these supplies; and
- (g) strengthening regulatory capacity to guarantee the safety, efficacy, and quality of drugs in the Caribbean countries, Colombia, Cuba, Honduras, Panama, and Peru.

⁸ A summary of the meeting can be accessed at:

http://new.paho.org/hq/index.php?option=com_docman&task=doc_download&gid=8796&Itemid=

⁹ A summary of the events at the International meeting on technology transfer and health innovation in the Americas can be accessed at:

http://new.paho.org/uru/index.php?option=com_content&task=view&id=245&Itemid=230

27. Today, the Region has four regulatory authorities for regional reference (Resolution CD50.R9 [2010]) to strengthen capacity and the regulatory functions in the Member States.

28. Integrating the multiple initiatives and work areas of the global strategy implies major challenges. In addition to improving access, having a participatory space with reliable and pertinent information will help to strengthen the capacities necessary to implement all the activities required for innovation in health. Therefore, PAHO, in collaboration with the Member States, international organizations, and key actors, is developing a Regional Platform for Access and Innovation for Health.¹⁰ This platform will serve as an integrating instrument and channel for promoting the cooperation, work in networks, transparency, and information flows necessary for promoting leadership, innovation, access, and rational use in the field of health technology, as well as the sharing of information on the initiatives included in the global strategy.

29. The Member States of PAHO have displayed a serious commitment to comprehensive implementation of the strategy. The 49th Directing Council of PAHO provided complementary tools with its adoption of the *Policy on Research for Health* (Resolution CD49.R10 [2009])¹¹ and Resolution CD49.R19¹² (2009) on the elimination of neglected diseases and other poverty-related infections.

Action by the Directing Council

30. The Directing Council is requested to take note of this progress report and offer its recommendations in this regard.

¹⁰ Available from:

http://new.paho.org/hq/index.php?option=com_content&task=view&id=2168&Itemid=1178&lang=en

¹¹ Resolution CD49.R10 (2009), *Policy on Research for Health*, [online] is available at:

http://new.paho.org/hq/index.php?option=com_docman&task=doc_download&gid=3093&Itemid=

¹² Resolution CD49.R19 (2009), *Elimination of Neglected Diseases and Other Poverty-related Infections* [online] is available at: [http://new.paho.org/hq/dmdocuments/2009/CD49.R19%20\(Eng.\).pdf](http://new.paho.org/hq/dmdocuments/2009/CD49.R19%20(Eng.).pdf)

C. ADVANCES IN THE IMPLEMENTATION OF THE WHO FRAMEWORK CONVENTION ON TOBACCO CONTROL

Background

31. The objective of this report is to provide an update on the progress made with respect to tobacco control measures in the Region of the Americas pursuant to Resolutions CD48.R2 (2008) of the 48th Directing Council of the Pan American Health Organization (PAHO) (1) and CD50.R6 (2010) of the 50th Directing Council of PAHO (2).

Progress Report

32. Saint Vincent and the Grenadines ratified the Framework Convention on Tobacco Control (FCTC) in October 2010, and Saint Kitts and Nevis did so in June 2011, bringing the number of States Party to 29 (83% of all PAHO Member States).

33. El Salvador, Mexico, and Panama raised taxes on tobacco products; however, these levies still fail to represent 75% of the retail price, which means that only two countries have reached that goal (Argentina and Chile).

34. Eleven countries have national or subnational legislation covering more than 90% of the population that bans smoking in all indoor public places and workplaces, without exception. Argentina, Barbados, Honduras, and Venezuela are the four new countries that have joined Canada, Colombia, Guatemala, Panama, Peru, Trinidad and Tobago, and Uruguay. One country, Paraguay, suffered a setback with the repeal of a decree that addressed this issue, due to a lawsuit filed by the tobacco industry.¹³

35. Sixteen countries have regulations governing the packaging and labeling of tobacco products that are consistent with the FCTC, although two of them do not require images in the warnings. Argentina, Honduras, and Nicaragua are the new countries that have joined this group. Paraguay suffered a setback with the repeal of the decree that addressed this issue, due to a lawsuit filed by the tobacco industry. For 12 countries, the deadline for application of the pertinent article of the FCTC is the end of 2011.¹⁴

¹³ The legislative assemblies of Ecuador and El Salvador have passed bills requiring 100% smoke-free environments, in keeping with the provisions of the WHO FCTC, but as of the date of this report (11 July 2011), the Presidents of the Republic of the respective Member States have not signed them into law, and the deadline for doing so (or vetoing the legislation) has not yet passed.

¹⁴ The legislative assemblies of Ecuador and El Salvador have passed bills requiring health warnings, in keeping with the provisions of the WHO FCTC, but as of the date of this report (11 July 2011), the Presidents of the Republic of the respective Member States have not signed them into law, and the deadline for doing so (or vetoing the legislation) has not yet passed.

36. Although Honduras and Nicaragua have adopted partial restrictions on tobacco advertisement, promotion and sponsorship and Argentina has joined the countries that have broad restrictions, the two only countries with a total ban continue to be Colombia and Panama.¹⁵ For 20 countries, the deadline for application of the pertinent article of the FCTC is the end of 2011.

37. Recent years have witnessed an increase in the number and aggressiveness of measures adopted by the tobacco industry to fight tobacco control policies. PAHO is collaborating closely with civil society organizations to provide immediate and appropriate technical assistance to the Member States in this area under Article 5(3) of the FCTC.

38. With respect to the cross-cutting issues of gender and human rights, PAHO, in collaboration with the World Health Organization (WHO) and the U.S. Centers for Disease Control and Prevention (CDC) continues to buttress the Global Tobacco Surveillance System through the use of a standard protocol that makes it possible to have information with a breakdown by sex in all components of the system. It has also provided technical assistance for implementation of the tobacco control measures with a human rights approach. This has been particularly important in its support to counteract the interference of the tobacco industry, which opposes measures to promote smoke-free environments.

Measures to Improve the Situation

39. The issue of tobacco control must remain a priority, since full implementation of the FCTC will preserve people's health and save countless lives, not only in the long term, but in the short term as well, as demonstrated by studies that show a significant reduction in the incidence of acute myocardial infarction following implementation of policies on smoke-free environments.

40. Since 80% of the Member States are legally bound by the Convention, it is essential to foster the inclusion of tobacco control in cooperation plans with the countries, along with use of the horizontal cooperation mechanism, through technical cooperation among countries.

41. It is necessary to play a more active role at the national level to facilitate the creation or strengthening of coordinating entities and technical units responsible for addressing the issue of tobacco control.

¹⁵ The legislative assemblies of Ecuador and El Salvador have passed bills requiring a comprehensive ban on advertising, in keeping with the provisions of the WHO FCTC, but as of the date of this report (11 July 2011), the Presidents of the Republic of the respective Member States have not signed them into law, and the deadline for doing so (or vetoing the legislation) has not yet passed.

42. Action by the tobacco industry usually requires a rapid and coordinated response by the PAHO/WHO Member States. The Organization should widely disseminate information on the different types of technical cooperation available in each case, in addition to promoting coordination with other government and civil society actors in order to optimize the interventions. It is therefore essential that the support provided to governments facing industry action be coordinated by the Organization and that the States Parties share information on their experiences.

43. It is recommended that tobacco control be a component of broader projects, since many areas, such as chronic noncommunicable diseases and maternal and child health, could benefit and at the same time help to mobilize new sources of financing. Moreover, it is important to continue and further the inclusion of the gender and human rights perspective and health protection in the work environment in the tobacco control agenda.

Action by the Directing Council

44. The Directing Council is requested to take note of this progress report and establish that a progress report be submitted every two years to coincide with the end of the biennium.

References

1. Pan American Health Organization. WHO Framework Convention on Tobacco Control: Opportunities and Challenges for Its Implementation in the Region of the Americas [online]. 48th Directing Council of PAHO, 60th Session of the WHO Regional Committee for the Americas (Resolution CD48.R2) , 29 September-3 October 2008; Washington (DC), US. Washington (DC): PAHO; 2008 (Resolution CD48.R2) [accessed 22 March 2011]. Available at:
<http://www.paho.org/english/gov/cd/cd48.r2-e.pdf>
2. Pan American Health Organization. Strengthening the Capacity of Member States to Implement the Provisions and Guidelines of the WHO Framework Convention on Tobacco Control. [online]. 50th Directing Council of PAHO, 62nd Session of the WHO Regional Committee for the Americas; 27 September-1 October 2010; Washington (DC), US. Washington (DC): PAHO; 2010 (Resolution CD50.R6) [(accessed 22 March 2011)]. Available at:
http://new.paho.org/hq/index.php?option=com_content&task=view&id=3149&Itemid=2401&lang=en

D. IMPLEMENTATION OF THE INTERNATIONAL HEALTH REGULATIONS

Introduction

45. The purpose of this report is to give an account of the progress made by Member States of the Region of the Americas and the Pan American Health Organization (PAHO) toward fulfilling their obligations and commitments in implementing the International Health Regulations since the last report to the 50th Directing Council, held in 2010 (Document CD50/INF/6).

Promote Regional and Global Partnerships

46. States Parties are gradually taking ownership and embracing the spirit of the Regulations in terms of transparency, shared responsibility, and mutual support, driven also by existing subregional integration mechanisms and initiatives. Recognizing the benefits of this approach, PAHO continues to promote and collaborate with such mechanisms and initiatives. It also continues to strengthen collaboration with other international organizations and technical institutions identified as key to supporting implementation of the Regulations.

Strengthen National Disease Prevention, Surveillance, Control and Response Systems and Public Health Security in Travel and Transport

47. The National IHR Action Plans (NAP) are the cornerstones of IHR implementation at the national level. Of the 28 States Parties that developed their NAP, at least 10 have conducted the costing exercise for such plans. Country-specific support provided by PAHO for the implementation of NAPs includes: (a) finalization and adjustment of the NAP; (b) strengthening of the National IHR Focal Point Office (NFP) through the development of standard operating procedures, training in the use of Annex 2 of the Regulations, study visits to the WHO IHR Contact Point for the Region at PAHO Headquarters, and introduction of the IT platform for event management with support from the Ministries of Health of Brazil and Chile; (c) training of Rapid Response Teams; and (d) the establishment of competencies for field epidemiology.

48. PAHO supported country missions to facilitate the implementation of IHR provisions at points of entry, in particular those related to the port designation process, promoting intersectoral interactions between public health and points of entry authorities, and other ministries (e.g. ministries of transport, defense, among others), stressing the importance of integrating public health functions and a cost-effective approach to the

designation of points of entry. With support from the Government of Spain, PAHO facilitated the translation of key documents on IHR implementation at points of entry.

49. The States Parties have committed to establishing core capacities for surveillance and response, including at points of entry, by June 2012, but it can be anticipated that not every country in the Region will meet the deadline. This deadline should be regarded as a target set to maintain the momentum and a step in the sustainable and ongoing preparedness process where countries adapt lessons learned and evidence-based best practices.

Strengthen PAHO/WHO Regional and Global Alert and Response Systems

50. PAHO continued fulfilling its obligations as the WHO IHR Contact Point for the Region of the Americas, facilitating the public health event management process: risk detection, risk assessment, response, and risk communication. From 1 January to 3 November 2010, a total of 110 public health events of potential international concern were detected and assessed. For 60 out of the 110 events considered, verification was requested and obtained from the NFP.

51. PAHO supported national authorities in their response efforts during a nosocomial outbreak of pulmonary plague in a known plague focus in Peru in August 2010. PAHO also supported Haiti and Dominican Republic following the reintroduction of cholera in Haiti in October 2010. Over 100 experts were deployed to support cholera response efforts, including those mobilized through the Global Outbreak Alert and Response Network (GOARN). Institutions and governments that contributed substantially to the response include the Centers for Disease Control and Prevention, United States; the Public Health Agency of Canada; the European Centre for Disease Prevention and Control; the Institut de veille sanitaire, France; the Ministries of Health of Brazil, Peru, and Spain, and the Government of Cuba. Cuba deployed an additional 1,500 health workers to strengthen its already substantial, ongoing presence, as well as the Governments of Argentina, Brazil, Ecuador, and Peru also sent personnel.

Sustain Rights, Obligations and Procedures and Conduct Studies and Monitor Progress

52. The review and/or amendment of the national legal framework to ensure its compatibility and consistency with IHR provisions remain a challenge in Central America and the Caribbean.

53. In 2010, all but five States Parties in the Region submitted the annual confirmation or update of the NFP contact details. As of 31 January 2011, the IHR Roster of Experts includes 75 experts from the Region of the Americas.

54. As of 31 January 2011, 379 ports in 17 States Parties in the Region of the Americas were authorized to issue Ship Sanitation Certificates. The list of authorized ports is regularly updated and posted online.¹⁶

55. In 2010, eight States Parties from the Region informed WHO about their vaccine requirements for travelers. The information was included in the 2011 edition of WHO publication *International Travel and Health*.¹⁷

56. In spite of the fact that the IHR signal the commitment of States Parties to strengthen capacity for surveillance and response while ensuring mutual accountability,¹⁸ to date, there are no legal obligations concerning the format of the annual report to be used by States Parties for reporting to the World Health Assembly (WHA). Mindful that, as per Article 54, IHR implementation monitoring should encompass the Regulations as a whole, between 2007 and 2009, several monitoring tools, primarily focusing on core capacities, were developed worldwide and in the Region. Therefore, options as for the reporting format were offered to facilitate States Parties' ability to comply with their reporting obligations to the Sixty-fifth WHA. Member countries of the Union of South American Nations (UNASUR) agreed in May 2011 to use the toolkit developed and validated within the Southern Common Market (MERCOSUR) framework for reporting to the Sixty-fifth World Health Assembly.

IHR Review Committee

57. The IHR Review Committee¹⁹ was convened pursuant to Resolution WHA61.2 (2008), following the Director-General's proposal to the 126th Executive Board to review the functioning of the IHR during the pandemic (H1N1) 2009. The main findings, recommendations, and conclusions of the Review Committee were presented at the Sixty-fourth WHA in the Report of the Review Committee on the Functioning of the International Health Regulations (2005) in relation to Pandemic (H1N1) 2009 (hereafter referred to as Final Report).²⁰

58. The three overarching conclusions offered by the Review Committee in its Final Report indicate that: (a) the IHR helped improving the world's preparedness to cope with public health emergencies, although core capacities called for in Annex 1 of the IHR are

¹⁶ Available at http://www.who.int/ihr/ports_airports/portslanding/en/index.html.

¹⁷ WHO. "International Travel and Health", 2011 Edition, <http://www.who.int/ith/en/>

¹⁸ Global Health Security and the International Health Regulations. Andrus JK, Aguilera X, Oliva O, Aldighieri S. BMC Public Health. 2010 Dec 3;10 Suppl 1:S2.

¹⁹ Information about IHR Review Committee is available at:
http://www.who.int/ihr/review_committee/en/index.html.

²⁰ WHO. 64th WHA Document A64/10, 2011, "Report of the Review Committee on the Functioning of the International Health Regulations (2005) in relation to Pandemic (H1N1) 2009",
http://apps.who.int/gb/ebwha/pdf_files/WHA64/A64_10-en.pdf.

not yet fully operational throughout all levels of the public health system and are not on a path to be timely implemented worldwide; (b) WHO performed well in many ways during the pandemic, confronted systemic difficulties and demonstrated some shortcomings; no evidence of malfeasance was found by the Review Committee; and, (c) the world is ill-prepared to respond to a severe influenza pandemic or to any similar global public health event; in addition to the establishment of core capacities, factors of different nature might help in advancing global preparedness.

59. Through Resolution WHA 64.1, the Assembly urged Member States to support implementation of the recommendations contained in the Final Report of the IHR Review Committee.²¹

²¹ WHO. 64th WHA Resolution WHA 64.1, 2011, http://apps.who.int/gb/ebwha/pdf_files/WHA64/A64_R1-en.pdf.

E. PROGRESS TOWARD ACHIEVEMENT OF THE HEALTH-RELATED MILLENNIUM DEVELOPMENT GOALS IN THE REGION OF THE AMERICAS

Introduction

60. The Millennium Development Goals (MDGs),²² set in 2000 by the 189 member countries of the United Nations through the Millennium Declaration, were reaffirmed at the Summit of 2010. The Member States of the Pan American Health Organization (PAHO) have expressed a clear commitment to meeting the targets set to reach the [MDGs](#), in the conviction that health is an essential factor in social, economic, and political development. The Organization has deemed that the best way to make progress toward meeting these targets is to improve equity in health both among and within countries, giving priority to vulnerable areas and groups, as well as populations living in poverty. The MDGs and their associated targets are key dimensions of the [PAHO](#) commitment to health policies with quantifiable results.

61. This report is based on the commitments made during the 45th Directing Council of 2004, which adopted resolution [CD45.R3](#) on the MDGs and health targets ([CD45/8](#)); the report of the World Health Assembly [A63/7](#) (2010) and Resolution [WHA63.15](#) (2010); and the resolution of the Millennium Summit adopted by the United Nations General Assembly ([A/RES/65/1](#)[2010]) as it pertains to the Region of the Americas. The report also proposes strategic action for the next four years.

Background

62. The year 2010 marked four-fifths of the way to the target date set for achieving the MDGs, a time frame that began in 1990 and will end in 2015. Although the Region of the Americas seems to be on the way to achieving of the health-related MDGs, it must be recognized that the regional averages tend to conceal major disparities among and within the countries. Moreover, the rate at which the targets are met differs from country to country, regardless of the level of development.

63. According to estimates by the Economic Commission for Latin America and the Caribbean ([ECLAC](#)), between 2003 and 2008 the proportion of people living in poverty in Latin America and the Caribbean fell by 11 percentage points, decreasing from 44% to 33%; similarly, the proportion of people living in extreme poverty fell from 19%

²² There are eight Millennium Development Goals. They refer to the eradication of poverty, universal primary education, gender equality, the reduction of child mortality, the improvement of women's health, combating HIV/AIDS, malaria, and other diseases, environmental sustainability, and development of a global partnership for development.

to 13%. Even with this progress, it was calculated that in 2008, 180 million people were living in poverty and 71 million in extreme poverty. For this reason, in the [Inter Agency Report on MDGs](#) it was agreed that three aspects of equality would be emphasized: equal rights, the closing of gaps, and the welfare of future generations through sustainable development (1–2).

64. With the adoption of Resolution [CD45.R3](#) in 2004, the countries have implemented activities with support from the Organization's different technical areas, emphasizing measurement, quality, and monitoring of the progress made toward meeting the targets. Furthermore, through numerous documents, the countries have made a commitment to:

- (a) reduce subnational inequalities (in 2006 [CD47/INF/2](#) , [CD47/inf/1](#) and in 2007 [CSP27/14](#));
- (b) reduce poverty and hunger (RIMSA [CD46/14](#) [2005], [CD48/19. Rev. 1](#) [2008]);
- (c) improve nutrition (in 2006 [CD47/18](#), [CD47.R8](#) and [CD49/23. Rev. 1](#) 2009);
- (d) reduce gender inequity ([CD46/12](#) [2005]);
- (e) reduce infant mortality (in 2006 [CD47/12](#), [CD47/11. Rev. 1](#), [CD47.R19](#), [CD47.R10](#), and in 2008 [CD48/7](#), [CD48.R4, Rev. 1](#));
- (f) improve maternal health ([WHA55.19](#)²³[2002] and [A57.13](#) [2004]) ;
- (g) combat HIV/AIDS (in 2005 [CD46/20](#) and [CD46.R15](#)), malaria ([CD46/17](#) [2005], and in 2007 [CSP27/9](#) and [CSP27.R11](#)); and tuberculosis (in 2005 [CD46/18. Rev.1](#) and [CD46.R12](#));
- (h) promote sustainable development (in 2008 [CD48/16](#), [CD48/16, Add. II](#), and in 2010 [CD50/19](#), [CD50/19, Add. I](#) and [CD50/19, Add. II](#));
- (i) strengthen health systems that are based on primary care and respond to the health determinants (in 2008 [CD48/14, Rev. 1](#), [CD48/14, Add II](#), and in 2009 [CD49.R22](#));
- (j) strengthen vital and health statistics ([CD48/9](#) [2008], [CD49/16](#) [2009], in 2007 [CSP27/13](#), [CSP27/12](#) and [CD50/INF/6](#) [2010]).

65. This progress report is based on the data provided by the Member States and published annually by PAHO within the framework of the Regional Core Health Data and Country Profile Initiative ([CD/45/14](#) [2004] and [CD50/INF/6](#) [2010]), and on global data generated by the United Nations Inter-Agency and Expert Group on MDG

²³ This document is currently available in English only.

Indicators, which provides standardized figures based on population projections or adjusted data (1–3).

Analysis of the Current Situation

66. The degree of progress toward achievement of the MDGs varies from country to country and target to target.

67. For the purposes of this report, both the information from the countries (referred to here as “PAHO”), routine records, and country calculations, and from the estimates of the Economic Commission for Latin America and the Caribbean (ECLAC/CELADE), which oversees the interagency group, were considered.^{24,25,26,27}

68. A study was conducted using information for the period 1990-2009, equivalent to 76% of the time allotted for achieving the MDGs. The problems that affect use of the information from routine systems are primarily lack of coverage of the numerator and/or denominator of the indicators. This makes it necessary to use calculations done by the countries and international organizations, which do not always coincide.²⁸

69. MDG 4 is analyzed with the data from PAHO, using mortality in children under 1 year of age, since this age group accounts for 80% of the deaths in children under five.

70. **Infant mortality** continues to move downward in the Region. In 1990, the infant mortality rate (IMR) was 42 per 1,000 l.b. (live births.) in Latin America and the Caribbean and in 2009, 19 per 1,000 l.b., for a 55% reduction and an annual average reduction of 2.9% (4). It is calculated that in 2009 there were 199,000 infant deaths in the

²⁴ Pan American Health Organization. Health Information and Analysis: Health Situation in the Americas: Basic Indicators for 2004 to 2010. Washington (D.C.) USA.

²⁵ Comisión Económica para América Latina y el Caribe/Centro Latinoamericano y Caribeño de Demografía. Tasas de mortalidad infantil estimadas según quinquenios. Países de América Latina 1950-2050 [Internet]. CEPAL/CELADE. Santiago de Chile, Chile (accessed 1 November 2010). Available at: http://www.eclac.org/celade/proyecciones/basedatos_BD.htm.

²⁶ Institute for Health Metrics and Evaluation. Neonatal, postneonatal, childhood, and under-5 mortality for 187 countries, 1970-2010: a systematic analysis of progress towards millennium development goal 4 [Internet]. IHME; 2010 [accessed 1 November 2010]. Available at: <http://www.healthmetricsandevaluation.org/resources/datasets/2010/mortality/results/child/child.html>.

²⁷ United Nations Children's Fund/World Health Organization/World Bank/United Nations Population Division. The Inter-agency Group for Child Mortality Estimation: Trends in infant mortality rates (1960-2009) [Internet]. IGME; 2010 [accessed 1 November 2010]. Available at: http://www.childinfo.org/mortality_imrcountrydata.php.

²⁸ PAHO is executing a strategy for improving vital and health statistics (CD48/9 [2008]) that consists of two components: a) working with the countries to strengthen and improve statistics, and b) coordinating with international organizations to avoid duplication of efforts and the use of techniques or hypothesis that differ when calculating the indicators.

Americas. Some public health measures that have contributed to this decline are: progress in the implementation of the high-impact, low-cost primary health care strategy; free universal programs for routine vaccination; oral rehydration therapy; child growth and development monitoring; increased coverage of basic services, especially drinking water and sanitation; an increase in the educational level of the population, especially women; declining fertility; and poverty reduction.²⁹ It should be noted that there is great heterogeneity among the countries of the Region and among population groups and territories within countries.

71. Based on the official figures that PAHO receives from its Member States, the lowest IMR are seen in Canada, Chile, Costa Rica, Cuba, the United States of America, and Uruguay, (from 6 to 10 per 1,000 l.b., depending on the series used); Bolivia and Haiti have the highest figures (from 50 to 80 per 1,000 l.b., depending on the series)—values eight times higher than in the countries with the lowest rates.

72. In the Caribbean countries (English- and French-speaking), the series are more unstable because small populations are involved and their situation is more homogeneous than in the Latin American countries. The French Departments of the Americas (Guadeloupe, French Guiana, and Martinique) and Anguilla have the lowest IMR (below 10 per 1,000 l.b.) while Guyana, Suriname, and Trinidad and Tobago have the highest in the subregion (20-40 per 1,000 l.b. according to different estimates).

73. **Maternal mortality** in the Region has declined, but with trends that differ from country to country. In 1990, the maternal mortality ratio (MMR) was 140 per 100,000 live births in Latin America and the Caribbean and 84 in 2008, a 40% reduction, with an average annual reduction of 3% since 1990. The number of maternal deaths in the Americas in 2008 is calculated at 10,242 (5).

74. Based on the official figures that PAHO receives from its Member States, the percentage change in the maternal mortality ratio (MMR) was analyzed, using the MMR figures available in 2000 as the baseline and comparing it with the most recent figures available between 2005 and 2009. If a country did not have the MMR for 2000, the figure for 1999 or 2001 was used.

75. This downward trend is observed in 15 countries of the Region, which show different degrees of progress ranging from -2.9% up to -44.3%. In addition, there are

²⁹ This statement is also supported in paragraph 4 of this same document. In 1990 there were 200 million poor and 93 million people living in extreme poverty; in 2007 there were 184 million poor and 68 million living in extreme poverty. In 2008, notwithstanding the food crisis, the number of poor fell to 180 million; however, the number of people living in extreme poverty rose to a 71 million. Therefore, according to the 2008 data from ECLAC, the number of people living in extreme poverty increased, but at the same time it can be said that poverty in general has fallen since 1990 (by 11 percentage points and 20 million people).

countries that reported increases until 2008, an increase largely attributable to improvements in the monitoring of maternal deaths – for example, greater capture of the indirect causes of death observed in Canada, the United States, and the Dominican Republic. It should be pointed out that for 2009, we expect an increase in maternal mortality in some of the countries due to the 2009 influenza A (H1N1) epidemic.

76. It is important to note that in several countries, the expansion of coverage in prenatal care, delivery by skilled birth attendants, contraceptive access and use, and the intensification of maternal mortality surveillance are strategies that are contributing to lower maternal mortality. Nevertheless, although the maternal mortality indicator has improved, the analysis is hindered by a lack of information in the series, because of the size of populations and/or the scarcity of sources that cover all the years foreseen for the analysis of the MDGs. It should be pointed out that reducing maternal mortality remains a pending issue and that most of the countries in the Region will not succeed in meeting the target by the established date.

77. Concerning the calculation of the number of new **HIV** infections for the countries of the Region, a reduction in morbidity has generally been observed, with differing trends in mortality (6). In 2009, around 7% of the total new HIV infections worldwide—that is, 179,000 cases—corresponded to the Region; of these, 92,000 occurred in Latin America, 70,000 in North America, and 17,000 in the Caribbean (3). UNAIDS is responsible for monitoring the achievement of Targets 6A and 6B.

78. At the global level, the epidemic has not yet been halted or turned around; however, some regions are beginning to see stabilization. In the Americas, the epidemic continues to be concentrated in men who have sex with men, male and female sex workers, and injection drug users. According to the WHO, UNAIDS, UNICEF Progress Report 2010, among low- and middle-income countries, in 2009, the Latin American and Caribbean Region had the highest antiretroviral treatment coverage, at 50%, a 2% increase over 2008. In children under 15, antiretroviral treatment coverage rose from 40% to 58% between 2005 and 2009. From 2005 to 2009, antiretroviral prophylaxis coverage for pregnant women in Latin America and the Caribbean grew from 43% to 54%, and in children born to HIV+ women, it went from 39% to 48% (6).

79. For the period 2000-2009, the Region reported a 52% drop in morbidity from **malaria**, along with a 61% drop in mortality from this cause; 18 of the 21 countries with endemic malaria managed to lower their numbers by 2009. Of these, nine have reported reductions of over 75%; while five of them have had reductions of over 50%. Since 2005, there has been a sustained reduction in transmission in the Americas (7).

80. With respect to **tuberculosis**, 23 countries in the Region have made progress. Nevertheless, multidrug resistance still poses a challenge. The 2010 WHO report on

tuberculosis control, (which contains data reported by the countries of the Region) notes a 4% annual rate of reduction in TB incidence in the Americas, making it the Region of the world with the sharpest decline. At the same time, the Region of the Americas has already met the targets of a 50% reduction in the TB prevalence and mortality rates set for 2015 (8).

81. With respect to **sustainable access to safe water**, the responsibility in the interagency group rests with UNICEF and WHO, agencies that, through the Joint Monitoring Program (JMP) use information based on household surveys and censuses, with standardized definitions to ensure comparability in time and between countries. According to the available regional JMP data for 2008, access to improved water sources stands at 93% (97% in urban areas and 80% in rural areas). The challenge is greater among the population in the lowest income quintiles. The JMP will improve monitoring by providing a breakdown of the data, which will make it possible clarify the definition of the sources of access to improved water and pay closer attention to the measurement of water quality. Work is beginning on the preparation of post-2015 indicators on the right to clean water and sanitation, recently declared a human right by the United Nations General Assembly (9).

82. In regard to **basic sanitation**, according to the JMP data for 2008, there is 80% coverage with improved basic sanitation in the Region. In rural areas, this coverage is only 55%, making it necessary to continue promoting this service in rural and peri-urban areas. Furthermore, progress needs to be made in improving service quality, reducing unimproved sanitation services and defecation in the open, and improving wastewater treatment in urban areas (9). The challenge is greater among the population in the lowest income quintiles (2).

Proposal

83. In order to meet the targets it is necessary: a) to guarantee joint efforts among the countries of the Region, considering that some must speed up activities; b) to maintain the leadership of the Member States with technical assistance from PAHO for monitoring and technical cooperation to improve health system performance; and c) to improve national health information systems to ensure increasingly valid, reliable and timely data from the usual systems.

84. The countries will be requested to continue pursuing the following strategic lines for the achievement of MDGs: (a) review and consolidation of information systems; establishment of nominal registries that make it possible to assess coverage gaps. Likewise, use technology resources to create an integrated system designed to facilitate timely decision-making; (b) strengthening of systems based on primary health care (PHC). It is proposed that the health systems of different levels of government that are in

more highly vulnerable situations be strengthened with the renewed PHC framework; (c) reduction of inequity within countries, giving priority to the most vulnerable municipalities and excluded population groups, as a response to the social determinants of health. It is proposed that initiatives targeting such municipalities and groups, such as Faces, Voices, and Places, healthy municipalities, the Alliance for Nutrition and Development, Safe Motherhood, and other initiatives aimed at consolidating citizen rights (identity, access to social programs, citizen participation, surveillance, etc.), and territorial social management be strengthened; (d) development of public policy to ensure the sustainability of achievements and action on the social and environmental determinants of health through the promotion of “health in all policies.” It is proposed that advantage be taken of all political and technical forums to bring the issue of the challenges of equity in our Region to the forefront; and, (e) intensification of intersectoral and interagency work to pool and target efforts.

Action by the Directing Council

85. The Directing Council is requested to give priority to this line of technical cooperation and activities that further promote achievement of the MDGs by 2015.

86. The Member States are requested to intensify their efforts to achieve the MDGs through targeted actions in the five proposed strategic lines

87. It is recommended that a progress report be prepared in 2013 in preparation for the consolidated report that will be submitted to the United Nations General Assembly in 2015.

References

1. United Nations. Millennium Development Goals 2010: Achieving the Millennium Development Goals with Equality in Latin America and the Caribbean: Progress and Challenges [Internet]. Interagency report coordinated by ECLAC, Santiago, Chile: United Nations; 2010 (document LG/G.2460) [accessed 28 January 2011]. Available at:
<http://www.eclac.cl/cgi-bin/getProd.asp?xml=/publicaciones/xml/5/39995/P39995.xml&xsl=/tpl-i/p9f.xsl&base=/tpl/top-bottom.xsl>.
2. Millennium Development Goals: Advances in Environmentally Sustainable Development in Latin America and the Caribbean. Interagency report coordinated by ECLAC. Santiago, Chile: United Nations; 2010 [accessed 28 January 2011]. Available at:
<http://www.eclac.cl/cgi-bin/getProd.asp?xml=/publicaciones/xml/2/38502/P38502.xml&xsl=/dmaah/tpl/p9f.xsl&base=/dmaah/tpl/top-bottom.xsl>.

3. Joint United Nations Program on HIV/AIDS. UNAIDS Report on the Global Aids Epidemic 2010. [Internet]. New York: UNAIDS; 2010 [accessed 10 February 2011]. Available at: http://www.unaids.org/globalreport/Global_report.htm.
4. UN Inter-agency Group for Child Mortality Estimation. Levels and Trends in Child Mortality: Report 2010 [Internet]. New York: UNICEF; 2010 [accessed 10 February 2011]. Available at: http://www.healthynewbornnetwork.org/sites/default/files/resources/UNICEF_Child_mortality_for_web_0831.pdf.
5. World Health Organization. Trends in maternal mortality: 1990 to 2008. Estimates developed by WHO, UNICEF, UNFPA, and the World Bank [Internet]. Geneva, Switzerland: WHO; 2010 [accessed 10 February 2011]. Available at: <http://www.who.int/reproductivehealth/publications/monitoring/9789241500265/en/index.html>.
6. WHO, UNAIDS, UNICEF. Towards universal access: scaling up priority HIV/AIDS interventions in the health sector. Progress report 2010. Geneva, Switzerland: WHO; 2010. Available at: <http://www.who.int/hiv/pub/2010progressreport/report/en/index.html>
7. Pan American Health Organization. Report on the Situation of Malaria in the Americas, 2008. Washington (DC), US: PAHO; 2008 [accessed 10 February 2011]. Available at: http://new.paho.org/hq/index.php?option=com_content&task=view&id=5175&Itemid=2258.
8. World Health Organization. Global tuberculosis control: WHO report 2010 [Internet]. Geneva, Switzerland: WHO; 2010 [accessed 10 February 2011]. Available at: http://www.who.int/tb/publications/global_report/2010/en/index.html.
9. Word Health Organization. A snapshot of drinking-water and sanitation in the MDG region Latin-America & Caribbean – 2010 update. A regional perspective based on new data from the WHO/UNICEF Joint Monitoring Program for Water Supply and Sanitation. WHO and UNICEF; 2010 [accessed 10 February 2011]. Available at: http://www.wssinfo.org/fileadmin/user_upload/resources/1284626181-LAC_snapshot_2010.pdf

F. REVIEW OF THE PAN AMERICAN CENTERS

Introduction

88. This document was prepared in response to the mandate of the Governing Bodies to periodically examine and evaluate the Pan American Centers.

Pan American Foot-and-Mouth Disease Center (PANAFTOSA)

89. In light of the convergence of human and animal health, there is a growing need for the Pan American Health Organization (PAHO) to exercise leadership in the areas of zoonoses, food safety, and food security.

Recent Progress

90. The institutional development process for PANAFTOSA included the review and improvement of basic administrative processes. Operating costs were broken down so that technical cooperation for the eradication of foot-and-mouth disease will be financed largely by voluntary contributions from Brazil's Ministry of Agriculture, Livestock, and Food Supply, and other public and private organizations in the agriculture sector through a trust fund that will pool the financial resources allocated to regional coordination of the Hemispheric Program for the Eradication of Foot-and-mouth Disease (PHEFA). Therefore, PANAFTOSA drew up a new action plan for the period 2011-2020 that was approved at a special meeting of the Hemispheric Committee for the Eradication of Foot-and-mouth Disease (COHEFA) in December 2010. The PHEFA Action Plan 2011-2020 spells out the political and technical commitments of the countries that are necessary for meeting the goal of eradication at the end of the period.

91. In addition, the regional and global coordination mechanisms for early warning and rapid response to serious health risks associated with zoonoses, foodborne diseases, and animal diseases that have an impact on food security are being strengthened under the International Health Regulations (2005), in close collaboration with the World Animal Health Organization (OIE). In December 2011, the remodeling of the laboratory of Brazil's Ministry of Agriculture, Livestock, and Food Supply located in Pedro Leopoldo (Minas Gerais), which will be a biosafety-level 4 facility, in compliance with the standards of the World Animal Health Organization (OIE), is expected to be completed. This will permit the transfer of the PANAFTOSA reference laboratory, currently located in Rio de Janeiro, to its new installations.

Latin American and Caribbean Center on Health Sciences Information (BIREME)

92. BIREME is a specialized PAHO center founded in 1967 to channel the Organization's technical cooperation in health sciences information and technology to the Region. The Center has worked in collaboration with the Government of Brazil under the legal framework of a Maintenance Agreement, which was successively renewed since its signature until 30 December 2009.

93. In 2009, following an extensive consultative process in which the Government of Brazil, under the leadership of the Ministry of Health, actively participated, the 49th Directing Council approved a new institutional governance structure and legal framework, stipulated in the Statute of BIREME, which went into effect on 1 January 2010. In order to provide all the administrative and legal elements necessary for the operations of the new institutional framework, especially the negotiation and signing of the new Headquarters Agreement for BIREME with the Government of Brazil, the aforementioned Maintenance Agreement was extended to 31 December 2011.

94. The Statute of BIREME establishes an Advisory Committee, made up of five nonpermanent members appointed by the Directing Council of PAHO and two permanent members, PAHO and Brazil.

95. In 2009, the 49th Directing Council selected five Member States to serve on the BIREME Advisory Committee: Argentina, Chile, and the Dominican Republic (with a three-year term), and Mexico and Jamaica (with a two-year term). The difference in the length of the terms was designed to guarantee the rotation and continuity of members in the future.

Recent Progress

96. The BIREME Advisory Committee took office on 31 August 2010, with the five nonpermanent members and two permanent members participating. During this session, the Advisory Committee's rules of procedure and a series of activities and meetings necessary for the implementation of BIREME's new institutional framework were approved:

- (a) PAHO/WHO and the Ministry of Health of Brazil prepared a draft Headquarters Agreement in August 2010, which is still pending ratification by the Brazilian counterpart. The approval and signature of this agreement by the Government of Brazil is essential for completing BIREME's institutional framework under its new Statute. It is important to conclude the Agreement before the Maintenance Agreement expires on 31 December 2011.

- (b) The negotiation and signing of the agreement on BIREME's facilities and operations on the UNIFESP campus will begin once the new Headquarters Agreement with the Government of Brazil is signed.
- (c) The proposed Headquarters Agreement establishes the mechanisms for defining the contributions of PAHO/WHO and the Government of Brazil to support the biennial work plans approved under the Statute of BIREME. The budget for the next two years will include regular financial, as well as in-kind, contributions.
- (d) The nomination of candidates for electing the members of the Scientific Committee is under way, in coordination with the BIREME Advisory Committee, as stipulated in the Statute of BIREME. The Scientific Committee is expected to be formed in the first semester of 2012.
- (e) The second meeting of the BIREME Advisory Committee is scheduled for 25 October 2011 at BIREME headquarters in São Paulo, Brazil.
- (f) The PAHO/WHO Representative Office in Brazil, in coordination with the respective regional areas, the Knowledge Management and Communications Area (KMC), and the Health Surveillance, Disease Prevention and Control Area (HSD), has taken the lead in harmonizing all dimensions of institutional management processes and regularization of the work and cooperation exchanges between PAHO offices and Centers in Brazil. A roadmap has also been developed for institutional integration and harmonization of the Centers in the managerial, technical, and administrative spheres. All cooperation activities foreseen will be analyzed with Brazil, and their joint execution with the PAHO Representative Office is projected, based on the provisions of the Country Cooperation Strategy.
- (g) Preparation of the new biennial work plan as a subsidiary entity of PAHO's Knowledge Management and Communications Area (KMC), based on the cooperation strategy in Brazil. The biennial work plan 2012-2013 was prepared jointly with KMC, and communication for its improvement and linkage has continued.

Pan American Center for Sanitary Engineering (CEPIS)

97. As noted in Resolution CD50.R14, on 30 September 2010 the agreement between the Government of Peru and PAHO/WHO to convert CEPIS to the Regional Technical Team on Water and Sanitation (ETRAS) was signed. ETRAS operates out of the facilities of the PAHO/WHO Representative Office in Peru as part of the Sustainable Health and Development Area (SDE) of PAHO. By decision of the parties, the agreement establishing CEPIS, signed on 8 April 1971 by the Government of Peru and PAHO/WHO, was terminated on the date that the Agreement for the Establishment of ETRAS was signed.

98. Consequently, information on CEPIS will no longer be included in the periodic review of the Pan American Centers, and the activities of ETRAS will be presented as part of the periodic report on program performance under the respective strategic objectives.

Latin American Center for Perinatology and Human Development/Women's and Reproductive Health (CLAP/SMR)

Recent Progress

99. The Government of Uruguay made a commitment to providing a physical space for the joint relocation of CLAP/SMR and the PAHO/WHO Representative Office; this has not yet materialized.

100. A study was conducted on merging the administrative services of CLAP/SMR and the PAHO/WHO Representative Office in Uruguay, and a proposal was submitted that contained the necessary steps to bring about the administrative merger and transfer to the new sites.

101. Extension V of the Agreement between the Government of the Eastern Republic of Uruguay, the University of the Republic, and PAHO/WHO to continue the activities of CLAP/SMR was signed. The new agreement expires on 28 February 2016.

Regional Program on Bioethics

102. Pursuant to Resolution CD50.R14, the different modalities of collaboration with the Member States in bioethics were evaluated, and it was resolved that the regional program would be consolidated under the Office of Gender, Diversity, and Human Rights (DRG). Consequently, information about the Regional Program on Bioethics will no longer be included in the periodic evaluations of the Pan American Centers, and the Program's activities will be part of the periodic reports on program performance under the respective strategic objectives.

103. In addition, consultations way with the Government of Chile and the University of Chile are under way to develop joint activities in this field, which could result in a new agreement to replace the Agreement for the Operation of the Regional Program on Bioethics, signed by the Government of Chile, the University of Chile, and PAHO/WHO on 13 January 1994.

Subregional Centers (CAREC and CFNI)

Caribbean Epidemiology Center (CAREC)

104. CAREC is maintaining its customary services, expanding them as necessary and appropriate during its transition to the Caribbean Public Health Agency (CARPHA). As noted in Resolution CD50.R14 (2010), study and support groups in the areas of human and financial resources and laboratory management have been created for the transition process. These groups are continuing their efforts to ensure an orderly and transparent transition to CARPHA. Some of the priority areas include the definition of its work area, the functions of the CAREC laboratory and enhancing its capacities, and the laboratory network that will be set up within the CARPHA structure.

105. CAREC has benefited from the support and guidance of the CAREC Council and has taken into consideration the decisions that the Council for Human and Social Development (COHSOD) and the Caucus of Caribbean Community (CARICOM) Ministers of Health have made concerning CARPHA.

Caribbean Food and Nutrition Institute (CFNI)

106. Pursuant to the request in Resolution CD50.R14 (2010), CFNI continues collaborating with the CARICOM teams in matters related to CARPHA to guarantee that relevant issues in connection with food security, the components of nutrition, and the surveillance of chronic noncommunicable diseases are included in its execution plans. CFNI programs are under review to facilitate the definition of the functions that will be subsumed by CARPHA.

107. The possibility of entering into agreements with institutions in this subregion for the transfer of other functions, such as hospital food services and dietetics and human resources education, continues to be explored. This distribution of responsibilities within each priority area was endorsed by the CFNI Policy Advisory Committee in resolutions 2, 3, 4, and 7 of 19 July 2010 and likewise at its meeting of 12 July 2011.

108. In order to obtain greater technical and administrative efficiency, it was decided to relocate the PAHO/WHO Representative Office in Jamaica to the CFNI building. On 29 November 2010, a modification of the CFNI headquarters lease agreement was signed by the University of the West Indies and PAHO/WHO to enable the two offices to be consolidated. In addition, a cost estimate has been received for the renovations and improvements necessary to accommodate the staff from the Representative Office and CFNI in the same physical space. The transfer is expected to take place in December 2011.

G. REGIONAL INITIATIVE AND PLAN OF ACTION FOR TRANSFUSION SAFETY 2006-2010: FINAL EVALUATION

Introduction

109. In 2005, the 46th Directing Council of the Pan American Health Organization (PAHO) approved the Regional Plan of Action for Transfusion Safety 2006-2010 (1, 2). The purpose of the plan was to contribute to reducing mortality and improving patient care in Latin America and the Caribbean by making safe blood for transfusion available in a timely manner to all patients who needed it. The plan had five objectives and nine progress indicators. Although progress was made after 2005 in terms of the number and safety of blood units collected in the Region, national blood systems were considered inefficient, and access to blood was still suboptimal by 2008 (3). Therefore, Member States agreed to modify their approaches to meet the goal and objectives of the plan (4).

110. The Director of PAHO appointed an External Evaluation Team to assess advances in areas related to the Regional Plan, identify problems encountered in its implementation, and evaluate the opportunities for future action. The Team, which was operational from January to June 2011, analyzed the official national data submitted to PAHO by the countries (5-10). Process and progress indicators for each of the strategic lines of the Regional Plan were assessed. The evaluation exercise included surveys of PAHO/WHO Representatives and focal points, national health authorities, and local staff with regard to the technical cooperation program associated with the Regional Plan. The anonymous surveys were designed to elicit information on the extent of knowledge about the plan, the institutional support provided/received to meet its goals, the quality of technical publications, the efficiency of information gathering and sharing, and the factors that affected national outcomes.

111. This document summarizes the progress made by the national blood systems since 2005, as officially reported by the countries, and taking into consideration the findings of the External Evaluation Team.

Background

112. The World Health Assembly (WHA) first addressed issues pertaining to transfusion safety in 1975, urging Member States to promote the development of national blood services based on voluntary blood donation and to enact efficient legislation governing their operation. The 28th WHA also requested the Director-General to take steps to develop good manufacturing practices for blood and blood components in order to protect the health both of blood donors and of transfusion recipients (11). Three

subsequent documents (12-14) stressed the importance of blood transfusion services and national transfusion programs in preventing HIV infections.

113. The 58th WHA considered availability, accessibility and safety of blood, taking a comprehensive view, (15) in 2005, and adopted Resolution WHA58.13, Blood Safety: proposal to establish World Blood Donor Day (16), which urged Member States to introduce legislation, provide adequate financing, promote multisectoral collaboration, ensure proper use of blood and support the full implementation of well-organized, nationally coordinated and sustainable blood programs with appropriate regulatory systems. At the same time, the Director-General was asked to provide support for the countries to strengthen their capacity to screen all donated blood against major infectious diseases in order to ensure the safety of all blood collected and transfused. These concepts were reiterated in 2010 (17, 18).

114. The Governing Bodies of PAHO have addressed issues of blood transfusion safety since 1998. The Strategic and Programmatic Orientations for the Pan American Sanitary Bureau 1999-2002 called for all blood for transfusion to be screened for hepatitis B and C, syphilis, *Trypanosoma cruzi*, and HIV, and for all blood banks to participate in quality control programs (19). In 1999, the Directing Council adopted Resolution CD41.R15 and urged Member States to give higher priority to blood safety; to promote the development of national blood programs and transfusion services, voluntary blood donation, and quality assurance; to strengthen blood bank infrastructure; to allocate the necessary resources; and to ensure training of medical providers in the use of blood (20, 21).

115. In 2005, the Directing Council adopted Resolution CD46.R5 urging the Member States to analyze the progress and challenges in the pursuit of sufficiency, quality, safety, and appropriate clinical practice; to adopt the Regional Plan of Action for Transfusion Safety 2006-2010; and to allocate and use resources to meet its objectives (2). In 2008, considering that the concepts of previous resolutions still applied, and recognizing that modifications in current national approaches were needed to achieve the goals set for 2010, the Directing Council adopted resolution CD48.R7 (4) in which the Member States were urged to define an entity in their ministries of health as responsible for the efficient operation of the blood system; estimate the need for blood; establish a network of volunteers to educate the community; and terminate mandatory donation, with the goal of 100% voluntary, altruistic, non-remunerated donors.

Situation Analysis

116. An analysis of the situation up to 2009 was carried out using data from 35 countries and territories (1, 5-10). Canada, the United States of America, including Puerto Rico, and the French Territories were not included in this analysis.

117. In the Caribbean subregion, where 27 blood collection and processing centers exist, only Guyana, Jamaica, Netherlands Antilles and Suriname have a legal framework for blood services. Haiti has a national blood safety program within the Ministry of Health. In all other countries, the National Blood Transfusion Service, the National Public Health Reference Laboratory or the major hospital blood banks have the responsibility of coordinating national activities. Guyana and Haiti, which receive support from a multi-year international grant, and Netherlands Antilles and Suriname, whose blood banks are managed by the Red Cross, report having sufficient financial resources for the operation of their blood processing centers.

118. All Latin American countries except for Chile, El Salvador, and Mexico have national laws to regulate blood banks and transfusion services. However, challenges remain with regard to the steering capacity of the health authorities, even though Argentina, Bolivia, Brazil, Chile, Cuba, Dominican Republic, Guatemala, Honduras, Paraguay, Peru, Uruguay, and Venezuela have specific units within their Ministries of Health to oversee the national blood system, and the Caja Costarricense del Seguro Social, the Colombian National Institute of Health, the Ecuadorian Red Cross Hemocenter, the Unit of Laboratory Surveillance in El Salvador, the National Blood Transfusion Center in Mexico, and the National Diagnosis and Reference Center in Nicaragua are responsible for coordinating blood services in their respective countries. Human and financial resources allocated for blood transfusion at the national level are considered to be insufficient for the appropriate operation of the services.

119. In the Latin American countries, the centers that collect and process blood are part of the Ministry of Health, the Social Security, the Armed Forces, the National Police, the public sector, or national or international non-governmental organizations. The multiplicity of actors, coupled with limited oversight by health authorities, represents a major obstacle to the appropriate use of national resources.

120. One of the indicators of progress of the Regional Plan of Action 2006-2010 was that all Latin American countries would have implemented regional blood collection and processing systems to cover the needs of patients of geographically distinct areas. In 2005, there were 2,522 blood processing centers in the 19 Latin American countries. The mean number of blood units processed by center inversely correlated with availability of blood, and also with the proportion of voluntary blood donors at the national level (*1*), a clear indication that creating more blood banks does not result in improvements in blood availability.

121. In 2009, the number of blood processing centers in Argentina, Brazil, Chile, Colombia, Nicaragua, Paraguay, and Uruguay diminished by 351. Argentina (80 centers) and Brazil (167 centers) accounted for 70% of the reduction. In Nicaragua, the Ministry of Health closed all 21 hospital-based blood banks and set up a national network with

three centers managed by the Red Cross. Costa Rica, Dominican Republic, Ecuador, Guatemala, Honduras, Mexico, and Venezuela reported a combined total of 113 more processing facilities in 2009 than in 2005 (Table 1, Annex).

122. In Latin America, the mean numbers of blood units processed per center in a year were 3,163 in 2005 and 3,974 in 2009, equivalent to 12-15 units per center per day. In general, the efficiency of the blood services is deficient in all countries other than Nicaragua, where three Red Cross centers processed 69,932 collections in 2009 (Table 1, Annex).

123. Blood availability is determined by the extent of collection, the prevalence of infectious markers among blood donors, and the separation of whole blood units into components—red blood cells, plasma, and platelets. From 2005 to 2009, blood collection increased in the Caribbean and Latin American countries by 14%, from 8,059,960 units to 9,166,155, with the overall collection rate for those years being 145.0 and 157.4 per 10,000 inhabitants respectively (Table 2, Annex). National collection rates increased more than 10% in 24 countries (range: 10.2% - 143.9%), remained unchanged in Belize, Brazil, British Territories, Costa Rica, El Salvador, Guatemala, Honduras, Uruguay, and Venezuela, and decreased in Cuba (18.7%) and Netherlands Antilles (15.7%). Despite the reductions in the two latter countries, they nevertheless showed the highest national collection rates in 2009: 359.7 and 295, respectively (Table 3, Annex).

124. In 2005, national blood collection rates ranged from 11.5 to 442.5, with a median of 109.3. Fifteen countries had collection rates below 100 per 10,000 inhabitants. In 2009, the national rates varied from 21.4 to 359.7; the median rate was 145.3. Only eight countries, Bolivia (70.0), Dominican Republic (84.4), Guatemala (65.3), Haiti (21.4), Honduras (78.1), Jamaica (91.5), Peru (75.9) and St. Vincent and the Grenadines (93.5) collected fewer than 100 units per 10,000 inhabitants (Table 3, Annex).

125. In 2009, the national prevalence of markers of transfusion-transmissible infections (TTI) varied from 0, in Netherlands Antilles, to 16.6% in Paraguay (median = 3.1%) (Table 1, Annex). TTI markers were detected in 319,996 (3.5%) units. The availability of blood in the Caribbean and Latin American countries thereby dropped to 8,846,159. In addition to the eight countries with the lowest blood collection rates mentioned above, Guyana, Paraguay, and St. Kitts and Nevis had fewer than 100 units available per 10,000 inhabitants.

126. It is estimated that the 319,996 units that were discarded in 2009 because they were positive for infectious markers represented wastage of US\$ 19,919,776 (Table 2, Annex). Factors that determine the high prevalence of markers among blood donors include poor recruitment and selection, and inadequate quality in the laboratory testing methodology.

127. Since national needs for blood for transfusion are determined by characteristics of the national health systems, by the local epidemiology of the clinical conditions that require blood transfusions, and by demographics, it is not appropriate to suggest a figure as a target for blood collection or blood availability rate. The Regional Plan of Action for Transfusion Safety 2006-2010 included the estimation of geographic and temporal needs for blood as one of its objectives.

128. There is an inverse relationship between national blood availability rates and maternal mortality ratios in the Latin American and Caribbean countries that have information on maternal deaths (22). Eight of the nine countries with maternal mortality ratios above 83 per 100,000 live births (23) have blood availability rates below 100 per 10,000 inhabitants. (Figure 1, Annex).

129. The median proportion of blood units separated into components among Caribbean and Latin American countries was 77% in 2005, as compared to 90% in 2009, when Brazil, Cuba, El Salvador, Grenada, Netherlands Antilles, St. Lucia, St. Vincent and the Grenadines, and Suriname prepared red blood cells from at least 95% of units collected. Argentina, Colombia, Costa Rica, Dominica, Mexico, Nicaragua, and Panama reported obtaining red blood cells from 90%-94% of whole blood units. Barbados (38%), Belize (32%), Dominican Republic (39%), Honduras (39%), Jamaica (48%), and St. Kitts and Nevis (14%) prepared components from less than 50% of the blood units they collected (Table 4, Annex).

130. Of the 11 countries with availability rates below 100 units per 10,000 inhabitants, Bolivia (89%), Dominican Republic (39%), Guatemala (87%), Guyana (74%), Haiti (52%), Honduras (39%), Jamaica (48%), Paraguay (74%), Peru (79%), and St. Kitts and Nevis (14%) prepared components from less than 90% of their units, further limiting the national availability of blood for transfusion (Tables 3 and 4, Annex).

131. Despite the apparent limited availability of blood at the country level, 981,253 units of red blood cells expired in 2009, at an estimated cost of \$54,950,168 (Table 2, Annex). The multiplicity of blood collecting centers, the lack of standardized operating procedures at the hospitals and the limited oversight by health authorities contributed to this situation.

132. The Regional Plan of Action 2006-2010 aimed to improve the quality of blood components by increasing donor safety and extending the coverage and precision of laboratory testing.

133. Screening of blood for markers of transfusion-transmissible infections improved in the Region (Table 5). In 2005, 87,875 units were not tested for HIV, a figure that had dropped to 1,708 units in 2009. The corresponding figures for hepatitis B in 2005 and

2009 were 93,949 and 1,371; and for hepatitis C, 95,962 and 2,861. For syphilis, 159,929 units went unscreened in 2005 and only 1,535 in 2009. There was also a reduction in the number of units not tested for *Trypanosoma cruzi*, declining from 959,662 in 2005 to 288,405 in 2009. However, the goal of universal screening for those agents set in 1998 remains to be achieved. Additional resources to ensure continuous access to laboratory supplies combined with a renewed commitment from countries in applying national norms will be necessary to achieve the goal of universal screening.

134. In 2009, four countries—Antigua and Barbuda, Dominica, Peru, and St. Kitts and Nevis—did not screen all blood units for hepatitis C (5). This represented the potential transfusion of 16 HCV infected units in that year compared to 482 in 2005. Peru was the only country that reported incomplete screening for HIV and HBsAg. As a consequence, 10 HIV-positive units and seven hepatitis B-positive units might have been transfused. The risk of a transfusion being contaminated by a virus in 2009 was 1:277,762 donations, compared to 1:11,784 in 2005. Mexico and Peru did not test all units for *Trypanosoma cruzi*, a fact that might have resulted in 1,187 infected units in 2009, compared to 2,362 in 2005, with the respective risks being 1:7,166 and 1:3,377.

135. These estimates are calculated based on the proportion of units not screened and the prevalence of antibodies against the virus among donors. In 2009, 36,327 donors were positive for HIV, 31,823 for hepatitis B, and 50,628 for hepatitis C. The median prevalence of hepatitis C antibodies among donors in countries with more than 50% voluntary donation was 0.3%, while in countries with less than 50% voluntary donation it was 0.5%. For the other markers, the corresponding figures were 0.1% and 0.2% for HIV, 0.2% and 0.3% for HBsAg, and 0.6% and 0.9% for syphilis.

136. There were 2,950,018 voluntary blood donors in 2005, compared with 3,308,996 in 2009, representing a 12% net increase over the five-year period. The regional proportion of voluntary blood donation, however, remained unchanged, 36.6% in 2005 and 36.1% in 2009 (Table 2, Annex).

137. Nine countries/territories reported more than 50% voluntary donors in 2009: Colombia (65%), Costa Rica (76%), Cuba (100%), Guyana (68%), Haiti (70%), Netherlands Antilles (100%), Nicaragua (87%), St. Lucia (64%), and Suriname (100%). Twenty countries had less than 25% voluntary donations, with Antigua and Barbuda (5%), Belize (8%), Dominica (3%), Guatemala (4%), Mexico (3%), Panama (5%), Peru (5%), St. Vincent and the Grenadines (5%), and Venezuela (6%) reporting less than 10%.

138. Remunerated donors were reported in 2009 by Dominican Republic (3,300), Honduras (294), Panama (7,641) and Peru (88). The 11,323 paid donors accounted for 0.1% of all donations. The proportion of paid donors was 0.2% in 2005 (Table 2, Annex).

139. The widespread requirement by hospitals for patients to provide blood replacement continues to be the major obstacle to voluntary blood donation. As demonstrated in Nicaragua, where replacement donation was terminated in March 2009, a well planned transition strategy that includes the active recruitment of blood donors and the participation of qualified personnel to service them can result in important changes in the blood donation system.

140. Although the purpose of the Regional Plan of Action for Transfusion Safety was to contribute to reducing mortality and improving patient care in Latin America and the Caribbean by making safe blood available in a timely manner for all those patients who need it, there is limited information on transfusion practices and outcomes. In 2009, only Anguilla, Antigua and Barbuda, Barbados, Belize, Grenada, Guyana, Paraguay, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Suriname, and three of the British Territories provided information on the age distribution of patients who received transfusions (Table 6, Annex).

141. The limited interaction between national health authorities with transfusion services at the hospital level hinders the estimation of national needs for blood and prevents a structured allocation and efficient use of resources.

142. The External Evaluation Team made several recommendations, including the need to develop a Regional Plan of Action 2012–2017 based on the progress and lessons learned during the Initiative. It also emphasized the critical contribution of blood services to achieving Millennium Development Goals 4, 5, and 6.

Action by the Directing Council

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

References

1. Pan American Health Organization. Progress report on the regional initiative for blood safety and plan of action for 2006–2010 [Internet]. 46th Directing Council; 2005 Sep 26–30; Washington, D.C. (USA): PAHO; 2005 (Document CD46/16) [cited 2011 June 28]. Available from: <http://www.paho.org/english/gov/cd/CD46-16-e.pdf>
2. Pan American Health Organization. Progress report on the regional initiative for blood safety and plan of action for 2006–2010 [Internet]. 46th Directing Council; 2005

Sep 26-30; Washington, D.C. (USA): PAHO; 2005 (Document CD46.R5) [cited 2011 June 28]. Available from: <http://www.paho.org/english/gov/cd/CD46.r5-e.pdf>

3. Pan American Health Organization. Improving blood availability and transfusion safety in the Americas [Internet]. 48th Directing Council; 2008 Sep 29-Oct 3; Washington, D.C. (USA): PAHO; 2008 (Document CD48/11) [cited 2011 June 28]. Available from: <http://www.paho.org/English/GOV/CD/cd48-11-e.pdf>
4. Pan American Health Organization. Improving blood availability and transfusion safety in the Americas [Internet]. 48th Directing Council; 2008 Sep 29-Oct 3; Washington, D.C. (USA): PAHO; 2008 (Document CD48.R7) [cited 2011 June 28]. Available from: <http://www.paho.org/english/gov/cd/cd48.r7-e.pdf>
5. Pan American Health Organization. Supply of blood for transfusion in the Caribbean and Latin American countries 2006, 2007, 2008, and 2009. Progress since 2005 of the Regional Plan of Action for Transfusion Safety. Washington, D.C.(USA): PAHO 2010.
6. Brasil, Ministerio da Saude. Secretaria de Atencao a Saude. Caderno de Informacao. Sangue e Hemoderivados. Producao Hemoterápica. Brasilia; 2011.
7. Chile, Ministerio de Salud. Coordinación Nacional de Sangre. Programa Nacional de Sangre 2009. Santiago; 2011.
8. Ecuador, Cruz Roja Ecuatoriana. Secretaría Nacional de Sangre. Datos de sangre 2009. Quito; 2011.
9. Uruguay. Administración de Servicios de Salud del Estado. Servicio Nacional de Sangre. Programa Nacional de Sangre 2009. Montevideo; 2010.
10. Venezuela, Ministerio del Poder Popular para la Salud, Coordinación del Programa Nacional de Sangre. Programa Nacional de Sangre 2009. Caracas; 2010
11. World Health Organization. Utilization and supply of human blood and blood products [Internet]. 28th World Health Assembly; 1975 May 13-30; Geneva, Switzerland: WHO; 1975 (Document WHA28.72) [cited 2011 June 28]. Available from: <http://www.who.int/bloodsafety/en/WHA28.72.pdf>
12. World Health Organization. Global strategy for the prevention of AIDS [Internet]. 40th World Health Assembly; 1987 May 4-15; Geneva, Switzerland: WHO; 1987 (Document WHA40.26) [cited 2011 June 28]. Available from: <http://www.who.int/bloodsafety/en/WHA40.26.pdf>

13. World Health Organization. Global strategy for the prevention and control of AIDS [Internet]. 45th World Health Assembly; 1992. May 4-14; Geneva, Switzerland: WHO; 1992 (Document WHA45.35) [cited 2011 June 28]. Available from: <http://www.who.int/bloodsafety/en/WHA45.35doc.pdf>
14. World Health Organization. HIV/AIDS: confronting the epidemic [Internet]. 53rd World Health Assembly; 2000 May 20; Geneva, Switzerland: WHO; 2000 (Document WHA53.14) [cited 2011 June 28]. Available from: http://apps.who.int/gb/archive/pdf_files/WHA53/ResWHA53/14.pdf
15. World Health Organization. Proposal for establishment of World Blood Donor Day [Internet]. 58th World Health Assembly; 2005 April 7; Geneva, Switzerland: WHO; 2005 (Document A58/38) [cited 2011 June 28]. Available from http://www.who.int/bloodsafety/WHA.A58_38-en.pdf
16. World Health Organization. Blood safety: proposal to establish World Blood Donor Day [Internet]. 58th World Health Assembly; 2005 May 25; Geneva, Switzerland: WHO; 2005 (Document WHA58.13) [cited 2011 June 28]. Available from: http://www.who.int/bloodsafety/WHA58_13-en.pdf
17. World Health Organization. Availability, safety and quality of blood products [Internet]. 63rd World Health Assembly; 2010 March 25; Geneva, Switzerland: WHO; 2010 (Document A63/20) [cited 2011 June 28]. Available from: http://apps.who.int/gb/ebwha/pdf_files/WHA63/A63_20-en.pdf
18. World Health Organization. Availability, safety and quality of blood products [Internet]. 63rd World Health Assembly; 2010 May 21; Geneva, Switzerland: WHO; 2010 (Document WHA63.12) [cited 2011 June 28]. Available from: http://apps.who.int/gb/ebwha/pdf_files/WHA63/A63_R12-en.pdf
19. Pan American Health Organization. Strategic and programmatic orientations for the Pan American Sanitary Bureau, 1999-2002 [Internet]. 122nd Session Executive Committee; 1998 June 22-26; Washington, D.C. (USA): PAHO; 1998 (Document CE122/8) [cited 2011 June 28]. Available from: http://www.paho.org/english/gov/ce/ce122_8.pdf
20. Pan American Health Organization. Strengthening blood banks in the region of the Americas [Internet]. 41st Directing Council; 1999 Sep 27-Oct 1; San Juan, Puerto Rico: PAHO; 1999 (Document CD41/13) [cited 2011 June 28]. Available from: http://www.paho.org/english/gov/cd/cd41_13.pdf
21. Pan American Health Organization. Strengthening blood banks in the region of the Americas [Internet]. 41st Directing Council; 1999 Sep 27- Oct 1; San Juan, Puerto

Rico: PAHO (Document CD41.R15) [cited 2011 June 28]. Available from:
http://www.paho.org/english/gov/cd/ftcd_41.htm#R15

22. Cruz JR. Reduction of maternal mortality: The need for voluntary blood donors. *Int J Gynecol Obstet* 2007; 98(3):291-293.
23. Pan American Health Organization. Health situation in the Americas. Basic Indicators 2009. PAHO, Washington, D.C. (USA), 2010. [Cited 2011 28 June] Available from:
http://new.paho.org/hq/dmdocuments/2009/BI_ENG_2009.pdf

Annexes

ANNEX: TABLES AND FIGURES**Table 1. Number of blood processing centers and number of units processed per center per year, Latin American countries 2005 and 2009.**

COUNTRY	NUMBER OF CENTERS		NUMBER OF UNITS PROCESSED/CENTER/YEAR	
	2005	2009	2005	2009
Argentina	480	400	761	2,254
Bolivia	22	20	2,126	3,449
Brazil	562	395	6,652	9,270
Chile	78	38	2,283	5,438
Colombia	110	91	4,797	7,604
Costa Rica	17	27	3,186	2,195
Cuba	48	46	10,320	8,762
Dominican Republic	58	65	1,071	1,309
Ecuador	22	33	5,669	5,302
El Salvador	32	29	2,504	2,853
Guatemala	47	60	1,664	1,525
Honduras	22	24	2,378	2,429
Mexico	550	560	2,457	2,857
Nicaragua	24	3	2,255	23,274
Panama	26	26	1,645	1,975
Paraguay	16	11	4,706	6,075
Peru	92	90	1,953	2,453
Uruguay	76	57	1,259	1,615
Venezuela	240	302	1,495	1,528
All countries	2,522	2,277	3,163	3,974

Table 2. Indicators of performance, national blood systems in the Caribbean and Latin America.

VARIABLE	2005	2009	Difference
Units collected	8,059,960	9,166,155	+ 1,106,195
Blood donation rate*	145.0	157.4	+ 12.4
Voluntary donors Number (%)	2,950,018 (36.6%)	3,308,996 (36.6%)	+ 358,978 (0)
Remunerated donors Number (%)	15,507 (0.2%)	11,323 (0.1%)	- 4,184 - (0.07%)
Units separated into components (median)	77%	90%	+ 13
Units with TTI markers Number Prevalence (median)	238,696 (3.1%)	319,996 (3.1%)	+ 81,300 - (0.02%)
Number of expired units of red blood cells	610,375	981,253	+ 370,878
Total annual discard Number of units Estimated cost (US\$ 56/unit)	849,071 47,547,976	1,301,279 72,869,944	+ 452,178 25,321,968

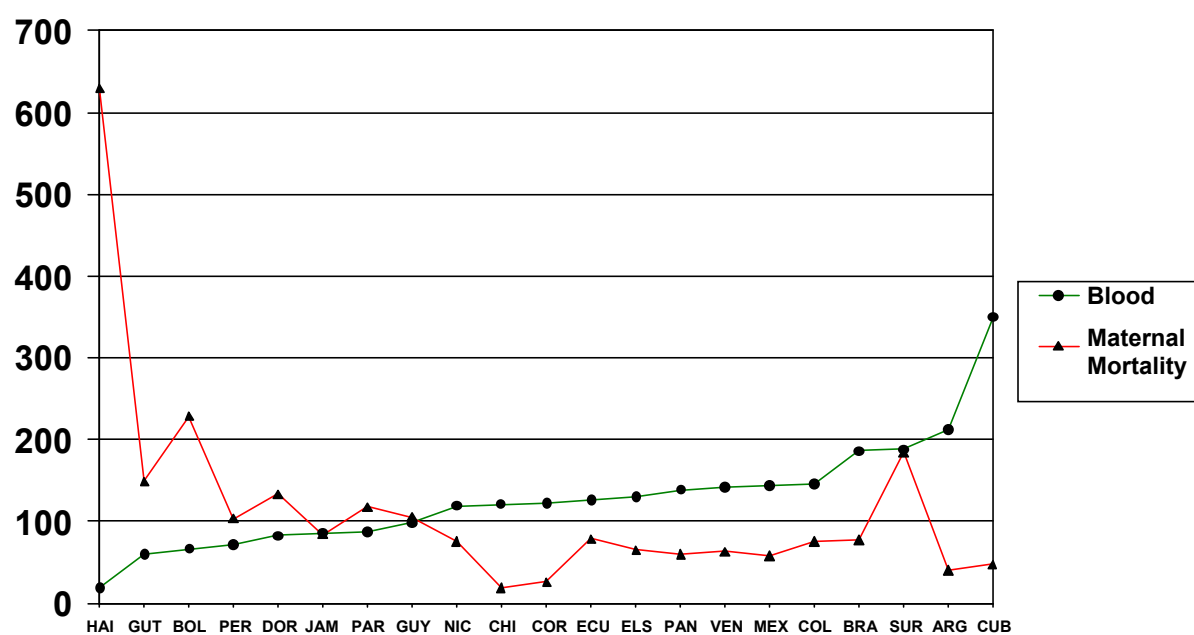
* per 10,000 inhabitants

Table 3. Blood collection in the Caribbean and Latin American countries, 2005 and 2009.

COUNTRY	Number of units collected		Donation rate	
	2005	2009	2005	2009
Antigua and Barbuda	1,020*	1,321	124.4*	153.6
Argentina	365,313	926,941	94.3	230.0
Bahamas	5,152	6,914	158.5	202.2
Barbados	4,164*	4,781	148.2*	167.8
Belize	3,107	4,364	125.2	129.6
Bolivia	46,764	69,073	50.9	70.0
Brazil	3,738,580	3,661,647	200.9	189.0
Chile	178,079	206,676	109.3	121.8
Colombia	527,711	692,487	122.6	151.7
Costa Rica	54,170	59,336	125.2	129.6
Cuba	495,343	403,060	442.5	359.7
Dominica	757	977	105.1	133.8
Dominican Republic	62,120	85,169	65.2	84.4
Ecuador	124,724	174,960	95.5	128.4
El Salvador	80,142	82,757	132.3	134.3
Grenada	835	1,426	79.5	133.3
Guatemala	77,290	91,554	60.8	65.3
Guyana	5,267	7,700	68.9	101.0
Haiti	10,823	21,471	11.5	21.4
Honduras	52,317	58,317	75.9	78.1
Jamaica	22,155	24,881	83.0	91.5
Mexico	1,351,204	1,602,071	128.3	146.2
Netherlands Antilles	9,393	6,702	350.0	295.0
Nicaragua	54,117	69,932	99.2	121.2
Panama	42,771	51,539	132.3	149.2
Paraguay	47,060	66,873	79.7	105.3
Peru	179,721	221,266	64.6	75.9
St. Kitts and Nevis	423	510	88.1	104.1
St. Lucia	1,914	2,446	121.9	152.9
St. Vincent and the Grenadines	822	982	77.5	93.5
Suriname	7,525	9,774	150.5	188.0
Trinidad and Tobago	13,625	22,368	103.4	167.1
Uruguay	95,686	92,073	287.8	273.9
Venezuela	403,625	461,481	151.0	161.4
British Territories				
<i>Anguilla</i>	114	117	87.7	83.6
<i>Virgin Islands</i>	447	484		
<i>Cayman Islands</i>	864	981	196.4	196.9
<i>Montserrat</i>	79*	94	158.0*	188.0

*Data for 2006

Figure 1. Blood availability rates and maternal mortality ratios, selected Caribbean and Latin American countries 2009.



Spearman correlation test, $p=0.002$

Table 4. Blood units separated into components (proportion of red blood cells prepared), Caribbean and Latin American countries, 2005 and 2009.

COUNTRY	2005	2009	Difference
Antigua and Barbuda	30*	61	+31
Argentina	87	90	+3
Bahamas	87	81	-6
Barbados	14**	38	+24
Belize	35	32	-3
Bolivia	67	89	+22
Brazil	38	95	+57
Chile	95	100	+5
Colombia	39	90	+51
Costa Rica	89	94	+5
Cuba	43**	95	+52
Dominica	94	92	-2
Dominican Republic	78	39	-39
Ecuador	77	NR	
El Salvador	93	96	+3
Grenada	99	100	+1
Guatemala	84*	87	+3
Guyana	62	74	+12
Haiti	28	52	+24
Honduras	32	39	+7
Jamaica	46	48	+2
Mexico	88	94	+6
Netherlands Antilles	100	100	0
Nicaragua	78	90	+12
Panama	33*	91	+58
Paraguay	55	74	+19
Peru	72*	79	+7
St. Kitts and Nevis	42	14	-28
St. Lucia	98	100	+2
St. Vincent and the Grenadines	98	97	-1
Suriname	98	100	+2
Trinidad and Tobago	65**	79	+14
Uruguay	87	NR	
Venezuela	81	-80	-1
British Territories			
<i>Anguilla</i>	62	61	-1
<i>Virgin Islands</i>	NR	16	
<i>Cayman Islands</i>	83	91	+24
<i>Montserrat</i>	NR	1	

* Data for 2004 **Data for 2006

Table 5. Coverage of screening for markers of transfusion-transmissible infections, Caribbean and Latin American countries, 2005 and 2009.

MARKER	2005	2009
HIV	98.9%	99.9%
HBsAg	98.9%	99.9%
HCV	98.8%	98.9%
Syphilis	98.0%	99.9%
<i>Trypanosoma cruzi</i>	87.1%	96.6%

Table 6. Number of units of red blood cells and whole blood transfused, according to age of patients, countries that submitted data, 2009.

COUNTRY	AGE (years)					No data
	< 5	5-14	15-44	45-59	>59	
Antigua and Barbuda	56	0	478	288	471	
Barbados	201	167	4,259	0	0	
Belize	244	144	1,566	595	519	
Grenada	46	27	347	276	466	
Guyana	203	301	2,076	924	1,756	
Paraguay	5,433	2,640	18,951	8,970	14,213	420
St. Kitts and Nevis	0	9	9	144	86	149
St. Lucía	0	61	59	969	545	656
St. Vincent and the Grenadines	0	157	57	526	216	342
Suriname	0	381	263	4,349	2,171	2,569
British Territories						
<i>Anguilla</i>	0	1	24	11	62	
<i>Cayman Islands</i>	3	8	258	204	416	
<i>Montserrat</i>	0	0	0	23	29	
