Non-communicable Disease Prevention and Control in Brazil

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This document was developed with the cooperation of the Pan-American Health Organization.
FOREWORD

On behalf of the Brazilian Government, I present in this document a synthesis of ongoing measures related to the health sector in Brazil, in particular to the area of non-communicable diseases. With this document, Brazil wishes to formally manifest the desire to host the 3rd Meeting of the Global Forum in 2003, an initiative considered of the highest importance for the prevention and control of non-communicable diseases. These diseases represent a major health problem, whose combat demands the analysis and the exchange of experiences among countries, and Brazil considers the Global Forum a timely and singular strategy.

Brazil occupies a territory of 8.5 million square kilometers and has a population of about 170 million inhabitants. It is facing a process of epidemiological polarization, characterized by the growth of non-communicable disease occurrence associated with the persistence of a high prevalence of some infectious diseases, such as tuberculosis and malaria. This poses a serious challenge for the country’s health system, still coping with its reform process.

The Brazilian Federal Constitution, promulgated in 1988, defined health as a citizen’s right and established the guiding principles of the Unified Health System (SUS): universal access, equity, and comprehensiveness. The current model of the Brazilian health system is, therefore, relatively recent, and is characterized by a horizontal distribution of functions throughout the different spheres of government and broad social involvement. Currently, a major effort is being undertaken on the reorganization of health care, especially on the basic level, taking into account its response capacity to cope with most of the population’s health problems.

It is in this quite favorable context, in which adequate conditions and means are available, that Brazil has been adopting important measures for the prevention and control of non-communicable diseases. Such measures are translated into plans,
projects, and specific programs that have made significant progresses possible, in spite of the challenges that still exist.

Some of the actions developed in Brazil, such as the Plan for the Reorganization of Hypertension and Diabetes Care have been recognized by the World Health Organization as a possible model for other countries. At the international level, Brazil actively participates in most events related to that area. It is noteworthy that the latest WHO Resolution about “Diet, Physical Activity and Health”, referred to as WHA55.23, was proposed by Brazilian representatives.

Upon reaffirming Brazil’s interest in hosting the 3ª Meeting of the Global Forum, I would like to point out that this document also presents general information concerning the country, and information related to the logistics of the Meeting.

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Non-communicable Disease Prevention and Control
in Brazil

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Non-communicable Disease Prevention and Control in Brazil

I. Introduction

In the beginning of the 21st century, the processes of demographic transition and epidemiological polarization in Brazil became more evident and intense than ever before. This has also been occurring in the majority of American countries. In the first, the major reductions in birth, fertility, and mortality rates, and significant increase of life expectancy at birth led to unparalleled growth of elderly population. In the later, the prevalence of infectious and non-communicable diseases, in the population’s morbidity and/or mortality profile, became more balanced, clearer and more visible.

Strategies and actions for the prevention and combat of communicable diseases have been developed in the country for almost a century. They have been maintained, strengthened or modified based on accumulated experiences and on the emerging new challenges. The assessment of non-communicable diseases, on the other hand, requires from the sector’s institutions and professionals, a creative effort in the proposition of policies and actions. It also requires the search at local and international levels for successful initiatives that could be implemented by the Brazilian health system, respecting the specificity of the various regions and the fiscal capacity of the State.

The perspective of continuation and intensification of the population’s aging process and, consequently, of the rising prevalence of chronic non-communicable diseases makes it timely to exchange knowledge and experiences about adopted approaches. It is important to note the specific context in which the different lines of action were proposed and implemented.

In July 2002, a workshop was held in Brazil with the objective of discussing strategic lines of action for NCD prevention and control, based on the CARMEN\(^1\) Initiative approach, in technical cooperation with the World Health Organization and the Pan American Health Organization. As a consequence, the Ministry of Health published a resolution establishing a permanent National Committee for NCD
related policies appraisal and proposal. This committee consists of representatives from different areas of the Ministry of Health, National Health Council, National Councils of State and Municipal Health Secretariats\textsuperscript{2} and the Pan American Health Organization. The following text, another sub-product of the meeting, briefly presents some of Brazil’s characteristics and those of the Unified Health System. It also explains the policies and activities carried out in the area of NCD prevention and control.

\textbf{II. Brazil in Brief}

Brazil is, both in area and population, the largest country in South America and the fifth largest in the world (Table 1). With more than 7,000 km of coastal extension facing the Atlantic Ocean, Brazil borders ten other countries. Approximately 80\% of the population live within 400 km of the coast, where nearly all the big cities are located, such as Rio de Janeiro and São Paulo (Table 1). In the interior there are, in general, smaller cities, lower demographic densities, and sparse railways and highways networks.

In the social context, although there persist great inequalities, Brazil has shown rapid advances in recent years. According to the UNDP’s 2002 Human Development Report, Brazil is among the average human development countries, occupying, in 2000, the 73rd position in the general classification of 174 studied countries, with a Human Development Index - HDI of 0,757. In 1998, Brazil occupied the 74th position, with an HDI of 0,737, while in 1997, it was placed in the 79th position.

Brazil’s territory is divided into states and municipalities, each autonomous and with their own political, fiscal and administrative structures. This permits a better management of the cultural and geographical diversity. It must be pointed out that the population and the number of cities in every state vary widely. For example, in the year 2000, the State of Roraima had only 15 cities and 324 thousand inhabitants, while the State of Minas Gerais had 853 cities and the City of São Paulo alone had 10.5 million inhabitants.

\textsuperscript{1} Set of Actions for NCD Multi-factorial Reduction

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Table 1 - Brazil in Data (year 2000)

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<th>General Information</th>
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<tr>
<td><strong>Capital:</strong> Brasilia</td>
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<tr>
<td><strong>Area:</strong> 8,514,215 km²</td>
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<tr>
<td><strong>Distribution:</strong> 81.25% urban, 18.75% rural (¹)</td>
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<tr>
<td><strong>Currency:</strong> Real (R$)</td>
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<td><strong>Per capita GDP:</strong> US$ 3,492.63 (²)</td>
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<tr>
<td><strong>Political Subdivisions:</strong> 26 states, subdivided into 5,560 cities, and 1 Federal District</td>
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<tr>
<td><strong>Ethnic composition:</strong> 54% of European descent; 5.4% of African descent; 39.9% of mixed African, Indigenous and European descent (pardos); and 0.7% of Indigenous and other. (¹)</td>
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<th>Regional Differences</th>
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<td>Northeastern</td>
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<td>Southeastern</td>
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<td>Southern</td>
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<td>Midwestern</td>
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<th>General Indicators</th>
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<td><strong>Indicator</strong></td>
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<tr>
<td>Mortality from Communicable Diseases (p/100,000 pop.)</td>
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<td>Infant mortality (p/1,000 live births) (²³)</td>
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<td>Life expectancy at Birth (years)</td>
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(¹) Brazil, IBGE, Census 2000; (²) Brazil, Presidency of the Republic, 2000; (³) Brazil, IBGE, PNAD 1999; (²³) Brazil, IBGE, Celso Simões
However, the prerogatives and responsibilities of the states and cities do not depend on their size or economic power. In accordance with 1988 Federal Constitution provisions, each sphere of government has both specific and shared commitments. This is understood as responsibilities that are shared with the other spheres of government. Each sphere of government (federal, states and cities) has, for the exercise of its power, three arms: legislative, executive and judiciary.

The Brazilian social protection model was established by the 1988 Federal Constitution. A universal and broader social security concept was adopted, including policies and actions related to health care, social assistance, and social insurance, funded with resources derived from the budget of governmental spheres and social contributions from employers, workers and others. The guiding principles of the SUS were introduced into the Constitution as an important element of that new framework.

**III. The Unified Health System – SUS**

Before the implementation of the SUS, the Ministry and the State and Municipal Secretariats of Health worked in the field of health education and disease prevention, aiming for universal coverage and making use of vertically organized endemic disease control programs and vaccination campaigns. Regarding access to health care facilities, the Brazilian population was divided in three groups:

- people who could pay directly for medical services;
- Insured workers with access to the old social security network; and
- Rural and indigent population, without any explicit right and little or no access to individual medical care.

After successive sectoral movements that aimed at changing this health care system design, the 1988 Federal Constitution defined Health as “a citizen’s right and a responsibility of the State,” and as a component of the recently created universal Social Security. It also established the guiding principles of the SUS, determining the construction of a new health system that should be:
(i) universal, granting the unrestricted access to the entire population;

(ii) decentralized, to make better planning, management, appraisal, and control feasible;

(iii) regionalized and organized in hierarchical services networks, allowing for integration mechanisms and referral systems;

(iv) comprehensive, offering all types of services related to health promotion, disease prevention, treatment and rehabilitation;

(v) managed by only one governmental authority in each sphere of government; and

(vi) based on social participation.

The universal right to health care was given immediately, although the transition from one organizational model to another did not happen instantaneously. A policy of successive approximations was adopted, due to the size of the territory and to the necessity of maintaining and operating the existing services while their operative logic was changing. This allowed the adaptation of the legal and operational instruments and the training of health administrators and professionals. Management boards were created to mediate negotiations among the managers of the three spheres of government – the Bipartite and the Tripartite Management Boards. In order to facilitate social participation, the National, State and Municipal Health Councils were constructed. The lines of action defined and approved by these boards are translated into “National Operational Guidelines” issued by the Ministry of Health. These guidelines give directions for the health system’s organization, relationships between different government levels, the transfer of financial resources, and the relationships between managers, providers, and users.

Fourteen years after the promulgation of the 1988 Federal Constitution, health care and the administration of the public ambulatory and hospital networks were widely decentralized. They became managed by the municipal and/or the state governments, in accordance with the level of complexity of the provided medical care. The population’s access to community and primary health care was also expanded, due to the implementation of the Family

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Health Program. Financial resource transfers from the National Health Fund to the State and Municipal Funds are carried out monthly through direct transfers designated funds to each state or municipality. The Ministry of Health still pays the providers directly for some actions and services.

The states and cities are applying increasing amounts of their own financial resources in the health sector. It is expected that, by the year 2004, these resources will be at least 12% of the total state budget and 15% of the total budget of municipalities and the Federal District\(^4\). The major efforts of managers of the three spheres of government managers focus on two areas:

(i) Improving problem-solving skills in the primary health care services network, including Family Health Program units, in order to tackle the population’s most common health problems. This has been achieved by training programs, development of new tools, and sustainable provision and access to free essential medicines;

(ii) Expanding and guaranteeing population access to all levels of attention, which involves structuring the health service networks by region. These networks may be comprised of the territory of more than one city or even more than one state.\(^5\)

The Ministry of Health and the State and Municipal Secretariats of Health are still developing administrative structures in order to accommodate the new functions. Regarding NCD prevention and control area, for example, the Ministry of Health has set up a Health Policies Secretariat, which is in charge of policy formulation and evaluation related to health promotion, diabetes, hypertension and pharmaceutical care. The Health Care Secretariat is in charge of cancer, mental health, and injuries; the National Center of Epidemiology (CENEPI) of the epidemiological surveillance. The Sanitary Surveillance National Agency (ANVISA) regulates and controls products and health services.

The structure of State and Municipal Secretariats of Health are the same or similar to that of the Ministry of Health. The main

\(^4\) Constitutional Amendment number 29/2000

\(^5\) The different aspects of these processes are clearly addressed in the Health Care Operational Guidelines, number 01 of 2002 – NOAS 01/2002.
difficulties are related to realization of a new administrative structure. The new structure should be able, at the same time, to both incorporate knowledge related to the assessment of the various diseases and regulate the operational aspects of a comprehensive health service network. Although the separation of technical and managerial responsibilities hinders the perfect coordination within the institutions, it also promotes greater involvement and commitment of all these units to such policies, which are the health sector’s main priority. The actions, proposed by the different areas, inevitably integrate during their implementation at local level.

It is noteworthy that the Brazilian public health sector is gradually achieving its goals concerning NCD. These goals include assessing the diseases in a broad but cohesive perspective. In other words, the strategies proposed for their prevention and control should be able to bridge across the policy building, community based activities and the responsiveness of health services to population needs. Efforts have also been made to integrate health promotion, prevention and control actions, in order to ensure their cost-effectiveness and sustainability.

The SUS’s main lines of action for preventing and controlling NCD are described in the following sub-sections.

**IV. Surveillance and Monitoring**

Some of the so called “modern lifestyles” may be considered as major health risk factors. Inadequate eating habits, smoking and sedentary lifestyle are among the main causes of NCD onset and/or development. This group of diseases includes cardiovascular diseases (ischaemic heart disease, stroke and hypertension), cancer, diabetes, renal and rheumatic diseases, injuries (accidents, violent acts and poisonings) and mental disorders. They are highly prevalent in Brazil, contributing substantially to the overall burden of disease in the country.

The Mortality Information System (SIM) registered a total of 946,932 deaths in the year 2000. Considering only the deaths due to well defined causes, 32% were related to the circulatory system diseases, 15% to neoplasm, 14.5% to external causes,
11% to the respiratory system diseases and 5.5% to infectious diseases. Epidemiological surveillance and morbidity, mortality and NCD risk factors monitoring are currently a SUS top priority, since they can provide information on the effectiveness of implemented actions to policy and decision-makers.

The National Subsystem of NCD Surveillance was created by a Normative Instruction issued by the Ministry of Health. It was defined that the following should be the surveyed:
(a) NCD risk factors, such as sedentary lifestyle, smoking, alcohol and consumption of other drugs, unhealthy eating, obesity, hypertension and risk factors linked to occupational activities;
(b) morbidity and mortality by cardiovascular diseases, diabetes mellitus, cancer, mental disorders and accidents and violence.

As monitoring strategies, the Normative Instruction recommends the use of inquiries and surveys, as well as the use of other information systems’ data. The Ministry of Health contracted four Collaborating Centers to work on the development of monitoring models and other studies, addressing violence, cardiovascular diseases, diabetes, cancer and aging. Goals related to the surveillance of these diseases were included in the 2002 Integrated Program Budget Tool (national, states and cities), aiming at government level personnel and at formulating and implementing a national policy for effective NCD monitoring.

According to WHO’s “stepwise approach” proposition, the NCD monitoring techniques are likely to be developed in stages. New functions can be progressively added to a basic structure. It is possible, for example, that the NCD risk factor surveillance system utilizes information obtained from inquiries and information about biochemistry and physical measures related to such factors can be progressively added. Brazil, as a member of WHO’s MEGA Countries Project⁶, is initiating the test of a practical methodology for NCD risk factor survey to be adopted by municipalities.

The Household Inquiry on NCD Behavioral Risks and Referred

⁶ The WHO Mega Countries Project brings together the countries with more than 100 million inhabitants.
Morbidity, funded by the Ministry of Health, is currently being carried out, and will be finished by June 2003. The survey is an attempt to characterize the population by exposure to cancer and other NCD risk factors. It will target 19,000 households and approximately 54,000 people older than 15 years of age, in the 26 state capitals and the Federal District. The baseline result from this survey will contribute to the formulation of public policies and stimulate the development of NCD monitoring systems in the country. Until then, available information from other types of studies and surveys is being used to evaluate prevalence trends in behavioral risk factors.

The sedentary lifestyle is a major public health enemy in Brazil. Despite the fact that there are no available data about physical activity patterns, some indirectly related facts can be used to infer the magnitude of this problem. From 1970 to 1999, the segment of the economically active population employed by the services sector jumped from 29% to 55%, and the number of households with TV sets, from 24% to 89%. These data suggest a significant reduction in physical activity both at workplaces and during leisure time. A national survey, carried out in 1997 with the participation of 2,504 people, showed that 60% of the Brazilian adult population described themselves as non-active.

Along with sedentary lifestyle, inadequate eating habits and obesity are important NCD risk factors. The nutritional status of the Brazilian population has changed in the last decades. From 1975 to 1997, malnutrition rates declined significantly among all socioeconomic and age groups, although specific nutritional deficiencies persist in some regions. During the same period, obesity prevalence among teenagers and adults increased. Obesity prevalence among men raised from 2.1% in 1975, to 6.4% in 1997. Among women, the prevalence rates were 6.0% in 1975, and 12.4% in 1997. In 1975, malnutrition was more prevalent than obesity, while in 1997 obesity became a much bigger problem. This has been attributed to significant dietary changes, including higher consumption of processed food and beverages, worsened by sedentary lifestyle.

Tobacco use is considered high when compared with other Latin America countries. In Brazil, a third of the adult population smokes (11.2 million females and 16.7 million males) and the
The proportion of smokers in rural areas is greater than in urban areas in all age groups. Ninety percent of the smokers become dependent on nicotine between ages 5 and 19, and there are 2.4 million smokers in this age range. There is a greater proportion of smokers among men than among women in all age groups. However, the number of female smokers is increasing, mainly among youth.

Some studies carried out in Brazil have demonstrated that, among the deaths due to cardiovascular diseases, hypertension was related to 46% of the cases, and that the cardiovascular death risk increases almost 50% in people with diabetes mellitus. Hypertension and diabetes are thus the major risk factors for cardiovascular diseases, and can lead to complications such as acute myocardial infarction, stroke, chronic renal failure, amputations of feet and legs, blindness, miscarriages and perinatal deaths. Data from the National Social Security Institute (INSS) show that 40% of early retirements are due to these diseases.

The number of hospitalizations due to diabetes, registered in the Hospitalization Information System (SIH/SUS), is elevated. There is a high hospital permanence rate, since these hospitalizations usually demand high complexity procedures as a consequence of the severity of the disease complications. The “Multicenter Study on Prevalence of Diabetes Mellitus in Brazil”, carried out in nine Brazilian capitals in 1986/88, demonstrated that 7.6% of the population in the age range of 30 to 69 were diabetic, and among those aged 60 to 69 the prevalence raised to 17.4%. In 2000, a Screening Campaign for Suspected Cases of Diabetes was carried out by most of the SUS primary health care units, targeting the population in the 40 or higher age group. The campaign covered 80% of Brazilian cities and identified 2.9 million individuals that could be diabetic, a number equivalent to 14.66% of the tested population. Among these, approximately one million were also suffering from hypertension.

A review of studies done until 2001 shows a high prevalence of hypertension in Brazil, ranging between 10.1% and 52.2% of the population, depending on criteria and methodologies. During the period of November 2001 to January 2002, a Campaign to Search for Suspected Cases of Hypertension and Healthy Life Habits Promotion was carried out, also targeting the population in the 40 or higher age
group. The partial results – until September 2002 – show that 3,851 cities reported their campaign data to the Ministry of Health. In these cities, the blood pressure of 11,777,048 individuals was measured and it was found that 36% of them could suffer from hypertension.

A study carried out by the Latin American Center for Studies about Violence / CLAVES, based on data from the Hospitalization Information System (SIH/SUS), showed that accidents and violence occupy the seventh position in the hospital morbidity ranking, corresponding to 5.5% of overall hospitalizations. Nevertheless, injuries are the second major cause of hospitalization in ages 10 to 19 (7.9%) and those aged 20 to 29 (5.1%). The male population is 2.4 times more affected than the female. In the mortality profile (year 2000), injuries came in second place among all deaths, but stand as the first cause of death among males aged 10 to 49, mainly due to homicides (37,421 deaths).

Initiatives for continuous monitoring of accidents and violence have been implemented:

(i) Development of the Health Information System for Accidents and Violent Acts;

(ii) Mandatory notification to legal authorities, of suspected or confirmed cases of violence against children and adolescents by every SUS health facility7;

(iii) Regulation of the notification of cases compatible with external causes, as well as accidents and diseases related to occupational activities, through the Hospitalization Information System (SIH/SUS)8.

V. Health Promotion

One of the Brazilian health sector’s major challenges is to incorporate a healthy lifestyle into everybody’s routine. To promote health is to improve people’s life conditions, by both increasing protection factors and reducing risk factors. Some victories have been achieved in Brazil. Programs such as AIDS Prevention and

7 MoH: Resolution GM/MS 1.968/2001
8 MoH: Resolution GM/MS 1.969/2001
Control, Breast Feeding Promotion, and Tobacco Use Control are examples of successful initiatives, recognized all over the world. This success is due to integrated actions on counseling, social communication and health care, community participation and political, economic and legislative measures. One example of these successful integrated actions is the Brazilian Code for Commercialization of Infant Food, developed in partnership with the food industry.

Nevertheless, it is still necessary to invest in the development and implementation of a national agenda for health promotion. The Ministry of Health’s lines of action are the basis for this agenda. Integrated promotion of physical activity, healthy eating, and tobacco use reduction is a main line of action. An example is “Agita São Paulo”, from which the project “Agita Brazil”, with broad national reach, was adapted. This is a national program for physical activity promotion that highlights the importance of 30 minutes of regular daily physical activity, that can be held in any available spaces - workplaces, schools, homes, health care facilities or others.

“Agita Brazil” is an initiative of the MoH to increase the population’s knowledge on the benefits of physical activity. It also aims at increasing physical activity levels among the population. Workers, schoolchildren, teenagers, elders, and NCD patients are the program’s main target groups. Its implementation includes:

(i) Planning and execution of mega events, such as “physical activity weeks”, that involve community leisure activities;

(ii) Developing educational and informational materials such as posters, folders, bookmarks, food pyramids, and postcards to be distributed in schools, hospitals, supermarkets and other places;

(iii) Sponsoring scientific events focused on physical activity and healthy lifestyles.

The Smoking and Other Cancer Risk Factors Control Program aims at preventing related risk factors by stimulating the adoption of healthy behavior and lifestyles, and contributing, therefore, to the reduction of cancer and tobacco-related diseases. Its educational activities may be divided into periodic and continuous actions. The periodic actions involve campaigns such as “International No-Tobacco
Day,” “National Combat Smoking Day” and “National Combat Cancer Day.” These campaigns aim at promoting community and leadership participation, disseminating information through mass media and sponsoring specific events such as congresses and seminars for health professionals.

The continuous actions aim at maintaining a regular flow of information on smoking and other cancer risk factors. Culture and habits can only be changed after long intervention periods; therefore, ongoing educational activities appropriate for the community are carried out. It is also very important to support to smokers who want to quit. The program includes the module Helping your Patient to Stop Smoking, which improves health professionals’ skills to effectively support quitters.

The program works on the development of tobacco control laws and disseminates information within the community. Law 10167/2000 restricts cigarette advertisements and forbids tobacco industry sponsorship of sports and cultural events. This represents a major victory for the health sector. The regulation of food advertisement focused on children is another example of a successful initiative in the legislation area. The MoH is encouraging and supporting those states and municipalities interested in discussing and proposing local health protection laws. Consequently, municipal laws regulating the nature and quality of food sold at private and public schools cafeterias were promulgated.

Sometimes, national laws are opposed to some national and international interests. This is the case in the Brazilian regulation on food labeling. It made nutritional labeling mandatory on all commercialized food products, after September 2001. It has also established a model for labels and fines in case of noncompliance. Information about nutritional composition of food products is a consumer’s right and it is essential for those working towards a balanced diet. Therefore, mandatory labeling was also applied to imported products. This has resulted in complaints from other countries and lobbies due to commercial interests. The MoH has also been active in most international fora in the area of health products regulation – food, drugs, cosmetics and others – in order to protect consumer’s health above any other interests.
To keep people informed is a priority for the MoH. Investments have been made in technical information dissemination, translating scientific knowledge into words that people can understand. The booklet called “10 Easy Steps to a Healthier Diet” is an example. It includes a self-test for diet evaluation and information on how to improved it. An illustrated booklet about “Brazilian Regional Food” was published and sent to all Family Health teams aiming at recovering traditional Brazilian diets. This is based on the use of inexpensive and healthy native vegetables and fruits.

The MoH also keeps a channel open for direct communication with the population known as “Dial Health”, which provides a countrywide toll-free number. Women, men, teenagers, elderly people and even children use this service to obtain information about all types of health related issues, totaling almost 20,000 monthly calls.

Community based professional training programs were implemented to provide necessary communication and health care skills for those working within communities. Considering people’s culture and age, community health workers, family health teams and teachers should promote adherence to healthy behaviors. During the year 2002, the MoH organized 8 regional workshops on “Food and Nutrition” for primary health care professionals, with an emphasis on the integration of health promotion messages on healthy diet, physical activity and tobacco control. Health promotion, food security and access to healthy food as a human right were the main workshop themes. This is a stepwise training program to be implemented by the three governmental spheres: national, states, and municipality. During the first step, described above, 280 professionals from all the states were trained. They are trainers-of-trainers, passing along the acquired knowledge to other professionals from all Brazilian cities. The state coordinators of Family Health and Community Health Worker Programs, other State Health Secretariats’ technical coordinators, teachers at nutrition colleges and professionals from Food and Nutrition Collaborating Centers were trained. Civil organizations’ and State Health Councils’ representatives also participated. As a result, by September 2002, 75% of the states had already developed and started the implementation of their own training program.
Although the health sector is not solely responsible for all health promotion initiatives, it must have leadership and coordinate this area within the country. Thus, the MoH takes the lead on health advocacy, and seeks effective healthy coalitions and alliances. Therefore, a broad municipality’s participation has been pursued. The creation of the National Award “Innovative Experiences in Hypertension and Diabetes Mellitus Prevention and Control” is an example of incentives for municipality participation. This project awards cities that have developed and implemented the three best innovative experiences in prevention and control of hypertension and diabetes and complied with the award’s established criteria. It aims at disseminating the lessons learned and supporting the replication and extension of the successful experiences.

Finally, it is important to mention the implementation of the “Suicide Prevention Program,” developed in partnership with the State and Municipal Secretariats of Health and the Crisis Management Centers (CVV), and the “Mobilizing Society and Promoting Health Project” for reduction of the morbidity and mortality by traffic accidents.

The “Mobilizing Society and Promoting Health Project” integrates actions to mobilize the health sector, local governments and civil society for the prevention of car accidents. The goals are:

- Promoting behavioral and environmental changes related to car accidents in order to reduce their incidence and consequences;
- Improving the available information on behavioral and environmental factors, morbidity and mortality related to car accidents.

The project is organized along the following operational axes:

a) Training health and transit professionals to guarantee the quality of the information;

b) Training representatives from employers and transportation unions, media professionals and organized civil society members, who could disseminate information about preventive measures.

Today, 84 municipalities in 14 states, comprising an estimated population of 46.7 million inhabitants, are participating of the project’s
first phase. The selection of these municipalities was based on the absolute number of deaths due to car accidents, car accident mortality rates and proportional mortality by car accidents. It is noteworthy that in 1998, during the implementation of the new Brazilian Transit Code, there was a reduction of 1.6% in the total deaths due to external causes, and a reduction of 13.3% in the number of deaths related to car accidents. The educational campaigns for car accident prevention, jointly developed with the Ministries of Justice and of Transportation, contributed to this reduction.

**VI. Primary Health Care Organiz**

The ongoing reorganization process of primary health care aims at expanding and turning it into an effective gatekeeper for the health system. This reorganization’s fundamental strategy is to implement the Family Health Program (FHP), which is based on health team action. The basic composition of these teams is one physician, one nurse, one nurse’s aid and five or six community health workers (CHW). Each team cares for approximately 3,450 people, forging ties of co-responsibility over local health with the community it serves. The teams’ action is focused on the family, to whom health promotion, health protection and care are directed, backed by a primary health care unit.

Promoting community participation is a main line of action. The CHW is the principal link between the health services and the community. The CHW resides necessarily in the locality in which he carries out his functions, and therefore he is totally identified with his own community, its values, habits and language. The specific responsibilities of the CHW were regulated by a Law, sanctioned in July of 2002. The workers carry out their activities during household visits and educational meetings. The main tasks of the CHW are:

a) Maintaining records of all families living in their work area;

b) Monitoring prenatal care of pregnant women;

c) Registering children and monitoring monthly their development, nutritional and vaccination status and any occurrence of disease;

d) Following up cases of tuberculosis, Hansen’s disease, diabetes, and hypertension;
e) Informing families about health promotion and disease prevention measures;
f) Identifying environmental problems related to trash collection, water supply and sewer destination, among others.

Initiated in 1994, the Family Health Program (FHP) had a rapid expansion: in 1997, there were 1,623 teams in 567 cities, and, in 2000, 10,674 teams in 3,109 cities. Since its inception, FHP has contributed to the improvement of health care quality in the SUS. In 1995, FHP became the chosen strategy for the primary health care reorganization and has been politically and institutionally strengthened since then. This prioritization led to the implementation of the Primary Health Care Block Grant (PAB).

The PAB consists of an amount of funding, exclusively earmarked for primary care activities, regularly and directly transferred from the National Health Fund to the Municipal Funds. It is composed of a fixed portion corresponding to a per capita value and a variable portion. The variable portion provides financial incentives awarded for strategically important activities, such as basic pharmaceutical care; control of specific nutritional deficiencies, epidemiological surveillance and diseases control, Community Health Workers and Family Health Programs.

The way in which the FHP expanded is a good indication of acceptance by state and municipal managers of the Program’s principles. Today, there are 16,228 family health teams, integrated by 220 thousand health professionals, acting in 4,116 cities. There are more than 53 million people under the Program’s care, representing 31% of the country’s population. An analysis of its expansion revealed that initially there was a trend toward the coverage of previously less well served areas, represented by small and medium sized cities. Eventually, it was extended to localities with critical social indicators and indigenous people. The increasing implementation of FHP throughout Brazil has so far improved access to health services for those sectors of society, which were previously excluded.

In November 1999, the MoH began to remunerate better the cities that present higher FHP population coverage. This measure reduced the risk of spreading the work of the teams too thinly, a
development which would have made little impact on the organization of local health services and on the health care indicators of the targeted population. In order to qualify professionals for the FHP, Family Health Training and Further Education Schools were implanted throughout the country. This strategy makes it possible for FHP staff, as well as other workers involved in primary care reorganization, to keep current and develop relevant skills.

Also in 1999, the MoH carried out the survey “Appraisal of the FHP Implementation and Operation Processes” with the collaboration of the State and Municipal Secretariats of Health. The survey’s results showed an effective change in health practices performed in FHP related primary health care units. According to this survey, the population’s access to services improved significantly in the localities served by these units. In relation to NCD, it was found that:

- The number of pap smears collected by nurses increased from 16.1% to 67.5% of the target population;
- The number of registered hypertensive patients increased from 13.9% to 96% of the target population and the number of those in treatment increased from 34.8% to 98.5%; and,
- The number of registered diabetic patients increased from 12.7% to 93.9% of the target population and the number of those in treatment increased from 32.5% to 97%.

In 2001, the Health Care Operational Guidelines (NOAS 01/2002) were published, broadening the cities’ responsibilities concerning primary care. They also established a regionalization process to achieve greater equity, and a strategy for the health services hierarchy. The guidelines have defined the minimum availability of health care that should be guaranteed by all Brazilian municipalities. For each defined line of action, the responsibilities and activities that should be developed by primary care units are set. Among these responsibilities are NCD prevention and control, especially of hypertension and diabetes mellitus. The established responsibilities and activities for hypertension prevention and control are described in Table 2, while the ones related to diabetes mellitus are listed in Table 3.
It is noteworthy that the Health Care Operational Guidelines also apply to those cities and communities, which do not have Family Health teams. That is also true for these last actions described activities that integrate the Hypertension and Diabetes Mellitus Care Reorganization Plan. This Plan is financed mainly by the MoH, although it is implemented in partnership with Municipal and State Secretariats, scientific societies of cardiology, of diabetes, of hypertension, and of nephrology, and national federations of patients with these pathologies. The Hypertension and Diabetes Mellitus Care Reorganization Plan established the directives and goals for reorganization of the care of these diseases within SUS, through the updating of primary care professionals, the guarantee of the diagnosis, and the linkage of patients to health units for treatment and follow up.

The HiperDia registration system\(^9\) was developed in order to register and link patients with diabetes and hypertension to health units. HiperDia is a computerized system, which has the complementary purposes of generating information to subsidize the regular and systematic acquisition, dispensing, and distribution of medicines to all registered patients. This system is a tool for the planning of hypertensive and diabetic patients’ care, and is being used by federal, state and municipal managers. About 4.7 thousand municipalities have already adhered to the Plan, and 1,103 of them sent their data to the HiperDia national data bank, which keeps the records of more than 330 thousand patients already.

The National Program for Hypertension and Diabetes Mellitus Pharmaceutical Care is a sub-program of the Hypertension and Diabetes Mellitus Care Reorganization Plan, that was created with the objective of standardizing the therapeutic scheme for diabetes and hypertension clinical treatments. This Program guarantees registered patients free and regular provision of the following medicines: glibenclamide 5mg, metformin 850mg, and insulin for diabetic patients and hidroclorotiazida 25mg, propranolol 40mg and captopril 25mg for those with hypertension.

In this context, the MoH has also adopted monitoring and regulation policies regarding commercialization of drugs, aiming at

\(^9\) Hypertension and Diabetes Registration System
lowering their prices, and thus costs of treatment. A law was promulgated, regulating the introduction of generic medicines into the Brazilian pharmaceutical market. Their prices are monitored in order to guarantee that they are kept, in average, 40% lower than those of the reference products. Besides conquering the confidence of doctors and patients alike, the generics have promoted an interesting market competition that led to a significant lowering in the prices of some reference medicines. Therefore, the treatment of some diseases (such as hypertension, diabetes, high cholesterol and benign prostate hyperplasia) is gradually becoming more affordable.

Table 2 - Primary Care - Hypertension Prevention and Control

<table>
<thead>
<tr>
<th>Responsibilities</th>
<th>Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Health Promotion and Prevention</strong></td>
<td>• Educational activities for prevention and control of the following risk factors: sedentary lifestyle, smoking, obesity and nutrition</td>
</tr>
<tr>
<td>Diagnosis</td>
<td>• Clinical diagnosis</td>
</tr>
<tr>
<td>Patients’ Records</td>
<td>• Information systems feeding and analysis</td>
</tr>
<tr>
<td>Active Search for probable cases</td>
<td>• Blood pressure measurement</td>
</tr>
<tr>
<td></td>
<td>• Household visits</td>
</tr>
<tr>
<td>Treatment</td>
<td>• Health center and home-based care</td>
</tr>
<tr>
<td></td>
<td>• Provision of medicines</td>
</tr>
<tr>
<td></td>
<td>• Home-based care for patients with stroke sequelae and other complications</td>
</tr>
<tr>
<td>Prompt Diagnosis of Complications</td>
<td>• Referral to complementary laboratory exams</td>
</tr>
<tr>
<td></td>
<td>• Referral to electro-cardiogram exams</td>
</tr>
<tr>
<td></td>
<td>• Referral to X-rays</td>
</tr>
<tr>
<td>First Emergency Care</td>
<td>• Emergency care for hypertensive crises and other complications</td>
</tr>
<tr>
<td></td>
<td>• Home-based care</td>
</tr>
<tr>
<td></td>
<td>• Provision of medicines</td>
</tr>
</tbody>
</table>
Table 3 - Primary Care - Diabetes Prevention and Control

<table>
<thead>
<tr>
<th>Responsibilities</th>
<th>Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Health Promotion and Prevention</strong></td>
<td>• Educational activities for prevention and control of the following risk factors: sedentary lifestyle, obesity and nutrition</td>
</tr>
<tr>
<td></td>
<td>• Educational activities for prevention and control of diabetes complications (foot care, nutritional counseling, etc.)</td>
</tr>
<tr>
<td></td>
<td>• Training for insulin auto-application</td>
</tr>
</tbody>
</table>

| Control | Diagnosis | • Search for high risk individuals                                                                                      |
|         | Patients’ Records | • Information systems feeding and analysis                                                                 |
|         | Active Search   | • Household visits                                                                                                        |
|         | Treatment      | • Ambulatory and home-based care                                                                                         |
|         |               | • Therapeutic training                                                                                                    |
|         |               | • Provision of medicines                                                                                                 |
|         |               | • Dressings                                                                                                              |
|         | Monitoring glucose blood level | • Monitoring patients’ glucose levels (capillary blood glucose) by the health units                                 |
|         | Prompt Diagnosis of Complications | • Referral to complementary laboratory exams                                                                            |
|         |               | • Referral to electro-cardiogram exams                                                                                   |
|         | First Emergency Care | • Emergency care for acute conditions and other complications                                                            |
|         | Referral       | • Home-based care                                                                                                         |
|         |               | • Guaranteed care for patients in serious conditions at secondary/tertiary level facilities.                             |

In addition to routine care, national campaigns were carried out by the SUS health services network, such as those for breast and cervical cancer control, justified by high incidence of these tumors.
in Brazil. Consolidated by the Breast and Cervical Cancer Control Program, “Viva Mulher”, they consist of developing strategic measures aimed at broader and more effective control of these diseases. Since its inception, in 1998, to the end of 2001, the Program processed 33.1 million pap smears. In 2002, the Second National Campaign for Cervical Cancer Prevention and Control was conducted among women aged 35 to 49 years, focusing on those who had never before had a pap smear and those who last were screened more than three years prior. The campaign planned to screen 2.5 million women within the age group and reached 85% of its goal. In total, over 3.8 million women were examined. The follow-up phase is being strengthened to confirm all positive cases and to guarantee diagnosis and treatment.

VII. Specialized Care Organization

During the year 2000, the MoH coordinated an intense debate and negotiation process with State and Municipal Health Secretariat Councils and other social sector representatives, at the Tripartite Management Board (CIT) and at the National Health Council, concerning the revamping and consolidation of the SUS’ decentralization process. The Health Care Operational Guidelines (NOAS/SUS), published in January 2001, is a result of this long negotiation process.

This Guidelines’ general objective is “to promote greater equitable resource allocation processes and to promote the population’s access to all levels of health care “. In order to reach this goal, the guidelines consider the essential nature of network regionalization for the SUS’s decentralization process. It also proposed three groups of integrated strategies:

- Designing and implementing Regionalization Master Plans for the organization of health services networks within the state. These plans aim at structuring functional and responsive health care service networks in various health care levels.
- Strengthening SUS managerial skills. This includes the development of new strategies and tools to enhance managerial performance in planning, programming, regulation, appraisal and control at the state and municipal levels.
• Updating criteria for the states and municipalities certification processes, aiming at making them consistent with the proposed changes.

The design of the Regionalization Master Plans is considered extremely important. It is coordinated at the state level, but counts on the municipalities’ active participation. According to the guidelines, this plan should contain at least:

a) Division of the state territory in health regions or micro-regions, defined in accordance with sanitary, epidemiological, geographical, and social criteria, as well as the existence and patterns of access to services.

b) Diagnosis of the population’s main health problems and definition of priorities for intervention.

c) Organization of comprehensive and responsive health care modules conformed by one or more cities. Each one of these modules should be able to provide the first level of intermediate complexity health care to fulfil the demands of the primary care level.

d) Definition of referral flows and inter-municipal relationships.

e) Organization of specific specialized care networks.

f) Development of a Master Plan of Investments, which should fulfil identified gaps in the health care network, in accordance with the defined priorities for intervention.

Along with the fundamental primary care that must be available for all Brazilians, the guidelines propose the creation of responsive health care modules. These modules should guarantee, in the micro-regional area, timely access to essential health care. The objective is to provide health care for the most common health problems, as this care is not always available in all cities, due to economic difficulties. The guidelines also establishes general directives for the organization of intermediate and high complexity health care levels, and advocates that the regionalization plan should map specialized care referral networks. This type of regionalization requires the integration of various municipal health care networks in order to
maintain inter-municipal referral systems coordinated at the state level.

The NOAS increased the fixed Primary Health Care Block Grant (PAB), and the amount of funding for the first level of intermediate complexity health care. It also established that the amount of funding received for outpatients’ care, at this level of complexity, should be based on a per capita national value. This has been considered an improvement of the financing logic, particularly because it leads to a significant expansion of pre-payment mechanisms. It demands a more active role of the managers in planning services’ supply, based on identified priorities and population needs.

The Integrated Program Budget Tool (PPI) has been a fundamental instrument for the SUS management and structural reorganization. The NOAS made the development of PPI indispensable, highlighting the importance of this instrument in the regionalization process. The programming tool is based around resources allocation and the distribution of responsibilities among the three spheres of government. This should guarantee the population access to health care, in the own or neighboring cities where the necessary service is available.

The evidence of gaps in the supply of health services led the MoH to formulate strategies for supply expansion and access to certain forms of care. These strategies were carried out through the building of specific health care networks. The MoH’s involvement in the organization of these networks is valid, as many specialized services are not available in all cities, states, or even in regions. The structuring of networks, the definition of increasing levels of health care complexity, and the definition of referral flows are essential for guaranteed access to services. To finance these networks, the MoH transfers funds to states and cities monthly, in amounts pre-defined by a budgetary ceiling, and through other mechanisms.

In an attempt to qualify the specialized care in SUS, the Ministry made massive investments in professionals’ training, infrastructure improvement, equipment acquisition and, especially, in the recurrent financing of specific networks’ participating facilities. These actions targeted ambulatory and hospital services specialized
in cases of accidents and violence, oncology, cardiovascular diseases and mental health care, among others. In each case, the MoH adopted criteria for identification, accreditation, and certification of specialized units at different levels. The certified units receive extra financial incentives aggregated to the SUS regular payments. The provision of high-cost medicines is granted to all assisted patients through special financing mechanisms.

Regarding accidents and violence care, partnerships were established with universities and State and Municipal Secretariats aiming at training network professionals. It is worth highlighting the training of 2,320 health professionals and fire fighters in 2001 focused on pre-hospital care. Structures were improved in five different branches of the network: emergency care, neurosurgery, extensive burns care, intensive care, and physical rehabilitation. Considering all those areas, 266 hospitals were improved and 188 physical rehabilitation units were installed. The same strategy was used for the oncology network, with the improvement of 254 facilities and the installment of 20 new ones.

The mental health care model, strongly based in hospital care, still resists the changes proposed by the Psychiatric Reform. The specialized hospitals concentrate 80% of expenditures in this area. However, a gradual growth in the assignment of financial resources to the community-based psycho-social care network can be seen, along with a consequent reduction in the psychiatric hospital beds. Likewise, the MoH has defined strategies for implementation and strengthening of alcohol and other drug addiction rehabilitation networks, implementing a model centered on community-based care that aims at the social rehabilitation of drug addicts.

Besides the organization and expansion of service networks, the MoH is promoting campaigns, or “mutirões”, for performing elective surgeries that present repressed demand rates, aiming at reducing waiting lists. It is worth highlighting the “mutirões” for prostate surgery and lasertherapy to reduce blindness attributable to diabetic retinopathy, carried out in conjunction with medical associations and State and Health Municipal Secretariats. These “mutirões” were responsible for a 40% increase in the total number of these surgeries performed annually by the SUS network.


**VIII. Social Participation and Control**

With the promulgation of the 1988 Federal Constitution, popular participation became perceived as an important element for the public health system’s successful consolidation. The Health Councils and Health Conferences were instituted as instruments of social participation and control. They are meant to increase societal involvement in the definition and monitoring of health policies. They were implemented countrywide as political-administrative arenas where the views of diverse interests within the health system’s organization and management could emerge. Nowadays, the Health Councils and Conferences are successfully established.

The Health Conferences are convened by the Health Councils and occur every 4 years. The Health Councils are permanent boards that belong to SUS administrative structures at the federal, state, or municipal level, depending on the sphere to which they are linked. Fifty percent of the members must represent the users while the other 50% must represent governmental areas, service providers and health professionals. The Health Councils act regularly in strategy formulation and in health policy implementation control. In order to better exercise its role, the National Health Council established permanent thematic commissions on specific technical areas. Among these, the Intersectoral Commissions for Food and Nutrition, Mental Health, and Accidents and Violence have a contributory role in the approach to NCD.

However, the Health Councils are not the solely responsible for quality control of SUS’s performance. Various mechanisms have been implemented as ways of ensuring the users’ participation, as well as professional associations and non-governmental organizations. Thus, the SUS Customer Service (SAC/SUS) was developed, with the objective of identifying the citizens’ or SUS users’ needs and/or opinions. SAC/SUS is based on a computerized system, with an information flow via Internet, and includes various input channels such as mail to and from the SUS’s users, and spontaneous
demands via e-mail, or by means of the toll-free telephone system, Dial Health.

Letters are sent regularly and systematically to former hospitalized patients with information about the undertaken procedures, utilized medical materials, hospital bills and correspondent payments, and other data related to their hospitalization. This enables the patients to check all the information, and, in case of errors or questions, to call the toll-free telephone service of SAC/SUS. The patients who received the MoH’s letters during the last years have answered them with praise, denouncements, claims, suggestions, information and data correction. Therefore, this system offers everyone the opportunity to participate in the control process. At the same time it enables the SUS managers to identify frauds. In accordance with the type, severity, or recurrence of the denouncements, the Municipal and State Health Secretariats fine hospitals. These measures serve to correct irregularities and improve quality.

The Spontaneous Demands System (SADE) aims at the identification, classification, and prioritization of needs, problems, opinions and suggestions, spontaneously presented by any Brazilian citizen. The objective and goals of SADE are similar to those of the mail system, but it is more flexible in answering demands and providing correspondent solutions. The demands are relayed immediately to the appropriate Secretariat of Health and should be rapidly fulfilled.

The National Program for Hospital Services Evaluation (PNASH) was developed in 1998 aiming at improving the quality of hospital care provided by SUS. The Program consists of an annual evaluation of all SUS’s hospitals. There are different standardized forms for the evaluation: (1) technical performance, (2) outpatient care, (3) in-patient care, and (4) emergency services. The patient care evaluations (2, 3, and 4) represent 60% of the overall process. The results and respective recommendations are sent to the states and cities for appropriate actions to be taken.
The intense dialogue among different sectoral actors is considered the primary reason for health system strengthening in Brazil. Although SUS is young, it is already maturing, through the exhibition, discussion and, in many cases, overcoming of problems and conflicts unveiled on the road. It is certain that other evolution and territorial challenges will arise, but there is no doubt that the greater the social support system, the greater the response capacity will be.

**IX. Logistical Information**

Brazil proposes Rio de Janeiro as the venue for the 3rd Meeting of the Global Forum on NCD Prevention and Control. Rio offers exceptional conditions for such an important event. According to the International Congress and Convention Association, Rio de Janeiro is classified among the seven most sought after sites for international congresses. It is easily accessible by air, and the international airport is located less than 20 minutes from major hotels and convention centers.

Rio also has a hotel infrastructure with capacity to comfortably host more than 20 thousand visitors. The hotel facilities suit all personal and professional profiles. Additionally, the city can offer the services of many companies highly specialized in congresses, fairs and exhibitions. They can offer planning, and provision of modern audiovisual equipment, excellent translation services, and transportation arrangements.

Besides the outstanding services offered, Rio de Janeiro is one of the most beautiful cities in the world, with a wonderful coastline, the largest urban forest in the world, and vast gastronomic and cultural options. The city is well known for its very nice people of unparalleled warmth. The weather during the time of the meeting will be quite pleasant, corresponding to the Brazilian spring and summer.
Brazil will designate nearly US$ 120 thousand to fund the event, which should finance the meeting’s infrastructure needs:

1. an auditorium with capacity for more than 200 participants, with sound systems, translation and audiovisual equipment;
2. four meeting rooms, with capacity for more than 50 participants each, with sound system, translation and audiovisual equipment;
3. security system in the all sections of the Forum, name tags and executive secretarial services;
4. translation: English, Spanish and Portuguese;
5. printing of informational documents, and dissemination of materials, including folders, letters and the event’s official program;
6. coffee break service during the event; and
7. VIP room for authorities, lecturers, and guests.

Brazil looks forward to welcoming everyone to Rio de Janeiro next year!