PRIMARY HEALTH CARE SYSTEMS (PRIMASYS)

Case study from Colombia

Abridged Version
Overview of primary health care system

Colombia is a tropical middle-income country, located in the north-west of South America. According to the Colombian National Administrative Department of Statistics (Departamento Administrativo Nacional de Estadística, DANE), Colombia has 49 million inhabitants in its 1 141 748 square kilometres of territory. It is estimated that 76% of the population lives in urban areas, while the remaining 24% lives in rural areas. Life expectancy at birth in Colombia increased from 57 years in 1960 to 74 years in 2014.2

According to the Colombian Health Situation Analysis (Análisis de Situación de Salud, ASIS), 2015, the main reasons for consultation in health services in Colombia are noncommunicable diseases, accounting for 65.45% of doctor visits made between 2009 and 2014, followed by nutritional and communicable disease conditions (14.73%), injuries by different causes (5.2%), and maternal and perinatal conditions (2.12%). The main cause of death is circulatory problems (29.92%), followed by neoplasm (17.79%) and external causes (injuries) (16.79%). Indicators related to the Millennium Development Goals show that the maternal mortality rate has reduced from 104.9 to 55.2 maternal deaths per 100 000 live births; however, maternal mortality is still concentrated in the poorest areas, where there are major problems of equity in access to health services. Neonatal mortality between 2005 and 2013 declined from 9.9 to 7.3 neonatal deaths per 1000 live births. Mortality in children aged under 1 year declined from 19.5 to 11.6 deaths per 1000 live births. Mortality in children aged under 5 years declined steadily from 24.3 deaths per 1000 live births in 1998 to 14.1 in 2013. Vaccination coverage among children in the last 10 years has remained above 85%, and in the last five years has been above 90%.5

The National Demographic and Health Survey (Encuesta Nacional de Demografía y Salud, ENDS), 2015, showed that 98% of pregnant women in Colombia had received skilled birth attendance during delivery; in addition, 92% of women had received four or more prenatal check-ups during their previous pregnancy and 78% had received postnatal care following their previous delivery.6 In contrast to the positive health indicators, Colombia has the second highest level of inequality in the region (after Honduras), with a Gini coefficient of 53.5 (2015). However, in the last 15 years the rate of poverty in Colombia has decreased from 50% to 28.5%. Colombia's gross domestic product (GDP) per capita was US$ 6056.1 (US$ actual prices) in 2015.7 Table 1 summarizes demographic and health indicators for Colombia.

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2 Ibid.
4 Ibid.
5 Ibid.
## Table 1. Colombia: demographic and health indicators

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Results</th>
<th>Information source</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total population of country</td>
<td>49 million</td>
<td>DANE</td>
<td>2016</td>
</tr>
<tr>
<td>Distribution of population: urban/rural</td>
<td>76% urban, 24% rural</td>
<td>DANE</td>
<td>2016</td>
</tr>
<tr>
<td>Growth rate</td>
<td>0.9%</td>
<td>World Bank</td>
<td>2015</td>
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<tr>
<td>Fertility rate</td>
<td>2.0</td>
<td>Ministry of Health</td>
<td>2015</td>
</tr>
<tr>
<td>Life expectancy of birth</td>
<td>74 years</td>
<td>World Bank</td>
<td>2014</td>
</tr>
<tr>
<td>Infant mortality</td>
<td>11.6/1000 live births</td>
<td>ASIS</td>
<td></td>
</tr>
<tr>
<td>Under 5 mortality rate</td>
<td>14.1/1000 live births</td>
<td>ASIS</td>
<td>2013</td>
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<tr>
<td>Maternal mortality rate</td>
<td>55.2/100 000 live births</td>
<td>ASIS</td>
<td>2013</td>
</tr>
<tr>
<td>Immunization coverage under 1 year</td>
<td>Up to 90%</td>
<td>ASIS</td>
<td>2013</td>
</tr>
<tr>
<td>Skilled birth attendance (% of pregnant women)</td>
<td>98.6%</td>
<td>ASIS</td>
<td>2015</td>
</tr>
<tr>
<td>Four recommended prenatal care visits</td>
<td>92%</td>
<td>ASIS</td>
<td>2015</td>
</tr>
<tr>
<td>Income or wealth inequality (Gini coefficient)</td>
<td>53.5</td>
<td>World Bank</td>
<td>2015</td>
</tr>
<tr>
<td>Total health expenditure as proportion of GDP</td>
<td>7.2%</td>
<td>World Bank</td>
<td>2014</td>
</tr>
<tr>
<td>Primary health care expenditure as % of total health expenditure</td>
<td>56%</td>
<td>Ministry of Health</td>
<td>2015</td>
</tr>
<tr>
<td>% total public sector expenditure on primary health care</td>
<td>100%</td>
<td>Ministry of Health</td>
<td>2016</td>
</tr>
<tr>
<td>Total expenditure on health per capita</td>
<td>US$ 962</td>
<td>WHO</td>
<td>2014</td>
</tr>
<tr>
<td>Public expenditure on health as proportion of total health expenditure</td>
<td>75.2%</td>
<td>Bank of the Republic</td>
<td>2011</td>
</tr>
<tr>
<td>Out-of-pocket payments as proportion of total expenditure on health</td>
<td>15.9%</td>
<td>Bank of the Republic</td>
<td>2013</td>
</tr>
</tbody>
</table>

**Key to sources:**

Timeline

The basis of Colombia’s current health system was established in 1993, as a mechanism for implementation of the 1991 National Constitution, wherein health is considered as a fundamental right (Figure 1). As established, the health system was based on assurance of provision of health services to the population. Later, in 1996, the conditions for population health care were defined based on collective activities under the Basic Attention Plan.

In 2000, regulations were issued in order to ensure effective and efficient care in activities of public health interest, such as prevention of common diseases and healthy population measures, including vaccination, maternal and child health, and early detection of diseases such as breast and cervical cancer. As of 2001, responsibility for specific protection, implementation and early detection activities was assigned to municipalities and states. Performance in health issues is assessed against indicators related to the aforementioned activities.

In 2007, a law was passed mandating the national government to issue national public health policies and plans, in order to ensure integration of actions and implementation of long-term programmes to improve health conditions for the Colombian population, including in relation to emerging diseases. To protect the fundamental right to health care, in 2008, Judgement T-760 of the Constitutional Court of Colombia mandated equality in health benefit plans for the entire population, and a review and update of benefit plans, in accordance with technological advances in health care. In 2011, as part of compliance with Judgement T-760, a law was issued ordering the creation of a health model strengthening primary health care, development of a permanent functional structure for updating health plans, and formulation of a national pharmaceutical industry policy. In 2014, a new law was created amending the fundamental right to health care, which was now deemed an inalienable right that should be guaranteed against any form of discrimination.


by the government at the same level as the right to life. The law mandated creation of a health model based on the social determinants of health, taking into account the geographical characteristics of the Colombian territory. Additionally, it created an unlimited health plan, by which the Colombian population is entitled to any technology available in Colombia, with treatment paid for through the health system using public resources, except in the case of technological solutions that are too extravagant, cosmetic, or experimental, or that lack evidence of effectiveness and safety. In compliance with these laws, in 2016, a new Comprehensive Health Care Model (Modelo Integral de Atención en Salud, MIAS) was introduced, which strengthens primary health care delivery, including through increasing the responsibility and decision-making capacity of health teams. It is a model that improves access of the population to health care, aims to achieve user satisfaction, and optimizes fulfilment of health system goals.

**Governance and health services architecture**

Colombia is a centralized State, which assigns functions to departments and municipalities according to their management capacity, population and availability of resources. The regulatory and governing body for health is the Ministry of Health and Social Protection, which is responsible for issuing the technical rules and regulations that control the health system, and the management components, norms, and organizational, monitoring and control elements related to finance and the relationships between the different entities in the system (Figure 2).^{10}

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**Figure 2. Architecture of health care system in Colombia**

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Rules and technical regulations controlling the functioning of entities seek to harmonize the relationships between payers and service providers, within an environment of patient-centred care, quality of service delivery, and best clinical practice. Development of studies on the effectiveness and safety of health technologies and procedures is financed by The Ministry of Health and Social Protection, as well as the production of clinical guidelines and protocols, to help actors in the system to improve quality and articulation of clinical care through different conditions. The government must formulate long-term policies (10 years), called decennial plans. Among them are the 10-year Public Health Plan, the National Pharmaceutical Policy, and the Comprehensive Health Care Policy. In addition, in each presidential period (every four years) a government plan must be established aligned with the above, indicating the programmes that will be developed to achieve the health goals of the Colombian population.

At the territorial level, departments, districts and municipalities are responsible for health promotion activities, tracking actions of public health interest, financing collective health activities, monitoring, control, and inspection of the health services plan, and ensuring quality in the provision of services. The territorial entities are in charge of certifying the functions of health providers, monitoring health indicators, and articulation between the health sector and other allied sectors, such as education, culture and infrastructure.

Health-promoting companies (empresas promotoras de salud, EPS) have several functions, including affiliating Colombian inhabitants (national or foreign) to the Colombian health system, managing population risk of disease, and supervising financial resources for the provision of individual health services to the population that is affiliated. Surveillance of the EPS is carried out by the National Superintendence of Health, a State agency but independent of the Ministry of Health and Social Protection.

Health service provision is performed by public and private hospitals, as well as independent health professionals. Service networks are articulated with low-complexity hospitals, as well as independent health professionals. Health service provision is performed by public and private entities of Colombia contribute. Given the way the State is organized, an important source of funding is generated by the financial surpluses arising from management of resources in the Colombian health system. There are other sources of finance derived from general taxes that are transferred to the health system as part of the national general budget, for example taxes levied on alcoholic beverages, gaming, tobacco and firearms. According to professional criteria, patients can be referred to specialized services (doctors or dentists), but in some cases administrative authorization is required by the EPS. Hospitals and clinics that provide health services in Colombia are organized by level of complexity: low, medium, and high complexity. Low-complexity institutions provide services of general medicine, nursing, labour and delivery care, dentistry, pharmaceutical services, clinical laboratory (basic tests), and in some cases nutrition and therapy. Medium-complexity institutions include basic specialized services such as internal medicine, gynaecology, general surgery, orthopaedics, anaesthesiology and paediatrics. High-complexity institutions include public and private hospitals, specialized surgical services, more complex medical and surgical specialties, high-level clinical laboratory and diagnostic imaging (including magnetic resonance imaging), tomography, interventional radiology, special care units (such as intensive adult, paediatric, neonatal and obstetric care), in addition to specialized units for cancer treatment, dialysis and transplants, among others.

Financing

Colombia's health system financing has multiple sources. Some resources are levied through specific destination taxes, while others come from project taxes and investment funds. In the last five years in Colombia health per capita spending has increased by 25%, from US$ 720 in 2009 to US$ 962 in 2014, despite the fact that the percentage of GDP destined for health has been maintained constant at 7% (+/- 0.2%). Out-of-pocket health expenditure is 15.9% of total health expenditure.

While sources of revenue for Colombia's health system vary, the main source is taxes that workers from the public and private entities of Colombia contribute. Given the way the State is organized, an important source of funding is generated by the financial surpluses arising from management of resources in the Colombian health system. There are other sources of finance derived from general taxes that are transferred to the health system as part of the general budget, for example taxes levied on alcoholic beverages, gaming, tobacco and firearms.  

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These resources are distributed based on the characteristics of use. For example, resources for providing individual services are made per capita to the EPS. For this purpose a premium insurance was created based on the capitation payment unit (unidad de pago por captación, UPC), which is revised and adjusted annually taking into account adjustments in benefit plans, inflation and population variations.

Resources for collective activities, public health activities and basic sanitation are transferred to the municipalities, districts and departments through the national general budget in accordance with the General Participation System, which allocates resources according to various criteria, including population conditions, number of inhabitants, populations with unsatisfied basic needs, special populations, and the municipality category. Small, low-level municipalities, which lack management capacity, receive resources to be allocated by departments, while municipalities in higher categories and with good management capacity receive resources directly, and manage them themselves (Figure 3).

### Human resources

Following the guidelines and principles of the Toronto Call to Action, Colombia promulgated Law 1164 in 2007, which created an Observatory on Human Resources for Health. This structure seeks to generate an information system on human resources for health in order to advance actions to improve the working conditions of workers in the health sector, and to generate actions and studies that strengthen the competences and qualities of human resources for health in Colombia. In 2012 Colombia had 26.01 professionals per 10,000 inhabitants, where the density of doctors was 16.89 per 10,000 inhabitants and the density of nursing professionals was 9.19 per 10,000 inhabitants. According to the observations made by the Observatory on Human Resources for Health, Colombia has surpassed the goal of having more than 40% of the existing medical staff dedicated to primary care activities. However, the goal of achieving a nurse–physician ratio of 1:1 has not been met, as the ratio was 0.55:1 in 2011.

Colombia has 1122 municipalities and in all of them there are health professionals caring for the population. Among the actions initiated in the country within the legal and regulatory framework related to human resources for health, the training of health personnel has been strengthened in different categories, including assistants, technicians, technologists and professionals in the areas of medicine, nursing, dentistry and other professions. Credit grant programmes are in place to encourage professionals to obtain training in areas where there are fewer specialties in Colombia (Figure 4).

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Planning and implementation

Implementation of health programmes in Colombia occurs within the framework of the current health system and is developed under the expansion of a health care model that takes account of the characteristics of each of the regions of the country, establishes linkages with other sectors within their competences, and defines the functions and responsibilities of actors according to the structure of the Colombian State. To define the activities in the health system there are general laws that are clustered through national mandates called decrees. In this respect, the Comprehensive Health Care Policy was established by Resolution 429 of 2016, and the Comprehensive Health Care Model (MIAS) was established by Resolution 3202 of 2016. Both decrees institute a series of transversal guidelines to the health sector and other related sectors, defining the activities to be developed by each of the institutions that make up the health system in Colombia.

This health model includes regulatory aspects related to the quality of service, applying the concept of “comprehensive care routes”, whereby, for a clinical component, the administrative conditions and the best standards in services are determined. The model also provides a framework for review and regulation of payment mechanisms for health services; development of information systems based on digital clinical charts; training of human resources for health; and creation of incentive plans for achievement of goals in different entities of the health sector in Colombia.

Monitoring and information systems

Since the creation of the new health system in Colombia in 1993, the government has developed structures that facilitate information gathering on the activities taking place in the health sector in Colombia. Measurement parameters have been set up for each of the system components, and reporting mechanisms have been put in place to shed light on coverage and provision of services (quality and quantity), price systems and performance indicators.

To assist with these activities, a reporting model – the Individual Records of Health Services Provision system (Registros Individuales de Prestación de Servicios de Salud, RIPS) – has been established. This mechanism enables data to be gathered on the number of procedures, appointments, medicines and other services that are provided to the population. However, the RIPS system does not allow linkages to be made with other systemic data (demographic, poverty, quality of services, etc.) that would help analyse health service provision. For this reason, in the past five years work has been undertaken on a platform that integrates all these related features – the Comprehensive Information System for Social Protection (Sistema Integral de Información de la Protección Social, SISPRO).17 It allows accurate review of results for health indicators, the health characteristics of each of the territories, number of services rendered, application of quality indicators, integration with elements of human resources for health, and follow-up on the Colombian population’s affiliation to the health system.

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17 www.sispro.gov.co.
Way forward and policy considerations

In accordance with this analysis of health care provision in Colombia, it is important to undertake action in the following areas:

• finalize development of the current care model, allowing, in parallel, strengthening of the competencies of regional actors to implement the model;
• define profiles of local officials responsible for the leadership of primary health care actions and strengthen the capacity and technological infrastructure necessary for the deployment of this system;
• define payment mechanisms for health actions that encourage achievement of goals established at national level;
• strengthen follow-up actions on human resources for health policies in Colombia;
• reinforce the technological infrastructure of different components of the system in order to obtain more immediate data, with lower adjustment rates;
• strengthen training of human resources for health, for example in nursing, physician and family medicine programmes.

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This case study was developed by the Alliance for Health Policy and Systems Research, an international partnership hosted by the World Health Organization, as part of the Primary Health Care Systems (PRIMASYS) initiative. PRIMASYS is funded by the Bill & Melinda Gates Foundation, and aims to advance the science of primary health care in low- and middle-income countries in order to support efforts to strengthen primary health care systems and improve the implementation, effectiveness and efficiency of primary health care interventions worldwide. The PRIMASYS case studies cover key aspects of primary health care systems, including policy development and implementation, financing, integration of primary health care into comprehensive health systems, scope, quality and coverage of care, governance and organization, and monitoring and evaluation of system performance. The Alliance has developed full and abridged versions of the 20 PRIMASYS case studies. The abridged version provides an overview of the primary health care system, tailored to a primary audience of policy-makers and global health stakeholders interested in understanding the key entry points to strengthen primary health care systems. The comprehensive case study provides an in-depth assessment of the system for an audience of researchers and stakeholders who wish to gain deeper insight into the determinants and performance of primary health care systems in selected low- and middle-income countries.