# MACAO (CHINA)

### CONTEXT

# **Demographics**

With an annual growth rate of 1.9%, the end-year estimated population of Macao (China) was 552 300 in 2010, with 52.0% female and 48.0% male. Those aged 0-14 years account for 12.2% of the total population and those aged 65 and above for 8.0%. Population density is 18 300 per square kilometre and the entire population are city-dwellers.

In 2010, there were 5114 live births, up by 7.3% compared with 2009, while mortality increased by 6.6% to 1774. The natural growth rate for the same year was 6.1%, with a crude birth rate of 9.4 and a crude death rate of 3.3 per 1000 population. The infant mortality rate was 2.9 per 1000 live births and the under-five mortality rate was 3.5 per 1000 live births, while the total fertility rate was 1.1 birth per woman (aged 15-49), with no recorded maternal mortality. Life expectancy at birth for male was 79.5 years in 2007-2010, and 85.4 years for female.

Besides natural increases, migration flow is another important factor in determining population growth. In 2010, an estimated net inflow of 7800 persons was recorded, including Chinese immigrants with "one-way exit permits" from Mainland China, persons authorized to reside in Macao and non-resident workers.

### **Political situation**

Macao became a Special Administrative Region of the People's Republic of China on 20 December 1999. The constitutional document, the Basic Law of the Macao Special Administrative Region, came into force on the same day. It stipulates the system to be practised in Macao, and lays down the political and administrative framework for 50 years from 1999.

Under the Basic Law, Macao is entitled to a high degree of autonomy in all areas except defence and foreign affairs. The principles of "One country, two systems", "Macao people governing Macao" and "a high degree of autonomy" have passed their initial tests with flying colours, and are now broadly recognized in Macao and infused into its social and political culture.

Fernando Chui Sai On is currently serving his third term as Chief Executive of Macao. The Chief Executive's cabinet comprises five policy secretaries. He is advised by an Executive Council that has 11 members. The Legislative Assembly is a 29-member body comprising 12 directly elected members, 10 appointed members representing functional constituencies, and seven members appointed by the Chief Executive.

### Socioeconomic situation

With the support of Mainland China, the economy of Macao has remained positive. Gross domestic product (GDP) for 2010 expanded by 26.2% in real terms, and per capita nominal GDP (US\$) increased by 30.7% year on year. An increase in private consumption expenditure has been spurred on by the favourable performance of the tourism and gaming sectors, as well as rising employment earnings; however, a weakening external demand in the United States of America and the Euro Zone has led to a significant decrease in exports of merchandise.

Expenditure on health accounted for 2.4% of GDP in 2009, with government expenditure accounting for 72.9%.

Macao has sound economic and trade relations with more than 120 countries and regions, particularly with the United States of America, the European Union and the Portuguese-speaking countries.

In 2010, the total labour force was 327 600, of which 318 300 were employed, giving an unemployment rate of 2.8%, down by 0.8% compared with 2009; the underemployment rate decreased by 0.1% to 1.8% year on year.

# Risks, vulnerabilities and hazards

Macao is occasionally hit by tropical storms, tropical cyclones and typhoons during summer and autumn, causing traffic disruption and, on occasions, major floods and landslips, but seldom casualties.

#### 2. **HEALTH SITUATION AND TREND**

#### 2.1 Communicable and noncommunicable diseases, health risk factors and transition

Having gone through the process of demographic and epidemiological transition, the population of Macao enjoys a fairly low mortality rate and a long life expectancy. They also enjoy a high standard of health, as reflected by the general decline in the incidence of communicable diseases and the increase in life expectancy, as well as the improvement in health indices. Noncommunicable diseases are the main causes of morbidity and mortality. However, like other developed areas, the threat from re-emerging and newly emerging infectious diseases continues. In addition, the HIV/AIDS incidence rate is slowly increasing and tuberculosis is still a significant public health problem

#### 2.2 **Outbreaks of communicable diseases**

Outbreaks of influenza, enterovirus infection and norovirus gastroenteritis in schools and residential institutes occur most commonly, contributing 59.1% of all outbreaks of communicable diseases in 2010. During 2010, there were 19 outbreaks of influenza, 15 of enterovirus infection and five of norovirus gastroenteritis. Efforts have been put into infection control measures to halt and prevent such outbreaks.

# Leading causes of mortality and morbidity

Among the 1774 deaths in 2010, 33.0% were attributable to neoplasms, 25.8% to diseases of the circulatory system and 14.8% to diseases of the respiratory system.

Since 2001, cancer has been one of the leading causes of death, claiming more than 500 deaths every year. In 2010, cancers of the colorectum, bronchus and lung, breast, prostate, and liver were the five most common, contributing 13.9%, 13.7%, 10.2%, 6.8% and 6.8% of all new cancer cases, respectively. The top five leading causes of cancer deaths were cancers of the bronchus and lung, colon and rectum, liver, stomach and nasopharynx, accounting respectively for 25.1%, 13.4%, 11.5%, 6.5% and 6.2% of total cancer deaths in 2010.

In terms of causes of morbidity, the three most common notifiable diseases in 2010 were seasonal influenza (35.7%), enterovirus infection (22.4%) and chickenpox (13.8%).

In 2006, Macao launched the WHO new Stop TB Strategy, with DOTS as the core of the strategy. The proportion of tuberculosis cases of the lung detected under DOTS was 89.0 per 100 000 population in 2009. The incidence rate for tuberculosis in 2010 was 63.0 per 100 000 population, with a treatment success rate of 91.3% (2009).

The Population Health Survey 2006 described the prevalence of major health conditions and the general health status of the population, as well as behaviour related to major causes of mortality and morbidity. Among other finds, it showed that the risk factors related to noncommunicable diseases were the major prevalent causes of morbidity. The prevalence of dyslipidemia was 24.3%, that of diabetes was 27% and the adjusted rate for hypertension was 28.8% (44.5% of people with high blood pressure were newly discovered).

Morbidity and mortality from most vaccine-preventable communicable diseases have remained very low for many years. There is no risk of malaria, but small clusters of dengue fever occur occasionally. The hepatitis B carrier rate among adults is around 11.5%, but is less than 1% among vaccinated children. HIV/AIDS prevalence remains low, estimated at less than 0.1% (4.89 cases per 100 000 inhabitants).

# Maternal, child and infant diseases

Maternal, child and infant care services are available in all highly accessible health centres, all of them equipped with ultrasound examination equipment. More than 95% of pregnant women receive antenatal care and almost 100% deliver in hospital. No maternal death was recorded during the period from 1992 to 2010. Diarrhoea among infants and children is common, but is not usually life-threatening.

#### 2.5 **Burden of disease**

A study in 2001 indicated injury and intoxication and cancer as the leading causes of potential years of life lost (PYLL).

### **HEALTH SYSTEM**

# Ministry of Health's mission, vision and objectives

In line with the Government's policy of building a quality society, a long-term objective of Macao's health authorities is to enhance the quality of medical and health care, thus safeguarding and improving the public's health.

The Health Bureau is tasked with coordinating the activities of public and private organizations in the domain of public health and assuring the health of citizens through specialized and primary health care services, as well as disease-prevention and health-promotion activities.

# Organization of health services and delivery systems

Medical and health service providers in Macao are classified as either governmental or nongovernmental. The former mainly include government health centres that provide primary health care, as well as Conde S. Januário Hospital, which provides specialist medical services. Nongovernmental providers include medical entities subsidized by the Government and other institutions, such as Kiang Wu Hospital, the University Hospital, the Workers' Clinic and Tung Sin Tong Clinic, as well as various private clinics and laboratories.

The departments of Conde S. Januário Hospital include Inpatient, Outpatient, Emergency, Surgery, Intensive Care, Coronary Intensive Care, Burns Service, Physiotherapy and Rehabilitation Medicine, Haemodialysis and Peritoneal Dialysis, Medical Imaging, Laboratory, and Haematological Oncology. The 73 types of service offered by the Outpatient Department include anaesthesiology, cardiology, chest clinic, surgery, plastic and reconstructive surgery, dermatology, stomatology, gynaecology and obstetrics, haematological oncology, physiotherapy and rehabilitation, internal medicine, general medicine, nephrology, neurosurgery, ophthalmology, orthopaedics, otorhinolaryngology, paediatrics, psychiatry and urology.

With regard to the private sector, two nongovernmental hospitals play complementary roles in providing health care services. Founded in 1871, Kiang Wu Hospital has three departments: Emergency, Outpatient and Inpatient. It is a modern general hospital that integrates treatment, prevention, teaching and research. The University Hospital, sharing a close collaborative relationship with the Macau University of Science and Technology, was established on 25 March 2006. It integrates clinical services, teaching and scientific research, and is Macao's first hospital dedicated to both Chinese and Western medicine.

To realise the objective of "Health for all", the health authorities have established a primary health care network, with health centres as the operational units offering all residents easy access to primary health care services in their own neighbourhoods. There are six health centres and two health stations distributed throughout the various districts of Macao. Two of the health centres, Fai Chi Kei Health Centre and Areia Preta Health Centre, also have traditional Chinese medicine clinics. The primary health care network provided services to 525 619 outpatients during 2010. Most outpatients attended the adult health care, children's health care and women's health care services, which accounted for 62.5%, 11.4% and 13.2%, respectively, of total outpatient visits.

## Health policy, planning and regulatory framework

"A sound health care system and putting prevention first" is the Government's policy. In recent years, it has focused particularly on enhancing prevention and control capacity in the areas of emergency rescue response and public health.

The Health Bureau is a public entity endowed with administrative, financial and patrimonial autonomy, under the supervision of the Secretary for Social Affairs and Culture. The Bureau's task is to assure the health of citizens, prevent disease, provide health care and rehabilitation services, train professional health workers, supervise and support entities in the health sector, and provide forensic services.

#### 3.4 **Health care financing**

The health system is financed mainly by the Macao Government, which accords high priority to the resources allocated to medical services and health care. In 2009, spending on relative services totalled US\$ 356.2 million, up by 31.3% from US\$ 271.2 million in 2008.

Medical services provided by health centres and Tung Sin Tong Clinic are basically free of charge. All legal residents, regardless of their ages or occupations, are entitled to free medical services at health centres and to supplementary check-ups at Conde S. Januário Hospital by referral from health centres. Non-residents pay for such services according to rates established by the Health Bureau.

### **Human resources for health**

To acquire medical knowledge and techniques from other regions and countries, the Health Bureau has continued to dispatch specialists to Sichuan and Xi'an in Mainland China, as well as to Singapore and Australia, to undertake advanced studies in otolaryngology, maxillofacial surgery, obstetrics and gynaecology, medicine, orthopaedics and urology. In addition, to elevate the professional competence of departments of orthopaedics, cardiology, anaesthesiology and general surgery, experienced professors have been invited from Portugal, Beijing (China), Guangzhou (China), Nanjing (China) and Hong Kong (China) to guide operations.

On 12 August 2010, the Legislative Assembly approved bills on the rank and grade system for doctors, hospital administrators, diagnostic and therapeutic technicians, pharmacists and senior health technical officers, and sanitary inspectors, as well as medical helpers. Amendments to the rank and grade system will help in planning the development of various professions in the health sector by identifying their interactive relationships, and will therefore facilitate the implementation of health policy in the long term, as well as optimizing the overall structure of the health care system.

#### 3.6 **Partnerships**

In January 2010, the Cooperation Agreement on Entry-Exit Sanitary Inspection and Quarantine between the General Administration of Quality Supervision, Inspection and Quarantine of the People's Republic of China and the Secretary for Social Affairs and Culture of the Macao Special Administrative Region was signed; the agreement regulates both parties in efforts to establish a mechanism for regular meeting and direct communication, strengthen the cooperation of the sanitary inspection and quarantine services, implement food-safety management policy, formulate relevant standards and legislation, as well as notify each other of any major food-safety incidents or false or inferior food incidents.

In May 2010, an agreement on a Life Support Training Programme was signed between Conde de S. Januário Hospital and the Hong Kong College of Emergency Medicine with the aim of providing courses on basic life support (BLS), advanced cardiac life support (ACLS) and paediatric advanced life support (PALS) that are recognized by the American Heart Association.

In July 2010, a service agreement on a cardiologists and oncologists training programme was signed between the Health Bureau and the Hospital Authority of Hong Kong (China); under the agreement, specialists from the Hong Kong Hospital Authority will come to Macao on a regular basis to provide training to local specialists.

#### 3.7 Challenges to health system strengthening

The Health Bureau continues to follow policies and plans to create a favourable environment and conditions for medical consultation and to ensure that residents receive a satisfactory and convenient community health care service, hence strengthening public health and improving the quality of life of the population. However, factors such as the increasing population and population ageing, as well as the rising demand for medical services, are serious concerns for the Government of Macao.

Statistics from Conde de S. Januário Hospital indicate that hospital admissions increased by 35% from 12 748 in 2001 to 17 228 in 2010, while outpatient and emergency consultations rose by 82.8% and 37.5%, respectively. In 2010, the bed occupancy rate increased to 89.4%, with patients staying in hospital for an average of 9.3 days.

In November 2010, the Health Bureau initiated an extension project for the emergency ward in Conde S. Januario Hospital. The total area of the emergency ward will be increased from 1330 square metres to 4000 square metres.

To raise the level of medical services, keep in line with the patient safety goals, strengthen strategies for continuous quality improvement and ensure residents enjoy medical benefits, Conde de S. Januário Hospital has appointed the Australian Council on Healthcare Standards (ACHS), an independent organization, to conduct an accreditation programme to improve its services continuously. The accreditation will be divided into three phases: evaluation, training & education, and periodic review assessments. The first phase commenced in July 2010 with an invitation to ACHS experts to visit Macao to conduct the evaluation; phases two and three, including an organizationwide survey, are expected to be conducted within two years.

To provide convenient and efficient psychological counselling and therapy to people with emotional disorders, particularly the elderly, and to reduce their waiting times in hospital outpatient departments, mental health care outpatient clinics have been set up in Fai Chi Kei Health Centre and Hac Sa Wan Health Centre since September 2010.

# LISTING OF MAJOR INFORMATION SOURCES AND **DATABASES**

Title 1 Health statistics

Operator Statistics and Census Service

Specification Contains analyses and tables in relation to health care in Macao

Web address http://www.dsec.gov.mo/Statistic/Social/HealthStatistics.aspx?lang=en-US

Title 2 Yearbook of statistics

Operator Statistics and Census Service Specification : Includes latest general information

Web address http://www.dsec.gov.mo/Statistic/General/YearbookOfStatistics.aspx

Title 3 Macao yearbook 2010

Operator Government Information Bureau

Specification Outlines major events, progress and changes on a yearly basis :

Web address http://yearbook.gcs.gov.mo

### **ADDRESSES**

### **HEALTH BUREAU**

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### WHO REPRESENTATIVE

There is no WHO Representative in Macao (China). Queries about the WHO programme of collaboration with Macao (China) should be directed to:

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#### 6. **ORGANIZATIONAL CHART: Health Bureau**

