

Chapter 8

Health

Hong Kong's public and private medical sectors provide extensive healthcare services, including a low-cost public healthcare 'safety net' that ensures no one in Hong Kong is denied medical care due to lack of means.

2015 Figures at a Glance

<i>Infant Mortality Rate</i>			1.3* per 1,000 registered live births
<i>Maternal Mortality Ratio</i>			1.6* per 100,000 registered live births
<i>Life Expectancy</i>	2015	81.2*(Male)	87.3* (Female)
	2064 (projected)	87.0 (Male)	92.5 (Female)

(*provisional figures)

Hong Kong has a high-quality healthcare system supported by a highly professional team of workers. The infant mortality rate has fallen steadily over the past 20 years, from 4.7 per 1,000 live births in 1993 to 1.7 per 1,000 live births in 2013, one of the lowest in the world. Male and female life expectancy in 2015, at 81.2 years and 87.3 years respectively, were among the highest in the world.

Hong Kong's Domestic Health Accounts (DHA)¹ show total health expenditure increased from 3.6 per cent to 5.4 per cent of gross domestic product from 1989-90 to 2012-13. Over the same period, public health spending (\$53.4 billion in 2012-13, or 2.6 per cent of GDP) rose from 39 per cent to 48 per cent of total health expenditure. The government's recurrent funding for health has risen substantially over the past five years, from \$36.8 billion in 2010 to \$54.5 billion by 2015, registering an increase of about \$17.7 billion, or more than 48 per cent. Recurrent expenditure on health accounted for 17 per cent of the government's recurrent expenditure in 2015.

¹ A series of accounts compiled over the years in accordance with the International Classification for Health Accounts Framework developed by the Organisation for Economic Co-operation and Development to keep track of Hong Kong's health spending and to allow for international comparison.

Organisational Framework

The Food and Health Bureau formulates policies and allocates resources for healthcare services, with the aim of protecting and promoting public health, providing lifelong holistic care to every resident and ensuring no one is denied medical help due to lack of means.

The Department of Health is the government's health adviser and executes policies and statutory functions. It safeguards the community's health through a range of promotional, preventive, curative and rehabilitative services.

The Hospital Authority, established under the Hospital Authority Ordinance, provides public hospital and related services. It offers medical treatment and rehabilitation services through hospitals, specialist clinics, general outpatient clinics and outreach services organised into seven clusters that together serve the whole city.

The Health and Medical Development Advisory Committee, chaired by the Secretary for Food and Health and with members from different sectors of the community, advises the government on the formulation of policies and strategies for the long-term development of medical and health services.

Healthcare Reform

In response to the challenges of an ageing population, the government has embarked on a number of initiatives to enhance the long-term sustainability of the healthcare system:

- **Private insurance** – The bureau consulted the public from December 2014 to April 2015 on the introduction of a government-regulated private health insurance scheme. The Voluntary Health Insurance Scheme sets minimum requirements for individual indemnity hospital insurance plans, which aim to protect consumers better and enable more people to use private health services.
- **Manpower planning and professional development** – The bureau is conducting a strategic review to meet projected demand for manpower and foster professional development of healthcare professions.
- **Development of private services** – The bureau is preparing new legislation to revamp the regulatory regime for private healthcare facilities.

Primary Care Services

Primary care is the first step in the healthcare process. It covers a wide range of public services, including health promotion and disease prevention, general outpatient services and special health services for people in specific age groups who do not require immediate hospital attention.

Clinics

Primary care services are mainly provided by the private sector. The Hospital Authority operates 73 general outpatient clinics/community health centres that are targeted at serving the elderly,

low-income families and chronic disease patients. The body also runs family medicine specialist clinics as a key component of its primary care services. In 2015, some 1.57 million people used these services, with 6.28 million attendances recorded. On average, about 31 million outpatient visits are made to private Western medicine clinics each year.

The government has established 18 public Chinese medicine clinics to promote the development of 'evidence-based' Chinese medicine and provide training placements for graduates of local Chinese medicine bachelor's degree programmes under a tripartite collaboration model involving the Hospital Authority, non-governmental organisations and local universities. In 2015, these clinics served about 160,000 patients involving more than 1.1 million attendances. Private Chinese medicine clinics recorded about 7.5 million attendances each year.

Family Health

The Department of Health provides health promotion and disease prevention services through its 31 maternal and child health centres and three women's health centres for children up to five years of age and women aged 64 or below. The centres offer an Integrated Child Health and Development Programme for parents and caregivers to promote the holistic health and well-being of children. The programme's core components are parenting, immunisation, and health and developmental surveillance.

For women, these centres offer antenatal, postnatal, family planning and cervical screening services, as well as health education on areas including psycho-social health, personal relationships, physical health and healthy lifestyles. Some 29,600 expectant mothers and 57,300 newborn children attended the centres in 2015, representing about 49 per cent and 93 per cent of the total numbers of expectant mothers and newborn children respectively.

The Family Health Service under the department disseminates information on child care, parenting and health. The Family Planning Association of Hong Kong offers services and health information on sexual and reproductive health treatments and counselling. In 2015, more than 200,000 people used its services.

Student Health

Health screening and individual counselling are available to primary and secondary school students through the department's 12 student health service centres and three special assessment centres. In the 2014-15 school year, about 636,000 students joined these programmes. In addition, school health inspectors check schools' hygiene standards, while the department's Centre for Health Protection sends School Immunisation Teams to primary schools every year to administer free vaccinations for students.

Under the School Dental Care Service, the department's eight school dental clinics provided preventive dental services, including annual check-ups and basic care, to about 316,000 primary students (about 96 per cent of all Hong Kong primary students) in the 2014-15 school year. Students with intellectual and/or physical disabilities (such as cerebral palsy) studying in special schools can use these services until the age of 18.

Elderly Health

The department's 18 elderly health centres and 18 visiting health teams provide primary health care to the elderly, improve their ability to care for themselves, and encourage healthy living and their family's support. The centres assess, treat, educate and counsel people aged 65 and above on a membership basis. The visiting teams conduct health promotion activities for the elderly and provide training to improve carers' skills. In 2015, the centres recorded around 42,400 enrolments and 170,000 attendances for health assessment and medical consultation, while the visiting teams recorded 307,000 attendances at health promotion activities.

Community Health

Community healthcare services aim to reduce reliance on inpatient services and help patients recover in the community. In 2015, the Hospital Authority conducted 1.99 million home visits and outreach care services, including those for elderly and mental patients.

More than 80 per cent of those receiving the Hospital Authority's community nursing care services are elderly people. Community geriatric assessment teams visit residential care homes for the elderly regularly to provide medical and nursing care to residents who are unable to visit the specialist outpatient clinics. These teams also train carers at the homes to take care of their frail residents.

Dental Health

Eleven government dental clinics provide the public with emergency services in pain relief and tooth extraction, while seven public hospitals offer specialist oral healthcare services to patients with special oral healthcare needs. The department also monitors the level of fluoridation in water supplied to the public to reduce dental decay.

The department's Oral Health Education Unit carries out target-oriented educational activities to promote oral health, such as the Bright Smiles Mobile Classroom for primary students. Information on oral health is also provided through the unit's homepage. In addition, the department organises an annual Love Teeth Campaign to encourage good dental habits.

Government-subsidised outreach dental teams set up by NGOs provide free dental services including fillings, extractions and dentures each year for elders in residential care homes and similar facilities.

A four-year pilot project launched by the bureau in 2013 provides dental services for adult patients with intellectual disability who are recipients of Comprehensive Social Security Assistance (CSSA), the Disability Allowance or the Hospital Authority's medical fee waiver. Eligible patients get subsidised check-ups, treatment and oral health education at designated clinics, or other necessary services under intravenous sedation or general anaesthesia at designated hospitals.

The department also conducts Dandelion Oral Care Action, a special oral health promotion programme to educate children with mild to moderate intellectual disability in special schools to take care of their oral hygiene themselves.

Mental Health

The government adopts a holistic approach in promoting mental health through a service delivery model that covers prevention, early identification, timely intervention and treatment, and rehabilitation.

As a major medical service provider for people with mental disorders in Hong Kong, the Hospital Authority offers a spectrum of psychiatric services including inpatient facilities, day hospitals, specialist outpatient clinics and community outreach. In 2014-15, more than 217,000 people with mental health problems received treatment and support through these services.

Psychiatric inpatient care is essential to facilitate symptom control, behavioural management and early recovery for patients experiencing acute psychiatric crisis. In 2014-15, the Hospital Authority maintained 3,607 psychiatric beds, with a bed occupancy rate of around 70 per cent, to care for some 14,600 patients.

To meet day-care needs, the Hospital Authority provided about 889 psychiatric day hospital places in 2014-15.

In line with an international trend to focus more on community and ambulatory care in the treatment of mental illness, the Hospital Authority also operates cluster-based community psychiatric services. In 2014-15, about 280,000 community psychiatric outreach attendances and about 95,000 psychogeriatric outreach attendances were recorded. The Hospital Authority also extended a case management programme for patients with severe mental illness to cover the whole city in 2014-15, serving some 17,000 patients living in the community.

Other Special Services

Specialist facilities under the department include 20 methadone clinics, 19 tuberculosis and chest clinics, seven social hygiene clinics, four dermatology clinics, two integrated treatment centres, four clinical genetic clinics, six child assessment centres and two travel health centres. These clinics and centres recorded about 6.2 million attendances in 2015.

Healthcare Services Provided by Private and Non-governmental Organisations

The private care sector complements the public sector by providing a range of specialist and hospital services. There are doctors of Western medicine, Chinese medicine practitioners, dentists, nurses, chiropractors, physiotherapists, occupational therapists, pharmacists, optometrists and other healthcare professionals.

NGOs operate community clinics offering primary care services. Many also organise health promotion, educational and other healthcare-related activities. Some NGOs provide health assessment services for the elderly and medical check-ups for women.

Secondary, Tertiary and Specialised Healthcare Services

These services are available mainly in the Hospital Authority's hospitals and specialist clinics. In 2014-15, it spent about \$42.9 billion on specialist outpatient and inpatient services. At the end of 2015, there were 27,895 public hospital beds, comprising 21,587 general beds, 2,041 infirmary

beds, 3,607 beds for the mentally ill and 660 beds for the mentally handicapped. In addition, there were 4,014 beds in private hospitals, 5,498 in nursing homes and 880 in institutions run by the Correctional Services Department. There are 5.2² beds per 1,000 people. Spending on secondary, tertiary and specialised healthcare services in both the public and private sectors amounted to about \$55.5 billion in 2012-13, of which spending on public specialist outpatient and inpatient services accounted for 74 per cent.

In 2014-15, about \$9.6 billion was spent on secondary and tertiary ambulatory medical services provided by the Hospital Authority's specialist clinics. The clinics cover a wide range of specialties, including internal medicine, surgery, obstetrics and gynaecology, paediatrics, orthopaedics and traumatology, ear, nose and throat, ophthalmology, psychiatry, neurosurgery, oncology and cardio-thoracic surgery.

In 2015, the Hospital Authority's specialist outpatient clinics recorded more than 7.3 million attendances. Appointments for new patients are made on the basis of the severity of their clinical condition in order to ensure patients with acute conditions are given priority. Patients in stable condition are referred to primary care practitioners in the private sector or the Hospital Authority's general outpatient clinics for follow-up.

Allied Health Service

Allied health professionals working under the Hospital Authority include audiologists, clinical psychologists, dietitians, occupational therapists, optometrists, orthoptists, physiotherapists, podiatrists, prosthetists and orthotists, speech therapists and medical social workers. They provide rehabilitative and extended care to help patients receiving inpatient, outpatient, ambulatory and community care services to reintegrate into society. In 2015, the Hospital Authority's allied health outpatient departments recorded about 2.52 million attendances.

Inpatient Services

In 2014-15, \$33.3 billion was spent on inpatient services provided by public hospitals. A total of 1.66 million inpatients and day patients were discharged in 2015.

Accident and Emergency Services

Accident and emergency services are provided at 17 public hospitals, delivering a high standard of service for critically ill or injured people and victims of disasters. In 2014-15, \$2.5 billion was spent on these services. In 2015, 1.29 million people paid 2.23 million visits to the accident and emergency departments of public hospitals, an average of around 6,100 attendances per day.

Patients attending the accident and emergency departments of public hospitals are classified under five categories according to their clinical conditions: critical cases come under Category 1, emergency cases under Category 2, urgent cases under Category 3, semi-urgent cases under Category 4, and non-urgent cases under Category 5. The triage system ensures patients with more urgent needs receive prompt treatment. In 2015, all Category 1 patients received immediate treatment while 97 per cent of Category 2 patients were treated within 15 minutes.

² Consisting of all beds in the Hospital Authority's hospitals, private hospitals, nursing homes and correctional institutions.

Medical Charges and Waivers

Fees for public hospital and clinic services for the public are subsidised up to 97 per cent by the government, and are waived for CSSA recipients. Other needy groups, including low-income patients, the chronically ill, and elderly patients with financial difficulties, are assisted through a medical fee waiver mechanism.

Private Hospitals

The 11 private hospitals served 374,875 inpatients in 2014, representing 19 per cent of the city's total number of inpatients. Spending on private inpatient services amounted to \$14.6 billion in 2012-13, accounting for 34 per cent of overall expenditure on inpatient services in the public and private sectors.

Development and Infrastructure

Public Hospital Development Projects

A number of public hospital development projects are in progress in different parts of Hong Kong. In 2015, Yan Chai Hospital's new wellness centre came into operation and the redevelopment of Caritas Medical Centre was completed. Works began on the refurbishment of Hong Kong Buddhist Hospital and expansion of the Hong Kong Red Cross Blood Transfusion Service Headquarters. Other ongoing projects include the remaining works for the redevelopment of Yan Chai Hospital, the construction of Tin Shui Wai Hospital and Hong Kong Children's Hospital, the reprovisioning of Yaumatei Specialist Clinic at Queen Elizabeth Hospital, and demolition and substructure works for the expansion of United Christian Hospital. Preparatory works to redevelop Kwong Wah Hospital and Queen Mary Hospital are also under way.

Public-private Partnership Projects

The government takes part in a series of clinical public-private partnership projects through the Hospital Authority, including the Cataract Surgeries Programme, Patient Empowerment Programme, Haemodialysis Public-Private Partnership Programme and Pilot Project on Enhancing Radiological Investigation Services through Collaboration with the Private Sector.

The Hospital Authority's General Outpatient Clinic Public-Private Partnership Programme, launched in Kwun Tong, Wong Tai Sin and Tuen Mun in mid-2014, subsidises hypertension patients of stable condition (with or without hyperlipidemia) from its general outpatient clinics to receive treatment by private doctors. As at end-December 2015, 92 private doctors and 6,745 patients had taken part in the programme.

Sharing of Electronic Health Records

A Public-Private-Interface Electronic Patient Record Sharing Pilot Project, launched in 2006, aims to enhance continuity of care by enabling participating private healthcare professionals, with the patients' consent, to access the Hospital Authority's records. As at the end of 2015, about 480,000 patients, 3,557 private healthcare professionals, 11 private hospitals and 78 other private organisations or NGOs had taken part in the project.

Leveraging on its experience in the pilot project, the government committed to undertake a 10-year programme to develop a citywide Electronic Health Record Sharing System (eHRSS). This is a new IT infrastructure developed to enhance the quality and efficiency of healthcare service provided to healthcare recipients. The corresponding legislation, the Electronic Health Record Sharing System Ordinance (Cap 625), was passed by the Legislative Council in July 2015 and took effect in December 2015. The first stage of eHRSS development has been completed and the system is targeted to be launched in the first quarter of 2016.

Health Promotion

Healthy Lifestyle

The Department of Health's Central Health Education Unit formulates and implements health promotion strategies. It runs campaigns and programmes to provide the public with information and advice on health-related topics and to encourage healthy eating and regular physical activity.

In the 2014-15 school year, 590 pre-primary institutions participated in the StartSmart@school.hk campaign and about 470 primary schools, including special schools, joined the EatSmart@school.hk campaign. In 2015, about 700 restaurants took part in the EatSmart@restaurant.hk campaign, while 18 organisations involving about 3,300 staff took part in the Health@work.hk project.

In addition, to prevent communicable diseases, the unit provided the public with updated information and health advice on infectious diseases. It also produced materials in various languages to raise awareness among ethnic minorities of hygiene measures and the need to prevent communicable diseases.

A total of 317 secondary schools, about 75,000 students and 800 parents and teachers enrolled in the Adolescent Health Programme and received its services.

Aids Counselling and Education

The department's Red Ribbon Centre collaborates with community partners to enhance public awareness and prevention of human immunodeficiency virus and to promote caring and acceptance of HIV patients. In 2015, the centre organised 23 major activities and 64 special programmes, involving some 81,400 participants.

Information on Acquired Immune Deficiency Syndrome, sexually transmitted infections and multilingual Aids hotlines is available at the department's website.

Appointments for counselling and HIV antibody/rapid tests may be made on the hotline 2780 2211. In 2015, the hotline received about 26,000 calls and nurse counsellors received 18,500 calls for Aids counselling service. About 820,000 condoms were distributed to promote safer sex. There are also a Gay Men HIV Testing Hotline (2117 1069) and a website. In 2015, the Gay Men HIV Testing Hotline received 250 calls for counselling and HIV antibody/rapid testing.

Organ Donation and Transplant

The department promotes organ donation in various ways, including via a dedicated page on Facebook, in collaboration with the Hospital Authority, healthcare professional bodies and NGOs. As at the end of 2015, more than 188,000 people had registered with the Centralised Organ Donation Register to express their wish to donate their organs after death.

The number of patients waiting for kidney, liver, heart and double lung transplants stood at 1,941, 89, 36 and 16 respectively as at the end of 2015. During the year, there were 36 liver, 66 renal, 14 heart, 13 double-lung and 262 pieces of cornea donation from the deceased in public hospitals. There was no single-lung donation.

The Human Organ Transplant Ordinance regulates the transplant of human organs and import of human organs for transplant purposes, and prohibits commercial dealings in human organs intended for transplant. Approval from the statutory Human Organ Transplant Board is required for the transplant of human organs between living persons who are not genetically related or a couple whose marriage has subsisted for not more than three years. In 2015, the board received 21 applications for organ transplants between living non-related persons and Hong Kong imported 69 human organs for transplant purposes.

Under the ordinance, applications can be made to the department to exempt certain commercial products made from processed human tissue, enabling patients with genuine medical needs to benefit from the use of these products. As at the end of 2015, the department had received 39 applications for exemption and approved 33 products.

Smoking and Health

China is a state party to the Framework Convention on Tobacco Control of the World Health Organisation, making provisions of the convention applicable to Hong Kong. The city's tobacco control policy aims to discourage smoking, contain the proliferation of tobacco use and minimise the impact from passive smoking through a progressive and multi-pronged approach, comprising legislation, publicity, education, enforcement, smoking cessation and taxation.

Legislation and Enforcement

The Smoking (Public Health) Ordinance stipulates statutory no-smoking areas and regulates the advertisement, promotion, packaging and labelling of tobacco products. Smoking is banned in all indoor areas of workplaces and public places, including restaurants and bars, as well as some outdoor areas, including the open areas of schools, leisure grounds, bathing beaches and public transport facilities. Offenders are liable to a fine of \$1,500 under the Fixed Penalty (Smoking Offences) Ordinance. All advertisements and promotions for tobacco products are prohibited.

In 2015, the department's Tobacco Control Office conducted more than 29,300 inspections and issued 163 summonses and 7,693 fixed penalty notices for smoking offences. It distributes health education materials, including guidelines, posters, no-smoking signs and pamphlets, to venue managers of statutory no-smoking areas and to the public.

Taxation

The government increased tobacco duty rates by 11.7 per cent in February 2014 to curb cigarette consumption.

Publicity and Education

The Hong Kong Council on Smoking and Health, an independent statutory body, advises the government on smoking, passive smoking and health, and on publicising the hazards of smoking. The council conducts publicity, education and community involvement campaigns, which attracted 269,000 participants in 2015. It also operates a website and a hotline to receive enquiries and suggestions from the public on smoking and health.

Smoking Cessation and Prevention of Youth Smoking

The Tobacco Control Office provides advice on how to quit smoking, counselling services and pharmaceutical treatment through various channels, including a hotline (1833 183), clinics and an interactive online cessation centre. In 2015, more than 9,000 phone calls were made to the smoking cessation hotline. The office also broadcasts announcements on television and radio, conducts seminars and issues materials to increase public awareness of the harmful effects of smoking and second-hand cigarette smoke. It collaborates with a number of NGOs to run community-based smoking cessation programmes, including the use of Chinese medicine acupuncture, peer-led phone counselling, smoking cessation services at the workplace, smoking cessation programmes for ethnic minorities and new immigrants and school activities to promote a smoke-free culture.

The Hospital Authority provides smoking counselling and cessation services through its 16 full-time and 49 part-time Smoking Counselling and Cessation Centres. It also operates a phone hotline providing booking and enquiry services for smokers who wish to quit smoking.

Disease Prevention and Control

The department spent \$2.7 billion on disease prevention and control at its maternal and child health centres, elderly health centres and similar facilities in 2014-15.

Centre for Health Protection

The Centre for Health Protection collaborates with local and international counterparts to prevent and control diseases in Hong Kong. It works on three principles: real-time surveillance, rapid intervention and responsive risk communication. The centre keeps track of communicable diseases and issues surveillance reports on a regular basis, as well as reports on laboratory data.

A board of scientific advisers, comprising experts from different disciplines, and seven scientific committees meet periodically to assist the centre in formulating effective policies to improve the health protection system.

The centre maintains close liaison with District Councils and Healthy Cities projects at district level to disseminate information and guidelines on diseases, alert the public to health threats and facilitate rapid implementation of preventive measures. It also shares professional

knowledge and experience in combating diseases with other health authorities and agencies on the Mainland, in Macao and at the WHO.

Prevention and Control of Infectious Diseases

Under the Prevention and Control of Disease Ordinance, there are 49 statutory notifiable infectious diseases in Hong Kong. In 2015, about 17,000 cases were reported, of which about 8,800 and 4,469 were diagnosed as chickenpox and tuberculosis respectively.

Up to December 2015, Hong Kong had confirmed 13 human cases of avian influenza A(H7N9) since the city reported its first human case in December 2013. All 13 cases were considered upon investigation to be sporadic imported cases. A Preparedness Plan for Influenza Pandemic defines the city's respective response levels, sets out the corresponding command structures and outlines the measures to be taken in relation to the development of a pandemic.

The centre continually reviews and updates its strategies for coping with major outbreaks of infectious diseases, including the Ebola virus disease and Middle East Respiratory Syndrome, ensuring both the government and the community are prepared to deal with them.

Vaccination Programmes

Children are protected against communicable diseases such as tuberculosis, hepatitis B, poliomyelitis, diphtheria, tetanus, pertussis, measles, mumps, rubella, chickenpox and pneumococcal disease under a Childhood Immunisation Programme.

The Government Vaccination Programme, which includes a Residential Care Home Vaccination Programme, provides eligible people in target groups with free seasonal flu and pneumococcal vaccinations each year at public hospitals and clinics, and at residential care homes for the elderly and people with disabilities. From October 2015, the programmes extended free seasonal flu vaccination to all elders aged 65 or above and eligible people with intellectual disability.

The predominating virus in the 2014-15 season was found to be an antigenically drifted H3N2 strain. In view of this, the government implemented a 2015 Southern Hemisphere Seasonal Influenza Vaccination (SH SIV) Programme from May to August 2015, providing free SH SIV vaccination to all residents of residential care homes of the elderly.

Under Vaccination Subsidy Schemes, children aged between six months and less than six years and elderly people aged 65 or above get subsidised seasonal flu vaccinations at private clinics. This benefit was extended to people with intellectual disability from October 2015. A subsidised pneumococcal vaccination at private clinics is also available for elderly people who have not previously received one. More than 1,600 private doctors take part in the schemes.

Non-communicable Diseases

The biggest killers in Hong Kong are cancer, heart and cerebrovascular diseases, which together accounted for about 51 per cent of all registered deaths in 2015. Elderly people are the major victims of these chronic non-communicable diseases.

A Cancer Co-ordinating Committee chaired by the Secretary for Food and Health makes recommendations for the prevention and control of cancer, which claimed more than 14,200 lives locally in 2015. About 106,000 women underwent cervical screening under the citywide Cervical Screening Programme, which the Department of Health launched in 2004 to encourage women aged 25 to 64 to undergo regular cervical cancer screening.

Regulatory Activities

Healthcare Professionals

As at end-2015, 13,726 doctors, 2,382 dentists, 9,787 listed and registered Chinese medicine practitioners, 50,461 registered and enrolled nurses, 4,462 midwives, 2,504 pharmacists, 202 chiropractors, 2,762 physiotherapists, 1,783 occupational therapists, 3,297 medical laboratory technologists, 2,165 optometrists, 2,121 radiographers and 402 dental hygienists were registered in Hong Kong.

Western Medicine

Western medicine in Hong Kong is regulated under the Pharmacy and Poisons Ordinance. Acting on the authority of the Pharmacy and Poisons Board, the department evaluates and approves applications for the registration of pharmaceutical products, issues licences to drug manufacturers, wholesalers and retailers, and takes action against the illegal sale of controlled drugs. The department also enforces regulatory controls on poisons, antibiotics and dangerous drugs for medicinal use.

In 2015, the board approved 3,802 applications for registration of pharmaceutical products. As at the year end, 19,486 pharmaceutical products were registered in Hong Kong.

In 2009, a government committee's report on the regulation of pharmaceutical products put forward 75 recommendations. Most of these recommendations have been implemented, including upgrading the GMP (Good Manufacturing Practice) licensing standards of local drug manufacturers to PIC/S (Pharmaceutical Inspection Co-operation Scheme) standards; stepping up inspections of local drug traders; providing additional information on sales restrictions that apply to each registered pharmaceutical product, such as prescription-only medicine; providing updated information on the safe use of drugs on the website of the department's Drug Office; introducing a Code of Practice for drug traders and enhancing the licensing control of wholesalers.

Chinese Medicine

Chinese medicine is regulated under the Chinese Medicine Ordinance, which requires any person engaged in the retail or wholesale of Chinese herbal medicine or the manufacture or wholesale of proprietary Chinese medicine to obtain a licence. Licensed manufacturers may apply for a Certificate for Manufacturer, certifying that they follow the requirements of GMP in the manufacture and quality control of proprietary Chinese medicine. The Chinese Medicine Council of Hong Kong is the statutory body responsible for devising and implementing regulatory measures for Chinese medicine. All proprietary Chinese medicine must be registered before they can be sold, imported or possessed in Hong Kong. As a transitional arrangement, proprietary Chinese medicine manufactured or offered for sale on 1 March 1999 is eligible for a

transitional registration status upon submission of acceptable basic test reports. By the end of 2015, there were 6,895 licensed Chinese medicine traders, including 14 holding the Certificate for Manufacturer; 7,883 proprietary Chinese medicines had obtained transitional registration status; and 607 had been issued with a 'Certificate of registration of proprietary Chinese medicine'.

Registered products must be affixed with the registration number and their labels and package inserts should comply with statutory requirements.

Under the ordinance, an application can be made to the council's Chinese Medicines Board for a certificate for the purpose of conducting a clinical trial or medicinal test of any proprietary Chinese medicine.

The department has released reference standards for 236 commonly used Chinese medicines since it launched the Hong Kong Chinese Materia Medica (HKCMM) Standards Project in 2002 that sought to ensure the safety and quality of common Chinese herbal medicine. The project is supported by local universities and overseas and Mainland experts.

The department's Chinese Medicine Division, which was designated by the WHO as a WHO Collaborating Centre for Traditional Medicine in April 2012, focuses on helping the WHO to formulate policies and strategies and setting regulatory standards for traditional medicine.

Integrated Chinese-Western Medicine Pilot Programme

Following directions spelled out in the 2013 Policy Address, the Hospital Authority has launched an Integrated Chinese-Western Medicine Pilot Programme in two phases since September 2014 with the aims of using such medicine to maximise the outcome of patient care, gaining experience in the development of Chinese medicine inpatient services, and facilitating postgraduate Chinese medicine development and training. With the launch of the second phase in December 2015, the pilot programme is now operating in seven public hospitals, namely, Tung Wah Hospital, Pamela Youde Nethersole Eastern Hospital, Tuen Mun Hospital, Prince of Wales Hospital, Shatin Hospital, Kwong Wah Hospital and Princess Margaret Hospital.

Human Reproductive Technology

Activities using human reproductive technology are regulated to ensure the procedures are conducted in a safe and informed manner, and to safeguard the welfare of children born through the technology. The Human Reproductive Technology Ordinance confines the application of human reproductive technology procedures to infertile married couples, regulates surrogacy arrangements and the use of embryos and gametes for research and other purposes, and prohibits commercial dealings in embryos or gametes and the use of donated gametes in surrogacy arrangements. Reproductive technology service providers and embryo researchers who wish to conduct relevant activities under the ordinance must apply for a licence issued by the Council on Human Reproductive Technology set up under the legislation. As at the end of 2015, the council had issued 53 valid licences, including 18 treatment licences, 34 artificial insemination-by-husband licences and one research licence.

In accordance with international practice and in consultation with the medical profession, social workers, the legal profession, academia and ethical groups, the council has released a Code of Practice on Reproductive Technology and Embryo Research, which sets out the requirements, standards and good practices for embryo researchers and reproductive technology practitioners.

Port Health

To prevent and control the cross-boundary spread of infectious and other serious diseases into and out of Hong Kong, the department's Port Health Office enforces quarantine measures according to the International Health Regulations and the Prevention and Control of Disease Ordinance. Arriving travellers at boundary control points are required to undergo temperature screening as a precautionary measure.

The Port Health Office also operates two Travel Health Centres to provide outbound travellers with disease preventive services, including medical consultation, vaccination, prophylactic medication and advice on travel-related risks. The office has a close working relationship with the travel industry and provides travel health information on the department's website.

Radiation Health

Set up under the Radiation Ordinance, the independent Radiation Board controls the import, export, possession and use of radioactive substances and irradiating apparatus. The board's executive arm is the department's Radiation Health Unit, which carries out licensing controls and conducts inspections of radioactive substances or irradiating apparatus. It also provides health surveillance and radiation monitoring for radiation workers, maintains metrology standards for environmental and occupational protection level radiation dosimetry measurements, and provides the related standard calibration services. The unit advises the government on the protection of public health in nuclear incidents and management of radioactive substances and wastes.

Training of Medical Personnel

Doctors

Degree courses in medicine and surgery are offered at the University of Hong Kong (HKU) and the Chinese University of Hong Kong (CUHK), which admitted a total of 420 medical students to their six-year bachelor degree programmes in 2015. In 2015, 40 medical graduates with professional qualifications obtained outside Hong Kong passed a licensing examination conducted by the Medical Council of Hong Kong.

The Hong Kong Academy of Medicine is an independent statutory body which approves, assesses and accredits specialist training within the medical and dental professions. Its 15 colleges conduct training and examinations to award specialist qualifications to qualifying candidates.

The Hospital Authority also trains specialist doctors. Each year, most of the medical graduates of the two universities are offered Hospital Authority appointments for specialist training while

working in the organisation. In 2015, about 340 doctors were recruited for specialist training and some 300 doctors obtained specialist qualifications at the end of their training.

Dentists

HKU offers degree courses in dentistry, admitting 54 students to its six-year bachelor degree programme in 2015. Six candidates who completed their dental training outside Hong Kong passed a licensing examination conducted by the Dental Council of Hong Kong.

Chinese Medicine Practitioners

CUHK, HKU and Hong Kong Baptist University offer full-time undergraduate degree courses in Chinese medicine. In 2015, 71 full-time local bachelor's degree graduates who passed the licensing examination were registered as Chinese medicine practitioners.

The 18 public Chinese medicine clinics are required to employ these fresh graduates as junior Chinese medicine practitioners and to provide them with three years of training. As at the end of 2015, these clinics provided 72 junior places for their first year of training and 144 trainee places for their second and third years of training.

Allied Health Professionals

Hong Kong Polytechnic University (PolyU) offers degree programmes for allied health professionals in physiotherapy, radiography, occupational therapy, medical laboratory science and optometry. In 2015, 109, 93, 91, 43 and 36 students enrolled in these programmes respectively.

The Hospital Authority's Institute of Advanced Allied Health Studies devises structured long-term training plans for allied health staff members and runs courses on specialist and multidisciplinary training, clinical and personal development. These include three years of in-service training for new recruits of allied health grades. In 2015, the institute offered 60 training courses and a number of overseas scholarships.

Nurses

HKU, CUHK, PolyU, the Open University of Hong Kong, Tung Wah College and the Caritas Institute of Higher Education provide pre-registration nursing training. They recruited 1,638 students into their five-year full-time nursing degree programmes in 2015. PolyU and CUHK also enrolled another 134 nursing students into their three-year Master's Degree of Nursing programmes.

Hong Kong Baptist Hospital, Hong Kong Sanatorium and Hospital, St Teresa's Hospital, Union Hospital and HKU Space Community College provide pre-enrolment nursing training. They recruited 319 pupil nurses into their two-year Higher Diploma in Enrolled Nurse (General) training programmes in 2015. Open University enrolled 155 and 86 pupils into their two-year Higher Diploma in Nursing programme and Higher Diploma in Mental Health Nursing programme respectively. During 2015, 40 nurses with professional nursing qualifications obtained outside Hong Kong passed the Nursing Council of Hong Kong's licensing examination and were awarded practising certificates for registered nurses or enrolled nurses.

The Hospital Authority's three-year higher diploma programme provides basic registered nurse training and enrolled 300 students in 2015. Another 100 pupil nurses were admitted to its two-year enrolled nurse basic training programme.

The Hospital Authority's Institute of Advanced Nursing Studies seeks to strengthen specialty care training for nurses and encourage them to improve professional standards through continuous learning. The institute provides simulation training for new graduates to strengthen their skills in clinical care and medical emergencies. Experienced nurses can apply for scholarships to attend overseas training for international exposure.

Laboratory Services

Government Laboratory

The Government Laboratory offers a comprehensive range of analytical, investigatory and advisory services to support the government in upholding its commitments to the protection of public health. In the financial year 2014-15, it spent \$197 million on providing the required services.

In 2015, the laboratory carried out 196,339 tests on a wide range of foods to ensure they were fit for consumption and complied with the legal requirements. It also conducted 14,317 tests arising from investigations into food complaints. The laboratory outsources some routine testing to private laboratories to better utilise its resources for developing new testing methods and coping with a broadened scope of testing services, and to develop the capacity of the private laboratory sector.

In 2015, the laboratory performed more than 59,800 tests on pharmaceutical products and over 82,900 tests on Chinese medicine to ensure they met recognised quality and safety standards and to verify proprietary Chinese medicines were free from western drugs adulteration or harmful ingredients. The laboratory also supported investigations into the use of undeclared western drugs in preparations and incidents of intoxication suspected to have been caused by misused or contaminated Chinese herbal medicine. Under the Chinese Medicine Ordinance (Cap 549), proprietary Chinese medicine must be registered before it can be imported, manufactured and sold in Hong Kong. The laboratory also provides analytical support to the Department of Health in certifying the chemical makers of unregistered proprietary Chinese medicine, and helps the department develop the Hong Kong Chinese Materia Medica Standards. As well, it conducts year-round surveillance of tar and nicotine yields in cigarettes; in 2015, more than 12,000 checks on data declared by tobacco traders were carried out and the results were released to the public.

Public Health Laboratory Services

The department's Public Health Laboratory Services Branch conducts laboratory tests for clinical and surveillance specimens and provides clinical diagnostic and public health laboratory services to the public and private sectors for patient care and for other public health purposes.

The branch's Public Health Laboratory Centre is designated by the WHO as a National Influenza Centre, a National Poliovirus Laboratory, a National Measles Laboratory of the Hong Kong

Special Administrative Region, a Supranational TB Reference Laboratory, a Regional Reference Laboratory for measles in the Western Pacific Region, a Global Influenza A(H5) Reference Laboratory and a Sars Reference Laboratory.

Auxiliary Medical Service

The Auxiliary Medical Service is a government department under the Security Bureau, with 99 civil servants and about 6,000 adult volunteers and cadets. Its main role is to reinforce regular medical, health and ambulance services during emergencies and to provide backup in normal circumstances. The volunteers come from all walks of life and include doctors, nurses, pharmacists and paramedics. All are qualified Disaster Medical Assistants. The cadets, aged 12 to 17, receive training in discipline and medical skills, helping them develop self-discipline and a sense of responsibility.

The medical service deploys First Aid Bicycle Teams along designated cycling tracks in the New Territories to help meet increased demand for help along these tracks during weekends and public holidays. It also runs programmes on first aid at schools and gives talks to the public on heart disease, cardiopulmonary resuscitation, drug abuse and other health-related subjects.

Websites

Aids Hotline Website: www.27802211.com

Auxiliary Medical Service: www.ams.gov.hk

Centre for Health Protection: www.chp.gov.hk

Department of Health: www.dh.gov.hk

eHealth Record Office: www.eHealth.gov.hk

Food and Health Bureau: www.fhb.gov.hk

Gay Men HIV Testing Hotline: www.21171069.com

Health and Medical Development Advisory Committee: www.fhb.gov.hk/hmdac/

Healthcare Reform: www.myhealthmychoice.gov.hk

Hong Kong Council on Smoking and Health: www.smokefree.hk

Hospital Authority: www.ha.org.hk

Oral Health Education Unit: www.toothclub.gov.hk

Organ Donation Website under the department: www.organdonation.gov.hk

Red Ribbon Centre: www.rrc.gov.hk

Travel Health Service of the department: www.travelhealth.gov.hk

Virtual Aids Office of the department: www.info.gov.hk/aids/