

Chapter 9

Health

Hong Kong's public and private medical sectors provide comprehensive 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.

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 public health authority and executes policies and statutory functions. It safeguards the community's health through promotional, preventive, curative and rehabilitative services.

The Hospital Authority provides public hospital and related services. It offers medical treatment and rehabilitation services through hospitals, specialist clinics, general outpatient clinics and outreach services.

Figures at a Glance

Infant mortality rate	2020	2.0 per 1,000 registered live births	
Maternal mortality ratio	2020	0 per 100,000 registered live births	
Life expectancy at birth	2021	83.0* (Male)	87.7* (Female)
	2069 (<i>projected</i>)	88.4 (Male)	93.9 (Female)

*provisional figures

Hong Kong has an excellent healthcare system supported by a highly professional team of workers. The infant mortality rate in 2020 was among the lowest in the world. Male and female life expectancy at birth was among the world's highest in 2021.

Hong Kong's Domestic Health Accounts¹ show total health expenditure increased from 3.6 per cent to 6.8 per cent of Gross Domestic Product from 1989-90 to 2019-20. Over the same period, public health spending (\$101.5 billion in 2019-20, or 3.6 per cent of GDP) rose from 40 per cent to 54 per cent of total health expenditure. The government's recurrent funding for health has risen by about 63 per cent over the past five years, from \$58.7 billion in 2016 to \$95.9 billion in 2021. Year on year, the recurrent funding for health grew more than 10 per cent from \$87.1 billion in 2020. It accounted for 19 per cent of the government's recurrent expenditure in 2021.

Healthcare Reform

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

- **Primary healthcare reform** – The government aims to establish a primary healthcare system which will serve as a gatekeeper to support secondary and tertiary healthcare and relieve the overloaded public services. The Primary Healthcare Blueprint – Engagement Version will be released under the current term of government, which will focus on the following:
 - (i) establishing and restructuring a district-based, prevention-oriented primary healthcare system;
 - (ii) utilising private healthcare services and improving financing of primary healthcare services;
 - (iii) governance framework of primary healthcare services;
 - (iv) manpower and training of primary healthcare personnel; and
 - (v) enhancing health surveillance and sharing of health records.
- **Manpower planning and professional development** – Following the recommendations in the *Report of the Strategic Review on Healthcare Manpower Planning and Professional Development*, the government plans to meet long-term manpower demand and foster professional development by increasing the number of local subsidised healthcare training places and attracting more qualified non-locally trained healthcare professionals. The Medical Registration (Amendment) Ordinance 2021 has widened the pathways by which qualified non-local doctors may practise in Hong Kong.
- **Regulation of private healthcare facilities** – The Private Healthcare Facilities Ordinance provides a regulatory regime for private healthcare facilities while protecting patient safety and rights. The government is implementing the regime in phases, based on the types of private healthcare facilities and their risk levels, and keeps in view the services and facilities to be subject to regulation for consumer protection.

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 Cooperation and Development to keep track of Hong Kong's health spending and to allow for international comparison.

Primary Health Care

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

General outpatient and allied services are provided mainly by the private sector and non-governmental organisations (NGOs). In 2020-21, private Western clinics handled more than 18 million outpatient visits. NGOs operate community clinics, and many also organise health promotions and educational activities. Some NGOs provide health assessments for the elderly and medical check-ups for women.

The public sector provides primary health care mainly through the Department of Health and the Hospital Authority. The authority operates 73 general outpatient clinics, including community health centres, used mainly by the elderly, low-income families and chronic disease patients. In 2021, some 1.71 million people used these services, with 6.28 million attendances recorded.

District Health Centres

To enhance district-based primary health care, the bureau aims to set up district health centres in all 18 districts. Each centre will be operated by an NGO with government funding to promote medical-social collaboration, public-private partnership and district-based services. It will focus on primary, secondary and tertiary prevention, including health promotion, health assessment, screening and managing chronic diseases, and community rehabilitation.

The first centre was set up in Kwai Tsing in 2019 and the second opened in Sham Shui Po in June 2021, with further centres in Tuen Mun, Wong Tai Sin, Southern, Yuen Long and Tsuen Wan expected in 2022. Smaller interim centres have been established in the other 11 districts since September 2021.

Preventive Care

The department provides health promotion and disease prevention services to the community particularly for infants, children, women and the elderly through the following services.

Family Health

There are 31 maternal and child health centres and three women's health centres that provide immunisation, parenting, health and developmental surveillance, and breastfeeding support for children from birth to five years of age and women aged 64 or below. Antenatal, postnatal, family planning and cervical screening services as well as health education are also offered for women. Some 16,000 expectant mothers and 35,000 newborn babies attended such centres in 2021.

Student Health

There are 13 student health service centres and four special assessment centres that provide health screening and individual counselling to primary and secondary students. In the

2020-21 school year, about 385,000 students joined these programmes. Eight school dental clinics provide preventive dental services, including annual check-ups and basic care. In 2020-21, about 336,700 or 94 per cent of all primary students participated in such services. At special schools, students with disabilities can use these services until age 18.

Elderly Health

Eighteen elderly health centres provide primary health care to people aged 65 and above, including assessment, treatment, education and counselling, and 18 visiting health teams conduct health promotion activities for the elderly and provide training to carers. In 2021, there were about 38,000 enrolments and 133,000 attendances for health assessment and medical consultation, as well as some 280,000 attendances at promotional activities organised by the Elderly Health Service.

The Elderly Health Care Voucher Scheme subsidises the elderly to receive private primary care in the community that best suits their needs. The annual voucher amount for each eligible person is \$2,000, with a maximum accumulation limit of \$8,000. By end-December, over 1.42 million elderly residents had used the vouchers, accounting for about 99 per cent of the eligible population. The government keeps the scope and utilisation of the scheme under review to strengthen its effectiveness and enhance primary, especially preventive, care for the elderly.

Vaccination

The Hong Kong Childhood Immunisation Programme protects children against vaccine-preventable diseases such as tuberculosis, hepatitis B, poliomyelitis, tetanus, pertussis, measles, diphtheria, mumps, rubella, chickenpox, pneumococcal disease and human papillomavirus (for school girls of suitable grades). Pertussis vaccinations are provided for women between 26 and 34 weeks of pregnancy, as part of routine antenatal care at maternal and child health centres.

The Government Vaccination Programme and the Vaccination Subsidy Scheme provide free or subsidised seasonal influenza vaccinations respectively from October each year to eligible people, including children and those aged 50 or above. The vaccinations are provided through kindergartens and child care centres, primary schools, public hospitals and clinics, residential care homes for the elderly and for persons with disabilities, residential child care centres, and designated institutions serving people with intellectual disabilities.

Cancer Screening Programmes

The government provides screening for cervical cancer, colorectal cancer and breast cancer. The Cervical Screening Programme encourages women aged between 25 and 64 who have ever had sex to undergo regular screening while the Colorectal Cancer Screening Programme subsidises asymptomatic residents aged between 50 and 75 to undergo screening. From 6 September, the Breast Cancer Screening Pilot Programme has provided screening services for eligible women, aiming to detect breast cancer before symptoms appear so that early treatment can be carried out.

Community Outreach Health Care

Community outreach health care aims to reduce reliance on inpatient services and help patients recover in the community. In 2021, the Hospital Authority conducted 2.01 million home visits and outreach care services for, among others, the elderly and people with mental illness. Around 85 per cent of those receiving community nursing services are elderly. Community geriatric assessment teams visit residential care homes for the elderly regularly to provide medical and nursing care to frail residents who are unable to attend specialist outpatient clinics. These teams also train carers at the homes to care for their residents. The Patient Support Call Centre provides support to high-risk elderly patients discharged from public hospitals, offering advice on disease management and care support, and arranging referrals to appropriate services for patients in need.

Oral Health

The government's policy on dental care seeks to improve oral health and prevent dental diseases by raising public awareness of oral health and encouraging improved habits through promotion and education. Educational activities include the Brighter Smiles for the New Generation for pre-school children and the Bright Smiles Mobile Classroom for primary students, while the annual Love Teeth Campaign encourages good dental habits. Eleven government dental clinics provide emergency services in pain relief and tooth extraction, while seven public hospitals offer specialist oral health care services. The government also monitors the level of fluoridation in public drinking water to reduce dental decay.

Under the Outreach Dental Care Programme for the Elderly, teams set up by NGOs receive government subsidies and provide free on-site oral check-ups for elderly people and oral care training to caregivers in residential care homes, day care centres and similar facilities. Free dental treatment will be provided on-site or at a dental clinic if necessary. The Healthy Teeth Collaboration programme provides free oral check-ups, dental treatment and oral health education for adults with intellectual disabilities aged 18 or above through NGO dental clinics. The Special Oral Care Service provides dental service for pre-school children under six years old with intellectual disabilities at the Hong Kong Children's Hospital, and provides on-site dental check-ups and oral health education for eligible children at special child care centres.

Mental Health

The government adopts an integrated approach in promoting mental health, encompassing prevention, early identification, timely intervention and rehabilitation. Cross-sectoral and multidisciplinary support and care services are available through collaboration among government bodies and other relevant organisations including the Food and Health Bureau, Labour and Welfare Bureau, Education Bureau, Hospital Authority, Social Welfare Department and Department of Health.

The Hospital Authority is a major medical service provider for people with mental disorders. Its psychiatric services include inpatient facilities, day hospitals, specialist outpatient clinics and community outreach. In 2020-21, about 275,800 people received treatment and support through these services. In 2021-22, the authority has earmarked additional funding of around \$156 million to address the escalating demand for psychiatric services.

The Advisory Committee on Mental Health advises the government on mental health policies and follows up on recommendations in the *Mental Health Review Report*. In March, the committee initiated a pilot scheme to provide timely assessment, intervention and support to children and adolescents with mental health needs through medical-social collaboration.

In September, the committee began the second phase of the mental health promotion and public education initiative ‘Shall We Talk’. Over 855 organisations signed the Mental Health Workplace Charter that aims to promote a mental health-friendly workplace, benefiting more than 510,000 employees. To address the impact of the COVID-19 epidemic on public mental health, the government earmarked \$300 million for the committee to launch the Mental Health Initiatives Funding Scheme.

Smoking and Health

The World Health Organisation (WHO) Framework Convention on Tobacco Control is applicable to Hong Kong as a part of China. The city’s tobacco control policy aims to discourage smoking, contain the proliferation of tobacco use and minimise the impact from passive smoking through legislation, publicity, education, enforcement, smoking cessation and taxation.

The Smoking (Public Health) Ordinance stipulates statutory no-smoking areas, regulates the packaging and labelling of tobacco products, and prohibits advertising and promoting such products. Smoking is banned in all indoor areas of workplaces and public places, as well as some outdoor areas, such as the open areas of schools and healthcare facilities, parks, bathing beaches and public transport facilities. In 2021, the Tobacco and Alcohol Control Office conducted over 41,170 inspections and issued 40 summonses and 7,703 fixed penalty notices for smoking offences.

The emergence of alternative smoking products, including e-cigarettes, heated tobacco products and herbal cigarettes, poses new health risks and challenges. The Smoking (Public Health) (Amendment) Ordinance 2021, banning the import, manufacture, sale, distribution and advertising of alternative smoking products, will come into effect on 30 April 2022.

The Hong Kong Council on Smoking and Health, an independent statutory body, advises the government on smoking, passive smoking and health matters, and publicises the hazards of smoking. The council also conducts publicity, education and community involvement campaigns, and receives enquiries and suggestions from the public on smoking and health matters.

AIDS Counselling and Education

The Department of Health’s Red Ribbon Centre works with community partners to enhance awareness and prevention of human immunodeficiency virus (HIV) and to promote the care and acceptance of HIV patients. In 2021, the centre organised 44 activities for 54,400 participants. Information on Acquired Immune Deficiency Syndrome (AIDS) and sexually transmitted infections is available on the department’s website and a multilingual AIDS hotline. Appointments for counselling and HIV antibody tests may be made via the hotline or the

website. In 2021, counsellors handled 13,900 calls for AIDS counselling. There are also a Gay Men HIV Information website and a Gay Men HIV Testing Hotline, which received 155 calls in 2021 for counselling and HIV antibody tests.

Secondary, Tertiary and Specialised Health Care

These services are available mainly in the Hospital Authority's hospitals and specialist outpatient clinics. As at end-2021, the city had 30,105 public hospital beds, comprising 23,774 general beds, 1,981 infirmary beds, 3,675 beds for the mentally ill and 675 for the mentally disabled. There were also 5,050 private hospital beds, comprising 4,682 inpatient beds and 368 day beds, 6,465 beds in nursing homes, and 874 in institutions run by the Correctional Services Department. There were 5.6² beds per 1,000 population. Public hospitals spent \$52.8 billion on inpatient services in 2020-21 and discharged 1.81 million inpatients and day inpatients in 2021.

The authority's specialist outpatient clinics arrange appointments for new patients based on the urgency of their clinical conditions, to ensure those with acute conditions receive priority. Patients in stable condition are referred to family medicine and general outpatient clinics, or to primary care practitioners in the private sector for follow-up. In 2021, the specialist outpatient clinics recorded 8.19 million attendances.

In 2019-20, spending on both public and private inpatient and specialist outpatient services totalled about \$98.6 billion, of which 71 per cent was spent on the public sector. In 2020-21, the authority's specialist clinics spent about \$14.9 billion on providing medical services.

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 2021, the authority's allied health outpatient departments recorded 3.08 million attendances.

Accident and Emergency Services

Eighteen public hospitals provide accident and emergency services, delivering a high standard of service for critically ill or injured people and victims of disasters.

Patients 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 2021, all Category 1 patients received immediate treatment and over 95 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.

Accident and emergency services spent some \$4.3 billion in 2020-21 and handled 1.87 million visits by 1.14 million people in 2021, an average of about 5,100 attendances per day.

Medical Charges and Waivers

Fees for public hospital and clinic services are government-subsidised at a rate of 97.3 per cent³. Under a medical fee waiver mechanism, the Hospital Authority grants waivers to needy groups including Comprehensive Social Security Assistance recipients, low-income patients, Higher Old Age Living Allowance recipients aged 75 or above, the chronically ill and elderly patients with financial difficulties.

Private Hospitals

Private hospitals complement the public sector by providing a range of specialist and hospital services. There are 13 private hospitals, including one newly-commissioned in 2021, providing 5,050 hospital beds as at end-December. In 2020, the private hospitals served 276,723 inpatients, representing 15 per cent of the city's total. Spending on private inpatient services amounted to \$28.3 billion in 2019-20, accounting for 37 per cent of overall expenditure on public and private inpatient services.

Public-private Partnership Programmes

The government takes part in clinical public-private partnership programmes through the Hospital Authority. Services include cataract surgery, haemodialysis, radiological investigation, colon assessment, glaucoma treatment, trauma operation and breast cancer surgery.

The authority's General Outpatient Clinic Public-Private Partnership Programme subsidises clinically stable patients with hypertension and/or diabetes mellitus under the care of its general outpatient clinics to opt for primary care from the private sector. As at end-2021, 604 participating service providers and 41,060 patients were taking part in the programme. A co-care service model, developed in 2021, enables clinically stable patients under the authority's specialist outpatient clinics to receive healthcare from the private sector.

Voluntary Health Insurance Scheme

The Voluntary Health Insurance Scheme aims to regulate the quality of individual indemnity hospital insurance products and improve market transparency, providing consumers with greater confidence in health insurance and private healthcare services, thereby alleviating pressure on the public healthcare system. As of end-2021, the number of scheme policies reached 980,000.

Genomic Medicine

The Hong Kong Genome Institute was set up in 2020 to implement the Hong Kong Genome Project, a project to sequence 40,000 to 50,000 genomes. The pilot phase began in July 2021 focusing on patients with undiagnosed disorders and hereditary cancers, and their family members. The sequencing results may help the diagnosis or clinical management of participants, and the resulting genomics database will facilitate relevant scientific research.

³ Percentage is calculated based on 2019-20 information.

Organ Donation and Transplant

The Department of Health, working with the Hospital Authority, healthcare professional bodies and NGOs, promotes organ donation on different fronts. The promotional work is coordinated by the Committee on Promotion of Organ Donation. By end-2021, the Centralised Organ Donation Register recorded more than 340,000 registrations. The number of patients waiting for kidney, liver, heart and lung transplants stood at 2,360, 69, 78 and 19 respectively. During the year, there were 57 kidney, 33 liver, eight heart, 13 double-lung and 306 cornea donations from the deceased in public hospitals.

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 2021, the board received eight applications for organ transplants between living non-related persons and Hong Kong imported 53 human organs for transplant purposes.

The first paired kidney donation operation was successfully performed by the Hospital Authority in August and was a breakthrough in kidney transplantation in Hong Kong. The authority performs organ matching regularly on renal patients and their relatives who have joined the Paired Kidney Donation Pilot Programme.

Other Special Services

Specialist facilities under the department include 19 methadone clinics, 17 chest clinics, eight social hygiene clinics, four dermatological clinics, one integrated treatment centre, four centres and clinics providing services related to clinical genetics, seven child assessment centres and two travel health centres. These facilities recorded around 2.1 million attendances in 2021.

End-of-life Care

The public consultation report on legislative proposals on advance directives and dying in place was published in July. Relevant law drafting work is under way.

Chinese Medicine

Flagship Infrastructure

The government is constructing the first Chinese medicine hospital in Hong Kong, promoting service development, education and training, innovation and research. In June, the government announced that Hong Kong Baptist University would be the contractor for the hospital's operation. The hospital is expected to begin services, in phases, from mid-2025.

The Government Chinese Medicines Testing Institute specialises in testing and scientific research of Chinese medicines aiming to set internationally recognised standards. The temporary institute began operation in 2017 and publishes research results on the Chinese Medicine Regulatory Office website. The construction of the permanent institute started in June and is expected to be commissioned in 2025.

Services

At the district level, 18 Chinese Medicine Clinics cum Training and Research Centres promote the development of Chinese medicine through services, training and research, under a collaboration model involving the Hospital Authority, NGOs and local universities. The government provides an annual quota of around 620,000 subsidised Chinese medicine outpatient attendances, covering general consultation, acupuncture and bone setting/*tui na* services. There were about 1.28 million attendances in 2021.

The Hospital Authority implements the Integrated Chinese-Western Medicine Programme at designated public hospitals to gain experience in providing Chinese medicine inpatient services in stroke care, musculoskeletal pain management and cancer palliative care. The number of participating hospitals increased to eight in April, covering all seven of the authority's hospital clusters.

Private Chinese medicine clinics record about 9 million attendances each year.

Development Initiatives

The \$500 million Chinese Medicine Development Fund provides subsidies which benefit different segments of the sector, including training in Chinese medicine, enhancing manufacturing practices for proprietary Chinese medicines, improving clinic facilities and supporting scientific research and promotional activities. In 2021, the Food and Health Bureau launched a review on the overall implementation of the fund.

In August, streamlined approval procedures allowing Hong Kong-registered proprietary Chinese medicines for external use to be registered and sold in the Guangdong-Hong Kong-Macao Greater Bay Area (GBA) and an arrangement for selected public healthcare institutions in the GBA to recruit Hong Kong Chinese medicine practitioners were implemented.

Disease Prevention and Control

The Centre for Health Protection works 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 and laboratory data reports regularly.

Prevention and Control of Infectious Diseases

The Prevention and Control of Disease Ordinance specifies 51 statutory notifiable infectious diseases in Hong Kong. In 2021, 10,674 cases were reported, of which 3,803 and 3,968 were diagnosed as COVID-19 and tuberculosis respectively. The centre continually reviews and updates its strategies for coping with major outbreaks of infectious diseases, including an influenza pandemic, the Ebola virus disease, measles, Middle East Respiratory Syndrome, Zika virus infection and dengue fever, ensuring both the government and the community are prepared to deal with them.

To prevent and control the cross-boundary spread of infectious and other serious diseases into or out of Hong Kong, the Department of Health's Port Health Division enforces health

quarantine measures according to the International Health Regulations and the Prevention and Control of Disease Ordinance.

Measures to Combat COVID-19

Since the first case of COVID-19 was confirmed in January 2020, Hong Kong, like the rest of the world, has been seriously affected by the pandemic. During the year, the government closely monitored the local and global situation, and took a range of measures against the pandemic covering the following areas:

- **Legal framework** – The government invoked the Prevention and Control of Disease Ordinance to introduce specific regulations to support anti-epidemic measures, including border control measures, mask wearing, social distancing, virus testing, use of vaccines and vaccination requirements for entry into specified places.
- **Professional advice** – The government took account of advice from the WHO and maintained communication and cooperation with the National Health Commission and Mainland provinces and cities on joint prevention and control of COVID-19. It consulted an advisory panel of experts and the relevant scientific committees on epidemic control measures and the use of COVID-19 vaccines. The government also sponsored local research and development to inform epidemic control policies and measures.
- **Prevention of imported cases** – The government maintained control of the importation of cases through testing and quarantine, taking into account the infection risks of places overseas. Since end-2020, the government has strengthened the testing frequency and arrangements of inbound travellers from arrival at airport to quarantine at designated quarantine hotels, to minimise the risk of leakage into the community.
- **Maintaining social distancing** – The government continued to adjust social distancing measures applicable to various venues, group gathering restrictions and mask wearing requirements in 2021, and adopted a new approach in April to encourage vaccination through applying ‘vaccine bubble’ requirements to various venues.
- **Application of technology** – Applications of technology included the LeaveHomeSafe QR code and app for assisting in tracing contacts of confirmed cases; the Local Situation Dashboard to provide the public with the latest information on cases; and the adoption of rapid tests and building sewage testing technology that helped detect confirmed cases.
- **Information transparency** – Up-to-date information was regularly provided to the public through various channels, including briefings by the Centre for Health Protection and the Hospital Authority; press conferences by the Chief Executive and bureau secretaries; thematic websites; and press releases and posts on social media platforms by relevant bureaus and departments.
- **Vaccination** – In February, the government received the first batch of COVID-19 vaccines and started the COVID-19 Vaccination Programme. All eligible members of the public were offered free vaccines, including the initiation of a third dose in November. The government continues to liaise with vaccine manufacturers to ensure a steady supply.

Prevention and Control of Non-communicable Diseases

Non-communicable diseases including cancer, cardiovascular diseases, chronic respiratory diseases and diabetes mellitus together accounted for about 55 per cent of all registered deaths in 2020.

The government is implementing its action plan, *Towards 2025: Strategy and Action Plan to Prevent and Control Non-communicable Diseases in Hong Kong*, which sets out nine targets to be achieved by 2025 and a portfolio of initiatives to reduce the burden of non-communicable diseases.

The Hong Kong Cancer Strategy aims to reduce the cancer burden in the local population and improve the quality of life and survivorship of cancer patients. The government promotes as the primary preventive strategy the adoption of a healthy lifestyle, which includes no smoking, avoiding alcohol consumption, eating a balanced diet and engaging in regular physical activity.

The Department of Health is also coordinating the implementation of two other action plans, which set out strategies and priorities to eliminate the health threats posed by antimicrobial resistance and viral hepatitis.

Health Promotion

The department formulates and implements strategies and measures to promote healthy eating, regular physical activity and mental wellness to target groups at different settings. It also updates information and health advice on infectious diseases and produces materials in various languages to raise awareness among ethnic minorities of how to prevent communicable diseases and adopt a healthy lifestyle.

The department works closely with Healthy Cities projects, NGOs and other community partners and solicits their support to carry out health promotion activities, disseminate health information, alert the public to health threats and facilitate implementation of preventive measures.

Health Infrastructure Development

Public Hospital Development Projects

In 2021, the preparatory works for the construction of a new acute hospital at the Kai Tak Development Area were completed, while the foundation works continued. Other new or ongoing projects included the main works for phase 1 redevelopment of Kwong Wah Hospital and Queen Mary Hospital, the extension of Tuen Mun Hospital's operating theatre block, phases 2 and 3 of Kwai Chung Hospital, and the expansion of Haven of Hope Hospital and United Christian Hospital; the construction of the Hospital Authority Supporting Services Centre and Community Health Centre cum Social Welfare Facilities in North District; the preparatory and foundation works for phase 1 redevelopment of Grantham Hospital, stage 1 of phase 2 redevelopment of Prince of Wales Hospital, and the expansion of North District Hospital and Lai King Building in Princess Margaret Hospital; and the preparatory works for the redevelopment of Our Lady of Maryknoll Hospital.

Sharing of Electronic Health Records

The territory-wide Electronic Health Record Sharing System (eHRSS) allows public and private healthcare providers to view and share consenting patients' electronic health records.

Stage 2 development of the eHRSS will be completed by 2022, which includes radiology image sharing that has been piloted since March starting with the Hospital Authority sharing images onto the platform. Radiology image sharing by private hospitals also started during the year.

EC Connect, a turn-key clinical management system, has been implemented on a pilot basis at participating private hospitals and Chinese medicine clinics to support clinical record management, daily administration and operation.

The eHealth App which facilitates empowerment and self-care by providing relevant information to the public and care-givers was launched in January. It allows the public to view some of their key health records and check the elderly voucher balance and quotas of selected public-private partnership programmes. Users can also access their COVID-19 vaccination record and QR code if they received the vaccine in Hong Kong.

As at end-2021, around 4.55 million residents and over 2,300 organisations, including all 13 private hospitals and other healthcare providers such as private clinics, elderly homes and welfare groups, had registered for eHRSS, in addition to the Hospital Authority and the Department of Health. Over 2.48 billion clinical records were shared on eHRSS by various participating healthcare providers. About 53,000 accounts had been created for healthcare professionals, comprising about 14,500 doctors, 32,900 nurses, 660 dentists and 5,700 other professionals specified under the Electronic Health Record Sharing System Ordinance.

Health and Medical Research

The Health and Medical Research Fund aims to build research capacity and to encourage, facilitate and support research to inform health policies, improve population health, strengthen the health system, enhance healthcare practices, advance the standard and quality of care, and promote clinical excellence, through evidence-based scientific knowledge derived from local research in health and medicine. It also provides funding to evidence-based health promotion projects that help people adopt healthier lifestyles.

The biennial Health Research Symposium, held on 23 November with 690 participants, commemorated the fund's 10th anniversary.

During the fight against COVID-19, the Food and Health Bureau and the fund approved over \$500 million to support 69 research studies from April 2020 to end-2021. Many of these studies apply cutting-edge technology to fill knowledge gaps and to better prepare Hong Kong for the recovery stage of the pandemic.

The Statistics Unit of the bureau's Research Office is setting up the Integrated Population-based Health Dataset to support healthcare policy planning and formulation.

Healthcare Professional Regulation and Training

Healthcare Professional Regulation

As at the year end, 15,546 doctors, 2,706 dentists, 10,562 listed and registered Chinese medicine practitioners, 64,026 registered and enrolled nurses, 4,450 midwives, 3,181 pharmacists, 287 chiropractors, 3,954 physiotherapists, 2,783 occupational therapists, 4,224 medical laboratory technologists, 2,273 optometrists, 2,673 radiographers and 531 dental hygienists were registered in Hong Kong.

The Pilot Accredited Registers Scheme for Healthcare Professions enhances the society-based registration arrangements for healthcare professions not subject to statutory registration. As at end-2021, the number of voluntary registrants for each profession was 534 for the Hong Kong Institute of Speech Therapists, 51 for the Hong Kong Institute of Audiologists, 79 for the Hong Kong Academy of Accredited Dietitians, 227 for the Hong Kong Association of Educational Psychologists and 380 for the Hong Kong Institute of Clinical Psychologists.

Doctors

To increase the number of doctors in Hong Kong, the government has expanded the number of training places for medical students funded by the University Grants Committee from 250 in 2008-09 to 530 in 2021-22, an increase of more than 100 per cent.

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 552 medical students to their bachelor's degree programmes in 2021.

Non-locally trained doctors can register and practise in Hong Kong after passing the Medical Council of Hong Kong's licensing examination and completing a period of assessment of normally 12 months in an approved hospital. During 2021, 34 non-locally trained doctors passed the licensing examination. Non-locally trained doctors may also work in specified institutions on a limited registration basis. Since 2018, the period of limited registration and renewal has been extended from not more than one year to not more than three years.

The Medical Registration (Amendment) Bill 2021 was passed in October to create an alternative pathway for non-locally trained doctors to obtain full registration in Hong Kong, which the government hopes will attract more qualified non-locally trained doctors to practise in Hong Kong, thereby alleviating the shortage of doctors in the public healthcare system.

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. The Hospital Authority trains specialist doctors, offering appointments to all qualified medical graduates from HKU and CUHK each year for on-the-job specialist training. In 2020-21, about 470 doctors were recruited for specialist training. Around 300 doctors were awarded specialist qualifications by the Hong Kong Academy of Medicine in 2021.

Dentists

HKU offers degree courses in dentistry, admitting 81 students to its bachelor's degree programme in 2021, while 10 non-locally trained dental graduates passed licensing examinations conducted by the Dental Council of Hong Kong.

Chinese Medicine Practitioners

Hong Kong Baptist University (HKBU), CUHK and HKU offer full-time undergraduate degree courses in Chinese medicine. In 2021, 66 full-time local bachelor's degree graduates who passed the licensing examination were registered as Chinese medicine practitioners.

The Hospital Authority implements the Chinese Medicine Practitioner Trainee Programme at the 18 Chinese Medicine Clinics cum Training and Research Centres, which provides 216 training places for Chinese medicine practitioner trainees, including 72 places for the first year of training.

Allied Health Professionals

Caritas Institute of Higher Education (CIHE), Hong Kong Metropolitan University (HKMU), Hong Kong Polytechnic University (PolyU) and Tung Wah College (TWC) offer degree programmes for allied health professionals. In 2021, the four institutions admitted a total of 748 students to their degree programmes in physiotherapy, radiography/radiation therapy, occupational therapy, medical laboratory science and optometry. The degree programmes offered by PolyU are publicly funded, while those at CIHE, HKMU and TWC are self-financing and students are eligible for government subsidies under the Study Subsidy Scheme for Designated Professions/Sectors. Professional accreditation for the physiotherapy degree programmes at CIHE, HKMU and TWC is in progress.

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, and clinical and personal development. These include three years of in-service training for new recruits of allied health grades. In 2021, the institute offered 94 training courses.

Nurses

CIHE, CUHK, HKBU, HKU, HKMU, PolyU, TWC and Hong Kong Sanatorium and Hospital (HKSH) provide pre-registration nursing training. They recruited 2,340 students into their nursing degree programmes in 2021. HKU, CUHK and PolyU enrolled another 149 students in their Master's Degree of Nursing programmes.

Hong Kong Baptist Hospital, HKSH, St Teresa's Hospital, Union Hospital, TWC and CIHE provide pre-enrolment nursing training. They recruited 426 pupil nurses into their two-year Higher Diploma in Enrolled Nurse (General) programmes in 2021. HKMU enrolled 278 and 59 pupils in its two-year Higher Diploma in General Health and Higher Diploma in Mental Health Nursing programmes respectively. Seventeen nurses with professional nursing qualifications obtained outside Hong Kong passed the Nursing Council of Hong Kong's licensing examinations and received practising certificates for registered nurses or enrolled nurses.

Government-subsidised, self-financing undergraduate programmes in nursing offered 1,160 places in 2020-21.

The Hospital Authority has upgraded the three-year Higher Diploma in Nursing Programme to the four-year Professional Diploma in Nursing Programme, which provides pre-registration nursing training and enrolled 300 students in 2021. Another 100 pupil nurses were admitted to its two-year pre-enrolment nursing training programme.

The authority's Institute of Advanced Nursing Studies strengthens specialty training for nurses and encourages them to improve professional standards through continuous learning. New graduates undergo simulation training to strengthen their competence and skills in clinical care and medical emergencies.

Regulatory Activities

Western Medicines

Western medicines, including advanced therapy products, are regulated in Hong Kong under the Pharmacy and Poisons Ordinance. Acting on the authority of the Pharmacy and Poisons Board, the department provides support to the board in evaluating and approving applications to register pharmaceutical products and issuing licences to drug manufacturers, wholesalers and retailers. The department's Drug Office takes action against the illegal sale of controlled drugs and enforces regulatory controls on poisons, antibiotics and dangerous drugs for medicinal use.

In 2021, the board approved 2,756 applications to register pharmaceutical products. As at the year end, 15,028 pharmaceutical products were registered.

All provisions of the Pharmacy and Poisons (Amendment) Ordinance 2020 came into effect on 1 August, introducing a regulatory framework for advanced therapy products.

Chinese Medicines

Chinese medicines are regulated under the Chinese Medicine Ordinance, which requires any person engaged in the retail or wholesale of Chinese herbal medicines or the manufacture or wholesale of proprietary Chinese medicines to obtain a licence. The Chinese Medicine Council of Hong Kong is the statutory body that devises and implements regulatory measures for Chinese medicines. All proprietary Chinese medicines must be registered before they can be sold, imported or possessed in Hong Kong. As at end-2021, there were 7,734 licensed Chinese medicine traders, including 21 holding the Certificate for Manufacturer; 4,650 proprietary Chinese medicines with transitional registration status; and 3,468 with a Certificate of Registration of proprietary Chinese medicines.

The Hong Kong Chinese Materia Medica Standards Project aims to ensure the safety and quality of common Chinese herbal medicines. It is supported by local universities and overseas and Mainland experts. As at end-2021, the department had released reference standards for 330 commonly used Chinese herbal medicines under the project.

The department's Chinese Medicine Regulatory Office, which is designated by the WHO as a WHO Collaborating Centre for Traditional Medicine, helps the WHO formulate policies and strategies and sets regulatory standards for traditional medicine.

Human Reproductive Technology

The Human Reproductive Technology Ordinance regulates the application of human reproductive technologies to ensure the procedures are conducted in a safe and informed manner, and to safeguard the welfare of children born through the technologies. The Council on Human Reproductive Technology's code of practice sets out the requirements, standards and good practices for embryo researchers and reproductive technology practitioners. As at end-2021, the council had issued 40 licences, comprising 16 treatment licences, 22 artificial insemination by husband licences and two research licences.

Laboratory Services

Public Health Laboratory Services

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

Laboratories of the branch's Microbiology Division are variously designated by the WHO as a National Influenza Centre, National Polio Laboratory, National Measles Laboratory, Supranational Tuberculosis Reference Laboratory, Regional Reference Laboratory for Measles and Rubella in the Western Pacific Region, Global Influenza A(H5) Reference Laboratory, Global Severe Acute Respiratory Syndrome Reference Laboratory and COVID-19 Reference Laboratory.

Private Medical Laboratories/Diagnostic Centres

Medical laboratories/diagnostic centres provide clinical diagnostic laboratory testing services to manage, prevent and treat diseases and for health assessment. The standard of the medical laboratory service is ensured through the professional regulation of medical laboratory technologists. There were 142 private laboratories in Hong Kong as of end-2021.

Private medical laboratories provide vital support to the government's COVID-19 testing strategy. To ensure the quality of COVID-19 testing services provided by private medical laboratories, the department runs the Laboratory Recognition Scheme and maintains a list of recognised nucleic acid testing institutions.

Auxiliary Medical Service

The Auxiliary Medical Service (AMS) is a government department under the Security Bureau, with 99 civil service positions and around 6,000 adult volunteers and cadets. It reinforces regular medical and ambulance services during emergencies and provides 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. In 2021, the AMS launched its Health Awareness and Promotion Programme for Youth to equip cadets with professional knowledge and healthcare skills.

The AMS provides first aid during natural disasters, large-scale incidents, public activities and festivals. During weekends and public holidays, its members operate first aid stations in country parks, with First Aid Bicycle Teams covering cycling tracks in the New Territories. The AMS also organises first aid programmes at schools and public talks on cardiopulmonary resuscitation and other health topics.

During the year, the AMS has provided strong support in the fight against COVID-19, with members assisting at quarantine, treatment and testing facilities, escorting people to quarantine centres, supporting the enforcement of compulsory testing orders, and assisting in the implementation of restriction-testing declarations. They have also trained and monitored staff of designated quarantine hotels.

Websites

AIDS hotline website: www.27802211.com

Auxiliary Medical Service: www.ams.gov.hk

Cancer Online Resource Hub: www.cancer.gov.hk

Cervical Screening Programme: www.cervicalscreening.gov.hk

Change for Health: www.change4health.gov.hk

Chinese Medicine Development Fund: www.cmdevfund.hk

Chinese Medicine Regulatory Office: www.cmro.gov.hk

Colorectal Cancer Screening Programme: www.colonscreen.gov.hk

COVID-19 thematic website: www.coronavirus.gov.hk

COVID-19 Vaccination Programme: www.covidvaccine.gov.hk

Department of Health: www.dh.gov.hk

District Health Centre: www.dhc.gov.hk

eHealth Record Office: www.eHealth.gov.hk

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

Gay Men HIV Information website: www.21171069.gov.hk

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

Hong Kong Genome Institute: www.hkgo.org

Hong Kong's Domestic Health Accounts: www.fhb.gov.hk/statistics/en/dha.htm

Hospital Authority: www.ha.org.hk

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

Organ Donation: www.organdonation.gov.hk

Red Ribbon Centre: www.rrc.gov.hk

School Dental Care Service: www.school dental.gov.hk

'Shall We Talk' initiative: shallwetalk.hk

Travel Health Service: www.travelhealth.gov.hk

Viral Hepatitis Control Office: www.hepatitis.gov.hk

Virtual AIDS Office: www.aids.gov.hk

Voluntary Health Insurance Scheme Office: www.vhis.gov.hk