



Flanders
State of the Art

A network of glowing blue icons connected by lines, set against a dark blue background. The icons include a pill, a wheelchair, a syringe, a heart with an ECG line, a plus sign, a stethoscope, a hand holding a pulse, and a first aid kit. A hand is visible on the right side, interacting with the network.

HEALTHCARE & MEDICAL SECTOR

IN SINGAPORE

FLANDERS INVESTMENT & TRADE MARKET SURVEY



HEALTHCARE & MEDICAL SECTOR IN SINGAPORE

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1. OVERVIEW OF HEALTHCARE AND MEDICAL SECTOR IN SINGAPORE

Singapore's healthcare ecosystem is highly regarded among the best in the world in terms of its high standard of medical care and efficient healthcare delivery. According to the World Health Organisation (WHO), Singapore healthcare system ranks sixth globally and it offers the fourth best healthcare infrastructure in the world. Singapore is also the healthcare and medical hub for the region. Primary healthcare in Singapore refers to the first line of care in the community provided through an island-wide network of outpatient polyclinics and clinics run by private general practitioners (GPs). The healthcare system in Singapore is divided into two sectors namely statutory boards (public) and institutions (private).

The public healthcare system in Singapore comprises of several public hospitals, specialist centers, polyclinics and community hospitals whereas the private healthcare sector in Singapore operates independently and it has a significant role in providing additional medical services, specialized care and personalized treatment options to exclusive clientele and medical tourism. Singapore is home to several private hospital groups, medical centers and specialized centers for specific medical conditions. There are also private clinics/practitioners which include general practitioners and specialists. Patients tend to visit private practitioners for non-emergency medical issues and personalized care.

Basic care at public hospitals is heavily subsidized in Singapore. Singapore's employees inject around 37 percent of their salaries in mandated savings account called Central Provident Fund (CPF) that may be spent on healthcare, housing, education, and insurance, with part of this being contributed by their employers. The national health insurance scheme in Singapore is a system unique in the world built around the "three M's", known as MediSave, MediShield Life and MediFund. It provides basic health insurance coverage for Singapore citizens and permanent residents. It is also common in Singapore that individuals purchase additional private health insurance plans for better coverage especially for private healthcare services.

Singapore has a very well-established regulatory framework for the healthcare sector. The Ministry of Health (MOH) oversees and regulate both the public healthcare system and private healthcare system in Singapore. Medical devices are regulated by the national regulatory agency, Health Sciences Authority (HSA). The regulations and requirements for medical devices in Singapore are based on the Health Products Act and its subsidiary legislation, specifically the Health Products (Medical Devices) Regulations.

The Singapore government procurement system is considered fair and transparent. Government tenders are publicly announced on its one-stop e-procurement portal - www.gebiz.gov.sg. Hospital procurement in Singapore is centralized to optimize cost savings and standardization across healthcare institutions and there is a tendering process for the procurement exercise. SingHealth Group Procurement Office (GPO) and National Healthcare Group Procurement (NHGPO) are the central procurement entity for the two public hospital groups in Singapore.

Singapore places great emphasis on healthcare research and innovation. There are several academic medical centers in Singapore that combine healthcare delivery, medical education, and research such as the National University Health System (NUHS) and the SingHealth Duke-NUS



Academic Medical Center. Research organizations such as the Agency for Science, Technology and Research (A*STAR) and the National Medical Research Council (NMRC) were set up to support and fund research initiatives in biomedical sciences, clinical research and health services research.

From July 2023, Singapore’s HealthTech agency, formerly known as IHS launched its new identity, **Synapxe**. Synapxe (<https://www.synapxe.sg/>) is the national HealthTech agency responsible for creating intelligent technological solutions to support Ministry of Health (MOH) and public healthcare.

List of projects under Synapxe include:

- HealthHub
- National Electronic Health Record (NEHR)
- Next Generation Electronic Medical Record (NGEMR)
- National Harmonised Integrated Pharmacy System (NHIPS)
- National Billing System (NBS)

Pharmaceutical and biomedical industries are leading drivers of economic growth in Singapore. Being pro-business and having a thriving research and development landscape, Singapore has become one of the few countries that are able to export more pharmaceutical products than it imports. ¹ These factors have attracted foreign investors to use Singapore as a manufacturing base for a wide range of products including Active Pharmaceutical Ingredients, drug products and biologics drug substances. Some of the major international players with presence in Singapore include Abbott, Amgen, Becton Dickinson, GlaxoSmithKline, Medtronic, Merck Sharp & Dohme, Novartis and Pfizer. Vaccination played a significant role in response to the pandemic in Singapore. Prior to Covid-19, Singapore did not have any vaccine production facility. Now, five pharmaceutical companies have committed to set up vaccine production facilities here.

The MedTech sector in Singapore is also a growing segment for Singapore’s healthcare industry. Singapore is home to more than 60 multinational MedTech companies undertaking a range of activities from regional headquarters and manufacturing to research and development, including several CDMOs for Medtech devices. In 2018, the MedTech sector contributed S\$13.3 billion to Singapore’s economy. Many MedTech projects are supported by the public healthcare clusters through clinical advisory, co-development and test-bedding. The industry is seeing more investors who is willing to support early-stage startups including foreign companies looking to expand their footprint in Asia.

Singapore is an open economy and there is no barriers to entry. All goods imported into Singapore are subject to a **8.0% goods and services tax (GST)**. There are **4 categories** of dutiable goods:

- Intoxicating liquors
- Tobacco products
- Motor vehicles
- Petroleum products and biodiesel blends

¹ <https://www.aseanbriefing.com/news/singapores-healthcare-industry-gateway-to-aseans-healthcare-market/>



2. PUBLIC HEALTHCARE SYSTEM

Primary healthcare (refers to first line of care) is provided by a network of outpatient polyclinics and clinics run by private general practitioners (GPs). Currently, there are 23 polyclinics and approximately 1,800 GP clinics in Singapore. The primary care services include:

- Outpatient medical treatment
- Medical follow-ups after discharge from hospital
- Maternal and child health
- Immunisation
- Health screening and education
- Diagnostic and pharmaceutical services

There are 3 public healthcare clusters in Singapore: SingHealth Group, National Healthcare Group & National University Health System.

2.1 SINGHEALTH GROUP

SingHealth is Singapore's largest cluster of healthcare institutions, comprising a network of public hospitals, specialty centers, and primary care clinics. It consists of four public hospitals, two community hospitals, five national specialty centers, and a network of eight polyclinics.

- Singapore General Hospital (SGH)
- Changi General Hospital (CGH)
- Sengkang General Hospital
- KK Women's and Children Hospital (KKH)
- National Cancer Centre Singapore (NCCS)
- Singhealth Community Hospitals
- SingHealth Polyclinics
- SingHealth DukeNUS Academic Medical Centre
- National Heart Centre Singapore (NHCS)
- Singapore National Eye Centre
- National Neuroscience Institute
- National Dental Centre

2.2 NATIONAL HEALTHCARE GROUP

The National Healthcare Group (NHG) is one of the major healthcare clusters in Singapore. NHG operates several hospitals, national specialty centres, and polyclinics. Tan Tock Seng Hospital (TTSH) is the largest hospital in the group and serves as the tertiary hospital for the cluster.

- Tan Tock Seng Hospital (TTSH)
- Institute of Mental Health (IMH)
- Khoo Teck Puat Hospital (KTPH)
- National Skin Centre
- Yishun Community Hospital
- Woodlands Health Campus
- Admiralty Medical Centre
- John Hopkins Singapore
- Primary Care Academy
- NHG Pharmacy
- NHG College
- Centre for Medical Technologies & Innovation (CMTi)



2.3 NATIONAL UNIVERSITY HEALTH SYSTEM

The National University Health System (NUHS) is one of the three public healthcare clusters in Singapore with an integrated Academic Health System and Regional Health System. Their member institutions come under one Academic Health System comprise of tertiary, acute and community hospitals, national specialty centres, polyclinics, a medical centre and academic health sciences institutions.

- National University Hospital
- Ng Teng Fong Hospital
- Alexandra Hospital
- National University Cancer Institute, Singapore (NCIS)
- National University Centre for Oral Health, Singapore (NUCOHS)
- NUS Yong Loo Lin School of Medicine (NUS Medicine)
- NUS Faculty of Dentistry (NUS FOD)
- NUS Saw Swee Hock School of Public Health (NUS SSHSPH)
- National University Polyclinics (NUP)
- Jurong Medical Centre (JMC)
- NUHS Diagnostics & NUHS Pharmacy
- National University Heart Centre, Singapore (NUHCS)

3. PRIVATE HEALTHCARE SYSTEM

In the **private healthcare** sector, there are two major hospital groups that operate the majority of the private healthcare institutions in Singapore: **Parkway Pantai and Raffles Medical Group**.

3.1 PARKWAY PANTAI LTD – IHH HEALTHCARE

Website: <https://www.ihhhealthcare.com/>

Parkway Pantai is Southeast Asia’s largest private healthcare provider with hospitals in several countries such as Singapore, Malaysia, Brunei and Hong Kong. It is a wholly owned subsidiary of Kuala Lumpur based IHH Healthcare whose largest shareholder is Malaysian state investment agency Khazanah Nasional. Parkway Pantai owns four hospitals in Singapore and the Parkway Shenton network of over 30 primary care clinics island wide as well as a wide range of specialty and ancillary services such as Parkway Cancer Centre, Parkway Radiology, Parkway Laboratories (including Angsana Molecular & Diagnostics), Parkway Rehab and Parkway Emergency Services.

- Gleneagles Hospital
- Mount Elizabeth Hospital
- Mount Elizabeth Novena Hospital
- Parkway East Hospital



3.2 RAFFLES MEDICAL GROUP

Website: <https://www.rafflesmedicalgroup.com/>

Raffles Medical Group (RMG) is one of the largest private healthcare providers in Asia, with hospitals and clinics located in several countries such as Singapore, China, Japan, Vietnam and Cambodia. RMG owns Raffles Hospital in Singapore, which specializes in obstetrics and gynecology, cardiology, oncology, and orthopedics.

RMG has a network of clinics with general practitioners, specialists and dental surgeons and owns Raffles Hospital, a tertiary care hospital in Singapore which accommodates surgical centres, medical laboratories and 24 specialist centres in various areas like Obstetrics & Gynaecology, Cardiology, Oncology and Orthopaedics.

RMG has its own consumer healthcare division, Raffles Health, which develops and distributes nutraceuticals, supplements, vitamins and medical diagnostic equipment.



4. DEVELOPMENT WITHIN THE HEALTHCARE AND MEDICAL SECTOR IN SINGAPORE

In order to work towards a healthier Singapore, Ministry of Health (MOH) has developed a Healthier SG strategy. Under the Healthier SG strategy, Singaporeans will be encouraged to seek primary care with a family physician/General Practitioner (GPs) of their choice as the first line of care. MOH partners with the three healthcare clusters to support the General Practitioners (GPs) who would eventually support the residents for different health needs and care episodes to ensure continuity of care.



Singapore represents a promising market for health IT systems when it comes to advanced mobile health and telemedicine than other markets. Telemedicine is already in place since 2017 with a number of providers including WhiteCoat, MyDoc, Doctor Anywhere, Speedoc, MaNaDr, SATA CommHealth, Doctor World, Parkway Shenton, BetterHealth, HiDoc, and Rescu. In an effort to develop this sector, the Singapore government launched a regulatory sandbox with these telemedicine providers to co-create governance and regulatory framework for the sector in 2018. During the pandemic, the use of teleconsultation and telemedicine became essential to ease the burden of the healthcare system. From mid-2022 onwards, telemedicine service providers are required to be licensed under the new Health Services Act (HSA). One of the most recent projects, which aims to help BioMedtech start-ups, is the launch of Co11ab Novena within Health City Novena. Co11ab Novena (<https://www.co11ab.sg/>) is a S\$15 million incubator and partnership between National Technological University of Singapore (NTU), Agency for Science, Technology and Research (A*STAR) and National Healthcare Group (NHG) that aims to facilitate the clinical adoption of new technologies. It will provide BioMedTech startups with access to industry knowledge, mentorship and financial support for their research & development leading to commercialization of their innovations.

5. OVERVIEW OF HEALTHCARE R&D IN SINGAPORE

Singapore has a well-established reputation as a center for scientific R&D and innovation capability in Asia. The Agency for Science, Technology and Research (A*STAR) is a leading public sector R&D agency that bridges the gap between academia and industry through open innovation.



Its R&D activities span across different biomedical sciences domains: MedTech, pharmaceuticals and biologics, and biomedical research.

The list of the most outstanding R&D institutes and centers in Singapore (non-exhaustive):

- Singapore Eye Centre
- Cancer Science Institute of Singapore
- Mechanobiology Institute, Singapore
- Bioinformatics Institute
- Bioprocessing Technology Institute
- Genome Institute of Singapore
- Institute of Bioengineering and Nanotechnology
- Institute of Medical Biology
- Institute of Molecular and Cell Biology
- Experimental Therapeutics Centre

6. CHALLENGES & TRENDS WITHIN THE HEALTHCARE SECTOR IN SINGAPORE

The major challenges and trends within the healthcare sector in Singapore are ageing population, increasing chronic disease burden, slower workforce growth and rising healthcare costs. The ageing population is growing rapidly with an estimate of 1 in 4 citizens being over the age of 65 by 2030.

Ministry of Health Singapore (MOH) has set in place plans to adopt IT technology including data analytics and AI (artificial intelligence) to improve patient care and its strategies to develop the healthcare workforce of the future include equipping them with new skills, growing a Singapore core in the workforce, and tapping into technology to improve efficiency and patient experience.

According to the Future Health Index Survey conducted by Royal Philips, Singapore had the third-highest percentage (28 per cent) of healthcare professionals who said they use AI to improve diagnostic accuracy. The Future Health Index survey polled nearly 3,200 healthcare professionals from 15 countries, including 201 in Singapore. Based on the survey findings, AI is used more for administrative tasks, for functions such as staffing and scheduling patient appointments. ²

Mature markets like Singapore stands out as a market to introduce digital health solutions due to low barriers to adoption as people are willing to try one or more of the many digital health innovations available on the market.

Some key considerations for Belgian companies looking to enter in Singapore’s healthcare and medical sector:

- "3 Beyonds" Strategy
 - Beyond healthcare to health: Preventive care
 - Beyond hospital to community: Community care
 - Beyond quality to value: Affordable & sustainable healthcare

² Article: <https://www.straitstimes.com/singapore/health/singapore-ranked-no-3-in-survey-on-use-of-ai-in-healthcare>



- Leverage partnerships
 - Partnerships with universities for R & D projects to leverage on government funding (Example: NUS and NTU)
 - Public-private partnership with agencies such as A*STAR, Enterprise Singapore (ESG), National Research Foundation (NRF) and SGInnovate
- Innovation in healthcare
 - Telemedicine (Example: Scheduling appointments, order medication and palliative care)
 - AI & Robotics (Example: AI on back office operations and clinical activities)
 - Data Analytics (Example: using Big data for patient monitoring)

7. RELATED AUTHORITY

7.1 MINISTRY OF HEALTH (MOH)

Website: <https://www.moh.gov.sg/>

MOH and its statutory boards are responsible for regulating Singapore’s healthcare system. All Healthcare facilities such as hospitals, medical centres, community health centres, nursing homes, clinics (including dental clinics), and clinical laboratories (including x-ray laboratories) are required to apply for a licence under the Private Hospitals & Medical Clinics (PHMC) Act/Regulations. All Healthcare facilities are also required to maintain a good standard of medical / clinical services under the PHMC Act/Regulations.

7.2 HEALTH SCIENCES AUTHORITY (HSA)

Website: <https://www.hsa.gov.sg>

Health Sciences Authority (HSA) regulate health products, serve the administration of justice, secure the nation’s blood supply, and safeguard the public’s health. The regulatory process for medical devices are as such:

- Medical Device Registration

All medical devices intended for sale or supply in Singapore must be registered with the HSA before they can be marketed. This applies to both locally manufactured devices and imported devices.

- Risk Classification

Medical devices are categorized into four risk classes (A, B, C, and D), with Class A representing the lowest risk and Class D representing the highest risk. The risk classification determines the regulatory requirements and the level of scrutiny during the registration process.



- Product Listing

Some low-risk medical devices, such as Class A devices, are exempted from full registration but must be listed with the HSA. The product listing allows the HSA to keep track of the devices available in the market.

- Authorized Representative

Foreign manufacturers without a local presence in Singapore must appoint an Authorized Representative (AR) who is a resident of Singapore. The AR acts on behalf of the manufacturer and is responsible for liaising with the HSA.

- Documentation Requirements

Manufacturers are required to submit various documents during the registration process, including device descriptions, technical specifications, labeling, instructions for use, and evidence of conformity with applicable standards.

- Quality Management System

Manufacturers must have a quality management system (QMS) in place that complies with the relevant international standards, such as ISO 13485. The QMS ensures the consistent quality and safety of the medical devices.

More up to date information on the regulation and requirements can be retrieved from the website of HSA - <https://www.hsa.gov.sg>.

7.3 AGENCY FOR INTEGRATED CARE (AIC)

Website: <https://www.aic.sg>

The Agency for Integrated Care (AIC) was formed as an independent corporate entity under MOH Holdings (MOHH) to work with stakeholders and partners in developing the Community Care Sector.

7.4 AGENCY FOR SCIENCE, TECHNOLOGY AND RESEARCH (A*STAR)

Website: <https://www.a-star.edu.sg/>

The Agency for Science, Technology and Research (A*STAR) is Singapore's lead public sector agency that spearheads economic oriented research to advance scientific discovery and develop innovative technology.



8. HEALTHCARE AND MEDICAL RELATED TRADE EVENTS

Medical Fair Asia

Date: 11th September to 13th September 2024
Venue: Marina Bay Sands Convention Centre
Website: <https://www.medicalfair-asia.com/>

9. ASSOCIATION

9.1 SINGAPORE MEDTECH CONSORTIUM

Website: <http://sgmedtech.com.sg/>

The Singapore Medtech Consortium is a group of Singapore-based companies from Venture Capitalist, Manufacturers & Distributors spearheaded by Racer Technology. They provide end-to-end manufacturing solutions in the areas of in-vitro diagnostics, wearables and life science tool consumables.

9.2 SINGAPORE MEDICAL ASSOCIATION

Website: <https://www.sma.org.sg/>

The Singapore Medical Association (SMA) is the national medical organisation representing the majority of medical practitioners in both the public and private sectors.

9.3 SINGAPORE DENTAL ASSOCIATION

Website: <http://sda.org.sg/>

The Singapore Dental Association (SDA) is the professional association of dentists dedicated to serving both the public and the profession of dentistry.

9.4 THE PHARMACEUTICAL SOCIETY OF SINGAPORE

Website: <https://www.pss.org.sg/>

The Pharmaceutical Society of Singapore (PSS) is the professional organisation representing pharmacists in Singapore.



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The information in this publication is provided for background information that should enable you to get a picture of the subject treated in this document. It is collected with the greatest care based on all data and documentation available at the moment of publication. Thus this publication was never intended to be the perfect and correct answer to your specific situation. Consequently it can never be considered a legal, financial or other specialized advice. Flanders Investment & Trade (FIT) accepts no liability for any errors, omissions or incompleteness, and no warranty is given or responsibility accepted as to the standing of any individual, firm, company or other organization mentioned.

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