Emerging trends in healthcare and their implications for Vietnam

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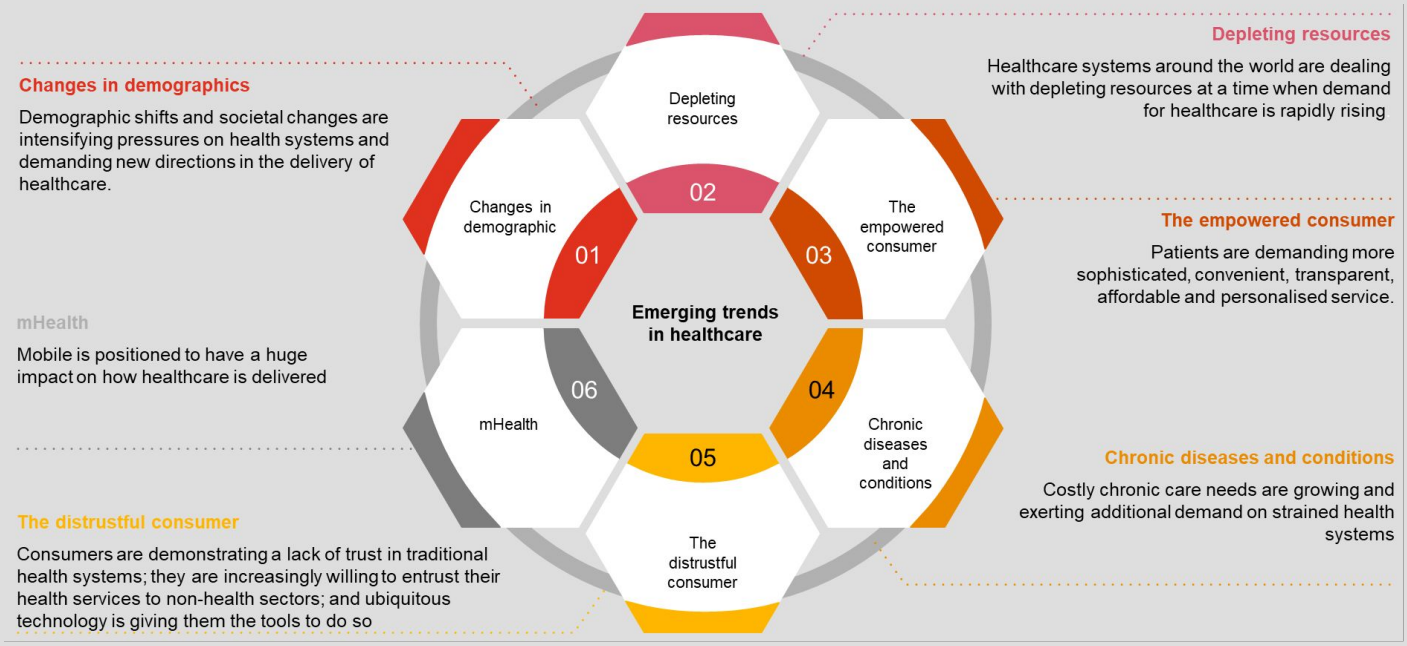
The global healthcare landscape is evolving, with Covid-19 as an accelerator

While the healthcare industry has been witnessing evolution in all aspects over the past 10 to 20 years, the emergence of technology and digitalisation within the sector, as well as two years of an unprecedented epidemic, have accelerated disruption in the industry. Several recent trends – increasing consumerism in healthcare (e.g., a stronger preference for convenience and simplicity in using healthcare services), inpatient care shifting to outpatient services, technological innovations, increasing complications, higher incidence of certain diseases due to more sedentary lifestyles, and longer life expectancies – are together shaping a global shift in the healthcare landscape, disrupting the sector, and pushing stakeholders to innovate and take action.

Globally, PwC has identified six emerging trends in healthcare[1] (Figure 1).

Figure 1: Global emerging trends in healthcare



(1) https://www.pwc.com/gx/en/industries/healthcare/emerging-trends-pwc-healthcare.html

These trends have been impacting the healthcare industry in a number of ways:

Changes in demographics: Changing demographics drive healthcare reforms. A new paradigm of public and private sector collaboration is developing to transform healthcare financing and delivery. **Partnerships with new market participants** from the retail, technology (e.g., artificial intelligence, robotic, teleconsultation, analytics), wellness, and fitness sectors (i.e., non-healthcare/ non-traditional healthcare sectors) are expanding and reshaping the health system.

Depleting resources: In the face of a shortage of skilled labour, **technology has become a potential solution to healthcare's resource problems**. For example, remote monitoring, telemedicine, and mobile devices will help doctors/medical staff to save physical consultation time and communication time with patients, make decisions faster with the support of improved analytics, etc. With the ability to bring innovation, improved efficiency, and unique solutions, **the private sector has become an appealing potential health partner for governments.** One form is the public-private partnership, with which the government can reform healthcare and mitigate their depleting resource issues at the same time.

The empowered consumers: Consumers (patients) are becoming more informed and involved in the care process. Informed consumers demand increased accountability, integrity, and transparency from their health providers and overall health system. This is leading a shift away from fragmented care to **integrated models**: requiring organisations, communities, and social care providers to coordinate their services, and with patients becoming active partners in their health across the continuum of care.

Chronic diseases and conditions: Lifestyle changes are driving up incidences of chronic diseases (diabetes, heart-related, cancers, etc.), increasing demand for chronic care. This is more costly and demands new models and considerations for delivery of care. Advancements in precise, early detection and diagnosis of disease will serve to minimise treatment costs. For this reason, the sector is placing greater emphasis on preventive health solutions. This opens the door for **non-healthcare/non-traditional healthcare industries** to bring innovative solutions to chronic disease prevention and management challenges.

The distrustful consumer: Consumers are demonstrating a lack of trust in traditional health systems, due to several long-lasting and unsettled issues (e.g., overloading, long-time queuing, administrative issues, mistrust of medicine/inputs/quality of care, etc.); they are increasingly willing to entrust their health services to non-health sectors. New and ubiquitous technology is giving them the tools to do this with greater ease. With the entrance of **non-traditional healthcare players** (e.g., retail clinics[2], wellness centres), traditional players (i.e., hospitals and clinics) will have to decide against whom to compete and with whom to partner.

mHealth[3]: Mobile helps to make healthcare more accessible, via virtual channels in addition to traditional physical visits; faster, by saving travel and queuing time; and cheaper, partly by enabling patients to obtain information about their health conditions more easily and to have more control over the care process.

(2) A retail clinic is a walk-in clinic located at retail outlets such as grocery stores, department stores, malls, and supermarkets that treat uncomplicated minor illnesses and provide preventative healthcare services. This model is popular in the U.S.

(3) mHealth is defined as the provision of healthcare or health-related information using mobile devices (typically mobile phones, but also other specialised medical mobile devices, like wireless monitors). Mobile applications and services can include, among other things, remote patient monitors, video conferencing, online consultations, personal healthcare devices, wireless access to patient records and prescriptions

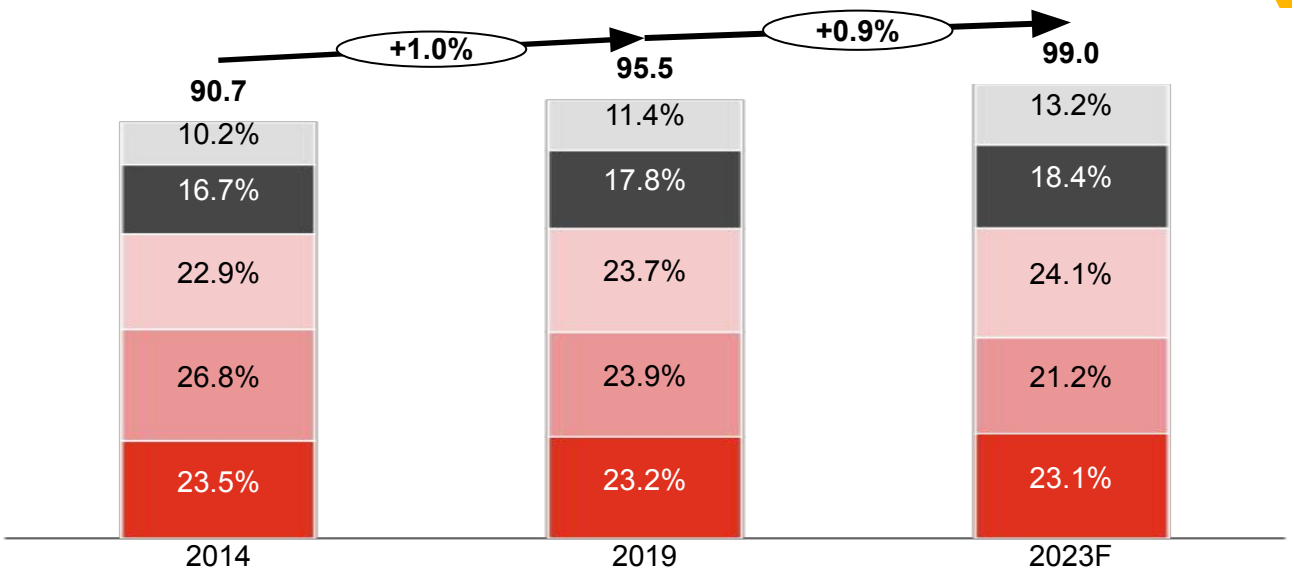
Where is Vietnam in this quantum leap?

An ageing population, an emerging middle and affluent class, and an increasing burden of chronic diseases reflect demographic shifts and societal changes in Vietnam relevant to the healthcare sector. These trends are driving up the demand for long-term care. Additionally, access to middle-class comforts is both fueling increasing demand for more health options and resulting in more sedentary lifestyles that will inevitably lead to greater incidences of obesity, diabetes, and other costly, chronic health conditions.

Vietnam's population has been ageing rapidly, with the proportion of the population that is 60 years and above increasing at the fastest rate (nearly 5% since 2014). This demographic trend is increasing complications associated with morbidity and mortality, especially chronic non-communicable diseases, among the higher age groups.

Vietnam population by age group

2014-2023f, Million people



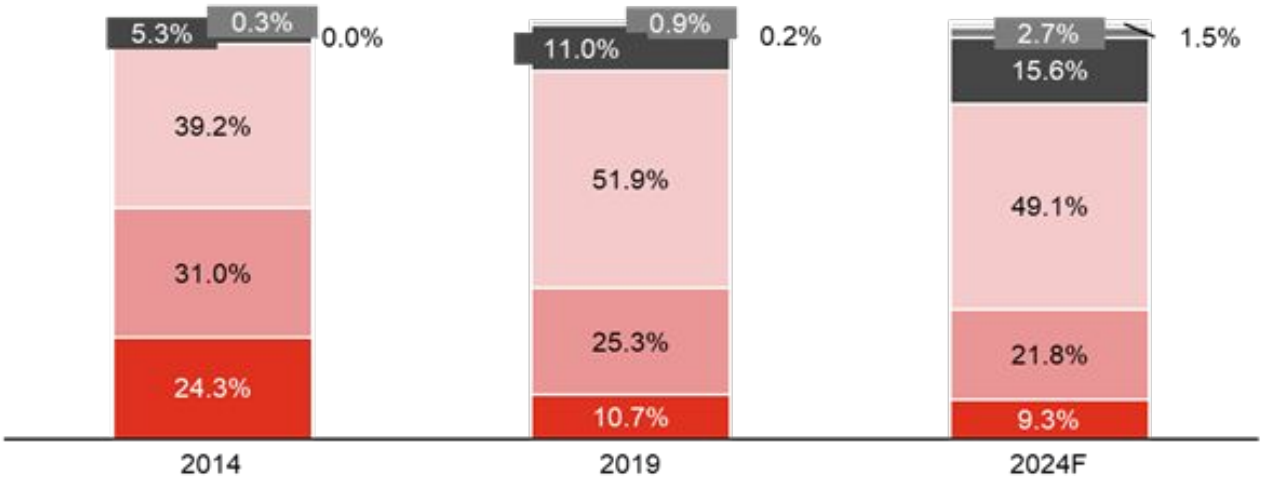
Vietnam's middle and affluent class has also grown significantly in recent years. Households with annual incomes at or above USD13,450 are expected to make up nearly 20% of the population by 2024, up from 12% in 2019.

CAGR	0-14	15-29	30-44	45-59	60+
'14-'19	*1.2%*	*-1.9%*	*1.5%*	*2.1%*	*4.8%*
'19-'23	*0.4%*	*-1.6%*	*1.1%*	*1.2%*	*3.7%*

Source: GSO, Euromonitor, PwC Research & Analysis

Household income bracket distribution

2014-2024f, %



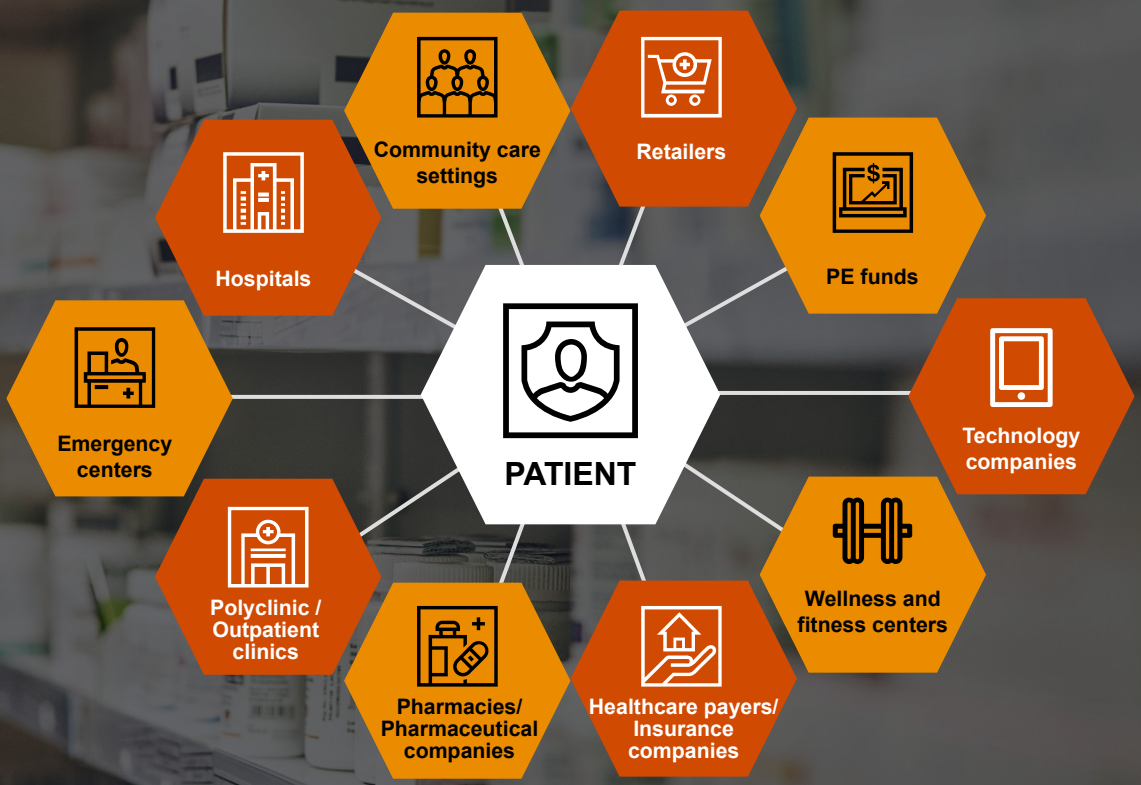
Annual household income (current price)

	Group	VND	USD*
High income	A	1,962 million and above	84,066 and above
	B	784.8 – 1962 million	33,626 – 84,066
	C	313.9– 784.8 million	13,450 – 33,626
Middle income	D	117.7 – 313.9 million	5,044 – 13,450
Low income	E	58.9 – 117.7 million	2,522 – 5,044
	F	0 – 58.9 million	0 – 2,522

Source: GSO, Euromonitor, PwC Research & Analysis

These wealthier income groups typically demand a higher quality of healthcare examination and treatment, as well as more sophisticated, convenient, transparent, affordable, and personalised services. These groups also have access to much wider care options, i.e., in hospitals and alternative sites of care (e.g., fitness centres, retail clinics, the workplace, alternative clinics, or home), either domestically or abroad, via offline or virtual channels, etc. This is opening the door for new entrants from other industries, which are together creating a larger health ecosystem in addition to traditional settings (i.e., hospitals and doctor clinics), with patients at the core (Figure 2). The global shift away from fragmented care to integrated models in which organisations, communities and social care providers coordinate their services, with patients as active partners in their health across the continuum, is also occurring in Vietnam.

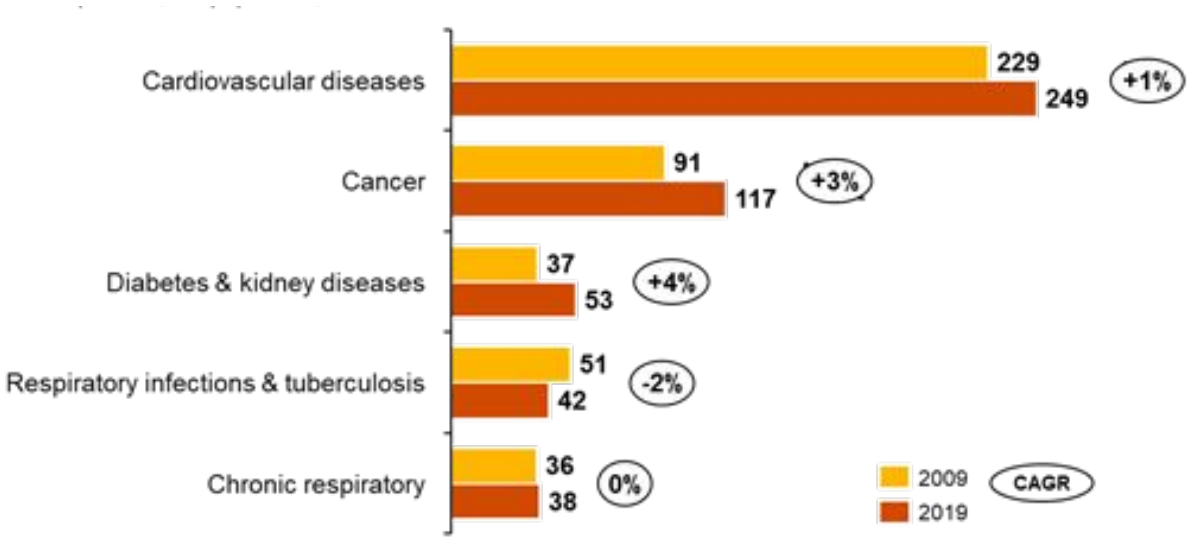
Figure 2: Players in the healthcare ecosystem



The ageing population, the emergence of the middle and upper-middle class, and increasing pollution from both urbanisation and industrialisation have increased health complications and associated stresses on the healthcare system. Four out of five leading causes of death in Vietnam are non-communicable diseases. Deaths from cardiovascular diseases and cancer account for approximately 55% of total deaths in all age groups, while this figure for the population aged 70 or more years is nearly 60%. These and other negative health indicators show marked increases from 2009 to the present.

Top 5 causes of deaths

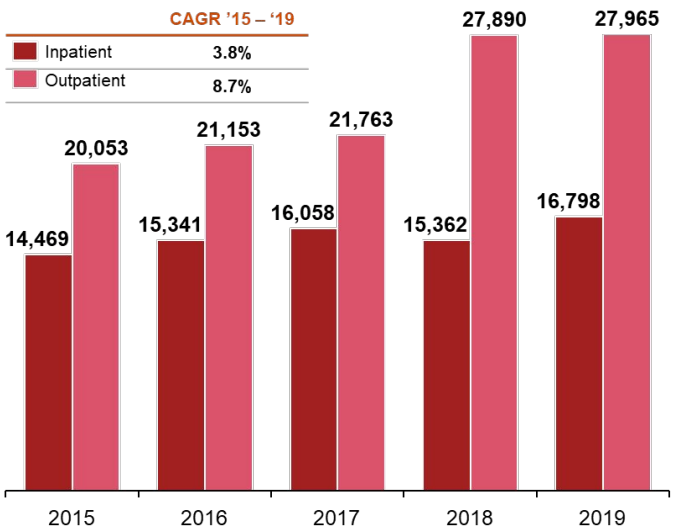
Deaths per 100,000 population, 2009 - 2019



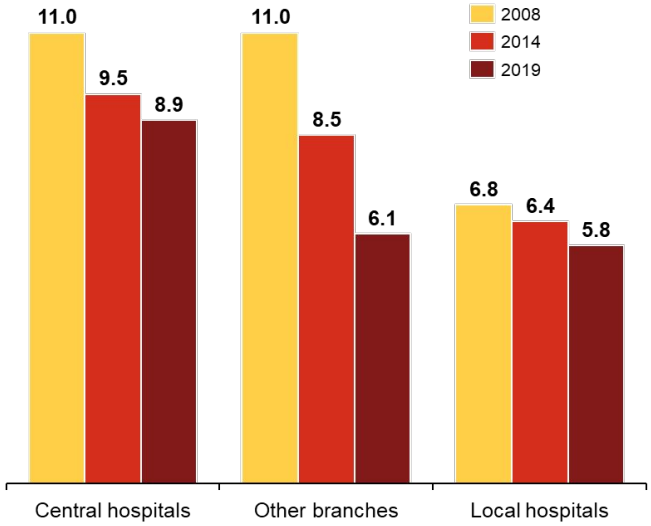
Source: Healthdata, PwC Research & Analysis

Another shift in Vietnam, particularly related to care delivery, is driven by increasing awareness of a more comprehensive view of wellness, and a focus on prevention and early diagnostics. This is, in particular, in response to increasing chronic NCDs, and the implementation of additional technological supports, and availability of additional care options beyond traditional institutional care (hospitals/ outpatient clinics). Throughout our recent in-market experience, we have seen that patients are increasingly seeking care outside of traditional hospitals, taking more initiative for self-care (by using teleconsultation services, wearable devices, lifestyle tracking, and other means), as well as requesting both home care services and community-based care (e.g., elderly homes, rehabilitation centres, etc.). Over roughly the past decade, the average time spent in the hospital has gradually decreased, while the gap between inpatients and outpatients has gradually widened. This is driven by both improved treatment quality in hospitals, and the availability of post-acute settings (e.g., post-surgery/ICU care) with which patients can choose to be cared for at home, or in rehabilitation centres. This trend is expected to continue, especially after the collective experience of the Covid-19 pandemic. The pandemic has hastened the move to preference for out-of-hospital care. Patients have realised the availability and benefits of alternative care options, as well as access to virtual tools during the pandemic. This trend likely will continue as patients gain access to such channels, enabling more flexibility in their comprehensive care management.

Number of inpatients and outpatients
2015-2019, Thousand people



Average length of stay
By level, days



Source: GSO, PwC Research & Analysis

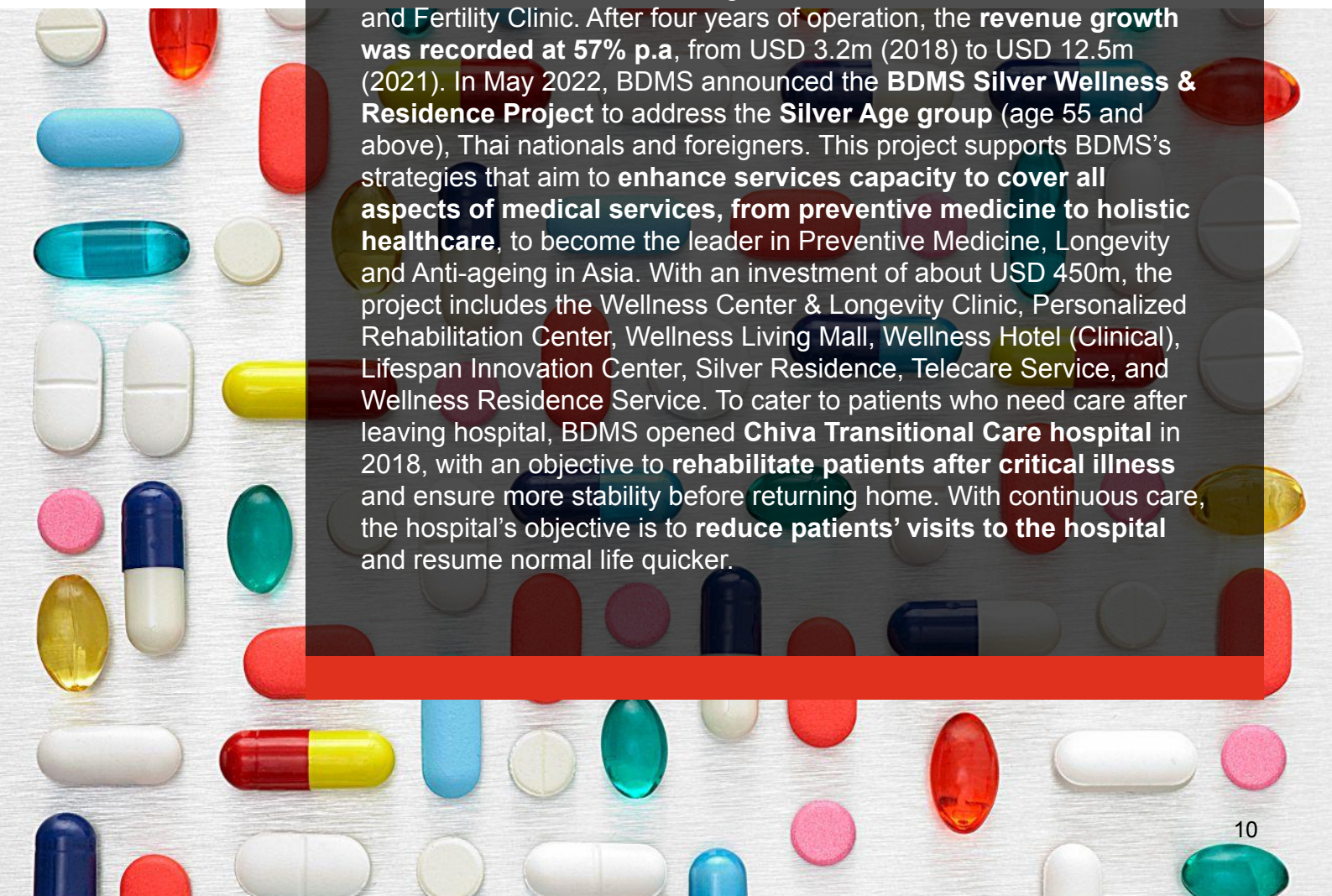
Given evolving care models, both partnership and collaboration have shifted from optional to imperative. There are various forms of collaboration for Vietnam's healthcare stakeholders to consider

Partnership and collaboration between stakeholders in the healthcare ecosystem are keys for them to stay tuned in the fast-evolving healthcare industry, and to continue to stay relevant and successful within the wider ecosystem. In a broader context, collaboration to create a more connected healthcare ecosystem for all stakeholders will help to ensure success and sustainability throughout the industry.

01

Hospitals' targeting of organic growth and horizontal integration: As patients are looking for a more integrated care model, hospitals with a traditional acute care focus can consider diversifying their range and mode of services, to establish separate facilities specialising in pre-acute/pre-hospital care, (e.g., clinics for consultation and diagnostics services, including teleconsultation); as well as services catering to later in the care continuum, to offer post-acute care, (e.g., elderly homes, rehabilitation centres, home care services, post-surgery care, palliative/end-of-life care, etc.). This move could enable hospitals to acquire patients earlier in the care continuum, and to increase patient retention by enabling them to manage the care process more comprehensively. Hospitals may choose to expand organically, or via acquisition or strategic partnerships, especially in the areas that are traditionally not covered by hospitals such as teleconsultation and mHealth, wellness services, home care, and palliative care.

Case study of BDMS (Bangkok Dusit Medical Service), Thailand: The biggest private hospital in Thailand in terms of network and revenue, BDMS currently consists of 49 hospitals in Thailand and Cambodia. In 2018, BDMS started a wellness business, by launching a dedicated **wellness clinic** for regenerative and preventive medicine in Bangkok. The preventive medical centre has seven specialised clinics: Regenerative Clinic, Neuroscience Clinic, Musculoskeletal and Sports Clinic, Cardioscience Clinic, Digestive Wellness Clinic, Dental Clinic, and Fertility Clinic. After four years of operation, the **revenue growth was recorded at 57% p.a**, from USD 3.2m (2018) to USD 12.5m (2021). In May 2022, BDMS announced the **BDMS Silver Wellness & Residence Project** to address the **Silver Age group** (age 55 and above), Thai nationals and foreigners. This project supports BDMS's strategies that aim to **enhance services capacity to cover all aspects of medical services, from preventive medicine to holistic healthcare**, to become the leader in Preventive Medicine, Longevity and Anti-ageing in Asia. With an investment of about USD 450m, the project includes the Wellness Center & Longevity Clinic, Personalized Rehabilitation Center, Wellness Living Mall, Wellness Hotel (Clinical), Lifespan Innovation Center, Silver Residence, Telecare Service, and Wellness Residence Service. To cater to patients who need care after leaving hospital, BDMS opened **Chiva Transitional Care hospital** in 2018, with an objective to **rehabilitate patients after critical illness** and ensure more stability before returning home. With continuous care, the hospital's objective is to **reduce patients' visits to the hospital** and resume normal life quicker.



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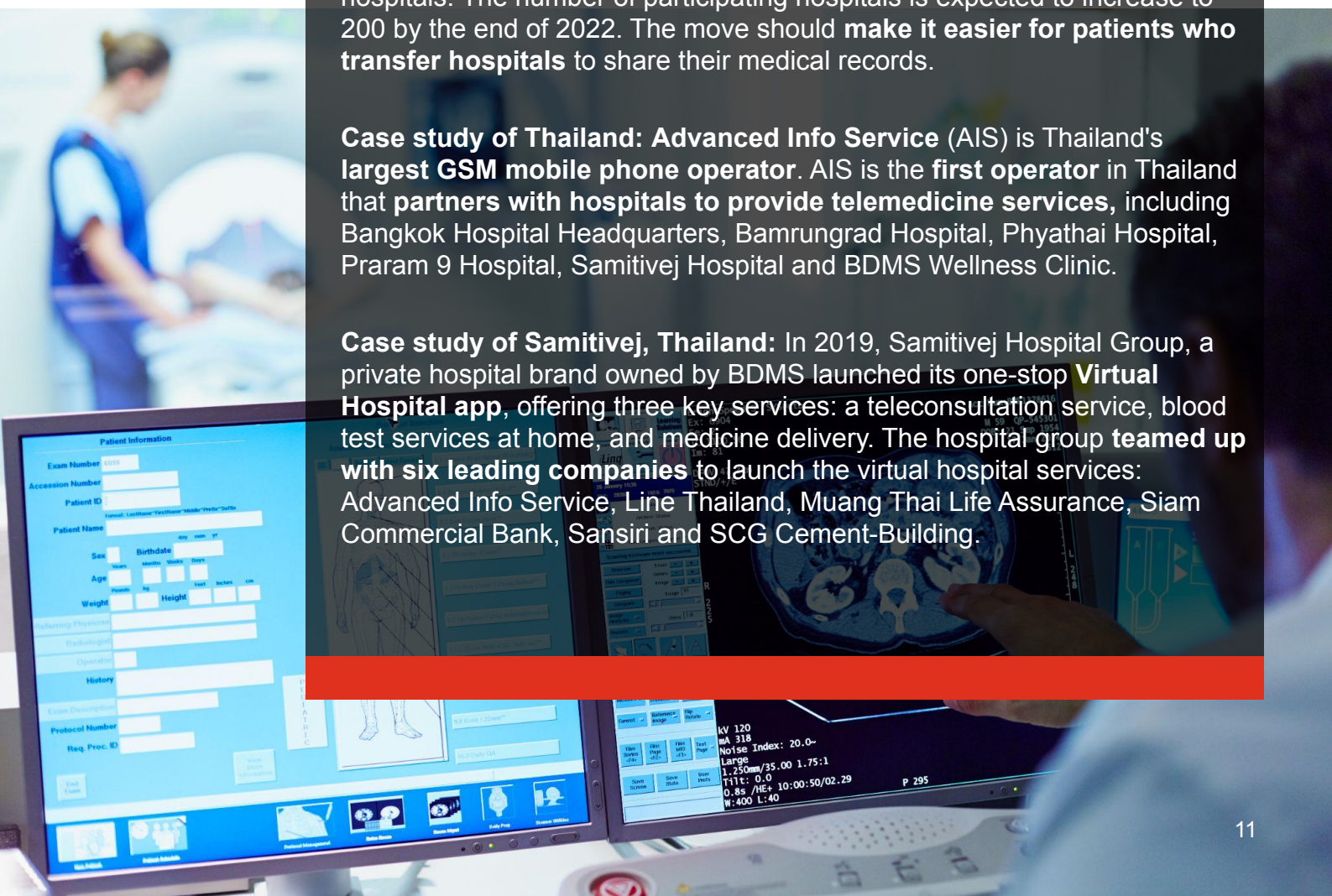
Hospitals, technology companies and the government may collaborate to transform care delivery: Artificial intelligence, telehealth, virtual reality, and other health technologies are more commonplace in developed markets, though they are in a development stage within Vietnam. Virtual care, telemedicine, virtual surgery, AI-assisted test analysis, connected care teams, robot-assisted surgery, data-driven and evidence-based care are all reforming the future of care delivery. To adopt these technologies successfully, and to bring greater value to patients, hospitals cannot transform in siloes. Patient data should be more connected, shared, and protected. Currently, one hospital cannot acquire all patient data without coordinating with many other stakeholders, including healthcare technology companies, clinic providers, and national government databases. Hospitals generally also lack expertise, resources, and robust infrastructures to manage digital healthcare. At the same time, health tech companies cannot grow without leveraging hospitals' patient pools for customer referral. While hospitals and tech companies may form a symbiotic relationship with mutual benefits, the government can also play a role in encouraging collaboration, by staying up to date on technology advances and creating a regulatory environment that encourages and rewards this type of collaboration. This will require governments to break down silos that prevent innovation from flowing between players, in both regulated and non-regulated (e.g., prevention and wellness) sectors of the healthcare industry.

Case study of Thailand: National Telecom (NT) joined forces with the Government Big Data Institute (GBDi) to launch a **"Health Link" centralised platform to gather patients' records from around 100 hospitals**. Participating hospitals can access patient history data from other hospitals. The number of participating hospitals is expected to increase to 200 by the end of 2022. The move should **make it easier for patients who transfer hospitals** to share their medical records.

Case study of Thailand: Advanced Info Service (AIS) is Thailand's **largest GSM mobile phone operator**. AIS is the **first operator** in Thailand that **partners with hospitals to provide telemedicine services,** including Bangkok Hospital Headquarters, Bamrungrad Hospital, Phyathai Hospital, Praram 9 Hospital, Samitivej Hospital and BDMS Wellness Clinic.

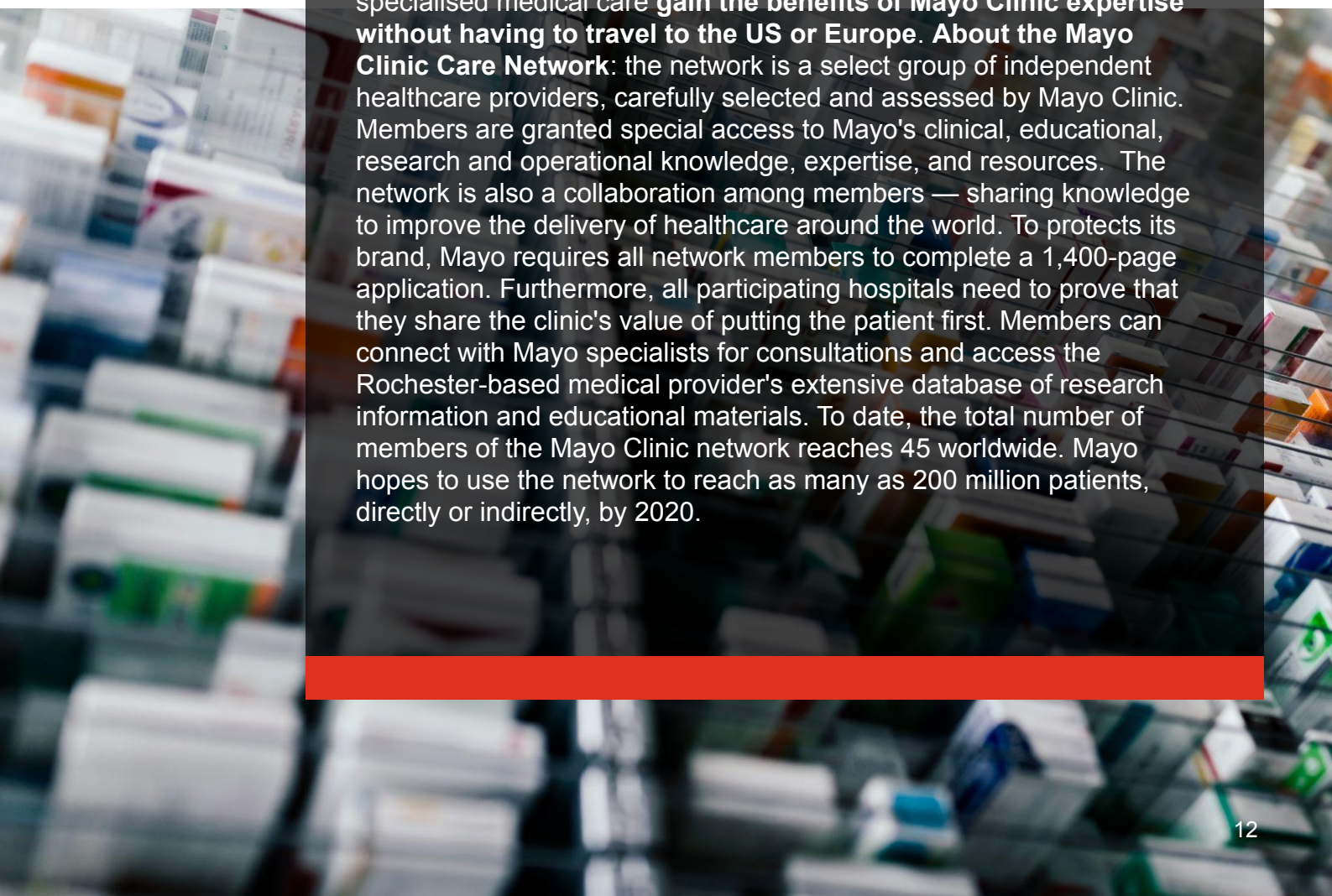
Case study of Samitivej, Thailand: In 2019, Samitivej Hospital Group, a private hospital brand owned by BDMS launched its one-stop **Virtual Hospital app**, offering three key services: a teleconsultation service, blood test services at home, and medicine delivery. The hospital group **teamed up with six leading companies** to launch the virtual hospital services: Advanced Info Service, Line Thailand, Muang Thai Life Assurance, Siam Commercial Bank, Sansiri and SCG Cement-Building.



03

Local hospitals (both public and private) **can consider partnering with foreign hospitals** with well-established brands, to collectively deliver consumer-centred healthcare. While the former can take advantage of the latter's reputation and expertise, especially in the specialties in which is looking to expand; the foreign hospital can benefit by leveraging the local hospital's network and local patient pool. The local hospital can also leverage the foreign hospital's brand to gain and improve patients' trust. One model that has been in place in the market is the local hospital becoming a flagship hospital of the foreign counterpart, which could be internationally accredited (e.g., Joint Commission International - JCI). The local hospital could adopt a set of criteria required by the foreign hospital, while the foreign hospital could also send doctors on a periodic basis and provide training for the local hospital's medical and non-medical staff. In Vietnam, the American International Hospital (AIH) signed a collaboration agreement with Johns Hopkins Medicine International (JHI) in 2019. Accordingly, AIH has received consultancy and knowledge sharing from JHI for clinical training and operations. John Hopkins supports and advises AIH on patient safety, clinical care, clinical operation, infection control and international patient referrals. This type of collaboration can be replicated and adopted by other healthcare providers in the market.

Case study of Mayo Clinic and American Hospital Dubai, UAE: In 2016, Mayo Clinic added its first Middle East hospital to its healthcare network – American Hospital Dubai. The collaboration aimed to **help people in the UAE and the Middle East** who required highly specialised medical care **gain the benefits of Mayo Clinic expertise without having to travel to the US or Europe**. **About the Mayo Clinic Care Network**: the network is a select group of independent healthcare providers, carefully selected and assessed by Mayo Clinic. Members are granted special access to Mayo's clinical, educational, research and operational knowledge, expertise, and resources. The network is also a collaboration among members — sharing knowledge to improve the delivery of healthcare around the world. To protects its brand, Mayo requires all network members to complete a 1,400-page application. Furthermore, all participating hospitals need to prove that they share the clinic's value of putting the patient first. Members can connect with Mayo specialists for consultations and access the Rochester-based medical provider's extensive database of research information and educational materials. To date, the total number of members of the Mayo Clinic network reaches 45 worldwide. Mayo hopes to use the network to reach as many as 200 million patients, directly or indirectly, by 2020.



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