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Hong Kong Institute of Asia-Pacific Studies  
The Chinese University of Hong Kong

**POLICY  
RESEARCH**  
*Report*  
政策研究報告

# Building a Sustainable Healthcare System for Hong Kong

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# 1 Introduction

## Background

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On 12 January 2022, the Government of the Hong Kong Special Administrative Region announced a proposal to restructure its policy bureaux as of 1 July 2022, the beginning of the government's new term. The Food and Health Bureau would be renamed the Health Bureau, and revamped to focus on medical and health policies. Apart from implementing ongoing projects and policies, the task of the restructured policy body is to ensure the sustainable development of the public healthcare system and to support the development of industries in such aspects as public health strategies, health technology, the research and development of drugs, and medical manpower (The Government of the Hong Kong Special Administrative Region, 2022b). Many problems in the healthcare system are not new and the urgency to ensure adequate preparedness and appropriate responsiveness from the healthcare services in Hong Kong had become obvious during the pandemic.

As a response, the idea of publishing a book on “building a sustainable healthcare system for Hong Kong” was conceived by the convenors of this Policy Forum. A call for chapters was initiated before the beginning of the new term of governance. It was then decided to organize a forum, initially planned to be held in October 2022, to collect views from potential contributing authors, and academic and professional experts. However, an opportunity arose when The Chinese University of Hong Kong (CUHK, the University) was inviting proposals to stage events to celebrate its

60th anniversary. The Hong Kong Institute of Asia-Pacific Studies (HKIAPS, the Institute) submitted a plan to organize an event in July 2023 lasting one and a half days. Two non-local experts would be invited to present the keynote speeches, together with Dr the Honourable David T. Y. Lam, an alumnus of the University, and elected representative of the Medical and Health Services functional constituency in the Legislative Council. The application was approved by the University and the work of planning the Forum began in February 2023. An organizing committee (the Committee) was set up with secretariat support from the Institute. The Committee decided to adopt the title of the proposed book as the theme of the policy forum.

## **Global Actions in Healthcare**

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In 1978, the World Health Organization (WHO) proposed “Health for All by the Year 2000” in its historical Declaration of Alma-Ata, thereby setting a global agenda for the development of primary healthcare in all countries, with the aim of achieving universal health coverage (World Health Organization, 1981). The subsequent Ottawa Charter in 1986 was regarded as a milestone in global health, with a reference framework for health promotions, involving the formulation of five key actions and three basic strategies to pursue the WHO’s policy of “Health for All” (World Health Organization, 1986). In 2005, the Bangkok Charter for Health Promotion in a Globalized World was adopted. It comprised four key commitments in promoting health, namely, central to the global development agenda, a core responsibility for all of government, a key focus of communities and civil society, and a requirement for good corporate practice (World Health Organization, 2005).

In 2015, the United Nations advocated a significant world strategy by drawing up 17 Sustainable Development Goals (SDGs) and specific targets for the respective SDGs (United Nations, n.d.).

One goal concerns good health and well-being, SDG3, which was echoed by Professor Michael Kidd in his keynote address. In the following year, the Shanghai Declaration of 2016 further illustrated directions to take in promoting health in the 2030 Agenda for Sustainable Development (World Health Organization, 2016). Then, in 2018, the Declaration of Astana was passed at the Global Conference on Primary Health Care with the aim of refocusing efforts on primary healthcare to ensure that everyone everywhere will be able to enjoy the highest possible attainable standard of health (World Health Organization, 2018).

## Building a Sustainable Healthcare System for Hong Kong

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Since the White Paper of 1974, a series of consultation documents on steering reforms in the local healthcare system have been released by the government of Hong Kong (Health Bureau, 2023). Then, in 1985, the Scott Report on the delivery of medical services in hospitals resulted in the establishment of a statutory body, the Hospital Authority, in 1990 to manage all public hospitals. At the same time, the *Report of the Working Party on Primary Health Care* was released in 1990, and almost 30 years later the first District Health Centre was opened. The Harvard Report, *Improving Hong Kong's Health Care System: Why and For Whom?* in 1999 was a major review of the financial sustainability of the healthcare system. It came after the 1993 release of the government's own paper, *Towards Better Health: A Consultation Document* known as the *Rainbow Document*, drawn up by the then Health and Welfare Branch. Since then, five more official papers on the future of the healthcare system has been produced by the government, namely:

1. *Lifelong Investment in Health* (2000);
2. *Building a Healthy Tomorrow* (2005);



3. *Your Health Your Life: Healthcare Reform Consultation Document* (2008);
4. *Primary Care Development in Hong Kong: Strategy Document* (2010); and
5. *My Health My Choice: Healthcare Reform Second Stage Consultation Document* (2010).

Officially, the healthcare reform was launched in 2008 after the release of the consultation document, *Your Health Your Life*. The government started to invest substantially in healthcare infrastructure (The Government of the Hong Kong Special Administrative Region, 2008). The Primary Healthcare Office was set up in 2019 (Health Bureau, 2022b). Projects involving public-private partnerships were launched to foster cross-sector delivery of healthcare services, and to share electronic health records. Regarding the reform of healthcare financing arrangements, a public consultation document, *Consultation Document on Voluntary Health Insurance Scheme*, was published in 2014. The Voluntary Health Insurance Scheme (formerly called the Health Protection Scheme) was launched in April 2019 (Health Bureau, 2022c).

In the 2017 Policy Address, the Chief Executive proposed to set up a District Health Centre with a brand new mode of operation in Kwai Tsing District within two years, to further illustrate the effectiveness of medical-social collaboration in primary care for the community (Lam, 2017). The Steering Committee on Primary Healthcare Development was established by the then Food and Health Bureau in November 2017 to formulate the development strategy and devise a blueprint for primary healthcare services. The Primary Healthcare Blueprint (Health Bureau, 2022a) was released on 19 December 2022 by the revamped Health Bureau to address the software and systemic aspects of our healthcare system, in terms of service delivery, governance, resources, manpower, and technology, and to map out the next steps towards establishing a primary healthcare system that can improve the overall health of the

public and enhance their quality of life. In launching the Blueprint, the Secretary for Health expected to develop an effective and sustainable system capable of supporting each and every citizen in Hong Kong in the decades to come and to transform Hong Kong into an even healthier society. The WHO has made it very clear that strong primary healthcare is an essential component of universal health coverage. Dr Libby H. Y. Lee, Under Secretary for Health, in her Opening Address at the Forum, indicated that since the 1980s the government has been studying and suggesting various reforms to make the healthcare system more sustainable. Different challenges were encountered at different times, but there is a desperate need for Hong Kong to find a way to sustain the local healthcare system. This is because sustainability is crucial to upholding the principle and long-time policy that no one will be denied adequate medical treatment due to a lack of means.

## **The Policy Forum**

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The Policy Forum was designed to focus on four selected areas crucial to building a sustainable healthcare system for Hong Kong, namely, the sustainability of healthcare systems; public health crises; capacity building in primary healthcare; and financing sustainable healthcare systems. Three keynote speeches were delivered, the contents of which were decided by the speakers, Dr the Honourable David T. Y. Lam, Professor Michael Kidd, and Professor Eleanor Holroyd, who is a former colleague at the Nethersole School of Nursing of the University. The Policy Forum was built on the theme of the 60th anniversary of CUHK, “where great minds shine,” and prominent academic and professional colleagues did indeed shine their great minds when sharing views and experiences in their respective areas of expertise. The four panel sessions of the Policy Forum were organized along these objectives, which were proposed by the government in relation to the restructuring process.

Inviting speakers, respondents, panellists, and moderators for the four panel sessions was a great challenge. To get the right persons who were available and had the right kinds of expertise and interests demanded careful and open communication to avoid unnecessary misunderstandings or unfounded expectations. At the same time, a tactful and balanced representation of people from the government, the University, academic and professional disciplines, and local tertiary institutions and professional organizations was achieved when planning the programme for the Policy Forum. Some minor hiccups arose during the process; however, the team was fortunate that everything went well, except for the heavy rain that fell minutes before the start of the programme on the second day. We thank the University, our colleagues at the HKIAPS, and members of the Committee for their support, and various helpers for making the Policy Forum run so smoothly.

All of the speakers, respondents, panellists, moderators, and participants, both at the event venue and online, allowed the Policy Forum to serve as a platform for local researchers, practitioners, and various stakeholders to (i) review and examine the policy gaps in the healthcare system and related services, (ii) discuss state-of-the-art practices, and (iii) recommend strategic policy initiatives to build a sustainable healthcare system for Hong Kong. This event also marked the publication of a new book with the same title as the theme of the Forum, which will promote continued interest and ongoing discussions in the healthcare sector on issues of concern raised during the Policy Forum.

## 2 Transcript

Date: 28–29 July 2023

Venue: Cho Yiu Conference Hall, CUHK & Zoom

### Welcoming Address

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#### Professor Rocky S. Tuan

The theme of today's conference is building a sustainable healthcare system for Hong Kong. As we all know only too well, the COVID-19 pandemic has been an unprecedented and loud wake-up call to the world about the urgent need to ensure adequate preparedness and appropriate responsiveness from the healthcare system and its services. In the face of a rapidly ageing population and the consequent greater demand for healthcare services, the issue of sustainability is of critical importance. One year ago, the Government of the Hong Kong Special Administrative Region restructured the Food and Health Bureau into the Health Bureau. Against this backdrop, the aims of this forum are, first, to review and examine the policy gaps in the healthcare system and related services; second, to discuss state-of-the-art practices; and third, recommend strategic policy initiatives to build a sustainable healthcare system for Hong Kong, including capacity building in primary healthcare and financing sustainable healthcare systems.

## Opening Address

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**Dr Libby H. Y. Lee**

The theme of the forum today is building a sustainable healthcare system for Hong Kong. In fact, the government has been studying and suggesting various kinds of reforms to make our healthcare system more sustainable and serve all of our people since the 1980s. Different challenges were there at different times; we desperately need to find a way out to sustain our healthcare system.

As the WHO has made loud and clear, primary healthcare is an essential component of universal health coverage. But is this a one-size-fits-all approach? Most importantly, does it fit Hong Kong? As a small and cosmopolitan city, we are ageing, and ageing very quickly. We are not unaware of the importance of disease prevention. The Hospital Authority provides highly subsidized services, and our government pays for more than 95% of these services. It goes without saying that sustainability is a real issue to us because we uphold the principle that no one will be denied services because of a lack of means.

One way to achieve sustainability could be to make people healthier, more health conscious, and less dependent on healthcare services. Staying healthy in the community by preventing diseases, detecting them earlier, and delaying complications has become the main focus during this term of the government. We released the Primary Healthcare Blueprint in December last year, which sets out the directions for the reform of our healthcare system: namely, changing from a treatment-oriented mindset to a prevention-focused, community-based, and family-centred culture. The major difference between this reform as compared to previous work is that we have invested in and are committed to establishing the required infrastructure and governance, with the aim of achieving both horizontal and vertical collaboration.

We are testing the whole model through a programme called the Chronic Disease Co-Care Scheme, which Dr Stephen Pang is currently occupied with. First, with regard to the infrastructure, we are working on the Primary Healthcare Commission, with the aim of making it a statutory body by the end of next year. This statutory body will oversee the development of primary healthcare services in Hong Kong, set the standard of services, steer the modelling of primary healthcare services, and develop primary healthcare practitioners. The second structure is the formation of the Strategic Purchasing Office. Through this office, we could mobilize the resources in the community, namely the private sector, to support primary healthcare for our citizens, especially in the direction that best suits the public. District Health Centres are the third piece of infrastructure. We have set up District Health Centres or District Health Centre Expresses in all districts of Hong Kong, i.e., 18 districts. We are continuously revamping and re-engineering the function of these centres. They serve as hubs for collaboration or coordination, with multiple access points. These centres in the community link resources in the community, such as healthcare services and social care services. This is what is called horizontal collaboration. A multidisciplinary care approach will be adopted to complement private family physicians. With the concept of a family doctor for all (i.e., every individual has their own family doctor), we believe that people would be better supported in the community and receive more optimal care.

Therefore, our first programme, a co-pay scheme, is the Chronic Disease Co-Care Scheme, which will be implemented this financial year. This is a programme to help individuals regain ownership of their own health based on a clinical protocol agreed upon by field experts. This is very important because we strongly believe in evidence-based medicine and practice in primary healthcare in Hong Kong. This is also a programme aimed at mobilizing private services to support the participants. Therefore, any Hong

Kong citizen aged 45 or above without a history of diabetes or hypertension will be eligible to participate in this programme. There are two parts to the programme: the first is screening for diabetes and hypertension. Participants could approach any of our District Health Centres or interim District Health Centre Expresses and then obtain nursing assessments. They would then be matched with a family physician of their preference, be seen by the doctor, and undertake blood tests. We aim to charge a one-off low fee for such a screening, so that patients will need to pay for this service, but will also be subsidized by the government. If, unfortunately, participants are then diagnosed with diabetes, hypertension, or pre-diabetes, they will then undergo treatment, which includes a number of subsidized medical consultation sessions and free basic drugs, as well as multidisciplinary services, health education, and lifestyle modifications. This system is also in place to encourage both doctors and patients to achieve a good outcome and adopt good health behaviours. Should any patients require secondary care, following the referral criteria in the clinical protocol, they could be referred to the public secondary care sector for a one-off consultation lasting one session, to formulate a care plan. The patients then will be referred to their own family physician to follow up with the plan in order to continue their care. This is a vertical collaboration approach, so this bilateral referral is particularly important in this programme. We look forward to the implementation of this programme, mainly because this is a test drive for a collaborative model that we hope can be adopted for other diseases, such as hepatitis.

We understand that one dramatic step in reforming the healthcare system might not be favourable to Hong Kong. We will try to break the process of reform down into many minor steps and invite all stakeholders to work together with us for a sustainable healthcare system.

## Keynote Speeches (Day 1)

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### *Keynote Speech 1*

#### **Three Critical Elements of Sustainable Healthcare**

**Dr the Honourable David T. Y. Lam**

I am going to talk about three critical elements that may affect the sustainability of our healthcare system in Hong Kong, and those three areas that I am particularly concerned about are talent, facilities, and financing. And of these three, talent is probably the most pressing of all. We understand that we have an ageing population but not only that, we do not have enough students and our birth rate is going down so our population has been shrinking in the past two or three years and is expected to continue to shrink. As for facilities, luckily enough we do have the resources and the money to build more facilities in Hong Kong, except that our facilities in the Hospital Authority seem to be falling apart in the past couple of months because they are ageing hospital buildings. It is kind of a common concept in that we do not have sufficient facilities in terms of hospital beds, operation rooms, and scanners. Now, as for financing, that is a big issue. We tried several times to revamp it but with very little success. And cost inflation is not only happening because we have an ageing population, but because individual patients have high expectations and more advanced technology comes with a higher price tag and we are over-reliant on subsidized or heavily subsidized public healthcare. Of course, as to our medical insurance, I am sorry to say that Hong Kong medical insurance is not really delivering.

Now let us just talk about the first segment: the talents. We have roughly 2.10 physicians per thousand population, and this figure has been widely promoted to be one of the lowest in developed areas of the world. And we have another 1.42 Chinese medicine practitioners



Table 1.1: Health manpower, 2021

Type of professional	Number of persons	Per 1,000 population
Physicians	15,546	2.10
Chinese medicine practitioners	10,535	1.42
Dentists	2,706	0.37
Nurses	64,026	8.64
Pharmacists	3,181	0.43
Occupational therapists	2,783	0.38
Physiotherapists	3,954	0.53
Optometrists	2,273	0.31
Radiographers	2,673	0.36

Notes: Figures are as at end of the year. Chinese medicine practitioners with limited registration are not included.

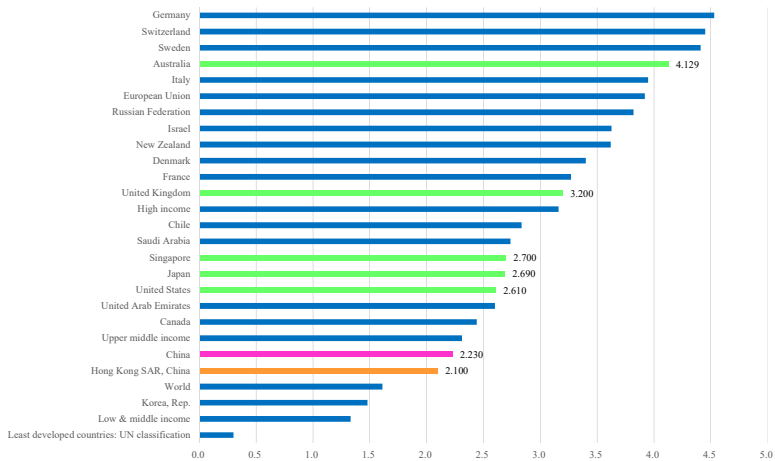
Source: Census and Statistics Department (2022, pp. 4, 390–391).

per thousand of the population, so there is some leeway as to how we should use our other talents, especially in primary healthcare. For nurses, we do have 8.64 general nurses per thousand population, and if you count midwives that adds up to nine point something, which is not a very small number (Table 1.1).

This is the number of physicians per thousand population and you can see that we are really low down. But are we really much behind others? If you look at Australia, they almost have double the number of doctors; but if you look at places like Singapore, the difference is not that great, maybe like 25% below, and we have roughly the same number of doctors as the rest of China. Maybe they seem to have more, but that number is not actually true because it also includes the number of Chinese medicine practitioners, so if we add that up, we have three point something, which is not bad at all (Figure 1.1).

Now, what about nurses and midwives? Actually, we are kind of in the middle and better than the United Kingdom even before

Figure 1.1: Physicians per thousand population, 2018–2020



Note: Hong Kong data are as of 2021.

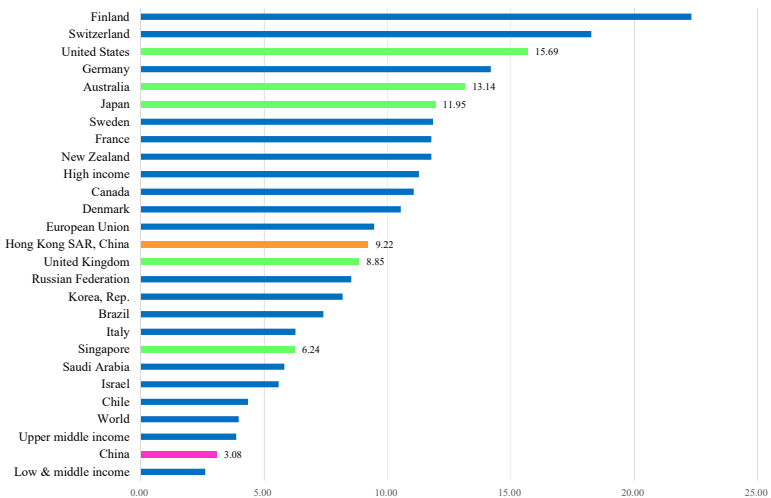
Sources: Census and Statistics Department (2022, pp. 4, 390–391); World Bank (2023d).

their strike, and we have more nurses and midwives per thousand of the population than Singapore. If you look at the rest of China, they have very few fully trained nurses and midwives, but we are now grabbing talents from them including nurses, so that does not make a lot of sense (Figure 1.2).

What about the growth of our healthcare professionals? We see a shrinking of the population hereafter, but before 2020 our population was still rising, and rising pretty steadily, at about 0.75% per year. As for doctors, for the first five years starting from 2011, we saw a 2.0% increase in the number of doctors per year, and for the next five years it was 2.5% (Figure 1.3), and it is steeper even today, so we have more doctors. Apparently, we are catching up.

But then what about the ageing of our population? In 1988, the median age of the Hong Kong population was 29.9; in 2018 when I was 52, the median age in Hong Kong was 45.3. If you look at the bars in Figure 1.4, the pink parts represent the segment of the

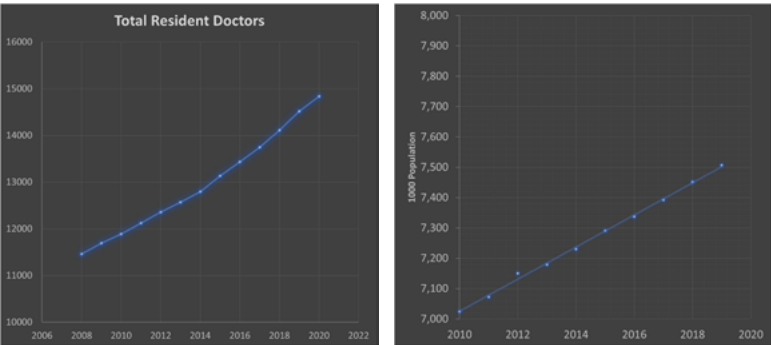
Figure 1.2: Nurses and midwives per thousand population, 2017–2020



Note:      Hong Kong data are as of 2021.

Sources: Census and Statistics Department (2022, pp. 4, 390–391); World Bank (2023c).

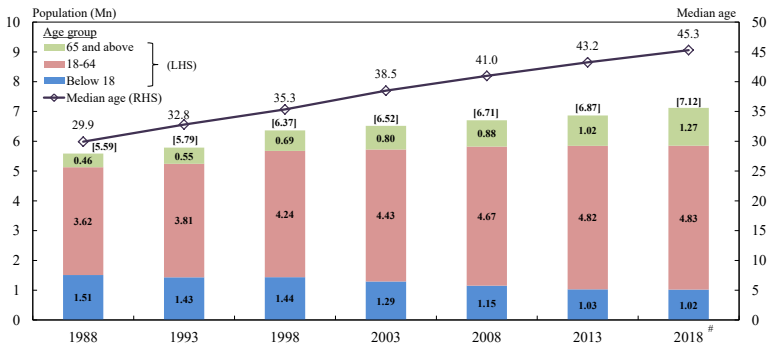
Figure 1.3: Growth of total resident doctors, 2008–2020



Notes:      Mean growth rate: 2011–2015: 2.0% p.a.; 2016–2020: 2.5% p.a.  
                 Mean population growth rate for last 5 years: 0.75%.

Source:      Department of Health (various years).

Figure 1.4: Total population and its growth, 1988–2018



Notes: # denotes provisional figures.  
 Figures in square brackets denote the total population.  
 Mid-year population figures, excluding foreign domestic helpers.  
 Source: Wong & Yeung (2019, p. 2).

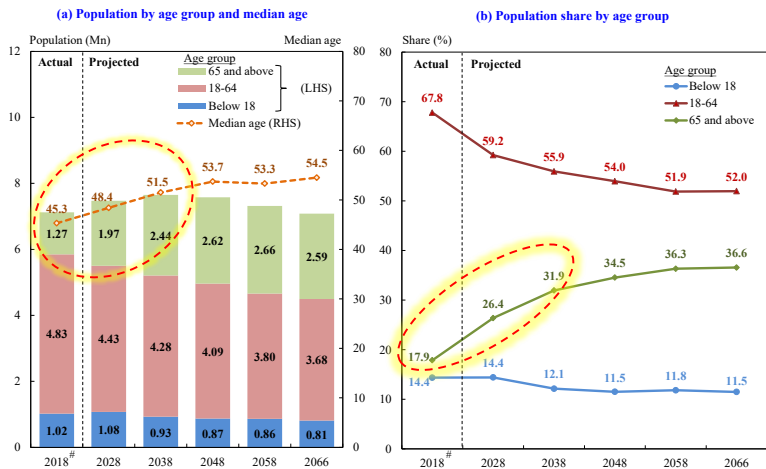
population who were between 18 and 64 years old. It is not really increasing a lot. But if you look, the biggest rise comes in the 65 and above segment and the biggest fall comes in the below 18 segment, which is really worrying.

If you project further from 2018 onwards, we can see that for the next 20 to 30 years we will see a steep rise in the median age of the people of Hong Kong and a steep rise in the proportion of elderly in the Hong Kong population. Thereafter, the increase will moderate, but we are facing about 30 years of the biggest challenge with regard to ageing in Hong Kong (Figure 1.5).

Back in 2018, we had nearly four younger people supporting one elderly person. But 20 years down the road, we will only have 1.83 younger people taking care of one elderly person and that figure will continue to shrink (Figure 1.6).

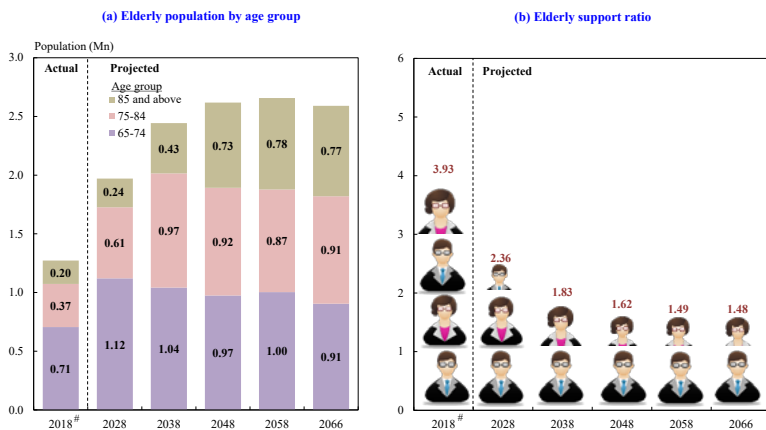
Table 1.2 is the number of births in Hong Kong. For the year 2022, we had roughly 32,500 births in Hong Kong, which is very low. If you compare it to 2019, we had 52,900. So that is a very significant drop.

Figure 1.5: Total population by age group, 2018–2066



Notes: # denotes provisional figures.  
Mid-year population figures, excluding foreign domestic helpers.  
Source: Wong & Yeung (2019, p. 3).

Figure 1.6: Elderly population and elderly support ratio, 2018–2066



Notes: # denotes provisional figures.  
Elderly support ratio refers to the number of persons aged 15–64 per elder aged 65 and above.  
Source: Wong & Yeung (2019, p. 4).

Table 1.2: Number of births and deaths, 2019–2022

Year	Number of births <sup>1</sup>		Crude birth rate (per 1,000 population)	Total fertility rate (per 1,000 female population) <sup>2</sup>	Number of deaths		Crude death rate (per 1,000 population)	Standardized death rate (per 1,000 population) <sup>3</sup>
	('000)	Year-on-year % change			Rate	Year-on-year % change		
2019	52.9	-1.6	7.0	1,064	49.0	+3.3	6.5	7.0
2020	43.0	-18.6	5.8	883	50.7	+3.5	6.8	7.0
2021	37.0	-14.1	5.0	772	51.4	+1.4	6.9	6.9
2022	32.5	-12.0	4.4	701	63.7	+24.0	8.7	8.4

- Notes:
- 1. Figures refer to the total number of live births born in Hong Kong.
  - 2. Figures exclude female foreign domestic helpers.
  - 3. Computed using the age-sex structure of the population at the reference moment of the 2021 Population Census as standard.

Source: Census and Statistics Department. (2024).

What is worse is that our death rate is on the rise. Because of COVID, we might have had more deaths in the year 2022, but we still saw a double-digit increase in the number of deaths in Hong Kong in that year, and then there was a double-digit fall in our birth rate (Table 1.2). When added up, we have a big problem with an ageing population, a shrinking population, a shrinking working force, and a shrinking number of students. If you just think about the number of students in Hong Kong, we now have about 500 locally trained doctors, and 100 locally trained dentists, which adds up to 600 or more, and there are about 3,000 nurses, which makes the number of healthcare professionals 3,600. Then there are a few hundred physiotherapists and occupational therapists, which adds up to 4,000, and then you have other healthcare professionals, so probably about 4,500 or more. But then, 18 years down the road how many students will we have? Thirty-two thousand. We do have a big problem in that we do not have enough students.

Regarding training, we are not doing badly, as we are training about 600 doctors per year and more are going to come, and then we are taking on non-locally trained doctors either by examination or by limited registration or other ways. Then, another thing we are doing is that we are grabbing talents from across the border from the Greater Bay Area, but that number is small: The first year we had approximately 80, including 10 doctors and 70 nurses — that is a tiny fraction of what we have compared to the over 60,000 nurses we have in Hong Kong.

The attrition rate is something we have to consider. We had, for nurses, a 10.7% attrition rate from public hospitals in the past year, which is very high. Because of that, I conducted a survey in 2022 on why people are leaving the Hospital Authority. First of all, the attractions include the ability to manage critical illnesses and emergencies, the opportunity to receive training, and a chance to take care of the underprivileged. But there are disillusionments, such

as a heavy workload in the Hospital Authority, and complaints about the very bad governance of the Hospital Authority.

Now, what are the pull factors for the private market, especially for doctors? The younger generation puts a lot of emphasis on work-life balance. They prioritize work-life balance in each and every segment of their career life, so that is just a little bit different from before. A higher income is also an attraction in the private healthcare sector.

With regard to retention policies, I asked the staff what they think we can do to retain our staff. Interestingly, most of our respondents suggested enhancing public-private partnerships to decrease the work in public hospital settings. They are not looking for a higher salary, more allowances, or any kind of subsidies, but at workload as the major factor that pushed them away from public healthcare. And, of course, there is a paradigm change in work-life balance. We mentioned that the younger generation are slicers.

The government took a different stance: They talked about obligatory public service. I know that is what they are doing in, say, Singapore, but in Hong Kong, it is of course not very welcomed by the younger generation. But in any case, I believe encouragement is better than draconian measures. So the Social Welfare Department is taking a different stance: They are paying for the training tuition fees of enrolled nurses, physical therapists, and occupational therapists. Of course, we welcome talents from abroad.

In summing up this section, I still believe that it is our primary responsibility to nurture our younger generation of healthcare professionals, and we do welcome talents from abroad and also from other parts of China. We have to do a lot to retain our staff, and one very important issue is to enhance the public-private interface or partnerships, so as to reduce the workload in public hospitals. Of course, developing primary healthcare also produces a healthier generation, which helps to drive down the need for hospital care.

Now let us go to the subject of facilities very briefly, as time is



Table 1.3: Health facilities, 2021

Type of facility	Number
Public hospitals and institutions under Hospital Authority	43
Private hospitals	13
Hospitals under correctional institutions	20
Hospital beds in hospitals in Hospital Authority	30,105
Hospital beds in private hospitals	5,147
Hospital beds in correctional institutions	874

Note:     Figures are as at end of the year.

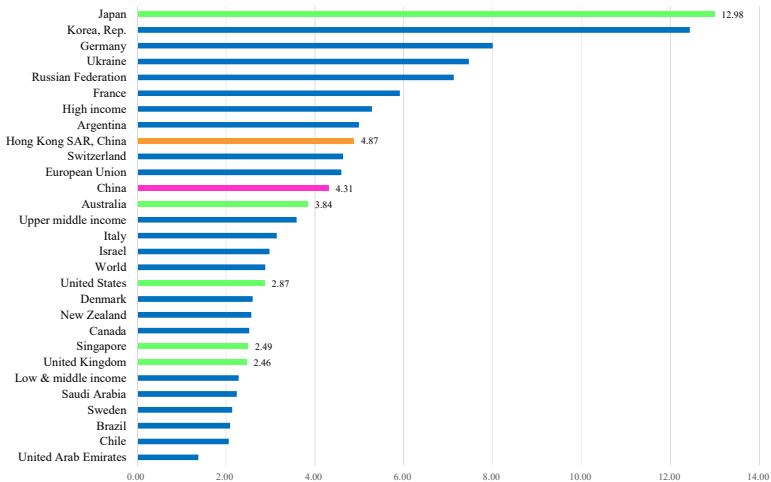
Source:   Census and Statistics Department (2022, p. 393).

running out. We have 43 public hospitals and 13 private hospitals, and the number of hospital beds in public hospitals is around 30,000, while private hospitals have just one-sixth of that figure, so we do not have enough private hospital beds, to be frank (Table 1.3).

There seems to be a general feeling among the public that we do not have enough hospital beds in Hong Kong, but that is not necessarily true. If you look at Japan, they have an exceptionally high number of hospital beds, but then we are not bad at all — at least we stand at the top tier, as we have 4.87 hospital beds per thousand population, better than Australia, the United States of America, Singapore, and the United Kingdom (Figure 1.7). We should think about whether we are actually using our hospital beds prudently or if are we abusing our hospital beds.

If we think that we do not have enough beds, there are two Ten-year Hospital Development Plans. Under those plans, the government is investing a total of 500 billion dollars. At the end of it, we will probably have 9,000 to 10,000 more hospital beds in Hong Kong and 90 more additional operating theatres, and many more hospital beds and capacity for specialist outpatients as well. All in all, we are near the end of the first 10 years that are to come

Figure 1.7: Hospital beds per thousand population, 2014–2019



Note: Hong Kong data are as of 2021.

Sources: Census and Statistics Department (2022, pp. 4, 393); World Bank (2023b).

in 2026. At the end of the second 10 years, we can hope that the increase in capacity should largely meet the projected demand for services up to 2036.

We also have other potential resources, and what I want to emphasize are daycare centres. All around the world, daycare is becoming more and more important, in many cases, exceeding inpatient care. If we invest more in daycare, then of course, our patients can be cared for in a community, and we will need better primary care helpers and primary healthcare services in the community. If we take that route, we will probably need fewer nurses to take care of patients who are staying overnight in hospitals. We want to build a three-dimensional healthcare system: We have to invest in daycare procedures, strategic purchasing, and then in the two Ten-year Hospital Development Plans.

Finally, we come to the issue of financing. As of now, we have

two financing systems in Hong Kong running in parallel with one another. One is a public healthcare financing system and the other is a private healthcare financing system. The public healthcare financing system is a safety net, as it is publicly funded. It is highly subsidized, with 97% of the cost being paid for by public fund. As for private healthcare, it is paid either out-of-pocket or by one's employer, partly by them, or by insurance. As for insurance, there are two types of medical insurance: One is group medical insurance, and the other is individual medical insurance, which can be the Voluntary Health Insurance Scheme under the auspices of the government or a commercial insurance scheme that is basically commercialized and non-subsidized.

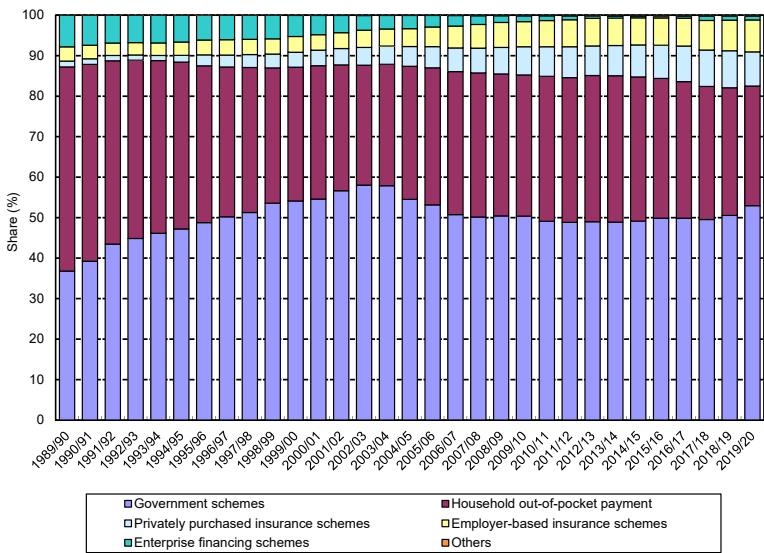
The purple bar in Figure 1.8 represents the portion comprised by publicly subsidized healthcare, while all of the bars above indicate privately-paid healthcare in Hong Kong over the years. Therefore, the two limbs of healthcare financing in Hong Kong have been roughly similar in scale over the years.

Of course, you all know healthcare expenditures are rising: not only overall healthcare expenditures (Figure 1.9), but also per capita healthcare expenditures (Figure 1.10).

In the year 2023–24, 124.8 billion dollars of government expenditures will go towards public healthcare, and another 120 billion dollars to private healthcare. As for the 124.8 billion dollars of public healthcare spending, it accounts for roughly 16% to 17% of the total government expenditure, which is quite expensive (Figure 1.11).

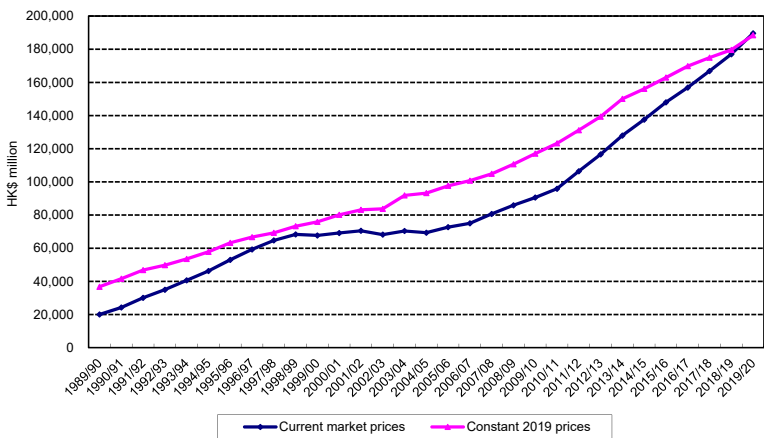
Are we paying a lot for our healthcare? Again, the United States of America stands out as the most expensive place on Earth. As for Singapore, we always compare ourselves to Singapore, as they have a nice financing scheme. But they spend about 2,632 USD per capita per year while we are spending around 3,200, so we are about 22% more expensive than Singapore, which is something, but not a lot (Figure 1.12). But then we do not know the trend: If we are

Figure 1.8: Share of current health expenditure by financing scheme (at current market prices), 1989/90–2019/20 (%)



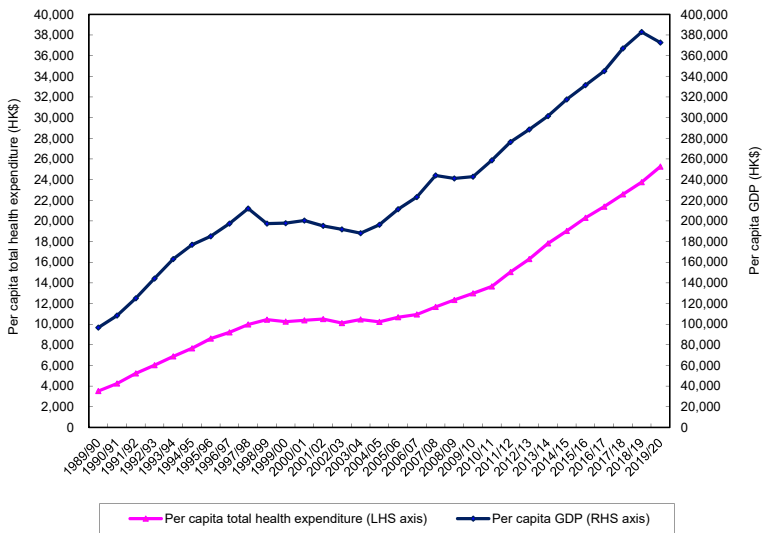
Source: Health Bureau (2021).

Figure 1.9: Total health expenditure at current market and constant prices, 1989/90–2019/20



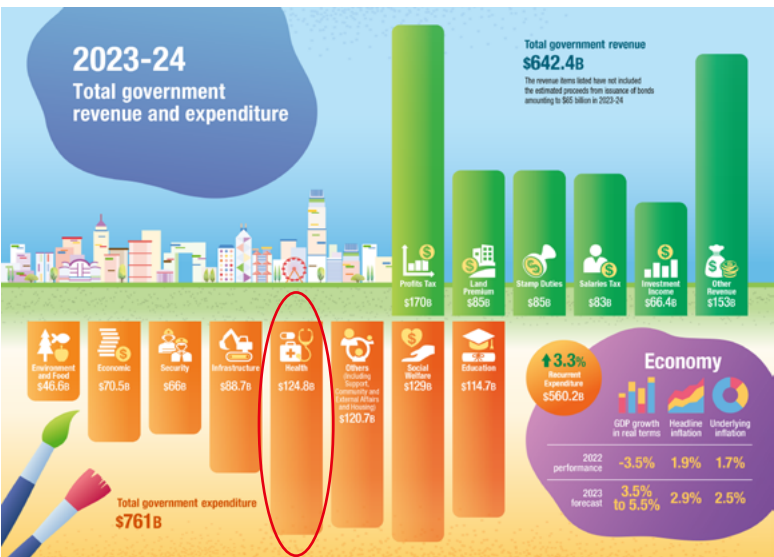
Source: Health Bureau (2021).

Figure 1.10: Per capita total health expenditure and GDP (at current market prices), 1989/90–2019/20



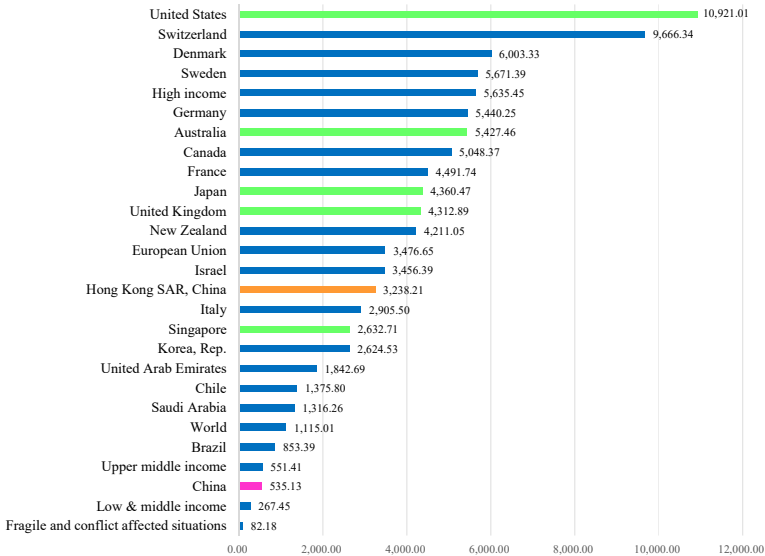
Source: Health Bureau (2021).

Figure 1.11: Total government revenue and expenditure, 2023–24



Source: The Government of the Hong Kong Special Administrative Region. (2023).

Figure 1.12: Per capita health expenditure in USD, 2019



Note: Hong Kong data are as of 2019–20.

Sources: Health Bureau (2021); World Bank (2023a).

increasing more quickly than Singapore, then maybe there is a lot we have to learn from Singapore.

In Hong Kong, what we have been doing, wittingly or unwittingly, is that we do not have means tests for public healthcare. But all services come with capacity limits, so the queue lengthens and people who can afford private healthcare would go to visit private doctors. For some years, some medical societies in Hong Kong have been worried that the government was trying to flood the market with doctors. Whether that is true or not, we are now looking at a population of over 86 million in the Greater Bay Area. So I see there is no way of flooding the market with doctors and we are not worried. As for purchasing local services, I know that the Hospital Authority has been thinking about purchasing services from across the border: either sending our patients there or doing telemedicine. But, again, how that is going to help the overall supply is still

a question, and of course, I always say we should increase day procedures.

As for the demand side, I believe that primary healthcare is a very important way out as we can have family doctors serving as goalkeepers or making specialist referrals. And if they keep their patients healthy, then they do not need to go into a hospital that often. A good primary healthcare system means a healthier community and less demand for hospital care. Co-payment is an important idea that I know is emerging again after many years. Co-payment instils the concept of user responsibility in our public. If resources belong to a common pool, everyone will go to grab a share. But if I divide up the common resources into everyone's pocket, it becomes my resources; and if I pay it out to the doctor, that becomes the doctor's money, and I would certainly think twice about doing that.

Co-payment is something that we have to do. But where will the money for co-payments come from? How about a provident fund, a mandatory provident fund, or a mandatory healthcare fund? The question is how can we start that mandatory savings account, either for the individual or for the family? We can have new ideas on that — what about so-called tax incentives; and what about the government agreeing to give people a small percentage of interest added to the standard interest rate in Hong Kong? This is possible, and there are possibilities that we can think about. So, co-payments, health accounts, and the third thing is mandatory health insurance. Again, the insurance industry told me that it is very difficult to compute what kind of premium should be given to patients for the Voluntary Health Insurance Scheme because there are purchasing biases. But if we talk about a mandatory scheme, things become more transparent. If we take that route, this would involve a savings account, mandatory health insurance, and a co-payment system that instils in our public a sense of responsibility not only in terms of their health, but also in the financing of healthcare.

## ***Keynote Speech 2***

### **Global Trends in Primary Healthcare and What Might that Mean for Hong Kong**

**Professor Michael Kidd**

Earlier this morning, we already mentioned the United Nations Sustainable Development Goals. Only one of those goals focuses on health and it is the third goal: good health and well-being.

This is all about universal health coverage and this is the big global health theme: How to ensure that every person in every town, village, and country of the world gets access to healthcare as a fundamental human right, and this is summarized as health for all people. This is the WHO's definition of universal health coverage: equity in access to health services, the quality of the healthcare we are providing, and the cost so that people do not face catastrophic healthcare costs. The challenge, though, is looking at this set of goals from 2015, and what is missing is pretty obvious: There is nothing there about health security and responding to health emergencies. It was not forecasted as part of the sustainable development goals, yet we knew it was going to happen.

Dr Tedros, the Director-General of the WHO, said in Astana that “family practice is the best way to provide integrated health services at the primary healthcare level. With an emphasis on health promotion and disease prevention, family practice helps keep people out of hospitals, where costs are higher and outcomes are often worse.” And what we are seeing in Hong Kong, Singapore, and other countries, is that this renewed focus on primary care, including but not limited to family practice, serves as a way to ensure that everyone has access to care.

This focus on health and well-being, empowering people in communities, multisectoral policy and action, recognizing that we need health in all government policies, considering the impact



of policies on health and primary care and essential public health functions lies at the core of our integrated health services. What did we learn during COVID-19? The countries that did best in protecting their population had strong primary care and strong essential public health functions, which were integrated and worked together to protect the people of their nations.

With the commitment at Astana and then the emergence of COVID-19, a lot of the planning that people were doing and a lot of the planned investment went out the window.

Unfortunately, as human beings, we forget the pain that we have been through, but it is important that we do not do that as we move forward. COVID-19 taught us some really important things about primary care reform. It taught us that public health measures are not effective if you do not have strong primary care to deliver them: the delivery of vaccines, the delivery of oral treatments, and the testing programmes. When there is an urgent need to do so, governments will suddenly find the money for healthcare interventions and bring forward reforms that have been delayed for years.

In Australia, our primary care contributions to the COVID-19 pandemic response can be brought down to these five basic principles: Primary care protects the most vulnerable people in the community, because we look after elderly people with chronic disease, people who are immunocompromised, and disadvantaged people. We provided community-based treatment and support services to affected people. We need to continue regular healthcare services for the whole of the population, even during outbreaks and lockdowns. We have seen that in countries where primary care services collapsed during COVID-19, there is now a rise in other preventable health problems that should have been picked up on and managed earlier on. We have learned how important it is to protect and support our primary healthcare workers and services, just as we supported our hospital-based services. In many countries, personal protective equipment was not available to people in primary care,

as they were reserved for those working in hospitals and emergency rooms. Yet so many of the cases were being seen in primary care and we have a moral responsibility to protect all of our workforce in healthcare. And, finally, mental health services. What we have seen with COVID-19 is a very long saga of mental illness and distress from people's lives being disrupted and people being depressed and anxious. But who looked after those people in the community? It was our primary care service, and that will of course continue to be the case for many years to come.

We did see very effective public health measures, though, in many countries with these strong primary care services. In Australia, we had a 98% double vaccination rate for people over 70. The vast majority of our COVID-19 vaccines were delivered in primary care through family practices, by primary care nurses, and also by community pharmacies. Our mass vaccination centres were largely unused because people preferred to go and get their vaccines from a doctor, nurse, or pharmacist whom they knew, trusted, and who were near their own homes.

In Australia over the last three years, I have been working on our National Primary Care Reform, and we now have a 10-year plan that goes to 2032. We are looking at transforming our healthcare system from being focused on illness to focusing on wellness; from looking at what is the matter with this person to what matters to this person — this is what we call goal-oriented healthcare; from a focus on treatment to a focus on health promotion and prevention, but making sure treatments are available when people need it; from multiple, often competing providers to a more coordinated and integrated system; from a system based on volume towards a system based on values, and not only value for money but also the values that underpin the care that we provide; and from a system that is fragmented towards a system that is much better coordinated.

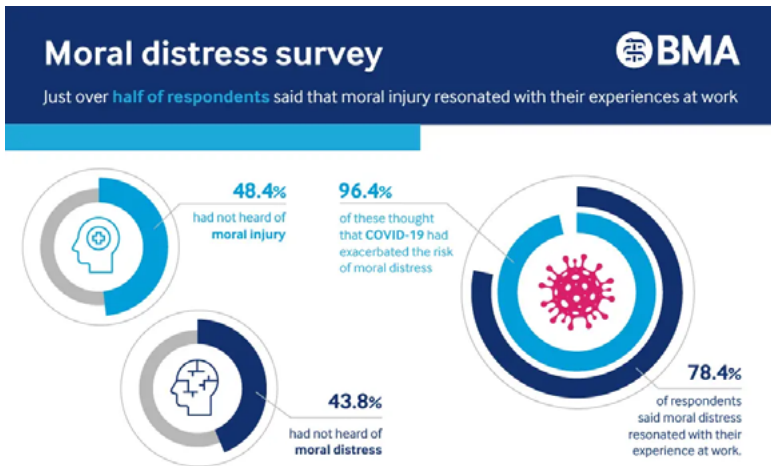
Underpinning this is what we call the Quadruple Aim of strengthening primary care: improving the health of the population; reducing the cost of care; doing things more efficiently and

enhancing the patient experience so that people get better care and are more satisfied; and improving the satisfaction of our healthcare providers.

I want to give you a few examples now from around the world where people are tackling this task. The National Academies of Sciences, Engineering, and Medicine in the United States released a report in 2021 on implementing high-quality primary care and I commend it to you. They have recommended paying for primary care teams to care for people rather than have individual doctors delivering services; ensuring that high-quality primary care is available to every individual and family in every community; training primary care teams where people live and work, so that there is a revolution in the way that we train our doctors and our nurses to make sure that they are getting experience in working in primary care; designing information technology (IT) that better serves patients, families, and team members; and ensuring that high-quality care is implemented across the United States, not just to those people who are lucky enough to have an employer-based insurance scheme.

Great aims, but earlier this year the Milbank Memorial Fund released their scorecard of how the United States was doing in primary care, and as you can see they were not doing very well in any of these measures: They were under-investing in primary care; the primary care physician workforce is shrinking and big gaps are appearing; in terms of access, the percentage of adults reporting that they do not have a usual source of care is increasing, despite the innovations of Obamacare and the Affordable Care Act; there are too few physicians training in community settings where most primary care takes place, as more people are training to be sub-specialists in the American model in hospitals; and there are few federal funding opportunities for research in primary care: 0.2% of the National Institute of Health's funding is allocated to primary care, yet the majority of healthcare delivery is happening in primary care.

Figure 2.1: Key findings of the moral distress survey, 2021



Source: British Medical Association (2021).

In the United Kingdom, there is a real problem with moral distress and moral injuries. Moral distress is when healthcare workers want to deliver high-quality care but they are not provided with the resources to be able to do that, and so they are having to make terrible decisions about who gets access to care — decisions that no healthcare worker should have to make. Look at Figure 2.1: 96.4% of healthcare workers surveyed by the British Medical Association thought that COVID-19 had exacerbated this risk of moral distress. The impact of the pandemic in the United Kingdom and so many other countries around the world has caused a lot of healthcare workers to think about whether they really want to keep working in this healthcare system.

There are some things that people are doing to strengthen primary care in their own countries. One is patient registration. Here in Hong Kong, you are moving towards every patient having a family doctor or family practice where they get their care. Patient registration happens in about 50 countries around the world. And

if you know your patient population, then you can better plan the healthcare services that they need, and you can plan that at the local practice level, at the local district level, as well as at the national level.

Telehealth has become one of the big innovations that we have seen in so many countries during COVID-19. In Australia, we had a 10-year plan to roll out telehealth as part of our national health insurance scheme. We incorporated a decade's worth of reforms in 10 days: We introduced telehealth as part of our National Health Insurance Scheme. Subsidized by the government, 300 new item numbers were added in our National Health Insurance Scheme. We transformed our healthcare system during periods of lockdown so that people could still get access to their healthcare providers. But very importantly this has now become an enduring, sustained part of our healthcare system.

We have seen a lot about artificial intelligence this year. What we need to make sure that we do is that we do not jump on the bandwagon of whatever is the latest fad in digital technology and that we examine the quality and safety implications of incorporating this new technology. As for decision support, we have been talking about it for decades. Finally, with big data and artificial intelligence algorithms, we are getting these systems that can help doctors and nurses and other healthcare providers to make much more precise clinical decisions based on the patients that we are seeing. Similarly, the translation of genomics into clinical practice: We are finally reaching that point where we can better use the genomic understanding of each patient to make prescription decisions and talk about preventive care and health promotion.

The next stage is electronic medical records: Things moving up into the cloud, records that are truly integrated now accessible in a useful way by each healthcare provider. Digital prescribing and dispensing really took off during COVID-19 as part of the lockdown. The digital twins are where we set up something like

you in the cybersphere, where we can look at what happens if we do these interventions or actions, what implications these are going to have on you as a patient, on your longevity and quality of life. Remote monitoring we have been talking about for decades, and we saw remote monitoring with COVID-19. In Israel, people are being given pulse oximeters to monitor their care at home with COVID-19. Wearable devices sound great, but we have got to look at sensible ways for you to use this technology.

And implantable devices: The VeriChip in 2004 was the world's first subdermal personal verification technology, a microchip containing your medical information that could be implanted in your arm. But what happened was this: The public said no, we are people, not pets, chipping people is wrong. People did not want that sort of technology being utilized in them.

Even with all this exciting technology, we still need that personal touch, the relationships between healthcare providers and their patients, and we still need someone we can trust rather than computers. Now, the big thing in digital health is apps: Everybody is getting lots of money to develop an app. But again, how many apps can one person deal with over time?

Strengthening primary care can help us to transform our hospital care. The greater investments that we make in primary care will lead to even greater savings in hospital care. The example that I like to look at is Denmark: In 1999, Denmark had 98 hospitals; in 2023 they have 32 hospitals — they have closed 66 hospitals during those 25 years. This is working in Denmark and what we have seen is this huge investment in primary care, especially in family doctors, multidisciplinary teams, and registration. But even Denmark is not Utopia. There are still complaints from our colleagues in Denmark that too many services are being offloaded into primary care without the resources to make them safe and appropriate, and family doctors do not want to become health managers, they still want to be clinicians working with their patients. If you are going to close

a clinic and move the services out into the community, you need to move the administrative support for those services out into the community as well, not just think you are going to make a whole lot of savings.

Multidisciplinary teams are very important. In Canada, in Ontario, where I was based before COVID-19, we got individual family doctors to come together to work in groups and then provided funds for other healthcare workers to be part of the teams. Very important are primary care nurses, community health workers in many countries around the world, and people who are not health trained but are from the community and can go out into the community and work with people to bring them into the clinics, or take the doctors or nurses out to see people. This is especially important with indigenous populations, refugees, and people who do not speak the native language of the country, to help those people to get access to healthcare. Physician assistants are very big in North America and other parts of the world, assisting the general practitioners (GPs) by doing routine tasks under supervision. Non-dispensing pharmacists, we had in our services in Canada. These were pharmacists who were not making a profit by giving out drugs. They were pharmacists who were working as part of the team with our patients, especially those with chronic diseases, doing medication reviews, trying to reduce polypharmacy, and helping people newly diagnosed with diabetes or asthma or other diseases with their management. Let us bring dentists and oral hygienists into our primary care clinics: We often think that we look after the whole person, except for their teeth, which is crazy. The full spectrum of allied health professionals, physiotherapists, dietitians, and psychologists provide this comprehensive whole-person care.

As you are doing here in Hong Kong, traditional healthcare providers are, in whatever form they take, for the local community, including consultant specialists. As we close the hospitals, we will still need those other specialists, but they will come and work with us in primary care. As happens in my primary care clinic in Australia,

we have to visit consultant specialists, a visiting psychiatrist, a visiting endocrinologist, and a visiting respiratory physician, who go to a number of different clinics, visiting paediatricians to provide care based in the community to our patients. In Ontario, they did this. They rolled it out with physiotherapists and psychologists in these family health teams to two-thirds of the population, and then they ran out of money. So, two-thirds of the population get access to whole team-based care and one-third fee for service just with a local GP.

Training reforms — the training of generalists. Do you know how many of your doctors who are graduating should be going into generalist specialties like family medicine, general medicine, and general paediatrics, and how many are going into consultant specialties? The answer is 50%. The more specialists you get, the more sub-specialization, sub-sub-sub-specialization, sub, sub, sub..., it goes on and on. And the more expensive healthcare is, the more opportunities for over-medicalization, over-expenditure, and over-investigation.

Finally, research, data, and evaluation are essential in primary care, but it should be based on primary care, informed by primary care, and led by primary care. Over the 50 years, you have had very strong primary care researchers led by people like Albert over so many years.

And, finally, please do not forget about COVID-19 in your future planning. One of the things that I found most alarming was that in the OECD countries, 1% to 2% of elderly people were living in aged care facilities, and 40% of the deaths occurred in those facilities. Those people were not protected in any of the OECD countries. And when they looked at pandemic planning in OECD countries, there was very little consideration of what would happen to elderly people, especially frail elderly people. And there was no representation of the aged care sector in the pandemic planning. The planning was for public health physicians, hospitals, and health authorities, but no consideration about aged care. We must do better next time.



## Keynote Speeches: Q & A Session

### **Professor Fanny M. Cheung:**

You mentioned psychologists and the primary care team, and I know that in the United Kingdom and Australia, low-intensity intervention is delivered in primary care, which is completely missing in Hong Kong. I have been training clinical psychologists at this university, and I know it is impossible to fulfil the demand for clinical psychologists in Hong Kong. But now with the evidence-based, low-intensity interventions, it is possible to introduce more mental healthcare into primary healthcare.

I think what we need to consider is not only in terms of the number of talents that we need in the manpower resources, but also in the training. That is a gap in the planning in terms of how we can train these primary care, low-intensity practitioners. In my past research, I noticed that people with mental health problems actually somatize their problems, wasting a lot of healthcare resources. Whereas if they are identified early on and treated at the primary care level, it could be a much more cost-saving approach.

### **Dr Shiping Zhang:**

I just finished a study looking at the usage of Chinese medicine during COVID-19 in Hong Kong to survey attitudes regarding the use of Chinese medicine versus Western medicine. And, interestingly, 70% of the people that I surveyed used Chinese medicine. And that was in a sample of over 6,000. Before COVID, the usage of Chinese medicine in Hong Kong was about 30% of the population. And I asked about their attitude in terms of using Chinese medicine versus Western medicine in the prevention of COVID, the management of COVID symptoms, and also the prevention of COVID developing into a severe state, as well as the use of medicine for long COVID. Except for lessening the severity of COVID symptoms, on the

other three aspects Chinese medicine scores better. And I also asked them about their views on the side effects of taking either Chinese medicine or Western medicine for COVID. They all believed that Chinese medicine has fewer side effects. What is your view on including Chinese medicine practitioners as primary healthcare doctors in Hong Kong?

**Professor Albert Lee:**

In terms of manpower, we have got to think outside the box, not just doctors, nurses, and physiotherapists. In fact, as a front-line doctor, I can tell you that having a psychological intervention would help me a lot. Not just that, we still need different professionals, but could also include more people like community health workers. Some people trained in psychology may be able to do some day-to-day management of emotional problems.

**Professor Mee-kam Ng:**

For Professor Kidd, I wonder if, in your experience, you really work also with built environment professionals? Because we understand that residential accommodations, communities, and neighbourhoods are also very important for people's health. My second question is, as an urban planner, I would like to know, in the case of Australia or other cities that you know of, what will be the space requirements or where should these primary care facilities be located, so that they can be accessible for people living in the environment, in the neighbourhood? Actually, I do have a small question for Dr Lam as well. You mentioned financing and maybe asking employers to contribute to financing medical insurance. But in the case of Hong Kong, over 90% of our enterprises, are like micro-units. I can understand why they are very reluctant to contribute because they also have financial constraints. So maybe it would be better to differentiate between different enterprises to incentivize them to participate in this very important aspect.

**Professor Vivian Lee:**

There are issues here in Hong Kong, but at the same time, the training of these talents is essential. My observation is that we do have people from multiple disciplines working in the primary healthcare team — do they know how to work with each other? Rarely do we have a joint interprofessional initiative or educational platform to train these professionals.

I also really appreciate Professor Kidd mentioning the Ontario health system. I want to ask your views on interprofessional collaboration in the real world. And you also mentioned the team-based model of care. But at the same time, how much do we train these future professionals in the understanding of these types of collaborations?

**Dr the Honourable David T. Y. Lam:**

How do the various disciplines and communities work with one another? Today, we have doctors, Western doctors and also Chinese medicine practitioners situated in basically every part of Hong Kong. But then, we do have the people, we do not have a system, we do not have governance. From there, how are we going to connect them up with the healthcare managers who are supposed to be nurses or senior nurses in maybe the District Health Centres that act as a hub, and also physiotherapists, community nurses, clinical psychologists, and clinical pharmacists?

Dr Libby Lee earlier on mentioned some infrastructure in Hong Kong, but what she did not mention is the electronic healthcare platform. Through that platform, healthcare workers in the community can talk to one another and refer patients. And if we all rely on one common medical record system, an electronic system, then we do not have to write letters to our clinical pharmacists, clinical psychologists, or physiotherapists. And then also the platform is a place where healthcare colleagues communicate with one another. Hopefully, if there is a need, small meetings

or conferences can be held on the platform to discuss a patient's condition.

Now, as for the role of our various disciplines, I am certain that clinical pharmacists will have a very important role in the community. One very important issue is empowering our healthcare professionals and empowering our patients. And for clinical pharmacists, I am certain that instead of the Hospital Authority sending packages of medicine to their patients in the community, which is fine, one should also consider having some clinical pharmacist consultation rooms in the community, where our patients go and see them to sort out their drug issues.

And mental health is high on the government's agenda. When we are talking about more common anxiety, depression, and other mood disorders in the community, we do not yet have a team of well-organized mental healthcare providers in the community. We have psychiatrists who should be taking care of serious diseases. We have clinical psychologists, but not too many of them. And even with them, registration is still a mess. And then we have counsellors. Some of them are in psychology, but some of them are not. We have social workers who deal with different problems. But when it comes to the patients, what should I do? We do not have a team. We do not have a portal of entry to a mental healthcare system in Hong Kong, except for the website "Shall We Talk." We need to build up a system of mental healthcare workers, including primary healthcare doctors who are specializing in mental health, clinical psychologists who work in close collaboration with maybe psychiatric nurses in the community, and also social workers.

As for Chinese medicine, it has always been a big issue and it is a mission for Hong Kong to develop Chinese medicine. First of all, before we start any model, we must understand each other's language. I believe our medical students and nursing students should learn some basic Chinese medicine, and our Chinese medicine students should learn something about basic Western medicine

and anatomy, physiology, and pathology. And on top of that, in the long run, the easiest way to run is to base guidelines built on evidence-based medicine. If that has elements of Chinese medicine, then primary care doctors will find it very easy to cross-refer to Chinese medicine practitioners and vice versa. And in the long run, the Hong Kong model may be like Chinese medicine and the various specialties of Chinese medicine. We just are like GPs and our specialists of Western medicine counterparts. So we work in collaboration with one another. I think that is the easiest way for things to work out. But we need a reference frame and a guideline.

### **Professor Michael Kidd:**

I am very worried about the mental health of the population of the world. As we come out of the COVID-19 pandemic, we know from past experience that self-harm and suicides often occur after a crisis is over, especially among young people.

The space requirements: What do you need? We look at the model of the one-stop primary care shop in your local community, somewhere people can go to and get all of their services without having to go here and there. It is the one place that often has to be custom-built.

Interprofessional learning: We need to be training people in multidisciplinary teams rather than training them in universities and then expecting them to go out and all of a sudden be able to do it. We need to move a lot of our training into the community and sustainable primary care systems. We need to have the capacity for all of these students to come in and train alongside us.

And finally, the question about urban planning. I love that my new Centre for Future Health Systems is based on the premise that the solutions to future healthcare do not just rest with medical faculties and public health academics, and I think that a lot of future health academic centres will be doing exactly the same.

## ***Panel Session 1***

### **Sustainability of Healthcare Systems**

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#### ***Speaker***

#### **Professor Albert Lee**

Now, I try to use a kind of anatomy, physiology, biochemistry, pharmacology, and behavioural science to dissect how primary care could help in the healthcare system.

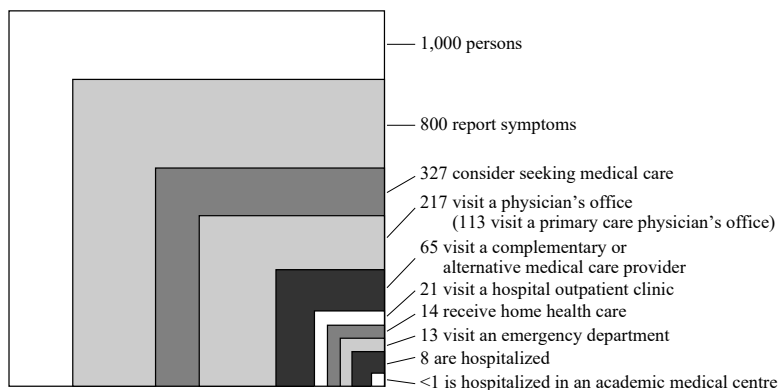
But, to be fair, we have not been doing too badly over the last one-and-a-half centuries. I want to highlight that a lot of real reform or paper consultations in Hong Kong took place after World War II. And the excitement was over the Scott Report and the *Report of the Working Party on Primary Health Care* — the first one was in 1985. And now we finally have the Primary Healthcare Commission.

The Hospital Authority establishment has made some improvements to the hospital facilities. Finally, we have District Health Centres. What we did not realize is that primary care is mainly in the private sector, so in terms of healthcare reforms, we need to know more about the private sector. And the District Health Centres were established a couple of years ago. They have not yet achieved the goal: We need primary healthcare. To date, we still have some ways to go.

Basically, we know that only a minority ended up here. But if we expand this a bit, there will be great resource implications. So, I think community-based schedules just start dumping patients back into a community, then still move patients backwards and forwards according to their needs. We basically need to identify who are at risk.

Now, the clinical iceberg. Now we are getting better with general practice, morbidity studies, and chronic disease registries.

Figure 3.1: The ecology of healthcare



Source: Green et al. (2001, p. 2022).

This is moving up. But there are still a lot of perceptions of healthy behaviour and somatization. Understanding the perception of health from the viewpoint of the patient, and understanding the patient's underlying worry, is of great help in its management. By understanding perceptions of health, you understand how we should view the patient and how we can better help the patient. So, I think we need to improve primary care to match the needs.

Now let us move on to the health journey. The complexity is not which drug we are using, but what kind of care we need to give patients at different time points. So, we need a specialist team to look after the patient, and coordinate to find the right care for them, the right kind of intervention. It is about how each specialist should be there. It is not just advice or assessment, but a down-to-earth approach to how the patient could get the needed support. The idea of community health practitioners is a good one: Someone with health training to help us to look after the patient when they are more stable.

Then, biochemistry. I think that the dilemma we are facing in terms of primary care is a lot of tests. We want to identify those

high-risk cases as red flags. And then we will do the test in a series so that we are aware of the risk to the patients, because if we apply the test to the low-risk population, no matter how great the test is, it will end up producing a lot of false positives — what we call low positive predictive value. In what way can we do this in long-term care? Sometimes we know the patient very well and they are friendly. We could somehow get a mental picture and a risk profile. And we could keep building up some of the parameters as we evolve with time. The risk stratification. That is one thing. We could predict the existing current risks and future risks. Not with 100% accuracy, of course. Artificial intelligence could help soon. And then for some of the skills we apply, we use time as a diagnostic tool, which would probably save you some time; we call the patient, support the family, and implement effective home monitoring. Now, with advanced technology, we can do that and manage a lot of different diseases like hypertension and diabetes. People can do home monitoring themselves. I do think we need to create a safe system, and primary care, and integrate different specialties so that patients will recover from illness and alert themselves if they need help. We can maintain them in the community.

Prescribing less is more effective and safer. Another patient like this one is incontinent: that could be due to drugs, could be due to cognitive impairment, could be due to some of the problems like stress incontinence, and general delivery. When you look at the possible causes, we family doctors could do the assessment. We would not necessarily be able to manage all of them, but at least we could consider going beyond one system, one specialty. For some illnesses we might need to seek further advice from people from other specialties. Multispecialty and multidisciplinary.

Behavioural science: When people are feeling happy, they eat well, they sleep well, and they move around. It is all interrelated, with a lot of evidence. Therefore, psychosocial rehabilitation plays a very important part in cardiac rehabilitation apart from getting

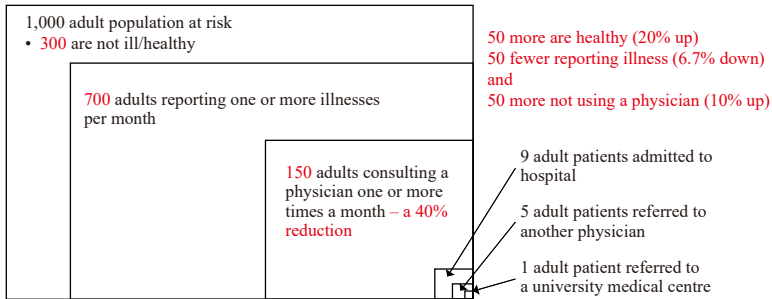


treatment, managing other medical conditions, and attending to lifestyle issues like smoking, exercising, and mental health.

To finish off, I think we should have more discussions about the model of care: How you integrate different parties, different kinds of workers, and different kinds of people to be involved, rather than just one. Medical models should go beyond just doctors, and policies could affect children as well. We should perhaps see how we could put all the other services together. It is in a continuum with the entire healthcare system, apart from other services. And I have been mentioning voluntary insurance, District Health Centres, and health vouchers. We can do something from the general population to the individual. We can do some basic screening that is not necessarily medical, and have health workers trained to a very high level, or even have the patients themselves do some assessments, so that we understand the risks. For those with no risk, there is still periodic surveillance in a district. For those with no significant risk of a chronic health condition, we can provide some basic health counselling and a review. If they improve okay, we can go back; if they do not improve, then we need a further assessment. The same with identifying risk factors. If they are at risk of chronic disease, not just diabetes, hypertension, maybe mental health, or chronic obstructive pulmonary disease, then they should get a further assessment. See whether they improve through basic changes in behaviour and things like that. If they can, they can be followed up on a district basis. If they get worse, with no improvement, then refer them to family doctors. Family doctors engaged in integrated primary care management may or may not need specialists. There can be continuity — the patient can move up and down, up and down along the way.

We want more people and fewer reported illnesses, fewer people needing to consult with doctors, and we want to try to manage the problem in the community.

Figure 3.2: Monthly prevalence estimates of illness in the community and the roles of physicians, hospitals, and university medical centres in the provision of medical care



Source: Based on White, Williams, & Greenberg (1961, p. 890).

## Respondent

### Professor Kenneth N. K. Fong

I just want to know more actually. How do we know that we are taking the right approach? Suddenly in 1991, the Hospital Authority took over all the proper hospitals in Hong Kong. We do not know if it was right or wrong, but it was a sudden change. And it is irreversible. Regarding sustainable healthcare, traditional ways of measuring sustainable healthcare are, in three pillars: improving healthcare, saving money, and also saving time, so as to improve healthcare. Now, the government of Hong Kong is advocating outcome-based performance. Do we have a key performance index (KPI) for measuring this primary care reform? Should we measure only the admission rate, the length of stay, or perhaps the re-admission rate? Should we measure the quality of life and the quality of death?

Regarding the establishment of District Health Centres now in Hong Kong, I think that what comprises the government's KPI

nowadays are the number of District Healthcare Centres that are opening, and also the number of attendees and the health outcome. Most of the District Health Centres in Hong Kong now have been taken over by non-governmental organizations (NGOs). But the NGOs traditionally belong to the welfare system, not the health system. Is there any mismatch between the health system and the welfare system in Hong Kong, in relation to the establishment of District Health Centres in Hong Kong? Should we also think about home-based treatment, not just day hospitals?

The third pillar is about saving time. Should we think about low carbon and the use of electronic forms? And also about artificial intelligence, the use of artificial intelligence, and also the Internet of Things (IoT), and also about making use of artificial intelligence and big data to inform precision medicine? Should we also talk about the coordination of services among people in different specialties? Should we be over-reliant on a guideline or a system? We should also think about the coordination of different specialties or services. This is my response to Albert's lecture.

## *Discussant 1*

### **Dr the Honourable David T. Y. Lam**

When we talk about the sustainability of the healthcare system today, it seems like we are kind of putting an equals sign between a sustainable healthcare system and primary healthcare. But what I am a little bit worried about in the long run is this: Is primary healthcare really a panacea for the unsustainability of the healthcare system?

We do have to bring services that are now available only in hospitals back to the community. So that as we grow old our peers can see their doctors and have medical and other healthcare services mostly inside the community, and then they can live happily in a community instead of going to and from hospitals and elderly

homes. Also, we need to make our community healthier. When our people are healthier, they need less healthcare in a hospital and, hopefully, that is going to be less expensive. That also saves a lot of suffering for our elderly people. That probably will also lengthen the working days of our population.

What I am also concerned about is that when we develop a primary healthcare system, we are talking about a multidisciplinary working team. We have Chinese medicine practitioners, doctors, dentists, nurses, pharmacists, clinical pharmacists, clinical psychologists, physiotherapists, occupational therapists, dietitians, speech therapists, audiologists, etc. Now, that brings up another problem, which is that when I am one of the members of the public, who am I going to see, who am I going to look for? What is quite important in the whole idea is to build into the system a first point of contact. And according to the system that we are trying to build, the first point of contact is either the family doctor or the District Health Centres. Again, so what is the role between the District Health Centres and the family doctor? What I have been thinking about, and hopefully I am not too far wrong, is that a family doctor should be the overall healthcare manager of the patient. That means giving advice over the course of the patient's life and treating diseases as necessary, giving the patient advice and also referring the patient to specialists when certain conditions are beyond the doctor's capacity to treat them. Whereas the District Health Centres should be a hub for coordinating all of the various disciplines in the community and also act as an interface between the community health system and also the hospital or specialist healthcare system. The specialist probably interfaces with the family doctor, whereas the hospital system interfaces with the District Health Centres.

Now, one very important role maybe for the District Health Centres is when someone is discharged from the hospital, then this person will need a lot of rehabilitation in the community. And also, he may have a quite complex medication regime in which he has to

be seen time and again by a clinical pharmacist. So, the hub or the District Health Centre is supposed to coordinate who this patient is going to see today on discharge and tomorrow. And until he is fit enough to go back to his family doctor, he should be under the care or the coordination of the case manager in the District Health Centre. That may be a role for our District Health Centres, but apparently, this role seems to be developing, but is not in full swing. And one more issue is that the District Health Centre should not be the provider of everything. It should be the coordinator and provide some work, but not all of it. It should coordinate all of the healthcare professions inside the community.

## *Discussant 2*

### **Professor Martin C. S. Wong**

I would like to think of the actionable items that we can take up together after the conference. Are there any things we could collaborate on? There is a very strong case here: We are trying to push primary healthcare forward.

Now, the first thing I would like to introduce is that we should be very proud of ourselves. The electronic health record-sharing system is one of the best systems that we have in the world, which can incorporate private and public information and information across all disciplines. We are very proud of the Primary Healthcare Office and the workforce. There are a lot of reference frameworks and a lot of resources have been injected. There are also our very successful public-private partnership programmes, including cervical cancer screening, cataracts, and colorectal cancer screening. And we have a nice and affordable healthcare system, including a very robust safety net.

We have a lot of experts in primary care and allied health professionals. How about if we academics can perform research

together? As the government is always talking about implementation science, would it be possible for us to submit these findings to higher governmental officials to ensure that we put evidence into clinical practice? Thousands and millions of dollars have been put into commissioned Health and Medical Research Fund (HMRF) projects. How about translating those findings into real practice? Second, there is the issue of health education for the public and the healthcare sector. There are lots of programmes in the community that are funded by charities, and they are highly helpful as community resources. How about if we promote these resources more actively in the community to ensure that stakeholders are aware of them? And third, I would recommend engaging more stakeholders to join governmental local programmes. At least, adherence to medical guidelines among medical doctors will need to be addressed. We need to have more seminars to disseminate these reference frameworks. And, sometimes, the stakeholders will need to be encouraged to join more public-private partnerships, which are effective. And the last point I would like to make is the importance of supporting primary care initiatives by listening to the various stakeholders, including patient groups, doctor advocacy groups, and different doctors' unions, to ensure that they are happy to join hands together. Because what we are concerned about would be the Chronic Disease Co-Care Scheme, which will roll out very soon. We are concerned about doctors not joining.

### *Discussant 3*

#### **Dr Vincent T. S. Law**

I want to pick up some points — the first one is public policy. We want to build and further improve the sustainability of the healthcare system. We really have to have a holistic view on how to formulate public policies.

In Hong Kong, we need a multidisciplinary team to educate citizens. If they are being helped already and are already educated, maybe we can help to reduce the workload of our healthcare system. I want to raise one more point on community health practitioners. In Hong Kong, other than medical doctors and nurses, we also have many graduates from some other health-related programmes. These graduates from our local universities are educated and trained specifically to promote healthcare and health. Community health practitioners in Hong Kong can further improve their role, and help the Hong Kong system do better in promoting healthcare. And for District Health Centres, I think that we can improve the efficiency and effectiveness of District Health Centres. We have to do some research together to evaluate the effectiveness of these centres in the near future.

### **Panel Session 1: Q & A Session**

#### **Professor Martin C. S. Wong:**

I have one question for Dr David Lam. After this conference, will you plan to bring all our recommendations to the Legislative Council? Thank you.

#### **Dr the Honourable David T. Y. Lam:**

I think primary healthcare is high on the agenda of the government and the Legislative Council, and lots of listening to stakeholders will be very important. So instead of talking about all the possibilities in a big council, I think it is more useful for stakeholders to meet up with individual members or small groups of members.

#### **Audience:**

I would like to quickly touch on what Professor Martin Wong just mentioned about patient-centred care. A lot of times we think about

what the patients want, but instead of what we think, we need to know what the patients would like us to do. And my question is about screening. We are doing more screening, and we all believe that in the long term that is positive for the health of the population. However, in recent weeks, I have visited quite a number of District Health Centres. And what I heard is that a lot of family doctors who are involved in this co-payment system, their patients got screened and then they would be paid and asked to look after their diabetes mellitus or hypertension. But any other issues that they raised would not be funded. Some doctors asked patients to see them separately for that. For a public health system which is heavily subsidized, more than 90% subsidized, and which includes doctor's consultations, investigations, and drugs for three or four months, it is hard to compete in terms of finance. If we do not get the financing right, all of these very admirable goals about screening, finding out the disease, and preventing it from happening, are not going to filter down to the patient level.

**Dr the Honourable David T. Y. Lam:**

I think that is a very important and down-to-earth question. Patients come to see a doctor according to the Chronic Disease Co-Care Scheme, for instance, to follow-up on hypertension or the management of simple hypertension or prediabetes. It is all in a scheme. But then as family doctors, colleagues will also take care of a lot of other aspects of the patient's health. And if the patient suddenly comes up with some other symptoms or some other questions, then the doctor will face a dilemma, that if he does not charge another consultation fee, then he will be spending a lot of time seeing a patient, intended originally just for a follow up of simple hypertension or prediabetes. But if he charges an extra fee, then he will probably be worried that that is going to breach the contract with the government or the Strategic Purchasing Office. I think these are very practical issues that we have to work out so



that the patient is happy that he knows that the doctor is caring for him; at the same time, the doctor feels satisfied because the doctor is doing a good job for the patient and is properly reimbursed for the job, but it is not a case of you pay me for just anything. It is not a buffet at a doctor's office. I think that has to be worked out.

And for screening at large — in Hong Kong we do not yet have a very well-written programme. Are we going to design some screening programmes for our population at different stages of their life? If we do so, will these be subsidized? And then further to that is about guidelines. When we develop primary healthcare, the government is trying to purchase some of those services from primary healthcare providers, including doctors, nurses, and other therapists and providers. So how should we strike a balance between guidelines and the autonomy of individual healthcare workers?

**Professor Albert Lee:**

I think the dilemma that we are facing now is that everything is itemized. If it is not itemized, we cannot pay. In Australia, they have a programme that could reimburse the service provided by a health professional like a diabetes educator, dietitian, or psychologist. I always encourage insurance companies to consider those as an item because this in the long term is cost saving. I think it is time for us to look into the whole package of care.

**Professor Martin C. S. Wong:**

It is quite difficult to address the question of the adoption of a reference framework because, interestingly, we conducted three serial cross-sectional surveys among primary care professionals in the years 2010, 2016, and 2018. We examined the association between doctor autonomy versus the level of adoption of the reference framework. Some doctors would like their autonomy to be taken out because they would get rid of the responsibility of not following the guidelines. And they think that the reference

frameworks are protective against medical litigation. I think now there will be another primary care guideline produced in the Primary Healthcare Office, which will highlight a life-course approach, and we emphasize that the reference framework will never be a legally binding document. It is only meant to assist physicians to make individualized decisions whilst sharing the decision-making process.

The second point I would like to raise is that there are quite a number of primary care initiatives that have not yet received a high enough priority. In the recent month, we have been discussing two preventive care programmes. One is on lung cancer screening, and one is on the respiratory syncytial virus vaccine across the territory. Unfortunately, it is not yet the time because of priority issues. Therefore, I think we have to be careful in choosing what preventive screening activities to recommend to the government. We also need more funding to support the rationale for the screening programmes.

**Professor Albert Lee:**

Following the guideline is definitely not a shield to making a legitimate claim on disciplinary action. That is only for reference.

**Dr Ben Y. F. Fong:**

We have a comment from a colleague online: High life expectancy is more closely related to the low infant mortality rate and childhood mortality rate, instead of to the misconception that it is affected by good hospital curative services. But in a way, with regard to the low infant or childhood mortality rate, perhaps Dr Chiu can enlighten us on why we have been able to achieve a very low infant mortality rate in Hong Kong.

**Dr Daniel C. S. Chiu:**

I think in Hong Kong, the service for the intensive care of babies is very well developed. And while we have been managing the so-called kids, those that are under 0.5 kilograms, the success rate

is very high, and the complications are very low. I think that the development in intensive care is very intensive. And that is the reason why fewer and fewer doctors want to join the paediatric service, because it is overworking them very much.

**Dr the Honourable David T. Y. Lam:**

Also, we have very good antenatal assessments and good general hygiene for clean water, and adequate nutrition.

**Professor Mee-kam Ng:**

I am bringing into this a non-medical aspect. In the planning standards and guidelines, we do have standards for hospital beds, but there are no District Health Centres. In Hong Kong, our hospitals are organized on a district basis. Are we duplicating the facilities? If we are going to build these District Health Centres, how many are we talking about? The Hong Kong government asks the Housing Authority when they build public housing, and they need to use 5% of their gross floor area for community facilities. Can we use this opportunity to ask them to provide this kind of purposefully built centre?

We also work on the relationship between the built environment and people's multifaceted well-being. We do not just look at physical health, but also mental health, psychological health, and social well-being. Maybe health professionals should also suggest that when you build these facilities, it should also be integrated with other community facilities, open spaces, and places where people can mingle with and support one another. And I think that probably will also help to promote primary care and also help people to help one another instead of just relying on medical professionals.

The other is about actionable items. If we are talking about curriculum changes, maybe you guys can ask for these curriculum changes so that we can integrate human forward change,

multifaceted well-being, and all the basic knowledge about our own well-being back into the curriculum.

**Professor Albert Lee:**

That is why I have been spending my time doing a healthy school programme. Also, look at the longevity of life. From seeing patients, I am worried that more and more patients are getting diabetes, so you have got to be careful about the environment we are living in. David is right: Primary care is not a panacea if we do not address other things.

**Professor Martin C. S. Wong:**

Regarding physical health or education in secondary school, the good news is that the Education Bureau is now incorporating Health Management and Social Care as a formal part of the curriculum in secondary school teaching. For this part of the curriculum, they will introduce a Primary Healthcare Blueprint, so it is very impressive.

## ***Panel Session 2***

### **Public Health Crises**

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#### ***Speaker***

#### **Dr Thomas Tsang**

I am going to bring up some key issues that we face in a public health crisis and how they relate to a sustainable healthcare system. First of all, how may we leverage on the public health crisis to enhance the sustainability of the healthcare system? And second, how can we do better in managing the public health crisis?

The negative effects of a public health crisis on the healthcare system are very clear. Most visibly, a health crisis disrupts the delivery of healthcare services. A health crisis also diverts and drains resources, and shifts policymakers' focus away from other health priorities. And there are numerous other knockdown effects.

Nonetheless, a public health crisis may be the catalyst to effecting positive changes to the healthcare system. First, the community is more health conscious, reducing the demand for health services. A health crisis breaks down institutional barriers. Health and hospital infrastructure also get a big boost, thanks to the health crisis. Last, but not least, a health crisis facilitates the development and adoption of novel tools, models, and operations.

We saw many such examples during COVID-19. The expanded use of telemedicine and the delivery of antiviral drugs at your doorstep are good examples. For the first time, the private sector and the NGOs run community vaccination centres alongside with government. For the first time, community treatment centres and vaccination centres were set up in non-health facilities. For the first time, a long list of new laws was put up in a short time, like mask

mandates and restrictions on gatherings. And all of these were unprecedented changes.

Now, how might these changes affect the sustainability of the healthcare system? They certainly help us get better prepared for the next pandemic or the next public health crisis. With upgraded infection control measures, facilities, and staff, we may see fewer hospital-acquired infections in the future. Some modes of healthcare delivery like telemedicine or doorstep drug dispensing may add to the deficiencies of clinical consultations and clearly shorten waiting times. The extended scope of public-private partnerships will help to relieve the heavy burden on public hospitals. If a significant part of the public manages to sustain their health-promoting behaviour or healthier lifestyles well after the pandemic, that would be good news for chronic diseases as well.

Now, what can we do to sustain these positive changes? First, the proper evaluation of benefits will help convince decision-makers and us that we are on the right track. We should keep deploying beneficial structures and interfaces created during the health crisis and not let them rust, and we could assimilate these new changes in our routine operations or reconfigure them for other new purposes.

Let me move on to the second question: How can we do better in managing a public health crisis? Every time a new health crisis comes along, there is bound to be unexpected issues and situations that the plan has not covered. The truth is, it is impossible to list and prepare for all possible scenarios. And sometimes we may be forced to make changes outside or even contrary to what the plan has stated.

We always talk about evidence-based decision-making. In a real-life public health crisis like a newly discovered virus, often the information is not complete enough for that to happen. If you ask the experts, they may well come up with very different, even contradictory opinions. Sometimes when there is scientific evidence for a particular intervention, it is hard to act on it due to opposite

public perceptions. Two good examples are the safety of the COVID-19 vaccine and the concept of mixed immunity.

Command is all-important in fighting a public health crisis. Nonetheless, in a complex health crisis involving the whole of government and society, things have been found that fall in between the delineated roles and responsibilities, and this frequently causes a delay in response. Typically, bottlenecks occur when the work of different institutions intersects to undertake a new task. Addressing public inquiries is another common but seemingly unsolvable challenge in coordination. Although the government and Hospital Authority set up hotlines during COVID-19, people often complained these did not help because, one, they could not get through, and two, the hotline staff only knew stuff relating to their own department and could not coordinate a reply that was spread across different departments, which is often needed. And finally, a lot of coordination is required to support vulnerable groups in institutions like elderly homes, and they tend to suffer the most when coordination fails.

In communication, we strive for consistency, clarity, and the adequacy of the message. Rumours spread faster than viruses, and rumour control demands a lightning-fast response, which is sometimes not attainable due to a lack of information. An accompanying and designated spokesperson makes all the difference, of course. And sometimes, despite all our tricks and efforts, our communication fails to address the public's concern.

SARS and COVID-19 taught us an important lesson — that surveillance and information systems should be integrated and possess real-time capabilities. But still, some of the systems remain outside the loop. Universities, in particular, have called for a more open data platform to share real-time data for research and monitoring purposes. Now, regardless of how well we handled COVID-19, people are going to be stuck with these images in their mind. And the root cause has to do with surge capacity.

Indeed, Hong Kong took exceptional and unprecedented measures to boost surge capacity during COVID-19. But here are some ideas we can look at further. First, could we predict the peak of the outbreak further ahead to allow more time for scenario planning and advanced preparations? Before a public health crisis strikes, could we sign prior service agreements, train our partners, and prepare standard operating procedures for all of them so that they can all jump in in full gear when we press the button? And, once a health crisis is imminent, could we preemptively communicate with the public? I just want to highlight the aftermath and recovery phase. The healthcare system needs to find a good solution to manage an uncertain number of patients with long COVID and quickly clear the long backlog of non-emergency cases that the pandemic left us.

### ***Respondent***

**Dr Daniel C. S. Chiu**

It is not that there is something matters with primary doctors. It is what matters to primary doctors. I would like to have more timely and appropriate information and evidence. All of this information is very important for us, not only to treat our patients but also to prevent ourselves from getting the disease and our nurses from quitting their jobs. Also, it is important for us to do all of the planning and to collaborate with the government to do all the prevention, education, and planning. But in the previous year, we had a little problem in getting the right information at the right time. In many cases, different television programmes had different specialists talking about different concepts and two ends of the story. So the public and also even the doctors felt lost about what we should do. As doctors, we like to have information that is fast, timely, and evidence-based. I think that the government has done quite a lot already.



The second question we would like to ask as doctors is what we can contribute to society and the world. Well, we can talk to our patients as far as information allows, we advise them on isolation, also on prevention. We also participate in the outreach of the programme for vaccination. We also participate in public education and talks. We have already participated in some visits to elderly homes. But anything more we can do is something that we would like to do.

And also, as a matter of research and data analysis, we are at the front line. We can probably provide more information on the area. Without further ado, I would like to just bring up a few simple questions. Communication — can it be better done? Can something other than a website be done? And secondly, I think that Dr Tsang can advise us more on how human resources and material resources can be better coordinated. I think that Professor Zhixiu Lin has shared with us his perspective that Chinese medicine practitioners have been fully employed and utilized in fighting this crisis. Last, but not least, I would like to say that doctors can contribute more to data and surveillance. Before that, I would just like to say that some new moralities have come up. We have more Zoom meetings, and we have to do more telemedicine. I think the government might be making policies or making recommendations or making guidelines on telemedicine. Lastly, we cannot forget that other public health crises, including mental health diseases and environmental hazards, together with monkeypox, might be still around.

### *Discussant 1*

#### **Professor Zhixiu Lin**

I think the crisis can only have arrived or arisen from three factors. One, of course, is about money and funding. I think Hong Kong

certainly is not short of funding from the government and industry. And the other thing, of course, is that we do not have good technical know-how. And the third one, I think probably what we have discussed a lot today, is talents and human resources. There is a shortage of those in Hong Kong.

Now, on the other hand, if we look at the healthcare models in Hong Kong, we certainly can divide them into two. One, of course, is Western — so-called mainstream medicine. Another is Chinese medicine. We have about 10,000 Chinese medicine practitioners. Among them, more than 8,000 are registered. Basically, they are the fully licensed Chinese medicine practitioners, plus over 2,000 listed Chinese medicine practitioners. If you only compare the number of Chinese and Western medicine practitioners, it is probably 1:1.3. How to integrate this Chinese medicine human resource into our healthcare system is something we certainly need to discuss.

But why Chinese medicine? Because in our culture, we have been practising Chinese medicine for thousands of years. Chinese medicine is very good at treating chronic diseases. Meanwhile, Chinese medicine is very good at preventing diseases. In Chinese medicine, this is called “治未病”. In Chinese medicine, we usually use herbal medicine to moderate one’s constitution and increase one’s immunity so that disease does not happen easily. During the fifth wave of the pandemic in Hong Kong, Chinese medicine practitioners were forced to treat a lot of these pandemic patients. And certainly, we observed a very good response from the public.

What is the solution for the crisis? So, I would say that the solution is to try to properly utilize the human resources of Chinese medicine practitioners in the healthcare system. So that you can treat a certain proportion of the patients and they will not go to the healthcare system, the public healthcare system. I will also suggest the integration of Chinese medicine into the public health system.

## ***Discussant 2***

### **Professor William C. W. Wong**

Dr Chiu mentioned that family doctors face a lot of difficulties. But he asked the question, what else can be done?

At that time, I conducted a study surveying GPs in Shenzhen. GPs there have been helping out through social media, education programmes, answering virtual consultations, sending in medicines to people, even food, and looking after chronic disease patients online. I think one of the very few important factors is how prepared they were to deal with this problem in terms of their anxiety level. So having good information and clear instructions is very important. Hong Kong is not as organized, but we now have a great opportunity with the primary care reform and the Blueprint for setting up District Health Centres run by NGOs, which can connect with a lot of GPs in the districts in the future.

Second, we have not finished with the pandemic. And the third point that I want to make is that I am also working with Professor Kidd on a study. We are looking at international data on over 80 million primary care patients in the world. The issue of COVID itself has rippled out. In reproductive care, for example, in a lot of places, non-emergency, non-essential services have been delayed or stopped. These cannot be replaced by virtual care. And in years to come, we might see these ripples turn into an increase in the number of cancer patients or people not coming in for oral contraceptives during this COVID period. These ripples have to be addressed as well.

## ***Discussant 3***

### **Dr Victor W. T. Zheng**

On how to handle public health crises, we have a lot of views from

academic and medical experts. However, the views of the general public are seldom addressed and discussed.

Now, let me turn to report to you our recent opinion survey on the public's view of the handling of the COVID-19 pandemic. First, the general public was asked to evaluate the government's performance in handling the pandemic in the past three years. Around half of our respondents gave the answer that the government's performance in the past three years was not so good. Young, well-educated, and non-pro-establishment respondents gave a more critical answer on the government's performance (Table 4.1).

Second, when we asked our respondents to evaluate the performance of medical professionals in handling COVID, they unanimously gave a thumbs up. Almost 90% of them answered that our medical professionals were handling the pandemic very well. There were no significant variations among the different groups (Table 4.2).

When we changed our focus to ask our respondents to evaluate their own preventive measures in handling COVID, you can see that the overwhelming majority, nearly 90%, reported that they had taken sufficient preventive measures to fight against COVID-19. The percentage is particularly high among older citizens (Table 4.3).

And then when we asked our respondents to evaluate the common citizens' preventive measures, you can also see that a majority of them, over 70%, answered that they had taken sufficient measures to fight this pandemic. And the percentage is significantly higher among middle-aged and better-educated people (Table 4.4).

And then when we asked our respondents about their views on the chances of another big wave of COVID-19 breaking out in the coming year, probably this winter, you can see that over 70% of our respondents told us that the chance is small. And a higher percentage of middle-aged and better-educated respondents thought that the chance is small (Table 4.5).

When we asked our respondents about their confidence in

Table 4.1: Evaluation of the government's performance in handling the COVID-19 pandemic in the past three years (%)

	Good	Not good	Don't know	(N)
Overall	39.8	49.1	11.1	(716)
Sex				
Male	37.2	52.1	10.7	(338)
Female	42.2	46.5	11.3	(378)
	n.s.			
Age				
Under 30	26.3	71.5	2.3	(94)
30–59	34.7	54.9	10.3	(369)
60 and over	52.3	32.5	15.3	(253)
	***			
Education				
Primary	64.4	19.8	15.8	(77)
Secondary	44.6	42.8	12.6	(316)
Tertiary	27.1	65.8	7.1	(298)
	***			
Political affiliation				
Pro-establishment	62.6	29.4	8.0	(65)
No political stance	41.7	45.6	12.7	(511)
Non-pro-establishment	13.4	80.9	5.6	(99)
	***			

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

the ability of the Hong Kong medical system to handle another pandemic outbreak, about 60% told us that they were confident. Cross-tabulation data showed that those respondents who were older in age, had less education, and pro-establishment were more confident in Hong Kong's medical system (Table 4.6).

Table 4.2: Evaluation of the medical profession's performance in handling the COVID-19 pandemic in the past three years (%)

	Good	Not good	Don't know	(N)
Overall	88.8	5.4	5.8	(714)
Sex				
Male	88.0	6.3	5.6	(336)
Female	89.5	4.5	5.9	(378)
	n.s.			
Age				
Under 30	87.7	6.5	5.7	(94)
30–59	90.1	5.3	4.6	(368)
60 and over	87.3	5.1	7.5	(252)
	n.s.			
Education				
Primary	90.1	2.1	7.9	(77)
Secondary	87.2	6.1	6.7	(316)
Tertiary	90.3	5.4	4.3	(296)
	n.s.			
Political affiliation				
Pro-establishment	87.7	9.1	3.2	(65)
No political stance	88.7	4.7	6.6	(510)
Non-pro-establishment	92.6	4.5	2.9	(99)
	n.s.			

The general public's view may be sensational, subjective, or disruptive, but you need to face it. My further concern is that if there is big gap in views between medical professionals and the general public, how can it be handled? And equally importantly, if there is a big gap in views between medical professionals, how can it be

Table 4.3: Evaluation of one's own preventive measures in handling the COVID-19 pandemic in the past three years (%)

	Sufficient	Not sufficient	(N)
<b>Overall</b>	<b>88.1</b>	<b>11.9</b>	<b>(704)</b>
<b>Sex</b>			
Male	85.7	14.3	(332)
Female	90.1	9.9	(372)
		n.s.	
<b>Age</b>			
Under 30	75.3	24.7	(94)
30–59	88.9	11.1	(366)
60 and over	91.6	8.4	(244)
		***	
<b>Education</b>			
Primary	94.9	5.1	(74)
Secondary	88.6	11.4	(310)
Tertiary	87.0	13.0	(297)
		n.s.	
<b>Political affiliation</b>			
Pro-establishment	96.8	3.2	(65)
No political stance	87.1	12.9	(500)
Non-pro-establishment	87.8	12.2	(98)
		n.s.	

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

handled? In sum, one of the lessons we learned from this pandemic is to consider the public's views. And only when we are doing that can there be more sustainability and more accountability.

Table 4.4: Evaluation of citizens' preventive measures in handling the COVID-19 pandemic in the past three years (%)

	Sufficient	Not sufficient	Don't know	(N)
<b>Overall</b>	<b>71.8</b>	<b>20.0</b>	<b>8.2</b>	<b>(716)</b>
<b>Sex</b>				
Male	71.2	23.0	5.9	(338)
Female	72.4	17.3	10.3	(378)
			*	
<b>Age</b>				
Under 30	67.5	23.2	9.3	(94)
30–59	79.1	16.9	4.1	(369)
60 and over	62.8	23.3	13.9	(253)
			***	
<b>Education</b>				
Primary	58.4	18.6	23.0	(77)
Secondary	71.0	22.1	6.9	(316)
Tertiary	77.9	16.8	5.3	(298)
			***	
<b>Political affiliation</b>				
Pro-establishment	79.7	17.6	2.7	(65)
No political stance	70.0	20.6	9.4	(511)
Non-pro-establishment	80.6	15.2	4.2	(99)
			n.s.	

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .



Table 4.5: Views on the chances of another big wave of COVID-19 breaking out in the coming year (%)

	Big	Small	Don't know	(N)
Overall	16.4	71.6	12.0	(716)
Sex				
Male	17.0	73.0	9.9	(338)
Female	15.9	70.3	13.8	(378)
	n.s.			
Age				
Under 30	26.6	69.3	4.0	(94)
30–59	14.2	79.6	6.2	(369)
60 and over	15.8	60.8	23.4	(253)
	***			
Education				
Primary	14.7	46.0	39.3	(77)
Secondary	14.3	75.3	10.4	(316)
Tertiary	19.0	75.0	6.1	(298)
	***			
Political affiliation				
Pro-establishment	15.4	72.0	12.6	(65)
No political stance	15.5	72.4	12.1	(511)
Non-pro-establishment	22.7	69.2	8.0	(99)
	n.s.			

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

Table 4.6: Confidence in the ability of the Hong Kong medical system to handle another pandemic outbreak (%)

	Confidence	No confidence	Don't know	(N)
Overall	58.3	30.5	11.3	(715)
Sex				
Male	58.4	32.8	8.8	(338)
Female	58.1	28.4	13.5	(377)
	n.s.			
Age				
Under 30	43.5	52.2	4.2	(94)
30–59	56.8	31.7	11.5	(369)
60 and over	65.9	20.5	13.6	(252)
	***			
Education				
Primary	65.6	12.5	21.9	(76)
Secondary	65.0	25.2	9.8	(316)
Tertiary	50.4	41.3	8.3	(298)
	***			
Political affiliation				
Pro-establishment	93.0	5.8	1.2	(65)
No political stance	57.9	29.2	13.0	(510)
Non-pro-establishment	43.3	49.7	7.0	(99)
	***			

\*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

## **Panel Session 2: Q & A Session**

### **Dr Thomas Tsang:**

I think we have a lot of lessons evidently from the COVID vaccination campaign. Everyone knows that the main problem is to get certain groups, particularly the elderly and our children, vaccinated. I think part of the reason is that they have an unfounded concern or fear of the side effects, and the government tried its best to dispel these misunderstandings. But, as Dr Zheng said, sometimes the public does not care about your scientific data. How could we do better? Looking at Dr Zheng's study, I was thinking it presented very clearly the difference in perceptions between the public and medical professionals, and how they look at the government.

In situations like this, in addition to what we already did, what else could sway the public into getting the right perspective about things like vaccine safety and all that? I am not aware of any good opinion leaders that we can use as far as the elderly population is concerned, but I might be wrong.

### **Dr Daniel C. S. Chiu:**

The other thing I want to point out is how to change attitudes and behaviours. I would suggest involving more parent groups and NGOs because they seem to be quite influential in many ways. They like to form groups on social media. So that if they are influenced, they may accept and change their attitudes. As far as vaccination for kids is concerned, parents are also balancing the risk of getting the disease and having their kids vaccinated. It might be difficult to get them vaccinated.

### **Professor Anthony Y. H. Fung:**

The government is still using a lot of promotional campaigns, which can be useful for adults and for our older generation. But I guess nowadays, this kind of top-down campaign, especially for health

promotions, may not be as useful as something like bottom-up education.

**Professor William C. W. Wong:**

Also, I think that the personal relationship between a doctor and the patient really makes a difference. I think just some personal tailor-made information and building upon the trust we have would be very powerful.

**Professor Anthony Y. H. Fung:**

That is one of the bottom-up procedures and that is more useful than seeing someone on the mass media saying that this is really not harmful. I guess we can use this kind of primary healthcare promotion education, and that is more useful and more cost-saving than using this wide-scale top-down campaign.

**Dr Stephen Y. S. Wong:**

Everyone talks about integrated medicine, but what they mean is different. In a clinical setting where you are dealing with acute cases, can Chinese medicine actually perform a bigger role in a hospital setting?

**Professor Zhixiu Lin:**

I think it would be rather difficult to just say whether Chinese medicine can be integrated into the public healthcare system in Hong Kong because there are a lot of stakeholders here. I think in terms of policy orientation, one can just look at mainland China — they have a very good system that integrates both Western and Chinese medicine in their public healthcare system. Western medicine still plays a major bigger role than Chinese medicine. I think that is fair because Western medicine involves a lot of investment over a long period of time.

But if we compare Hong Kong and mainland China, and

certainly Hong Kong, the integration is just in its infancy. We only have a so-called “pilot project” for the integration of this system in Hospital Authority hospitals. Also, the project is only confined to very narrow disease entities: pain, chronic pain, and stroke; rehabilitation; and also cancer palliative. Still, there is large area that we can explore. I think it is all down to the government’s will, whether they want to do it. But certainly, the progress is still quite slow.

**Dr Thomas Tsang:**

The Hospital Authority really has the intention of fostering this area in a speedier manner. I totally agree that from the surge capacity point of view, the Chinese medicine practitioners are indeed a big pool of surge capacity in case we have a public health crisis. As far as the model is concerned, how can we make use of Chinese medicine in treating COVID patients or maybe some of the viruses? Today, there are hospitals where Western and Chinese medicine practitioners see stroke cases together. They are working on the cancer protocols and all that. Then, once that is agreed upon, that can be promulgated for general use.

Careful planning is required as to the priorities. The second point is how can Chinese medicine practitioners help further in the health crisis? During COVID, the government passed a new law that enabled Western medicine doctors to order a patient to take a mandatory test for COVID. The same powers have not been granted to Chinese medicine practitioners yet. I think in general that I agree that there is a lot of room for Chinese medicine practitioners to participate, not just in the health crisis, but also in our healthcare system as a whole. And as far as I read from the policy address, Chinese medicine practitioners have already been given a very prominent position.

**Dr Daniel C. S. Chiu:**

I am not against traditional Chinese medicine, but the fact is that I am ignorant about Chinese medicine. It is difficult for us to integrate. I do not know whether the government or Hospital Authority has any policy of teaching old dogs to do new tricks.

**Professor William C. W. Wong:**

Honestly, all my patients will go to traditional Chinese medicine for long COVID symptoms. The patients will find a way as long as the service is available.

**Audience:**

From a public health background, we always talk about preparedness. But then preparedness is not on paper or just an academic exercise, and then we do it and nothing happens. We really have to put it to the test and see whether the system works or not. And from a wider perspective, the general public has to be well prepared, both mentally and knowledge-wise.

**Dr Thomas Tsang:**

What if we predict sooner when the fifth wave will hit us. That probably would save a lot of lives and all that. I understand that the difficulty with all of these predictions is that there are uncertainties. But in case there is no crest, they will say that you are making a big fuss and causing a lot of inconvenience to patients. So there are always pros and cons to this argument. And the other thing is we can certainly get our partners to be better prepared. The private sector has been very helpful. If you could get them earlier with all the required training or the standard operating procedures and all that, that probably would help to achieve a sustainable arrangement. That is why I was thinking that, maybe even after the pandemic, we should keep these connections, perhaps like draw up a register of

volunteer doctors who would be willing to help us out in these health crises, and then continually interact with them and provide them with information and training, and working with the large medical groups of doctors that would improve our capacity pool.

Finally, how did the Hospital Authority management do? All the healthcare workers, all the managers, had a daily Clinical Case Conference and they did not take a single break for an extended period. The amazing thing to me really is that, this time, in contrast to the time of SARS, you heard fewer dissenting voices from healthcare workers. But then certainly there are things that we could do better.

**Professor Anthony Y. H. Fung:**

Are there any more structural improvements for the Hospital Authority? So that if another wave of COVID is coming, then they would respond even more quickly in terms of resource sharing or human resources problems.

**Dr Thomas Tsang:**

Again, not speaking for the Hospital Authority, but even before the pandemic came, the Hospital Authority already had contingency plans involving designating patients, how to manage patients, triage them, or move them around in different hospitals. But the problem is that the fifth wave was so huge that it overwhelmed everything. I think the main point really is that we need to be open to different options. We have to keep an open mind to different modes of operations and deliveries as the situation changes.

**Professor Eleanor Holroyd:**

I would just like to highlight the preparedness of nurses. Often that workforce is not brought to the forefront. I am wondering what is being done in terms of training nurses just to look at more community-based care, particularly in terms of sectorial knowledge

and also community mobilization and nurse's advocacy, and in terms of amplifying patient voices.

**Dr Victor W. T. Zheng:**

I can observe that at this moment we have very low social trust and also society is getting divided. In this case, apart from trying to strengthen our medical system to solve the coming pandemic, another way is to find a way to rebuild our social trust and to enhance our medical professionals to be more united instead of divided. When our medical professionals have divided views or opinions, it will greatly affect social anxiety or the way to follow up on measures to fight COVID.

**Professor Sally Chan:**

We did learn from SARS, and in fact the curriculum on training nurses was strengthened a lot in terms of infection control. But apart from basic training, continuous professional development is also important after they graduate as enrolled nurses or registered nurses. And in fact, what I learned, what is happening in mainland China is that in some hospitals, they require all of the nurses going through intensive care training to prepare for crises. And what I am also considering is not just to train nurses or healthcare professionals, because we know that during COVID-19 the outbreak was in the community, in aged care facilities and all that. And all those healthcare workers had not yet been trained. So, I think moving forward, apart from healthcare professionals, we also must train those healthcare workers, so that they also have a basic knowledge about infection control and the prevention of infectious diseases, and so on.

**Professor Albert Lee:**

People got infected in Hong Kong, let us say during the peak. Even the mild infections, you have to send them to the hospital.



Most people in Hong Kong share a bedroom. You just have to send those infected people away. Otherwise, you will infect the whole household. It is a structural problem of housing. I think another structural problem we need to look at is our living environment. We have to think about whether we can manage some of our patients in the community. But the first thing is, how about the living environment?

**Professor Michael Kidd:**

The Australian government has paid for an infection prevention and control nurse leader in every nursing home in the country, and that position will continue. We will have one person on site, in every nursing home, to be the leader when there are outbreaks. And we hope this is going to help with our outbreaks of influenza and gastroenteritis and all the other problems that affect our aged care facilities, as well as other environmental hazards, like typhoons.

I also thought one of Victor's slides was interesting, about the level of trust in healthcare workers and healthcare spokespeople throughout COVID-19. Many clever politicians stood behind their medical and nursing leaders who gave the messages, and the public, of course, trusted those people. But eventually, the public in many countries became exhausted with lockdowns and restrictions. We started to get protests and violence in some cases as well, where the population just went for longer than they could cope with.

**Professor Anthony Y. H. Fung:**

In fact, if you ask the public, what is the crisis? I think at that time, they would say: They are not afraid of COVID-19, but they are afraid of being caught and then being isolated in the isolation facilities. I think it is more important to deal with the fear of the public. I remember a project that I did with the School of Public Health here. In fact, we recruited a lot of students from CUHK's Faculty of Medicine and School of Journalism and Communication.

At that time, the elderly homes in Hong Kong were really under stress. We trained the students, and they talked to these people in the elderly home for hours every day. Psychological stress is as important as physical stress at such a time. I would say in future, if that happens, there should be someone that should face the fear of the public.

**Dr Stephen Y. S. Wong:**

I am interested in two protocols. One is, is there any standard operating procedure that we can set up with private hospitals where they would automatically be more helpful in the future during a crisis? Number two is, I remember the Asia World-Expo, where we had step-down healthcare, which was run by NGOs and social sector staff with some minimal health workers. But is there a way to institutionalize all of the good things that you have mentioned?

**Dr Thomas Tsang:**

The first part is about private hospitals. I do think some agreements in principle could be discussed for future health crises. Whether a standard operating procedure can be worked out really depends on individual hospitals. But I think we have some agreements, at least in principle. As for the other emergency, I think we now have the experience. And the next time we need to deploy them, we can probably do it much faster than we did for COVID-19. I am quite sure that these kinds of arrangements, whether they are written down as standard operating procedures or in some other form, already exist in some departments. But maybe they need to be reviewed periodically.

### ***Panel Session 3***

## **Capacity Building in Primary Healthcare**

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### ***Moderator***

**Professor Anthony Y. H. Fung**

During COVID-19 a lot of healthcare organizations did not have enough manpower. So, we came up with a solution. We call it the “PROcruit C” programme. We actually trained a lot of young graduates during COVID-19 and they had no background in healthcare. And then we put them in the healthcare industry to become healthcare practitioners and health coaches as well.

### ***Speaker***

**Professor Sally Chan**

Capacity building is not just about increasing the potential of the individual, but also of the organization and communities. And it is not just about knowledge and skills, but also about the ability to plan, develop, implement, and sustain health-related activities related to primary healthcare and according to the changing needs of the community, which is a very long-term process.

For resources, about 20% of our current health expenses is for primary healthcare in Hong Kong. But within that 20%, we know that about 27% is spent on the outpatient clinic, which is also related to treating diseases. The point is whether we need the government to invest more or whether we need to consider how we allocate resources so that we can have more funding to support this very important direction. And then we talk about human resources. Of course, we know that in Hong Kong, we are getting fewer and fewer

prospective students from secondary school to join the training in the tertiary sector. So where can we recruit more? And in Hong Kong at present, we are talking about importing healthcare professionals from various places. But of course, the evidence tells us that it is not a long-term solution. The most important solution is to expand the training capacity locally, and to retain our own healthcare professionals within Hong Kong.

And when we talk about training, it is not just about the number of nurses and doctors that we have trained. It is also about the content — what is the curriculum that they engage in? Take nursing training as an example. At present, the nurses' training syllabus is tightly controlled by the Nursing Council of Hong Kong. So out of the 1,250 hours of theoretical input, only 40 hours are devoted to health education and health promotion. And for training registered nurses, we have to have 1,400 hours of clinical placement, of which 60 hours is for primary healthcare (Nursing Council of Hong Kong, 2017, pp. 18–19). You can see that the majority of the training, be it theory or clinical placement, is very much focused on acute care. And if we really want to move forward to prepare people to be in primary healthcare, I believe we need to reexamine all of these curricula and the training syllabus.

The second thing I want to talk about in human resources is other healthcare professional workers in the community. There are nurse practitioners working in primary healthcare settings in many countries, and they play a very important role in taking care of people, especially in rural and remote areas. In Hong Kong, we have training for advanced practice nurses. But I really have doubts about whether advanced practice nurses can really be trained up to the full scope of practice. People are trained to do the job, but in the community setting, in the primary healthcare setting, we do not have nurses that can practice solo like nurse practitioners in Australia, in the United Kingdom, and in the United States. In terms

of human resources, we need other people such as administrators and technicians.

And the third resource that we really need to invest in is technology. We know that in Hong Kong, we have electronic health records, but how can we have data sharing between the private and public sectors, between GPs and specialists, and with other healthcare institutions? Also, COVID-19 accelerated the development or the incorporation of technology in taking care of our patients. For example, telemedicine consultations.

I believe that there must be some lessons that we can learn from other countries. For example, Australia is a big country with a very dispersed population. So, the focus is on how to improve access to care in rural and remote areas and how to attract healthcare professionals to work in those areas. In those areas, nurse practitioners play a very important role in taking care of people. How we can leverage technology in providing care to people in remote areas is an important issue. And interprofessional collaboration is also very important. In Australia, primary care refers to the first point of contact for healthcare in the community. It does not just include GPs, but also community nurses, people in other health practices, community pharmacists, those in mental health services, oral health, dental health, maternity, child health, etc. And interprofessional collaboration is very important. In Australia, they have Primary Health Networks, organized based on regions. They assess the health needs of that region and then commission health services for that region to meet the healthcare needs and also facilitate people to get in touch with the appropriate health services so that they can obtain better healthcare, as well as to avoid duplication of care.

Singapore is a bit like Hong Kong. Singapore also does not have enough healthcare professionals, so they put a lot of effort into expanding the local training capacity and also into recruiting healthcare professionals from other countries. They also put in effort into enhancing the skills of existing practitioners in primary

healthcare and improving the infrastructure and technology and so on. One thing you need to learn about Singapore is that the government puts a lot of emphasis on how to track indicators and achievements such as patient outcomes, population health indicators, and health utilization data, so that they can use such data for data-driven evidence-based decision making, and also make healthcare providers account for what they are doing.

In the United Kingdom, I think you all know the National Health Service (NHS). At present, the capacity-building efforts are focused on how to integrate health and social care services. There is a need for collaboration across sectors in order to promote holistic primary healthcare. The United Kingdom also has multidisciplinary teams, including family doctors and other professionals.

And then, lastly, there are the Scandinavian countries. Of course, different countries have different healthcare systems and policies. Overall, they also want to promote multidisciplinary team-based care. It is very important that all of the healthcare disciplines and other disciplines work together to promote primary healthcare and then continuity of care. And what I know is that in the future, they want to focus on the management of chronic diseases, mental health, and data sharing.

What can we do? We talk about primary healthcare here, but how about the Hospital Authority? How about the social sector? How about the other sectors? Do we have a common mission and vision so that we can develop strategies and common goals and objectives to move on? Multi-stakeholder collaboration is needed.

And the government has to be the leader and formulate policies, regulations, and guidelines to support development and improvement. It also has a responsibility to monitor the quality and accessibility of policies. In Hong Kong, the NGOs know the needs of people, especially the needs of marginalized populations, so they can play a very important role in driving primary healthcare.

Lastly, there are the users. Have we consulted them? I believe this is something that Hong Kong can do better — involve our users in the planning and development of primary healthcare services.

After we have done all that, we have to measure the outcome. What are the indicators that you can use? In Singapore, I know that they use different indicators to evaluate capacity-building strategies. Access and utilization are important. And then the quality and continuity of care, whether people follow clinical guidelines? What about coordination of care and patient-reported outcomes? And what about the patient-provider relationship and the care coordination? And then the cost-effectiveness. And we have to assess whether the patient and the community are really engaging in the decision-making process and whether after the engagement, they experienced changes in their knowledge, behaviour, and empowerment.

We can collect data by a quantitative method, but it is also very important that we collect data with qualitative approaches. We can have group-focused interviews, we can have case studies so that we can obtain in-depth insights into experiences, as well as have a better understanding of different complex factors that would affect the outcome. And, in fact, the WHO has proposed different tools and frameworks to measure the outcome of primary healthcare capacity building. All of these frameworks, in fact, follow the input service delivery outputs and outcome model. And this is an example of the Primary Health Care Performance Initiative Framework.

I would like to conclude my presentation by saying that capacity-building involves a lot of healthcare professionals and different sectors. It has to be cross-sector and a long-term process. It is also a process of changing mindsets. And it also goes beyond improving human resources capacity. In fact, it is also a way to improve the organizational and institutional context.

***Respondent*****Dr Stephen F. C. Pang**

We all know that our health status in Hong Kong is good in terms of expected lifespan. I think that the reason why we can maintain very good health in terms of the parameters that we use to measure it, is probably due to the high calibre of our talents and their professionalism. But if we totally rely on talent, I think that this is the issue that we are concerned about today: Whether it is sustainable in the longer term because you can see that our talents now are very exhausted with tackling the ageing population as well as the increase in people with chronic diseases.

If you look at the Hospital Authority, for the time being, if you look at the strategic plan, the main focus in the planning of facilities is to make our future hospitals look better. They are recruiting more people. In the last 10 years, the number of staff has increased from about 60,000 to almost 90,000 (Hospital Authority, 2023b). We need to think outside the box and consider whether primary healthcare and mobilizing resources in the community as well as the private sector is what is most important for us to focus on.

Also, primary healthcare is different from primary care. When we are talking about primary healthcare, that is not only a medical model but also includes a holistic and social model in our future development. But developing a primary healthcare system is not that simple and easy because if you look at other countries, they have a long history of development. They have an accreditation system for GP practices in Australia. And if you look at the organization, they may have had the system in place for many years and we are only starting to build our Primary Healthcare Commission now.

Also, what we look at is future improvements in quality. But first, we look at the funding model. Is it the highly subsidized model, where 95% of subsidies come from the government (Health Bureau, 2022a, p. 12), or should all people have some co-payment



system, or do they need to contribute what they can to improve their own health? Also, training. Primary healthcare training is not that mature. The training of nurses probably starts to become more comprehensive at the fellowship level. If you look at the training of pharmacists, I think that they do not have very structured primary care pharmacist training. We think that the medical side seems to have a little bit more mature training in the family physician training. So that is why I think it is also good to start with the medical part because their structure and scope have been quite well developed in the past decades. Now our question is whether our professionals should focus more on primary care training so that they can have very structured training to deliver so that people understand what primary care and primary healthcare are.

The third thing is what you can do to assess a person's risk instead of their diagnosis. Because we are working on their first contact. After training, then we need to talk about what roles and duties primary care providers should take up. And then after they have had their duty and role assigned, how can the team work together? That sort of thing we still have no platform for, although eHealth will be our future platform. But at least for professionals, what is their willingness to do that? Even with their team building, how can the government empower the providers? Can we have empowerment through subsidized programmes or through a service agreement, or a reference framework?

The last thing is, how can we change the mindset of the community to take preventive care as the key issue for maintaining their health instead of going to see a doctor when they are sick? That would be a shift from a treatment-based to prevention-focused approach. And the last thing is, what is the alignment within professionals so that we can work together?

## *Discussant 1*

### **Mr Jimmy Wong**

I agree with Professor Chan that there are four major elements (i.e., access and utilization, quality and continuity of care, cost-effectiveness, and patient and community engagement) that will affect the development of primary healthcare.

For the hardware, I think if all of us have visited the District Health Centres, you may find a very beautiful well-designed place and a well-updated IT system. The hardware is already ready. As for the software, our healthcare professionals are well trained at the university level and have gained experience in hospitals, but most of the time they are opposed by the client. In Chinese, “求醫” means that the patient or the client needs to ask, seek help, and seek advice from healthcare professionals rather than the healthcare professionals going down to connect with the patients. That is why primary care is different from traditional medical care.

With regard to the stakeholders, we have thousands and thousands of them to target, according to statistics from the Health Bureau. The target is not a problem then. My concern is how to link up these four elements to our clients, especially clients and our professional staff. Nowadays I am not sure if people in Hong Kong understand what a District Health Centre is even though we have had a publicity campaign for nearly one year. But at least in my district in the New Territories, few citizens understand the District Health Centre service in their district. My point is that if we want to effectively push primary care, the most important thing is our staff's attitude towards the primary healthcare system. It is very important to build up a very good relationship with them. I expect that our primary care professional should be the one who leads as the case manager.

For the time being, we need to empower the primary care staff. Empowerment is important because I heard that they want to make

some improvements, but they are restricted by some guidelines or protocols, and they are restricted to coming up with some new ideas. Also, encouragement. Encourage them and empower them or those who are already working in the District Health Centre primary care services.

## *Discussant 2*

### **Dr Kam-leung Chan**

I would like to talk about the role of Chinese medicine in capacity building in primary healthcare in Hong Kong. First, Chinese medicine provides an alternative treatment option for primary healthcare in Hong Kong. By integrating Chinese medicine into the primary care setting, patients have access to a wider array of treatments, including acupuncture, herbal medicine, bone setting, and massage. This diversification allows for personalized and patient-centred care tailored to individual preferences and needs. Second, Chinese medicine emphasizes a holistic approach to healthcare, focusing on balance and harmony of the body, mind, and spirit. By incorporating Chinese medicine into primary healthcare, Chinese medicine practitioners can address not only the physical symptoms but also the underlying imbalance of the root causes of health issues. This comprehensive approach contributes to a more holistic and patient-care-centred primary healthcare system. Chinese medicine places great emphasis on preventive measures and health promotions.

Next, the integration of Chinese medicine into the healthcare system in Hong Kong encourages collaboration and knowledge sharing between Western medicine practitioners and Chinese medicine practitioners. This operation allows for the exchange of

expertise, research findings, and best practices, leading to a more comprehensive and evidence-based approach to patient care.

Last, the integration of Chinese medicine into healthcare in Hong Kong has led to increased research and evidence-based trials in the field. Research studies are being conducted to evaluate the efficacy, safety, and mechanism of Chinese medicine treatments. This contributes to the body of knowledge and health-informed clinical decision-making, ensuring that Chinese medicine is practised based on scientific evidence and best practices.

### *Discussant 3*

#### **Dr Joseph W. F. Leung**

I think that within these last three years of the pandemic, health and technology have definitely become very important and irreversible. In Hong Kong, the pandemic has deepened the penetration of mobile apps because of the Leave Home Safe app. If we talk about primary healthcare, we might need to think about how to pursue digital health because technology definitely plays an important role.

Another issue is digital literacy. Because if we cannot maintain good digital literacy, it will be very difficult to pursue digital health. But if we want to push it, which party should be responsible?

Another issue is data collection. First, data collection is also very important. Without data, we cannot do any data analytics. In 2020, the Singapore government partnered with Apple, and launched the LumiHealth app. If people join the plan, then they would need to submit their health status through the smartwatch. This might be a good thing for us to consider as a pilot — to collect the citizens' health status, then try to prepare policies. But of course, we also need to think about privacy controls and social trust, trust in government.

### Panel Session 3: Q & A Session

#### **Professor Eleanor Holroyd:**

I would just like to ask about how to develop public trust in the community healthcare system. And how there could be a way of building into training components and building into the public profile or the voices of the public, stronger trust for the community system. What would be a mechanism that could be built into either the education of nurses or advanced nurse practitioner roles, but with some knowledge of putting community health at the forefront and patients and community first in terms of an orientation for workforce training?

#### **Dr Stephen F. C. Pang:**

In Hong Kong, particularly at the primary healthcare level, I think trust is one of the issues that we really need to be concerned about. What I think is that in Hong Kong, people still trust professionals, but we may not have a very good recognition system for professionals working at the primary care level. What we need to build up is a recognition system for primary care professionals, and how they can be recognized by the public as part of the contributions to primary care.

I think family doctors are one of the approaches that we would try to test. For example, we would try to support them with the community drug formula, so that they can take up drugs at a cheaper price so that they can manage patients at a reasonable price instead of totally depending on the patient's ability to afford the drugs. Another is IT, which can be used to share information, particularly for the patient that they are taking care of, and then they can communicate with the public sector through a bilateral referral system. And then in the future, we will also consider other public health interventions. We would try to support them by recognizing their contributions instead of saying, I give you some money, you

just do it for me as one transaction. Second, if other primary care professionals are involved, once they have been part of the, say, District Health Centres or part of the partners of our District Health Centres in the future, then what is the connection we can build so that the public recognizes their work instead of just treating them as private practitioners?

**Mr Jimmy Wong:**

Regarding trust, perhaps primary healthcare services are a new thing to most Hong Kong people. Chinese people in a healthy state will not consider seeing doctors and will not see any people to improve their physical health. Maybe the concept may change in the future, but I think, to begin with, we have three ways to go. First, to educate them about health knowledge. And the second is that I think people in Hong Kong understand that they are paying a low fee to the healthcare system. We can let them understand that they need to contribute part of the cost if they did not do well in prevention. So primary care should come in earlier to prevent a knowledge deficit from occurring for most people without healthcare knowledge.

**Dr Joseph W. F. Leung:**

Personally, I think we are in the phase of the restructuring of the District Council. I think that there might be an opportunity to make use of the District Council to link up more with the District Health Centres.

**Dr Stephen F. C. Pang:**

In Hong Kong, we do not have a very good community network in that sense. I know that the government had started trying to build care teams in each district in different sub-districts. Now, there are two districts where care teams have been formed. They have a very strong communication network, and we have professional support. We will try to explore whether this could be a long-term policy and

plan to do it. Technology is another thing that we probably need to further pursue. This time, the Primary Healthcare Blueprint is, I think, the first report where 20% is comprised of a discussion about IT in primary care reform. We will try to see whether we may have different ways of doing things with different people in different age groups.

**Professor Michael Kidd:**

One of the challenges facing governments all around the world looking at strengthening primary care is capacity building and getting recent graduates from medical schools and nursing schools to come and work in community-based settings. Do you have any insights into what you are going to do here in Hong Kong to make sure that you are able to build that steady pipeline of new doctors to become family doctors or work in primary care clinics, and similarly with the nursing graduates?

**Dr Stephen F. C. Pang:**

This is a very challenging question. For the time being, I think we need to look into the issues from different disciplines and different approaches. For example, for medicine, I think in Hong Kong, people would like to go into private practice. But we can provide a structural system for them to work in primary care. That means that, at the moment, they do not want to spend time doing some preventive care because that is not profitable. What we could try to do is design our primary care schemes. For nurses, I think the career structure would be very important, because there are no profitable specialties or disciplines for nurses. And then because they are more flexible and they can do more compared with what they do in a hospital, where they may be restricted by a lot of practices governed by the doctors, if we have a very good career structure for them, that would be good for them. For pharmacists, I believe that because they have no status in Hong Kong, I can say that, apart from in

public hospitals, they have no status at all in the private sector. What we must try to build on is how to develop pharmacists. For other disciplines, I think different disciplines have their own character. That is why we developed the primary care directory and sub-directories. A directory means that all primary care providers need to register with the primary care directory. Then we would offer them packages and different privileges, and the authority to attract people to do more primary care.

**Dr Ben Y. F. Fong:**

Being an ex-appointed District Councillor of Shatin for eight years, I could see the potential and development involved in getting primary healthcare at the district level going. And today, we hear a lot about primary healthcare or the healthcare system involving everybody. And there are a lot of resources in the community at the district level, from business, from healthcare, schools, and other places. Now on digital literacy among the elderly, we had a one-off experience and they did really well. It is just a matter of whether we provide the incentive, the encouragement and, more importantly, the technical support. Also, we have lost so many people through migration in the last few years. No matter how many more you train up, you lose so many. How do we fill the gap? At the organizational level, retention of staff, particularly experienced staff, is very important if we want to build up a sustainable health system for Hong Kong.

**Professor Albert Lee:**

I think the District Council, or the future district administration, could play a role in community assessments and understanding the needs of the community. We have done community diagnoses for 10 districts in Hong Kong. I am already working with the District Officer from Sham Shui Po to develop some dashboards. I think it is something that I think the future District Council could focus on, that will help you to plan forward.



The second point is about the manpower issue. When I was a graduate in the United Kingdom, none of us wanted to be a GP, including myself. But later, more and more of my colleagues opted in. Because it is compulsory training and afterwards they will find a reasonable job. I think the primary care directory is a good step. I think we need to go step by step, through the credentialling of GPs.

**Dr Ben Y. F. Fong:**

I have a minor point to make in response to Professor Kidd's question about how we train students. In the University of Hong Kong, they have a mentorship programme for fresh medical students going to a GP's clinic. And the doctor becomes the mentor for something like three years during the training. And that is very good exposure. I never resist all these alternative medicines or therapies. It is good to get them early.

**Professor Albert Lee:**

I think the undergraduate experience is very important. I had a very good undergraduate experience in the United Kingdom for General Practice. I learned a lot about medicine and I was inspired by my GP tutor in London. I think for the medical curriculum, we really have to improve and get them to have good exposure during their undergraduate years, and then they know what GPs do.

**Professor Kenneth N. K. Fong:**

We do have primary healthcare courses in our university for allied health professionals. Like physiotherapists and occupational therapists, who have a subject in the undergraduate curriculum called primary healthcare. And after graduation, we worked with the School of Professional Education and Executive Development (SPEED), Hong Kong Polytechnic University. They offer two professional certificate courses in primary healthcare for occupational therapists and physiotherapists. After they get the certificate, they can say that

they have been trained in primary healthcare. Perhaps in the future, we can also think about disaster management and preparedness for them in the curriculum. But one of the challenges that we face, I think, is the practicum, because we do not have enough placements for them in terms of primary healthcare. Because in Hong Kong, most practicums are received in hospitals, not in primary healthcare settings. I think the government and also the Bureau might think about that.

**Dr Stephen F. C. Pang:**

I think the practicum in training definitely will be a problem because we are now trying to purchase as many private services as we can to cater to the need for primary care. We probably really need to think because when you do the services in private, they may not be willing to take up the training component. We probably need to learn from overseas. Of course, some colleagues asked me whether they can go to the District Health Centre for training. But what can I say? The District Health Centre is so small compared with the whole community. And I do not think now they have a very standardized primary care scope of practice. In the future, we can think about including outreach services, and consider what outreach services can be part of primary care.

Another thing is manpower loss in Hong Kong, which I hope is not a long-term thing. If we can really keep on improving and providing them with the opportunities, I hope some of them will come back. And, we do really need to think about flexibility in work. While I was in the Hospital Authority, I started the Locum Recruitment, but it is still not very attractive. But in the community, I think it is easy to start the Locum arrangement. And then like our experience with COVID-19, we set up a lot of community isolation facilities, most of them on a Locum basis. So why not try to think about that? That is a lot of manpower there.

**Dr Victor W. T. Zheng:**

I think the technology aspect is the key feature. A lot of us mentioned this, particularly artificial intelligence. My question is, has the government tried to think from this direction or has the government injected any resources to study this area to see the potential for further development?

**Dr Stephen F. C. Pang:**

I can say this time that we have really spent quite a significant amount of money on IT development. The issue for me is, do we have expertise? This is the most difficult part. It is unlike in hospitals. They are quite structured and standardized. When you develop an IT system, it is not that difficult. But in the community, how can we engage people through technology and whether that is something that old people like? How can we have a system where people of all ages would love to go into the app and then go to any technology so they can learn and can share and can build up a healthy lifestyle? That is the challenge. We shall have a very flagship project on how to engage the people.

**Professor Albert Lee:**

I think it takes some time because in our university, our students, in the first year, first semester, have a course, a mandatory course, in artificial intelligence. So, all students learn artificial intelligence. Also, regarding older people, I think they could learn. We can do more promotions on the use of eHealth and eMedicine.

## Keynote Speeches (Day 2)

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### *Keynote Speech 3*

#### **Implementing Sustainable Healthcare Policies: Aotearoa, New Zealand**

**Professor Eleanor Holroyd**

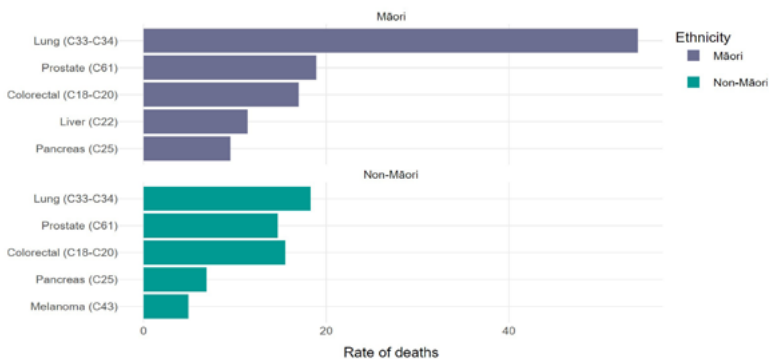
I am going to talk mainly today about some of New Zealand's responses to public health capacity building and strengthening, and some of the issues around cultural competency, transparency, and building public trust.

Some unique features of the New Zealand healthcare system include a universal, tax-funded national healthcare service, one of the first countries in the world to do so. Reasonably uniquely, we have a universal old age scheme. Everybody over 65 has a non-means-tested pension. We also have an excellent compensation scheme. Any accident in the community or home is automatically covered for healthcare and time off work. We have had some quite groundbreaking health reforms lately in response to the health future. That work that is going on is called Te Whatu Ora, which means the weaving of wellness in 2022. This year, we are proceeding on the construction of a new healthcare system. We also had some new policies on a Smokefree New Zealand.

Yet, in the last five decades, indicators for Māori and indeed Pacific health have remained inequitable with those for non-Māori. We have a gap or a system of inequity around Māori health outcomes in New Zealand (Figures 5.1 and 5.2).

There was some early work done in the 1980s by Mason Durie, not dissimilar to some of the work that has been taking place in planetary and one health movements, on the Te Whare Tapa Whā model, which recognizes the interconnectedness of physical, mental, spiritual, and family well-being. It is very holistic, and it is looking

Figure 5.1: Rates of most common cancer deaths for Māori and non-Māori males, 2020



Note: Rates are per 100,000 and age-standardized to the WHO’s standard world population.

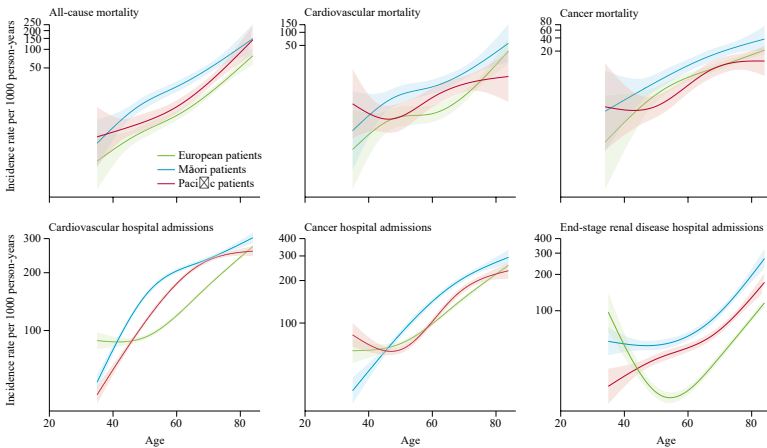
Source: Health New Zealand (2022).

at a comprehensive approach to healthcare delivery and looking at all the systems of well-being that can better meet the diverse health needs of communities.

There has been a lot of research on the benefits of looking at using indigenous, first peoples, frameworks in terms of outcomes for all populations and the promotion of social accountability, equity, and respect for diversity and inclusivity. Its key issues are on epidemics of loneliness and disengagement and some of the COVID outcomes that have happened, the mind and the life force, and the expression of emotion.

In 2022, under Jacinda Ardern’s government, there was a large healthcare system reform. The main principles of this were just returning to the centrality of the principles and obligations of the Treaty of Waitangi, and encouraging all people to access the comprehensive range of support in their local communities to help them stay well. When people need emergency or specialist care, this will be accessible to all because we do have a number of remote

Figure 5.2: Adjusted incidence rate (per thousand person-years) of clinical outcomes in a New Zealand population with diabetes enrolled to the Diabetes Care Support Service between 1994 and 2018, by Māori, Pacific, and European ethnicity



Notes: Patients were aged 35–84 years. Period and birth cohort effects were adjusted by use of age-period-cohort models. Solid lines indicate point estimations and shaded areas indicate the 95% CIs.

Source: Yu et al. (2021, p. e215).

communities with no necessary digital engagement and also often lacking in transport and not necessarily being able to access services. A large amount of attention paid to digital services will mean that many more people will get the care they need in their homes and communities. It is very important that healthcare workers feel valued and respected, and are well-trained and happy in their roles. The main principle of this is equity, which I have outlined on the gap for Pacific and Māori and increasing numbers of other priority groups. Sustainability, that is embedding population health as a driver of preventing and reducing health needs and promoting efficient and effective care. Many people would be affected and it would be whānau-centred, empowering people to manage their own health

and well-being and have meaningful control over the services, and treating them as experts in their own care. So very much a bottom-up approach.

Of course, alongside these reforms come workforce issues. New Zealand is facing an ageing workforce and huge numbers are emigrating. We are losing our graduates as fast as we can train them. We have an underrepresentation of Māori-Pacific in clinical roles, such as doctors, nurses, physiotherapists, allied health professionals, pharmacists, etc. The poor health status of Māoris needs to be recognized, as well as the considerable role Māoris play in creating a sustainable workforce and then showcasing initiatives that empower Māoris. Also, the importance of *whakapuāwaitia*, healthcare for all, needs to be emphasized.

During the COVID-19 pandemic, New Zealand was hailed for a while as being quite revolutionary in introducing an early lockdown. Our “social bubbles” policy, where people formed intimate bubbles or work bubbles with a number of people, was actually seen as quite groundbreaking in a number of places. The government held regular press conferences every day. People listened. There was a great deal of trust. Of course, after the second lockdown happened, things fell apart and there was a lot more anarchy and anger around it. There were transparent updates on infection rates and citizens got to know some of the science and talk the scientific language. This open communication was seen in a number of studies to build trust and allow citizens to understand the rationale behind government decisions.

A group of us doing work across New Zealand with the London School of Economics and Political Science looked at a number of areas around the sociological imagination during the COVID response. One of the key areas was healthcare workers. New Zealand has quite a lot of mental health nurses and mental healthcare navigators, who were all interviewed as part of the network of community care workers. Quite overwhelmingly, although they

were hailed as heroes, they were not necessarily treated as heroes. Their pay was lower. They were often quite invisible because they were working with patients in isolation. Commonly, they did not get a mask or gown. They were going the extra mile, dropping in pharmaceutical products or extra things for remote and isolated people, and dealing with the complexity of managing bubbles at work and bubbles at home.

Again, in the community, there is a lot to be done to really appreciate, make visible, and also to give financial support in terms of remuneration and conditions to what is often seen as the invisible workers in the community. About 20% of New Zealand's nursing service is involved our community, doing primary health and aged care. We have quite a strong role for advanced practice nurses, and we have a training route for public health nurses up to master's degrees as well. Community workers recently got a pay rise.

Also, in some of the other areas for sustainability, we do have a national health platform that enables the sharing of patient data among healthcare providers. But there are still issues with remote areas and digital literacy around some of the more remote communities. We also have an innovation hub that supports the development and implementation of healthcare technologies and, like Hong Kong, moving quickly into telehealth, but it brings a number of complexities with it as well.

Some other legislation was Smokefree New Zealand. A nationwide engagement process was started with Māori and Pacific groups, as well as with other priority groups, healthcare providers and NGOs, research and academic units, and business and industry. Multiple stakeholders were engaged to get triangulated input from all angles to actually promote what would be a way forward with a high level of community engagement. As a result, last year, New Zealand passed smoking legislation to permanently ban the sale of cigarettes to anyone born in 2009 or after.

Innovation plays a big part. The research grants councils are



very strongly focused on innovation and innovation awards, blue sky thinking, and thinking outside the box about what could be done to make a change. There is an accessible platform. The Health Quality and Safety Commission actively involves the public. Every decision, every health bill being reformed or investigation into new health legislation, must involve consumers and the public in decision-making. We did feel that was quite a groundbreaking way of putting health and people at the centre of legislation.

We do have our undergraduate curriculum in nursing, consisting of seven semesters and, overall, there are nearly two semesters of public health and primary care. There is also a common first year, where we have an interprofessional first year where students studying clinical sciences, physiotherapy, occupational therapy, nursing, podiatry, and oral health have critical public health courses to look at some of the areas of health systems and critique some of the policies that are happening in public health; and other topics that are focused on capacity building, access and equity, social accountability, and professional responsibility. Then, of course, we have graduate and master's programmes that build on the principles of the Treaty of Waitangi and that are focused on New Zealanders living, staying, and getting well. There are several support systems built into that: valuing performance, smart systems, people powered, etc.

We do have nurse practitioners. They have key roles in the community, in remote communities and in primary healthcare. These nurse practitioners do a one-year to 18-month master's. They can do diagnoses, they can do treatments, they can prescribe several antibiotics and also pain medication. They work in collaboration, or they work autonomously on population health outcomes. They provide a range of assessments and treatments, and they are also considered clinical leaders. We are increasing the number of nurse practitioners in response to some of the social reforms.

My last slide shows you some of the things that have been

integrated into the new service delivery model, weaving wellness with the family or the Whānau Centre, and then the support systems around it. Pacific, rural health and then key population groups in terms of youth mental health, and all of these, of course, intersect with chronic illness, aged care, and with public health services, hospital services, and social services combined. In the new interprofessional model of education, we are looking at our linking, as I said, with public health and more social work. We have practitioners that can respond in a more meaningful manner and more autonomously by helping clients or patients navigate healthcare systems.

## ***Panel Session 4***

### **Financing Sustainable Healthcare Systems**

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#### ***Speaker***

#### **Professor Peter P. Yuen**

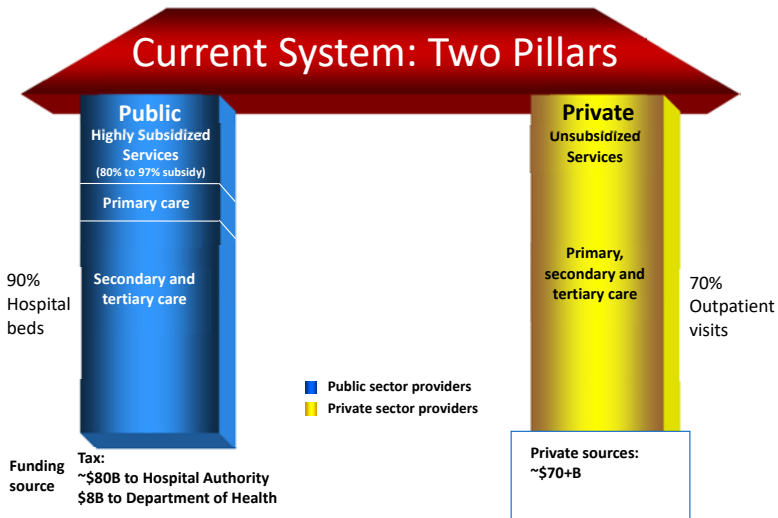
Today I am going to share with you some of my findings and analysis of whether Hong Kong's healthcare financing system is sustainable.

We have a two pillars system. One is the public pillar, which is the blue side, and the private pillar, the yellow side (Figure 6.1). Roughly in terms of money, I think it is 50:50, with the public side, of course, focusing predominantly on hospital, on secondary and tertiary care. And the private side is mostly on outpatient primary care with also a small sector of private hospitals. Around 80 billion dollars to the Hospital Authority and some to the Department of Health. And private sector spending is also about 70 billion dollars — the majority are outpatient visits. The public sector is heavily subsidized, up to something like 97% of the cost. The private side has almost zero subsidies.

These are the different sources of financing in Hong Kong. And taxes make up about 50%. The second largest component is out-of-pocket, and that makes up about 35%. And then the rest would be insurance (15%). There are three bars. The yellow one represents group schemes, mostly employer sponsored. And then the light blue one represents individual purchase plans. This is again half and half. Of that 15%, maybe about 7% to 8% would be group, and 7% would be individual purchase plans. When we talk about insurance, it is not a major player in Hong Kong. If we have problems with tax income, then we will be in trouble (Figure 6.2).

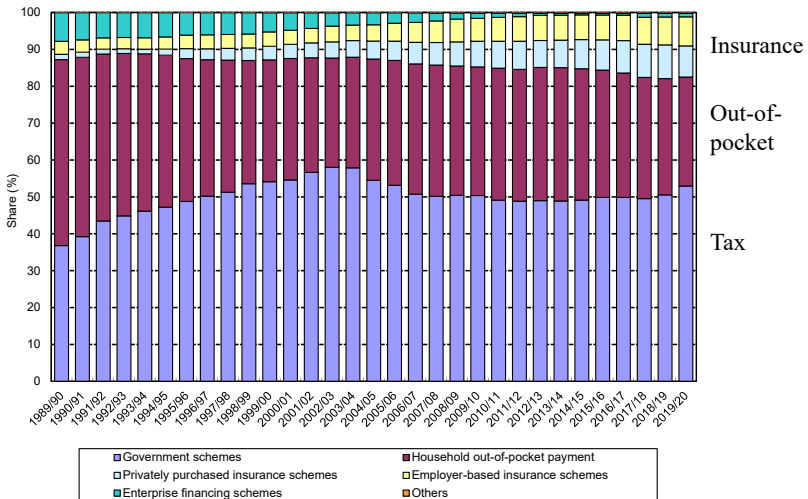
The system is already strained. This is the waiting time for a

Figure 6.1: Current system of healthcare financing system



Source: Based on The Bauhinia Foundation Research Centre (2007).

Figure 6.2: Sources of financing for healthcare, 1989/90–2019/20 (%)



Source: Health Bureau (2021).

Table 6.1:    Waiting times in public hospitals for patients with total joint replacement surgeries, 1 January 2022–31 December 2022 (month)

Cluster	Median Waiting Time	90th Percentile Waiting Time
Hong Kong East	33	79
Hong Kong West	27	67
Kowloon Central	37	47
Kowloon East	22	64
Kowloon West	42	56
New Territories East	29	60
New Territories West	56	95

Note:      The median and 90th percentile waiting time implies that half and 90% of the patients with surgeries performed could receive surgeries earlier than the indicated waiting time respectively.

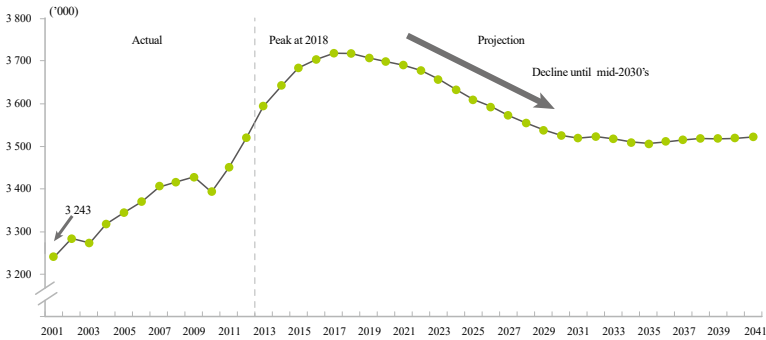
Source:    Hospital Authority (2023a).

total joint replacement. It could be as long as 95 months. Even the median time is not short either. In New Territories West, people have to wait 56 months (Table 6.1). So that is not a very good situation in Hong Kong for non-urgent conditions in public hospitals. But of course, if you have money, you can get it done in the private sector quickly.

Is the system financially sustainable? I think there are two major challenges. One is an ageing population, which we are all acutely aware of, and the second one would be medical inflation.

An ageing population is really worrying in Hong Kong. Not only do we have more old people, but we have fewer and fewer working-age people who are the people who pay taxes. If we have a shrinking taxpaying population, how are we going to finance our public hospitals? Since 2018, our labour force has been declining, and the decline is a sustained one, not a short-term one (Figure 6.3).

Figure 6.3: Projected labour force, 2001–2041 (thousand persons)



Note: Figures exclude foreign domestic helpers.

Source: Secretariat of the Steering Committee on Population Policy, Chief Secretary for Administration's Office (2013, p. 6).

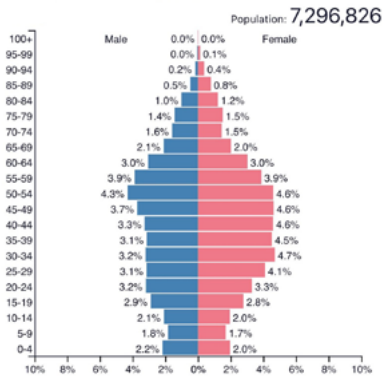
And this projection did not account for the emigration that happened last year. We need to bear in mind that we not only have more elderly people, but that we also have a shrinking tax base.

The number of retirees is also a concern. In 2013, 10 years ago, if you looked at the pyramid, the bulge was still within the working age group. Now we find the bulge moving up towards the retirement groups. And if we look at 20 years from now, then we find the top is almost a little bit larger than the lower half, meaning there will be more people not working, not contributing to taxes, than the people who are contributing to taxes, and the revenue of the government will be less and less (Figure 6.4). Is it going to be sustainable?

Now, the second factor is medical inflation. I tracked the private health insurance claim data as well as the premium data over the years. And it is quite a good fitting regression line. Roughly, it is about 4.5% per year (Figure 6.5). In those years, general inflation was actually very low. We are talking about medical inflation being about double that of general inflation. That is mainly due to new

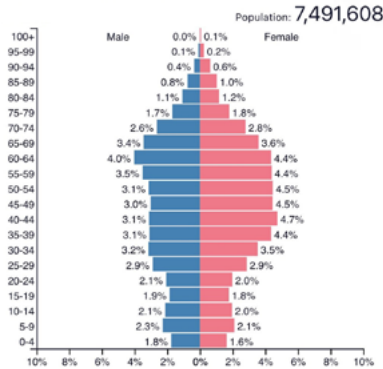
Figure 6.4: Population pyramids, 2013, 2023, and 2043

2013



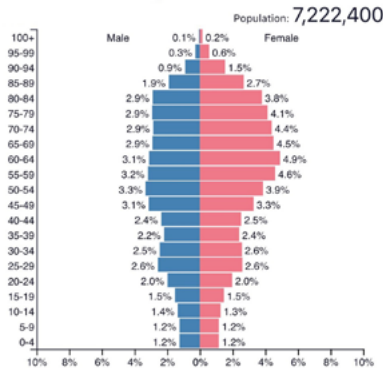
Bulge within working population

2023



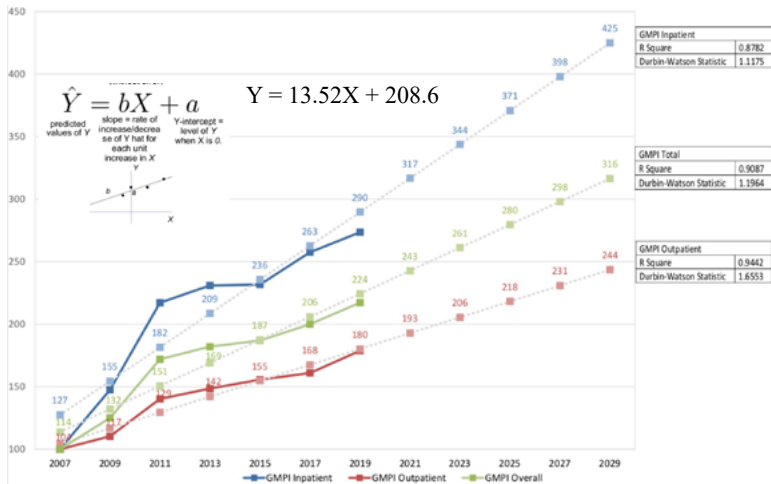
Bulge moved to the retired population

2043



Retired population size similar to the working population size:  
Fewer taxpayers,  
more heavy users

Figure 6.5: Prediction of Group Medical Premium Indices (GMPI) in the next 10 years



Note: Using least squares method for time series forecasting.

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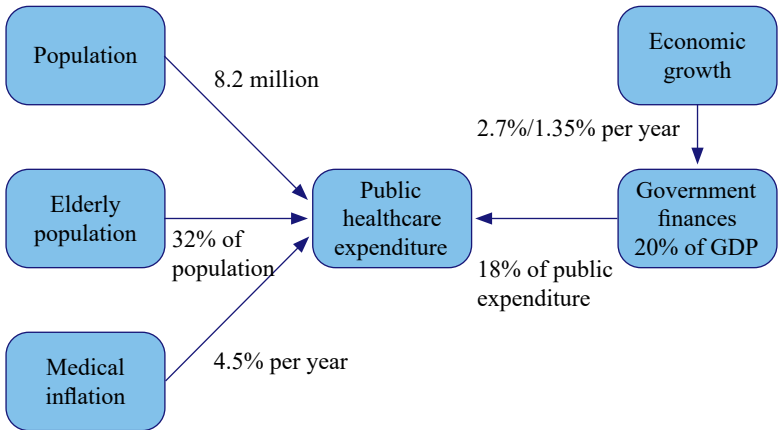
technology, new drugs, and a new way of treating patients, plus the behaviour of some providers.

So how bad will it be in 20 years from now? I looked at some parameters: the number of people we have, the number of elderly people, medical inflation, and economic growth. We have been okay because we have economic growth. The government's revenue year after year was still increasing and the government was able to give more and more money to the Hospital Authority.

This is my forecasting model. The population is one factor, but more importantly, there are the elderly population and then medical inflation. That constitutes the demand side. On the supply side, if we have economic growth, then the government will have more money and can spend more money on public healthcare. The population by 2039 would be about 8.2 million and the elderly population 32%.



Figure 6.6: Forecasting model of public health expenditure, 2019–2039



Assume that medical inflation will be 4.5% every year. And then economic growth: I use two assumptions. (1) We maintain the same rate as in the past 20 years, which was 2.7%. (2) Because of ageing, and because of the geopolitical situation that affects our economy, I assume it to be only half of that, at 1.35%. All along, government finances are about 20% of GDP, and the government has been allocating about 18% of its total budget to healthcare. These are the parameters and assumptions (Figure 6.6).

Let us look at the situation in terms of funding. I use 2019 data because that is pre-COVID. In 2019, funding was about 72 billion dollars to the Hospital Authority only, not counting primary healthcare. The population was 7.5 million and elderly people constituted about 18.5%. I used a weighting of four for elderly health expenses. Every elderly person would consume maybe four times that of a non-elderly person in terms of healthcare expenditure. The rest would be the non-elderly population. Using this weighting, I would say that by 2039, the total population would be equivalent

Table 6.2: Public healthcare funding, 2019 and 2039

	2019	2039
<b>Population</b>		
Elderly	1.4 million (18.5%)	2.6 million (32.0%)
Non-elderly	6.1 million (81.5%)	5.6 million (68.0%)
Total	7.5 million	8.2 million
<b>Population units</b>		
Elderly	5.6 million	10.5 million
Non-elderly	6.1 million	5.6 million
Total	11.7 million	16.1 million
<b>Per population unit funding</b>	<b>\$6,214</b>	<b>\$6,214</b>
<b>Total funding</b>		
Basic requirement	\$72.7 billion <sup>1</sup>	\$100 billion <sup>2</sup>
Adjusted for medical inflation	—	\$241.1 billion <sup>3</sup>

Notes: 1. Funding to the Hospital Authority.  
 2. Funding requirement based on population level and ageing only.  
 3. At 4.5% per year compounded for 20 years.

to 16.1 million non-elderly population. If I use the existing level of funding, the funding for each population unit would be around 6,000 dollars (Table 6.2).

Now, if we go to the demographics in 2039, if we want to maintain the same level of funding, we will require 100 billion dollars just because of the population, with no improvements (Table 6.2).

And if we look at medical inflation for the next 20 years, again, using 4.5%, the funding level would become 241.1 billion dollars, not 100 billion dollars (Table 6.2).

Then, we look at GDP growth and economic growth. Scenario one would be we would be able to maintain 2.7% per year. Our GDP by then would be about 5,000 billion or 5 trillion. Public

Table 6.3: Projection of public healthcare funds available in 2039

	Scenario 1	Scenario 2
GDP growth rate per year	2.7% <sup>1</sup>	1.35% <sup>2</sup>
GDP <sup>3</sup>	\$5,090.16 billion	\$3,906.95 billion
Public expenditure <sup>4</sup>	\$1,018.03 billion	\$781.39 billion
Public health		
Expenditure <sup>5</sup>	\$183.25 billion	\$140.65 billion
Requirement	\$241.10 billion	\$241.10 billion
Inadequate	\$57.85 billion short (30% less)	\$100.45 billion short (70% less)

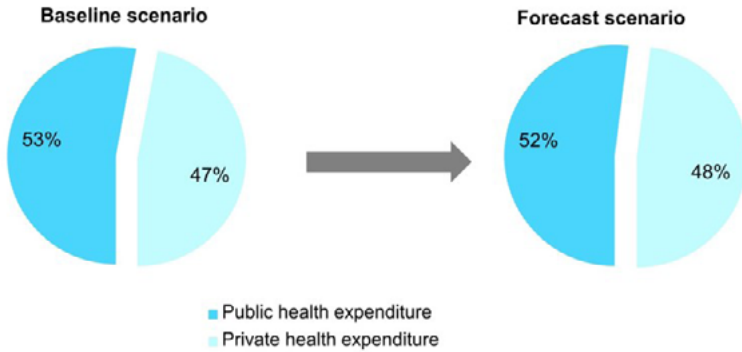
Notes: 1. Assuming GDP growth rate same as the past 20 years.  
 2. Assuming GDP growth rate is half that the past 20 years' average.  
 3. GDP in 2019: \$2,987.60 billion.  
 4. 20% of GDP.  
 5. 18% of public expenditure.

expenditure, 20% of that. Public health expenditure is 80% of the public budget. The requirements would be 241.1 billion dollars. We would be short by 30%, so a very significant percentage (Table 6.3). We already have a waiting time of about 90 months, if I cut the budget by 30%, I do not know how long the waiting time will be.

And that is also a very optimistic projection. Scenario two, if I cut economic growth by half, then we are 70% short (Table 6.3). So I think that the whole system would collapse. It would not work if I only give the Hospital Authority 30% of what it needs.

Will more private health insurance help? This is what the government is trying to do: pushing voluntary health insurance. But as we see earlier, private insurance is only 15% of the total picture. And what the government is pushing is only individual purchased plans, and that is only 7%. And there are a lot of problems with the Voluntary Health Insurance Scheme. They are not that attractive to the elderly because of the experience-rated premium. If you are

Figure 6.7: Projected proportions of public and private health expenditure in 2040



Source: Food and Health Bureau (2014, p. 135).

old, you pay a lot more. If you have preexisting conditions, you pay a lot more. It is not attractive to the elderly. There are some tax incentives, but if you are retired, tax incentives are meaningless.

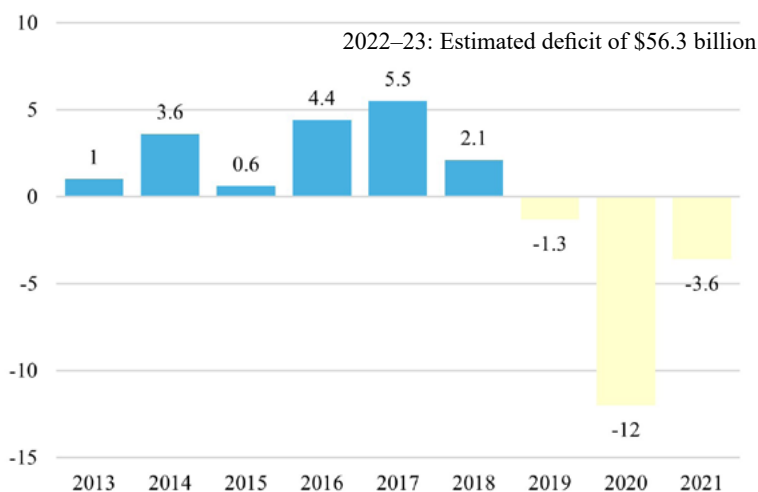
And even the government's consultants projected that the public-private mix, even with the Voluntary Health Insurance Scheme, the changes would be very marginal, about a 1% difference (Figure 6.7).

What about all these primary care initiatives that we heard about yesterday? We have the District Health Centres, we have the Primary Healthcare Blueprint. But where are we going to get new money for primary care? If we want primary healthcare to work, we need to finance it.

This is the government's financial situation. We have been in the red after 2018; and in the past there had been government surpluses (Figure 6.8). But even in the 2022–23 financial year, it is still a deficit budget. Is it realistic for the government to find new money to fund primary care? I do not think so.

I think we need to drastically improve efficiency. Economists look at two types of efficiencies: allocative efficiencies and technical

Figure 6.8: Hong Kong government budget, 2013–2021 (% of GDP)



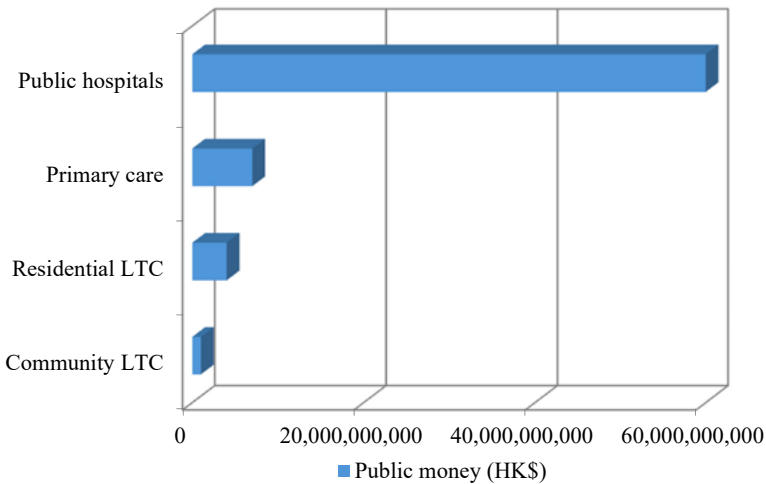
Sources: The Government of the Hong Kong Special Administrative Region (2022a); Trading Economics (2023).

or X-efficiencies. Allocative means you put money where it would derive the most benefit. X-efficiency is after you get the money, are you really spending it in the most efficient manner? Hong Kong performs badly on both counts.

In terms of allocative efficiency, we put all the money in public hospitals, not in primary care, not in community-based care. And not only that, about 50% of all hospital admissions were found to be inappropriate (Yam et al., 2014). They can be treated on an outpatient basis. And the same thing for long-term care. About 65% of all those who are applying to stay in residential care facilities do not need residential care in terms of their physical health (Elderly Commission, 2017; Figure 6.9).

Spending on primary care is, of course, not enough. It is only 17% and that is already highly inflated because that includes all the regulatory functions of the Department of Health (Figure 6.10).

Figure 6.9: Allocative inefficiency of public health expenditure

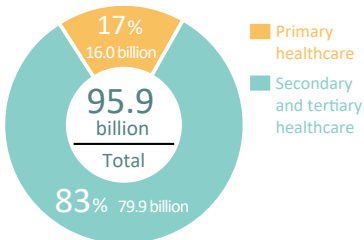


Notes: ~50% of all public hospital admissions were found to be Ambulatory Care Sensitive Conditions.  
 ~65% applications for subsidized long-term care (LTC) services were assessed to have care needs that could be met by community care.

Sources: Based on Yam et al. (2014) and Elderly Commission (2017, p. 11).

Figure 6.10: Spending on primary healthcare

Public health expenditure in 2019/20



17% of Hong Kong public health expenditure are on primary healthcare, including governance, system administration, Department of Health statutory functions, etc.

Private health expenditure on primary healthcare accounts for ~70% of total primary healthcare spending.

Source: Health Bureau (2022a, p. 12).

As I have indicated, we really need to just shift our resources to more outpatient ambulatory care, and ambulatory care saves a lot of money. You do not need three shifts of staff. If it is done outpatient, that involves one shift. And the same for long-term care.

I think to remove the allocative inefficiency, you need to put everything under one roof, put everything controlled by one authority so that that authority can shift resources. Because right now, the Hospital Authority is not willing to give up any of its resources. By one roof, I mean governance, budget, and staffing are all controlled by one authority; the authority can redeploy you to work in nursing homes and work in primary care facilities and shift resources around.

And the second thing is the technical or X-efficiency. Most people think the Hospital Authority is already very efficient, but is it really more efficient than the private sector? What I did is I estimated the cost of the Voluntary Health Insurance Scheme basic plan for the entire population of Hong Kong. If I buy private health insurance for the entire Hong Kong population in 2021, I will only need 47.62 billion dollars (Table 6.4). We gave the Hospital Authority 80.7 billion dollars (Table 6.5). I would save half the money.

When I included only inpatient services in the Hospital Authority, which is 54.4%, it is 50.75 billion dollars. So there would still be enough money to buy health insurance for everyone. This just shows that our public hospitals are not that efficient (Table 6.5).

And the reason is very simple. The funding model is a block grant model. Hospitals get money regardless of the work they perform (Figure 6.11). Now in most countries, they are moving from activity-based funding to value-based funding. But we are not even activity-based, we are historical-based. So if you work hard, then you are doing a disservice to your hospital. Everyone tries to be less efficient so that they do not get more patients, hoping they will go to the other clusters.

This is what I call serious perverse incentives. Money goes to

Table 6.4: Premium cost for private health insurance for the entire population in 2021

Age group	Male population ('000)	Male premium (HK\$)	Female population ('000)	Female premium (HK\$)	Premium cost for the age group (HK\$ thousand)
0-4	134.8	2,758.00	124.6	2,208.00	646,895.20
5-19	465.5	1,708.00	427.6	1,804.00	1,566,464.40
20-24	176.4	1,792.00	192.2	2,246.00	747,790.00
25-29	219.4	1,881.00	328.1	2,758.00	1,317,591.20
30-34	229.2	2,060.00	364.2	3,225.00	1,646,697.00
35-39	235.6	2,291.00	360.3	3,616.00	1,842,604.40
40-44	230.5	2,899.00	329.9	4,678.00	2,211,491.70
45-49	244.1	3,686.00	327.4	5,382.00	2,661,819.40
50-54	253.8	4,665.00	333.0	5,619.00	3,055,104.00
55-59	288.2	6,144.00	343.4	6,336.00	3,946,483.20
60-64	294.7	8,262.00	308.5	8,070.00	4,924,406.40
65-69	235.7	10,598.00	247.6	10,483.00	5,093,539.40
70-74	185.5	13,766.00	195.8	13,574.00	5,211,382.20
75-79	100.7	17,580.00	103.8	17,395.00	3,575,907.00
80-84	79.6	21,715.00	92.4	21,497.00	3,714,836.80
85+	72.1	27,545.00	137.6	25,264.00	5,462,320.90
Total premium cost	3,445.8		4,216.4		47,625,333.20

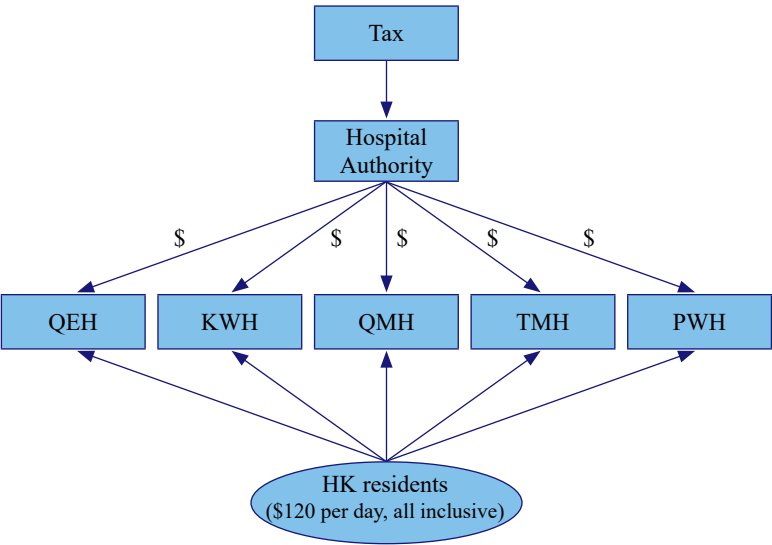
Note: Buying Voluntary Health Insurance Scheme basic plan for the whole population.



Table 6.5: Efficiency of the Hospital Authority in 2021

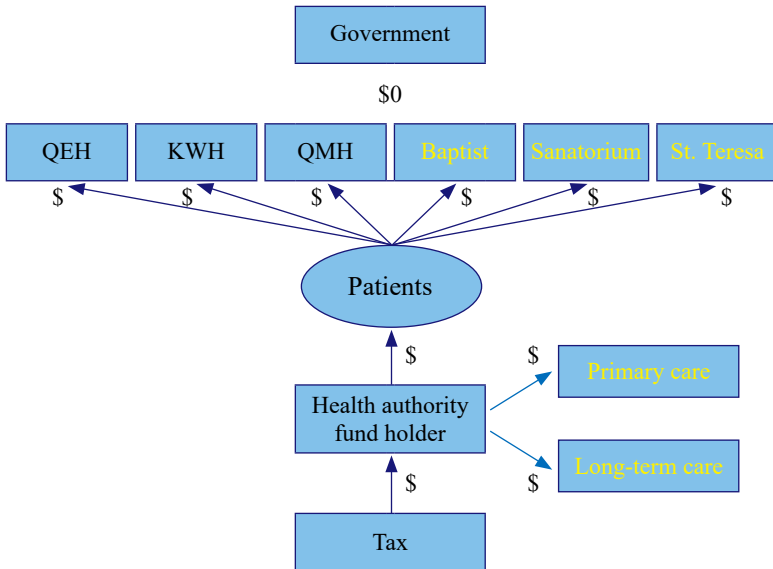
Recurrent funding to the Hospital Authority	\$80.7 billion
Capital subvention to the Hospital Authority	\$12.6 billion
Total subvention to the Hospital Authority	\$93.3 billion
Inpatient services share	\$50.75 billion (54.4%)
Buy Voluntary Health Insurance Scheme for everyone	\$47.62 billion

Figure 6.11: The current funding model: Block grant cannot promote efficiency



Note:    QE = Queen Elizabeth Hospital; KW = Kwong Wah Hospital;  
         QM = Queen Mary Hospital; TM = Tuen Mun Hospital;  
         PW = Prince of Wales Hospital.

Figure 6.12: Change needed: Change the funding model to money follows the patients



Note: QE = Queen Elizabeth Hospital; KWH = Kwong Wah Hospital; QMH = Queen Mary Hospital; Baptist = Hong Kong Baptist Hospital; Sanatorium = Hong Kong Sanatorium & Hospital; St. Teresa = St. Teresa's Hospital.

the hospital whether or not you do a good job. And you penalize good service because you will attract more patients. There is no incentive to be efficient. And the longer the waiting times, the more ammunition you have to get more resources from the Bureau. We really need to do away with block grant grants to the Hospital Authority. Money needs to follow patients.

We need to change to a money-follows-patients model (Figure 6.12). You spend the same amount of money, and give it to a fund holder; that fund holder would fund hospitals based on the volume of work they do. They would also allocate some money to primary care, to long-term care.

My conclusion is that the health financing situation is really gloomy based on an ageing population, fewer taxpayers, low economic growth, a low tax rate, a narrow tax base, and because we do not have any really significant supplementary financing mechanisms. Even if economic growth can be maintained, I think our quality of care would still be much worse off. But if economic growth is reduced by half, the system will not function. So the status quo is not an option. Doing things more or less in the same way, I think, would be grossly irresponsible. I think drastic change is needed to improve both allocative efficiency and technical efficiency.

### *Respondent*

#### **Professor Albert Lee**

Medical inflation keeps going up faster than general inflation, that is one point, and also definitely our economic growth. We have several hundred thousand people moving out of Hong Kong. We are facing an internal economic challenge ahead. It is going to be a tough time in the next 5 or 10 years for Hong Kong.

That already indicates that we need to find a way to improve efficiency. We need to put it under one roof, one single funder. I think that without the lack of structural integration and interfacing, the only way to force people to work is to put them under one funder. Now, I did a little calculation, a rough estimate: an inpatient bed, a low estimate, 5,000 dollars per night or even more. And emergency, another 1,000 dollars per admission. Now, let us say that as a GP, I could every day save one day of admission, which I think is possible if provided with other infrastructure. I could help the government to save 6,000 dollars. In 365 days, that becomes 2.2 million dollars. And we have around ... just take a figure of 5,000 GPs in Hong Kong, I think we can contribute 11 billion dollars. If we strengthen what we do in day-to-day general practice, we could contribute 10 billion dollars or more collectively. But then we need

the infrastructure to help us to do it. If we can save two or three admissions per day, then we will recover that 57 billion dollars.

So now there is an increasing call for personalized healthcare. I know that our biomedical scientists are making advances in medicine, looking into new drugs and genetic and target therapy, which is great. But I think epigenetics, talking about genetic expression, also has an impact on the environment. Sometimes we look at one side, we get to understand why certain people, with similar backgrounds, end up with different health outcomes. Unless we also invest in that, we can never know why certain people live longer.

I think we need to think outside the box in terms of healthcare planning and look into some of the junior-level healthcare workers, talking about non-dispensing pharmacists, physician assistants, and day-to-day care. And then voluntary health insurance. I think hopefully this will be a paradigm shift for insurance coverage. I always advise insurance firms to look into providing incentives for better health, total health, rather than just focusing on disease. And risk management should look at the infrastructure. I think nowadays action is very much needed in this policy paper and we could look at the whole patient journey. Along the pathway, how we could make a cost saving by improving efficient healthcare. That is something that could hopefully save billions of dollars.

## *Discussant 1*

### **Dr Donald K. T. Li**

First of all, of course, primary care. I am sure that with regard to family medicine, there is a lot of discussion about the benefits of this from gatekeeping into the health system, being efficient. But again, I agree that the money follows the patients. And then, secondly, would be incentives for quality at the primary care level — rewards. Recently, with the introduction of co-care, I think as a practicing

family doctor, first of all, I want more support. Not monetary support, but from the primary care team, so that I can access it. And I think that the District Health Centres are a very good start in the sense that doctors no longer need to hire their own staff but have a whole team to back them up to provide holistic care.

But to follow on the funding of primary care, I want to talk briefly about insurance. That is something that can be expanded in the future. The Voluntary Health Insurance Scheme is just a watered-down version of what was originally proposed, on a much bigger scale. Peter and I recommended mandatory insurance. You start young, it is like a savings plan, and then there is a lot of risk sharing. And then when you need to use it at an elderly age and all that, you are basically using up what you saved in a way. But everybody needs to join. I think the whole thing needs to be expanded. And there are a lot of problems with existing medical insurance. The voluntary health insurance is a much better way forward, but it is still very selective in the services provided. And in fact, it is discriminatory because there are still exclusions. People buy the insurance and when the insurance company knows that they are going to use it on certain chronic illnesses, they are excluded. I think the whole thing needs to be regulated.

But together with this is also a medical savings plan. This is back to the patients taking responsibility for their own health. Also, there is a financial obligation, because if the government is going to go broke sooner or later with this model, you need to contribute. And again, there were proposals that we worked on, medical saving plans that can really be saved. And if you do not use it, it can be transformed to the next generation. So that is a very good incentive. But again, all of these need to be mandatory.

Lastly, I think efficiency, basically, we noted primary care, family medicine, and all that is in the healthcare system. Overall efficiency is in the primary care level, and that is where technology comes in, telemedicine, all these emerging things. I think we need

to invest in all of these so that the efficiency at the community level will be much enhanced and really prevent unnecessary admissions, unnecessary stays in the hospital, all of these. So again, when we train our future doctors, family doctors, I think this element is very important — that we are up to date with technology and all that.

## *Discussant 2*

### **Dr Jonathan H. O. Wai**

I am working in the private sector, and now I am working in the administrative office of my hospital. I want to give a very simplified picture of how the private sector, especially in private hospitals, works. So now in the private sector, we have primary care, hospital care, and inpatient care. We have outpatient departments, including general outpatient and also specialist outpatient departments. We generated revenue from this by patients coming to the hospital, more or less like a clinic, as in GP clinics. And then this is one of the revenue streams. And then the main part of the income is admissions. All of these general revenues will subsidize the normal routine functioning of the hospital. We need to spend the money on staff services, daily updates, hardware, equipment, improvements, and equivalent maintenance. We need to do very tight or really careful budgeting in terms of money. And it is difficult, I would say, but it is important in order to make sure our staff can have the salary payroll every month.

So far, I have not seen talks about the budget for primary care, this sort of co-care payment, or the establishment of the Primary Healthcare Commission, or how the budget is being told to the public in detail. But I think it is really important. The second thing is how to control medical inflation. In the hospital, we are not going to control inflation, but we have to control our expenditures, how to control the money being used.

The third point I want to really speak out about is that about 50% of admissions can be managed in ambulatory care. I think it is talking about those cases in attending the outpatient department. But we are talking about the money from the whole source. Eighteen per cent of the money is spent on primary care or on public health. Not just in outpatient department, but in every aspect, including staff. If you are talking about putting all the cases from hospital to ambulatory care, then we need another kind of management. I would say we use the same human resources, but that is why we have to be there. You may have to consider that cases involving minor surgery, outpatient surgery, that will not require admission, can be put in as day cases. But these also have to be taken care of because we have to care about how the theatre is running, about how your infection is controlled, all of these things. You put it out from the hospital, out to the ambulatory centre, expenditures will still be needed, but could be less, because you cut down on one shift of personnel, I mean the night shift.

## **Panel Session 4: Q & A Session**

### **Dr Ben Y. F. Fong:**

When I was working in Australia, I was also managing a teaching hospital, and we had to cover the ambulatory surgical centres nearby in terms of emergency support. And they are very efficient. Hong Kong is very different from Australia in terms of space, in terms of access and other things. And I would not adopt a similar model from Australia, but it can be done within the hospital environment. Now in Australia, around 70% of the procedures are done outside hospitals or out of the hospital setting. But it is the reverse in Hong Kong. So we could start looking into it, whether it is feasible and manageable in Hong Kong, and I would say that it can be done. And I did it when I set up Union Hospital 30 years ago. We had four purpose-built

day surgery suites in the outpatient clinic within the hospital setting. All of the procedures are simplified, just like performing a minor procedure in your clinic. You do not have to scrub up and do all those things. It is saving, in terms of postoperative observation and other things. You do not need to follow the hospital's full protocol, and that is also saving.

Peter had a very important point on why the Hospital Authority is not moving in that direction because they get the money, so who cares? Apart from money following patients, there are also other means. If we remember when the Hospital Authority was first set up, there was lots of discussion and work on diagnosis-related groups (DRGs), which were very popular in the United States and Australia. And we only managed to come up with DRGs for 20 items and stopped. And that was meant to be a means of allocating funds to hospitals. Maybe it is time to revisit all of these innovative means.

**Dr Donald K. T. Li:**

I think the key thing is the funding. I mean, just back to daycare surgery and all that, we all know the efficiency of that. But this is part of the Hospital Authority. Now, would the Hospital Authority be willing to purchase services outside of its authority? That is the thing. And that is why money follows the patients. Because at the end of the day, if you use the calculated cost of the procedure in the Hospital Authority, it would probably be at least two times more than you purchase it from a private practitioner. Funds really need to be taken out of the healthcare budget from the Hospital Authority. Now, this was the initial idea with setting up primary care. And you notice at the end of the day, we did not get the primary care authority. It must be called a commission because it needs to be one grade lower than the authority, meaning also the funding. So precisely what we need to know is, are you really going to allocate, say, 10%, 20% of the healthcare budget to primary care? And then also allow money to follow the patients? The reason why all of these minor procedures



are still done in the Hospital Authority is because it only costs 100 dollars to the patient by going to the Hospital Authority. So the way it should be is that if this service is to be done by the Hospital Authority, they should be buying services from private practitioners and then still charging 100 dollars. And that would completely increase efficiency and not the overall cost. But then, at the end of the day, when the budget comes again, they need to justify, even though it is a block grant, that we have done 10,000 outpatient cases in the Hospital Authority. It is really, I think the time has come, besides the Blueprint, it is really the revolution of separating primary care versus secondary and tertiary. And primary care services should be on par and equal to those offered by the Hospital Authority.

**Professor Peter P. Yuen:**

Maybe allow me to comment on this strategic purchase. I think there were some suggestions in an Our Hong Kong Foundation report. And then also recently in the Primary Healthcare Blueprint, strategic purchasing is mentioned. But if you read the Primary Healthcare Blueprint, the reference to strategic purchasing is that if they need some primary care services, they might do some purchasing from the private sector. But there is no reference to purchasing inpatient services. But if you look at the Hospital Authority, they have no money to do strategic purchasing. All of the money they get is already tied up in salaries. So 80% is salaries and then drugs and then equipment and other things. If you really have to do strategic purchases, they have to sack staff, which they are not willing to do. So that is the problem. You have to put everything under one roof; otherwise, the Hospital Authority alone would not have the money to do any purchasing.

**Professor William C. W. Wong:**

Ever since the General Out-patient Clinics went to the Hospital Authority, basically, the service has not expanded. And currently,

apart from a small service run by the Department of Health, it is essentially what you are saying. I am not too sure having one authority looking after primary care would make any difference. And creating a huge organization would put the government at ransom. I am just wondering if you have considered having two authorities like what Donald just mentioned, or even looking at the Singapore system, where they have created a number of local authorities and health authorities in order to create competition. Otherwise, I would imagine that would be an even bigger problem than it is now.

**Professor Peter P. Yuen:**

I still think one authority, not two, not the Hospital Authority and a primary care authority, would work best. That authority really needs to have good people, and not just be driven all by these specialists. I think there needs to be a large percentage of consumer representatives. More like the New Zealand kind of thinking, not just all tertiary care. And I think that the body would have this control of money and they can dish out money to different levels of care. I think that is still very difficult because the hospitals would still say they need all those resources. Look at my waiting list. But you can clear the waiting list very simply by contacting the private sector, but they will not do it because they have to sack staff. You really need to disassociate providers from funders. But right now it is not because the Hospital Authority holds the money and they provide the services. But if you delink provision, purchasing, and funding, I think that would go a long way. Then, if I can pay for an outpatient, an ambulatory surgery, which is only one-half the price, then of course I would purchase. I would send the patients to an ambulatory surgery unit rather than to a hospital.

**Dr Ben Y. F. Fong:**

In the old days when we had the Medical and Health Department, it was only one department. Its statutory functions included managing

outpatient clinics, public hospitals, and subvented hospitals, as well as licensing private hospitals, everything was under one roof. The government was the funder. They would say what we should do in the Wanchai district, how much we should provide to the public. It was all allocated centrally. But now with the Hospital Authority, they are both the funder and provider. So the money goes to the Hospital Authority. The government has no control. Apart from that, we had the Audit Department coming to us every year to look into the books. But I doubt if the Hospital Authority is doing such strict auditing.

### **Professor David Bishai:**

Later this morning, we are talking about an immense challenge of reform and financial sustainability. Where could we have the conversations that are required for the political economy that could drive such an immense reform? Because it is the people of Hong Kong's money that is at stake here in this reform. Ben, your comment is right about the controlling function that is missing. And if we do what Peter suggests and really unify the Hospital Authority and the outpatient sectors, we would still be missing an enormous part of every health system, which is the controlling oversight of every dollar. In the OECD countries' health systems, there is this invisible 20% to 25% of the health budget are having bean counters watching every episode of care. In my hospital in America, every admission has got an oversight and utilization review. Hong Kong does not have that army of oversight. But if you are going to do anything next, this next step is going to have to include oversight. And again, it is going to cost new money that is not in your calculations. This oversight function is going to cost at least 10% of the health budget that is not there. The Hospital Authority is not paying for the oversight. The private patients, they do not know they are getting bad value. But that engagement of the people of Hong Kong in the value of their health system — they need to be at tables

like this. And I would put those tables in the District Health Centres. You can reach the people of Hong Kong with that.

**Professor Albert Lee:**

They need to be very strategic in purchasing. When I was in the United Kingdom in June, they actually purchased the radiological service abroad because now with advanced technology, a lot of radiologists interpret the film at home, probably they are also United Kingdom qualified and trained. So I think we need to think about this more innovatively. Some services, the public side could purchase from private hospitals. But sometimes the private hospital could purchase from the public. Because sometimes private hospitals also have advanced things.

David has highlighted a very important point, i.e., oversight. We are counting the numbers and not actually looking at real value for money. That is the problem. The District Health Centre, I hate to say that it is still counting the numbers on how many cases I have done now, rather than looking at every step as they mentioned from the whole pathway. Are we putting the right value for the right service? Rather than just the output, we really want to know the real outcome.

**Professor Sally Chan:**

When we talk about finances, we need to see how we can do things cheaper. I think we focus a lot on family medicine, but I believe it is also important to see how we can expand the role of nurses and allied health professionals in primary healthcare. For example, in Australia, the United Kingdom, and United States, you have nurse practitioners who really can work independently and collaboratively with primary care providers. And they can have a full scope of practice, assessment, investigation, make diagnoses, and also some can prescribe medications. We are talking about the District Health Centres in Hong Kong. And I know that at present, when people

attend the centres, they must then have a referral to the GP and come back and all that. In fact, those practitioners are well positioned in those centres and perform a range of functions that can manage a person's health. And the same as allied healthcare professionals, in that they can expand the scope of practice. And we know that, for example, in Australia, the services that are provided by nurse practitioners and other health professionals are much cheaper than those of medical doctors. If we really look at a sustainable healthcare system, I believe we must expand the role of those allied health professionals and nurses.

And one thing, when Peter talks about one health authority looking after the various functions, I think it may also have to retain and attract staff going into a different area of health. You know that at present, the majority of our healthcare graduates, 90%, will go to the Hospital Authority to work. Why? Because the Hospital Authority has a well-structured career path, apart from the salary. If we put all the units, long-term care, primary healthcare and hospitals, under one authority, I hope that they will have a consistent career path. No matter which area you are going into, you have a very similar career path, a similar salary. It may be a better way to attract our graduates going into the different areas. Under one authority, then that may overcome some of the issues.

### **Dr Donald K. T. Li:**

Nurses have a very important partnership with doctors together with other ancillary workers. But I think we also need to take into consideration patient expectations and culture as well. I think that is why our District Health Centres are undergoing a slight transformation from the previous few years when they were almost non-medical. They did not have a network of family doctors and all that. And it was the first stop for healthcare problems, mainly on prevention and all that. But the problem with that was that people did not associate that with medical care or community-based care.

They enjoyed the services of healthcare coordinators at the centres promoting health, but they did not see that as being part of the whole holistic care that is needed for their health prevention. And, hence, there is now more emphasis on having a network of doctors, family doctors, and one family doctor for everybody. This is what we hope for as a family doctor. I want to have a team, but I cannot afford it on my own because I need to hire professional nurses, care workers, etc. Now I have it at the District Health Centres, and I will coordinate as a family doctor to provide this care. But we also need to let patients understand that they need to shoulder some responsibility for their own health as well.

Briefly, I want to go back to the budget thing. The problem of the purchaser-provider split is that the Hospital Authority holds the funds and makes the purchases, this we have been saying for 10 years. But there is also one area of funding that cannot be neglected, and that is the training budget for our future profession. This is under the Hospital Authority as well. For example, all the training in Hong Kong, for specialists and family doctors and such, is under the Hospital Authority. There are no other options open. When I was president of the Hong Kong Academy of Medicine, I strongly advocated it. And then we started a committee of training, especially specialist training at the Hospital Authority. There were three meetings. All of them were to review the terms of reference until I retired from the Hong Kong Academy of Medicine. That is the problem of funds held by one person. That is why I think we all agree here that the governance of the future health authority or whatever, especially in holding funds, must be transparent, must be equitable, and must have stakeholder representation, and all that.

**Dr Jonathan H. O. Wai:**

I agree with what Professor Sally Chan said about the human resources problem. Yes, with the nurses and the allied health professionals also. If you are under the same roof as the Hospital

Authority, it would be simpler to assign duties. If you are in a different system, then you just switch from one organization to another. Also, you will have difficulty with the budgeting. The Hospital Authority has an annual expenditure of more than 80 billion dollars. A lot of the money goes to the staff. Also, I would like to just follow up on what Albert was saying about strategic purchasing. If we are going to assign some money from this 80 billion dollars to purchase some programme or procedure, we will have to increase the finances. But today, we really want to try to make it efficient. District Health Centres could be one way, but we really need to monitor the money, and how it is spent. I think some other personnel are needed to calculate it as well.

**Professor Michael Kidd:**

Just briefly, one of the opportunities to make a change is when a hospital has to be pulled down. One of the wonderful examples is the Women's College Hospital in downtown Toronto. It was pulled down. What they built was an ambulatory care hospital with no inpatient beds, exactly what you are describing. And day surgery, lots of ambulatory clinics, and a hospital in the home linked to it. A lot of the staff were redeployed to care for people, who went home from the day hospital, and were provided with care in their own homes. And when the pandemic occurred, it was the ideal place to be converted overnight into a COVID-19 assessment and testing centre. One of the other examples around the world where things fail is that when we stop building hospitals, we build ambulatory services, but the funding does not flow adequately. And as I described yesterday, in Denmark, where they now have a third of the hospitals they had 25 years ago, the biggest challenge for the primary care centres is that the services are sent out to them, but the money and the staffing and the infrastructure are not provided. So, you have to make a really good investment if you want to maintain the level of care to the population. And finally, I am a big advocate for the role of nurse

practitioners and health professionals in primary care. But one of the mistakes we should not make is having lots of new healthcare professionals out there working independently on their own. We risk fragmentation of care. What we need to do is look at how each of these new groups of health professionals are going to be integrated to provide comprehensive care, improved care for everybody.

**Professor Vivian Lee:**

We do have some questions from the online audience. The first question is to Professor Yuen: May I know the latest spending during the pandemic from 2021 onwards in terms of the healthcare budget? Because your previous slide was pre-COVID.

**Professor Peter P. Yuen:**

Nothing pops into my head, but I guess those are unusual times. No one cares about how much money they are spending. And I think that is necessary during that crisis.

**Professor Vivian Lee:**

The second question is related to the deficit. Most governments reported deficit financing for the increased need due to the pandemic. For Hong Kong's healthcare financing, dependence on taxation is clearly unsustainable, whether from taxes or insurance, which are pay-as-you-go. What new financial reforms are being proposed?

**Professor Peter P. Yuen:**

I think both taxes and insurance are not sustainable if we have an ageing population because it is still the working young people paying. So both insurance and taxes are the same. But taxes are even worse because it is harder to raise taxes. Insurance, you can look at the expenditure and raise the premium the next year. And Hong Kong is mostly taxation, so that makes it more difficult. And the only sustainable financing system is savings. Only one country



in this world managed to do it, that is Singapore. They make people save 8% of their salary from the time they work. And now everyone, when they retire, has this huge amount of money that they can use after retirement. Dr Li mentioned that in the Bauhinia Foundation Research Centre's study, we did propose something like that. We were talking about maybe 1%, because we would still have the Hospital Authority, which is funded by taxation. This is to create what we call a third pillar. And you can use that money to purchase some care. For middle-class people, they can afford to pay more than 120 dollars a day, but they cannot afford to pay maybe 20,000 dollars a day in a private hospital. So there is some kind of middle pillar where the government will subsidize, let us say, 50% if you use the money from your savings account and then you purchase care from the private sector. So that is something which I guess would probably work and would make the system more sustainable. But of course, the government needs to be more proactive and exercise greater stewardship in guiding reform in those directions.

**Dr Ben Y. F. Fong:**

A couple of points we did not discuss much this morning is out-of-pocket expenditures. Now in the Hospital Authority, if you want to have a diagnostic test earlier and faster, you can be referred to private imaging services at a discount. People are willing to do it. And the other point is the Greater Bay Area — we have many people who would go to Shenzhen, Guangzhou, and Zhuhai for medical treatment, particularly dental care, where it is extremely cheap. So that might be a strategic purchasing option for the Hospital Authority and the government.

**Professor Vivian Lee:**

There is one thing that we did not talk about. It is not just that the healthcare system relies and depends on interprofessional collaboration. I think that to finance a sustainable healthcare

system, we do need to have the infrastructure and the talents for discussions like today. I do not know if there is any training in terms of healthcare financing. Because we do need talents like this to work along with the policymakers, patients, healthcare administrators, and clinicians, to talk about how to finance a sustainable healthcare system.

**Professor Peter P. Yuen:**

We do have some short courses on healthcare management and some related to financing and economics. But those are short courses mostly for working healthcare professionals coming back to study. Some University Grants Committee funded courses would probably be required to be more effective.

**Professor Sally Chan:**

I believe that specialized training must be postgraduate. And, at present, for example, in my college, we have a programme called Health Information and Services Management. But of course, it is foundational. I do agree that we need to have this kind of talent in Hong Kong.

**Professor David Bishai:**

At the University of Hong Kong, our Master of Public Health programme does have a concentration in health economics, policy, and management. We have about 40 students every year, more than half are coming from mainland China. We would like to bring it to the attention of the Hospital Authority.

**Professor Vivian Lee:**

Based on my own research, at the micro level, usually for chronic disease management we spend the most in the hospital and only 3% or 5% on drugs. And the second expenditure will be on procedures or surgeries. So, if people shift everything to the hospitals, that is

very expensive to manage. And for a lot of things, we could prevent patients from moving into tertiary care. So that is the playground in the primary healthcare setting. And today's topic is on financing a sustainable healthcare system. We have a lot of issues in Hong Kong, but we could learn from each other, from overseas, and also from our neighbouring countries.

## **Roundtable Discussion**

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### **Dr Ben Y. F. Fong:**

Now, back home, our Secretary for Health released the Primary Healthcare Blueprint. And he said at the time that the Blueprint will guide the direction of the development of our healthcare system that will enable us to support a sustainable and healthy system that backs up each single citizen in Hong Kong in the decades to come.

At the time the thinking was to ensure the sustainable development of the public healthcare system, on which we have two panel sessions, and to support the development of industries (public health strategies, health technology, the research and development of drugs, and medical manpower). And we took care of these in panel session three. And the urgency to ensure adequate preparedness and the appropriate responsiveness of the services has become obvious during the pandemic. We have panel session two. The issue is what we want to bring in terms of sustainability to Hong Kong, whether it is just the healthcare system, as we have a dual-track healthcare system.

I am always proud of the unsung health policy in Hong Kong: No one is denied adequate medical treatment due to a lack of means. Anyone can enjoy it if you are classified as an eligible person, including foreign workers who stay in Hong Kong for a certain period. There is no means test, and this is something unique in our Hong Kong healthcare system.

### **Professor Anthony Y. H. Fung:**

I think having a kind of policy is not that easy these days. I would say nowadays we have to gather views from different universities, different stakeholders, practitioners, NGOs, and every other person interested in this topic to do something together. But we also

recognize that, in fact, it should be something that is started locally. So, we did some studies on how many people were involved and when did we start to care about our own policy? And we found out that, 29 years earlier, the first “local” book on primary care and family medicine was published by Professor John Fry and Dr Nat Yuen. And then, as time went by until 2021 and 2022, we started to have Ben, Vincent, and Albert; and this is Martin’s work. So that is why we need to work together, even though we are from different universities and different sectors, to work together for a better policy.

### **Professor Sally Chan:**

Maybe I will talk about the shortage of healthcare workers or medical workers. And of course, now there are a lot of discussions about importing people from the Greater Bay Area and all that. From my point of view, that can be a short-term solution. But I believe in the longer term we must expand our own training capacities. Although we said that we have reduced the number of secondary school leavers in Hong Kong, still there is potential to attract more people into the healthcare industry. We should portray the healthcare industry as a sunrise industry and attract young people to join this industry. We need to let the public know, for example, the current contemporary role of nurses. It is not just at the frontline bedside. They can continue to study and become specialized nurses and nurse practitioners, and they can have a career path in clinical education, research, and administration. We need to let the public know about the career progression of healthcare professionals.

Apart from recruiting more people into, or expanding our training capacity, it is also important for us to retain staff. A lot of staff left the service because they are fed up with the system. It is the system that failed them. So that is why it is also important to review our system, how we can provide recognition to our staff, and how we can have a fairer distribution of workload among different professionals. I believe healthcare work is hard work. No one comes

to the healthcare setting for a big salary. But since it is hard work, it must be rewarded and also has to enhance the status of various healthcare professionals. It is not just medicine. The public will know what their contemporary role is and give them respect and recognition. So that is why in the second question, the solution, I think is to expand our local training capacity and enhance the strategies to retain staff.

**Professor Albert Lee:**

I think in terms of the shortage of medical workforce, another thing I dare to say is we need to find hard-working professionals who really have heart and passion. We need reasonably intelligent people. But do we take all the super ones? Another thing to think about is our admission criteria, to find those people with reasonable talent as well, but who have a passionate heart. But usually, a lot of those students may fall through the computer system. They will never get interviewed because they are just one mark off. I think admission criteria are something practical that we need to investigate.

**Professor Anthony Y. H. Fung:**

I want to share my example. My daughter is applying for occupational therapy studies and medical school in Australia. She told me that all the interviews now in Australia are good. In the interviews, they ask people about equality, talk about opportunity, talk about fashion and they must answer questions about ethics, and medical ethics. So that is why values, as you mentioned, are as important as talent. I do not know whether it is possible for those kinds of values to be built into our interviews when we have graduate school.

**Professor Albert Lee:**

We do build on values. But some of those people might not even get an interview. They are cut off already.

**Professor Michael Kidd:**

I think you have a golden opportunity here now with the Primary Healthcare Blueprint established last year. And I think the opportunity for the academic community here in Hong Kong is to make sure you are embedded as much as you can be in that new commission and in the work that it is doing. And we asked the question, what is the practical primary healthcare model? Perhaps that has already been decided at a high level with the establishment of the Blueprint. So as academics, perhaps the role is to make sure that as this develops, it is evidence-based, that it has strong research and evaluation elements built in, and there are amazing PhD careers, I am sure, which are going to come out of the work with the new commission. And one of the things about the reforms we had in our health department during COVID is that I had researchers embedded in the Department of Health working with me on primary care reforms. And that was incredibly valuable. So, I just think you have a golden opportunity and I hope that you are able to capture it.

**Professor Eleanor Holroyd:**

I am going to respond about the shortage of medical workers and I just wondered if a model that could be considered is “pay as you learn,” for example, to promote the valuing of the students as a clinical workforce as well. So they would actually be getting paid while they are a student to be part of the healthcare system. And that may help raise their public persona and also actually help the public to embrace knowledge of a more critical thinking, more ethical decision making, less medicalized approach, and realize that a student or a trainee health professional is actually valued. I think valuing is quite central because lots of studies show that these professions are very undervalued, particularly work we did years ago in China around the role of nurses and the valuing of that.

**Professor Peter P. Yuen:**

Currently, there is a lack of manpower, not just in healthcare, but in every sector in Hong Kong, every level. And then in tertiary education, we limit the number of foreign students, for example, there is a quota even for the self-financing sector. I just do not understand why. We need people to work, right? So why do we restrict them? I think that is really something that we need to change. And I also looked at medical manpower or healthcare manpower in the Greater Bay Area. That is not the solution. They need more people than we do. Even for Chinese medicine practitioners, we have more than the whole Greater Bay Area. And pharmacists and physiotherapists, it is bad over there. I do not think it is good to try to steal people from them.

But the only area that I see that has potential is their long-term care. First of all, in Hong Kong, long-term care is horrible, right? But if you go to the Greater Bay Area, because the land is so much cheaper, space is not a problem, and they can have nice homes there. And then less skilled workers are more abundant there. Doctors, nurses, they might not have enough of, but we can provide the less skilled workers with some training.

Going back to financing. We say tax financing is not sustainable. Let us have social insurance, let us have medical savings, let us have more users pay and all that. It is not going to work because people are used to our low tax system. I think we should be realistic, and we should try to work within our existing financing system, try to improve efficiency, and make it work rather than change it. Nothing happened in the previous 20 years because every time there was some proposal that involved making greater contributions, the legislators would not like it and all that. I think we should try to work within our tax base system and try to make it work rather than, again, try to propose something which in the end I know will not be accepted.



**Dr Donald K. T. Li:**

Two comments just to follow up on the workforce. One, I just want to add about training opportunities. Aside from institutions and universities, NGOs offer training in long-term care, for example, places like Hong Kong St. John Ambulance, which offers training for domestic helpers to upgrade their services. And career paths, basically healthcare workers leading to managers, case managers, and likewise our nursing staff. But I think exposure to the community is important. For example, medical doctors, I think they should have primary care training for one or two years before going to become specialists and likewise nurses, and all that. I understand that now, for example, the nurses have recognized community-based training towards their final. All of these are quite important.

Just want to say something about preparedness. Because, again, family doctors and the primary care team are the most important respondents to disasters. Before disasters, we can instill appropriate knowledge in patients, with public education, preparedness and all that. But most importantly, when disaster comes, besides the community-based workers, professionals like family doctors can take part in response actions, by giving vaccinations, and the most important thing is maintaining services because especially in chronic cases and long-term chronic diseases, you need somebody to continue the services. And that is where family doctors come in together with the primary care team. And then post-disaster, post-traumatic disorders, psychological disorders, and all that, again, there is a role. I think we have realized that the hospital's power is only part of it, and that there is the issue of continuous care. I think for the future we really need to be prepared. And then, part of the training, for example, of primary care doctors, is the need to instill this kind of knowledge into them.

**Professor David Bishai:**

I do believe that the Primary Healthcare Blueprint is a golden

opportunity. What I know from public health is that there is a syndrome that is inevitable to medicalize our approach to primary healthcare. The medicalization that I mean is that the work of the District Health Centres will become transactional services to people one at a time. It was the operational blueprint coming out of Astana that said it is not wrong to medicalize, but you have to get the other branches of the operational framework and that means community engagement. And it is in the framework: essential public health functions, meaning collecting data on the needs of the people in every district. We do not have a map of the needs in the districts. So how do we get community engagement? How do people in the Western New Territories know that they are waiting 56 months for a hip? They do not know that number because we are not preparing the essential public health functions to engage the advocacy, the engagement, and the conversations. But that is what Astana said to do at the local level: Multisectoral community engaged public health plus medicalization. But if we do not do anything, what the District Health Centres and the primary healthcare authority will do is focus on the services to the members only. Stop, and the District Health Centres will do only that. They will provide services. And guess how many people will be treated? There are 18 District Health Centres and District Health Centre Expresses. You have got half a million Hong Kongers getting all of the benefits from all of this primary healthcare, that is not going to do it. So this is an opportunity and it is a moment where there is a shortage of workers trained in public health in the District Health Centres, a shortage of us saying: Let us go to the operational framework and take it seriously and combine clinical services at the District Health Centres with community engagement. Because what will happen is that you offset budgetary needs because you activate the local assets in the districts in the form of the schools and the NGOs and civic organizations — they will do your work for you without charging you any tax money. If only the local public health workers become those community organizers to

activate that, you will save money. And it is not a lot of the District Health Centre budget. That type of public health worker is less than 5% of any clinical budget. So we do not have to train thousands and thousands of these public health people, we have to train dozens. They might have an Master of Public Health from the University of Hong Kong, but that Master of Public Health has to be upgraded into the operational blueprint and it needs to be non-medicalized. So this is an opportunity and we have got to stay focused on getting the maximum out of the Primary Healthcare Blueprint, because it is really a great opportunity.

**Professor William C. W. Wong:**

In the Blueprint, medical-social collaboration is mentioned four times. Now that NGOs agree that there is a golden opportunity with lots of chances, how it is shaped, how it is made — we are determining how primary care is being delivered in the next 10 years in Hong Kong. It is currently run by social workers and NGOs, but under very strict orders from the primary care commissioners on what they can and cannot do. So even though social work is involved, it is not in the real sense, but it is like I mentioned yesterday about what happened in mainland China during COVID-19: The neighbourhood system organized a lot of services, delivering food, delivering drugs to patients and educating them. How can these District Health Centres utilize their position in the community by integrating or working with other NGOs based on themes to deliver various services along with the medical side? I think we should consider that as well.

**Professor Vivian Lee:**

I think training is important, but the training does not start in, let us say, a setting. It starts in tertiary education. And tertiary education is based on three pillars. The first is the qualifications — we transfer knowledge to our students at that level. And then the second pillar

is subjectivity. Subjectivity is once you have transferred knowledge, the students must think how they can utilize this knowledge and develop their own sense, and empower them to engage this knowledge into the third pillar, which is socialization, to do social good. And this does not stop within university training. It goes beyond when they become professional personnel. So, therefore, I think we do need to think about the process of training our medical professionals and how we can seek that subjectivity and impress in their mindset the importance of doing social good, along with the environment, which could be draining. But if they need to develop their own minds and empower themselves, hopefully they could see the value of doing social good, utilizing the knowledge that they have learned at the undergraduate level or postgraduate level.

And that talk about empowerment is in line with the question concerning community engagement. I totally agree with what Professor Bishai just mentioned. When I talked to patients in Hong Kong, even older patients, they said, oh, when I have high blood pressure, I have a headache, this is urgent, I need to go to the accident and emergency room. A lot of times for the patients, they do not know what is going on with the primary healthcare system that we are talking about. They do not know the value of the primary healthcare model that we are proposing. So, therefore, I think patient empowerment and patient education is also important in this process. Not just to old people, but even young people.

Therefore, there are some mismatches that we must address and that actually goes back to the first question: What is the practical primary healthcare model? There is no perfect primary healthcare model. I think each healthcare system has its own unique way of operating and we do need to have interdisciplinary collaboration, not just academic collaboration. A cost-effective model does not mean just a dollar sign. Not just meaning how much money you save, but it is actually how could you effectively utilize these economic resources to have quality of life. So there are a lot of things that we

have to consider, and I think the key is an interdisciplinary approach, and patient and student empowerment.

**Professor Anthony Y. H. Fung:**

I would like to talk about two of the comments on the web. In fact, they are also talking about capacity building. One is related to elderly people: He or she mentioned that in Australia a worker can choose to work as long as he or she is physically fit, right? The community can actually benefit economically from the ageing population. They either participate in healthcare jobs or continue to work. Another one I guess is from a representative from the Chinese medicine sector. He or she mentioned that in fact a lot of Chinese medicine practitioners can be trained to work in the District Health Centres. They can provide alternative services in the current health system. But, again, the salary is much lower, and they do not have many opportunities. The framework we propose can include some Chinese medicine practitioners as well.

**Professor Eleanor Holroyd:**

Consumer voices are important. You cannot have personal family-centred care unless you have a system of community engagement. And to me that has to be central. And I think you probably need to look at a social model of care that works across community, and is like what we saw the rise of after COVID, of links to Chinese medicine, which provides an explanation, history, a shared common understanding, and a more egalitarian power base between the providers and the patients. So my sense is that the patients or the family need to be at the centre. That networking is there. We have just got to find mechanisms to bring those voices out. It is just that they are not always visible at the table or in the policy documents or in the community approaches. So we really need to make sure that is at the centre of what we do, and when that is centre, we have that bottom-up approach that other things stem from.

**Dr Victor W. T. Zheng:**

I also want to echo Professor Holroyd's point. Actually, she mentioned in the speech that an open communication approach to rebuilding social trust is very important, particularly to allow citizens to understand the government's work. We all know that social trust in Hong Kong at this moment is very low. And although the point of community engagement is not mentioned in the Blueprint, I think the government should take an active role in engaging the community and, through this process, rebuild our social trust. And as I mentioned yesterday, when we talk about a holistic approach to public health crises or the medical system, we had better engage the general public, not just focus on the medical professionals. Through this process, I think it is better to mobilize to rebuild our social trust.

**Dr Joseph W. F. Leung:**

When we talk about crisis management, I think the government definitely plays an important role. However, I think our government, when they do the media propaganda, is not as good as we think. I should say it is still quite an old-school design. They do not make use of social media, it is still one-way communication. And, as Anthony mentioned, I think something should be bottom-up, not top-down. However, yesterday we also mentioned artificial intelligence. Because technology is a double-edged sword, we are facing more and more challenges because there is more and more fake news. So if we face another health crisis, how is the government going to manage all this news? I think they should start thinking about building social trust, building the trust of the citizens; and also think about technology and even social media, with regard to how to manage them.

**Dr Vincent T. S. Law:**

We need to rebuild social trust. But, traditionally, most previous

public engagement events have been government-led. In the future, especially for the Primary Healthcare Blueprint, I think community engagement may involve adopting a more open approach than a bottom-up one. We also need some kind of setting. There are different professionals: doctors, nurses, Chinese medicine practitioners. So, they come together, sit together with the citizens, and talk together. And the most important thing is how to analyse their wishes, what kinds of wishes will be selected by the government officials and put into real policies. And hopefully, the citizens and also professionals will also have some participation in the evaluation of the policy outcomes. Then, hopefully, the community engagement will be better.

## 3 Summary of Issues and Shared Views

This section contains summary points extracted from presentations and discussions during the Policy Forum. They represent the voices of the presenters, panellists, and participants. The five questions on issues of concern were raised by the Convenors for the Roundtable Discussion. Views on these questions and pertinent issues noted from all of the presentations and sessions have collectively been included in subsection B to steer the way forward for the future development and improvement of the healthcare system for Hong Kong.

The following subsections have been included:

- A. Building a sustainable healthcare system for Hong Kong
- B. The way forward
  - 1. Given the financial constraints, what is a practical primary healthcare model?
  - 2. The shortage of medical workers is a long-standing issue. What are possible solutions?
  - 3. What is a sustainable healthcare financing model?
  - 4. How should Hong Kong prepare for the next public health crisis like SARS and COVID-19?
  - 5. Should there be more community engagement in moving towards a sustainable healthcare system? This is not mentioned in the Blueprint.
- C. Other views



## **A Building a Sustainable Healthcare System for Hong Kong**

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- three critical elements affecting sustainability of the healthcare system in Hong Kong: talent, facilities, and financing
- not enough private hospital beds: one-sixth of a total of 30,000 public hospital beds<sup>1</sup>
- mandatory savings account: either for the person or for the family — insurance is a third pillar with 50:50 public and private financing
- goal-oriented healthcare: from a focus on treatment to a focus on health promotion and prevention; from a focus on illness to a focus on wellness
- a system based on values and evidence: people have to take responsibility for their own health
- coordinated and integrated: taking a holistic view in formulating public policies, avoiding fragmentation of care
- training reforms: training of generalists, as 50% of graduates go into generalist specialties like family medicine, general medicine, and general paediatrics
- Is primary healthcare really a panacea for the unsustainability of the healthcare system?
- Primary Healthcare Blueprint is a golden opportunity: to guide the direction of the development of our healthcare system and to enable us to support a sustainable and healthy system that supports every single citizen in Hong Kong in the decades to come

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1. In 1999, Denmark had 98 hospitals; in 2023 they had 32 hospitals, they closed 66 hospitals during those 25 years.

- very unique health policy: no one is denied adequate medical treatment due to a lack of means
- social insurance
- focus on capacity building, access and equity, social accountability, professional responsibility and performance, people-powered and smart systems, a new interprofessional model of education, public health, and more social work

## *B* The Way Forward

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### **1. Given the financial constraints, what is a practical primary healthcare model?**

- making people healthier, more health conscious, and less dependent on healthcare services
- to assess the risk of people: changing from a treatment-oriented mindset to a prevention-focused, community-based, and family-centred culture
- everyone has their own family doctor (first point of contact and overall healthcare manager) and Chronic Disease Co-care Scheme (vertical collaboration and bilateral referral): the doctor-patient relationship
- “Family practice is the best way to provide integrated health services at the primary healthcare level.” (Dr Tedros, the Director-General of the WHO)
- set the standard of services, steer the modelling of primary healthcare services, and develop primary healthcare practitioners: through the accreditation of competence and credentialling of GP and practices, training primary care teams where people live and work — a revolution in the way to train

our doctors and nurses — recent graduates getting experience in working in primary care, improving staff attitudes

- District Health Centres — four core elements: Access and utilization, Quality and continuity of care, Cost-effectiveness, Patient and community engagement; continuously revamping and re-engineering the function of these District Health Centres; collaboration or coordination hubs and interphase with multiple access points, care teams; link the resources in the community, such as healthcare services and social care services (horizontal collaboration); outreach services; role of district administration
- Strategic Purchasing Office and appropriate co-payment
- daycare is becoming more and more important, in many cases, exceeding inpatient care
- holistic care and the social model: one-stop, custom-built, comprehensive whole-person primary care shop in the local community — doctors, nurses, allied health professionals, physiotherapists, dietitians, clinical psychologists, mental healthcare workers, social workers, dentists, oral hygienists, Chinese medicine practitioners, community health practitioners, to integrate health and social care services
- strong primary care and strong essential public health: high-quality primary care available to every individual and family in every community; information technology and eHealth to better manage the problems in the community; engagement and empowerment of the private sector and NGOs through reference frameworks, subsidized programmes, or service agreements
- population health as a driver of preventing and reducing health needs and promoting efficient and effective care
- research, data, and evaluation: perceptions of health, to identify

who are at risk, to match the needs, the right care, the right kind of intervention, community diagnoses

- health education for the public and healthcare sector: primary healthcare in the undergraduate curriculum
- What is a practical primary healthcare model? Perhaps that has already been decided at a high level with the establishment of the Blueprint. So, as academics, perhaps the role is to make sure that as this develops, it is evidence-based, that it has strong research and evaluation elements built in.

## **2. The shortage of medical workers is a long-standing issue. What are possible solutions?**

- more nurses and midwives per thousand of the population than in Singapore
- high attrition rate in public hospitals: workload as the major factor
- retention policies: work-life balance; enhancing public-private partnerships; not looking for a higher salary, more allowances, or any kind of subsidies; build on values, heart, and passion
- multidisciplinary teams: primary care nurses, community health workers, physician assistants, non-dispensing pharmacists, medical and nursing students should learn some basic Chinese medicine
- capacity building in organizations and communities: the changing needs of the community, mobilizing resources in the community as well as the private sector
- expand local training capacity: the undergraduate experience, mentorships
- importing healthcare professionals: not a long-term solution
- measuring the outcome of primary healthcare capacity building: Primary Health Care Performance Initiative Framework

- put all units, long-term care, primary healthcare, and hospitals under one authority: a consistent career structure and path for all
- “pay as you learn” to promote the valuing of students as a clinical workforce: develop one’s own sense and empowerment, to engage knowledge to do social good, healthcare workers feel valued and respected
- attract individuals with the right qualities and dedication to the profession
- well-trained staff who are happy in their roles: community care workers, nurse practitioners

### 3. What is a sustainable healthcare financing model?

- In the year 2023–24, 124.8 billion dollars of government expenditure will go to public healthcare, and another 120 billion dollars will go to private healthcare. The 124.8 billion dollars of public healthcare spending accounts for roughly 16% to 17% of total government expenditure, which is quite high.
- There is a big problem with an ageing population, a shrinking population, a shrinking working force, medical inflation, and a shrinking number of students.
- the public healthcare financing system is a safety net — it is highly subsidized
- have a co-payment system that instils a sense of responsibility in our public
- allocative efficiencies: to put money where it will derive the most benefit, money in primary and long-term care, not hospitals where 50% of admissions are inappropriate, shift resources to outpatient ambulatory care, put everything under one roof, where governance, budget, and staffing are controlled by one authority
- X-efficiency: to spend money in the most efficient manner

- move from activity-based and historical-based funding to value-based funding
- money needs to follow patients — taking responsibility for one's own health
- drastic change is needed: incentives and rewards for quality at the primary care level
- strategic purchasing: to disassociate providers from funders
- primary care: gatekeeping and control of medical inflation

#### **4. How should Hong Kong prepare for the next public health crisis like the SARS and COVID-19?**

- In the United Kingdom, there is a real problem with moral distress and moral injuries (when healthcare workers want to deliver high-quality care, but they are not provided with the resources to be able to do that, so they end up having to make terrible decisions about who gets access to care — decisions that no healthcare worker should have to make).
- have an infection prevention and control nurse in every nursing home
- change modes of healthcare delivery: telehealth, artificial intelligence, digital prescribing and dispensing, remote monitoring, wearable devices
- deliver a personal touch
- a public health crisis may catalyze positive changes to the healthcare system: by breaking down institutional barriers, diverting the draining resources, and shifting policymakers' focus away from other health priorities
- make the community more health conscious, reducing the demand for health services
- develop and adopt novel tools, models, and operations:

assimilate new changes in routine operations or reconfigure them for other new purposes

- impossible to list and prepare for all possible scenarios: evidence-based decision-making
- set up a clear chain of command: all-important in fighting a health crisis
- address public inquiries: coordination required
- coordination required to support vulnerable groups in institutions like elderly homes
- communication: have a designated spokesperson, and ensure consistency, clarity, and adequacy of messages
- integrate surveillance and information systems: real-time capabilities
- convey timely, appropriate, and evidence-based information: the right information at the right time
- conduct research and analyse data
- ensure surge capacity: Chinese medicine practitioners, District Health Centres, community-based care, a register of volunteer doctors, prior service agreements with stakeholders; train partners; prepare standard operating procedures to ensure preparedness; strengthen training in infection control, public health, primary care, mental health, and environmental hazards, to prepare for the crisis
- consider the views of the public: a lesson learned from the pandemic, bridge the big gap in views between medical professionals and the general public
- set up a neighbourhood system: covering a lot of services, delivery of food and drugs

## **5. Should there be more community engagement in moving towards a sustainable healthcare system? This is not mentioned in the Blueprint.**

- need to know what the patients would like us to do
- cultural competency, transparency, and building public trust
- empowering people to manage their own health and well-being: meaningful control over the services and treat people as experts in their own care
- high level of community engagement: a bottom-up approach, networking, focus on the services
- community engagement can help in identifying specific healthcare needs and priorities of the local population
- to engage advocacy: the centrality of consumer voices, engage the community in the decision-making process
- activate local assets in the districts: schools, NGOs, and civic organizations
- a gap or a system of inequity
- engage people through technology
- a social model of care that works across the community

## **C Other Views**

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- residential accommodations, communities, and neighbourhoods: very important for people's health
- team-based model of care and interprofessional learning: a joint interprofessional initiative or educational platform to train health professionals



- “We do have the people, we do not have a system, we do not have governance.”
- “Clever politicians stood behind their medical and nursing leaders.”
- moving training into the community
- future health academic centres: future healthcare does not just rest with medical faculties and public health academics
- prescribing less is more effective and safer
- psychosocial rehabilitation
- “Do we have a key performance index for measuring this primary care reform?”
- “Should we measure the quality of life and the quality of death?”
- over-reliance on the guideline or system: adherence to medical guidelines, adoption of reference frameworks, striking a balance between guidelines and the autonomy of individual healthcare
- relationship between the built environment and people’s multifaceted well-being: social well-being integrated with other community facilities, open spaces, and places where people can mingle and support one another
- curriculum changes: integrate human forward change, multifaceted well-being, and all the basic knowledge about well-being
- a healthy school programme: Health Management and Social Care as a formal part of the curriculum in secondary school
- ripples: GPs in Shenzhen to help out on social media, education programmes, virtual consultations, delivery of medicines and food during pandemics
- non-emergency, non-essential services were delayed or stopped: could not be replaced by virtual care

- very low social trust and divisions in society: rebuild our social trust and better unite our medical professionals
- government not aware of any good opinion leaders
- change knowledge to attitudes and behaviours
- top-down campaigns, especially for health promotions, may not be as useful as bottom-up education: more important in dealing with the fear of the public
- psychological stress as important as physical stress
- “Preparedness is not on paper or just an academic exercise.”
- living environment: structural problem of housing
- standard operating procedure: set up standard operating procedures with private hospitals for health crises
- step-down healthcare: run by NGOs and the social sector, staffed by some minimal health workers
- institutionalize all the good things
- data-driven evidence-based decision making: to measure and track indicators and achievements such as patient outcomes, population health indicators, and health utilization data
- comprehensive and evidence-based approach to patient care
- access and utilization, quality and continuity of care, patient-provider relationship, care coordination, cost-effectiveness
- high calibre of talents and professionalism
- collaboration and knowledge sharing between Western and Chinese medicine practitioners
- develop public and social trust in the community healthcare system: an open communication approach to rebuilding social trust, to allow citizens to understand the government’s work
- health and technology: digital literacy, data collection, privacy control, innovation
- sharing of patient data among healthcare providers

- a paradigm shift: personalized healthcare, epigenetics, better health, total health, risk management
- reduce unnecessary admissions, unnecessary stays in hospital: about 50% of admissions can be managed in ambulatory care, 70% of the procedures are done outside hospitals or out of hospital settings, purpose-built day surgery suites in the outpatient clinic of a hospital
- manage patient expectations and culture
- diagnosis-related groups
- Greater Bay Area
- training in long-term care
- the community can benefit economically from the ageing population: “A worker can choose to work as long as he or she is physically fit.”
- make use of social media

# 4 Policy Recommendations for Building a Sustainable Healthcare System for Hong Kong



## 1. Talent, Manpower, and Capacity Building

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- 1.1 Nurture goal-oriented talents, not only to operate the healthcare system but to steer quality services towards achieving optimal effectiveness and health outcomes.
- 1.2 Retain serving staff with policies that incorporate work-life balance, staff values, and the heart and passion of the management.
- 1.3 Build human capacity, at all levels, both professional and supporting, in organizations and the community to meet the changing needs of the community.



## 2. Facilities

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- 2.1 Consider building more community facilities and downsizing hospitals.
- 2.2 Review the provision of private hospitals.
- 2.3 Study the impact between the built environment and community facilities on social well-being.



### **3. Financing**

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- 3.1 Consider value-based funding instead of activity-based and historical-based funding.
- 3.2 Consider allocative efficiency by funding services with the most benefit, such as primary and long-term care.
- 3.3 Consider the benefits of a “money follows the patients” model.
- 3.4 Review the appropriateness of admissions to public hospitals.
- 3.5 Disassociate the roles of providers from those of funders.



### **4. Service Delivery Model**

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- 4.1 Focus on capacity building, access and equity, social accountability, governance, shared professional responsibility, interprofessional model of education, smart systems, public health and social care.
- 4.2 Build a model of system based on values, evidence, mutual trust, and public engagement.
- 4.3 Consider putting all services units under one government department or authority.



### **5. Primary Healthcare**

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- 5.1 Make people healthier, more health conscious, and less dependent on healthcare services.
- 5.2 Set the standards of services with accreditation of practices and professional competence.

- 5.3 Regularly monitor access and utilization, quality and continuity of care, cost-effectiveness, and community engagement.
- 5.4 Build a holistic and social model in providing one-stop healthcare services.
- 5.5 Promote cultural competency and transparency.



## **6. Disaster and Crisis Management**

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- 6.1 Consider the establishment of infection prevention and control nurses in residential homes for the elderly.
- 6.2 Evaluate and adopt novel modes of healthcare delivery, tools, and applications such as telehealth, artificial intelligence, digital prescribing and dispensing, remote monitoring, wearable devices, etc.
- 6.3 Review and upgrade the surveillance and information systems for integration and real time capabilities.
- 6.4 Consider appointing a designated government spokesperson responsible for the release of timely, appropriate, and evidence-based information with consistency, clarity, and adequacy of messages.
- 6.5 Audit the surge capacity in the government, healthcare facilities and professions, and the community.

## 5 Editors' Notes

The Policy Forum was well attended, with about 300 and 200 participants respectively on both days. Of the participants, 70% joined online. The second day was affected by heavy rain, which is common in the summer. Thanks to the moderators, and the secretarial and technical support staff, all presentations and sessions went smoothly according to the scheduled time and order. Participants not only gained much from the presentations, but also contributed to the open and enlightening discussions of issues related to the theme and subthemes of the Forum. The views and suggestions will be very useful to the continuing dialogue in various forms of scholarly and professional activities in the time to come, about building a sustainable healthcare system for Hong Kong.

The presentations and sessions of the Forum were recorded, with the prior consent of the speakers. The recording was transcribed and studied, and has been included in this publication. The introduction of this paper illustrates the background, planning, development, and organization of the Forum. A summary of issues, shared views, and recommendations has been compiled for quick reference to the pertinent and salient views and suggestions presented during the Forum. Twenty-four policy statements for building a sustainable healthcare system for Hong Kong are recommended. The Forum has made a start, and similar events will be organized in future. A series of books on “Building a Sustainable Healthcare System for Hong Kong” will be published by the Hong Kong Institute of Asia-Pacific Studies.

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Hong Kong College of Community Health Practitioners

Policy Research @ HKIAPS, The Chinese University of Hong Kong

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