Health System Capacity Constraints- The Severe Shortage of Doctors in Hong Kong Public Hospitals

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Executive Summary

Our Hong Kong Foundation has actively been advocating for the need to improve our ailing health system to make it fit for purpose in the 21st century. We previously launched a health policy research report that looks into how Hong Kong's health system can prepare and adapt in the face of (a) an ageing population and (b) the growing burden of chronic diseases that have become more prevalent among younger generations. We advocate for system-wide changes to be developed, designed and implemented in moving towards a primary care-led, integrated, person-centred health system that adequately meets the healthcare needs of our population.

Amidst the many challenges faced by our health system, the issue of shortage of doctors remains unresolved and has once again resurfaced in the public arena causing widespread concerns. Particularly in the public sector, the severe shortage of doctors contributes to the challenge of timely access to quality healthcare for our local population and immediate action needs to be taken. While the current study puts focus on the critical doctor shortage issue in Hong Kong, we recognise that many other aspects of our health system need enhancement for a good health ecosystem and these will be addressed in future reports.

1. Hong Kong's health system is challenged by the severe shortage of doctors

i. Sufficient healthcare manpower is fundamental in a well-functioning health system that provides timely and appropriate care to meet healthcare needs of the population. However, in the city's first comprehensive healthcare manpower review by the Food and Health Bureau (2017), **projections forecasted a shortfall of approximately 500 doctors by 2020 and 1,007 by 2030.** Notably, these projections assumed the maintenance of the 2015 standard of health services provision (and various other assumptions that may not be realistic), a standard characterised by chronically overloaded public hospital wards manned by chronically overworked doctors. As we work to move away from this standard of care, the projected shortfalls are clearly underestimated.

ii. In 2017, our population of close to 7.4 million people was served by 14,290 fully registered doctors, equating to having approximately 1.9 doctors for every 1,000 people in Hong Kong. This number is well below the Organisation for Economic Cooperation and Development (OECD) average of 3.4 and we lag behind international peers including Singapore (2.4). In other words, **Hong Kong needs an addition of approximately 3,000 doctors to catch up with Singapore, and approximately 10,000 doctors to catch up with other well-developed regions.** This shortfall would continue to worsen if we do not increase the number of doctors in the public sector on a massive scale very quickly. In tackling a shortage of doctors, reference could be made to Singapore- a place with fewer doctors per 1,000 population than Hong Kong in 2008 but subsequently increased the total number of doctors by 70% to surpass Hong Kong in less than a decade.

2. The severe shortage of doctors is exacerbated by a rapidly ageing population and the growing burden of chronic diseases

i. **Hong Kong is home to a rapidly ageing population.** The percentage of our population aged 65 years or above is expected to double from 15.9% in 2016 to 29.1% in 2036 (representing an increase of approximately 1.2 million people). This wave of ageing of the baby boomers cohort is just at the beginning phase and the speed of population ageing in the next two decades is expected to increase.

ii. **Ageing population and the more profound complexity of illnesses among the elderly correspond to a greater demand for health services, particularly in the public sector.** This can be exemplified by public hospital bed utilisation ratios where in 2016, every 1,000 people aged 65 years or above required 10.5 beds compared to 1.9 required by every 1,000 aged below 65 years. The ratio was 15.7 for every 1,000 aged 75 years or above. In other words, each of the abovementioned 1.2 million additional people aged 65 years or above would require 5 times as much of medical resources than those aged below 65 years.

iii. **Alongside ageing population is the rising prevalence of chronic diseases that adds to the burden of our already ailing health system.** Thematic Household Survey data shows that in 2017, the prevalence of reported chronic diseases increased in every age group compared to that observed in 2000. Notably, the prevalence increase in younger age groups hints at an earlier onset of chronic conditions. Adding to the burden on our health system are those with multiple chronic diseases and more complex health conditions.

iv. Regardless of how we size the current shortage (not to mention the massive needs in the next decade), the current shortage of doctors is well above the number estimated by the Government and is in the thousands, not the hundreds. As the health needs of our population are becoming increasingly difficult to meet, the number of doctors for every 1,000 people aged 65 years or above has dropped from 13.9 in 2000 to 11.8 in 2017. Concurrently, the number of doctors for every 1,000 people with chronic diseases dropped from 11.7 in 2000 to 7.2 in 2017. **We estimate that Hong Kong will need an addition of at least 2,000 and 9,000 doctors, respectively, to bring the ratios back to the ones observed in 2000.**

3. Hanging on a rope stretched too thin — our public healthcare system is on the verge of collapse

i. Our public hospitals provide over 80% and over 90% of all inpatient bed days for the entire population and for those aged 65 years or above, respectively. They are, however, staffed with just close to 50% of active doctors in Hong Kong.

ii. Although the number of public hospital doctors increased by 24% between 2008 and 2017, the growth in the number of public hospital inpatient and day inpatient discharges and deaths was 43% — nearly double. **The growth rate of public hospital doctors did not match the upsurge in service demand and workload.** As a result, each doctor has been having to care for an increasing number of patients that add to their already heavy workload.

iii. The situation is likely to worsen. Based on current healthcare utilisation patterns and population projections, the number of public hospital inpatient bed days utilised by those aged 65 years or above is projected to increase from the current 50% to more than 70% by 2036. **Ageing clearly contributes to a substantially heavier burden on our already overloaded public healthcare system.**

iv. **There has been a distinct uptrend of health insurance expenditures over the past decade, hinting at the general growth and the potentially increasing attractiveness of working in the private sector.** Among many other indicators, expenditures via privately purchased and employer-based insurance schemes increased 335% from HKD 5.3 billion in 2001-02 to HKD 23.3 billion in 2016-17. However, over the same period, the ratio of inpatients taken care of by public and private hospitals stayed roughly unchanged, which implies that even though there are more financial resources available in private sector, the workload of public hospitals has not lessened. As 'pull factors' from the private sector increase and public hospitals continue to be overloaded, an ever-worsening doctor shortage situation, particularly in the public sector, becomes likely.

v. **Further worsening the crisis is the increase in attrition of public hospital doctors that is fast catching up with the intake of doctors in public hospitals.** In 2016-17, an intake of 467 full-time and part-time doctors in public hospitals was observed and 337 were lost to attrition in the same period. Among the doctors lost to attrition, some were lost due to retirement (and this retirement wave has just begun), while others were potentially lost to attrition to the private sector. If attrition of public hospital doctors continues to increase due to factors such as work overload, stress and other 'pull factors' that may attract them to practice in the private sector, then even a greater intake of doctors would amount to no, or slow net increase of doctors in public hospitals. This vicious cycle would mean that the chronic shortage of public hospital doctors will remain unresolved and would get worse very quickly as our population ages and chronic diseases become more prevalent.

4. There is an urgent need to become more receptive towards augmenting the role of foreign-trained doctors

i. To stand a chance at ameliorating this undesirable and unsustainable reality, evaluating the *supply* of doctors is a must. **Scattered efforts have been made to address the shortage in doctors, albeit evidently, with limited effectiveness since the shortage of doctors are in the thousands, not the hundreds.** For instance, the Government increased the number of University Grants Committee-funded medical training spaces by 90% from 250 in 2005-06 to 470 in 2016-17. The number will further increase by 60 each year in the 2019-20 to 2021-22 UGC triennium. Meanwhile, the Medical Council of Hong Kong (MCHK) increased the frequency of the Licensing Examination from one to two sittings in 2014, and in 2016 introduced flexible arrangements for the post-Licensing Examination internship requirement. In 2018, the Government extended the validity and renewal period of limited registration from not exceeding 1 year to not exceeding 3 years. In effort to specifically address the shortage of doctors in our public healthcare system, the Hospital Authority (HA) introduced the 'Special Retired and Rehire Scheme' in 2015-16 to rehire healthcare professionals after their retirement. As of 31st December 2018, 61 doctors continued to work under the scheme at the HA. The HA also set a higher retirement age for new recruits employed from June 2015 onwards, and increased the Special Honorarium Scheme (SHS) allowance by 10% for frontline medical staff in January 2019. Still, despite all these efforts, we continue to face a doctor shortage crisis.

ii. System-level changes to the distribution and skill-mix of our healthcare workforce are fundamental in moving towards a primary care-led, integrated, person-centred health system and will contribute to relieving the doctor shortage crisis. Still, these changes will only happen over an extended period of time while immediate action needs to be taken to address our doctor shortage crisis. **Thus, it is our view that due consideration needs to be given to augmenting the role of foreign-trained doctors in our public healthcare system.**

iii. **As of now, doctors who wish to obtain *full* registration to practice in Hong Kong must opt for the 'exam pathway' to registration. While a 'non-exam pathway' exists for foreign-trained doctors who wish to obtain *limited* registration to practice at limited venues for a limited duration, this pathway does not lead to full registration. Both 'exam' and 'non-exam' pathways have room for introducing greater flexibility to attract foreign-trained talent and reference could be made to international examples.**

a. **"Exam pathway"**: foreign-trained individuals who wish to be considered for *full registration* (currently making up 7.5% of our fully registered doctor workforce) to practice in Hong Kong must pass the 3-part MCHK Licensing Examination.

(i) This evidently is no easy way out where in 2017, the pass rate for part 1 (written exam) was an average of just 26.5% across two sittings and 42% for part 3 practical clinical exam. More encouraging pass rates were observed in other jurisdictions such as the US (where approximately 25% of practicing doctors are foreign-trained) for both written (>70% in 2017) and practical (>80% in 2017) exams. The comparatively less detailed and accessible examination syllabus, resources and reference material for examination preparation in Hong Kong, compared with other international examples, potentially deter applicants from succeeding in their application. **Therefore, we recommend the availability of a comprehensive examination syllabus and revision material for the MCHK Licensing Examination to be reviewed in order to ensure fairness and facilitate examination preparation.**

(ii) Internship experience is a listed MCHK Licensing Examination prerequisite - a prerequisite not observed for 'exam pathways' in other jurisdictions including the UK and US, and serves as a potential barrier for individuals who graduate from medical courses that do not offer relevant experience. To maximise the number of individuals eligible to sit the local examination and stand a chance at obtaining full registration to practice in Hong Kong, **consideration should be given to removing internship experience as a MCHK Licensing Examination prerequisite.**

(iii) English proficiency is examined in a standalone test in Hong Kong. While the pass rate is relatively promising (94.5% in 2017), applicants could not, like in the UK (where approximately 29% of practicing doctors are foreign-trained), opt to demonstrate their English proficiency via other means such as satisfactory International English Language Testing System (IELTS) results. **There is a need to consider allowing the use of similar non-examination means to demonstrate English proficiency in Hong Kong.**

(iv) In addition to passing the MCHK Licensing Examination, individuals looking to obtain full registration in Hong Kong must also complete a period of assessment (internship) at approved local hospitals that cannot be substituted with equivalent overseas experience, like in other jurisdictions such as the UK. **To attract more foreign-trained doctors to serve at the public sector, those who pass the MCHK Licensing Examination should be given the option to substitute the post-exam internship with equivalent overseas experience subject to set conditions (for example, requiring the individual to provide service in the public sector for a set number of years). Reference should be made to requirements for obtaining full registration in the UK.**

b. **"Non-exam pathway"**: individuals applying through the 'non-exam pathway' to obtain *limited* registration in Hong Kong (that makes up just close to 1% of our registered medical practitioner workforce[1]) are not required to sit the MCHK Licensing Examination.

(i) While individuals applying for limited registration are not required to sit the MCHK Licensing Examination, they also *do not* eventually progress to full registration. This contrasts with a clear progression track leading to full registration for 'non-exam pathway' observed in other jurisdictions such as Singapore - a place where a substantial number of foreign-trained doctors obtain full registration to practice via a 'non-exam pathway'. Doctors permitted to practice through the 'non-exam pathway' make up approximately 40% of registered medical practitioners holding valid practicing certificates. Generally, more experienced individuals could directly apply for *conditional* registration in Singapore using an acceptable primary qualification (listed in the 'Second Schedule' of close to 160 institutions in 28 jurisdictions), postgraduate qualification (close to 100 medical qualifications recognised by the Singapore Medical Council) or specialist qualification (accredited specialist by the Specialists Accreditation Board Singapore). Conditionally registered individuals undergo supervised practice in public or private settings for a minimal of 2 years before being considered for *full* registration without sitting a local licensing examination. Also providing 'non-exam pathways' to full registration include Australia (e.g. through the Competent Authority Pathway) and the UK (e.g. through demonstration of a recognised postgraduate qualification, sponsorship by recognised local body or eligibility for the specialist or general practitioner registers). **Consideration needs to be given to allow progression from limited to full registration in Hong Kong on condition that the doctor has practiced in the public sector, particularly in public hospitals, for a set number of years.** This also eventually allows individuals opting for the 'non-exam' option to practice at venues other than those stated under the 6 approved promulgations for limited registration, potentially increasing the attractiveness of practicing in Hong Kong. **The Hospital Authority should also consider hiring general practioners through limited registration.**

(ii) **Building on current criteria, acceptable medical qualifications for obtaining limited registration should be clearly listed.** The list could, for example, comprise of the world's top 50 medical schools (many of which are higher ranking than our local medical schools) from which qualifications should be obtained. Individuals with a medical qualification from listed institutions could eventually progress from limited to full registration through the 'non-exam pathway'. Permanent residents of the HKSAR with the right of abode who have received medical education from listed institutions should be prioritised.

(iii) Singapore allows less experienced medical graduates with an approved primary qualification from the 'Second Schedule' (list of close to 160 institutions in 28 jurisdictions that include qualifications from The University of Hong Kong and The Chinese University of Hong Kong) to apply for provisional registration for employment as a 'Postgraduate Year 1 *trainee* '. These individuals are required to complete a 12-month internship at an approved hospital in Singapore before becoming eligible for *conditional* and eventually *full* registration. **No similar pathway or progression track is currently available in Hong Kong. Introduction of a similar progression track in Hong Kong should be considered.**

[1] Note: some individuals in our medical professional workforce have medical qualifications of recognised Commonwealth countries and were recognised for registration by MCHK before September 1996. From that time, foreign-trained doctors (apart from those registered under the transitional provision detailed in section 35 of the Medical Registration Ordinance) must pass the MCHK-administered Licensing Examination and complete an internship assessment before they become eligible for full registration to practice in Hong Kong.

(iv) Also limiting the attractiveness of the limited registration pathway in Hong Kong is the explicit requirement for doctors to continuously be registered with a medical authority elsewhere, a requirement generally not observed in other jurisdictions. **To enhance the attractiveness of practicing in Hong Kong, consideration should be given to relaxing the requirement for doctors under limited registration to be registered with a foreign medical authority.**

5. Summary

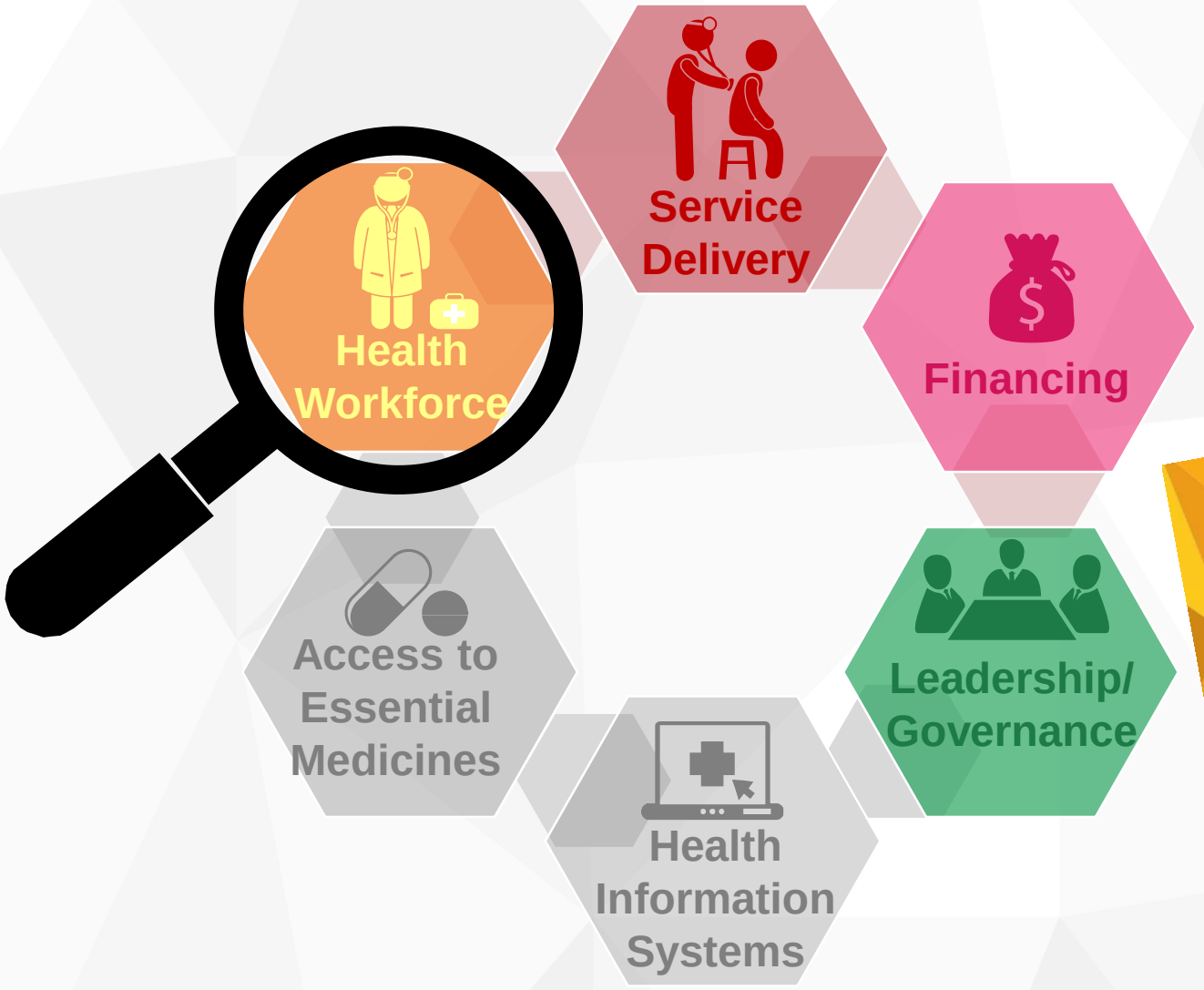
In summary, our public healthcare system is on the verge of collapse. Amidst the many challenges faced by our health system, the issue of shortage of doctors remains unresolved. This longstanding issue is exacerbated by a rapidly ageing population and growing burden of chronic diseases that represent an ever-increasing demand for healthcare services. Particularly in the public sector, the severe shortage of doctors contributes to the challenge of timely access to healthcare for our local population. As we continue our efforts in enhancing our health system, there is an urgent need to tackle the severe shortage of doctors in our health system by becoming more receptive towards augmenting the role of foreign-trained doctors. It is in the best interest of our crippling public healthcare system and for the well-being of our healthcare workforce and our citizens, that we must review the procedures currently in place to attract more well-qualified foreign-trained doctors to join our healthcare workforce to relieve our shortage of doctors, particularly in our public hospitals.

Presentation

Transforming our health system to meet 21st century needs

- OHKF has actively been advocating for the need to improve our ailing health system to make it fit for purpose in the 21st century.
- In November 2018, OHKF launched a policy research report that looks into how Hong Kong's health system can prepare and adapt in the face of a) **an ageing population** b) **the growing burden of chronic diseases** that have become more prevalent among younger generations.
- Complex system-wide changes need to be developed, designed and implemented in Hong Kong to better protect and promote health for our future.

WHO Health System Building Blocks



- ☑ Primary care
- ☑ Social (community/residential) care
- ☑ Medical-social collaboration
- ☑ Public-private partnership

Source. Our Hong Kong Foundation; World Health Organization

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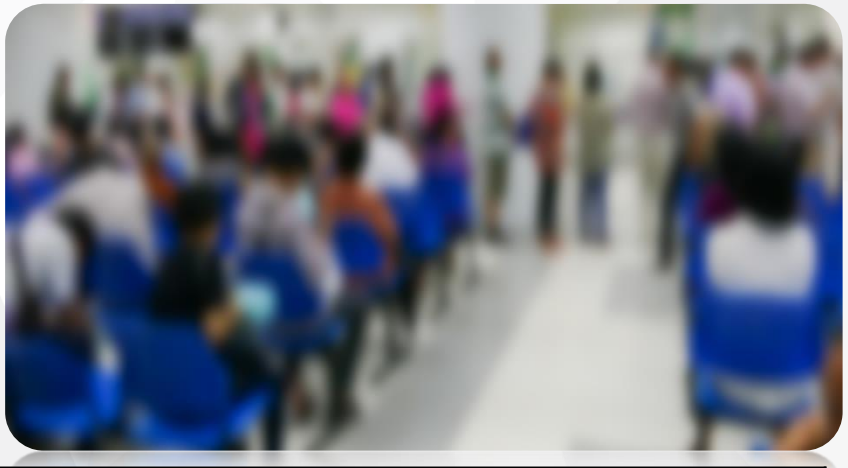
Our public healthcare system is on the verge of collapse





Discipline		Hong Kong(1)					Singapore(2)			
Accident & Emergency (in minutes)		Critical	Emergency	Urgent	Semi-urgent	Non-urgent	Critical	Major Emergencies	Minor Emergencies	Non-Emergency
		0	8	26	114	127	7	20	45	NA
Specialist outpatient (in weeks)(3)	New Cases Triage	Priority 1	Priority 2	Routine	Overall					
	Orthopaedics & Traumatology	1	5	73	4					
	Ophthalmology	1	3	51	3					

Source. Food and Health Bureau; Yap & Qian (2016)

Note.
(1) Hong Kong's average waiting time for Accident & Emergency services in various triage categories at public hospitals (overall) in 2017-18 (up to 31 December 2017).
(2) Singapore's average median waiting time cases for Accident & Emergency services in various triage categories at public hospitals between January 2013 and June 2016.
(3) Hong Kong's figures refer to median waiting time of new cases in various triage categories at public hospitals in 2017-18 (up to 31 December 2017). Singapore figures refer to new appointments, excluding those referred from the Emergency Department who receive medical consultation within the same day, across public healthcare institutions between January 2013 and June 2016.

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Part 1. The Condition: Hong Kong's health system is challenged by the severe shortage of doctors

Govt.: Shortfall of ***500*** doctors by ***next year*** - is it a gross underestimate?

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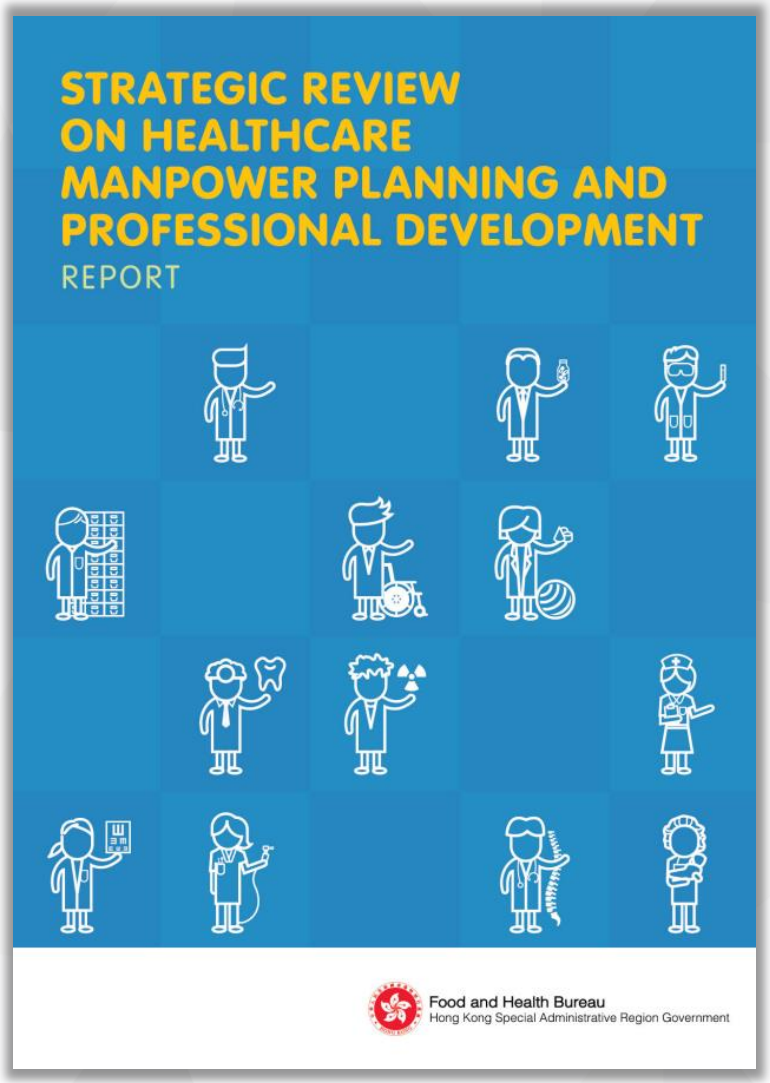
Projected shortfall of doctors (Full-time Equivalent)

Year	2016	2020	2025	2030
5th percentile	80	320	596	829
	(0.7%)	(2.6%)	(4.4%)	(5.7%)
Best guestimate	285	500	755	1007
	(2.4%)	(3.9%)	(5.5%)	(6.8%)
95th percentile	690	989	1296	1575
	(5.7%)	(7.5%)	(9.0%)	(10.3%)

There is a projected shortfall of **500** doctors by 2020 and **1007** doctors by 2030.



Source: Food and Health Bureau Strategic Review on Healthcare Manpower Planning and Professional Development

Hong Kong doctors/population ratio is low compared to international norm

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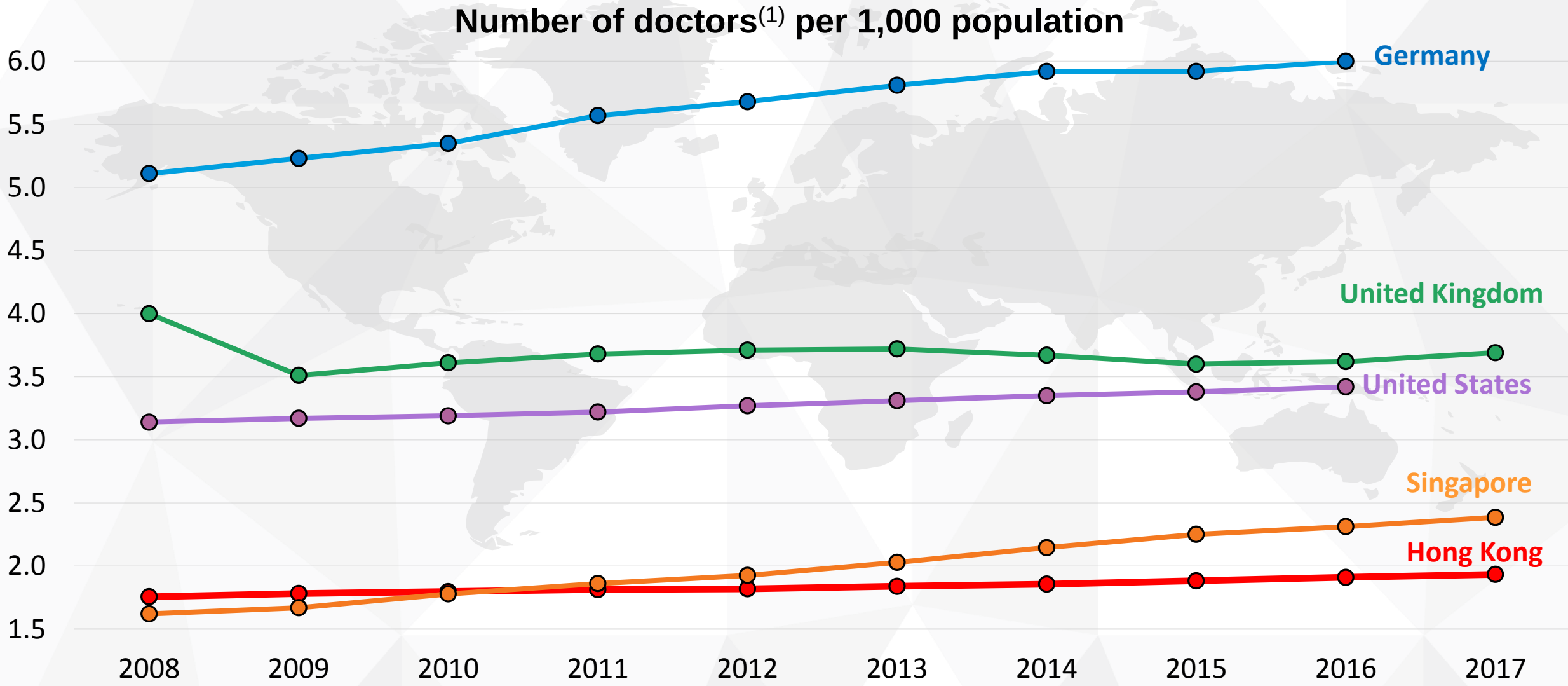


Note. (1) Number of doctors refer to doctors with full registration in Hong Kong, Germany, UK and US, and doctors with full, conditional and temporary registration in Singapore

Source: Food and Health Bureau, OECD, Year Book of Statistics Singapore, World Bank

If we want to catch up…

Doctors/Population=6.00

Doctors/Population=3.69

Doctors/Population=3.42

OECD Average
Doctors/Population=3.4

Doctors/Population=1.93

Doctors/Population=2.39

+30,060 doctors (+210%)

+12,985 doctors (+91%)

+10,990 doctors (+77%)

+ 10,842doctors (+76%)

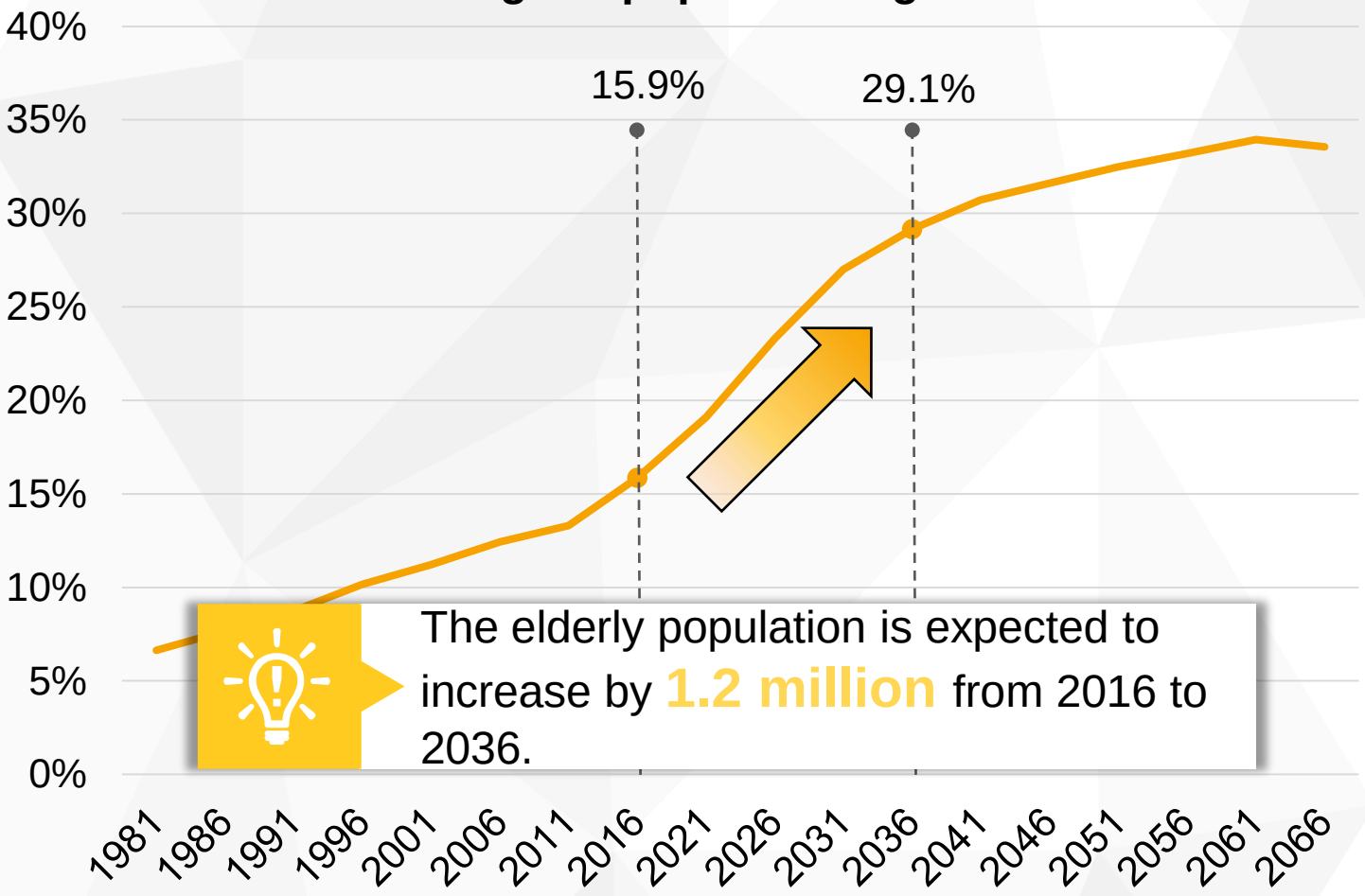
+3,376 doctors (+24%)

Note: As at 2017, the number of licensed doctors in Hong Kong was 14,290, mid-year population size was 7,391,700

Source. Food and Health Bureau, OECD, Year Book of Statistics Singapore, World Bank

The peak velocity of ageing just started, the public healthcare system would get worse

Percentage of population aged 65+



The elderly population is expected to increase by **1.2 million** from 2016 to 2036.

Number of public hospital beds required per 1,000 population in 2016(1)

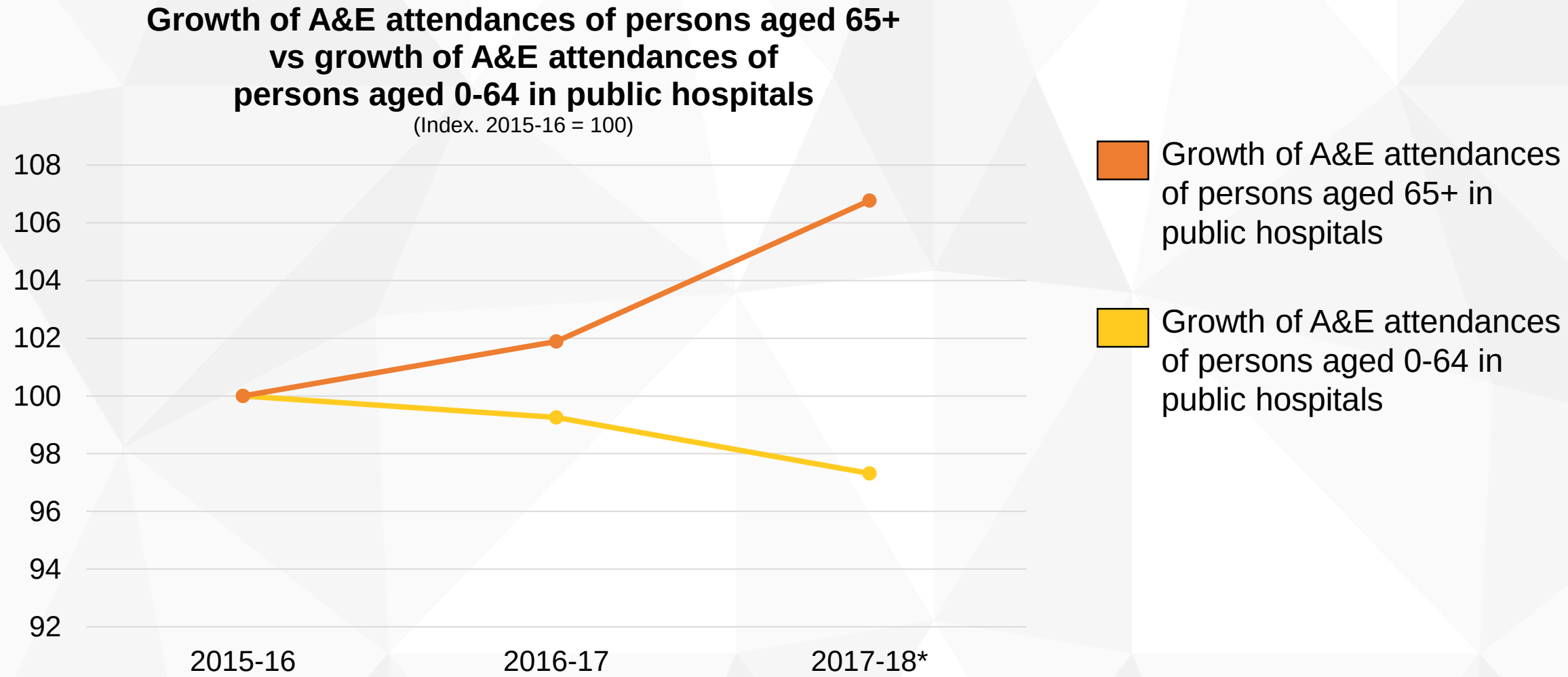
Age	Public hospital beds required / 1,000 population
0-64	1.9
65+	10.5
75+	15.7

The medical needs of the elderly are at least **5.5 times** that of the rest of the population.

Note: (1) No. of public hospital beds required = total number of bed days utilised per thousand population / 365. Bed days refers to inpatient patient bed days plus day inpatient discharges and deaths.

Source: Census and Statistical Department; Hospital Authority Statistical Report 2016/17

Increasing elderly A&E attendances in public hospitals

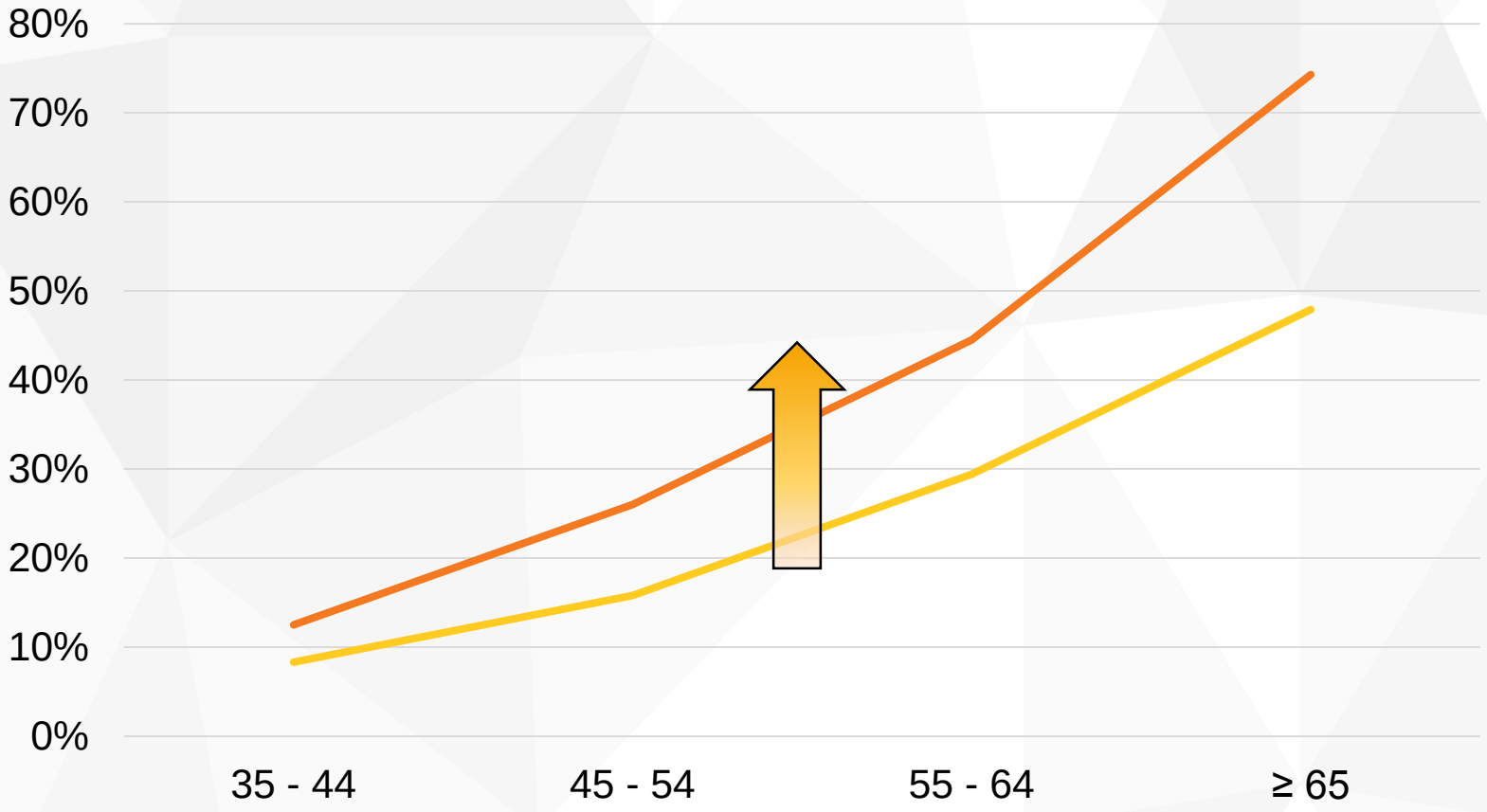


Note. * Up to 31 December 2017 (Provisional figures)

Source. Replies to initial written questions raised by Finance Committee Members in examining the Estimates of Expenditure 2018-19, Food and Health Bureau

Observed chronic diseases are more prevalent with earlier onset

Percentage of persons with chronic diseases in respective age groups in 2000* and 2017* (1)



% of persons with chronic diseases in respective age groups in 2017

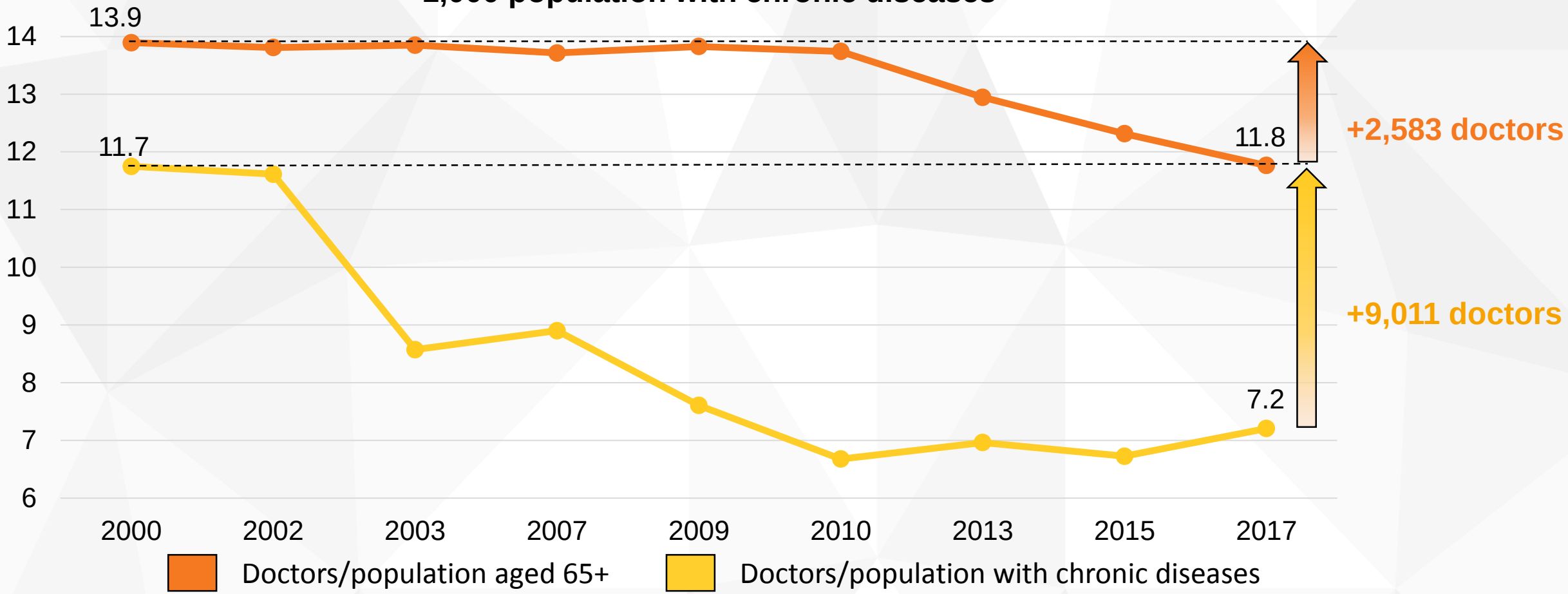
% of persons with chronic diseases in respective age groups in 2000

Note.
* Refers to issue date of Thematic Household Survey (THS) instead of data collection date.
(1) Figures in 2000 THS refer to respondents who reported diseases that required long-term follow-up. Figures in 2017 THS refer to persons reported chronic health conditions as diagnosed by practitioners of Western medicine.

Source: Thematic Household Survey 2000 & 2017, Census and Statistics Department.

Decreasing *doctors/elderly population* and *doctors/population with chronic disease* over time

Number of doctors per 1,000 population aged 65+ and 1,000 population with chronic diseases(1)

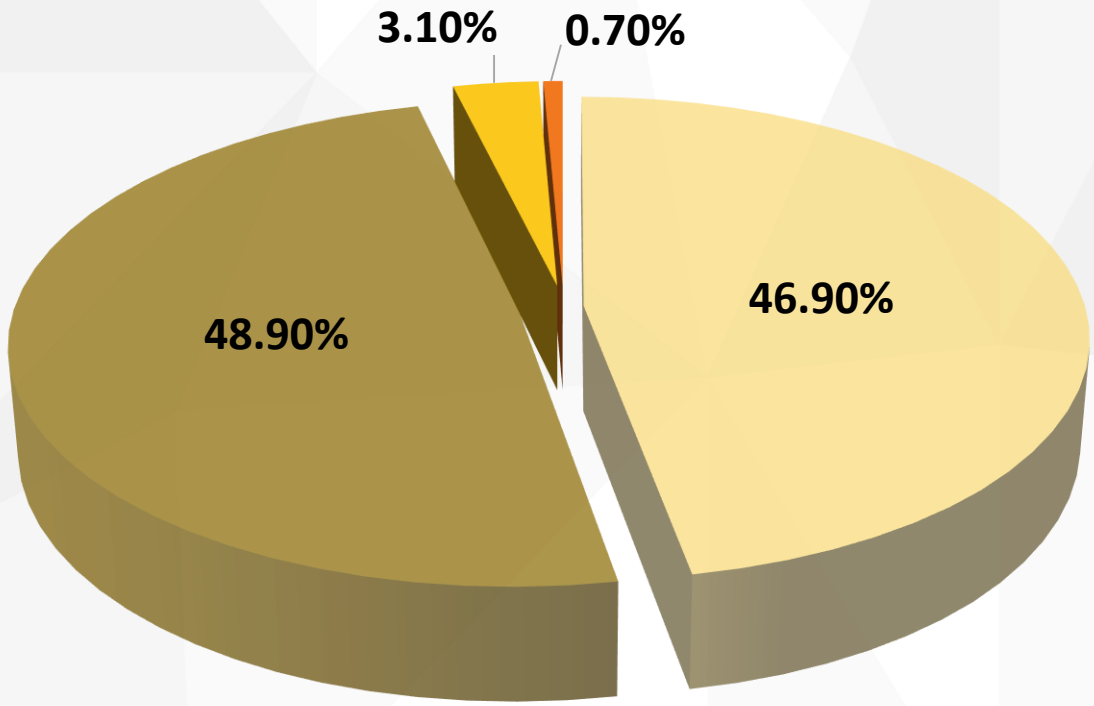


Note.

(1) Figures in 2007 THS and before refer to respondents who reported diseases that required long-term follow-up. Figures in 2009 THS and after refer to persons reported chronic health conditions as diagnosed by practitioners of Western medicine.

Source: Census Population Estimates, Thematic Household Survey 2000-2017, Census and Statistics Department.

Half of the doctors are in the public sector, but…

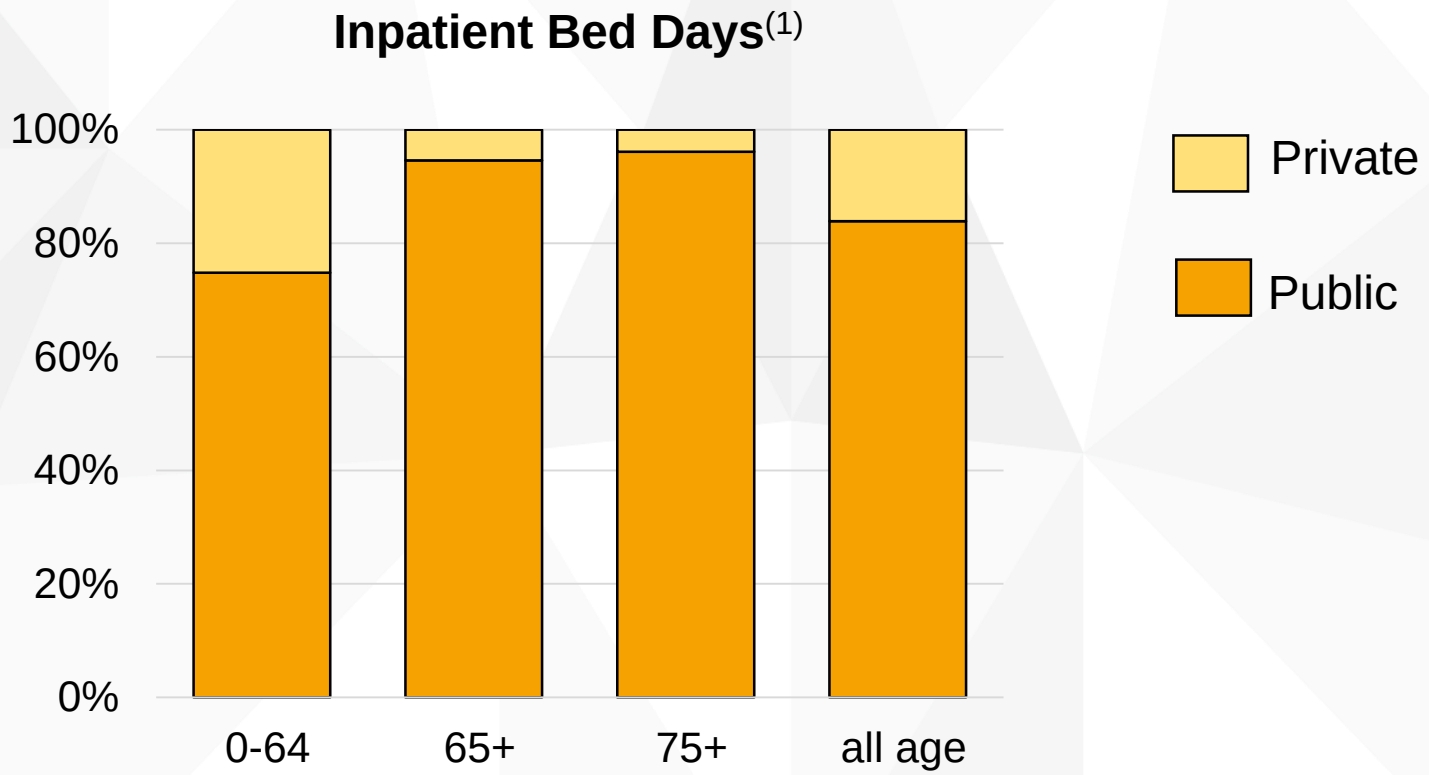


- % of active doctors enumerated working in the public sector
- % of active doctors enumerated working in the private sector
- % of active doctors enumerated working in the academic sector
- % of active doctors enumerated working in the subvented sector

Note.
The doctors covered in the 2015 Health Manpower Survey were doctors with full registration plus on the resident list as at the survey reference date 31.8.2015.

Source. 2015 Health Manpower Survey, Department of Health

...the public sector is handling more than 80% of hospital care



In 2016/17, public hospitals covered **>90%** of 65+ and 75+ inpatient bed days.

Note.
(1) Refer to hospital inpatient bed days only, excluding correctional services and nursing homes

Source: Hospital Authority Annual Statistical Report 2016/17

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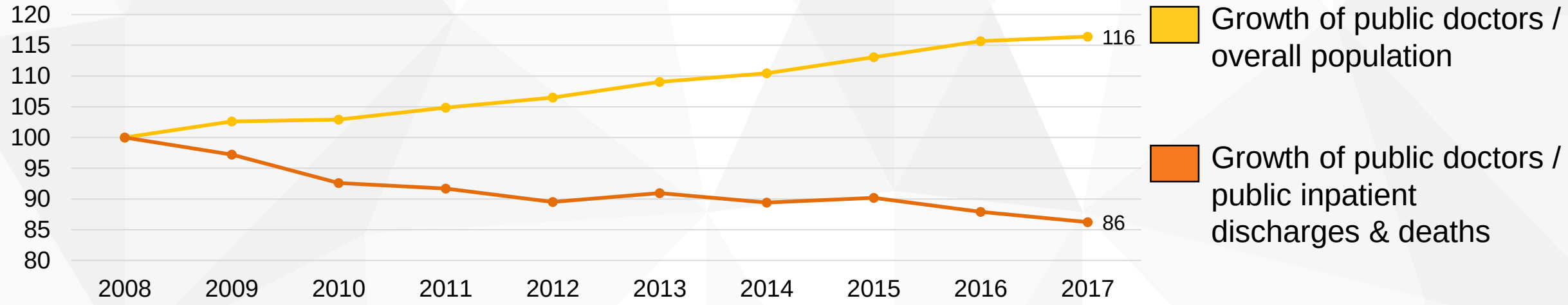
Part 2. The Symptoms: An Overstretched Public Healthcare System

Public doctors' burden has been growing...

Growth of public doctors per 1,000 overall population vs growth of public doctors per 1,000 public inpatient discharges and deaths

(Index. 2008 = 100)



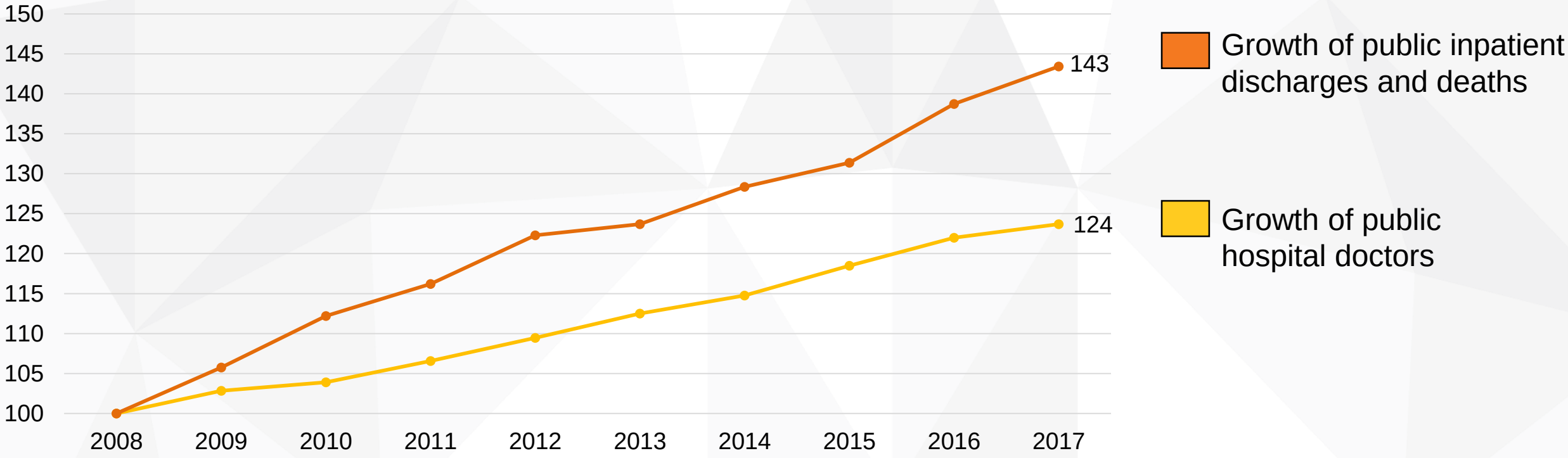
	2008	2009	2010	2011	2012	2013	2014	2015	20116	2017
Public hospital doctors(1) / overall population(2)	0.706	0.724	0.726	0.740	0.751	0.769	0.779	0.798	0.816	0.821
(index)	(100.0)	(102.6)	(102.9)	(104.8)	(106.5)	(109.0)	(110.5)	(113.1)	(115.7)	(116.4)
Public hospital doctors(1) / inpatient discharges & deaths(3)	3.87	3.76	3.58	3.55	3.46	3.52	3.46	3.49	3.40	3.34
(index)	(100.0)	(97.2)	(92.6)	(91.7)	(89.5)	(91.0)	(9.4)	(90.2)	(87.9)	(86.2)

Note.
(1) Refer to doctors with full registration in public hospitals on headcount basis as at end of the year.
(2) Refer to total number of population
(3) Refer to total number of discharges of inpatient and day inpatients on an episode basis and deaths in public hospitals as at 31 March of the year.

Source. Hospital Authority Statistical Report; Census and Statistical Department, Hong Kong Annual Digest of Statistics

Public doctors' workload is increasing over time

Growth of public doctors vs growth of public inpatient discharges and deaths
(Index. 2008=100)



Note.
(1) Refer to doctors with full registration in public hospitals on headcount basis as at end of the year.
(2) Refer to total number of discharges of inpatient and day inpatients on an episode basis and deaths as at 31 March of the year.

Source: Hong Kong Annual Digest of Statistics, Census and Statistics Department; Hospital Authority Statistical Report 2008/09– 2016/17

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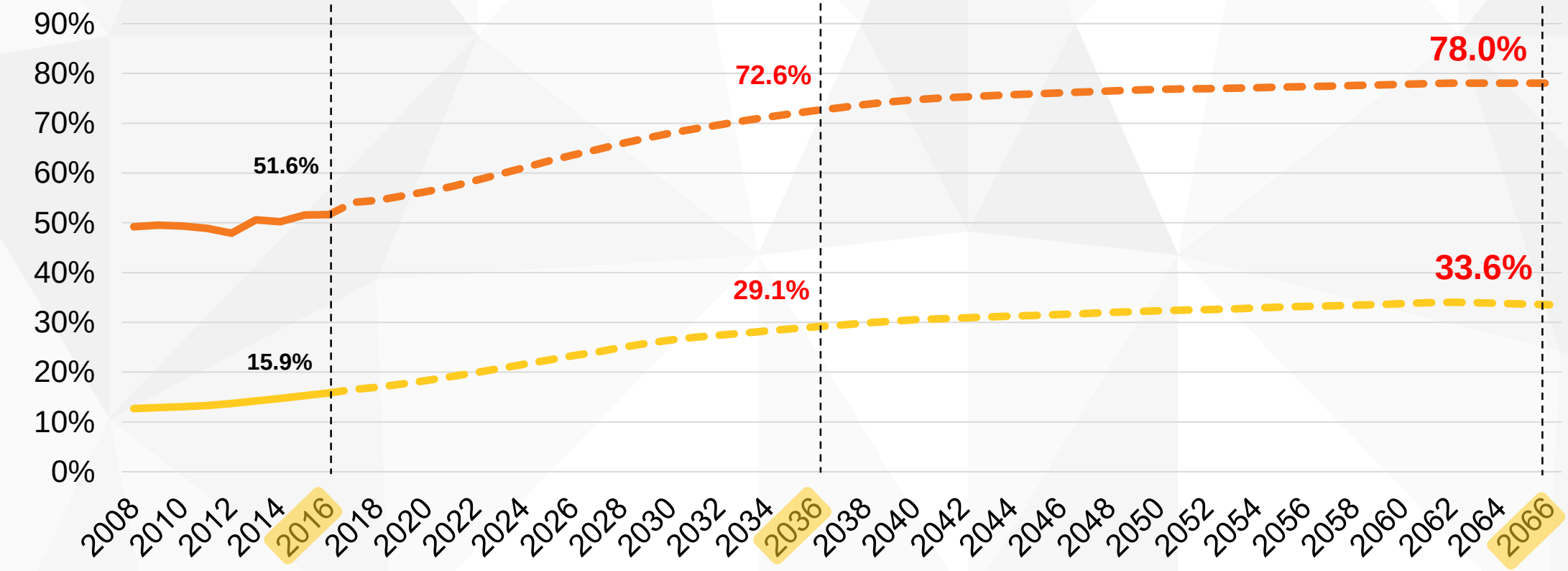
… and it would get worse!

Projected % of public hospital inpatient bed days accounted for by 65+ with expected population ageing

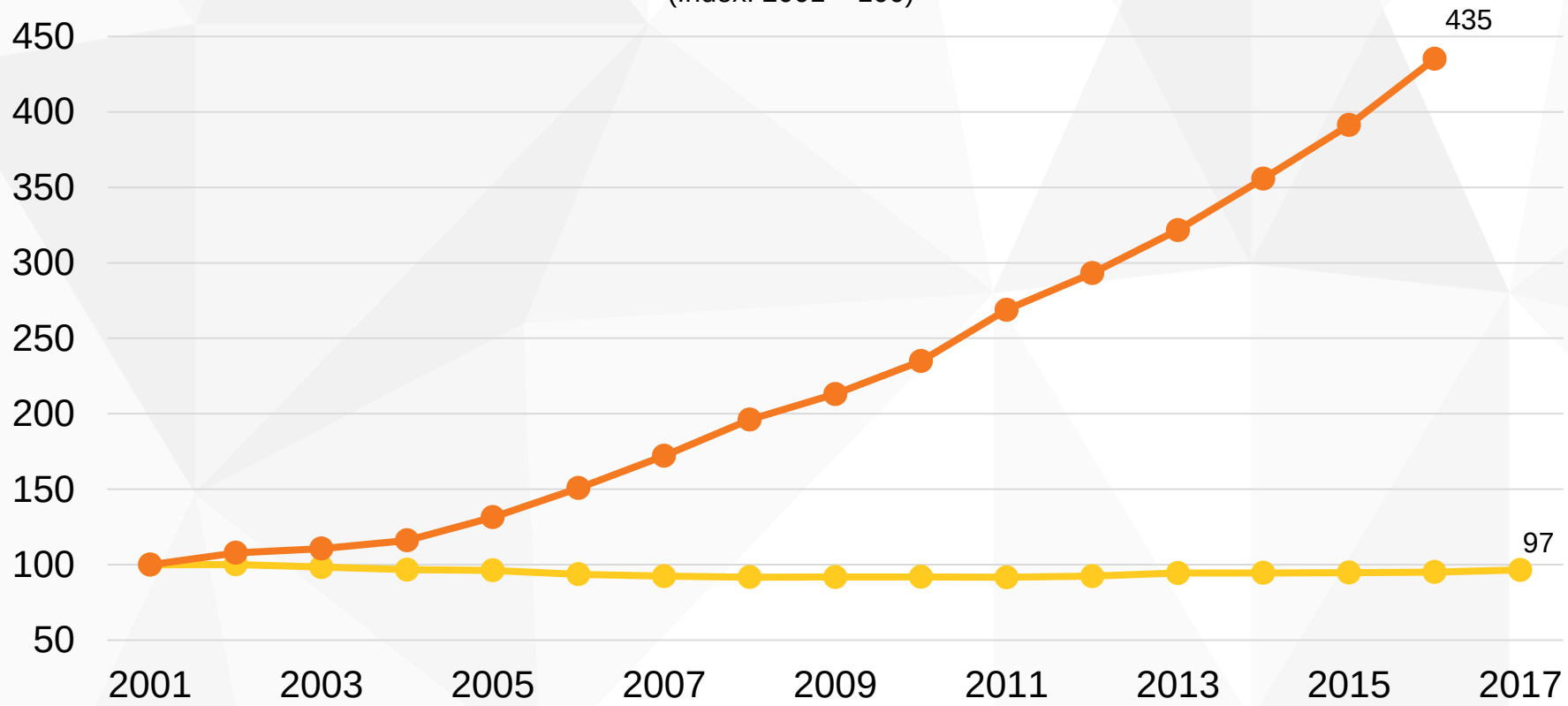


Source: Census Population Estimates, Census Population Projection, Census and Statistics Department; Hospital Authority Statistical Report 2008/09– 2016/17

… but the pull factor to the private sector grows

Growth of health insurance expenditures(1) vs growth of public hospital share of inpatient discharge and deaths(2)

(Index. 2001 = 100)



Growth of current health expenditures via privately purchased & employer-based insurance schemes

Growth of public hospital share of inpatient discharges and deaths

Note.

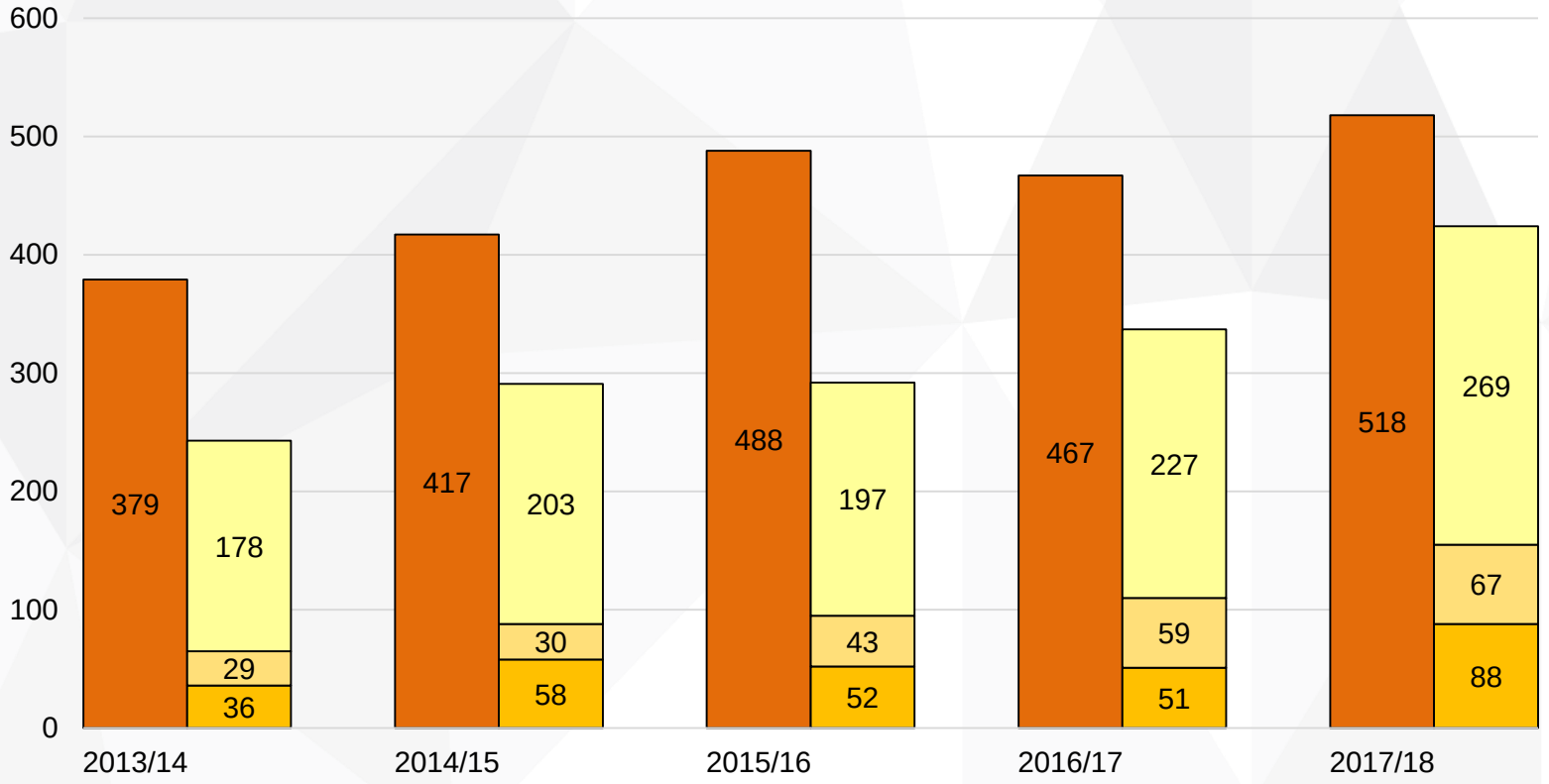
(1) Health insurance expenditures include expenditures via privately purchased & employer-based insurance schemes from April of the year to March of next year.

(2) Inpatient discharges and deaths refer to total number of discharges of inpatient and day inpatients on an episode basis and deaths as at end of the year.

Source. Domestic Health Accounts, Food and Health Bureau; Hong Kong Annual Digest of Statistics, Census and Statistical Department

Are new doctors enough to fill the gap?

Total intake(1), attrition(2) and number of retirees of full-time and part-time doctors in public hospital clusters



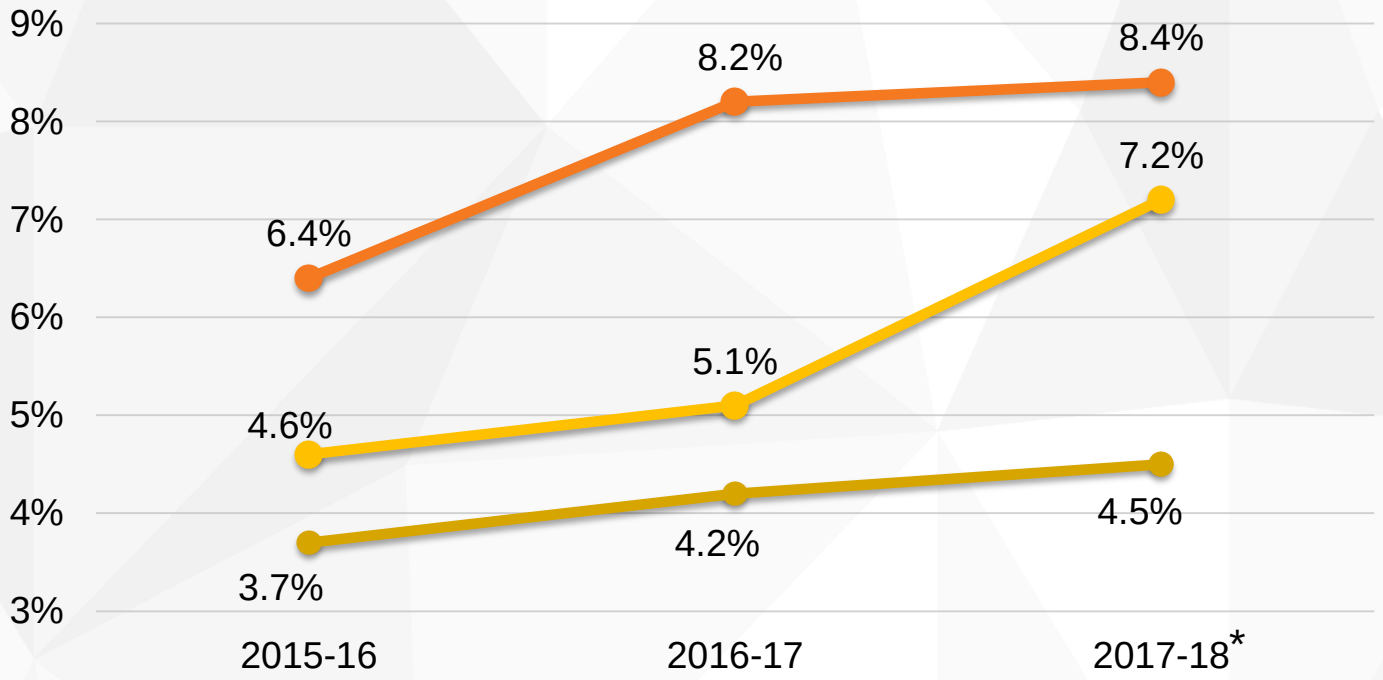
- Intake no. of full-time and part-time doctors in public hospitals
- Attrition no. of full-time doctors due to non-retirement in public hospitals
- Attrition no. of full-time doctors due to retirement in public hospitals
- Attrition no. of part-time doctors in public hospitals

Note.
(1) Intake refers to total number of permanent & contract staff (both full-time and part-time) including interns appointed as residents joining HA on headcount basis.
(2) Attrition includes all types of cessation of service from HA for permanent and contract staff on headcount basis. Doctors exclude interns and dental Officers.

Source. LC Paper CB(2)1857/17-18(01); Replies to initial written questions raised by Finance Committee Members in examining the Estimates of Expenditure 2018-19 & 2019-20, Food and Health Bureau

Attrition of full-time doctors in public hospitals

Attrition rate of public hospital full-time doctors by rank(1)



	2015-16			2016-17			2017-18*		
	No. left	Average Strength	Attrition Rate	No. left	Average strength	Attrition Rate	No. left	Average strength	Attrition Rate
Consultant	49	766	6.4%	66	805	8.2%	61	726	8.4%
SMO/AC	82	1783	4.6%	94	1843	5.1%	121	1681	7.2%
MO/R	109	2946	3.7%	125	2976	4.2%	132	2933	4.5%
Total	240	5455	4.4%	285	5588	5.1%	314	5322	5.9%

Note. (1) Full-time doctors only; Rolling Attrition Rate = Total no. of doctors left HA in the past 12 months /Average strength in the past 12 months x 100%
* January to December 2017

Source. Replies to initial written questions raised by Finance Committee Members in examining the Estimates of Expenditure 2018-19, Food and Health Bureau

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Part 3. The Remedy: Boosting Our Supply of Doctors through Attracting Foreign-Trained Talent

The efforts to fix this are too little too late!

Limited Registration

In 2018, the government extended the validity period and renewal period of limited registration **from not exceeding 1 year to not exceeding 3 years**

UGC-funded medical training

Increased quota for UGC-funding medical training

The number of UGC-funded medical training spaces was 470 in the 2016/17, representing an **increase of 90%** compared with 250 in the 2005/06

Further increase 60 UGC-funded training places each year in 2019/20 to 2021/22 UGC triennium

MCHK

Increased frequency of Licensing Examination

From **one to two sittings** per year since 2014

Flexible arrangements for post-Licensing Examination internship requirement

Introduced since 2016

HA

Increased Special Honorarium Scheme (SHS) allowance

One-off 10% increase in rate of Special Honorarium Scheme (SHS) allowance for 12 weeks from 28th January 2019 (for frontline staff, including doctors)

Special Retired and Rehire Scheme (SRRS)

As at 31st December 2018, **61** doctors were working under the SRRS

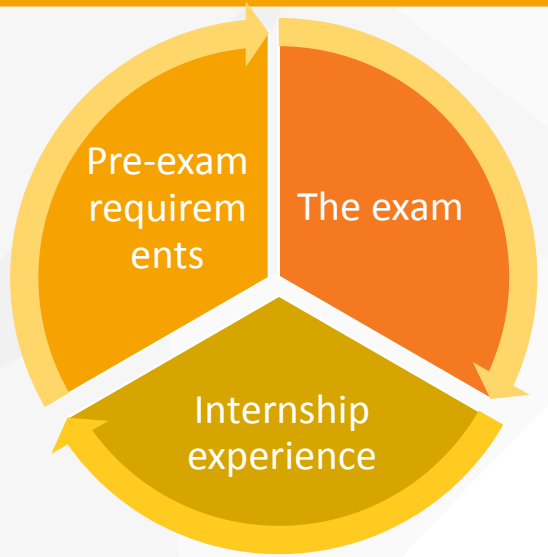
Retirement age pushed to 65 (for new recruits commencing employment on or after June 1, 2015)

Source. HKSAR Government, HKSAR Food and Health Bureau; Hospital Authority; The Medical Council of Hong Kong

Foreign-trained doctors can opt for an 'exam pathway' to obtain full registration to practice in Hong Kong, or a 'non-exam pathway' to obtain limited registration which does not lead to full registration.

Pathway 1

'Exam pathway' to obtain full registration



Full registration

Practice in public / private sector

Pathway 2

'Non-exam pathway' to obtain limited registration which does not lead to full registration

- Overseas medical qualification
- Post-qualification clinical experience
- Registered with medical authority outside Hong Kong

Limited registration(1)

Practice at *limited* venues (generally HA/DH/HKU/CUHK) for a *limited duration* of 3 years (with potential for renewal)

Note: (1) Doctors with Limited Registration are required to pass the Licensing Examination and complete an internship assessment to be granted Full Registration.

Source. The Medical Council of Hong Kong

Foreign-trained doctors using *'exam route'* make up a low percentage of our workforce

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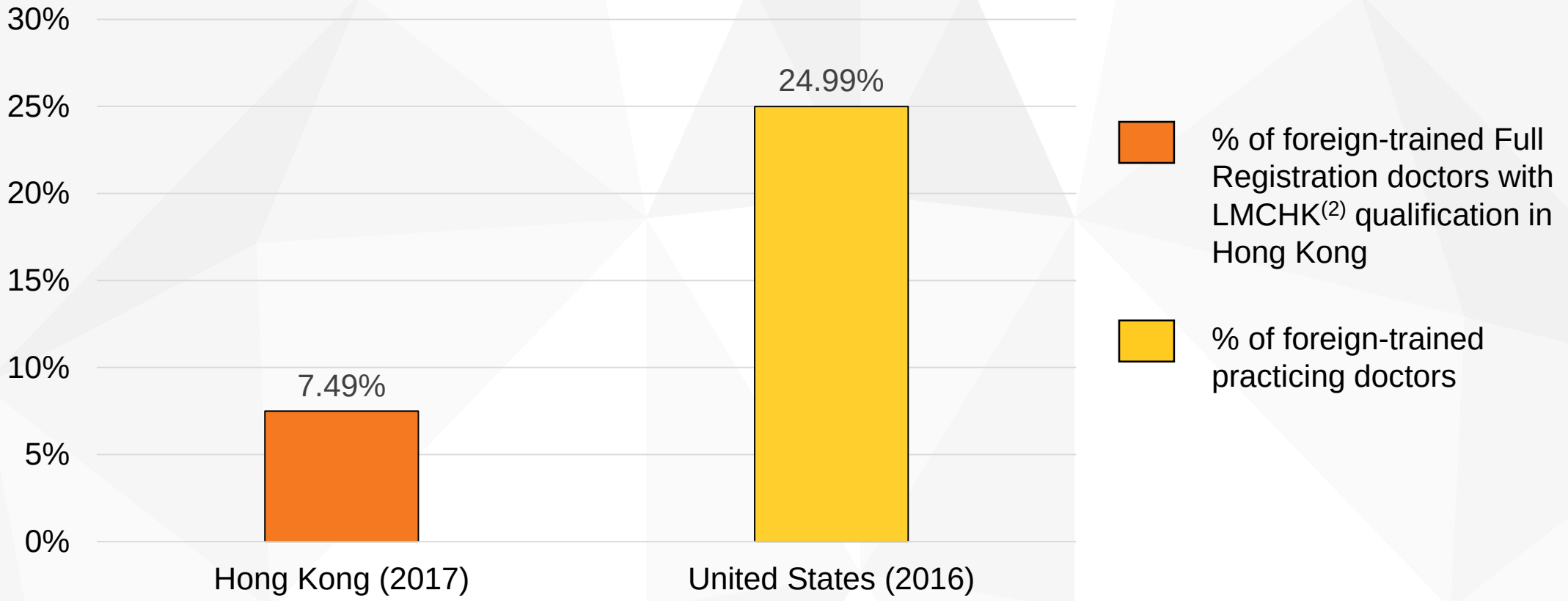
'Exam route' comparison: Hong Kong vs. United States(1)



Note:
(1) International medical graduates must take the United States Medical Licensing Exam to practice in the United States
(2) LMCHK: "Licentiate of The Medical Council of Hong Kong"

Source. The Medical Council of Hong Kong; OECD data; American Medical Association

'Exam routes' to obtain license: HK vs. UK and US

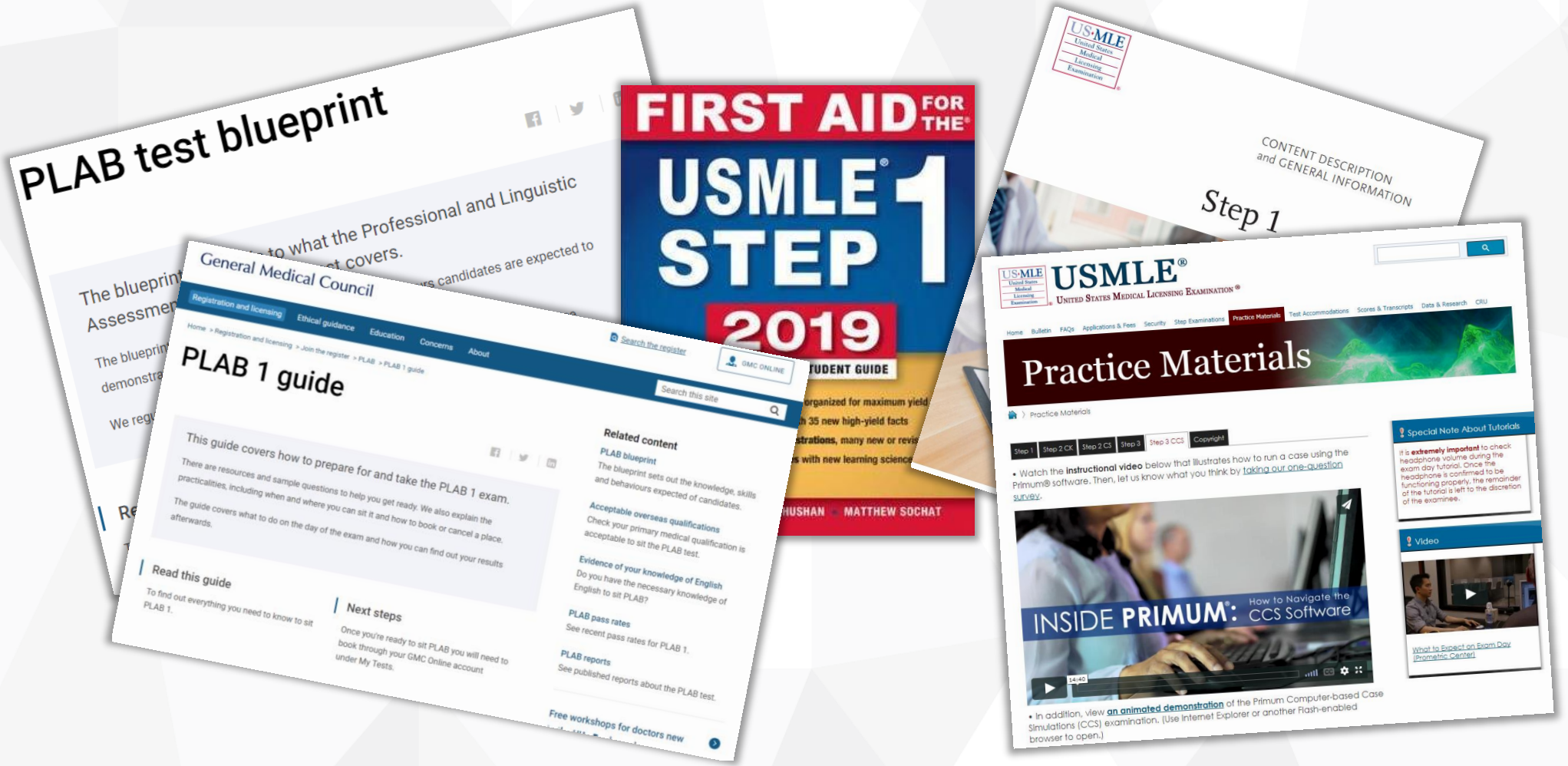
	Hong Kong	United Kingdom	United States
Written knowledge exam pass rate (2017)	27%	76%	Basic Science: 73% (2017); Clinical knowledge 76% (2017)
Practical clinical exam pass rate (2017)	42%	79%	Ability to practice under supervision 81% (2017); Ability to practice independently 84% (2017)
Standalone language exam unrequired	✘ (1)	✓	✓ (2)
Comprehensive exam syllabus/ revision material available	✘	✓	✓
Pre-exam internship experience unrequired	✘	✓	✓
Internship unrequired for licensing	✘ (After passing exam)	✓ (Replaceable by overseas internship)	✘ (After passing exam)

Note: (1). English exam average pass rate: 94.5% (2017); (2). English tested *during* clinical skills test

Source. The Medical Council of Hong Kong; United Kingdom General Medical Council; United States Medical Licensing Examination; American Medical Association

MCHK Licensing Examination was not designed to attract talent

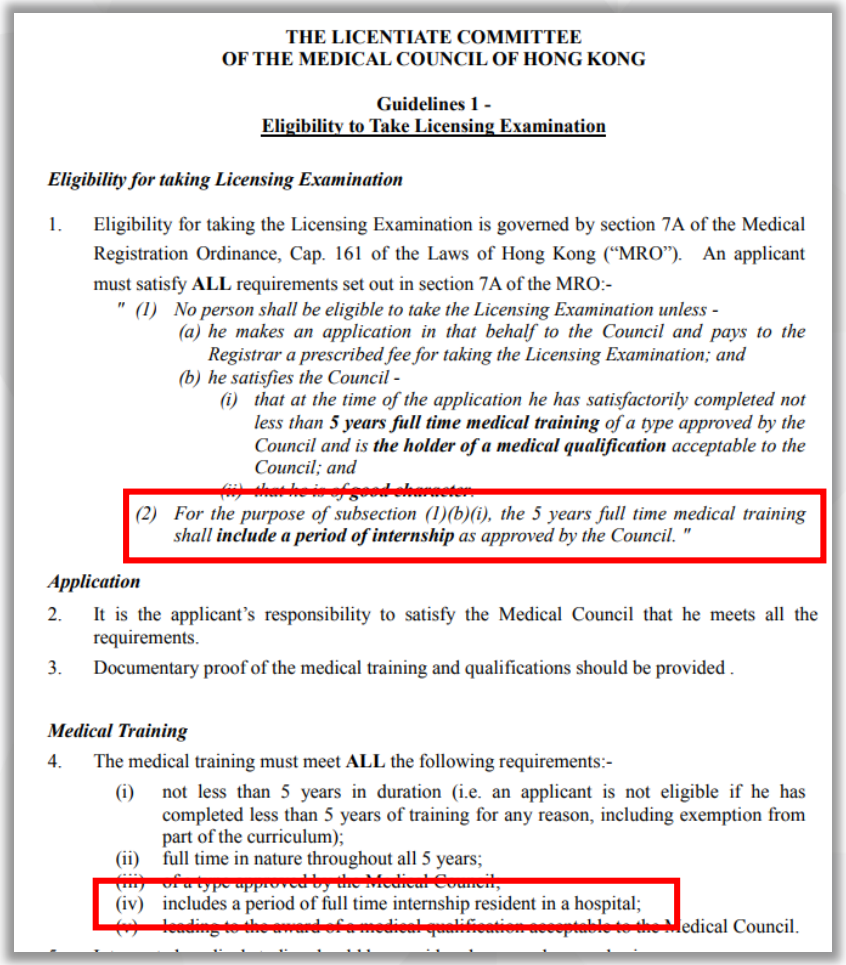
Test **syllabus is not comprehensive** and availability of reference materials / sample questions is limited→ not much facilitation to applicants wanting to pass the HK Licensing Examination



Source. United Kingdom General Medical Council; United States Medical Licensing Examination; www.bookdepository.com

Internship experience is required to sit exam

Internship experience is required for taking the test → **not all medical curricula offer the experience**



THE LICENTIATE COMMITTEE
OF THE MEDICAL COUNCIL OF HONG KONG

Guidelines 1 -
Eligibility to Take Licensing Examination

Eligibility for taking Licensing Examination

1. Eligibility for taking the Licensing Examination is governed by section 7A of the Medical Registration Ordinance, Cap. 161 of the Laws of Hong Kong ("MRO"). An applicant must satisfy **ALL** requirements set out in section 7A of the MRO:-

" (1) No person shall be eligible to take the Licensing Examination unless -
(a) he makes an application in that behalf to the Council and pays to the Registrar a prescribed fee for taking the Licensing Examination; and
(b) he satisfies the Council -
*(i) that at the time of the application he has satisfactorily completed not less than **5 years full time medical training** of a type approved by the Council and is **the holder of a medical qualification** acceptable to the Council; and*
(ii) that he is of good character.
*(2) For the purpose of subsection (1)(b)(i), the 5 years full time medical training shall **include a period of internship** as approved by the Council. "*

Application

2. It is the applicant's responsibility to satisfy the Medical Council that he meets all the requirements.
3. Documentary proof of the medical training and qualifications should be provided .

Medical Training

4. The medical training must meet **ALL** the following requirements:-
(i) not less than 5 years in duration (i.e. an applicant is not eligible if he has completed less than 5 years of training for any reason, including exemption from part of the curriculum);
(ii) full time in nature throughout all 5 years;
(iii) of a type approved by the Medical Council;
(iv) includes a period of full time internship resident in a hospital;
(v) leading to the award of a medical qualification acceptable to the Medical Council.

Stated requirements in other countries	
United Kingdom	**United States**
- Primary medical qualification with stated 'clinical rotation' requirement - English knowledge	- Primary medical qualification

- Other countries don't usually require doctors to complete a "fulltime internship" to become eligible for licensing examination
- No route in Hong Kong for foreign-trained graduates without fulltime internship experience
- Some other countries offer opportunity for foreign-trained graduates to complete internship e.g. United Kingdom: 'provisional registration'

Source. The Medical Council of Hong Kong; United Kingdom General Medical Council; American Medical Council

Foreign-trained doctors using *'non-exam route'* make up a low percentage of our workforce

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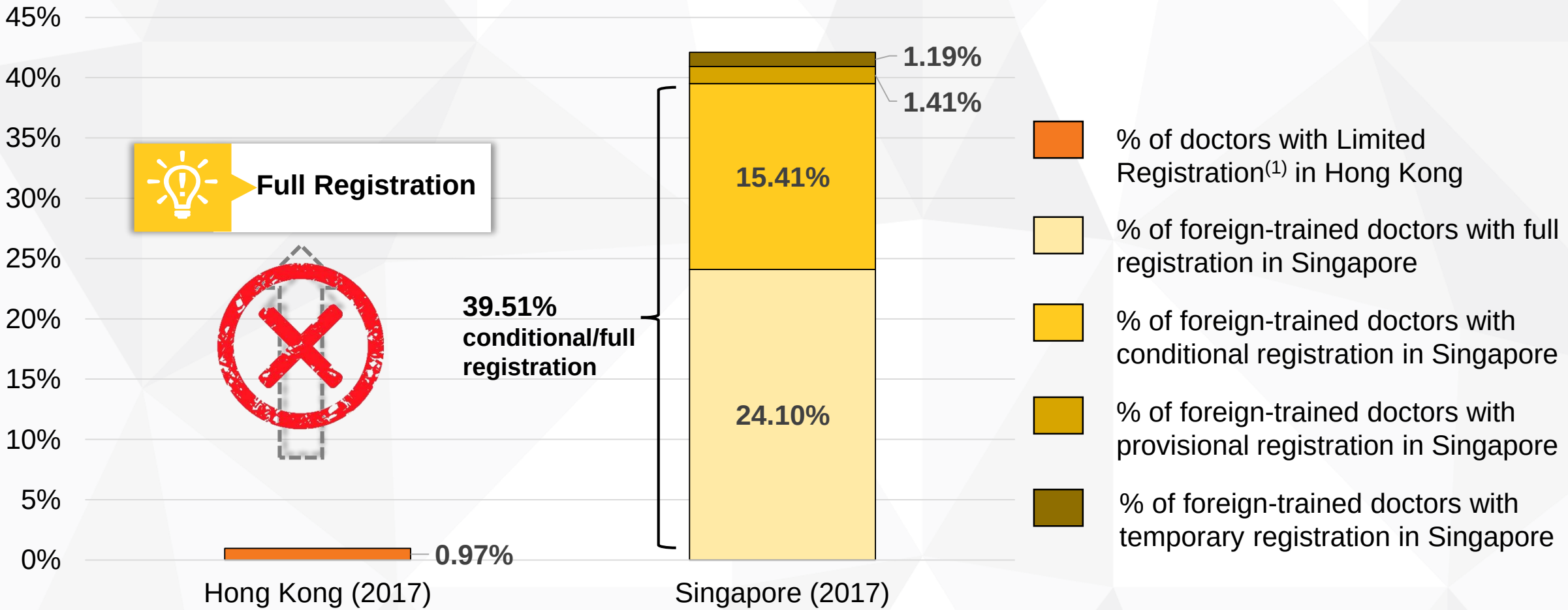
'Non-exam route' comparison: Hong Kong vs. Singapore



Note: (1) Doctors with Limited Registration are required to pass the Licensing Examination and complete an internship assessment to be granted Full Registration.

Source. The Medical Council of Hong Kong; Singapore Medical Council Annual Report 2017

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International Comparison: *'Non-exam routes'* to practice

	Hong Kong	Singapore		United Kingdom	Australia
	Limited registration	Provisional registration	Conditional registration	(1) Postgraduate qualification to full registration; (2) Sponsorship to full registration; (3) Certificate of eligibility for specialist/GP register to full registration	(1) Competent authority pathway to general registration; (2) Specialist pathway
Non-exam progression to **full registration***	✗	✓	✓	✓	✓
Post-qualification clinical experience/ internship unrequired*	✗	✓	✗	✗	✗
Clearly specified list of recognized overseas qualifications and details of post-qualification clinical experience/internship*	✗	✓	✓	✓	✓
Explicit requirement for registration with medical authority elsewhere unrequired*	✗	✓	✓	✓	✓
Not restricted to practice in **limited venues** ONLY*	✗	✗#	✓	✓	✓

*Please refer to details in supplementary slide
#True for provisional registration but could progress to conditional and eventually full registration for which practice venues are not limited

Source. The Medical Council of Hong Kong; Singapore Medical Council; United Kingdom General Medical Council; Australian Medical Council

Large scale remedies for large scale problems

Doctors / Population

			
2008	**1.76** (12,215*)	**>**	**1.62** (7,841*)
2017	**1.93** (14,290*)	**<**	**2.39** (13,386*)

- In 2008, the doctors per 1,000 population ratio in Singapore was **1.62**, *lower* than Hong Kong's **1.76**
- In 2017, Singapore reached a doctors per 1,000 population ratio of **2.39**, *surpassing* Hong Kong's **1.93**

The number of doctors in Singapore grew by **70%** in less than a decade.

Note: * Number of doctors

Source: Food and Health Bureau, OECD, Year Book of Statistics Singapore

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Policy considerations

Exam route

Offer **comprehensive syllabus and revision material** for MCHK Licensing Examination

Consider **removing internship experience** as Licensing Examination prerequisite

Doctors who pass the MCHK Licensing Examination should be **given the option to substitute the post-exam internship with equivalent overseas experience** on condition the individual practices in the public sector for a set number of years

Non-exam route

Allow **progression from limited to full registration** on condition that doctor has practiced in public sector for a set number of years (particularly in public hospitals)

Building on current criteria, **acceptable medical qualifications for obtaining limited registration should be clearly listed.** Individuals with a medical qualification from listed institutions could eventually progress from limited to full registration. Permanent residents of the HKSAR with the right of abode who have received medical education from listed institutions should be prioritised

Relax requirement for necessity to be registered with foreign medical authority

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Summary

1

The Condition: Hong Kong's health system is challenged by the severe shortage of doctors

- Amidst the many challenges faced by our health system, the issue of shortage in doctors, especially in the public hospitals, remains **unresolved**.
- Rapidly **ageing population** and growing burden of chronic diseases would worsen the situation going forward.

2

The Symptoms: An Overstretched Public Healthcare System

- Increasing **workload** and **attrition rates** of public hospital doctors, and lengthy patient **waiting times** are clear signs of an overloaded system on the verge of collapse.

3

The Remedy: Boosting Our Supply of Doctors through Attracting Foreign-Trained Talent

- Procedures currently in place for foreign-trained doctors ('exam' and 'non-exam' pathways) should be **reviewed** and greater flexibility should be introduced to to attract foreign-trained talent.
- While addressing the shortage of doctors, consideration should be given to the **role of relevant health care professionals (especially primary health care providers)** in moving our health system forward.

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Appendix

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Top medical schools 2019 (1)

Institute	Location	QS ranking	Times Higher Education ranking	Listed in Singapore Second Schedule
Harvard University	United States	1	2	✓
University of Oxford	United Kingdom	2	1	✓
University of Cambridge	United Kingdom	3	3	✓
Stanford University	United States	4	5	✓
Johns Hopkins University	United States	5	6	✓
Karolinska Institutet	Sweden	6	14	✓
University of California, Los Angeles (UCLA)	United States	7	12	✓
Yale University	United States	8	11	✓
Massachusetts Institute of Technology (MIT)	United States	9	N/A	N/A
UCL (University College London)	United Kingdom	9	8	✓
University of California, San Francisco	United States	11	N/A	✓
Imperial College London	United Kingdom	12	4	✓
University of Toronto	Canada	13	13	✓
Columbia University	United States	14	9	✓
University of Pennsylvania	United States	15	15	✓
Duke University	United States	16	16	✓
The University of Melbourne	Australia	17	9	✓
The University of Sydney	Australia	18	33	✓
McGill University	Canada	19	25	✓

Source. Singapore Medical Council Second Schedule; QS University Rankings; Times Higher Education

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Top medical schools 2019 (2)

Institute	Location	QS ranking	Times Higher Education ranking	Listed in Singapore Second Schedule
King's College London	United Kingdom	20	17	✓
University of California, San Diego	United States	20	21	✓
University of Edinburgh	United Kingdom	22	19	✓
National University of Singapore	Singapore	23	26	N/A
University of Michigan	United States	24	24	✓
University of Chicago	United States	25	22	✓
University of Tokyo	Japan	26	34	✓
London School of Hygiene and Tropical Medicine	United Kingdom	27	N/A	N/A
University of Washington	United States	27	18	✓
The University of Hong Kong	Hong Kong	29	29	✓
University of British Columbia	Canada	30	30	✓
Seoul National University	South Korea	31	49	✓
Monash University	Australia	32	45	✓
Charité - Universitätsmedizin Berlin	Germany	33	46	✓
Erasmus University Rotterdam	Netherlands	34	38	✓
Washington University in St. Louis	United States	35	20	✓
New York University	United States	38	42	✓

Source. Singapore Medical Council Second Schedule; QS University Rankings; Times Higher Education

Top medical schools 2019 (3)

Institute	Location	QS ranking	Times Higher Education ranking	Listed in Singapore Second Schedule
Cornell University	United States	40	N/A	✓
Ruprecht-Karls-Universität Heidelberg	Germany	40	28	✓
Ludwig-Maximilians-Universität München	Germany	42	40	✓
McMaster University	Canada	43	23	✓
University of Pittsburgh	United States	43	47	✓
Kyoto University	Japan	45	36	✓
The Chinese University of Hong Kong	Hong Kong	45	49	✓
KU Leuven	Belgium	47	39	✓

Source. Singapore Medical Council Second Schedule; QS University Rankings; Times Higher Education

International Comparison: 'Non-exam' routes to practice

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	Hong Kong	Singapore		United Kingdom			Australia	
	Limited registration	Provisional registration	Conditional registration	Postgraduate qualification to full registration	Sponsorship to full registration	Certificate of eligibility for specialist/GP register to full registration	Competent authority pathway to general registration	Specialist pathway
Eventual progression to full license	✗	✓ (after completing 12-month internship as **trainee** in Singapore→ conditional registration)	✓ (after at least 24 months of supervised practice)	✓	✓	✓	✓ (after 12 months of supervised practice)	✓ (specialist registration)
Recognized overseas qualifications specified (clearly listed)	✗ (Overseas qualification recognized)	✓ (Second Schedule)	✓ (Second Schedule, postgraduate qualification or accredited by Specialists Accreditation Board Singapore)	✓ (approved primary medical and international postgraduate qualification)	✓ (approved primary medical qualification)	✓ (approved primary medical qualification and specialist qualification)	✓ (degrees and internships from 5 countries)	✓ (specialist training and exam outcomes)
Clear specification of post-qualification clinical experience / internship	✗ (Overseas post-qualification clinical experience recognized)	**Internship experience not required**	✓ (completion of internship and active clinical practice for 3 years preceding application)	✓ (at least 12 months in UK or overseas)	✓ (at least 12 months in UK or overseas)	✓ (at least 12 months in UK or overseas)	✓ (internship/residency/ supervised practice apart from Canada)	✓ (specialist training as approved by specialist college applied to)
Explicit requirement for registration with medical authority elsewhere	✓	✗	✗ (no explicit requirement)	✗ (no explicit requirement)	✗ (no explicit requirement)	✗ (no explicit requirement)	✗ (no explicit requirement)	✗ (no explicit requirement)
Practice in limited venues ONLY	✓ (limited venues (generally HA/DH/HKU/CUHK))	✓ (approved hospital(s) in Singapore)	✗ (SMC-approved venues under supervision for at least 2 years- special approval required for practice in private sector)	✗ (work in 'approved practice settings'(public or private) after obtaining full license until next renewal)	✗ (work in 'approved practice settings' '(public or private) after obtaining full license until next renewal)	✗ (work in 'approved practice settings' '(public or private) after obtaining full license until next renewal)	✗	✗

Source. The Medical Council of Hong Kong; Singapore Medical Council; United Kingdom General Medical Council; Australian Medical Council; Australian Medical Council

‘Non-exam’ routes to practice in the Hospital Authority

	Hong Kong		
	General specifications of “limited registration”	**HA Service Resident**	**HA Associate Consultant**
Specified specialties (applications before 31st March 2019)	N/A	Anaesthesia / Anatomical Pathology / Cardiothoracic Surgery / Emergency Medicine / Family Medicine / Internal Medicine / Neurosurgery / Paediatrics / Radiology	Anatomical Pathology / Cardiothoracic Surgery / Nuclear Medicine / Ophthalmology / Radiology
Eventual progression to full license	✗	✗	✗
Recognized overseas qualifications specified	✗ (Overseas qualification recognized)	✓ “Possess qualification comparable to the Intermediate Examinations of constituent Colleges of the Hong Kong Academy of Medicine” (list of examples available)	✗
Clear specification of post-qualification clinical experience / internship	✗ (Overseas post-qualification clinical experience recognized)	✓ - “Three years of clinical experience as post-internship registered medical practitioner” - “Documentary proof of all full-time post-qualification clinical experience (include internship)”	✗ - “Documentary proof of all full-time post-qualification clinical experience (include internship)”
Explicit requirement for registration with medical authority elsewhere	✓	✓	✓
Practice in limited venues ONLY	✓ (limited venues (generally HA/DH/HKU/CUHK))	✓ (HA)	✓ (HA)
Additional requirement(s)	N/A	“Proficient in English”; “Proficient in Cantonese (except for Anaesthesia, Anatomtical Pathology and Radiology)”	- “Proficient in English”; “Proficient in Cantonese (except for Anatomical Pathology and Radiology)” - “Certified or registered as a specialist or equivalent, in relevant specialty in the country of practising Medicine. The certification or registration system for the specialist status should be a nationally or officially recognized system”

Source. Hospital Authority

Presentation