

## The Challenges of an Ageing Society from a Health Care Perspective

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Countries around the world, especially the developed economies, are grappling with the challenges of an ageing society and Hong Kong is no exception. This may come as a surprise that just only two centuries ago, the British economist Thomas Malthus predicted in his famous treatise "An Essay on the Principles of Population" that a point would come when human population would reach the limit up to which food sources could support it and any further increase would lead to population crash caused by natural phenomena like famine or disease. Malthus' famous prediction is based on the premise that man is a complacent animal and would continue to procreate when his basic needs are fulfilled and his family is well fed. It implies that population growth is only constrained by adequate food supply and natural or man-made catastrophes.

It therefore perplexes us that the first countries, which will experience a real reduction in population, like Japan, Germany and Italy, are among the most advanced economies in the world with the highest quality of life and an abundant supply of food! How this has come about would be a subject for other studies and research. The human society is facing a new challenge — an ageing community coupled with possibly a shrinking population. This is the complete opposite to the traditional concept of driving social and economic improvement through continued population growth. The message is clear that we can no longer rely on traditional concepts and experiences to help us tackle the challenge of an ageing society. We need new thinking.

What is the challenge of an ageing society? Ageing population is a multi-facet problem and different countries and societies will have different experiences due to different stages of social and economic development and the social policies adopted by them. We will focus on Hong Kong and look at the challenge from the health care perspective.

The left side of Figure 1 shows that Hong Kong will continue to experience a "healthy" population growth in terms of numbers. However, a closer look at the components of the projected population growth, as shown on the right side of the table, gives a very different picture — the growth of the population below aged 65 shows a marked decline after peaking in the next decade. Persistent low birth rate will lead to an actual contraction of the population below aged 65 in some 20 years' time. In short, population growth in the coming years will be mainly driven by the extension of longevity of the people of Hong Kong, the same in many other developed economies in the world.

Figure 1

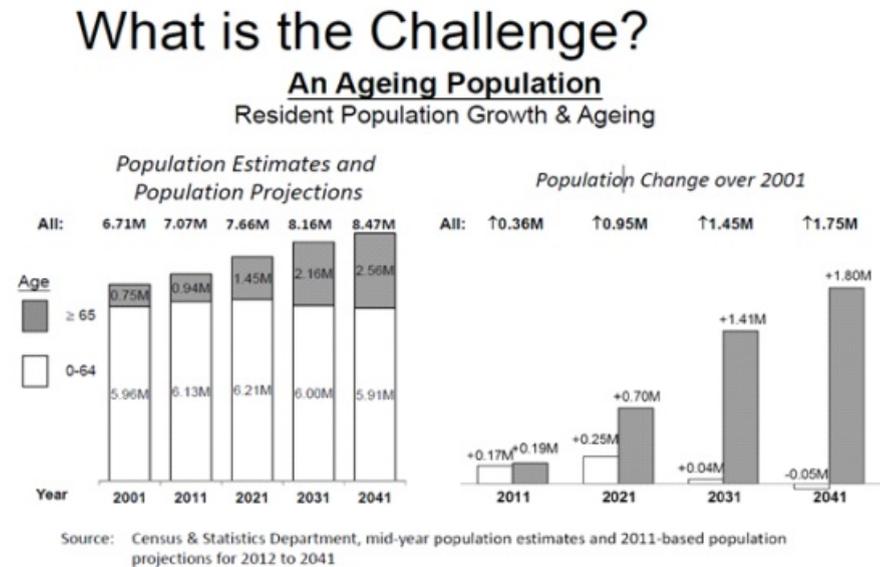
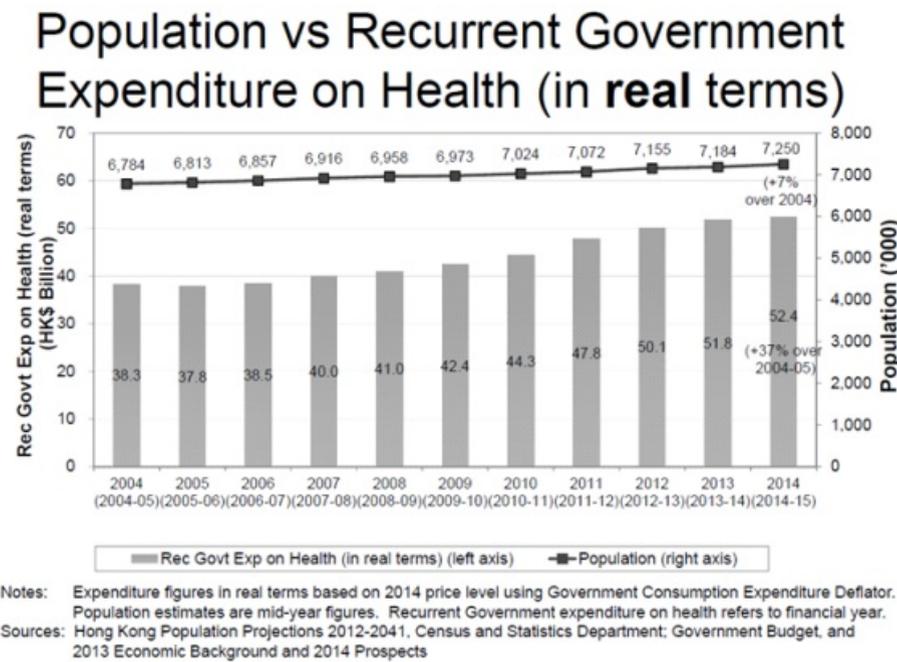


Figure 2



The implication of the ageing phenomenon is already being felt — without much of our notice. Figure 2 compares the real growth of Government spending on health care with population growth in the past decade. It shows that Government investment

on improving health care services (37%) has outpaced population growth (7%) by a wide margin of more than five times during the same period. However, the quality of public hospital service in terms of waiting time at the Specialist Outpatient Clinics (SOPC) (Figure 3) shows no corresponding improvement notwithstanding the rapid increase in Government funding. The true story is the growth of those aged 65 who are more prone to sickness and being hospitalized has been increasing at a much faster rate (30%) than that of the overall population (7%) (Figure 4).

Figure 3

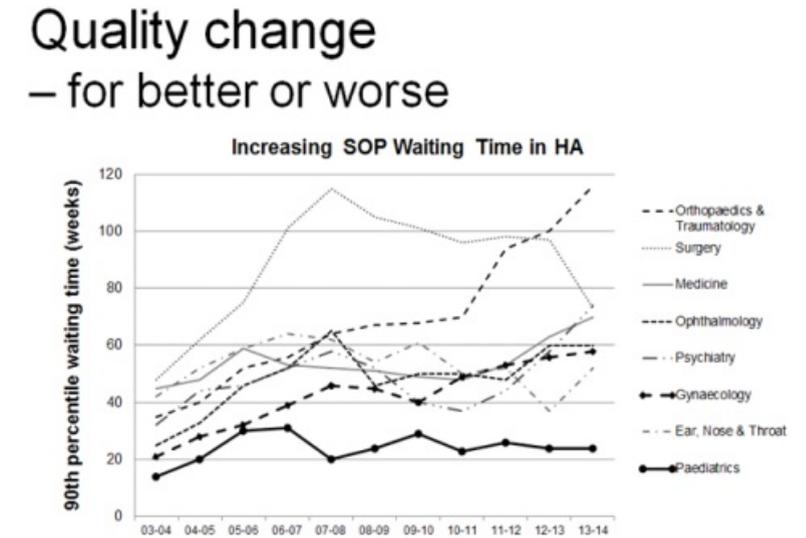


Figure 4

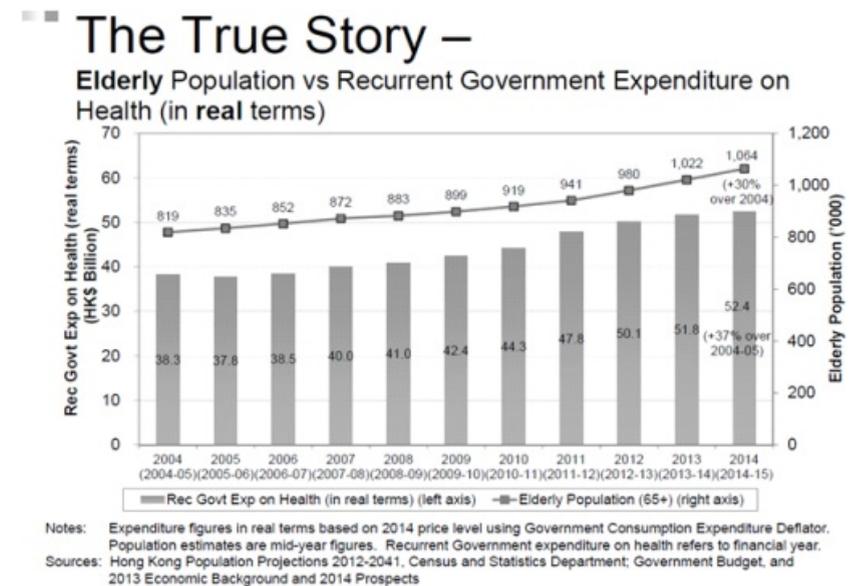


Figure 5



The demand for medical treatment is compounded by the fact that, according to the Hospital Authority's figures, the hospitalization rate of a person who is aged 65 or above is four times that of someone who is aged below 65 (Figure 5) and it grows exponentially as the age advances (Figure 6).

To quantify the challenge of ageing in terms of the demand for and provision of public health services, the Hospital Authority has estimated that Hong Kong will need to provide an additional 8 800 hospital beds in the public sector alone in the next 20 years to meet forecast growth in demand (Figure 7).

Figure 6

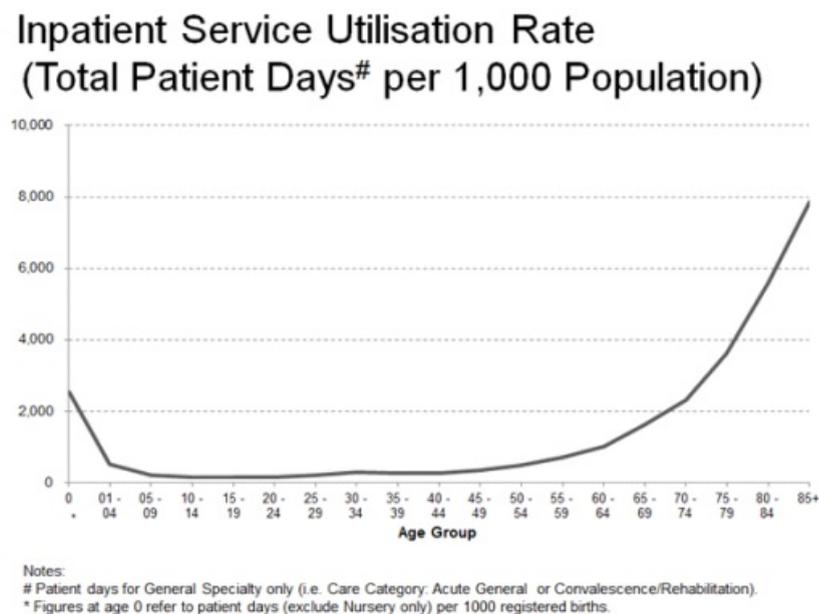


Figure 7

### How big is the challenge? HA's forecast of demand for hospital beds#

	Available beds as at 31 Mar 2014	Bed Requirement Equivalent*	
		2021	2031
<b>Expert Scenario</b>			
With clinical inputs, factor in a mild change in service delivery and efficiency gain	21,326	23,600	30,200
<b>Anticipated Shortfall</b>		2,300	8,800

# Refer to beds under Acute, Convalescence/Rehabilitation and Local Infirmar Care but exclude accident & emergency observation beds, nursery cots, beds for Central Infirmar Waiting List placement, beds under mental health and psychiatry specialties.  
\* Derived by inpatient bed days occupied, day patient discharges & deaths and assumed throughput per bed per year.

To help visualize the impact, what this means is that Hong Kong will need to build six comprehensive hospitals, each of the size of Queen Mary Hospital, in the next 20 years. The capital cost of each such hospital is in the region of \$15 billion in current day prices. Each will need a land footprint of some 10 hectares and a team of some 5000 health care professionals and supporting staff and an annual budget of \$ 3 billion to manage and operate it.

While we tend to focus on the public finance implications of the challenge of an ageing population, the challenge to the public health (and private) system actually has three different dimensions — cost, manpower, and facilities — and we cannot just look at reforming the health care financing system alone to solve the challenges of an ageing population in public health and other public services provision.

#### Cost

In the last two decades, similar to many other economies, the Hong Kong Government has made several attempts to reform the health care financing system to ensure its long-term sustainability (Figure 8).

Figure 8

### Cost

#### Health Care Financing Reform

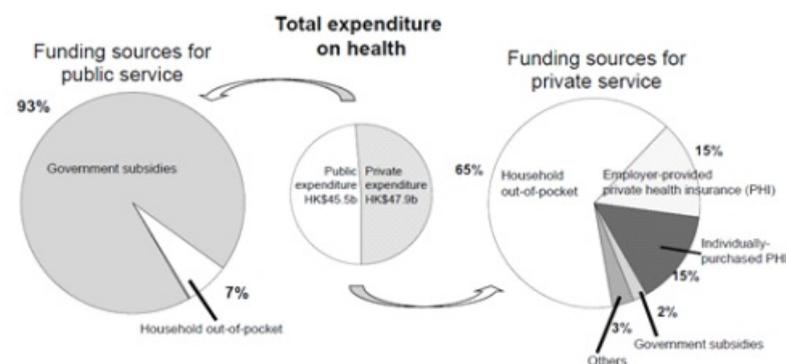
- 1993 - "Towards Better Health" (Rainbow Document)
- 1999 - "Improving Hong Kong's Health Care System: Why and For Whom" (Harvard Report)
- 2000 - "Lifelong Investment in Health"



They were all subsequently shelved due to the lack of public support in the subsequent public consultation process. Many blame it on the lack of political will. But is it true that the reason for the public to resist health care reform is their unwillingness to take more responsibility of their share of the health care costs? A closer look at the health care expenditure in Hong Kong (Figure 9) shows that the people of Hong Kong are already paying half of the health care costs out-of-pocket.

Figure 9

## Public and Private Health Expenditure



Source: Hong Kong's Domestic Health Accounts: 2010-11

This is because in Hong Kong, primary care, mostly episodic treatments, is mainly provided through the private medical sector, and the Government — through the statutory Hospital Authority — focuses mainly on the provision of secondary and tertiary (i.e. hospital) and emergency and other specialized services. Compared with other public health systems in the world (which are either wholly public funded or primarily relying on the private market to meet the health care needs of the citizens), the Hong Kong model is already based on shared responsibility and it gives people a choice and encourages them to take charge of their health through primary care. It also enables the private medical sector (including private hospitals which currently account for around 10% of hospital admissions) to have room to develop, gives doctors a career choice and mobility, and promotes synergy and complementarity between the public and private systems. Had primary care been provided through the public system like some other countries and economies, the challenge of ageing population would have been doubled.

It is, therefore, easy to understand that, conceptually, the Health Protection Scheme (HPS) being proposed is fundamentally different from the previous three health care reform initiatives in one major aspect — it neither copies from any overseas model nor is it intended to be a total solution. It is developed having regard to, and building upon, the strengths of the unique health care system in Hong Kong — the co-existence

of a vibrant, successful and well trusted public and private health care market. We have no intention and no one would agree that we should fundamentally change this well tested and well trusted dual markets system in Hong Kong and any mandatory contributory scheme is unlikely to be able to carry the day.

The objective of HPS is to leverage on the growing affluence of the community, as the baby-boomers are also growing old, and the successful and vibrant private health insurance market in Hong Kong, to encourage and facilitate those who can afford it and willing to do so to have a choice to use private hospital service through the support of a value-for-money private health insurance policy. To do so, we need to enhance consumer protection by addressing its current perceived weaknesses including insufficient protection, no guaranteed renewal which tends to discourage claims and the policyholders from seeking early treatment, complicated and confusing product structure, and opaque hospital charges. It is not just affordability, but also the adequacy of protection and the trust in the product, that influences a consumer's decision to take out a private health insurance.

The key word of HPS is "voluntary" and the main objective is "empowerment". It should be emphasized that those who have taken out a private health insurance policy will continue to be able to use the service of the Hospital Authority just like anybody in Hong Kong. But he will have an additional choice. It will be up to the individual (and not the Government) to decide whether he wants to seek treatment in the public hospital setting or a private hospital when he needs to do so. With the support of a quality private health insurance policy, an individual may prefer to seek treatment in the private sector for the common diseases where he can have a choice of doctor, better time management and a more convenient setting. And in more complicated cases, he may like to be treated in the public hospital setting with its strong medical team, which has the expertise and capability of handling such procedures. With private health insurance, he will have the choice and HPS is designed to enable more Hong Kong people to have and to be able to afford such choices. We will not force anyone to make the choice. With a trusted HPS, more people will be able to afford the choice and for every individual who opts to use the private hospital, the place thus released from the public hospital could be provided to someone who is more in need of the service, which will help reduce the waiting time of public hospitals and allow the individual who has HPS and the one who cannot afford private health insurance both to receive treatment earlier. The HPS will serve as a tool to facilitate the rebalancing between public and private hospital service through the willingness of the patients concerned and, by giving more people a choice, it helps promote synergy between the two sectors and better and more efficient use of public and private hospital facilities and capacities.

### Manpower

The rapid increase in demand for medical services as the population ages does not only create a huge burden on public finance, it has also created other non-financial implications. Money is only the means; ultimately we need people to provide the service. Indeed, as demonstrated in Figure 2, there is no shortage of Government commitment in investing in the public health system to enhance the capacity of public

hospitals to meet demand in recent years. The bottleneck is in the supply of health care workers. Shortage of health care workers has become a universal problem and everywhere is scrambling to train and attract more health care workers to join the profession.

The two medical schools in Hong Kong, which provide the main pool of young doctors, have increased their combined annual intake of medical students from 250 to 320 in 2009/10, and further to 420 in 2012/13. It takes six years to train a young doctor and 13 years to train a specialist. The public sector alone is currently short of some 300 doctors. The shortage is not due to the lack of public funding. It is primarily a result of the reduction in the number of annual intake of medical students from 320 to 280 in 2003/04 and further to 250 in 2005/06 due to the economic downturn and fiscal constraint of the Government in the early 2000s.

Given the long turnaround time for training a medical doctor, we cannot afford to make such a planning mistake again in the future, especially with the challenge of an ageing population. Short-term measures are being made to attract overseas trained doctors to return to serve Hong Kong, including increasing the number of annual licensing examinations from once a year to twice a year and exploring with the Medical Council the possibility of reducing the period of internship training requirement so as to attract more overseas practicing doctors (especially those with family roots in Hong Kong) to come back.

To provide a longer-term solution, the Government has committed the University of Hong Kong to establish a computer-aided dynamic forecasting model to project the long-term manpower needs of the main health care professions. The objective is to formulate a long-term health care manpower training and professional development strategy, which will help ensure a stable supply of health care workers in both the public and private sectors (to cater for the unique dual-market health care system in Hong Kong) and the long-term sustainability of our health care system, and avoid long-term training of health care professionals being affected too much by the vicissitudes of the economic cycle (Figure 10).

**Figure 10** Manpower

- Strategic Review on Health Care Manpower Planning and Professional Development
- Review direction
  - A more sustainable mechanism for ensuring adequate supply of healthcare professionals –
    - Local sufficiency?
    - Making more and better use of overseas supply?
  - Training and development framework –
    - Pre-registration training and post-registration CME/CPD
  - Regulatory regimes –
    - Greater accountability and transparency of regulatory bodies (e.g. lay participation)

## Facilities

A unique problem facing Hong Kong in tackling the health care challenge of an ageing population is the scarcity of land. Even with funding and adequate supply of manpower, the identification of suitable land to meet the hospital redevelopment and building programme would be a major difficulty. Given the land constraint, we must continue to plan ahead and in the meantime to optimize the land use and capacity of existing hospitals. Instead of the traditional way of meeting forecast demand by planning hospital projects on an individual basis, the Hospital Authority is taking a new approach of developing cluster-based clinical service plans starting with the Hong Kong West Cluster (Figure 11).

**Figure 11**

## Facilities

- Development of cluster-based clinical service plan



This would help define clearly the role of different hospitals inside the cluster, promote synergy and collaboration between hospitals and focus the health care team on the needs of the cluster as a whole and not just their own clientele. This new approach will raise the efficiency of the public hospital system and capacity utilization in the hospitals and the cluster as a whole, helping ensure the sustainability of our public health system under the challenge of an ageing population.

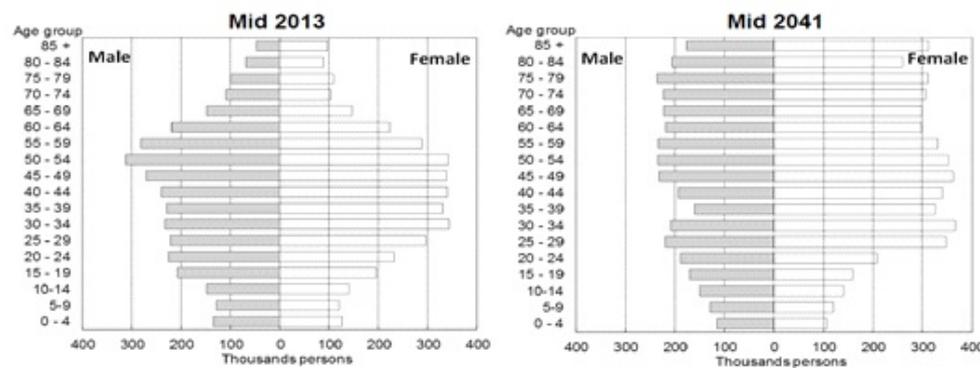
## We need New Thinking

To deal with the long-term financial challenge of an ageing population, the rational approach is to promote self-reliance and a medical saving scheme, which is also a common model in many countries and economies in the world. This has to be implemented before, and preferably long before, the trend of ageing has set in when the community collectively and the population individually are more able to afford it and take up the responsibility. The projected demographic change of the Hong Kong population in Figure 12 and the rising trend of dependence ratio in Figure 13 show that the shifting of the traditional population "pyramid" from a rhombus to a reversed pyramid means that the burden of taking care of the old and young will increasingly fall on the shrinking stratum of the economically active population in the community. Any

mandatory contributory scheme or saving scheme is not going to be palatable to the community, especially taken into account the fact that in Hong Kong, the community has already contributed to half of the health care costs through out-of-pocket or private insurance in the primary care market and, at the same time, they are enjoying a highly subsidized but efficient and well trusted public hospital system. In public administration, a balance has always to be struck between the theoretical rationality and political reality.

Figure 12

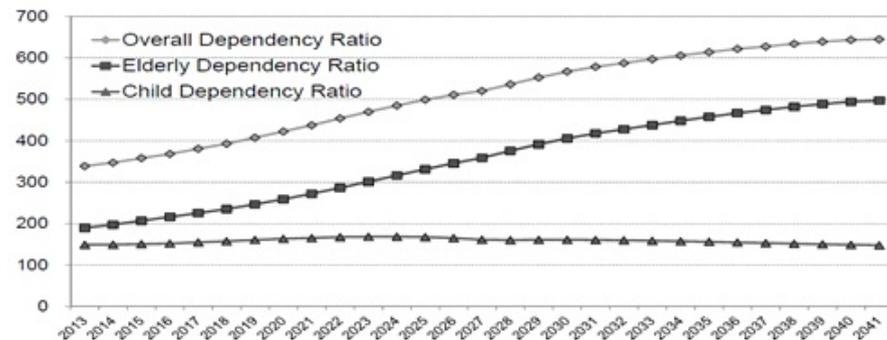
### (1) Population Pyramid



Source: Hong Kong Population Projections 2012 -2041. Census and Statistics Department

Figure 13

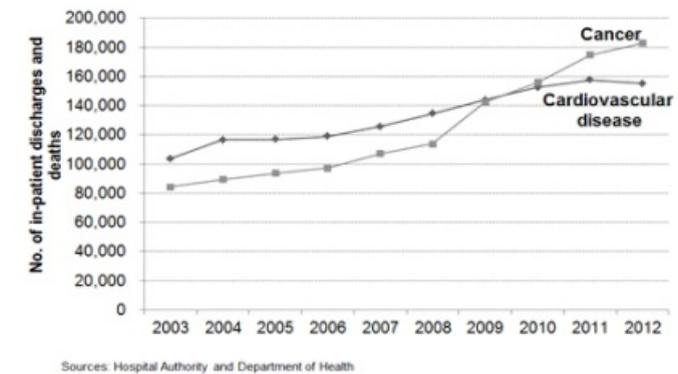
### (2) Dependency Ratio



Source: Hong Kong Population Projections 2012-2041. Census and Statistics Department  
 Child Dependency Ratio - number of persons aged under 15 per 1,000 persons aged between 15 and 64  
 Elderly Dependency Ratio - number of persons aged 65 or above per 1,000 persons aged between 15 and 64

Figure 14

### Increasing trend of age-related diseases (1)



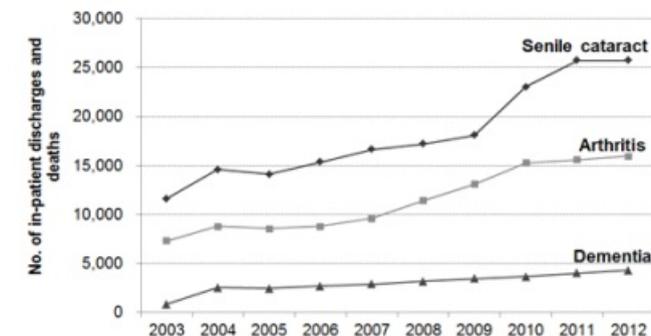
Sources: Hospital Authority and Department of Health

Simply put, to tackle the challenge of an ageing society, we cannot simply look for or rely on a fiscal solution. With a shrinking population — and at least a shrinking economically active stratum of the population — in the horizon, we have to look for solutions that would optimize the use of existing and any additional resources. After all, we are facing an unconventional challenge that has not been seen by humankind in its history and we need innovative thinking.

The main challenges to the public health system in the coming years are the age-related diseases (Figure 14 and 15). The inexorable rise of demand for treatment and surgical procedures means that even with the best will in the world and unlimited amount of financial resources, it would be impossible to meet the demand given the natural limitation of physical land and manpower constraints (land to build new hospital facilities and training of health care professionals). Money alone cannot solve the problem. We must look for other solutions in parallel, especially advancement in medical technology and new service delivery models.

Figure 15

### Increasing trend of age-related diseases (2)



Sources: Hospital Authority and Department of Health

Procedural re-engineering, such as concentrating cataract operations in a few dedicated cataract centers, has produced a multiple increase in capacity and a reduction of waiting time from years to months. This demonstrates that we have to move away from the conventional linear approach to capacity expansion, where in order to double the capacity we need to double the amount of resources financial, physical and manpower resources alike. Such an approach will be unsustainable in dealing with the exponential growth of demand for health care service in an ageing society. We have to look for solutions that have a significant multiplying effect so that, with the same amount of resources or same amount of additional resources, it can produce a multiple increase in efficiency and service capacity. We need to take a proactive approach and identify the most prevalent age-related diseases such as joint replacement orthopedic surgery, prostate-related diseases, cancers, and dementia, etc. and start looking for such solutions.

Another top priority area that we have to look at is integrated elderly care service. The medical wards are the main pressure points in public hospital services (see Figure 16 and 17).

Figure 16

## Utilization of acute medical wards (1)

(Annual occupancy from 2003-04 to 2013-14)

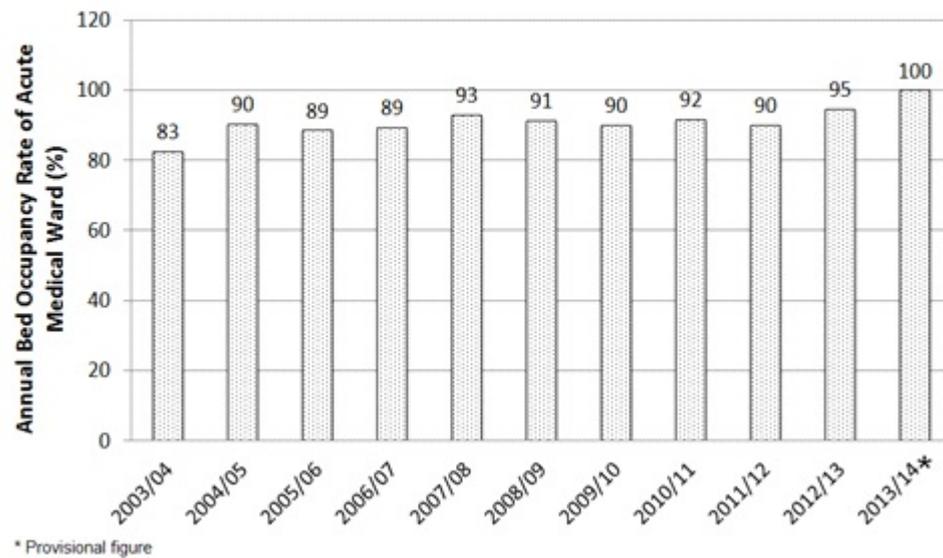
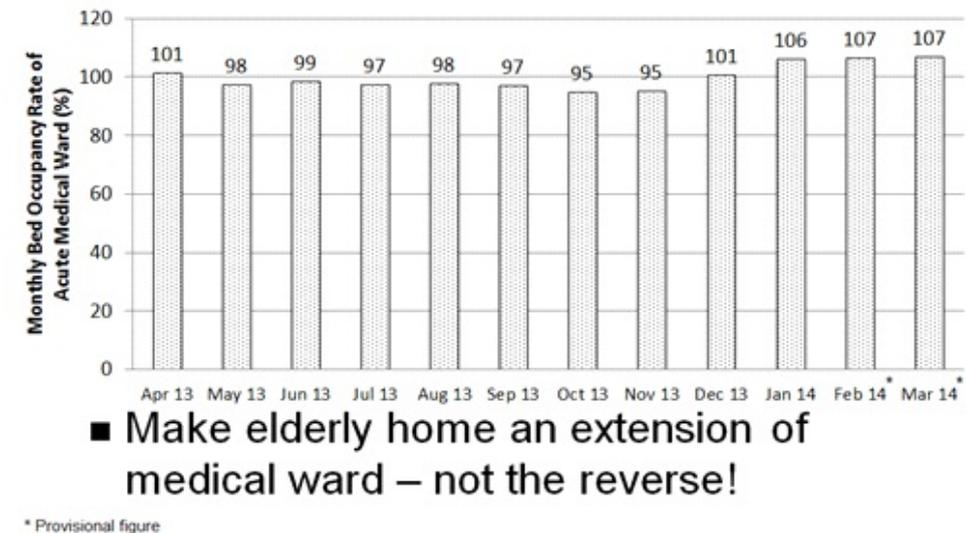


Figure 17

## Utilization of acute medical wards (2)

(Monthly occupancy in 2013-14)



They are operating at nearly full capacity during most of time of the year and are being utilized at over 100% capacity during influenza peaks each year. The beds are mostly taken up by elderly people, many of whom stay in elderly home and are suffering from chronic illness and are more prone to influenza infection and weather change. We need to make better use of elderly home facilities and promote cooperation and collaboration between hospitals and elderly homes, so that through better facilities, resources and medical support, we can reduce the number of elderly admission to hospital. It will not only help relieve congestion in public hospitals, it will also avoid shuffling elderly between hospitals and elderly homes with all the associated public health concerns and risks and discomfort and psychological shock to the elderly. To tackle the challenge of an ageing population, we need to mobilize community support and resources, especially in handling those diseases where care is more effective than treatment such as dementia, so that we can sustain an affordable health care system in the face of the challenge of an ageing society.

The community as a whole has to consider the concept of home-based care, neighbourhood support and community care, and reviving the tradition of itinerant doctors (where the doctor goes to visit a patient instead of moving the elderly between home, elderly home and hospital) and end-of-life care. We should not only focus on extending life (where hospitals are good at) but also maintaining the quality of life of elderly (home-based care).

### **Conclusion**

Ageing presents society with a multitude of challenges. The exponential growth of the elderly population means that the conventional linear model of proportional increase in resources to meet increase in demand is unsustainable and unaffordable to the economy. Around the world, countries and economies are looking for new solutions. With the diverse social, economic, and political situation; no single solution can work for all. Indeed, given the multiple challenges of ageing to a society, there is no "silver bullet" that can solve all problems. We need a multi-pronged approach, taking into account our unique social, historical and cultural environment. The HPS is not meant to be the "single" solution to solve the health care financing problem. Its objective is to build on the distinct feature of the Hong Kong health care system where we have the co-existence of vibrant, successful, and well-trust public and private medical sectors. The objective of the voluntary HPS, through better regulation of the private health insurance market and more transparency of private hospital charges, is to provide incentive and to encourage and facilitate more people who are willing and can afford it to take up private health insurance, and those who have already bought health insurance to make better and full use of their policies, so as to rebalance the public and private medical sector and optimize the utilization of resources of both sectors. Through better use of the slack capacity in the private health care sector, it will be a more cost effective solution to address the general and acute shortage of health care professional resources, which we are all facing around the world. We have to continue to look for solutions to address the long-term health care financing problem. Money alone cannot solve the problem, especially given the rising dependency ratio associated with an ageing community. We need to have new thinking and look for solutions, other than fiscal solutions, to tackle the challenges. The way going forward has to be reviving the traditional Chinese virtue of family, community and neighbourhood support, and promoting the concept of ageing at home and home-based care. We should not be clouded by the financial challenge of an ageing population and focus only on maintaining and extending life, we need to focus equally, if not more, on maintaining the quality of life of ageing.