



中華人民共和國香港特別行政區政府總部衛生福利及食物局
Health, Welfare and Food Bureau
Government Secretariat, Government of the Hong Kong Special Administrative Region
The People's Republic of China

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Ms Mary So
Chief Council Secretary
Legislative Council Secretariat
3rd floor, Citibank Tower
3 Garden Road, Hong Kong

Dear Ms So,

At the meeting of the Panel on Health Services held on 19 March 2008, Members requested the Administration to provide information on how much of the projected increase in Hong Kong's future public healthcare expenditure from \$37.8 billion in 2004 to \$186.6 billion in 2033 was attributed to an ageing population. The relevant information is provided below.

The projected figures on future public healthcare expenditure cited in the Healthcare Reform Consultation Document are based on the Health Expenditure Projection Study commissioned by the Food and Health Bureau and conducted by the Department of Community Medicine and School of Public Health, Li Ka Shing Faculty of Medicine, The University of Hong Kong. A synopsis of the study including its methodology and findings was published on the Internet at the same time as the Consultation Document (see http://www.fhb.gov.hk/beStrong/files/consultation/projecthealthexp_eng.pdf).

The health expenditure projection was conducted based on an adaptation of the United Kingdom Treasury's Wanless projection method¹. This method required health expenditure to be broken down by age, gender, unit cost, and activity level (i.e. volume in terms of healthcare utilization). The projection took into account medical inflation and changes in the utilization of healthcare services as a result of demographic changes.

The basic inputs and assumptions adopted for the projection are as follows:

- (a) The change in population structure, including population growth and population ageing, up to year 2033 was based on Population Projections 2004-2033 published by the Census and Statistics Department.

¹ Wanless D. Securing our Future Health: Taking a Long-Term View - Final Report. The Public Enquiry Unit, HM Treasury, UK Government, 2002. Available at <http://www.hm-treasury.gov.uk/wanless>

- (b) For activity level, it was assumed that age-gender-specific utilization pattern of healthcare and the standard of care equals the baseline level (that is at year 2004 level) plus an excess growth in per capita volume of services delivered (see sub-paragraph (d) below).
- (c) Projection of unit costs took into consideration per capita Gross Domestic Product (GDP) growth and medical price increase (e.g. due to the adoption of ever advancing technology) (see sub-paragraph (d) below). Working assumptions on GDP growth from 2006 to 2033 were provided by the Government Economist for the purpose of the study.
- (d) Rising medical costs due to advances in medical technology and delivery of healthcare keeping up with such advances is known as medical inflation. Net medical inflation refers to medical inflation over and above per capita GDP growth and comprises two components:
 - (i) medical price increase (paragraph (c) above), which incorporates the impact of certain key drivers of health expenditure such as the adoption of ever advancing technology and potential productivity gains, and
 - (ii) per capita volume growth (paragraph (b) above)².

With reference to international experience and past trend of Hong Kong's health expenditure data, net medical inflation was assumed to be 0.8% and 1.6% correspondingly for public health expenditure and private health expenditure, plus a 0.2% per capita volume growth per year.

The major factors contributing to the increase in health expenditure can be categorized into population ageing, population growth, net medical inflation and per capita GDP growth. Table 1 attached summarized the projected annualised growth rate by the contributing factors, over and above per capita GDP growth, for public health expenditure from 2004 to 2033. Based on the working assumptions on GDP growth provided by the Government Economist, the annualized growth rate of GDP is 2.7% from 2004 to 2033, and the baseline public health expenditure will increase by \$71 billion due to per capita GDP growth over the same period.

The projection model caters for the effects of all four factors simultaneously; and thus the increase in dollar amount of the health expenditure cannot be calculated for each factor in isolation under the model. The increase in dollar amount of public health expenditure provided is thus an estimation based on the proportion of the growth factors. The amount of increase in public health expenditure (in 2005 price) due to the three factors of population ageing, population growth and net medical inflation, plus the increase in the baseline public health expenditure due to per capita GDP growth, account for the projected increase in public health expenditure from \$38 billion (2.9% of GDP) in 2004 to \$187 billion (5.5% of GDP) in 2033.

Yours sincerely,

A handwritten signature in cursive script that reads "Christine".

(Miss Christine Au)
for Secretary for Food and Health

Table 1. Annualised growth rate and estimated increase by contributing factors for public health expenditure from 2004 to 2033

Contributing factor	Annualised growth rate due to the factor	Percentage share among contributing factors	Increase in public health expenditure due to the factor (\$billion in 2005 price)
Population ageing	1.2%	40%	31
Population growth	0.7%	25%	19
Net medical inflation	1.0%	35%	27
All	3.0%	100%	77

Note: The slight discrepancy between the sum of individual items and the total as shown in the table is due to rounding.