Synopsis of Healthcare Financing Studies

Out-of-Pocket Payments

Objective

This study assesses the potential financing implications of public fee increase on healthcare expenditure. The objectives of the study are (i) to project the public and private health expenditures in Hong Kong up to year 2033 with the assumption that public user fees will be increased, and (ii) to assess the impact of fees increase on the magnitude of extra funding required to meet future public health expenditure. The Food and Health Bureau has commissioned the Department of Community Medicine and School of Public Health, Li Ka Shing Faculty of Medicine, The University of Hong Kong to conduct this study.

Methodology

2. This study has assumed, for methodological parsimony, that all users will pay the specified user fee, and that the cost-recovery rate is feasible, without delving into the confounding issue of affordability. This means that the study has not taken into account (1) revenue foregone under the current fee waiver mechanism, (2) the likelihood that, other conditions being constant, more people may require fee waiver as a result of fee increase, and (3) the safety net mechanism may consequently be enhanced to provide added protection to ensure that no one would be denied adequate healthcare through lack of means. The study first examines the effect of public fees increase on the utilization of public health services using regression models based on data from Thematic Household Surveys conducted in 2002 and 2005, and the corresponding changes in public and private market share. The assumption is that the cost recovery rate of public in-patient fees will increase from the present average of 3% to 10%, 20%, 30% or 40%, and public out-patient fees from the present average of 15% to 20%, 30% or 40%. The increments are spread over 15 years (from 2005 to 2019) and thereafter keep at a constant level. The price effect has been taken into consideration such that there will be a shift of utilization from public to private sector and also slight decrease in the overall utilization. Table 1 shows the public fee schedule for in-patient, general out-patient (GOP), specialist out-patient (SOP), and Accident and Emergency (A&E) services at different cost recovery rates.

Table 1. Public fee schedule at different cost recovery rates

Public Healthcare Services	User Fee	Cost Recovery Rates	User Fees at Other Cost Recovery Rates			
	2004/05		10%	20%	30%	40%
In-patient						
General Ward	$100	3%	$331	$662	$993	$1,324
Out-patient						
GOP	$45	18%	NA	$51	$78	$104
SOP	$60/$100*	9%/14%	NA	$140	$222	$296
A&E	$100	14%	NA	$140	$216	$288

* First and follow-up consultations are charged at $100 and $60 per visit respectively.

3. Then, public and private health expenditures are projected based on an adaptation of the United Kingdom Treasury's Wanless projection method, which takes into account medical inflation and changes in the utilization of health services as a result of demographic changes. For the purpose of estimating the extra funding required to meet the projected public health expenditures, it is assumed that government budget on health will be set at 17% of total government budget during the projected period, and that the total government budget will be at 20% GDP.

Impact of Fee Increase on Service Utilization

4. It is estimated that if public in-patient fees are increased to 20% cost recovery, the respective market share of public and private in-patient services will change significantly from 95% and 5% in 2004 to 80% and 20% in 2019 through 2033 (Table 2). However, there will be insignificant changes in the public-private market share for out-patient services.

Table 2. Public-private market share at different public cost recovery rates

	In 2004	In 2019-2033 at different public cost recovery rates			
		10%	20%	30%	40%
In-patient					
Public	95%	85%	80%	77%	76%
Private	5%	15%	20%	23%	24%
Out-patient					
Public	30%	-	28%	27%	26%
Private	70%	-	72%	73%	74%

Projected Health Expenditure

5. Due to the changes in market share, future public health expenditure will decrease when user fees are increased. If public in-patient fees are increased to 20% cost recovery, the projected public health expenditure in 2030 will be $131.6 billion (4.1% GDP). This is significantly lower when compared to the levels of $161.9 billion (5.1% GDP) without a fee increase and $143.6 billion (4.5% GDP) at 10% in-patient cost recovery rate (Table 3). The projection results for the various cost recovery rates are graphically illustrated in Figures 1 – 4.

Table 3. Projected health expenditure with and without considering public fees increase

In constant 2005 prices HK$ Billion

	2004*	2010	2015	2020	2025	2030
Cost recovery: In-patient 3%, Out-patient 15% (No fees increase)						
Public health expenditure	37.8	58.5	77.7	100.1	127.5	161.9
Private health expenditure	30.1	45.7	59.4	74.6	92.3	114.0
Total Health Expenditure (THE)	67.8	104.1	137.2	174.7	219.8	275.9
Public health expenditure per GDP	2.9%	3.3%	3.7%	4.1%	4.5%	5.1%
Private health expenditure per GDP	2.3%	2.6%	2.8%	3.0%	3.3%	3.6%
THE per GDP	5.3%	5.9%	6.5%	7.1%	7.8%	8.7%

Table 3 - continued

In constant 2005 prices HK$ Billion

	2004*	2010	2015	2020	2025	2030
Cost recovery: In-patient 10%, Out-patient 20%						
Public health expenditure	37.8	56.2	71.9	89.2	113.4	143.6
Private health expenditure	30.1	50.1	72.3	100.8	125.5	157.3
Total Health Expenditure (THE)	67.8	106.3	144.2	190.0	238.9	300.9
Public health expenditure per GDP	2.9%	3.2%	3.4%	3.6%	4.0%	4.5%
Private health expenditure per GDP	2.3%	2.8%	3.4%	4.1%	4.5%	4.9%
THE per GDP	5.3%	6.0%	6.8%	7.7%	8.5%	9.4%
Cost recovery: In-patient 20%, Out-patient 20%						
Public health expenditure	37.8	55.1	68.6	82.1	104.1	131.6
Private health expenditure	30.1	51.7	78.5	115.8	144.7	182.2
Total Health Expenditure (THE)	67.8	106.8	147.0	197.9	248.8	313.8
Public health expenditure per GDP	2.9%	3.1%	3.2%	3.3%	3.7%	4.1%
Private health expenditure per GDP	2.3%	2.9%	3.7%	4.7%	5.1%	5.7%
THE per GDP	5.3%	6.0%	6.9%	8.0%	8.8%	9.8%
Cost recovery: In-patient 30%, Out-patient 30%						
Public health expenditure	37.8	53.8	64.8	74.0	93.7	118.0
Private health expenditure	30.1	52.9	83.1	127.5	159.6	201.6
Total Health Expenditure (THE)	67.8	106.7	147.9	201.5	253.2	319.6
Public health expenditure per GDP	2.9%	3.0%	3.1%	3.0%	3.3%	3.7%
Private health expenditure per GDP	2.3%	3.0%	3.9%	5.2%	5.7%	6.3%
THE per GDP	5.3%	6.0%	7.0%	8.2%	9.0%	10.0%
Cost recovery: In-patient 40%, Out-patient 40%						
Public health expenditure	37.8	53.1	62.5	67.9	85.8	107.9
Private health expenditure	30.1	53.7	86.4	136.7	171.4	217.0
Total Health Expenditure (THE)	67.8	106.8	148.9	204.7	257.2	324.8
Public health expenditure per GDP	2.9%	3.0%	2.9%	2.8%	3.0%	3.4%
Private health expenditure per GDP	2.3%	3.0%	4.1%	5.6%	6.1%	6.8%
THE per GDP	5.3%	6.0%	7.0%	8.3%	9.1%	10.2%

* Actual figures

Figure 1. Projected health expenditure with and without considering public fees increase (increased cost recovery: in-patient 10%, out-patient 20%)

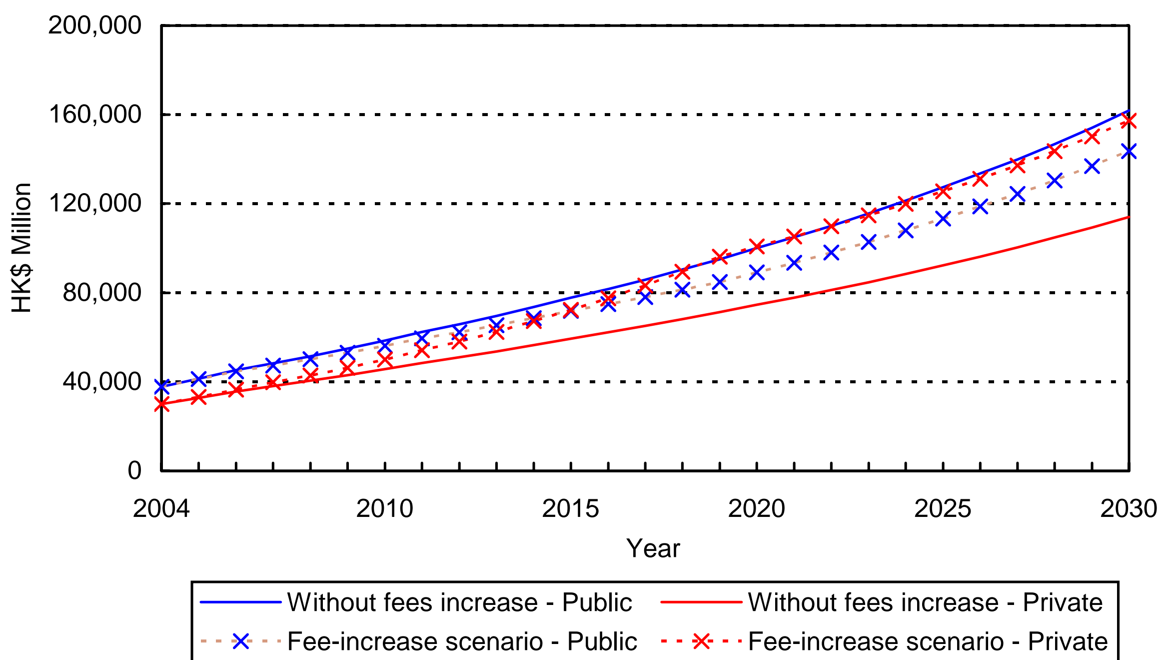


Figure 2. Projected health expenditure with and without considering public fees increase (increased cost recovery: 20% for both in-patient and out-patient)

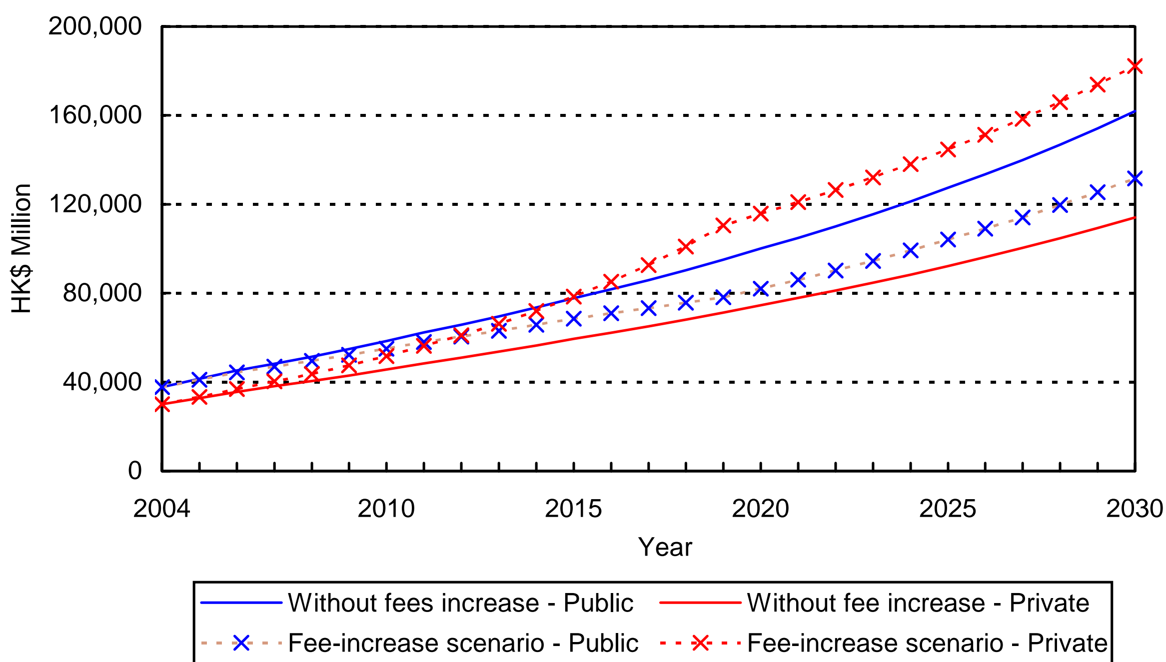


Figure 3. Projected health expenditure with and without considering public fees increase (increased cost recovery: 30% for both in-patient and out-patient)

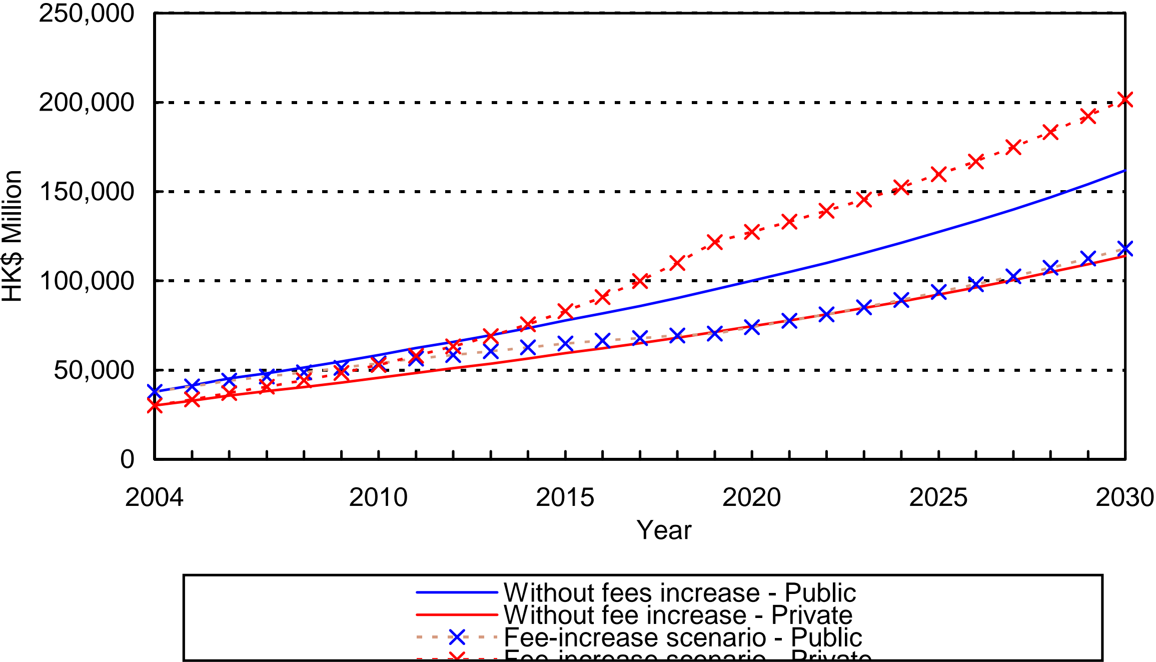
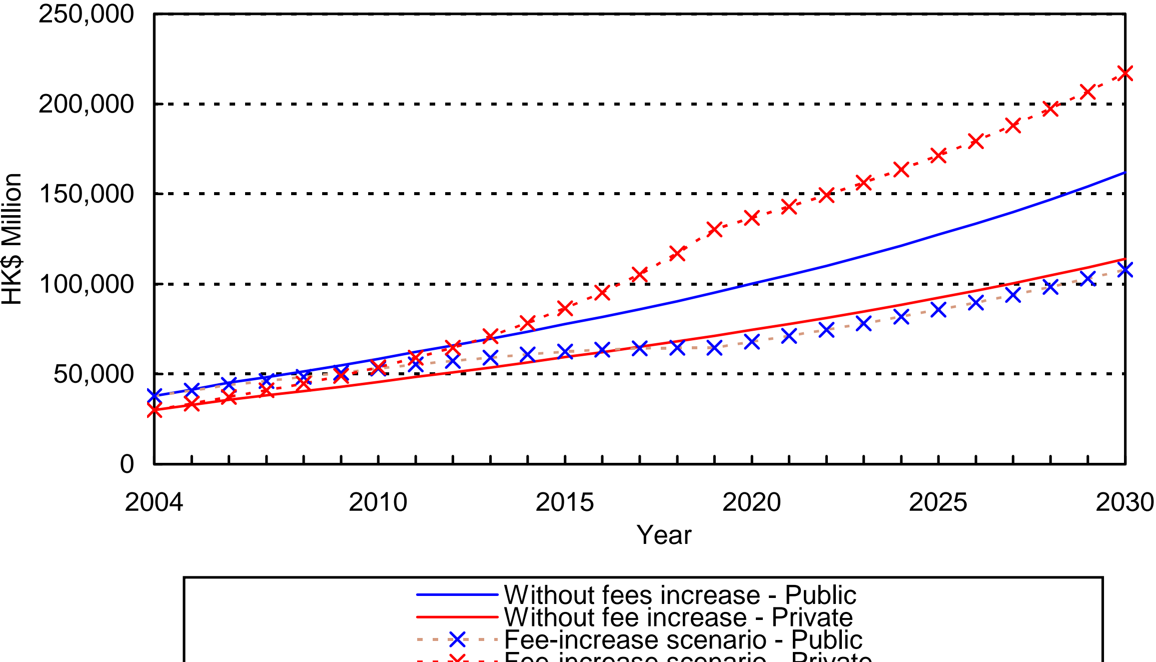


Figure 4. Projected health expenditure with and without considering public fees increase (increased cost recovery: 40% for both in-patient and out-patient)



Extra Funding Required for Public Health Expenditure

6. At present, government budget on health makes up about 14.7% of total government budget. This study has assumed that government budget on health will be increased to 17% of total government budget. The difference between government budget on health and the projected public health expenditure as estimated under this scenario, with and without considering fees increase, are presented in Table 4 and graphically illustrated in Figures 5 – 8.

7. If user fees were not increased and if government budget on health were fixed at 17% of total government budget, in 2030 we would be short of $53.5 billion. However, if the fees were increased to 20% cost recovery, the corresponding level of extra funding required for public health expenditure in 2030 would be reduced to $23.3 billion. If government budget on health is at 17% of total government budget, coupled with an increase in public user fees (cost recovery of 20% for in-patient and 20% for out-patient), we would be able to meet our needs up to year 2021. Without a fee increase, we would only be able to meet our needs up to year 2012.

Table 4. Extra funding required to meet projected public health expenditure when government budget on health is set at 17% of total government budget

	In constant 2005 prices HK$ Billion (% of GDP)					
Cost recovery	**2010**	**2012**	**2015**	**2020**	**2025**	**2030**
In-patient 3%, Out-patient 15%	-	*0.8*	5.7	16.4	31.8	53.5
(No fees increase)	-	*	0.3%	0.7%	1.1%	1.7%
In-patient 10%, Out-patient 20%	-	-	*0.6*	5.5	17.7	35.3
	-	-	*	0.2%	0.6%	1.1%
In-patient 20%, Out-patient 20%	-	-	-	*0.1*	8.5	23.3
	-	-	-	*	0.3%	0.7%
In-patient 30%, Out-patient 30%	-	-	-	-	*2.0*	9.7
	-	-	-	-	*0.1%*	0.3%
In-patient 40%, Out-patient 40%	-	-	-	-	-	-
	-	-	-	-	-	-

* Figure less than 0.1%

Figure 5. Extra funding required to meet projected public health expenditure when government budget on health is set at 17% of total government budget, with and without considering fees increase (increased cost recovery: 10% for in-patient, 20% for out-patient)

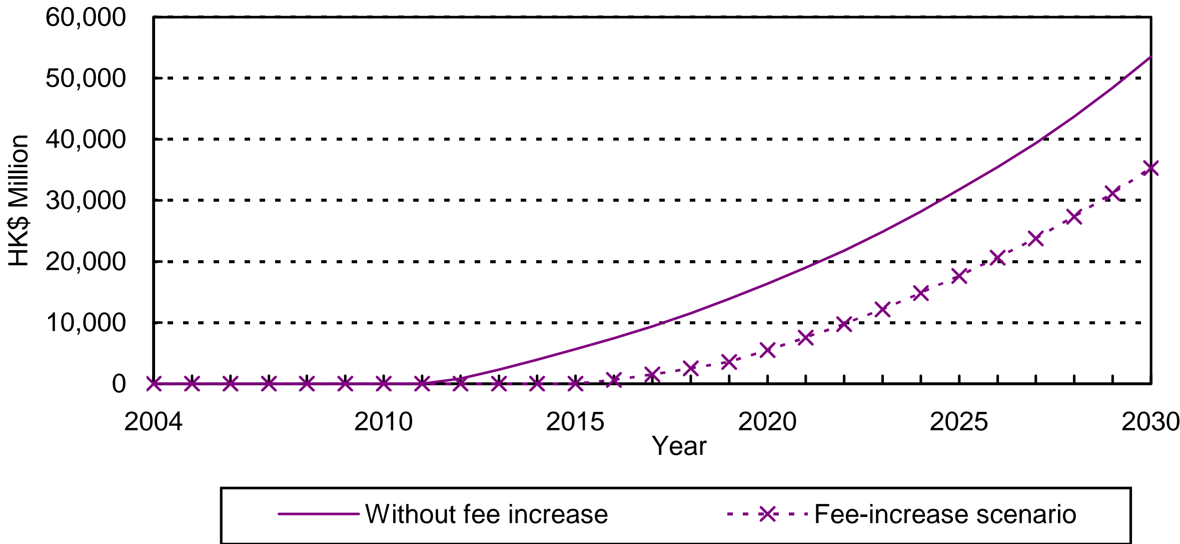


Figure 6. Extra funding required to meet projected public health expenditure when government budget on health is set at 17% of total government budget, with and without considering fees increase (increased cost recovery: 20% for both in-patient and out-patient)

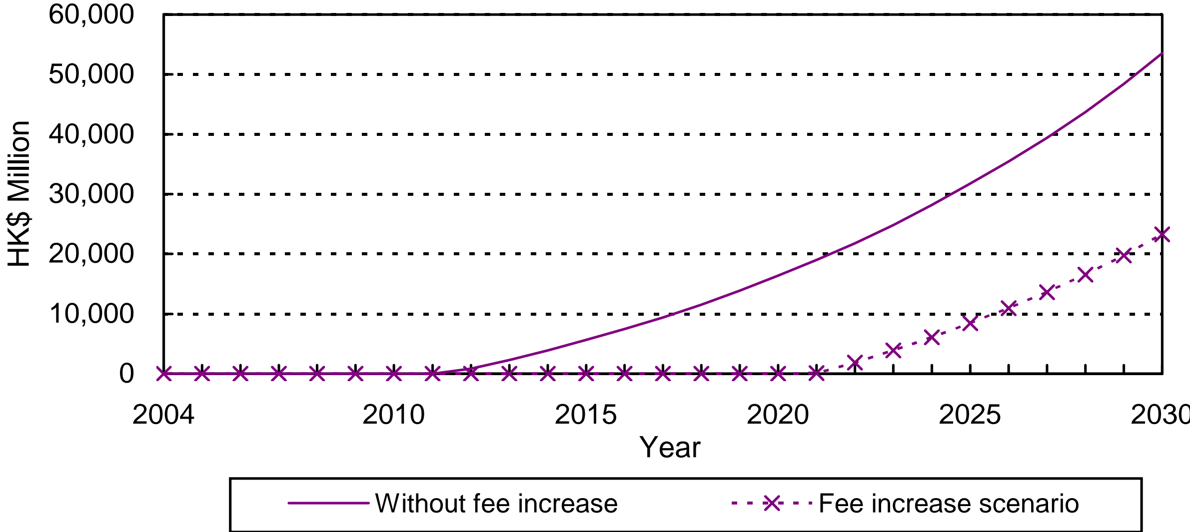


Figure 7. Extra funding required to meet projected public health expenditure when government budget on health is set at 17% of total government budget, with and without considering fees increase (increased cost recovery: 30% for both in-patient and out-patient)

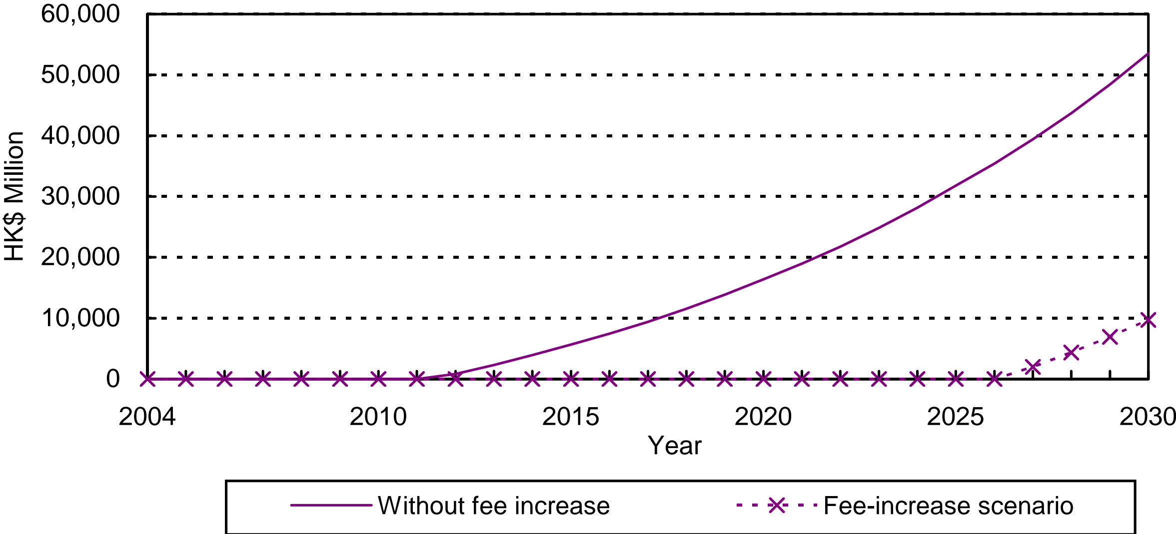
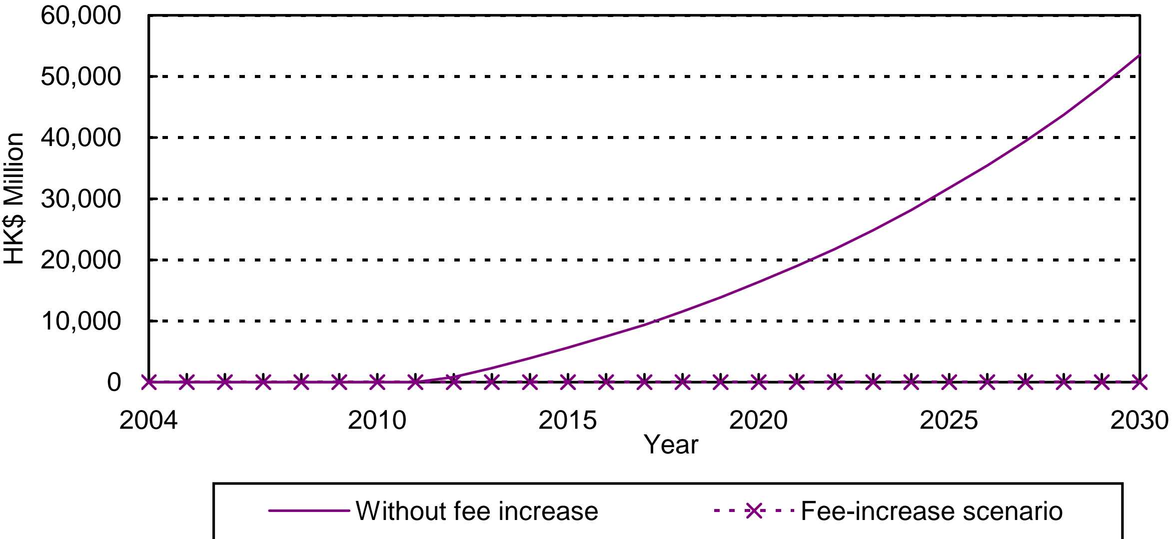


Figure 8. Extra funding required to meet projected public health expenditure when government budget on health is set at 17% of total government budget, with and without considering fees increase (increased cost recovery: 40% for both in-patient and out-patient)



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