

# The Determinants of Post-Pandemic Medical Inflation: An Analysis of Private Insurance Claims Data in Hong Kong

疫情後醫療通脹的決定因素：  
香港私營醫療保險索償數據的分析

28 April 2026

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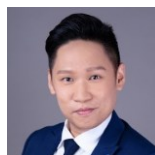
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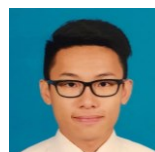
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# Research Objectives

## 研究目的

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To identify the key post-pandemic drivers of escalating inpatient and outpatient medical expenses in Hong Kong using private insurance claims data.

分析後疫情時期住院及門診醫療費用上升的主要因素

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To assess the relative impact of demographic, clinical, and systemic factors on medical expenses.

評估人口、健康及制度性因素對醫療支出的影響。

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To project the implications of rising healthcare expenses for employers, individual consumers, and the public sector.

分析醫療支出上升對僱主、個人及公共部門的影響。

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To provide actionable insights for policymakers, insurers, employers, and healthcare providers to mitigate expenditure escalation.

向政策制定者及業界提供具體而可行的建議。

# Data Source 數據來源



The analysis draws on two datasets provided by the Hong Kong Federation of Insurers (HKFI), covering private health insurance claims for the calendar years 2019 (pre-pandemic) and 2023 (post-pandemic).

由香港保險業聯會提供的 2019 年及 2023 年私營醫療保險索償數據。



The scope of analysis in this study is limited to cases identified as non-secondary claims.

分析範圍僅限於非第二索償個案。



The total number of claims, including both inpatient and outpatient claims, for years 2019 and 2023 are 9,798,876 and 10,284,581 respectively.

索償總宗數：2019 年約 980 萬宗；2023 年約 1,028 萬宗。

# Methodology 研究方法

**Descriptive statistics:**  
描述性統計:

Averages, medians, standard deviations, and quartiles  
包括平均數、中位數及四分位數。

**Comparative analysis:**  
比較分析：

Pair comparison *t*-test, Chi-squared Test and ANOVA  
透過 *t* 檢驗、卡方檢驗及變異數分析進行比較。

**Pre vs Post COVID analysis**  
疫前與疫後  
比較分析

Comparison of 2019 and 2023 data to identify changes in utilization and cost patterns.  
比較疫情前(2019年)與疫情後(2023年)的使用及成本變化。

**Top ten illness analysis**  
十大疾病分析

Identification of the most frequent and costly conditions / procedures.  
識別索償宗數及費用最高的十大疾病。

# Summary of Bill Average and Total Bill Amount in 2019 and 2023

## 2019 年與 2023 年平均帳單費用及帳單總額的比較摘要

	2019	2023	% change 百分比變化
<b>Bill Average</b>			
Inpatient Bill average (住院平均帳單費用)	\$24,092	\$25,225	↑ 5%
Number of valid claims (索償宗數)	333,053	558,292	↑68%
<b>Outpatient Bill average (門診平均帳單費用)</b>	\$463	\$583	↑28%
Number of valid claims (索償宗數)	6,334,740	6,131,996	↓ 3%
<b>Total Bill Amount</b>			
Total Bill Amount for Inpatient Claims (住院索償總額)	\$8.02 billion	\$14.06 billion	↑75%
Total Bill Amount for Outpatient Claims (門診索償總額)	\$2.97 billion	\$3.67 billion	↑24%
Overall Total (索償總額)	\$10.99 billion	\$17.73 billion	↑61%

# Overall Trend (2019–2023)

## 整體發展趨勢

Total claims 私營醫療保險總支出

↑ 61%

Inpatient bill 住院支出

↑ 76%

Outpatient bill 門診支出

↑ 24%

Main driver: inpatient frequency surge

主要推動因素:為住院服務使用率大幅上升。



# INPATIENT 住院

# Inpatient Overview

## 住院概覽

Bill average

住院平均帳單費用

↑ 5%

Claim frequency

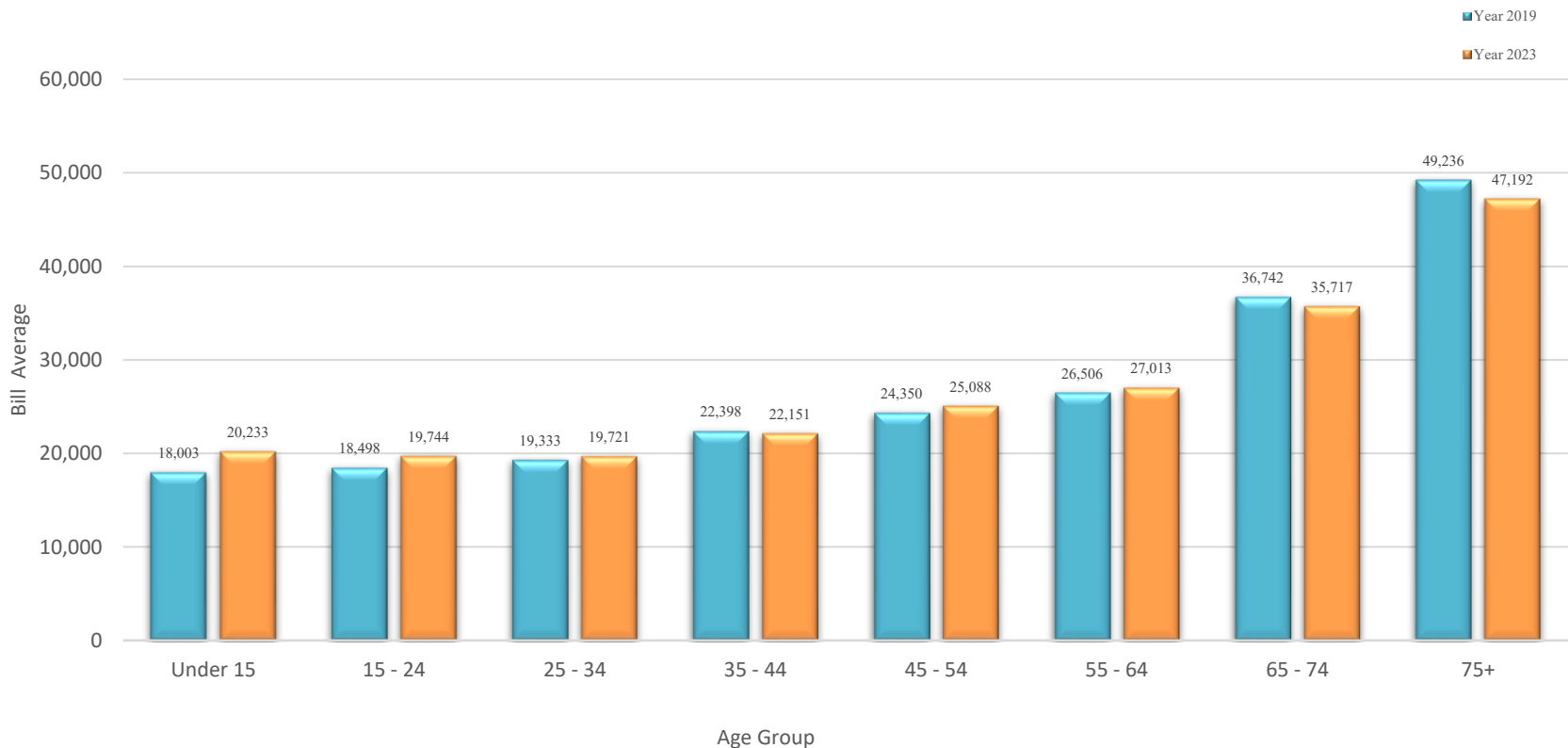
住院索償宗數

↑ 68%

# Comparison of Bill average by Age Group

## 各年齡群的住院平均帳單費用

Comparison of Bill Average by Age Group in 2019 and 2023



# Inpatient bills under different genders for 2023

## 2023年不同性別的住院帳單

Gender 性別	Bill average 平均帳單費用	% chg. from 2019 百分比變化	Number of claims 索償宗數	% chg. from 2019 百分比變化
Male	\$26,286	↑ 6%	241,791	↑ 66%
Female	\$24,377	↑ 4%	314,990	↑ 77%

# Inpatient bill average under different plan types for 2023

## 2023年不同計劃的住院平均帳單費用

Policy 計劃	Bill average 平均帳單費用
Panel providers 網絡醫療計劃	\$16,146
Non-panel providers 非網絡醫療計劃	\$28,557
Group plan 團體醫療計劃	\$19,077
Individual plan 個人醫療計劃	\$31,194
(Individual) VHIS plan 個人自願醫保計劃	\$29,344
(Individual) Non-VHIS plan 個人非自願醫保計劃	\$32,181

# Inpatient average bill under different plans by age groups for 2023

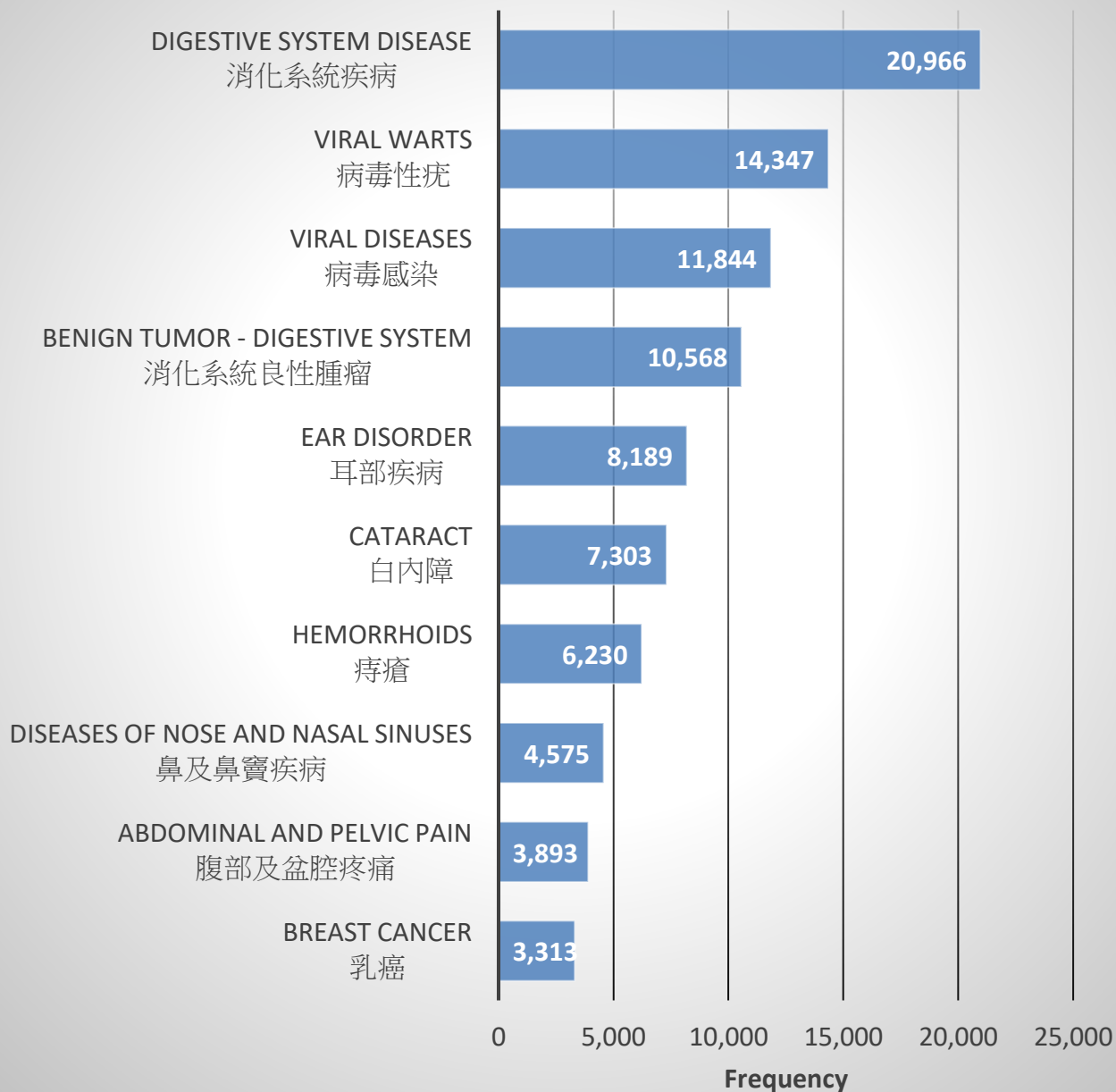
## 2023年各年齡群不同計劃的住院平均帳單費用

Age Group 年齡群	Panel Providers 網絡醫療	Non-panel Providers 非網絡醫療	Group Plan 團體醫療	Individual plan 個人醫療	Non-VHIS 非自願醫保	VHIS 自願醫保
Under 15	\$16,702	\$20,687	\$16,876	\$23,251	\$24,573	\$21,982
15 – 24	\$11,587	\$23,523	\$15,488	\$23,878	\$24,194	\$23,023
25 – 34	\$11,385	\$22,591	\$15,668	\$24,925	\$24,516	\$24,596
35 – 44	\$14,381	\$24,824	\$18,203	\$27,825	\$27,957	\$27,198
45 – 54	\$16,683	\$28,068	\$19,929	\$31,916	\$32,270	\$30,702
55 – 64	\$17,915	\$30,780	\$20,490	\$32,885	\$33,273	\$31,684
65 – 74	\$19,798	\$43,759	\$28,289	\$37,019	\$36,890	\$36,711
75+	\$24,960	\$56,337	\$55,316	\$46,389	\$47,084	\$44,128

# Most Frequent claims of Top 10 illnesses in 2023 (private hospitals)

## 2023年索償宗數最高的十大疾病 (私家醫院)

### Top 10 Most Frequent claims of top illnesses





# OUTPATIENT 門診

# Outpatient overview

## 門診概覽

Bill average  
平均帳單費用  
↑ 28%

Claim frequency 索償宗數  
↓ 3%

# Outpatient benefits in 2023

## 2023年門診項目

Category of Outpatient benefits 門診項目	Bill average 平均帳單費用	% chg. from 2019 百分比變化	Number of claims 索償宗數	% chg. from 2019 百分比變化
Generalists 普通科	\$387	↑ 17%	2,900,517	↓ 19%
Chinese Medicine Practitioner 中醫	\$480	↑ 17%	1,693,971	↑ 39%
Specialists 專科	\$925	↑ 13%	764,571	↑ 13%
X-Ray / Laboratory X光及化驗	\$1,372	↑ 68%	330,662	↓ 13%
Dental 牙科	\$1,350	↑ 27%	237,688	↓ 8%
Physiotherapy 物理治療	\$646	↑ 24%	348,166	↑ 41%
Chiropractic 脊醫	\$875	↑ 20%	36,732	↑ 66%

# Outpatient Expenses Key drivers

## 門診支出的主要驅動因素

Generalists 普通科

↓ 19%

CMP 中醫

↑ 39%

Physiotherapy 物理治療

↑ 41%

X-ray/Lab bill X 光及化驗

↑ 68%

## Outpatient average bill under different plans for 2019 and 2023 2019年及2023年不同計劃的門診平均帳單費用

Policy 計劃	Year 2019	Year 2023
Panel providers 網絡醫療計劃	\$283	\$356
Non-panel providers 非網絡醫療計劃	\$610	\$718
Individual plan 個人醫療計劃	\$2,022	\$1,191
Group plan 團體醫療計劃	\$467	\$594

# Outpatient average bill under different policies by age groups for 2023

## 2023年各年齡群不同計劃的門診平均帳單費用

Age Group 年齡群	Panel Providers 網絡醫療	Non-panel Providers 非網絡醫療	Group Plan 團體醫療計劃	Individual Plan 個人醫療計劃
Under 15	\$313	\$710	\$601	\$1,648
15 – 24	\$296	\$749	\$566	\$1,115
25 – 34	\$295	\$662	\$517	\$1,004
35 – 44	\$336	\$707	\$588	\$1,024
45 – 54	\$399	\$723	\$617	\$1,160
55 – 64	\$424	\$759	\$640	\$1,111
65 – 74	\$628	\$993	\$839	\$1,373
75+	\$978	\$1,091	\$1,000	\$1,414



**SUMMARY**

**總結**

# Summary - Overall Spending

## 總結：整體醫療支出情況

### Spending Growth Overview (醫療支出增長概況)

Private health insurance spending rose 61% from 2019 to 2023 (~15% per year) driven by inpatient claims increases, especially from day procedures.

私營醫療保險支出於 2019 至 2023 年間上升 61%（約每年 15%），增長主要來自住院索償，尤其是日間程序。

# Summary – Inpatient drivers

## 總結：住院支出驅動因素

### **Inpatient Claim Frequency Rise (住院索償次數上升)**

Inpatient claims frequency increased 68% with some benefit categories exceeding 100%.

住院索償次數上升 68%，而個別保障類別的索償增幅更高於 100%。

### **Room and Board Claims Growth (病房及膳食索償)**

Room and Board claims increased by only 24%, suggesting rise largely due to day procedures.

病房及膳食索償僅增加 24%，反映整體升幅主要來自日間程序。

# Summary – Outpatient Trends and Cost Patterns

## 總結：門診服務趨勢與成本模式

### Declining Generalist Consultations (普通科門診下降)

Generalist outpatient claims decreased by 19% from 2019.

普通科門診的索償次數較2019年減少 19%。

### Rise in Alternative Therapies (另類療法使用上升)

Chinese Medicine, Physiotherapy, and Chiropractic visits surged by 39%, 41%, and 66%, respectively, with higher claim costs.

中醫、物理治療及脊醫就診次數分別上升 39%、41% 及 66%，且索償成本較高。

### Increased Diagnostic Testing (診斷檢查使用量上升)

X-Ray and Laboratory claims rose 73%, surpassing overall outpatient bill increases of 28%.

X 光及化驗索償大增 73%，明顯高於門診整體帳單 28% 的升幅。

# Summary - Top Conditions and Utilization Behavior

## 總結：主要住院疾病及醫療使用行為

### Top Inpatient Conditions (主要住院疾病)

Digestive System Diseases and Viral Warts were leading inpatient claim conditions in 2023.

消化系統疾病及病毒疣是 2023 年最主要的住院索償疾病。

### Diagnostic Test Utilization (診斷檢查使用情況)

Gastro-colonoscopy and other diagnostic tests showed significant increases in claim frequency and billing.

胃鏡、大腸鏡及其他診斷檢查的索償次數與金額均顯著上升。

### Behavior-Driven Claims (行為驅動的索償)

For the two top claims, they appeared to be procedures that are more susceptible to consumer and/or provider behavior.

索償宗數最高的兩項程序，較易受消費者及／或醫療服務提供者行為所影響。

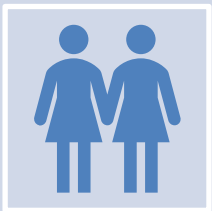
# Summary - Demographic and Plan-Type Differences

## 總結：不同人口特徵及保單類型下的差異



**Age :** Healthcare expenses increase with age.

**年齡：**醫療開支隨年齡增長而上升。



**Gender:** Females file claims more frequently than males, but males have higher average inpatient costs.

**性別：**女性的索償次數較男性為高，但男性的平均住院費用較高。

# Summary - Demographic and Plan-Type Differences

## 總結：不同人口特徵及保單類型下的差異



**Plan Type Expenditure Differences :** Group Plans report substantially lower claims than Individual Plans

**保單類型支出差異:** 團體醫療計劃的索償水平顯著地低於個人醫療計劃。




**Panel Providers:** Claims from Panel Providers are substantially lower than non-Panel providers.

**醫療網絡:** 網絡醫療服務提供者的索償金額明顯低於非網絡服務提供者。

# Summary - Demographic and Plan-Type Differences

## 總結：不同人口特徵及保單類型下的差異



**VHIS plans:** Claims from non-VHIS plans are marginally higher than claims from VHIS plans. For illnesses, which were observed to be a major contributor to expenditure escalation, it is observed the number of claims for these conditions were very much higher than that from non-VHIS Plans

**自願醫保：**非自願醫保計劃的索償金額略為高於自願醫保計劃。就疾病相關個案而言，其索償宗數明顯高於非自願醫保計劃下的相應個案，該類個案被觀察到是醫療支出上升的主要因素之一。

# Conclusions



This study clearly indicates that overall health insurance claims increased very substantially after the pandemic.

本研究明確指出，疫情後整體醫療保險索償水平大幅上升。



The overall increase amounted to double-digit increase every year.

整體增長幅度巨大，且按年均呈現雙位數增長。

# Conclusions



If such an increase continues at the same rate, it will raise serious concerns about the affordability of private health insurance for both employers and individuals — costs would be 50% higher in five years and double within ten years.

如果此類增幅以相同速度持續下去，將對僱主及個人負擔私人醫療保險的成本構成嚴重疑慮——五年內費用將上升50%，十年內更將翻倍。

# Conclusions



This study also shows that post-COVID health expenditure increases were driven primarily by increases in utilization, especially by increases in inpatient plans' day procedures, some of which appear to be elective in nature or are for early detection purposes.

本研究亦顯示，疫情後醫療支出的上升主要由服務使用量增加所推動，尤其是住院保障計劃中日間醫療程序的顯著增長，其中部分屬於選擇性程序，或用於早期檢測目的。

# Conclusions



Setting lower spending limits and/or requiring co-payment for some of these procedures might mitigate the situation.

對部分程序設立較低的支出上限及／或引入共付額，或有助緩解目前的情況。

# Conclusions



As for outpatient claims, there appears to be a shift in consumers preference in outpatient visits with more seeking more expensive care (relative to General Practitioners) from Chinese Medicine, Physiotherapists, Chiropractors and Specialists.

在門診方面，消費者的求醫偏好出現轉變，較多選用相對普通科醫生而言費用較高的中醫、物理治療、脊醫及專科服務。

# Conclusions



This trend is not likely to be reversed in view of the ageing population with more suffering from chronic conditions that can be effectively managed by Physiotherapists and Chinese Medicine Practitioners.

隨着人口老化及慢性疾病增加，而相關病況可由物理治療及中醫有效管理，這種趨勢預計難以逆轉。

# Conclusions



The age factor contributes significantly to health expenditure increases.  
年齡因素在推動醫療開支上升方面發揮了重要作用。



This factor is almost certain to continue and exacerbate given the speed of population ageing in Hong Kong in the near future.  
隨着香港人口迅速老化，這一因素料將持續並進一步推高醫療開支。

# Conclusions



The Study shows that there are significant differences in terms of the average bill per claim for different type of plans

研究結果顯示，不同類型保險計劃在每宗索償的平均帳單金額方面存在顯著差異。

# Conclusions



The average Inpatient bill from Panel Providers was 76% lower than those from non-Panel Providers; The average Outpatient bill was around 100% lower.

使用網絡醫療服務提供者的平均住院帳單較非網絡醫療服務提供者低76%，而非網絡醫療服務提供者的平均門診帳單亦高出約100%。

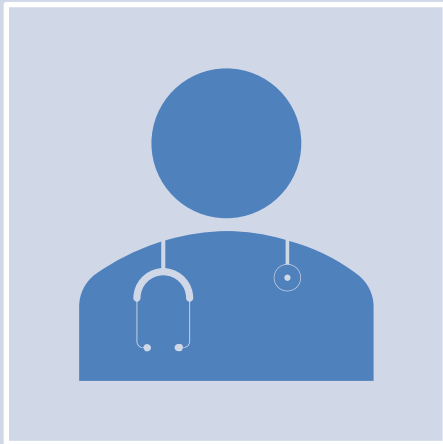
# Conclusions



The average Inpatient bill from Group Plans was 63% lower than those from Individual Plans; The average Outpatient bill was also around 100% lower.

團體保險計劃下的平均住院帳單較個人保險計劃低63%，而個人保險計劃下的平均門診帳單亦高出約100%。

# Conclusions



This study suggests a rather alarming trajectory for health care expenditure and the associated premium in the private health insurance sector unless effective measures are being put in place in the near future.

研究結果顯示，若未能及早採取有效應對措施，私營醫療保險的醫療開支及保費走勢將令人憂慮。

# Conclusions



Stakeholders – individuals, employers, insurance, providers and Government -- need to urgently get together to work out a way forward.

個人、僱主、保險業、醫療服務提供者及政府必須盡快攜手合作，尋求前路。

# Conclusions



Greater use of Panel Providers, and for individual plans to adopt certain Group Plan features could go a long way to mitigate the expenditure increase situation.

更多地使用特約醫療服務提供者，以及讓個人計劃採用某些團體計劃的特點，將對緩解開支增加的情況大有幫助。



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# Q&A

## 問與答