**J2 H2 Economics CSQ – Market Failures (Healthcare)**

**Healthcare and Health Insurance**

**Extract 1: Global trends in healthcare expenditure**

Between 2004 and 2014, the World Bank reckons that the average share of health expenditures of high-income countries has increased from 10.9 to 12.3 per cent of gross domestic product (GDP). Singapore is no exception as its share of health expenditure as a percentage of GDP has increased from 3.3 to 4.6 per cent between 2011 and 2015. However, this was not the case for all countries. The equivalent figures for Ireland were 9.9 in 2011 and 7.8 in 2015.

An important factor is the development and adoption of new and expensive health technologies such as biologics - extremely costly drugs revolutionising the treatment of rheumatoid arthritis, cancers and diabetes. Another factor is rising wages, fuelled in part by competition between private providers to attract the best healthcare professionals. This is compounded by the fact that retrenched PMETs from other fields cannot easily enter the healthcare sector due to a mismatch of skills.

The quantity of care consumed in Singapore is also increasing. While population ageing is often cited as a cause, lifestyle risk factors, such as eating too much and exercising too little, also contribute to the rise of costly chronic conditions.

Adapted from: Various

**Extract 2: The balance needed in health insurance**

Health insurance plays a central role in influencing healthcare consumption. By significantly decreasing the price of care at the point of consumption, insurance plans increase the quantity of care consumed. Part of this increase is actually a good thing as it reflects better access to healthcare, especially for lower-income individuals who could not afford treatment otherwise. However, by distorting the price of care, health insurance may induce overconsumption. Having an insurer pay 100 per cent of a patient's bill is hardly conducive to encouraging prudent spending.

This illustrates the subtle balancing act of health insurance: While some coverage1 is good, too much is detrimental. Overconsumption of care puts a financial burden on insurance companies which, in turn, need to increase their insurance premiums2.

Adapted from: The Straits Times, 1 Feb 2018

1 Insurance coverage refers to the portion of the medical bill that is paid for by the insurance company.

2 Insurance premiums are the price of insurance policies paid by consumers (the insured) to the insurance firms.

**Extract 3: Singapore’s national health insurance scheme – MediShield Life**

MediShield Life is a basic health insurance plan which helps to pay for large hospital bills and selected costly outpatient treatments, such as dialysis and chemotherapy for cancer. MediShield Life will provide protection for all Singapore Citizens and Permanent Residents, for life, including for any serious pre-existing conditions. Individuals can use the money in their Medisave accounts to pay for MediShield Life premiums.

There are three main features of MediShield Life - claim limits, deductibles, and co- insurance.

Claim Limits are the maximum amount that the insured can claim from MediShield Life. There are different claim limits for each type of expense, such as the daily ward charges and the type of treatment or surgery undertaken. For example, the claim limit for radiosurgery is $4,800 per procedure. The portion of the bill above the claim limit will be paid by the insured.

The deductible is the fixed amount within the claim limit that is payable by the insured before the MediShield Life coverage kicks in. The deductible is payable only once every policy year and increases with age and the ward class. For example, for those aged 80 and below, the deductible is $1,500 for stays in Class C wards.

The co-insurance is a percentage (e.g., 3%) of the remaining claimable amount after subtracting deductible which the insured have to pay.

The deductible and co-insurance serve to avoid the overconsumption often associated with insurance schemes that cover 100% of hospital bills.

Adapted from: Ministry of Health website (https://www.moh.gov.sg)

**Extract 4: Hard truths about co-payments in insurance**

The seminal study of health insurance conducted more than 30 years ago in the United States by Professor Willard G. Manning showed that introducing insurance co-payments such as deductibles and co-insurance substantially decreased health expenditures with only very few adverse health effects. Since that study, all public insurance schemes, including Singapore’s Medishield Life scheme, have included such elements.

However, the hard truth is that there is very little data on how to optimally set the level of these co-payments. There is considerable variation internationally. For instance, France's deductible lies below $2 per sickness episode, while Switzerland's maximum annual deductible of $3,500 is higher than Singapore's. For co-insurance rates, Germany's ranges from 5 to 10 per cent, while France's ranges from 30 to 40 per cent. No international guidelines exist.

Adapted from: The Straits Times, 1 Feb 2018

**Extract 5: Why is healthcare overconsumed and what can we do about it?**

Apart from overly-comprehensive insurance coverage, another factor causing the overconsumption of healthcare worth mentioning is "physician-induced demand" where some doctors take advantage of patients' lack of medical knowledge to provide them with more care than necessary, or to charge a higher fee. Physician-induced demand is especially prevalent when complete insurance coverage causes patients to have little financial incentive to question whether the care they receive is necessary since it is all covered by their health insurance.

To combat this problem, Singapore set up the Agency for Care Effectiveness (ACE), a national health technology assessment centre, in 2015. ACE’s work will help Singapore doctors and consumers determine the value for money of healthcare, in terms of life and quality of life gained. Its first tranch of 11 drug guidances based on how well these drugs work and their cost-effectiveness was published on 3 May 2017. ACE is part of the Ministry of Health’s (MOH) efforts to achieve its mission of:

* Promoting good health and reducing illnesses;
* Ensuring access to good and affordable healthcare; and
* Pursuing medical excellence.

Adapted from: The Straits Times, 1 Feb 2018 and Ministry of Health website

(https://www.moh.gov.sg)

**Questions**

(a) Using the information from Extract 1, compare the change in share of health expenditure as a percentage of GDP between Singapore and Ireland from 2011 to 2015. [2]

(b) Explain how each of the following led to the trend in healthcare expenditure in Singapore.

(i) ‘the development and adoption of new and expensive health technologies’ and ‘rising wages’ [4]

(ii) ‘population ageing’ and ‘lifestyle risk factors’ [2]

(c) Explain how the statement “retrenched PMETs from other fields cannot easily enter the healthcare sector due to a mismatch of skills” illustrates a form of inefficiency in the healthcare market. [2]

(d)(i) Explain the source of market failure caused by ‘(h)aving an insurer pay 100 per cent of a patient's bill’ (Extract 2). [2]

(ii) With reference to the case material, assess the use of deductibles and co- insurance (Extract 3) to address the market failure in (d)(i). [8]

(e) With the use of the case material and your own knowledge, discuss whether the setting up of the Agency for Care Effectiveness (ACE) will help Singapore achieve its microeconomic aims. [10]

[Total: 30]

**Suggested Answers**

**(a) Using the information from Extract 1, compare the change in share of health expenditure as a percentage of GDP between Singapore and Ireland from 2011 to 2015. [2]**

While Singapore’s healthcare expenditure as a percentage of GDP increased, that of Ireland decreased. In terms of magnitude, the extent of the decrease for Ireland was larger than the increase for Singapore.

**(b) Explain how each of the following led to the trend in healthcare expenditure in Singapore.**

**(i) ‘the development and adoption of new and expensive health technologies’ and ‘rising wages’ [4]**

Both increase COP 🡪 fall in supply

Fall in supply 🡪 increase P and decrease Q

Since healthcare is a necessity, demand is price inelastic

So, fall in Q is less than proportionate to increase in P, causing TE to increase

**(ii) ‘population ageing’ and ‘lifestyle risk factors’ [2]**

Both lead to an increase in DD for healthcare 🡪 Increase in DD 🡪 increase in P, Q, and hence TE

**(c) Explain how the statement “retrenched PMETs from other fields cannot easily enter the healthcare sector due to a mismatch of skills” illustrates a form of inefficiency in the healthcare market. [2]**

The statement shows inefficiency due to factor immobility. This is because the occupational immobility caused by the lack of skills means that these retrenched PMETs remain unemployed, which causes productive inefficiency (not producing on the PPC) as labour resources are not utilised.

**(d)(i) Explain the source of market failure caused by ‘(h)aving an insurer pay 100 per cent of a patient's bill’ (Extract 2). [2]**

The action of undergoing medical procedure undertaken by consumer but cost of going for healthcare procedures borne by insurer. This creates moral hazard where the consumers will overconsume even if the procedures are not necessary / consumers will not be careful about health

**(d)(ii) With reference to the case material, assess the use of deductibles and co- insurance (Extract 3) to address the market failure in (d)(i). [8]**

Question analysis:

* Command word = “assess” 🡪 Need 2 sides and an evaluative conclusion
* Content = “the use of deductibles and co-insurance to address the market failure”🡪 Need to explain how deductibles and co-insurance correct the market failure due to moral hazard and the limitations
* Context = insurance industry

Introduction

Deductibles and co-insurance are supposed to correct the market failure due to moral hazard in the insurance market.

Moral hazard as a source of market failure is the result of additional consumption due to

Use of the two measures solves moral hazard

Both the deductible and co-insurance require consumers to co-pay for the healthcare they consume, even though they have insurance. This solves the overconsumption due to moral hazard as consumers will consider whether they really need the treatment when they have to co-pay for it. Without such co-payment (i.e., if the insurance company pays for everything), consumers will consume healthcare services even if they don’t need it.

Limitations of the 2 measures

However, there may be implementation problems. First, because of imperfect information, the deductible and co-insurance amount may be set too high or too low. This is seen in Extract 4 where there is a great variance in deductible and co-insurance across different countries, which shows that there may be a lack of research on what the optimal levels of deductible and co-insurance are.

Additionally, the 2 measures may worsen inequity. Extract 2 points out that the reduction in price of healthcare paid by consumers due to insurance is a good thing as it improves access by low income. Conversely, making consumers co-pay for healthcare would worsen inequity as it increases the price of healthcare to consumers. Since healthcare is a necessity and a higher price might make it unaffordable to low income consumers, deductibles and co-insurance may worsen inequity. Additionally, such payments are regressive in nature as they take up a larger portion of the poor’s income than the rich’s.

Conclusion

In conclusion, deductibles and co-insurance are necessary to correct moral hazard. However, how well they are used depends on specific context of the country. For richer and more developed countries, the optimal deductible and co-insurance should probably be set higher since consumers have greater purchasing power. Additionally, we also need to consider whether there are other policies to mitigate the effects on equity. For example, higher deductibles and co-insurance payments may be optimal if there are complementary policies like means-tested subsidies for low income consumers to offset the negative effect on equity.

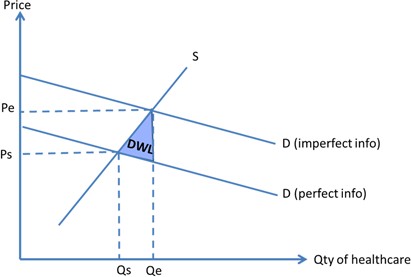
**(e) With the use of the case material and your own knowledge, discuss whether the setting up of the Agency for Care Effectiveness (ACE) will help Singapore achieve its microeconomic aims. [10]**

Question analysis:

* Command word = “discuss whether” 🡪 need 2 sides and an evaluative conclusion
* Content = “setting up of ACE will help Sg achieve micro aims” 🡪 Need to explain how ACE will result in efficiency and equity and how it may not (i.e., limitations of policy)
* Context = healthcare industry

Introduction: Explain the market failure in the healthcare industry due to imperfect info

The microeconomic aims are efficiency and equity. ACE is meant to combat the problem of “physician-induced demand”. Physician-induced demand causes both inefficiency and inequity. When patients have imperfect information, they may be persuaded by doctors to consume more care than necessary. This causes the demand for healthcare to be higher than it should be.



As seen from the diagram, the demand for healthcare due to physician- induced demand is at D(imperfect info), which is higher than it would be if consumers had perfect info. As such, the market equilibrium would be at Qe while the socially optimal quantity would be at Qs. Since Qe exceeds Qs, there would be overconsumption of healthcare and hence a deadweight loss of the shaded area. Social welfare is not maximised and there is allocative inefficiency.

Additionally, since the higher demand also causes the price of healthcare to be higher at Pe instead of Ps (Extract 5: physicians may charge a higher fee), it may also cause inequity as poor consumers who actually require the healthcare may be unable to afford it.

ACE will help achieve micro aims (efficiency and equity)

ACE publishes drug guidances on how well the drugs work and their cost- effectiveness. As this information is made public, it helps to correct the imperfect information of consumers. As consumers would now have perfect information of whether the drugs work, the demand for healthcare should fall from D(imperfect info) to D(perfect info). This would cause the market equilibrium to fall from Qe to Qs. Hence, overconsumption is corrected and the DWL is avoided. Thus, ACE helps to achieve efficiency.

Additionally, since the fall in demand would also cause a fall in the price of healthcare from Pe to Ps, the healthcare would then become more affordable to the low-income consumers who really need it. This also reduces inequity.

ACE will not help achieve micro aims as it has limitations

However, there are limitations to ACE. The drug guidances may have a limited effect for consumers who are fully covered by their insurance as they have little incentive to find out whether the treatments are really necessary since they are not paying for it. As such, the fall in demand may be limited.

Additionally, it is also unlikely for consumers to question doctors as doctors are perceived to be the professionals.

Finally, ACE may only have a limited reach. In the course of 2 years (2015 to 2017), it only released guidance for 11 drugs. There is still a great scope for physician-induced demand related to other drugs and treatments.

Conclusion

In conclusion, ACE may not be able to help Singapore achieve its microeconomic aims of efficiency and equity in the short run. This is because of the limited number of drug guidance released and the non- questioning attitudes of most patients. However, in the long run, the context in Singapore would change. As time passes, the number of drug guidance released would start accumulating, creating lesser and lesser space for physician-induced demand. Additionally, as the Singapore population becomes increasingly educated and vocal, more patients would be willing to challenge doctors based on the information released by ACE. As such, ACE would help Singapore achieve its microeconomic objectives in the long run.