Practice Questions 2
Econ 339 Health Economics

1. Repeat exercise one and assume the income is $\$250,000$. The price of a unit of health care is \$2205 and the price of a unit of OG is \$3890. The insurance premium is $\$5,000$ and the coinsurance rate is still 25%. Draw all graphs again and be precise with the budget constraints. You know that in equilibrium the individual buys 85 units of HC. Find the optimal point and draw the indifference curve. Then draw the new budget constraint with the insurance and re-optimize. The re-optimization is just graphical, you do not have to calculate anything for that.

2. Suppose that John Smith gets promoted to a job that causes two changes to occur simultaneously: (i) John earns a higher wage, but (ii) he is also placed into a riskier position at the factory that impairs his health. How would these two changes together affect John's desired health capital?

3. Consider the following demand and supply:

$$\begin{aligned} p &= 25 - \frac{3}{20}q, \\ p &= 2 + \frac{2}{25}q. \end{aligned}$$

   Suppose that producers need to have licenses to sell apples, and that only 90 units of apples are licensed (i.e. Q is limited to 90 - Quota!). Calculate the sum of the consumer surplus and producer surplus without the quota. Then calculate CS+PS with the quota. What has changed?

4. Consider the following demand and supply for health care services:

$$\begin{aligned} p &= 35 - \frac{2}{25}q, \\ p &= 5 + \frac{3}{15}q. \end{aligned}$$

   Calculate equilibrium and draw a graph. Now the consumer receives health insurance with a coinsurance rate of 40 percent. Draw the new equilibrium, deadweight loss, and calculate the new equilibrium quantity and the deadweight loss. What is the price that the doctor/hospital receives and what is the price that the consumer pays?

5. Consider the following demand and supply for health care services:

$$\begin{aligned} p &= 5 + \frac{3}{15}q. \\ q &= 6.3 - \frac{6}{25}p, \end{aligned}$$

   Calculate equilibrium and draw a graph. Now the consumer receives health insurance with a coinsurance rate of 80 percent. Draw the new equilibrium, deadweight loss, and calculate the new equilibrium quantity and the deadweight loss. What is the price that the doctor/hospital receives and what is the price that the consumer pays?

6. Demand and Supply Shifts:
   Using a supply-and-demand graph and assuming competitive markets, show and explain the effect on equilibrium price and quantity of the following events:

   (a) A technological change that decreases the cost of producing cancer tests and at the same time reduces the necessity of repeat testing on the market for physician clinic services.

   (b) Subsidy of tuition payments in nursing schools on the market for nursing services

   (c) Tuition increases of 15% on the market for doctor/physician services (careful, these are linked markets).

   (d) A price ceiling placed on wages in the market for hospital labor.