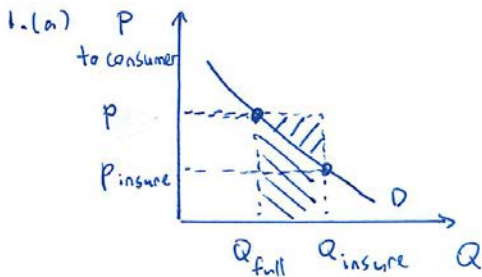


**Version A**



Health expenditure increase is the entire shaded area  
 welfare loss is the triangle shaded as ///

(b) (i) Elasticity =  $\frac{(340 - 224) / [(340 + 224)/2]}{-(0 - 50) / [(0 + 50)/2]} = \frac{116/282}{50/25} = \frac{0.411}{2} = 0.206$ .

(ii) Dental care was more responsive, especially in the first year, from the Table reproduced in course slides and discussed in class. (Full credit will also be given for equally responsive).

(c)  $E[U(x)] = 0.5 \times U(50) + 0.5 \times U(150) = 0.5 \times 88 + 0.5 \times 188 = 138$ .

Since  $E[U(x)] = 138 > U(80) = 128$  it is best not to get the insurance.

2.(a)(i) Health exchanges offer standardized insurance health policies offered by competing insurance companies.

(ii) All people are required to have health insurance (so healthy individuals cannot opt out).

(b)(i)  $E[X] = 80$  as uniform on (50, 110) has mean 80. (Posted price of 110 is the upper bound).  $E[U(X)] = 1.5 \times E[X] = 1.5 \times 80 = 120$ . Since this is greater than the price of 110, do buy car.

(c)  $T = [0.50 - 0.45] / \sqrt{0.02^2 + 0.02^2} = 0.05 / 0.0283 = 1.77$ .

Since  $|T| < z_{0.05} = 1.96$  do not reject  $H_0: \mu_1 = \mu_2$  in favor of  $H_A: \mu_1 \neq \mu_2$ .

The difference is not statistically significant at significance level 5%.

3.(a) True \$10,800 in 2017.

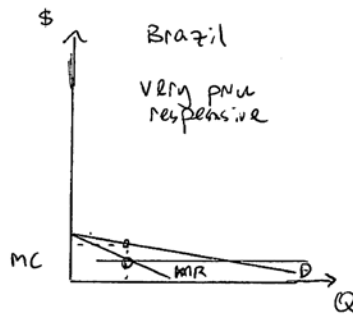
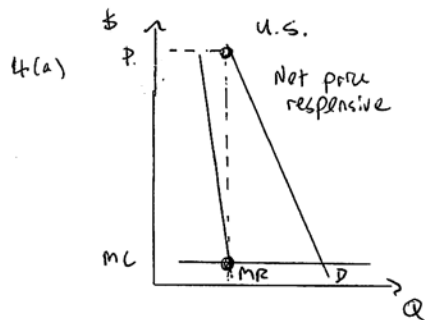
(b) False Hospitals and physicians are the top two categories.

(c) True Roughly 50/50

(d) True More people have private insurance than govt and it is mostly employer-provided. (to be precise 55% of people in U.S. get insurance through their employer).

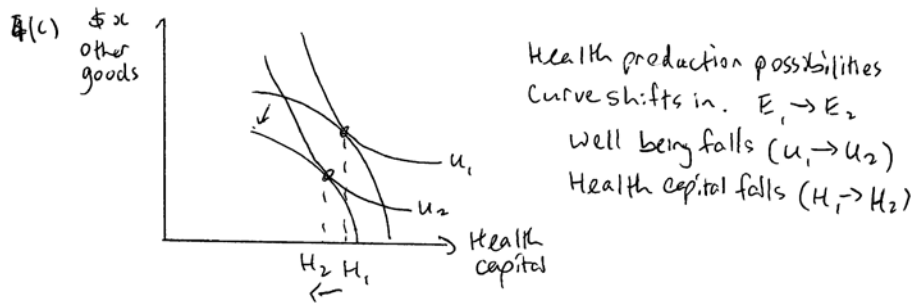
(e) True This is the health production function.

(f) False It uses mortality rates in 2017 at different ages. It does not forecast future mortality

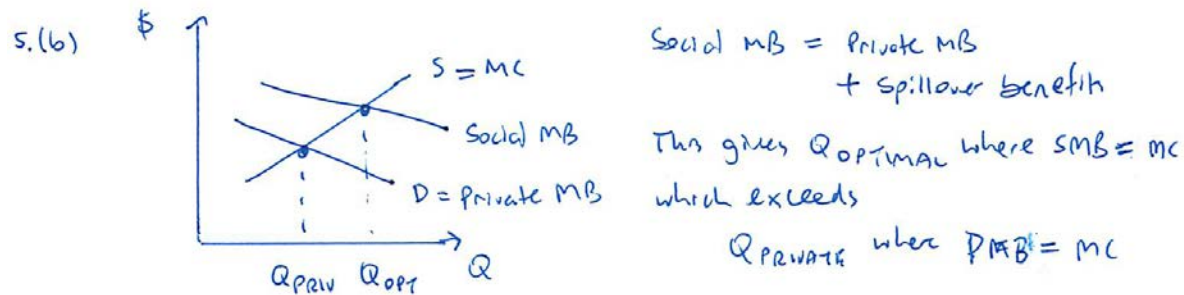


(b) Passive vs none: MC per QALY saved =  $(\$40,000 - \$0) / (4 \times 0.5 - 2 \times 0.4) = \$40,000 / 1.2 = \$33,333$ . Aggressive vs none: MC per QALY saved =  $(\$200,000 - \$0) / (10 \times 0.6 - 2 \times 0.4) = \$200,000 / 5.2 = \$38,500$ . Prefer passive treatment to aggressive as lower MC per QALY saved.

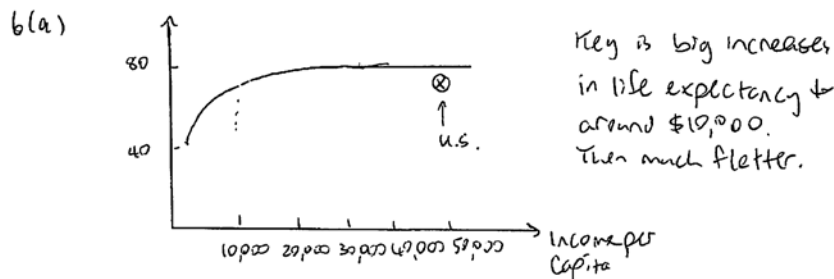
Econ 132 Fall 17 Solutions Version A



- 5.(a)(i) Prospective payment provides providers an incentive to keep their costs down.  
 (ii) Physician-induced demand is when physicians encourage patients to get more healthcare than they really need (and would choose on their own to get). This pushes the demand curve out, leading to greater quantity of healthcare and most likely a higher price.



- (c)(i) Negative: Monopoly with patents allows high monopoly price.  
 (ii) Positive: Potential monopoly profits given patents encourages firms to develop drugs.



- (b)(i) There was a substantial increase in spending per patient on treatment of heart attacks.  
 (ii) The article found that the benefits of this increased spending were several times the increase in costs. The more costly interventions were definitely worth it.

- (c)(i) U.S. insurance is not universal and (compared to most) has greater private sector role.  
 (ii) U.S. life expectancy is lower and infant mortality is higher. So outcomes were not as good.

7.(i) Outpatient spending =  $1138.9 + 701.9 \times \text{coins0} = 1138.9$  in 25% plan as then  $\text{coins0} = 0$ .

(ii) Directly from regression coeff of  $\text{coins0}$  is (273.6, 1130.1).

(iii) This is regression of  $\text{out\_infl}$  on an intercept which gives the sample average of outpatient spending.

(iv) Log-linear model: regress  $\ln \text{out}$  age  $\text{coins0}$  (or regress  $\ln \text{out}$  age income  $\text{coins25}$ ). Age is age in years, (Multiply the coefficient of age to get the percentage change).

(v)-(vi) For communities effected change from 2005 to 2015 by  $11 - 5 = 6$

For communities not effected change from 2005 to 2015 by  $12 - 10 = 2$ .

The difference in difference estimate of the policy is  $6 - 2 = 4$ .

Econ 132 Fall 17 Solutions Version A

**Multiple choice**

Question	1	c	Insurance company pays $0.8 \times (4000 - 1000) = 2400$
	2	a	
	3	d	$6,000 \pm 2 \times 4,000 / \sqrt{10000} = 6000 \pm 80 = (5920, 6080)$
	4	c	On balance some studies HMO better, some worse, some no diff
	5	a	Need value of life to calculate marginal benefit
	6	d	
	7	c	
	8	a	
	9	a	A voluntary insurance market would fail due to adverse selection
	10	b	Social MB is the sum of individual MB's which we don't observe
	11	b	Once the drug ingredient is discovered it is public information
	12	c	There are fewer old & disabled but they cost a lot more per person
	13	d	\$100,000 for year of life and 3% discount rate
	14	a	From notes it was 24 years
	15	d	
	16	a	There is concern about excessive rates of C-sections
	17	b	
	18	a	Across countries health care is a superior good

**Scores out of 60**

**Curve (Indication only: Course Grade is based on Total Score!)**

75 <sup>th</sup> percentile	48.5 (81 %)	(Ave GPA 2.67 on this curve)	C+	40 and above	
Median	43.5 (73 %)	A	51 and above	C	38 and above
25 <sup>th</sup> percentile	38.5 (64 %)	A-	49 and above	C-	36 and above
		B+	47 and above	D+	34 and above
		B	44 and above	D	32 and above
		B-	42 and above	D-	30 and above