

Insurance – Moral Hazard

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Moral Hazard

Definition: moral hazard is the increased usage of services when the patient's marginal costs are low due to insurance

- ▶ downward sloping demand for dr services
- ▶ fixed price
- ▶ insurance reduces the price to 0
- ▶ demand Q_{MH} instead of Q^*

Why is moral hazard bad?

1. Insurance companies can lose money

- ▶ Assume premium payment is $P(\text{sick}) * \text{Coverage}$ (assuming no loading fee)
- ▶ Insurer assumes $\text{Coverage} = \bar{P}Q^*$
- ▶ Actual coverage = $\bar{P}Q_{MH}$
- ▶ So, insurer's $E\pi = TR - TC = 0.05 * \bar{P}Q^* - 0.05 * \bar{P}Q_{MH}$
→ insurer loses money

Why is moral hazard bad?

2. Premiums can be higher or more uninsured

- ▶ Insurer assumes Coverage = $\bar{P}Q_{MH}$
- ▶ Premium = $0.05 * \bar{P}Q_{MH}$
- ▶ If no insurance, ECost = $0.05 * \bar{P}Q^*$ willing to pay a little more for insurance to avoid risk, but maybe not $0.05 * \bar{P}Q_{MH}$
→ higher premium and many don't buy insurance

Why is moral hazard bad?

3. Increases health care costs for all

- ▶ raises demand for services
- ▶ higher demand increases prices (for simplicity, we are assuming price is fixed in these graphs)
- ▶ raises demand for technology which would not be demanded without insurance (medical arms race, etc)

Definition

Why is it bad?

How does insurance try to reduce it?

Which policies increase it?

Why is moral hazard bad?

4. Deadweight loss – the fall in total surplus that results from a market distortion

How do insurance companies try to reduce moral hazard?

1. Deductible

- ▶ Pay a fix amt first, then insurance pays rest
- ▶ To insured, price is market price until deductible paid off, then price drops to 0
- ▶ If deductible is below or equal to $\overline{P}Q^*$, then buy policy and consume Q_{MH}

How do insurance companies try to reduce moral hazard?

1. Deductible (continued)

- ▶ If deductible is above $\bar{P}Q^*$, then decide whether to buy insurance:
 - ▶ Say, deductible = $\bar{P}Q_D = B + C + D$
 - ▶ Consume Q_{MH}
 - ▶ Consumer Surplus = $A + E - D$
 - ▶ If no insurance, $CS = A$
 - ▶ So, buy insurance if $E \geq D$
 - ▶ The way I've drawn this, don't buy

Definition

Why is it bad?

How does insurance try to reduce it?

Which policies increase it?

How does a deductible help the problem of moral hazard?

- ▶ If two possible illnesses – one is mild (derm), the other is severe (heart disease)
- ▶ Demand is higher for more severe illnesses
- ▶ Then, would choose optimal services for mild one at least

How do insurance companies try to reduce moral hazard?

2. Coinsurance

- ▶ Pay a fraction of the costs, and insurance pays the rest
- ▶ Graphically, this is represented by rotation in D curve (b/c fraction not absolute dollars)
 - ▶ original D curve represents what you are willing to pay if you pay everything
 - ▶ if you are only going to pay 50%, then for each quantity, you are willing for it to cost twice as much
- ▶ So, for a given price for services, the insured won't consume Q_{MH} , but will choose some amount higher than no insurance
→ Helps problem of moral hazard a little

How do insurance companies try to reduce moral hazard?

3. Maximum Payment Limits

Insurance puts cap on total spending: e.g. \$100k per year and \$300k for a lifetime

- ▶ This is opposite of deductible
- ▶ Major medical expenses are uninsured
- ▶ At high costs, insured will pay market price

Some policies make moral hazard worse

- ▶ upper limit on out-of-pocket spending by the insured – increases moral hazard at high end
- ▶ secondary insurance: another insurance policy covers some of your coinsurance
 - ▶ Assume primary insurance have 50% coinsurance rate
 - ▶ Secondary insurance has 50% coinsurance rate of what primary doesn't pay
 - ▶ In the end, insured only pays 25% of medical bills
 - ▶ Choose more services than if primary only

Assignment

- ▶ Read Ch. 10
- ▶ Read Bundorf and Simon article
- ▶ Send questions to fertighealth@gmail.com by Friday at 2pm
- ▶ First draft of paper due in one week
- ▶ Hwk 4 due in one week