HADM8600: Health Economics — UGA College of Public Health
Professor Angela Fertig — Spring 2008

Homework 5

Due Wednesday, March 5, 2008

1. Assume that UGA offered one insurance plan for its employees last year that charged the same premium to any employee. This year, they have introduced a second plan that employees can choose: a high-deductible health insurance plan. With this plan, the premium is much lower than the other plan, but the deductible is 10 times as high. The introduction of this new plan involves both moral hazard and adverse selection. Explain the role that these two concepts play in this scenario.

2. Assume that Chico Inc. has 1000 employees, all of whom are insured in the company plan. There are two groups of employees, healthy and unhealthy. Half of the employees are in each category. Persons in both groups have a 20% probability of being sick, an initial wealth level of $1000, and a utility function described by the following table. The only difference between healthy and unhealthy people is that when a healthy person gets sick, the cost of care is $100, but when an unhealthy person needs care, the cost is $150.

Wealth	Total Utility	Wealth	Total Utility
$800	57.0	$910	91.0
810	61.2	920	92.8
820	65.2	930	94.4
830	69.0	940	95.8
840	72.6	950	97.0
850	76.0	960	98.0
860	79.0	970	98.8
870	81.8	980	99.4
880	84.4	990	99.8
890	86.8	1000	100.0
900	89.0		

   (a) What would be the expected utility with no insurance for both types of employees?

   (b) If the company plan is community-rated, such that each person pays $50, what is the expected utility with insurance for both types of employees?

   (c) Would both groups choose to insure? What would be the total expenditure of each group of employees?

   (d) Assume that the company introduces a low-cost plan. Those in the plan pay $40. The plan only insures up to $100. Persons pay any excess out of pocket. Which group would purchase this low-cost plan? What would be the total expenditure of each group, including out-of-pocket expenses?

   (e) How much is each group paying to eliminate their risk of a bad health shock?