Indifference curves – medical costs

Introduction Over the past decade, medical costs have increased more rapidly than other consumer costs. Americans spent 2. 5 trillion on health care in 2009 according to Medicare’s Office of the Actuary. That figure translates into approximately $8, 086 per person, or 17. 6 percent of the nation’s gross domestic product (GDP). 1 Health care costs more than tripled from 1990 to 20092 and are projected to rise to 19. 6 percent of GDP in 2019. 3 The 4 percent increase from 2008 levels represented the slowest rate of growth in 50 years of measuring national health care spending. Much of that was the consequence of people losing jobs that came with health insurance. The recession had an impact on total health care spending in 2009. Many consumers decreased their use of health care goods and services partly because they had lost employer-based private health insurance coverage, and partly because their household income had declined. ” 4 Medical Cost Trends Two important trend reports were released in May 2011.

PriceWaterhouseCoopers (PwC) Health Research Institute’s “ Behind the Numbers: Medical Cost Trends for 2012” examined the medical costs for employers in 2012 and Medco’s “ Drug Trend Report” looked at prescription drug prices and utilization trends. The following are highlights from each report5: PwC’s “ Behind the Numbers: Medical Cost Trends for 2012” survey was completed during the first quarter of 2011. Survey participants included 1, 700 companies from the United States spanning 32 industries. •Medical costs - expected to rise from 8 percent in 2011 to 8. 5 percent in 2012. Provider consolidation - hospitals and physicians are aligning through mergers, acquisitions and other arrangements. •Cost shifting - reduction in

Medicare and Medicaid payments have forced the private sector to make up the difference. •Post-recession stress – stress from money, work and economy woes are taking a toll. More claims for stress-induced illnesses (i. e. heart disease) are more prevalent. Medco’s Drug Trend Report •Growth of prescription drug prices at historic low - overall drug inflation only 5. 4 percent. •Record inflation of branded drugs exceeded generic inflation. Specialty drug cost increasing The Annual Millliman Medical Index (MMI) reported an increase of $1, 319 (or 7. 3%) increase over 2010 for total health care costs for a typical family of four covered by a preferred provider plan (PPO). 6 The graph below indicates the overall trend from 2008 – 2011. Consumer Behavior Before sponsoring legislation to address the impact of rising health care costs, it is important to examine consumer opportunities (goods and services consumers can afford to consume) and consumer preferences (determines which goods will be consumed).

A preference order is assumed to satisfy four basic properties: completeness, more is better, diminishing marginal rate of substitution and transitivity. 1. Completeness – Assumes that the consumer is capable of expressing a preference for or indifference regarding health care. For any 2 bundles, A> B, B> A or A~B. 2. More is Better – If bundle A has at least as much of every good as bundle B and more of some good, bundle A is preferred to bundle B. 3. Diminishing Marginal Rate of Substitution – As a consumer obtains more of good X, the amount of good Y he or she is willing to give up to obtain another unit of good X decreases. . Transitivity – For any 3 bundles, A, B, and C, if A> B and B> C, then A> C. Similarily, if A~B and B~C, then A~C. Preferences can best be illustrated using indifference curves. An indifference curve defines the combinations of two goods that give a consumer the same level of satisfaction. The shape of the indifference curve is dependent upon the consumer's preferences. The rate at which a consumer is willing to substitute one good for another and still maintain the same level of satisfaction is called the marginal rate of substitution (MRS). In order to illustrate how rising medical costs have affected consumer alternatives, let X represent the quantity of medical services, and let Y represent the quantity of other goods. Furthermore, let income (M) be measured in hundreds of dollars, the price of medical services and other goods in terms of dollars per minute, with M = 100, Px = 4, and Py = 5. The budget set is the area above the x-axis, to the left of the y-axis, and below the budget line. The slopes reflect the market rate of substitutions under two different sets of prices.

A steeper slope means you have to give up a larger amount of Y in order to obtain one more unit of X. " 7 The total effect of a price increase in medical goods and services would affect real income. The income effect would result from a parallel shift in the budget line. 8 Income Changes and Consumer Behavior Medical costs are normal goods. An increase in income leads to an increase in the consumption of medical goods and services (i. e. prescription medicine, elective surgeries, etc.). Conclusion

Understanding the complex ways in which Americans pay for medical costs is challenging. As medical costs continue to rise, consumers will be forced to change their purchasing habits. A question to ask may be, " Has medical cost spending changed the average life expectancy? " If the answer is no, then should we be pursuing more frequent use of costly health care technology? Cost changes have certainly impacted our constituents. Sponsoring legislation to reduce rising health care costs will have a positive impact on consumer spending on non-medical goods and services.