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INSURANCE COVERAGE TRANSITIONS AND THE USE OF PREVENTIVE SERVICES

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ABSTRACT

There are many factors affecting the average American's insurance coverage. Increased medical costs have lead to increased insurance premiums and higher co-pays. Many employers do not offer company sponsored medical insurance plans to their employees. Individuals change jobs more frequently than in the past, often causing lapses in their medical insurance. For the consumer, when out-of-pocket costs increase, one of the easiest and more expensive cost for them to avoid is that of preventive medical care. A reduction in preventive medical care can lead to significantly higher treatments costs in later years.

This study uses data from the Medical Expenditure Panel Survey to examine how changes in the level of insurance coverage impact an individual's use of preventive medical services. The study focuses on a two year period and divides individuals into categories depending upon whether their insurance coverage increased, decreased, or remained constant over that period and whether the change or non-change affected their choice of preventive medical care.

INTRODUCTION

The consumption of preventive services is largely determined by insurance coverage. As insurance coverage status changes, out-of-pocket costs also change. Insurance losers experience an increase in out-of-pocket costs and respond by reducing their health care consumption. Likewise, previously uninsured individuals who gain insurance will increase their consumption of health care services. The rapidity and the extent to which the consumption of preventive health care services responds to changes in insurance status may be useful in predicting the level of future health costs as well as the health status of the population. In the case of insurance losers, a small reduction in preventive services use will diminish the adverse effect of insurance loss on future health costs. Likewise, if insurance gainers rapidly return to a level of preventive services consumption consistent with continuously insured individuals, then the negative impact of being uninsured on health costs will also be reduced.

Uninsured individuals use fewer preventive services than insured individuals. Likewise, recently insured or intermittently insured individuals are less likely than continuously insured individuals to use preventive services (C. Schoen and C. DesRoches, 2000, J. J. Sudano, Jr. and D.

W. Baker, 2003). Individuals who change insurance are also likely to delay treatments, particularly for follow up care (H. R. Burstin et al., 1998). The consequence of the loss of insurance and the concomitant reduction in the utilization of health care services is a reduction in wellness (D. W. Baker et al., 2001, 2002) and an increase in health problems (J. Z. Ayanian et al., 2000). Both the reduction in wellness and increase in health problems increase health costs.

This study examines how the use of preventive services changes with insurance status.. Nine preventive treatments (Dental checkups, blood pressure checks, cholesterol checks, physical exams, flu shots, prostate exams, pap smears, breast exams, and mammograms) are examined.

DATA

The MEPS (Agency for Healthcare Research and Quality, 2006) data set is a national sample collected by the Agency for Healthcare Research and Quality (AHRQ). The survey asked the respondent to indicate the amount of time that had elapsed since receiving their last preventive treatment. Possible responses included "within the past year," "within the past 2 years," "within the past 5 years," "more than 5 years," and "never." The physical examination and prostate examination questions were dropped after 1998. However, a question asking when the respondent last had a medical checkup has been included since 1998. The response to this question is also examined.

Five categories of insurance status for the two years of observations are examined. Individuals were classified as "continuously insured," "partially insured," " continuously uninsured," "insurance gainers.." "and "insurance losers" based on a comparison of their length of medical insurance coverage for each of the two years observed. The table below shows the lengths of coverage for each classification.

	First Year	Second Year
Continuously Insured n = 27,976	Insurance Coverage for the Entire Year	Insurance Coverage for the Entire Year
Partially Insured n = 6,150	Between 1 and 11 Months of Coverage	Between 1 and 11 Months of Coverage
Continuously Uninsured n = 5,930	No Insurance Coverage for the Entire Year	No Insurance Coverage for the Entire Year
Insurance Gainers n = 1,409	No Insurance Coverage for the Entire Year	At Least One Month of Insurance Coverage
Insurance Losers n =1,290	At Least One Month of Insurance Coverage	No Insurance Coverage for the Entire Year

METHODOLOGY

The probability of using a specific preventive service is estimated as a function of the insurance status measure in addition to a set of socio-demographic variables including age, age squared, dummy variables for poor and good health status (comparison group is excellent health),

male (for appropriate preventive services), race of black and Hispanic, married, high school completion, some college, poverty level, and regional indicators for south, west, and northeast. A measure of real income is also included. Separate logit models are estimated for each preventive treatment.

The regressions estimate the use of the preventive service for each year of the two years of observations. Dummy variables are included to indicate transitional insurance status of the individual in that particular year. These insurance status variables are included separately as gainers, losers, the partially insured and the uninsured. Also a dummy variable is included for insured individuals in their second year. The comparison group is the use of preventive services in the first year for those individuals who are insured in both years.

RESULTS

Uninsured individuals tend to differ from all three groups in that they are more likely to be male and Hispanic. They are also more likely to live in the south and have the lowest average income of the entire group. The weighted and unweighted percentages of respondents who reported the use of the specified preventive service within the last year. Blood pressure checks are most common at 78.2 percent. Influenza vaccinations are the least common at 21.4 percent of the suggested age group. These percentages are similar to those found in Gohmann (2005).

Continuously insured individuals experience no change in their adjusted relative risks of obtaining preventive care in year 2 except for cholesterol checks which were 5 percent higher. No changes for this group were expected, since they have insurance in both years. Insurance gainers do not immediately increase their use of all preventive services upon obtaining insurance (column 4). Although their adjusted relative risks are not statistically different from the continuously insured for physical exams, prostate exams, flu shots and checkups, gainers are less likely to have blood pressure checks, breast exams, pap smears, mammograms, cholesterol tests and dental checkups. The adjusted relative risks for these treatments are 11 to 35 percent lower than the continuously insured.

Likewise, during the year they had coverage (column 3), individuals who lost their insurance are significantly less likely than the continuously insured to engage in all preventive treatments except for physical and prostate exams. The adjusted relative risk ranges from 9 percent to 41 percent lower for the preventive treatments that are significantly different from the continuously insured.

Consistent with other studies, the continuously uninsured have lower relative risks of obtaining all preventive treatments relative to the continuously insured. The relative risks for this group are significantly different and range from 26 percent to 56 percent lower than the continuously uninsured.

Relative to the fully insured, the partially insured (columns 5 and 6) have lower relative risks for all treatments except prostate and physical exams. However, their relative risks are higher than the relative risks for insurance gainers and losers during the time those groups have insurance. These findings suggest that a loss of insurance for at least a year has a much larger negative effect on the probability of obtaining preventive treatment than does an episode of noninsurance of less than one year.

The results indicate that during the year that transitionally insured individuals have insurance coverage, they are less likely than continuously insured individuals to receive many preventive treatments. Another issue that can be examined is whether during the period with no insurance coverage, the transitionally insured use preventive services at a rate similar to those who are continuously uninsured.

In the year prior to obtaining their insurance, adjusted relative risks for insurance gainers were not statistically different from those of the continuously uninsured for dental checkups, flu shots, and prostate examinations. However, in the year they are uninsured, insurance gainers are significantly more likely than the continuously uninsured to receive the remaining preventive treatments examined (column 7 and column 9 in Table 3). Although it is not known how long these individuals were uninsured prior to obtaining insurance, their relative risk ratios in their last year of uninsurance are generally much higher than those who are continuously uninsured.

A similar comparison can be made for individuals who lose their insurance in the second year. The statistical test for the difference in the adjusted risk ratios of those who lose their insurance in the second year with the ratios for the continuously uninsured in the second year (columns 8 and 10 in Table 3) shows no significant difference in the relative risks, except for blood pressure checks.

DISCUSSION

Several conclusions can be drawn from these results. First, individuals who have previously been uninsured and obtain insurance tend to get general treatments such as physical exams, checkups and flu shots in similar proportions to those who are continuously insured. They do not, however, obtain those preventive tests that can lead to early detection of costly illnesses – mammograms, breast exams, pap smears and cholesterol tests. Delays in the use of these preventive treatments can lead to significantly higher future health care costs.

Second, those who lose their insurance do not consume as many preventive services in the year prior to losing their insurance as the continuously insured. This also r delays the early detection of illnesses that can be prevented or contained with early detection. Furthermore, after losing insurance coverage, these individuals use preventive treatments even less often, further increasing potential future health care costs.

A third result is that currently uninsured individuals who are soon to obtain insurance are more likely than the continuously uninsured to consume many preventive treatments that can detect illnesses early such as pap smears, breast exams, physicals, and blood pressure and cholesterol checks.

REFERENCES

Agency for Healthcare Research and Quality. "Puf Main Data Results," 2006.

Ayanian, J. Z.; Weissman, J. S.; Schneider, E. C.; Ginsburg, J. A. and Zaslavsky, A. M. "Unmet Health Needs of Uninsured Adults in the United States." *JAMA,* 2000, 284(16), pp. 2061-69.

Baker, D. W.; Sudano, J. J.; Albert, J. M.; Borawski, E. A. and Dor, A. "Lack of Health Insurance and Decline in Overall Health in Late Middle Age." *N.Engl.J.Med.,* 2001, 345(15), pp. 1106-12.

____. "Loss of Health Insurance and the Risk for a Decline in Self-Reported Health and Physical Functioning." *Med.Care,* 2002, 40(11), pp. 1126-31.

Baker, S. G. "Analysis of Survival Data from a Randomized Trial with All-or-None Compliance: Estimating the Cost-Effectiveness of a Cancer Screening Program." *Journal of the American Statistical Association,* 1998, 93(443), pp. 929-34.

Burstin, H. R.; Swartz, K.; O'Neil, A. C.; Orav, E. J. and Brennan, T. A. "The Effect of Change of Health Insurance on Access to Care." *Inquiry,* 1998, 35(4), pp. 389-97.

Cohen, S. "An Evaluation of Alternative Pc-Based Software Packages Developed for Analysis of Complex Survey Data." *Am.Stat.,* 1997, 51, pp. 285-92.

Cohen, S. B.; DiGaetano, R. and Goksel, H. "Estimation Procedures in the 1996 Medical Expenditure Panel Survey Household Component." *MEPS Methodology Report,* 1999, 5, pp. 99-0027.

Gohmann, S. F. "Preventive Care and Insurance Coverage." *Contemporary Economic Policy,* 2005, 23(4), pp. 513.

Schoen, C. and DesRoches, C. "Uninsured and Unstably Insured: The Importance of Continuous Insurance Coverage." *Health Serv.Res.,* 2000, 35(1 Pt 2), pp. 187-206.

Stata, C. "Intercooled Stata 8.0 for Windows." College Station, TX: Stata Corporation, 2003.

Sudano, J. J., Jr. and Baker, D. W. "Intermittent Lack of Health Insurance Coverage and Use of Preventive Services." *Am.J.Public Health,* 2003, 93(1), pp. 130-37.

van den Akker-van, M. E.; Marle, M. B.; van Oortmarssen, G. J.; Boer, R. and Habbema, J. D. F. "Cost-Effectiveness of Cervical Cancer Screening: Comparison of Screening Policies." *JNCI Cancer Spectrum,* 2002, 94(3), pp. 193-204.

Zhang, J. and Yu, K. F. "What's the Relative Risk? A Method of Correcting the Odds Ratio in Cohort Studies of Common Outcomes." *JAMA,* 1998, 280, pp. 1690-91.

AN ECONOMIC MODEL FOR DISTRIBUTING BODY ORGANS

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ABSTRACT

The science of economics is being called upon to offer potential solutions to many of the current problems in our health care delivery system. An area where economic analysis may be very useful is in the shortage of body organs for transplantation. The demand for body organs is far greater than the supply of body organs which results in thousands of individuals dying every year as a result of this market shortage.

The supply of organs comes from living donors and cadavers and has remained in short supply over the years requiring rationing of these vital organs. The shortage of body organs cannot be met by donors alone. According to Feldstein (2007) between 1995 and 2005, 62,367 people waiting for a transplant died during their wait. Since the purchase of organs is illegal the majority of organs are received through the altruism of donors.

This paper will examine the economic value that could be gained by allowing the market forces of supply, demand and price to determine the allocation of resources; in this case much needed body organs. The paper will also be sensitive to the ethical questions that would arise if this type of economic market would ever become a reality.

CHARGING FOR MEDICAL TELEPHONE CARE

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ABSTRACT

Telephone care in pediatrics accounts for large component of care delivered to patients and their parents. In fact a single pediatrician can handle over fifty phone calls per week (Fosarelli 1987). This means that at least 20% of primary care is delivered over the telephone and can be up to 80% of the care delivered after hours (Bergman 1966). These types of calls range from very simple interactions such as medicine refills to very complex medical decision-making and coordination of care for patients with complex medical problems. These services usually are available to patients 24 hour a day, to some degree. As information technology has advanced over the last decade, mobile phones and email access has become commonplace and individuals conduct business effectively by these methods. These patient calls often are the substitute for face-to-face care, and many times is the patient and parents preferred method of obtaining medical advice.

All of these telephone calls are associated with practice expense, risks to medical liability and often go unrecognized by third party payors. Many health plans expect physician access be available to their members 24 hours a day by phone, yet, this is rarely acknowledged as a reimbursable service. Further, telephone advice if routinely utilized in practice can be a money saving practice for insurance companies and can help to relieve some of the burden in already overcrowded medical offices and emergency rooms, by decreasing the need for costly visits and expensive emergency room referrals (ref). As pressures rise in medicine for cost containment it seems telephone care if properly practiced with established guidelines and documentation can decrease cost and also allow for patient satisfaction. This equals a quality service.

The American Academy of Pediatrics recently published a policy statement on payment for telephone care, which supports the reimbursement of telephone care provided to established patients. In fact, in 2007 billing codes for telephone care were developed and will be published in the American Medical Association's 2008 CPT manual, the reference for coding medical encounters for billing. There are many concerns with instituting a billing system for telephone care, which includes creating a barrier to care, especially for those who have no insurance or unable to pay. Also, the economic impact of billing for telephone care and how it will affect health care expenditures is largely unknown. This paper will explore the value of charging for telephone care and the economic impact of this practice in a market driven health care system.

PROCESS PERFORMANCE MEASUREMENT WITH AUTOMATICALLY COLLECTED DATA. A CASE STUDY IN AN OUTPATIENT CLINIC

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ABSTRACT

In this paper we show a very efficient way for continuous performance measurement of the outpatient treatment process (from a patient perspective) as realized in a public-funded Austrian hospital. Performance measurement focuses on time and efficiency of the process. In this hospital the outpatient treatment process is supported by an ERP system (SAP) which already collects process data of every patient going through the process, primarily for reasons of accounting and invoicing. We use this already recorded data, define performance indicators and calculate and visualize the resulting process performance. We also compare our ERP approach with other data collection techniques.

KEYWORDS: business process management, ERP, process control, collection of performance data, nonfinancial metrics

ERGONOMICS

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ABSTRACT

Ergonomics is a very important topic in many work places. It is also widely misunderstood in nearly all work places and very much by the media. Depending on the preconceived ideas of the individual discussing ergonomics opinions on outcomes range from: making work an adult Disneyland; to a safe work place; all the way a safe and efficient work place that individuals enjoy working in. There are many levels of addressing ergonomics and these range from completely designing the work place to take maximum advantage of the capabilities and limitations of human beings in all their complexity to only addressing problems and injuries as they surface.

Ergonomics impact on work places has suffered from a variety of problems. These problems range from the benefits being oversold to unskilled and somewhat unscrupulous practitioners putting unproven devices into the hands of workers without changing the overall conditions to a tendency of some of the earliest experts to make the topic overly complex and data driven (how many ergs are expended when an individual bends over) vs. focusing on does the task make the worker hurt. All of these problems and a failure to make a clear case in the media and in management circles have restricted understanding and impact of ergonomics in the work place. Where a simpler and more human centered approach has been taken, many gains have been seen and many workers have gone home at the end of each day and a career injury free.

This paper will explore the approaches to ergonomics and offer some suggestions and ideas on how to improve the work place. It will not attempt to offer solutions to specific problems or issues as each one is unique to the particular situation. Variations in human size and capability will be pointed out as areas needing to be considered during any ergonomic improvement efforts.