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The Effect of Paid Sick Leave on Physician Office-Based Visits

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by

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I. Introduction

The United States is one of the few among 35 OECD countries (Canada and Japan are the others) without a federal mandate requiring employers to provide access to paid sick leave (Heyman et al., 2009). Just in the past decade, however, a wave of legislation at the state and city level has erupted in the U.S. concerning workers' rights to paid time off for sickness related leave. In 2018 it is expected a combination of 29 counties and municipalities, and seven states, will have already enacted some form of paid sick leave legislation covering the right. Even so, millions of workers in the U.S. will still lack access to paid time away from work to recover when they are ill, seek preventative medical care, or care for a sick child or family member – an idea that has long been recognized as a basic labor standard across developed countries.

From a public health perspective, paid sick leave is important because without the benefit working adults are placed at risk financially, having to forego wages and even risk losing their jobs when acute health care needs arise (Heyman et al., 2009). It is not a stretch, also, to say that even with the guarantee of wage replacement, some workers might still "worry" about the intangible costs of "calling in sick". As a result, workers are likely to suppress their need for leave-taking when afflicted with communicable disease, a practice known as "contagious presenteeism". Such behavior is a major public health issue and one important avenue through which contagious diseases like influenza spread. Globally, seasonal influenza epidemics are responsible for 3 to 5 million cases of severe illness, and roughly 250,000 to 500,000 deaths (WHO, 2016). In the U.S. alone, flu-associated deaths range from 3,000 to 49,000 individuals annually (CDC, 2016).

Workers without paid sick days and leave are also more likely to delay, or forego preventative care altogether. As such, minor health conditions may progress into more serious illnesses leading to workers, employers, and the public all incurring additional and unnecessary health care costs (NPWF). Still, the benefits of paid sick leave go beyond decreased health care costs due to treating a significantly lower number of people showing more severe signs of illness. They also involve costs due to productivity losses associated with sick workers who continue to work but are not fully productive, and the subsequent impacts on economic growth and development, in addition to the collective costs of growing health and social inequities (Scheil-Adlung & Sandner, 2010). Thus, not only does paid sick leave address a major public health concern, it also has wide-ranging economic implications.

The existing literature on paid sick leave is extensive. Studies have traditionally focused on the effect of paid sick leave in European countries due to the wide variety of policy changes available for investigation. Though, as we continue to witness the enactment of sick leave legislation in the U.S., the opportunities for studies to shed light on its domestic impact grow exponentially. On both sides, studies find that more generous sick leave policies typically lead to collective increases in absence-behavior via an intended reduction of contagious presenteeism, but also through an unintended increase in the moral hazard effect known as shirking behavior - the act of calling out sick despite not being contagious and in well enough condition to work (Ahn & Yelowitz, 2016; Pichler & Ziebarth, 2015; Ziebarth & Karlsson, 2010; Henrekson & Persson 2004; Johansson & Palme 2004; Askildsen, Bratberg & Nilsen, 2005). Studies that focus on the effect of paid sick leave on labor outcomes find mixed results (Hill, 2013; Colla et al. 2014; Pichler & Ziebarth, 2016; Callison & Pesko, 2016). Studies also find that paid sick leave increases the use of some medical care services (Peipins et al. 2012; Klein, 2016).

While paid sick leave has been the subject of a number of studies in the past, we aim to address a significant gap in the literature. Due to data limitations and a lack of policy variation, only until recently most existing studies have focused on the effects of paid sick leave in E.U. settings. Large differences in mandate designs and labor markets, however, imply that these studies serve as poor models for the effects of paid sick leave in the U.S. Of the studies that address the effects of paid sick leave in the U.S., only a few do so using person level data and also claim a causal design-- Ahn and Yelowitz (2016) is one of those few studies.

In this paper I use data from the National Health Interview Survey (NHIS) ranging from 2004-2015. To overcome potential validity challenges I adopt the design of Ahn and Yelowitz (2016), which attempts to minimize sample selection issues by focusing on a balanced sample of workers where, from the employer's perspective, the incidence of sick leave is likely to be close to random. In contrast to Ahn and Yelowitz, who examine the effect of paid sick leave insurance on absence-taking in the U.S, I specifically address the effect of paid sick leave on physician office-based visits, visits to a hospital emergency room, absences, and severe sick days (bed days). As far as I know, this is the only study that estimates the causal effect of paid sick leave on physician office-based visits using pooled cross-section data at the person level.

The remainder of the paper is arranged as follows. Section II reviews the current state of the literature. Section III describes the theoretical model, and Section IV explains the data and design of our study. Section V presents the results, and Section VI concludes.

II. Literature Review

The current situation at the global level is that a large number of governments in all regions of the world have already formally recognized the need for paid sick leave by enacting concrete legislative measures guaranteeing workers the benefit. Still, large differences among nations regarding mandate designs, as well as overlapping leave regulations, means the incidence of paid sick leave varies significantly across countries. Notably, in Europe alone there exists a large spectrum of sick leave measures – both, public and private. Germany, for instance, has one of the most generous universal sick leave programs around the world. Based on a federal mandate, employers are required to continue wage payments for up to six weeks per sickness episode (Pichler & Ziebarth, 2015). Separately, Britain operates a system of statutory sick pay that applies to anyone who has a contract of service with an employer, and is equivalent to just one-third of the national adult minimum wage. The state's virtual lack of involvement means Britain's sick leave scheme is effectively a private system. While some firms are more ambitious than others, it is common for many firms to replace incomes at rates greater than the mandatory minima. The system of sick pay in France specifies a structure of replacement rates equal to 0% for the first three days of a sickness spell, 50% for the next 8 days, 90% until the total spell exceeds between 30 and 90 days depending on the worker's tenure. The rate then drops again to 50%. In Sweden, the system of sick leave covers all employed and self-employed workers and provides compensation for foregone hours at a rate of 80% for days 2-14 of a given sickness spell (Treble, 2009).

Such variation in mandate designs naturally serves as a rich backdrop for economists to study the effects of paid sick leave. In Germany, structural breaks in sick leave policies have provided a natural setting to study the effect of paid sick leave on worker's absence behavior. Primarily, studies have found that decreased access to sick leave has a diminishing effect on leave-taking, generally (Ziebarth & Karlsson, 2010). In particular, Pichler and Ziebarth (2015) find that a combination of a 14.8 percent increase in contagious presenteeism behavior, and a

34.1 percent decrease in shirking behavior – skipping work despite not being sick, constitute the overall decrease in absence-taking after reductions in coverage, and reflect the total moral hazard effect – the idea that consumers will alter their behavior when provided with insurance coverage. Using data on Sweden, Johansson and Palme (2005) and Henrekson and Persson (2004) also find a strong effect on absence behavior resulting from changes to paid sick leave coverage levels. Results show that reforms dictating more generous wage replacement rates for sick leave are associated with permanent increases in leave-taking. The opposite is also true – reductions in sick leave coverage are found to significantly decrease the incidence of sickness absences. Data from Sweden also show that the number of paid sick leave days is strongly related to economic cycles and is particularly reduced during periods of high unemployment, which, indirectly, shows that moral hazard is present (Askildsen, Bratberg & Nilsen, 2005). This can be explained by the idea that workers are more vulnerable to be laid off in times of recession, and are likely to suppress sick leave even if their health status is low (Scheil-Adlung & Sandner, 2010). Altogether, these studies provide strong evidence supporting the existence of a significant moral hazard effect related to paid sick leave.

Significant differences concerning mandate designs and labor markets, however, imply that these studies and others like it serve as poor models for the effects of paid sick leave in the U.S. For comparison, Susser and Ziebarth (2016) profile the sick leave landscape in the U.S. using data from the representative 2011 American Time Use Survey (ATUS) Leave Supplement. They find that among U.S. employees only around 40 percent have dedicated paid sick leave coverage that is not part of some larger “Consolidated Leave Plan” or “Paid Time Off (PTO) Bank” – where PTO can be used interchangeably as paid vacation, paid maternity leave, or paid sick leave. Workers most at risk include low-income employees who make less than $20 an hour, and workers who are already in bad health. Gaps in sickness sick leave coverage, they estimate, cause between 2.7 and 3 million U.S. employees to show up to work sick in any given week of the year. Among employees who needed but didn't take sick leave, 27.2 percent reported an inability to afford the loss of income as reason for suppressing leave-taking; 20.4 percent reported the fear of falling behind on too much work as reason; and 11.01 percent reported fear of job loss or other negative repercussion, among other reasons for engaging in presenteeism behavior. Women, in particular, are the most at risk – estimated to be 50 percent more likely to suppress their need for sick leave than their male counterparts. Such behavior is a major driving force behind the spread of contagious disease and should be treated as a major public health concern.

Not unlike in the E.U., Ahn and Yelowitz (2016) also find strong evidence of a moral hazard effect concerning paid sick leave in the U.S. Using a limited sample of Administrative workers from the NHIS and data from Google Flu Trends, they estimate the impact of paid sick leave insurance on absenteeism. Their results reveal that a substantive portion of the estimated impact of paid sick leave on absenteeism is attributable to the total moral hazard effect. They estimate that U.S. employees react to paid sick leave by taking roughly 1.2 more sick days compared to workers that are demographically similar, yet work in firms that do not offer the same coverage. As the model for this paper, later I describe in more detail the unique approach Ahn and Yelowitz (2016) take to overcome certain validity challenges. In particular, due to the voluntary nature of paid sick leave in the U.S., studies at the person level require researchers to think carefully about the likelihood of sample selection issues via non-random worker-firm matching.

As we witness the enactment of sick leave legislation in the U.S., the opportunities for studies to shed light on its domestic impact continue to grow exponentially. Current studies in a U.S. setting already point to evidence that paid sick leave would unambiguously work to curb the spread of contagious disease. Pichler and Ziebarth (2015), for instance, employ a DiD approach using reported Google flu rates at the city level to estimate that population level influenza infection rates decrease by about 10 percent for U.S. employees who obtain paid sick leave coverage. Additionally, studies link access to paid sick leave with increased use of medical care services. Using 2008 NHIS data, Peipins et al. (2012) find that the proportion of workers undergoing mammography, Pap test, endoscopy and medical care-seeking were significantly higher for those with paid sick leave. Callison and Pesko (2016) also estimate the impact of U.S. sick leave mandates on use of medical services. Also using a DiD model, they find no evidence that paid sick leave mandates affect dental visits, mental health visits, or medical specialist visits. Their results do show that the adoption of a sick leave mandate corresponds with an increase in general doctor visits and an almost 23 percent decline in hospital emergency room visits for individuals in the treatment county. Triple difference estimates also show that mandate adoption is associated with a 20 percent increase in general practitioner visits for those who benefit most from sick leave mandates. Combined, these studies suggest that medical care seeking and avoiding communicable diseases becomes relatively easier for individuals with sick leave coverage.

In addition to curtailing the exponentiation of communicable diseases, there is evidence that paid sick leave also helps to alleviate another problem in the form of hospital emergency room (ER) overcrowding. Klein (2016), for instance, cites studies contending that at least half of all emergency room visits in the U.S. are for the care of conditions that are considered nonurgent by medical standards. In addition to medical care at emergency rooms being up to three times more expensive than that of office-based visits, research also suggests that emergency room crowding is associated with increased hospital mortality, increased time to treatment for patients with time-sensitive conditions, higher probability of patients leaving the emergency room against medical advice without being treated, increases in medical errors, and increases in ambulance diversions. Paid sick leave would unambiguously work to improve emergency room crowding effects. As more workers gain access to sickness insurance, they are more likely to take advantage of preventative medical services and minor health conditions are addressed before turning into more serious illnesses.

With respect to labor market outcomes, Hill (2013) uses Medical Expenditure Panel Survey (MEPS) data to provides some of the first evidence that paid sick leave increases job stability and security. His results suggest that having access to paid sick leave decreases the probability of job separation by at least 25 percent. Colla et al. (2014), in contrast, find that firms in San Francisco that offered a new policy as a result of an ordinance were more likely to report reductions in compensation. These changes included reducing employee vacation time, or decreasing pay raises or bonuses relative to firms that did not make any major changes to their sick leave policy. At the same time, firms that made a major change to their policy were also more likely to report improved employee morale. Adopting firms were also more likely to report worse profitability than were firms that made no changes.

This has been one of the main sticking points for opponents of paid sick leave. In addition to encouraging shirking behavior, they argue that forcing employers to provide sick pay through mandates would increase labor costs, ultimately dampening job creation and hurting employment. Pichler and Ziebarth (2016), however, find little evidence to suggest that either employment or wage growth was significantly affected by sick pay mandates in the U.S. Using the Method of Synthetic Control Groups (SCGM), they exclude with "high statistical precision that employment or wages have decreased by more than 1% when assessing all treatment counties jointly". Similarly, Callison and Pesko (2016) also estimate the effect of paid sick leave mandates in the U.S. on labor market outcomes. Using a DiD approach, they find no significant effect of sick leave mandates on any of their labor market outcomes, including tenure at current job, weekly hours worked, and labor force participation. When using a triple difference approach, however, for those most likely to gain access to sick leave they find that average weekly hours worked fall by roughly 8 percent, and private sector employment declines nearly 7 percent following mandate adoption. At the same time, job tenure and labor force participation are shown to remain unaffected. Clearly, the literature concerning the effect of paid sick leave on labor market outcomes is mixed.

III. Theoretical Model

The conceptual framework for this study is adopted from a mix of standard work-leisure models that study the absence and medical services seeking behavior of workers. According to the Grossman (1972) model for health, it is assumed that individuals inherit an initial stock of health capital that depreciates over time – at an increasing rate, at least after some stage in the life cycle, and can be increased with investments in health capital (medical services, exercise, diet). The condition that the depreciation rate of the health stock increases with time (age) is important because it establishes that, all else equal, less healthy individuals (older) are more likely to make larger gross investments in health capital than healthy individuals (younger). This reinforces what we already know related to diminishing returns – the incremental decrease of output in the production of a commodity as one input is increased, while other inputs are held fixed. That is, for any given individual there exist a negative relationship between the current level of health stock, and the rate of return of investments in so called health. As more health capital is accumulated and the health stock grows, investments in health will exhibit diminishing marginal productivity. This means that individuals who are younger, and in good health stand to benefit less from incremental investments in health capital than their older, less healthy counterparts. As such, we expect that as health depreciates over time, time lost due to sickness and/or injury is positively correlated with use of medical services, and own time "used". In this way, at least part of time lost due to sickness can be described as "recovery time" (p. 240).

Beginning from the simple framework of an individual utility function, individuals receive the utility associated with being 'healthy' until contracting an illness of a specific type. We focus our study on acute illnesses, as opposed to chronic illnesses or health problems, as they are more likely to affect the daily attendance decisions of individuals (Gilleskie, 1998, p.3). Once ill, the individual makes optimizing decisions about seeking medical treatment and/or absence behavior. From Gilleskie (1998), the utility of an individual who is well, $U^W(\cdot)$, depends only on the composite consumption good, X_t. The utility of an individual who is ill, $U^S(\cdot)$, depends on consumption, the type of acute illness, and a vector of medical care use and work absence choices during each period of illness. For simplicity, the utility of an individual is denoted as

(1) $U^W(X_t) = X_t$ if well,

(2) $U^S(X_t, k, d_t, \epsilon_{tk})$ if ill.

Where X_t is determined by a per-period budget constraint; k reflects the type and severity of the acute illness; d_t represents a vector of medical care use and work absence choices, $\boldsymbol{d}_t = (d_t^1, d_t^2, d_t^3, d_t^4)$; and ϵ_{tk} represent choice specific random taste components of utility which also affect an individual's utility when ill. Equation (1) can be thought of as the "normal" state under which the great majority, 80-90 percent of all workers, fall every day.

The per-period budget constraint determines the composite consumption good, X_t. Assuming workers are not saving but consuming their entire income,

$$(3) \qquad X_t = \begin{cases} Y \text{ if well,} \\ Y - pC(d_t^2 + d_t^4) - Y(1 - [\Phi(a_{t+1})]L)(d_t^3 + d_t^4) \text{ if ill.} \end{cases}$$

Where Y denotes per period labor income; d_t^j are indicator variables equal to 0 or 1, and reflect the medical care seeking and absence choices available to an individual who is ill; the product pC defines an individual's out-of-pocket cost of a medical visit, which reflects the total price p of a visit and the out-of-pocket rate C, $C \in [0, 1]$; the variable L indicates sick leave coverage, where $L = 1$ if an individual has sick leave coverage and $L = 0$, otherwise; and, $\Phi(\cdot)$, represents the wage replacement rate (pp. 17-18).

The model shows that the utility of an individual with sickness k in period t of a sickness spell is a function of income, health insurance, and sick leave coverage. Conditional on these factors, workers make medical care seeking and absence choices to maximize discounted lifetime expected utility. Seeking treatment means the individual incurs the medical costs not covered by health insurance. Staying home from work also implies that income may be foregone depending on the level of sick leave coverage. Each period the decision making continues until the individual recovers, with past choices of medical treatment and absence improving the probability of recovery. In other words, while medical care consumption and absenteeism are shown to be costly, they may benefit an individual by reducing the length of a given illness episode. As insurance and sick leave coverage levels increase, it becomes less costly for employees to seek medical care and/or engage in absence-taking behavior. Consequently, individuals with insurance are expected to consume more medical services in the event of illness than those facing the full market price. Similarly, individuals with higher levels of sick leave coverage are more likely to take leave in the event of illness than those facing the full cost of a work absence. On the other hand, for a given replacement rate, (α_t), there exist a share of workers, $\pi_t(\alpha_t)$, who are ill but do not find it rational to be absent from work. These individuals choose to suppress their need for medical services and and/or absence, and are at work despite being sick – also known as *contagious presenteeism*. For workers who are ill but do not find it rational to be absent from work, gaining increased access to sick leave coverage might induce these workers to call in sick. By increasing the replacement rate and reducing the cost of absence, paid sick leave makes it more likely that workers in poor health will follow through on their need for recovery time and medical treatment. In turn, sick leave coverage it expected to have a decreasing (increasing) effect on presenteeism behavior (sickness absence-taking). For workers who are contagious, this means decreasing the spread of communicable disease to other susceptible employees and consumers.

Workers that engage in contagious presenteeism behavior trigger negative externalities by exposing healthy, susceptible individuals to potential infection and facilitating the spread of communicable disease. Ordinarily, all costs and benefits are fully internalized by the parties directly involved in a market transaction, and others not involved in the exchange are unaffected. When an externality occurs, consumers and sellers do not fully internalize all the costs and benefits of the transaction. As a result, external costs that adversely affect another party not directly involved in the transaction are generated, and the product is usually overproduced from a societal perspective. In the case of contagious presenteeism, workers do not internalize the negative social costs associated with attending work while sick into their work-leisure demand. In turn, labor is overconsumed relative to the social optimum and disease spreads. In simple economic terms, the marginal private benefit (MPB) of labor is greater than the marginal social benefit (MSB). The marginal social benefit of a good considers the additional costs inflicted on society and therefore lies below the marginal private benefit. The external costs underlie the difference between the two benefit curves (Santerre & Neun, 2013).

As such, we expect paid sick leave coverage to increase absence-taking through an intended reduction in welfare-reducing contagious presenteeism behavior. Conceptually, a reduction in the cost of a work absence may also increase the use of medical services by facilitating worker access to services typically available during conventional work hours, such as doctor visits and other medical care services. As a result, we expect paid sick leave to have a positive effect on physician office-based visits. This would mean work absences and medical services are complements. So long as hospital emergency rooms visits substitute for primary care physician visits because of time constraints on workers, then an increase in physician office-based visits may be accompanied by a reduction in hospital emergency room use. Alternatively, use of medical care services may be expected to decrease with paid sick leave through the reduced likelihood of the spread of communicable illnesses in the workplace (Callison & Pesko, 2016). That is, if paid sick leave incentives are effective, then public sickness insurance schemes might work to ameliorate presenteeism and the concomitant spread of disease, leading to a reduction in use of medical services in the long-term. Moreover, if medical care and absences are complements, one might also expect paid sick leave to increase demand for medical services.

IV. Data and Design

To study the effects of paid sick leave on worker's demand for health services, primarily physician office-based visits among other outcomes, I analyze data from the National Health Interview Survey (NHIS) – a nationally representative cross-sectional health survey of households in the United States. Conducted by the National Center for Health Statistics (NCHS), the NHIS provides continuous sampling and interviewing of the civilian, noninstitutionalized population of the U.S.

We link three components of NHIS data, including the sample adult file, person file, and family file, which asks on an ongoing basis sample adult workers about access to paid sick leave; number of visits to a doctor, clinic or any other health care professional place; reported hospital emergency room visits in the past 12 months; absences from work due to illness or injury; and number of days bedridden from severe sickness or injury, among other worker and firm-level characteristics.

This study follows closely the paper by Ahn and Yelowitz (2016) that estimates the causal effect of paid sick leave insurance on absence-taking in the U.S. Due to the voluntary nature of paid sick leave in the U.S., studies at the person level require researchers to think carefully about the likelihood of sample selection issues via non-random worker-firm matching. As a non-wage benefit, paid sick leave is offered as part of a more comprehensive benefits package, and it is not unreasonable to expect that workers who place a higher value on these benefits are likely to match with more generous firms. If that is the case, the treatment – "Do you have paid sick leave on this main job or business?" – is no longer randomly assigned and any estimate of β_1 will be biased, as a result. To maintain the validity of the analysis, it is important that the treatment group not be composed disproportionately of those who use health services more than the typical person in all forms. To overcome this sample selection issue, Ahn and Yelowitz (2016) create a sample that is balanced on both sides of the treatment variable. They achieve this by restricting their sample to an occupation category where, from the employer's perspective, whether or not sick leave is offered to this class of employees is random. Specifically, the occupation category must (1) not require a high amount of initial human capital (academic or experience) (2) be relatively homogenous in job description, and (3) not lead to large increases in pay or status after years of employment, thus making employees readily substitutable from the employer's perspective. Having met this criteria, it is assumed (1) workers are unlikely to self-select into these occupations based on preferences for secondary and tertiary features of compensation schemes, (2) nor is a firm likely to design its human resources policy with this class of workers as a primary class of employees to satisfy (p.15). The occupation need also be well-represented across all industry groups. With these considerations, the sample is restricted to two common occupations categories: "Sales and Related Occupations" and "Office and Administrative Support Operations."

I employ the same causal design to study the effect of paid sick leave on worker's use of medical services, primarily physician office-based visits, but also visits to a hospital emergency room, absences, and severe sick days. The first column of summary statistics from Table 1 separates roughly 140,000 workers from 2004 – 2015 by whether or not their employer offered paid sick leave, and shows large differences in observable characteristics. Workers with paid sick leave are absent more often than those without, but also have large differences in lifestyle habits such as smoking, exercise, and alcohol use. We also observe differences in socioeconomic status, including age, gender, marital status, race, and education. Workplace characteristics also differ, specifically tenure, hourly status, public worker status, and health insurance. The fact that workplace characteristics and demographics vary between workers with and without paid sick leave confirms the existence of non-random matching between workers and firms (Ahn & Yelowitz, 2016, p.14).

In contrast, summary statistics in Table 1 from the Sales and Administrative Worker sample, compared to the full sample from the NHIS, illustrates that our sample is much more balanced. While similarities across demographic characteristics such as gender, race, and marital status are encouraging, the most important feature of our balanced sample is that the number of severe sick days is nearly identical across the treatment. Whereas before, workplace characteristics varied between workers with and without paid sick leave, in effect confirming the existence of non-random matching between workers and firms, after balancing, similarities across demographic characteristics such as gender, race, marital status and number of severe sick days, serve as a clear indication that workers in these occupations did not select into a particular job to take advantage of paid sick leave because they were more or less susceptible to severe illness[1].

With this basic specification and restriction of the sample to a homogenous occupation, the assignment of paid sick leave for any given employee will be close to random. Therefore, β_1

[1]Although the sample is much more balanced across paid sick leave status compared to the full sample, fundamental differences still exist. For example, workers with paid sick leave are more likely to be working for public institutions and more likely to be offered employer sponsored health insurance (ESHI). These workers also earn higher income, and are likely to have higher average tenure on the job.

should be a measure of the causal impact of paid sick leave access, at least for the balanced group in consideration.

V. Econometric Model and Results

I use our limited sample of Sales and Administrative Workers to estimate the effect of having access to paid sick leave on multiple outcomes. Our baseline model is as follows.

$$E(OUTCOME_{it}) = f(\alpha + \beta_1 PSL_{it} + \beta_2 Educ_{it} + \beta_3 Martl_{it} + \beta_4 Female_{it} + \\ + \beta_5 Age_{it} + \beta_6 Race_{it} + \beta_8 Income_{it} + \beta_8 Health_{it} + \beta_9 Comorbidities_{it})$$

Where $OUTCOME_{it}$, represents one of our four outcome variables, including number of physician office-based visits; visits to a hospital emergency room; absences; and severe sick days. Both physician office-based visits and visits to a hospital emergency room are organized as categorical variables. In contrast, absences and severe sickness days exist as counts. PSL_{it} is our independent variable of interest and is an indicator equal to one based on the survey question "Do you have paid sick leave on this main job, job you held the longest, or job you held most recently?". Following the design of Bhuyan et al. (2016), $Educ_{it}$ is a categorical variable measuring educational attainment and is grouped as less than high school, high school, and college and above; $Martl_{it}$ is a marital status dummy categorized as married and not currently married/never married; $Female_{it}$ is a gender indicator equal to 1 if respondent is female; Age_{it} is a continuous variable including adults between 18 – 64; $Race_{it}$ is a factor variable grouped into 4 classifications including non-Hispanic white, non-Hispanic black, Hispanic, and non-Hispanic other; $Health_{it}$ is a categorical variable and is a measure of self-reported health status grouped as excellent health, very good health, good health, fair health, and poor health; $Comorbidities_{it}$ is an indicator variable equal to 1 if the respondent has one or more comorbidity conditions including diabetes, asthma, heart disease, or cancer.

Tables 2 and 3 present the initial results of two separate ordered logit regressions using frequency of physician office-based visits, and frequency of visits to a hospital emergency room as the dependent variables, respectively. In comparison, Tables 4 and 5 describe results from two separate negative binomial regressions using number of severe sick days, and absences from work as dependents, respectively. For each of our dependent variables, we estimate five cumulative models using an array of covariates.

As expected, our results show that having access to paid sick leave has a significant positive effect on worker's likelihood to visit a doctor, clinic or any other health care professional place. Our baseline model, column (1) of Table 1, estimates that paid sick leave is expected to increase the likelihood of visiting a physician's office for treatment by 30.6 percent and is highly significant at the 1 percent level. When I control for insurance status, tenure, and hourly status in columns (2) – (4), the magnitude of the effect decreases uniformly to 13.5 – 14.0 percent, still significant at the 1 percent level. When we include additional measures such as body mass index (BMI), smoker status, exercise, alcohol status, ESHI, and public/private worker status, the magnitude of β_1 falls to 6.9 percent, and is now significant at the 5 percent level.

Table 3 present the results of our cumulative models estimating the effect of paid sick leave on the likelihood to visit to a hospital emergency room. The results show, across the board, that having access to paid sick leave has no significant effect on an individual's likelihood to visit a hospital emergency room.

Having access to paid sick leave is also estimated to have a significant positive effect on number of days bedridden from severe sickness or injury. Our baseline model, column (1) of Table 4, estimates that having access to paid sick leaves increases number of days bedridden from severe sickness or injury by 18.4 percent, significant at the 1 percent level. Our findings are robust when we include insurance status, tenure, hourly status, and other regressors in columns (2) – (5), though the magnitude of the effect decreases slightly to 15.9 – 15.0 percent. Notably, the unconstrained model is significant at the 5 percent level.

Finally, paid sick leave is estimated to also have a significant positive effect on absences. Our baseline estimate, column (1) of Table 5, finds that having access to paid sick leave increases absences by 28.1 percent, all else equal, and is significant at the 1 percent level. The additive models of columns (1) – (4) find a similar result, estimating that paid sick leave increases absences by 24.8 – 22.1 percent, also significant at the 1 percent level. Our unconstrained model, column (5), finds an effect of a lesser magnitude, estimating that having access to paid sick leave increases absences by 14.6 percent, significant at the 5 percent level.

VI. Discussion

Using the publicly available NHIS dataset that asks respondents about number of visits to a doctor, clinic or any other health care professional place, whether their employing firm offers access to paid sick leave, and other detailed information about both workers and firms, our estimates find that workers who have access to paid sick leave are 6.9 – 30.6 percent more likely to incur physician office-based visits. This result is not surprising considering that paid sick leave reflects a reduction in the cost of short-term work absences specifically for the purpose of medical care seeking and recovery from illness. As the cost of missing work decreases, workers are observed to demand more medical care services. In turn, we conclude that absences from work and medical care seeking are complements – a reduction in the cost of a work absence leads to increases in the use of medical services by facilitating worker access to services typically available during conventional work hours, such as doctor visits and other medical care services.

Naturally, we also find that having access to paid sick leave increases the likelihood of incurring a work absence by 14.6 – 28.1 percent. Though part of this effect can be interpreted as days missed from work for purposes of recovery or seeking medical care, another part of the effect is a rise in moral hazard behavior associated with shirking. The discernment of the two effects is beyond the scope of this paper.

Further, we find that paid sick leave is associated with a 14.9 – 18.4 percent rise in the number of absences due to severe sickness, or bed days, which can be thought of as involuntary absence due to sickness. This effect also includes workers who are incapacitated by non-contagious illnesses, such as back pain, and can be interpreted partially as a reduction in the productivity losses associated with sick workers who continue to work but are not fully productive. That being said, part of this effect is also a reduction in the harmful behavior known as contagious presenteeism, where workers show up to work despite having a transmittable illness. Such behavior leads to negative spillover effects by facilitating the spread of communicable disease, as well as health costs associated with delaying treatment or the need for recovery, and productivity losses associated with sick workers who continue to work but are not fully productive.

Finally, while workers without paid sick days are expected to be more likely to delay, or forego preventative care altogether, allowing minor health conditions to progress into more serious illnesses, we find no significant effect of paid sick leave on the likelihood to visit a hospital emergency room. This result can be interpreted to mean that because hospital emergency rooms are reserved for urgent care, once an illness has progressed past a certain point of severity workers are likely to seek emergency treatment regardless of whether or not they have sick leave coverage.

VII. Conclusion

All in all, our results have important policy implications regarding the role of paid sick leave in ameliorating the spread of communicable illnesses and improving social welfare through health and economic gains. The increasing effect of paid sick leave on severe sickness absences is taken to reflect a reduction in the harmful behavior that is contagious presenteeism. As workers gain increased access to sick leave coverage, those afflicted serious illness are more likely to take up absence for medical care seeking and recovery without the fear of wage loss. Additionally, minor health conditions are addressed before turning into more serious illnesses, though our results find no significant effect of paid sick leave on visits to a hospital emergency room. This means infectious workers are less likely to spread contagious disease, plus firms save on the productivity losses associated with sick workers who continue to work but are not fully productive. The combined result is welfare enhancing.

Table 1

Summary Statistics

	All Occupations		Sales & Admin Support	
	PSL = 0	PSL = 1	PSL = 0	PSL = 1
Hospital emergency room visits	0.240	0.206	0.246	0.224
	(0.003)	(0.002)	(0.006)	(0.004)
Public Sector Worker?	0.066	0.251	0.047	0.169
	(0.001)	(0.001)	(0.002)	(0.003)
Married?	0.479	0.522	0.466	0.482
	(0.002)	(0.002)	(0.005)	(0.003)
High School Grad or Dropout	0.812	1.48	0.906	0.953
	(0.002)	(0.002)	(0.003)	(0.001)
ESHI?	0.392	0.938	0.421	0.918
	(0.002)	(0.001)	(0.005)	(0.002)
Abstain from alcohol	0.311	0.258	0.315	0.259
	(0.002)	(0.001)	(0.004)	(0.003)
Never smoked?	0.589	0.649	0.609	0.628
	(0.002)	(0.002)	(0.005)	(0.003)
Comorbidities	0.012	0.008	0.014	0.009
	(0.000)	(0.000)	(0.001)	(0.001)
Physician office visits	1.828	2.301	2.042	2.3901
	(0.041)	(0.007)	(0.019)	(0.014)
Never exercise?	0.461	0.37	0.424	0.385
	(0.002)	(0.002)	(0.005)	(0.003)
Absences	3.392	4.0702	3.338	4.415
	(0.067)	(0.049)	(0.147)	(0.107)
Severe sick days (bed days)	1.899	1.854	2.139	2.123
	(0.041)	(0.027)	(0.111)	(0.062)
BMI	2.421	2.537	2.421	2.537
	(0.010)	(0.008)	(0.010)	(0.008)
Female	0.458	0.526	0.632	0.669
	(0.002)	(0.002)	(0.005)	(0.003)
Tenure	7.926	9.809	7.065	9.506
	(0.033)	(0.028)	(0.070)	(0.056)
Self Health	2.141	2.008	2.118	2.066
	(0.004)	(0.003)	(0.009)	(0.006)
Hourly	0.616	0.521	0.616	0.610
	(0.002)	(0.002)	(0.003)	(0.001)
Age	41.262	42.717	40.928	42.449
	(0.052)	(0.037)	(0.125)	(0.079)
Non-White	0.425	0.369	0.359	0.369
	(0.002)	(0.002)	(0.005)	(0.003)

Data Source: 2004-2015 National Health Interview survey. Standard Errors in parentheses.

Table 2
Frequency of Office Visits, ologit

VARIABLES	(1) Baseline	(2) w/ Insurance	(3) w/ Tenure	(4) w/ Hourly	(5) Unconstrained
PSL?(Yes/No)	0.306***	0.140***	0.138***	0.135***	0.0694**
	(0.0281)	(0.0288)	(0.0288)	(0.0289)	(0.0330)
Married	0.161***	0.0931***	0.0925***	0.0931***	0.0861***
	(0.0243)	(0.0248)	(0.0248)	(0.0248)	(0.0259)
Female	0.995***	0.959***	0.958***	0.956***	0.959***
	(0.0269)	(0.0271)	(0.0271)	(0.0272)	(0.0292)
Non-Hispanic White					
Non-Hispanic Black	-0.223***	-0.220***	-0.220***	-0.224***	-0.277***
	(0.0329)	(0.0334)	(0.0334)	(0.0335)	(0.0348)
Hispanic	-0.275***	-0.203***	-0.203***	-0.205***	-0.247***
	(0.0349)	(0.0350)	(0.0350)	(0.0350)	(0.0371)
Non-Hispanic Other	-0.374***	-0.345***	-0.343***	-0.344***	-0.278***
	(0.0526)	(0.0536)	(0.0536)	(0.0536)	(0.0572)
Less than High school					
High School	0.349***	0.241***	0.242***	0.243***	0.222***
	(0.0548)	(0.0546)	(0.0546)	(0.0546)	(0.0575)
College or above	0.497***	0.369***	0.372***	0.376***	0.342***
	(0.0569)	(0.0567)	(0.0567)	(0.0568)	(0.0601)
Age	-0.0404***	-0.0305***	-0.0316***	-0.0313***	-0.0327***
	(0.0073)	(0.0073)	(0.0074)	(0.0074)	(0.0078)
Age squared	0.000548***	0.000420***	0.000428***	0.000425***	0.000428***
	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Excellent Health					
Very good Health	0.395***	0.408***	0.407***	0.406***	0.364***
	(0.0271)	(0.0275)	(0.0275)	(0.0275)	(0.0291)
Good Health	0.704***	0.735***	0.734***	0.734***	0.678***
	(0.0320)	(0.0323)	(0.0323)	(0.0323)	(0.0347)
Fair Health	1.409***	1.437***	1.437***	1.435***	1.389***
	(0.0616)	(0.0609)	(0.0609)	(0.0609)	(0.0642)
Poor Health	1.939***	2.001***	2.002***	1.998***	2.011***
	(0.1890)	(0.1820)	(0.1820)	(0.1820)	(0.1980)
No Comorbidities					
One or more Comorbidities	1.251***	1.206***	1.206***	1.205***	1.165***
	(0.1170)	(0.1150)	(0.1150)	(0.1150)	(0.1230)
ESHI?(Yes/No)					0.0212
					(0.0401)

Table 2 (Cont'd)
Frequency of Office Visits, ologit

VARIABLES	(1) Baseline	(2) w/ Insurance	(3) w/ Tenure	(4) w/ Hourly	(5) Unconstrained
Uninsured					
Private Insurance		1.303***	1.301***	1.300***	1.239***
		(0.0452)	(0.0452)	(0.0453)	(0.0505)
Public Insurance		1.546***	1.545***	1.545***	1.529***
		(0.0725)	(0.0725)	(0.0725)	(0.0762)
Other Insurance		1.678***	1.678***	1.675***	1.622***
		(0.0914)	(0.0914)	(0.0915)	(0.0960)
BMI, 1st Quartile					
BMI, 2nd Quartile					0.0880**
					(0.0352)
BMI, 3rd Quartile					0.169***
					(0.0353)
BMI, 4th Quartile					0.267***
					(0.0369)
Tenure, Low					
Tenure, High			0.0322	0.0328	0.0046
			(0.0266)	(0.0266)	(0.0278)
Hourly?(Yes/No)				0.0306	0.0143
				(0.0276)	(0.0293)
Smoker?(Yes/No)					-0.118***
					(0.0331)
Exercise?(Yes/No)					0.177***
					(0.0253)
Other Alcohol					
Heavy/Moderate Alcohol					-0.0633**
					(0.0311)
Public Worker?(Yes/No)					0.261***
					(0.0351)
Observations	24,454	24,266	24,266	24,262	22,355
Year Effects	Yes	Yes	Yes	Yes	Yes
Income Effects	Yes	Yes	Yes	Yes	Yes
Region Effects	Yes	Yes	Yes	Yes	Yes

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 3
Visits to ER, ologit

VARIABLES	(1) Baseline	(2) w/ Insurance	(3) w/ Tenure	(4) w/ Hourly	(5) Unconstrained
PSL?(Yes/No)	0.0551	0.0622	0.0688	0.0597	0.0203
	(0.0427)	(0.0442)	(0.0442)	(0.0444)	(0.0491)
Married	-0.101***	-0.105***	-0.102***	-0.0981**	-0.0567
	(0.0385)	(0.0392)	(0.0392)	(0.0392)	(0.0409)
Female	0.205***	0.191***	0.194***	0.189***	0.176***
	(0.0409)	(0.0414)	(0.0414)	(0.0415)	(0.0443)
Non-Hispanic White					
Non-Hispanic Black	0.363***	0.328***	0.330***	0.319***	0.351***
	(0.0492)	(0.0499)	(0.0499)	(0.0501)	(0.0520)
Hispanic	-0.0638	-0.0755	-0.0717	-0.0759	-0.0405
	(0.0538)	(0.0547)	(0.0547)	(0.0547)	(0.0572)
Non-Hispanic Other	-0.393***	-0.421***	-0.425***	-0.423***	-0.340***
	(0.0941)	(0.0959)	(0.0959)	(0.0959)	(0.1000)
Less than High school					
High School	0.0084	0.0285	0.0239	0.0256	0.0071
	(0.0750)	(0.0765)	(0.0764)	(0.0764)	(0.0783)
College or above	-0.111	-0.0991	-0.116	-0.104	-0.0847
	(0.0803)	(0.0817)	(0.0818)	(0.0819)	(0.0843)
Age	-0.0408***	-0.0420***	-0.0374***	-0.0362***	-0.0454***
	(0.0111)	(0.0112)	(0.0113)	(0.0113)	(0.0119)
Age squared	0.000279**	0.000295**	0.000265**	0.000253*	0.000355**
	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Excellent Health					
Very good Health	0.335***	0.336***	0.339***	0.335***	0.287***
	(0.0481)	(0.0484)	(0.0485)	(0.0485)	(0.0508)
Good Health	0.764***	0.759***	0.762***	0.758***	0.664***
	(0.0502)	(0.0505)	(0.0505)	(0.0506)	(0.0541)
Fair Health	1.399***	1.381***	1.384***	1.378***	1.268***
	(0.0727)	(0.0733)	(0.0733)	(0.0734)	(0.0781)
Poor Health	1.858***	1.850***	1.853***	1.843***	1.709***
	(0.1930)	(0.1920)	(0.1920)	(0.1930)	(0.2070)
No Comorbidities					
One or more Comorbidities	1.084***	1.052***	1.051***	1.046***	1.006***
	(0.1400)	(0.1420)	(0.1420)	(0.1410)	(0.1460)
ESHI?(Yes/No)					0.0762
					(0.0601)

Table 3 (Cont'd)
Visits to ER, ologit

VARIABLES	(1) Baseline	(2) w/ Insurance	(3) w/ Tenure	(4) w/ Hourly	(5) Unconstrained
Uninsured					
Private Insurance		0.105*	0.116*	0.109*	0.0838
		(0.0618)	(0.0618)	(0.0619)	(0.0683)
Public Insurance		0.742***	0.742***	0.740***	0.723***
		(0.0872)	(0.0872)	(0.0872)	(0.0912)
Other Insurance		0.897***	0.898***	0.889***	0.831***
		(0.1210)	(0.1210)	(0.1210)	(0.1270)
BMI, 1st Quartile					
BMI, 2nd Quartile					-0.0143
					(0.0568)
BMI, 3rd Quartile					0.101*
					(0.0563)
BMI, 4th Quartile					0.240***
					(0.0553)
Tenure, Low					
Tenure, High			-0.148***	-0.148***	-0.136***
			(0.0413)	(0.0414)	(0.0431)
Hourly?(Yes/No)				0.115***	0.0873*
				(0.0444)	(0.0471)
Smoker?(Yes/No)					0.288***
					(0.0460)
Exercise?(Yes/No)					0.0142
					(0.0389)
Other Alcohol					
Heavy/Moderate Alcohol					0.0075
					(0.0492)
Public Worker?(Yes/No)					0.0566
					(0.0566)
Observations	24,488	24,300	24,300	24,296	22,380
Year Effects	Yes	Yes	Yes	Yes	Yes
Income Effects	Yes	Yes	Yes	Yes	Yes
Region Effects	Yes	Yes	Yes	Yes	Yes

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 4
Number of Bed Days Taken, nbreg

VARIABLES	(1) Baseline	(2) w/ Insurance	(3) w/ Tenure	(4) w/ Hourly	(5) Unconstrained
PSL?(Yes/No)	0.184***	0.159***	0.158***	0.150***	0.149**
	(0.0548)	(0.0567)	(0.0567)	(0.0567)	(0.0583)
Married	-0.193***	-0.206***	-0.206***	-0.204***	-0.205***
	(0.0471)	(0.0464)	(0.0463)	(0.0462)	(0.0449)
Female	0.398***	0.390***	0.390***	0.387***	0.419***
	(0.0546)	(0.0546)	(0.0543)	(0.0544)	(0.0511)
Non-Hispanic White					
Non-Hispanic Black	-0.0324	-0.0286	-0.0290	-0.0377	-0.0557
	(0.0763)	(0.0762)	(0.0762)	(0.0761)	(0.0743)
Hispanic	-0.218***	-0.218***	-0.219***	-0.222***	-0.268***
	(0.0685)	(0.0678)	(0.0676)	(0.0680)	(0.0618)
Non-Hispanic Other	-0.333***	-0.317***	-0.318***	-0.317***	-0.267***
	(0.0958)	(0.0952)	(0.0947)	(0.0951)	(0.0973)
Less than High school					
High School	0.1090	0.0718	0.0726	0.0771	-0.0016
	(0.1080)	(0.1070)	(0.1070)	(0.1070)	(0.1090)
College or above	0.0921	0.0497	0.0534	0.0654	0.0086
	(0.1110)	(0.1110)	(0.1120)	(0.1120)	(0.1150)
Age	0.0385***	0.0381***	0.0373***	0.0389***	0.0397***
	(0.0131)	(0.0131)	(0.0134)	(0.0133)	(0.0137)
Age squared	-0.000515***	-0.000512***	-0.000507***	-0.000524***	-0.000539***
	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)
Excellent Health					
Very good Health	0.365***	0.368***	0.368***	0.367***	0.321***
	(0.0579)	(0.0577)	(0.0575)	(0.0576)	(0.0562)
Good Health	0.882***	0.877***	0.877***	0.876***	0.830***
	(0.0646)	(0.0642)	(0.0641)	(0.0642)	(0.0658)
Fair Health	1.729***	1.703***	1.702***	1.703***	1.620***
	(0.0969)	(0.0955)	(0.0951)	(0.0954)	(0.0975)
Poor Health	2.404***	2.394***	2.394***	2.391***	2.214***
	(0.2320)	(0.2370)	(0.2380)	(0.2390)	(0.2400)
No Comorbidities					
One or more Comorbidities	1.246***	1.257***	1.254***	1.251***	1.278***
	(0.1750)	(0.1730)	(0.1720)	(0.1740)	(0.1830)
ESHI?(Yes/No)					0.120*
					(0.0690)

Table 4 (Cont'd)
Number of Bed Days Taken, nbreg

VARIABLES	(1) Baseline	(2) w/ Insurance	(3) w/ Tenure	(4) w/ Hourly	(5) Unconstrained
Uninsured					
Private Insurance		0.227***	0.225***	0.217***	0.177**
		(0.0723)	(0.0721)	(0.0724)	(0.0769)
Public Insurance		0.292**	0.291**	0.280**	0.269*
		(0.1330)	(0.1320)	(0.1310)	(0.1420)
Other Insurance		0.448***	0.448***	0.439***	0.416**
		(0.1560)	(0.1560)	(0.1580)	(0.1690)
BMI, 1st Quartile					
BMI, 2nd Quartile					0.124*
					(0.0639)
BMI, 3rd Quartile					0.175**
					(0.0717)
BMI, 4th Quartile					0.176***
					(0.0661)
Tenure, Low					
Tenure, High			0.0315	0.0306	0.0211
			(0.0554)	(0.0555)	(0.0548)
Hourly?(Yes/No)				0.0755	0.0945*
				(0.0514)	(0.0522)
Smoker?(Yes/No)					0.193***
					(0.0600)
Exercise?(Yes/No)					0.0365
					(0.0464)
Other Alcohol					
Heavy/Moderate Alcohol					0.0729
					(0.0569)
Public Worker?(Yes/No)					0.156***
					(0.0566)
Observations	24,635	24,445	24,445	24,441	22,427
Year Effects	Yes	Yes	Yes	Yes	Yes
Income Effects	Yes	Yes	Yes	Yes	Yes
Region Effects	Yes	Yes	Yes	Yes	Yes

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

Table 5
Absences from Work, nbreg

VARIABLES	(1) Baseline	(2) w/ Insurance	(3) w/ Tenure	(4) w/ Hourly	(5) Unconstrained
PSL?(Yes/No)	0.281***	0.248***	0.244***	0.221***	0.146**
	(0.0611)	(0.0598)	(0.0596)	(0.0599)	(0.0612)
Married	-0.133***	-0.145***	-0.147***	-0.146***	-0.135***
	(0.0463)	(0.0452)	(0.0452)	(0.0451)	(0.0439)
Female	0.238***	0.217***	0.218***	0.210***	0.175***
	(0.0488)	(0.0473)	(0.0472)	(0.0472)	(0.0473)
Non-Hispanic White					
Non-Hispanic Black	0.1070	0.0940	0.0922	0.0748	0.0348
	(0.0721)	(0.0673)	(0.0673)	(0.0689)	(0.0693)
Hispanic	-0.189***	-0.187***	-0.189***	-0.192***	-0.231***
	(0.0647)	(0.0637)	(0.0633)	(0.0641)	(0.0586)
Non-Hispanic Other	-0.423***	-0.396***	-0.393***	-0.391***	-0.379***
	(0.0893)	(0.0907)	(0.0909)	(0.0912)	(0.0868)
Less than High school					
High School	0.0706	0.0218	0.0245	0.0366	-0.0307
	(0.0915)	(0.0915)	(0.0917)	(0.0915)	(0.0958)
College or above	-0.0332	-0.0965	-0.0899	-0.0521	-0.1120
	(0.0987)	(0.0977)	(0.0980)	(0.0978)	(0.1010)
Age	0.0227	0.0231*	0.0214	0.0257*	0.0198
	(0.0140)	(0.0136)	(0.0137)	(0.0135)	(0.0136)
Age squared	-0.0002	-0.0002	-0.0002	-0.0002	-0.0002
	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)
Excellent Health					
Very good Health	0.306***	0.317***	0.316***	0.312***	0.254***
	(0.0601)	(0.0576)	(0.0574)	(0.0576)	(0.0568)
Good Health	0.812***	0.813***	0.812***	0.804***	0.721***
	(0.0646)	(0.0625)	(0.0626)	(0.0622)	(0.0644)
Fair Health	1.469***	1.450***	1.449***	1.450***	1.292***
	(0.0924)	(0.0873)	(0.0872)	(0.0874)	(0.0892)
Poor Health	1.999***	2.033***	2.029***	2.017***	1.797***
	(0.2140)	(0.2190)	(0.2190)	(0.2220)	(0.2310)
No Comorbidities					
One or more Comorbidities	0.774***	0.752***	0.748***	0.730***	0.751***
	(0.1540)	(0.1450)	(0.1440)	(0.1470)	(0.1530)
ESHI?(Yes/No)					0.248***
					(0.0740)

Table 5 (Cont'd)
Absences from Work, nbreg

VARIABLES	(1) Baseline	(2) w/ Insurance	(3) w/ Tenure	(4) w/ Hourly	(5) Unconstrained
Uninsured					
Private Insurance		0.396***	0.393***	0.369***	0.285***
		(0.0716)	(0.0717)	(0.0722)	(0.0783)
Public Insurance		0.648***	0.650***	0.630***	0.612***
		(0.1550)	(0.1560)	(0.1600)	(0.1560)
Other Insurance		0.568***	0.562***	0.552***	0.396**
		(0.1570)	(0.1560)	(0.1630)	(0.1560)
BMI, 1st Quartile					
BMI, 2nd Quartile					0.0242
					(0.0619)
BMI, 3rd Quartile					0.109*
					(0.0620)
BMI, 4th Quartile					0.232***
					(0.0628)
Tenure, Low					
Tenure, High			0.0491	0.0487	0.0569
			(0.0490)	(0.0493)	(0.0487)
Hourly?(Yes/No)				0.220***	0.193***
				(0.0492)	(0.0481)
Smoker?(Yes/No)					0.235***
					(0.0566)
Exercise?(Yes/No)					-0.0091
					(0.0434)
Other Alcohol					
Heavy/Moderate Alcohol					-0.0195
					(0.0503)
Public Worker?(Yes/No)					0.300***
					(0.0481)
Observations	24,639	24,450	24,450	24,446	22,430
Year Effects	Yes	Yes	Yes	Yes	Yes
Income Effects	Yes	Yes	Yes	Yes	Yes
Region Effects	Yes	Yes	Yes	Yes	Yes

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

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