

Spring 3-6-2016

Workers without paid sick leave less likely to take time off for illness or injury compared to those with paid sick leave

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Recommended Citation

DeRigne, LeaAnne; Stoddard Dare, Patricia A.; and Quinn, Linda M., "Workers without paid sick leave less likely to take time off for illness or injury compared to those with paid sick leave" (2016). *Social Work Faculty Publications*. 31.

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TITLE: Lack of paid sick leave benefits: Working while sick and delayed and forgone health care

Abstract

Paid sick leave has entered the national spotlight as legislators consider mandating this benefit; however, little is known about paid sick leave and its relationship to health behaviors. Contrary to public health goals to reduce the spread of illness, findings indicate working adults without paid sick leave benefits are more likely to attend work when ill. They are also three times more likely to delay medical treatment for themselves, and twice as likely to delay treatment for their family members. Similarly, they are three times more likely to forgo medical care for themselves, and 1.6 times more likely to forgo medical care for their family compared to working adults with paid sick leave benefits. In this study we found an interaction between income and paid sick leave status as the lowest-income group of workers without paid sick leave is at the highest risk of delaying and foregoing medical care for themselves and their family members. Policy makers should consider the public health implications of guaranteeing sick leave benefits.

Background

The decision of when to seek medical care is a complex one made only more complicated by whether or not workers have access to paid sick leave benefits. Paid sick leave allows employees to leave work to seek care or recuperate at home without losing wages. Of 22 countries ranked highly in terms of economic and human development, the United States is the only country that does not guarantee paid sick leave.¹ As many as 145 countries, globally, provide some paid sick days.² For many Americans a day off work translates into lost wages or jeopardized employment.

Only 61% of the civilian work population in the US has paid sick leave benefits with only 19% of part-time workers offered this benefit, leaving nearly 49 million workers without access to this workplace and healthcare benefit.³ Employees in higher wage jobs and at larger employers have higher rates of paid sick leave than do employees in lower wage jobs or employed at smaller companies.³ The Family and Medical Leave Act (FMLA) provides up to 12 weeks of guaranteed, protected but unpaid leave for employees at companies with more than 50 employees; however, it is not designed for short-term sick leave, or for routine or preventative care.⁴ Given these restrictions, FMLA should not be considered a substitute or proxy for paid sick leave.

Access to paid sick leave varies by race with Hispanic workers having the lowest rates of coverage.³ This health related employment benefit is also less common among those who are younger, less educated, low income, those in fair or poor health, and the uninsured.⁵ Representing some of the most vulnerable, only three out of ten low-income workers with a child in fair or poor health have paid sick leave benefits.⁶

Workers use paid sick leave benefits to care for their own health needs or the health needs of their family members. This is particularly important to nearly fifty percent of American adults who have one or more chronic health conditions⁷, and over half of working Americans who provide care to a child or family member.⁸ Paid sick leave allows workers (and presumably their dependent family members) to receive prompt preventative or acute medical care, recuperate from illness faster, and avert more serious illness.²

The American Public Health Association (APHA) endorses and advocates for paid sick leave benefits as a public health policy.⁹ Although peer reviewed studies on this topic are limited, evidence suggests benefits of paid sick leave include increased job stability and employee retention following illness, injury, or birth of a child¹⁰,

increased worker productivity¹¹, decreased worker errors in production¹², decreased accidents or injuries on the job¹³, and increased mental and physical health of caregivers¹⁴. Additionally, when used to augment maternity leave, paid leave increases well baby visits, maternal health, and the duration of breastfeeding while also decreasing infant mortality.¹⁵

Aside from studies which find paid sick leave is associated with increased primary care visits, increased cancer screenings¹⁶, and increased pediatric health care visits¹⁷, very little peer reviewed research exists which examines the impact of sick leave benefits in relation to health care seeking behaviors.

This study extends the limited body of existing research and examines the relationship between paid sick leave benefits and delays in care and foregone care for both working adults and their family members. It also examines the risk of emergency room usage and the risk of missing work due to illness or injury by paid sick leave status. Finally, we analyze interaction effects between paid sick leave, family income, and health insurance.

METHODS

Sampling and Data Collection

The National Health Interview Survey (NHIS) is an ongoing data collection initiative since 1957 designed to provide data about a broad range of health topics. The 2013 NHIS cross-sectional sample uses multistage area probability sampling to derive a representative sample of the civilian, non-institutionalized population residing in the US. Black persons, Hispanic persons, and Asian persons are oversampled in the adult sample.

NHIS Interviews are conducted at the household, family, and person level. One randomly selected adult from each family is interviewed on a complementary set of questions. Interviews are conducted on an ongoing basis by trained US Census Bureau employees either in person or by phone.

Measures

The thirteen control variables included in the analyses are: adult respondent's gender, highest level of education attained (seven recoded indicators ranging from 8th grade or less to doctorate), race and ethnicity (Hispanic, Non Hispanic white, Non Hispanic black, non Hispanic other), marital status (y/n), family size, adult

respondent's occupation (five categories based on Standard Occupational Classifications), obesity in adult respondent (BMI gt 30), adult respondent's full time work status (yes=worked 35 hours or more previous week, no=worked fewer than 35 hours in last week), adult respondent's health insurance coverage status (insured or uninsured=reported no health insurance under private health insurance, Medicare, Medicaid, State Children's Health Insurance Program, a State-sponsored health plan, other government programs, or military health plan), adult respondent health status (excellent, very good, or good versus fair or poor), presence of a limiting condition in adult respondent (yes=limited in any way, or no=not limited in any way), total annual family income (<\$35k, \$35k-<75k, \$75k-<100k, \$100k and over), and adult respondents age (in years).¹⁸ The indicator measured for all analyses is self-reported paid sick leave status (n/y). These control variables were selected based on theory and past empirical findings as being related to the outcome variables. An interaction between PSL and family income was added since losing a few days of wage might be less relevant in deciding whether to visit a doctor or not for high income respondents, but the absence of paid sick leave and family income would be

much higher and significant for low family income respondents.

The six outcome variables examined are: respondent delayed medical care in last 12 months due to cost (y/n), family member delayed medical care in last 12 months due to cost (y/n), respondent needed medical care but did not get it in last 12 months due to cost (y/n), family member needed medical care but did not get it in the last 12 months due to cost (y/n), respondent had an ER/ED visit in last 12 months (y/n), and number of days respondent missed work at job or business because of injury or illness (excluding maternity leave). We examined these variables due to their important public health concerns.

Measurement limitations include the reliance on self-report data for all measures so the question of accuracy is raised. However, we did find a similar percentage of the workforce with paid sick leave, as did the Bureau of Labor Statistics. An additional limitation is that some variables such as emergency room usage only pertain to the respondent, not all household members. Finally, the data we utilize are cross-sectional and therefore causation cannot be established.

Analytic Sample

Three 2013 NHIS core questionnaires were used: family core (all related family members in the same household), person core (all persons within a family), and sample adult (age 18 or older randomly selected from family). The analytic sample includes 18,655 adults age 18-64 with current paid employment selected from the sample adult file. Those working without pay, working in a family business, self employed, looking for work, or not working are excluded.

Data Analysis

We estimate five multivariable logistic regression equations and one multivariable regression equation. We use the same control variables (gender, education, race and ethnicity, marital status, family size, occupation, full time work status, health insurance status, health status, obesity, limiting health condition, family income, age) and one predictor variable (paid sick leave status) in all six equations. The outcome variables can be found in the measures section. Interaction effects were added between paid sick leave status and family income and between paid sick leave benefits and insurance coverage.

Results

We identified 10586 (57.3%) working adults with paid sick leave benefits and 7879 (42.7%) without. Their full demographic profile is shown in Appendix Exhibit 1. Exhibit 1 shows bivariate relationships between paid sick leave status and all control variables. Those without paid sick leave are more likely to be male, unmarried, less educated, Hispanic, hold service occupations, work part time, be uninsured, have fair or poor health, have a limiting health condition and have lower-incomes. Nearly 65% of families with an income below \$35,000 have no paid sick leave compared to 25% of families who earn over \$100,00 a year therefore leaving the most economically vulnerable without this protective benefit.

For each of the six (outcome) variables, the predicted risks are summarized in Exhibit 2. When considering the respondent delaying medical care for themselves or a family member in the last 12 months, we found those who do not receive a paid sick leave benefit have a statistically significant increase in predicted risk (0.3% versus 0.9%) for themselves and a family member (0.8% to 1.6%; see Appendix Exhibit 2 and Appendix Exhibit 3 for full regression results). While predicted risks were

significantly increased when the respondent was uninsured, there was not a significant interaction effect between paid sick leave benefits and insurance status. Predicted risks were highest for the lowest family annual income category and significantly lower as family income increased. There is also a significant interaction between family income and paid sick leave benefits when explaining risk. The gap between predicted risks is significantly smaller for those with less than \$35,000 family income (11.1% versus 9.8% for those without insurance coverage and 2.5% versus 2.4% for those with insurance coverage) compared to all other income levels. As a depiction of the interactive effects among paid sick leave benefits, income, and insurance status, the predicted risks (from Exhibit 1) of the respondent delaying medical care are graphed in Exhibit 2. The significance of these findings is not only true for delaying medical care but also for the respondent forgoing needed care (see Appendix Exhibit 4 for full regression results and Appendix Exhibit 9 for a depiction of the interactive effects). While paid sick leave is important, insurance also has a major impact on the respondent forgoing needed care, especially for low-income respondents. This is true for those with and without paid sick benefits, and across income groups. The risk of forgoing needed care due to costs drops from 16.5%

to 3.1% among low-income adults without paid sick leave and 13.5% to 2.8% among low-income adults with sick leave.

When considering the risk of a family member delaying medical care and forgoing medical care, there is the same pattern and significance of risks as for the respondent with the exception that the interaction between family income and paid sick leave benefits is not significant when explaining whether to forgo medical care (see Appendix Exhibits 3 and 5 for full regression results and Appendix Exhibits 8 and 10 for a depiction of the interactive effects).

Paid sick leave benefits and family income have a statistically significant interaction effect when considering the risk of an ER/ED visit in the last 12 months (see Appendix Exhibit 6 for full regression results). However, insurance status and its interaction with paid sick leave benefits are not statistically significant. We found respondents with a family income of less than \$35K had the highest predicted risk of an ER visit (10.7%) regardless whether or not they had paid sick leave or insurance coverage. When family income was above \$35K and they had paid sick leave benefits, the predicted risk was nearly constant between 9.1% and 9.5%. Yet when there are

not paid sick leave benefits, the predicted risks of an ER visit decreases from 9.9% to 7.6% as family income level increases (see Appendix Exhibit 11 for a depiction of the interactive effects). For all people in the sample with incomes less than \$35,000 the risk of an ER visit is higher than any other income bracket. For the income bracket \$35,000-\$75,000 the predicted risk of an ER visit depends on both paid sick leave and insurance status. For incomes above \$75,000 the predicted risk of having an ER visit is higher if you have paid sick leave than if you don't. Properly interpreting these findings requires additional research, which further examines factors that may influence ER usage such as severity of health crisis, a more refined income variable and ability to access treatment in primary care settings.

Finally, insured working adults with paid sick leave benefits miss 1.5 days more of work due to illness or injury compared to workers without paid sick leave. Uninsured working adults with paid sick leave benefits miss 1.0 day more of work due to illness or injury compared to workers without paid sick leave. Predicted mean days lost due to illness or injuries are also presented in Exhibit 1 (see Appendix Exhibit 7 for full regression results and

Appendix Exhibit 12 for the depiction of the interactive effects).

Discussion

This research greatly enhances our understanding of the relationship between paid sick leave benefits and health care-seeking behaviors. Workers, (both full and part-time) without paid sick leave are less likely than those with paid sick leave to take time off work when ill or injured, and more likely to either forgo or delay treatment for themselves or a family member. These findings hold true after controlling for individual and family level variables (including income, education level, and health status among others), which might otherwise influence delays in care and foregone care. Interactions between income and paid sick leave status revealed that the lowest-income group of workers without paid sick leave are at the highest risk of delaying and foregoing medical care for themselves and their family members making the most financially vulnerable the least likely to be able to take care of health care concerns in a timely manner.

Delayed and foregone care. While increasing the number of people who are able to obtain timely and needed medical

care is an important national health care objective,¹⁹ existing research regarding paid sick leave's relationship to delayed and foregone care is limited. Penchansky and Thomas' model of access to care asserts that affordability, accommodation, availability, accessibility, and acceptability are important determinants of health care access.²⁰ Previous research identifies nearly 30% of US adults experience delays in care or unmet health care needs and identify worry about the cost of care (affordability) and, being "too busy with work or other commitments to take the time off" (accommodation) as the most prevalent reasons.²¹ Access to paid sick leave benefits cuts across several of these determinants to improve access to care. It prevents wage loss (affordability), provides workers with the ability to take time off without risking losing their job (accommodation), and also increases workers ability to seek treatment during daytime work hours (availability).

Findings from this research are consistent with this theoretical framework and indicate that needed care is 3 times more likely to be delayed or put off entirely due to cost for the adult worker without paid sick leave. Family members are 2 times more likely to delay needed medical

care and 1.6 times more likely to forego needed care when paid sick leave is not present. Of note, these delays are attributed to cost. It is possible that the cost concerns identified reflect not only the direct cost of health care and perhaps more expensive urgent care, but also the indirect costs associated with wage loss for those who do not have paid sick leave benefits. The risk for delaying medical care was significantly lower for higher income respondents supporting the idea that lost wages may be easier to handle when income is higher. The personal health care consequences of delaying or foregoing needed medical care can lead to more complicated and expensive health care conditions.

Staying home from work when sick or injured. Consistent with previous research, this analysis finds US workers with paid sick leave are more likely to miss work due to being sick or injured. Put another way, they are more likely to take time off work to care for self or family when needed. This is important since increased work absences are associated with shorter recovery times and reduced complications (British study).²² Additionally, the ability to stay home from work due to illness also allows workers and their dependent children to self-quarantine when

necessary, without concerns about income or job loss. The importance of having this option is underscored by experience during the 2009 H1N1 influenza outbreak. The Centers for Disease Control and Prevention recommended that people stay home if they were sick; yet, estimates suggest employees who did not stay home infected an additional 7 million people.²³ Lack of paid sick leave is estimated to have resulted in 1500 additional deaths during this outbreak.²⁴ Kumar et al. estimates that paid sick leave benefits could reduce influenza in the U.S. by as much as 6%.²⁵

Policy Implications

In addition to illuminating the potential value of offering non-compulsory paid sick leave, findings from this research can inform the discussion about mandatory paid sick leave policy. Globally, paid sick leave benefits are designed as either a mandated private employer benefit or as a part of a national health system plan. In the United States, currently four states (CT, CA, MA, OR) along with a few dozen municipalities mandate paid sick leave as an employee benefit.²⁶ In September of 2015, President Obama signed a mandate requiring that federal contractors allow workers to earn up to a minimum of 7 days of sick leave a

year²⁷. Comprehensive, long-term, peer-reviewed analyses of outcomes in these U.S. regions do not exist, but some research does exist that describes some health and business outcomes pertaining to paid sick leave in these regions^{28,29}. Our findings add to the body of research that policy planners can consider when weighing the issue of mandatory paid sick leave.

As a nation we aspire to reduce health disparities and improve access to medical care as documented in the Healthy People 2020 Agenda.³⁰ Taking into consideration the differential access to paid sick leave by race and ethnicity, income, and health status, access to paid sick leave can be viewed as a modifiable health disparity. Understanding the public health impact of employment policy is an important step to implementing sound workplace regulations that may lessen the longstanding health care disparities between higher income employees and lower-wage workers.

In addition to those weighing the value of mandatory paid sick leave, this research is of interest to stakeholders such as health planners, human resources managers, and employers who aim to voluntarily plan their benefit packages in a way that optimizes the health and productivity of employees while also benefiting their

business performance. Although further research is needed, findings from this study suggest benefits associated with paid sick leave, which these stakeholders may want to consider.

Health system policies, which support expanded access to affordable after-hours and weekend health services should also be considered so that those without paid sick leave are able to get preventative and routine treatment in non-emergency settings. Similarly, policy makers should also consider expanded access to health clinics in schools and work settings and the use of telemedicine appointments that could occur while at work or school. We must remember that when workers report cost as the reason for delayed or non-receipt of medical care they are often counting the indirect costs, which include loss of wages in addition to the cost of care. Being able to seek health care services after work hours would reduce the loss of wages.³¹

Implications for future research

Future research should assess if urgent care and emergency department use is significantly related to paid sick leave when considering the entire family unit, not just the adult worker. Future research should also examine if family medical care costs are higher due to delayed or

forgone care among those without paid sick leave. Also, the relationship between paid sick leave and specific health outcomes for individuals, families, coworkers, and the patrons they come in contact with also needs to be further investigated. Finally, gaps in insurance coverage and the quality of insurance coverage should be further examined in relation to these variables.

Conclusions

Going forward, policy makers should direct more attention to paid sick leave as a modifiable health disparity especially since this research reveals that low-income workers are the most vulnerable to delaying health care seeking for themselves and their family members.

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EXHIBIT LIST

EXHIBIT 1 (table)

Caption: Bivariate Analyses of Control Variables with Paid Sick Leave Status¹

Notes:

Data Source: Authors' analysis of data from CDC/NCHS, National Health Interview Survey, 2013

¹ All analyses are statistically significant at the 0.005 level

EXHIBIT 2 (table)

Caption: Predicted risks (%) or predicted mean days for each equation¹ by insurance status, family income, and paid sick leave benefits

SOURCE: Authors' analysis of data from CDC/NCHS, National Health Interview Survey, 2013

NOTES:

¹controlling for age, gender, marital status, educational level, race and ethnicity, occupation, family size, work status, health status, limiting health condition, and obesity.

²P < 0.05 for interaction of paid sick leave benefits and family income, main effect of paid sick leave benefits, insurance coverage, and family income

³P < 0.05 for main effect of paid sick leave benefits, insurance coverage, and family income

⁴P < 0.05 for interaction of paid sick leave benefits and family income

⁵P < 0.05 for main effect of paid sick leave benefits and insurance coverage

⁶ excluding maternity leave

EXHIBIT 3 (figure)

Caption: Predicted risk of respondent delaying medical care, last 12 months

SOURCE: Authors' analysis of data from CDC/NCHS, National Health Interview Survey, 2013

Exhibit 1: Bivariate Analyses of Control Variables with Paid Sick Leave Status¹

Variable	Outcome	Paid sick leave		No paid sick leave	
		n	%	n	%
Gender	Male	5096	55.7	4060	44.3
	Female	5490	59.0	3819	41.0
Marital Status	Married	5861	60.3	3855	39.7
	Not married	4692	54.0	4001	46.0
Education	0-8 years	188	28.8	465	71.2
	9-<12 years	388	33.2	779	66.8
	HS graduate / GED	1969	47.5	2179	52.5
	Some college	3266	54.7	2703	45.3
	Bachelor	3023	71.8	1186	28.2
	Master	1299	77.3	381	22.7
Race and Ethnicity	Doctorate	427	74.3	148	25.7
	Hispanic	1557	45.0	1905	55.0
	Non-hispanic white	6573	60.0	4391	40.0
	Non-hispanic black	1551	58.9	1081	41.1
Occupation	Non-hispanic other race	792	65.0	426	35.0
	Management	1162	71.7	459	28.3
	Professional	3917	75.0	1304	25.0
	Service	1182	35.4	2156	64.6
	Sales	2473	60.2	1634	39.8
Full time work	Production	1628	42.5	2200	57.5
	> 35 hours/wk	9606	66.4	4857	33.6
	< 35 hours/wk	948	24.3	2954	75.7
Uninsured	Yes	766	21.0	2881	79.0
	No	9793	66.4	4957	33.6
Health status	Poor/Fair	538	46.3	625	53.7
	Good/Very Good/Excellent	10043	58.1	7253	41.9
Limiting health condition	Yes	437	47.7	480	52.3
	No	10145	57.8	7395	42.2
Obesity	Yes	3000	58.9	2092	41.1

	No	7238	56.6	5554	43.4
Family Income	< \$35K	1922	35.2	3533	64.8
	\$35K - <\$75K	3683	61.4	2319	38.6
	\$75K - <\$100K	1565	69.2	695	30.8
	\$100K and over	2871	75.0	955	25.0
		mean	std	mean	std
Age (yrs)		42.0	11.8	39.1	13.0
Family Size (persons)		2.5	1.4	2.6	1.6

Data Source: Authors' analysis of data from CDC/NCHS, National Health Interview Survey, 2013

¹ All analyses are statistically significant at the 0.005 level

Exhibit 2 Predicted risks (%) or predicted mean days for each equation¹ by insurance status, annual family income, and paid sick leave benefits

Outcome	Paid Sick Leave Benefits	AL	Uninsured, by annual family income				Insured, by annual family income			
			< \$35K	\$35K - <\$75K	\$75K - <\$100K	\$100K and over	< \$35K	\$35K - <\$75K	\$75K - <\$100K	\$100K and over
(1) Respondent delayed medical care in last 12 months due to cost ²	No	0.9	11.1	9.7	7.2	4.4	2.5	2.1	1.5	0.9
	Yes	0.3	9.8	6.3	3.5	1.3	2.4	1.5	0.8	0.3
(2) A family member delayed medical care in last 12 month due to cost ²	No	1.6	13.5	12.6	9.3	5.8	3.9	3.6	2.6	1.6
	Yes	0.8	11.7	7.9	4.8	2.6	3.9	2.6	1.5	0.8
(3) Respondent needed medical care but did not get it in last 12 months due to cost ²	No	0.9	16.5	12.4	8.1	5.4	3.1	2.2	1.4	0.9
	Yes	0.3	13.5	8.8	4.5	1.4	2.8	1.8	0.9	0.3
(4) A family member needed medical care but did not get it in last 12 months due to cost ³	No	1.3	18.1	14	8.4	5.5	4.6	3.4	1.9	1.3
	Yes	0.8	14.6	10.4	6.4	3.2	4.1	2.8	1.7	0.8
(5) Respondent had an ER/ED visit in last 12 months ⁴	No	7.6	10	8.3	7.2	6.3	11.9	9.9	8.5	7.6
	Yes	9.1	10	8.8	8.7	8.5	10.7	9.5	9.4	9.1
(6) Number of days did respondent miss work at a job or business because of illness or injury ^{5, 6}	No	3.6	4.2	3.7	3.8	2.9	4.9	4.4	4.5	3.6
	Yes	5.1	4.1	4.5	4.3	3.9	5.3	5.8	5.6	5.1

Source: Authors' analysis of data from CDC/NCHS, National Health Interview Survey, 2013

NOTES: ¹controlling for age, gender, marital status, educational level, race and ethnicity, occupation, family size, work status, health status, limiting health condition, and obesity.

²P < 0.05 for interaction of paid sick leave benefits and family income, main effect of paid sick leave benefits, insurance coverage, and family income

³P < 0.05 for main effect of paid sick leave benefits, insurance coverage, and family income

⁴P < 0.05 for interaction of paid sick leave benefits and family income

⁵P < 0.05 for main effect of paid sick leave benefits and insurance coverage

⁶ excluding maternity leave