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# Association between Parental Access to Paid Sick Leave and Children's Access to and Use of Healthcare Services

**Abay Asfaw, PhD**[*] and **Maria Colopy, MPH**

Department of Health and Human Services, Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health, Washington, District of Columbia

## Abstract

**Background—**We examined the association between parental access to paid sick leave (PPSL) and children's use of preventive care and reduced likelihood of delayed medical care and emergency room (ER) visits.

**Methods—**We used the child sample of the National Health Interview Survey data (linked to the adult and family samples) from 2011 through 2015 and logistic and negative binomial regression models.

**Results—**Controlling for covariates, the odds of children with PPSL receiving flu vaccination were 12.5% [95%CI: 1.06–1.19] higher and receiving annual medical checkups were 13.2% [95%CI: 1.04–1.23] higher than those of children without PPSL. With PPSL, the odds of children receiving delayed medical care because of time mismatch were 13.3% [95%CI: 0.76–0.98] lower, and being taken to ER were 53.6% [95%CI: 0.27–0.81] lower than those of children without PPSL. PPSL was associated with 11% [95%CI: 0.82–0.97] fewer ER visits per year.

**Conclusion—**PPSL may improve children's access and use of healthcare services and reduce the number of ER visits.

### Keywords

parental access to paid sick leave; child health; delayed care; emergency room visits

## Introduction

Research has shown that parents substantially influence whether their children receive preventive care and timely medical treatment, thus affecting how quickly they recover from

[*]Correspondence to: A. Asfaw, PhD, National Institute for Occupational Safety and Health, 395 E. St. SW Suite 9200, Washington, DC 20201. hqp0@cdc.gov.

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illnesses and injuries, and enjoy good health [Waugh and Kjos, 1992; George and Hancock, 1993; Palmer, 1993; Heymann et al., 1996; Kristensson-Hallstrom et al., 1997; LaRosa-Nash and Murphy, 1997; Heymann et al., 1999; Ruhm, 2000; Kuo et al., 2011]. However, the ability of employed parents to provide this care may depend on workplace factors, such as a flexible work schedule. Parents may also need access to paid or unpaid sick and vacation leave. Heymann et al. [1996] and Clemans-Cope et al. [2008] showed that parents were more likely to use paid sick leave (PSL) or vacation to care for family members.

PSL substantially improves access to and use of healthcare services for workers and their dependents without wage penalty. DeRigne et al. [2016] showed that employees without PSL were 3.0 times more likely than those with PSL to forgo medical care for themselves and 1.6 times more likely to forgo medical care for their family. PSL for parents could help improve the overall health of children by decreasing the risks of early childhood infections and injuries [Redmond and Pichichero, 1984; Thacker et al., 1992; Hardy and Fowler, 1993; Roe et al., 1999; Ruhm, 2000]. Ruhm [2000] examined data from 16 European countries from 1969 through 1994, showing paid parental leave could cost-effectively improve children's health on the societal level of analysis. Shepherd-Banigan et al. [2016] showed that mother's access to PSL was associated with increased adherence to recommended preventive care for children. Access to PSL may also help reduce the likelihood of adults suffering non-fatal occupational injuries [Asfaw et al., 2012] and the spread of influenza infection at workplaces [Kumar et al., 2013], and increase adults' use of primary care [Cook, 2011] and preventive cancer screening tests [Peipins et al., 2012].

Despite the advantages of PSL, many U.S. workers do not have this employer-provided fringe benefit. Of 22 nations ranked highly for economic and human development, only the United States did not guarantee PSL to workers [Heymann et al., 2009]. In 2015,61% of U.S. private sector employees had access to PSL [Bureau of Labor Statistics (BLS), 2015]. Studies have shown that many low-income women were unable to take time off to care for themselves and their children [Clemans-Cope et al., 2008; Shepherd-Banigan and Bell, 2014].

This study provided additional new evidence on whether children with PPSL were less likely to receive delayed care due to time mismatch between parents and healthcare providers. Among other factors, parents might need the time to make and keep medical appointments, which are usually scheduled during regular working hours. The study also shed new light on whether children with PPSL were less likely to use emergency care than children without PPSL. In addition, this study provided evidence on the association between PPSL and children's use of preventive healthcare. We hypothesized that children with PPSL would: (i) be more likely to receive annual vaccination and well-child check-up; (ii) be less likely to receive delayed care due to time mismatch between parents and healthcare, hereafter referred to as “time mismatch”; and (iii) be less likely to use emergency care.

## Data and Method

We used 2011–2015 data from the National Health Interview Survey (NHIS), a cross-sectional household survey on the health of the civilian noninstitutionalized U.S. population.

Data collection for the NHIS was approved by the Research Ethics Review Board of the National Center for Health Statistics (Protocol #2009-16) and the U.S. Office of Management and Budget (Control #0920-0214). The National Center for Health Statistics offers more information about the survey's purpose, sampling procedure, and content at http://www.cdc.gov/nchs/nhis/about_nhis.htm.

Each year, one sampled adult and one sampled child (if the family has any children under 18 years of age) are randomly selected for collecting detailed information. We used the “child sample” data file and we linked it with the “adult sample” and “family” files to get full information about the healthcare use of each sampled child. We only considered adult respondents who were parents to the sampled child. More than 93% of sampled adults were biological, adoptive, or step parents to the sampled children. We identified three groups of child healthcare service indicators that might be affected by PPSL: (i) use of preventive care; (ii) delay in receiving medical care due to time mismatch; and (iii) emergency care use. We used flu vaccination and a well-child checkup to measure children's use of preventive care services. A child's medical care was considered as delayed due to time mismatch if parents mentioned “The (clinic/doctor's office) wasn't open when you could get there,” or “Once you get there, [sampled child name] has to wait too long to see the doctor” as a reason for delaying medical care for their child. Finally, we measured emergency care by the incidence and number of hospital emergency room (ER) visits. See Appendix for the details.

We measured our independent variable, PPSL, using responses to the question asked to only one of the parents in the adult sample: “Do you have paid sick leave on this MAIN job or business?” We assigned one to parents who responded “yes” and zero to parents who responded “no” to this question. The NHIS does not provide information on whether spouses or partners have access to PSL. We adjusted our results for the following covariates in the regression analyses: information about the sampled child, including age (in years), sex, and access to health insurance (HI), and about the sampled parent, including age, sex, race, education, and employment type (hourly/salary). We also included family level variables, such as whether a spouse or partner was living in the house; the number of family members working full time and living in the house, children (under 18), older adults (age 65 or older) living in the house; total family income (three categories); and geographic location (four regions) as covariates. The number of observations in each year were very similar. However, due to missing cases, the sample size varied from 38,823 (in the case of ER visits) to 40,289 (in the case of delayed care due to time mismatch).

We used univariate and multiple regression analyses to examine the association between PPSL and children's access to and use of healthcare services. In the case of preventive care and likelihood of delayed medical care and ER visits, we used logistic regression and estimated odds ratios. Since the number of ER visits was count data (number of ER visits per year), the appropriate choice for modelling was the Poisson model. However, the Poisson model assumes the mean is equal to the variance. In our case, the variance was more than three times higher than the mean. Therefore, we used a negative binomial regression model. To take into account the complex sample design of the NHIS and sampling weights, we used the survey command of STATA.

## Results

Table I presents the descriptive statistics of the variables.

### Children's Use of Preventive Care

With PPSL, 49.10% [95%CI: 48.14–50.06] of the children received annual flu vaccinations compared to 44.49% [95%CI: 43.57–45.40] of children without PPSL, and the difference was statistically significant (Pearson $\chi^2$ test: $F(1,300) = 51.12$, $P < 0.0001$). This shows that the number of children with PPSL vaccinated against flu was 10.4% higher than the number of children without PPSL. With PPSL, 84.91% [95%CI: 84.17–85.62] of the children received annual checkups, while without PPSL, 80.36% [95%CI: 79.57–81.13] of the children received annual checkups and the difference was statistically significant (Pearson $\chi^2$ test: F(1,300) = 73.01, $P < 0.0001$).

To control for the impact of covariates, we estimated two logistic regression models by including variables related to the sampled child, and his or her parent and family. The results are presented in Table II. Our key independent variable was PPSL. After adjustment for covariates, the odds of children with PPSL receiving annual flu vaccinations was 12.5% [95%CI: 1.06–1.19] higher, and the odds of receiving annual well-child checkups was 13.2% [95%CI: 1.04–1.23] higher than the odds of children without PPSL.

### Delayed Medical Care for Children Due to Time Mismatch

Without PPSL, medical care was delayed for 5.87% of children, compared with 4.01% of children with PPSL and the difference was statistically significant (Pearson $\chi^2$ test: F (1,300) = 47.19, $P < 0.0001$).

The logistic regression results presented in Table III supported the univariate results. With PPSL, the odds of children receiving delayed medical care because of time mismatch were 13.3% [95%CI: 0.76–0.98] lower than those of children without PPSL, controlling for the covariates we included.

### Children's Use of Emergency Care

With PPSL, 0.18% of the children were usually taken to the ER for treatment or medical advice, compared with 0.61% of the children without PPSL and the difference was statistically significant (Pearson $\chi^2$ test: F(1,300) = 27.42, $P < 0.0001$). A similar difference was observed in the frequency of ER visits. The average number of ER visits for children with PPSL was 0.21 per year, compared with 0.30 per year for children without PPSL ($t = 10.86$; $P < 0.001$). To control for covariates, we estimated a logistic regression model and the results are presented in the second column of Table IV. After adjustment for covariates, the odds of children with PPSL to be taken to the ER for either treatment or medical advice were 53.6% [95%CI: 0.27–0.81] lower than those of children without PPSL. The incidence rate ratio (IRR) from the negative binomial regression analysis, presented in the third column of Table IV, indicated that the number of ER visits for children with PPSL was 0.89 [95%CI: 0.82–0.97] times lower than the number of ER visits for children without PPSL per year ($P < 0.001$).

## Discussion

We examined the association between PPSL and children's access to and use of preventive and medical care. Both the univariate and the regression results demonstrated that PPSL was significantly associated with higher likelihood of children getting preventive care and lower likelihood of receiving delayed medical care due to time mismatch. Children with PPSL were also less likely to be taken to emergency care, though the overall number of children taken to ER was relatively small.

Our results are consistent with those by other researchers. Shepherd-Banigan et al. [2016] found that the likelihood of children with maternal access to PSL to receive preventive care was 9–28% points higher than that of children without maternal access to PSL. Another study that used data collected from a large company in 1992 found that children whose parents reported they had difficulty leaving work to take care of their sick children were 43% less likely to have received adequate immunizations by age 2, compared with children with parents who did not report such difficulty [Fielding et al., 1994]. Taken together, these findings suggest that PPSL may help improve children's use of preventive care. Other researchers suggested that access to PSL increased the likelihood of employees use preventive care such as cancer screening [Scheil-Adlung and Sandner, 2010; Peipins et al., 2012]. Because families, businesses, and society achieve long-term benefits by providing preventive care to children [King, 2004; Caro et al., 2005] PPSL may help reduce long-term healthcare costs.

Delayed medical care could lead to more serious illness, longer stays in the hospital, and more expensive treatments [Mills et al., 1991; Weissman et al., 1991; Strickland et al., 2004; Tennvall and Apelqvist, 2004; Huang et al., 2005]. Our results showed that PPSL could reduce the predicted probability of delayed care for children. This might be because parents with access to PSL could be more able to use time off work to take their sick children to a clinic or doctor. For instance, Heymann et al. [1999] estimated that parents with access to paid sick or vacation leave were 5.2 times more likely to look after their sick children than parents without paid sick or vacation leave.

Our results also confirmed that a child without PPSL would be more likely to visit the ER. Similar patterns were observed in the frequency of ER visits. Because ER visits are more expensive and less effective than regular doctor visits, PPSL may not only help improve access to care for children, but also—by reducing ER visits—decrease the overall long-term societal burden of healthcare costs.

Our study has several limitations. First, the NHIS data are cross sectional. As a result, we could not establish causality between PPSL and children's access to and use of healthcare services. PPSL may be endogenous in our models, meaning that factors such as education, that affect the likelihood of parents to get jobs with PSL, could also affect parent knowledge about the importance of pediatric preventive and timely care [Sanders et al., 2009; Shepherd-Banigan and Bell, 2014]. Second, children's health care use was measured by parental recall of medical use which could lead to a recall bias, though we do not expect this bias to be different between families with and without access to PSL. Note also that our well-child

visits were measured in the past year while well-child visits often spaced out to every 2 years in school-aged children. This might underestimate the overall number of children who received well-child visits. At the same time, infants are usually scheduled to have well-child visits every 2–3 months for the first 1–2 years, so parents will report yes to the question, although they may have missed multiple well-child visits. Again, these issues will not affect our results; since, there are no statistically significant differences in the number of school-aged children and infants between parents with and without PSL. Third, we had information on access to PSL only for one of the parents. We did not have information on the number of PSL days or parental access to paid vacation leave, work schedule, and work shift. We also did not have information on the working status of spouses. However, the "number of family members working full time" variable we used could have picked up some of the effects of this missing variable. Fourth, one of the indicators we used to measure time mismatch—"Once you get there, [sampled child name] has to wait too long to see the doctor"—might not indicate only lack of PSL but also could reflect an office system problem or parent impatience. Fifth, though the difference in the number of ER visits between children with and without PPSL was statistically significant, its clinical effect might be limited. Overall, the average ER visit per child per year was less than one. Sixth, the estimated odds ratios in the case of preventive care should not be interpreted as risk ratios since the two values can differ if the outcomes are more frequent [Schmidt and Kohlmann, 2008]. Finally, though improved access to healthcare services would help to improve children's health, we did not examine the direct association between PPSL and children's health.

## Conclusion

Parents can play a significant role to improving their children's health by helping them get access to and use healthcare services. However, this depends in part on how well parents can balance their work and family lives. Our results showed that PPSL was significantly associated with a higher likelihood of children receiving preventive care and a lower likelihood of receiving delayed medical care or being taken to an ER for treatment or advice. Future research might explore if these associations vary across different income groups.

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## Appendix 1

Measurement of the Dependent Variables.

| Variable | Question used to measure the variable | Value |
|---|---|---|
| Flu vaccination | "During the past 12 months, has [sampled child name] had a flu vaccination?" | Flu vaccination = 1 if the response was "yes," 0 if response was "no,"and missing if the response was "refused,"not "ascertained," or "don't know" |

| | | |
|---|---|---|
| Well-child medical checkups | "During the past 12 months did [sampled child name] receive a well-child checkup —that is, a general checkup when [he/she] was not sick or injured?" | Well-child medical checkups = 1 if the response was "yes," 0 if response was "no,"and missing if the response was "refused," not "ascertained," or "don't know" |
| Delayed medical care due to parents time mismatch | Parents mentioned either "The (clinic/ doctor's office) wasn't open when you could get there" or "Once you get there, [sampled child name] has to wait too long to see the doctor" as a reason for delayed medical care for children. | Delayed medical care due to parents' time mismatch = 1 if parents mentioned "The (clinic/doctor's office) wasn't open when you could get there" or "Once you get there, [sampled child name] has to wait too long to see the doctor" as a reason for delaying medical care for children, and 0 otherwise. |
| Emergency care | "Type of place that [sampled child name] usually goes when [he/she] is sick or you need advice about [his/her] health?" | Emergency room = 1 if the answer was hospital emergency room and 0 otherwise. |
| Number of emergency room visits | "DURING THE PAST 12 MONTHS, HOW MANY TIMES has [Sampled child] gone to a HOSPITAL EMERGENCY ROOM about [his/her] health?" | |

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## Table I
## Descriptive Statistics (Mean [sd]) of the Variables by PPSL(2011–2015, NHIS)

| | PPSL | |
|---|---|---|
| | **No** | **Yes** |
| Children who received annual flu vaccination per year (%) | 44.49 (0.005) | 49.10 (0.005) |
| Children who received annual well-child checkup per year (%) | 80.36 (0.004) | 84.91 (0.004) |
| Children who received delayed care due to time mismatch/year (%) | 5.87 (0.002) | 4.01 (0.002) |
| Children taken to ER per year (%) | 0.61 (0.001) | 0.18 (0.000) |
| Average number of ER visits per child per year | 0.30 (0.008) | 0.21 (0.006) |
| Control variables | | |
| Sampled children | | |
| Sex: male (%) | 50.69 (0.005) | 51.40 (0.004) |
| Age (in years) | 8.47 (0.050) | 8.62 (0.043) |
| Access to health insurance (%) | 94.61(0.002) | 98.60(0.001) |
| Parents | | |
| Sex: male (%) | 39.37 (0.004) | 45.19(0.004) |
| Age (in years) | 36.54 (0.087) | 39.42 (0.084) |
| Race/ethnicity (%) | | |
| Non-hispanic white | 53.19 | 61.75 |
| Non-hispanic black | 9.89 | 10.85 |
| Hispanic | 28.61 | 16.85 |
| Non-hispanic other | 8.3 | 10.55 |
| Education (%) | | |
| Less than a high school diploma | 12.22 | 3.34 |
| High school diploma or GED | 21.44 | 11.55 |
| Some college or diploma | 36.05 | 30.17 |
| Bachelor's degree or higher | 30.29 | 54.94 |
| Job classification (%): paid hourly | 69.35(0.005) | 49.53 (0.005) |
| Families | | |
| Spouse/partner living with the family (%) | 74.00 (0.004) | 80.70(0.004) |
| Number of family members working full time per family | 1.10 (0.007) | 1.38 (0.006) |
| Number of children (aged under18) per family | 2.43 (0.013) | 2.26 (0.011) |
| Number of older adults (aged over 64) per family | 0.03 (0.002) | 0.03 (0.002) |
| Income | | |
| Poor (100% or less than the federal poverty level) | 21.7 | 5.60 |
| Near poor (between100% and 200% of the poverty level) | 24.71 | 15.13 |
| Not poor | 53.59 | 79.27 |
| Region | | |
| Northeast | 13.00 | 17.21 |
| Midwest | 25.54 | 23.78 |
| South | 36.42 | 36.39 |
| West | 25.03 | 22.62 |

## Table II
## Children's Use of Preventive Care: Logistic Regression Results (2011–2015, NHIS)

| | Annual flu vaccination | | Annual well-child checkup | |
|---|---|---|---|---|
| **Variable** | **Odds ratio** | **[95% conf. interval]** | **Odds ratio** | **[95% conf. interval]** |
| PPSL | 1. 12 [a] | 1.06–1.19 | 1.13 | 1.04–1.23 |
| Child related covariates | | | | |
| Sex (1if male, 0 otherwise) | 1.00 | 0.96–1.05 | 1.06 | 0.99–1.13 |
| Age | 0.96[a] | 0.95–0.96 | 0.91 | 0.91–0.92 |
| Access to health insurance | 2.10[a] | 1.80–2.45 | 3.02 | 2.61–3.50 |
| Parent related covariates | | | | |
| Sex (1if male, 0 otherwise) | 1.03 | 0.98–1.08 | 0.93 | 0.86–1.00 |
| Age | 1.00 | 1.00–1.01 | 1.00 | 1.00–1.00 |
| Race/ethnicity (Non-hispanic white, reference) | | | | |
| Non-hispanic black | 1.05 | 0.96–1.14 | 1.43 | 1.27–1.61 |
| Hispanic | 1.24[a] | 1.15–1.33 | 1.06 | 0.96–1.17 |
| Non-hispanic other | 1.29[a] | 1.19–1.41 | 1. 14 | 1.01–1.29 |
| Education (No high school diploma, reference) | | | | |
| High school diploma or GED | 0.83[a] | 0.75–0.92 | 1.26 | 1.10–1.46 |
| Some college or diploma | 0.80[a] | 0.73–0.88 | 1.47 | 1.30–1.67 |
| Bachelor's degree or higher | 1.06 | 0.96–1.19 | 2.01 | 1.74–2.32 |
| Job classification (1if paid hourly, 0 otherwise) | 1.00 | 0.93–1.06 | 0.94 | 0.88–1.01 |
| Family related covariates | | | | |
| Spouse/partner living with the family | 1.18 | 1.10–1.26 | 1.12 | 1.02–1.23 |
| Number of family members working full time | 1.01 | 0.96–1.05 | 0.94 | 0.88–0.99 |
| Number of children in the family | 0.99 | 0.96–1.02 | 0.97 | 0.94–1.01 |
| Number of older adults in the family | 1.12 | 0.97–1.29 | 1.15 | 0.96–1.39 |
| Poverty status (below the poverty line, reference) | | | | |
| Near-poor | 0.84[a] | 0.76–0.92 | 0.89 | 0.78–1.00 |
| Not poor | 0.89[a] | 0.82–0.98 | 0.97 | 0.85–1.10 |
| Region (Northeast ref) | | | | |
| Midwest | 0.75[a] | 0.68–0.83 | 0.41 | 0.35–0.49 |
| South | 0.74[a] | 0.68–0.81 | 0.41 | 0.35–0.49 |
| West | 0.72[a] | 0.66–0.79 | 0.35 | 0.30–0.41 |
| Constant | 0.69 | 0.54–0.88 | 5.63 | 4.13–766 |
| Number of observations | | 39,782 | | 40,189 |

[a] $P < 0.01$

## Table III

**Children's Delayed Medical Care Due to Time Mismatch Among Parents and Healthcare Providers: Logistic Regression Results (2011–2015, NHIS)**

| | Delayed medical care due to time mismatch | |
|---|---|---|
| **Variable** | **Odds ratio** | **[95% conf. interval]** |
| PPSL | 0.87[b] | 0.76–0.98 |
| Child related covariates | | |
| Sex (1if male, 0 otherwise) | 1.03 | 0.92–1.15 |
| Age | 0.99 | 0.98–1.00 |
| Access to health insurance | 0.87 | 0.68–1.11 |
| Parent related covariates | | |
| Sex (1if male, 0 otherwise) | 0.82[a] | 0.73–0.93 |
| Age | 1.00 | 0.99–1.00 |
| Race/ethnicity (Non-hispanic white, reference) | | |
| Non-hispanic black | 1.21[b] | 0.99–1.48 |
| Hispanic | 1.86[a] | 1.62–2.13 |
| Non-hispanic other | 1.20[b] | 0.98–1.46 |
| Education (No high school diploma, reference) | | |
| High school diploma or GED | 0.74[a] | 0.61–0.90 |
| Some college or diploma | 0.82[b] | 0.67–1.00 |
| Bachelor's degree or higher | 0.79 | 0.65–0.97 |
| Job classification (1if paid hourly, 0 otherwise) | 1.04 | 0.90–1.19 |
| Family related covariates | | |
| Spouse/partner living with the family | 0.93 | 0.81–1.07 |
| Number of family members working full time | 0.93 | 0.86–1.00 |
| Number of children in the family | 1.03 | 0.97–1.10 |
| Number of older adults in the family | 1.34 | 0.97–1.87 |
| Poverty status (below the poverty line, reference) | | |
| Near-poor | 0.89 | 0.75–1.05 |
| Not poor | 0.71[a] | 0.59–0.86 |
| Region (Northeast ref) | | |
| Midwest | 1.14 | 0.91–1.43 |
| South | 1.28[a] | 1.05–1.57 |
| West | 1.52[a] | 1.24–1.86 |
| Constant | 0.08 | 0.05–0.13 |
| Number of observations | 40,289 | |

[a] $P < 0.01$.

[b] $P < 0.05$.

## Table IV

**Children's Use of Emergency Care: Logistic and Negative Binomial Regression Results (2011–2014, NHIS)**

| | ER usual place to visit (logistic regression) | | Number of ER visits per year (negative binomial regression) | |
|---|---|---|---|---|
| | **Odds ratio** | **[95% conf. interval]** | **IRR** | **[95% conf. interval]** |
| PPSL | 0.46[a] | 0.27–0.81 | 0.89[a] | 0.82–0.97 |
| Covariates | | | | |
| Child | | | | |
| Sex (1if male, 0 otherwise) | 1.00 | 0.66–1.50 | 1.00 | 0.93–1.08 |
| Age | 1.02 | 0.98–1.07 | 0.96[a] | 0.95–0.97 |
| Access to health insurance | 0.25[a] | 0.14–0.43 | 1.33[a,c] | 1.06–1.68 |
| Parent | | | | |
| Sex (1if male, 0 otherwise) | 1.42 | 0.91–2.21 | 0.98 | 0.91–1.07 |
| Age | 1.00 | 0.98–1.02 | 0.99[a] | 0.99–1.00 |
| Race/ethnicity (Non-hispanic white, reference) | | | | |
| Non-hispanic black | 2.47[a] | 1.34–4.55 | 1.21[a] | 1.07–1.36 |
| Hispanic | 1.48 | 0.87–2.50 | 1.04 | 0.94–1.16 |
| Non-hispanic other | 1.10 | 0.42–2.88 | 0.97 | 0.85–1.11 |
| Education (No high school diploma, reference) | | | | |
| High school diploma or GED | 1.07 | 0.64–1.81 | 1.08 | 0.91–1.27 |
| Some college or diploma | 0.66 | 0.37–1.20 | 1.11 | 0.94–1.31 |
| Bachelor's degree or higher | 0.30[a] | 0.13–0.73 | 0.76[a] | 0.64–0.90 |
| Job classification (1if paid hourly, 0 otherwise) | 0.98 | 0.57–1.71 | 1.17[a] | 1.07–1.27 |
| Family | | | | |
| Spouse/partner living with the family | 0.62[b] | 0.38–1.01 | 0.80[a] | 0.73–0.89 |
| Number of family members working full time | 1.18 | 0.78–1.79 | 1.01 | 0.95–1.08 |
| Number of children in the family | 1.05 | 0.86–1.29 | 0.91[a] | 0.87–0.94 |
| Number of older adults in the family | 1.55 | 0.82–2.93 | 1.01 | 0.85–1.21 |
| Poverty status (below the poverty line, reference) | | | | |
| Near-poor | 1.12 | 0.69–1.82 | 0.83[a] | 0.73–0.93 |
| Not poor | 0.68 | 0.37–1.26 | 0.68[a] | 0.60–0.75 |
| Region (Northeast ref) | | | | |
| Midwest | 1.14 | 0.52–2.48 | 1.00 | 0.90–1.11 |
| South | 1.55 | 0.75–3.22 | 0.93 | 0.85–1.03 |
| West | 0.91 | 0.43–1.93 | 0.79 | 0.70–0.90 |
| Constant | 0.02[a] | 0.00–0.06 | 0.68[b] | 0.48–0.96 |
| Number of observations | | 38,823 | | 40,261 |

[a] $P < 0.01$.

[b] $P<0.05$.

[c] The health insurance variable took an unexpected positive sign. Further analysis might explain this positive association between access to health insurance and number of ER visits.