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# How much would family and medical leave cost workers in the US? Racial/ethnic variation in economic hardship under unpaid and paid policies

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## ABSTRACT

Using a capability approach, this study assesses economic constraints under the current US national unpaid family and medical leave (FML) policy compared to a hypothetical national paid FML policy for all full-year workers. Existing literature documents gender and class differences in barriers to FML use, but there is limited research on racial/ethnic minority workers. Our results indicate that if FML policy changed from unpaid to paid leave, black workers would gain a greater percentage of family income back relative to white workers, due in part to their larger wage contributions to family income. However, moving to a paid FML policy has a lower likelihood of preventing short-term economic hardship for black and Hispanic workers, compared to white workers. Our findings are consistent with studies, of which there are few, that show that paid FML can decrease, but not eliminate, disparities in black and Hispanic working mothers' capability to take up parental leave and use leave for longer durations. Therefore, further design modifications to FML policy are needed for paid leave to be fully protective of all workers who need to take leave without facing economic hardship.

## RESUMEN

Utilizando un enfoque de capacidad, este estudio evalúa las limitaciones económicas en la licencia familiar y médica (FML) nacional no remunerada de los EE. UU. en comparación con una hipotética política nacional de FML remunerada para todos los trabajadores de año completo. La literatura documenta las diferencias de género y clase en las barreras para el uso de FML, pero hay investigaciones limitadas sobre los trabajadores de minorías raciales/étnicas. Nuestros resultados indican que si la política de FML cambió de licencias no remuneradas a licencias remuneradas, los trabajadores negros recuperarían un mayor porcentaje de los ingresos familiares con relación a trabajadores blancos, en parte porque sus salarios representan un porción mas

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grande a los ingresos familiares. Sin embargo, cambiando a una política FML remunerada tiene una menor probabilidad de prevenir dificultades económicas a corto plazo para los trabajadores negros e hispanos, en comparación con los trabajadores blancos. Nuestros resultados son consistentes con otros estudios, de los cuales hay pocos, que muestran que la FML remunerado puede disminuir, pero no eliminar, las disparidades raciales/étnicas en la capacidad de las madres trabajadoras para utilizar la licencia parental y tomarla por períodos más largos. Por consiguiente, se necesitan más modificaciones de diseño a FML para garantizar que todos los trabajadores que necesitan licencia puedan tomarla sin enfrentar dificultades económicas.

## Introduction

Over their lives, many workers will need time away from their jobs to care for their own or a close family member's serious medical condition. Other workers will need to take time off from work after the birth or adoption of a child. A critical policy that improves health and continued employment is paid family and medical leave (FML) (Baum & Ruhm, 2016; Burtle & Bezruchka, 2016; Byker, 2016; Heymann et al., 2017; Rossin, 2011; Rossin-Slater, Ruhm, & Waldfogel, 2013; Ruhm, 2000). In the US, workers who need to address urgent health needs without access to paid FML to replace lost wages may face a significant economic burden or forego leave with potentially severe consequences for their or their family's health. The economic consequences of a temporary leave from the labor market will depend in part on workers' access to resources that buffer wage loss and smooth family income (Low & Sánchez-Marcos, 2015). Buffering resources that can reduce the risk of short-term economic hardship include employer-provided FML benefits, public benefits, savings, and earnings from other household members.

Compared to other industrialized countries, workers in the United States (US) are at greater risk for economic hardship if they need FML because the US lacks a national paid FML policy (Adema, Clarke, & Frey, 2015). The US is the only country out of the 34 Organisation for Economic Co-operation and Development (OECD) countries that does not guarantee paid leave to mothers of infants. The US is one of two OECD countries that does not guarantee paid parental leave for both mothers and fathers (Switzerland does not guarantee paid leave to fathers) (Raub, Nandi, et al., 2018) and one of two OECD countries (with the Republic of Korea) that does not guarantee medical leave (Raub, Chung, et al., 2018). The United States' FML policy is regulated by the Family and Medical Leave Act (FMLA), an unpaid job-protected program. Paid FML benefits are available (or will be available by 2023) to workers in eight states and Washington, D.C., and in a growing number of cities and counties (National Partnership for Women & Families, 2019). Employers also provide access to paid family leave, but these benefits cover only 19% of civilian workers and are primarily available to workers in higher wage occupations (U.S. Bureau of Labor Statistics, 2019).

Using a capability approach, this paper compares economic constraints under the current unpaid national FML policy to constraints under a hypothetical national paid FML policy based on the State of California's program. We chose to model California's policy because it is the longest running state program in the US, has the largest evidence base, and is the first paid leave policy with progressive wage replacement. An extensive literature documents economic constraints, workplace norms and gender role dynamics leading to leave-

taking barriers and lower leave duration (Haas & Hwang, 2019). A growing research base compares socioeconomic constraints within and across public parental leave systems that can lead to inequalities in workers' leave decisions (Adema et al., 2015). In contrast, there is limited research on the opportunity structures and constraints of FML systems for racial/ethnic minority workers (Grosswald & Scharlach, 1999; Joshi et al., 2014).

### **Assessment of family medical leave policy using a capability framework**

Researchers are increasingly using a capability approach to assess class and gender differences in access to and take-up of work-family policies (Javornik & Kurowska, 2017; Koslowski & Kadar-Satat, 2019; Yerkes & Javornik, 2018). Pioneered by Sen (1985), a capability framework is normative and assesses: (1) whether a policy, if accessible, would help participants achieve a broadly defined valued functioning; and (2) potential participants' capabilities, which are real opportunities to make genuine choices about whether and how to participate in a program. The framework also accounts for conversion factors, which are economic constraints or social contexts that influence whether individuals can actually participate in and benefit from programs. Recognizing that policies can exacerbate inequalities when access is limited by gender, class, race/ethnicity or disability, policy assessment from a capability perspective requires a focus on differential opportunity structures and constraints embedded in policy design.

Similar to Javornik and Kurowska (2017), our normative assumption is that worker's ability to take leave when needed is a valued functioning. This assumption is consistent with the World Health Organization's policy goal of health equity defined as a situation in which all individuals in a society have opportunities to attain their full health potential (World Health Organization, 2019). Additionally, the U.S. public health goals, defined in Healthy People 2020, include achieving health equity, eliminating disparities, and improving the health of all groups (Healthy People 2020, 2019). Although the ability to take leave when it is needed to attain full health is a valued functioning for all workers, there are differences in observed functioning, or leave eligibility and take-up, across different groups, suggesting how conversion factors impact workers in different ways. Conversion factors related to leave can include individual factors such as wealth, family composition and knowledge of leave rights, and opportunity structures such as employment protections, union representation, workplace culture and enforcement practices. To apply the capability framework, we first analyze unpaid and paid FML policy components, specifically wage replacement rates, and identify potential socioeconomic conversion factors that affect use of FML, namely racial/ethnic variation in affordability constraints. Then we develop indicators that measure two key conversion factors associated with the affordability of leave: wage loss and short-term economic hardship. We assess racial/ethnic differences in wage loss, in potential gains from paid FML, and in the potential buffering role of spouse/partner wages. Using a capability approach highlights the extent to which various racial/ethnic groups have genuine choices to use FML if they need it.

### ***FML policy design and affordability constraints***

Applying the steps of the capabilities framework, we first describe the policy components and the socioeconomic constraints of both the paid and unpaid FML policy designs, focusing on racial/ethnic inequalities.

### ***National unpaid FML approach***

Passed in 1993, the FMLA guarantees 12 weeks of job-protected unpaid leave for employees experiencing qualifying medical conditions. Only about half of US working parents are eligible for the FMLA and one third are eligible and could potentially afford FMLA (Joshi et al., 2014). Compared to white working parents, black and Hispanic parents are less likely to be eligible for and potentially able to afford FMLA leave (Joshi et al., 2014).

The current unpaid FML policy approach in the US means there is disparate access to leave primarily based on whether workers can afford to absorb temporary wage losses. Take-up of unpaid FMLA is much higher among working mothers with higher education levels (Han, Ruhm, & Waldfogel, 2009; Waldfogel, 1999). The most common reason that US workers did not take needed family or medical leave is economic constraints (Klerman, Daley, & Pozniak, 2012).

### ***California paid FML approach***

California was the first state to enact a paid FML policy in 2002. California updated its policy in 2016 to include progressive wage replacement with lower-wage workers receiving a higher wage replacement rate (up to 70%) than higher-wage workers (up to 60% subject to a benefit cap). By targeting low-income workers, progressive wage replacement approaches could potentially decrease racial/ethnic disparities in the take-up of paid FML, because black and Hispanic workers with lower earnings will have a higher wage replacement rate compared to whites. For example, the Social Security program's progressive benefit formula can be advantageous for racial/ethnic minority workers (Hendley & Bilimoria, 1999).

There are no studies of the impact of progressive wage replacement approaches. However, studies of California's 2002 paid FML policy (which had 55% wage replacement) show its positive impacts on parents' leave-taking and labor force participation (Appelbaum & Milkman, 2011), leave-taking among mothers and fathers (Bartel, Rossin-Slater, Ruhm, Stearns, & Waldfogel, 2018), mothers' return to the same employer after childbirth (Baum & Ruhm, 2016), and work hours for mothers one to three years after childbirth (Rossin-Slater et al., 2013).

In terms of the impact of paid FML programs on poverty prevention, there are three relevant studies, though they do not estimate racial/ethnic differences. One study found that the CA policy decreased the risk of poverty for the mothers of one-year old children but not among the mothers of infants, suggesting that to mitigate poverty wage replacement rates may need to be higher directly following a birth (Stanczyk, 2016). A US study found some evidence that living in a state with paid parental leave reduced low-income single mothers' participation in some income assistance programs and decreased some measures of material hardship (Ybarra, Stanczyk, & Ha, 2019). A recent comparative study found that wage replacement rates in most OECD countries provided average wage earners with enough income so that workers and their families remained out of poverty while on leave, though minimum wage workers were less likely to remain out of poverty (Bose, Raub, Earle, & Heymann, 2019).

### ***Racial/ethnic variation in affordability constraints***

The distribution of affordability constraints associated with unpaid and paid FML policies is not even across racial/ethnic groups. Many adults in the US do not have resources to

handle emergency expenses or social networks to borrow funds (Board of Governors of the Federal Reserve System, 2017). A variety of measures of access to wealth, assets and highly resourced social networks, show that black and Hispanic families are much less likely to be able to afford a financial setback (Board of Governors of the Federal Reserve System, 2019; Dettling, Hsu, Jacobs, Moore, & Thompson, 2017; Killewald & Bryan, 2018). The wide disparities suggest that black and Hispanic families may have difficulty cushioning gaps in earnings if leave is needed.

Another aspect that influences a worker's ability to take leave is whether a worker has access to other family members' wages, which differs depending on the number of earners in a family and the percent of income contributed by each earner. Compared to other racial/ethnic groups, households of black workers are more likely to have no earner or one earner (U.S. Census Bureau, 2018b). On average, Hispanic workers have lower earnings when working full time and year round and are less likely to have access to employer-provided FML benefits (Bartel et al., 2019; U.S. Census Bureau, 2018a). Thus, black and Hispanic families may be particularly vulnerable during a period of wage loss.

By addressing affordability, paid FML could decrease racial/ethnic differences in take-up. After paid FML was introduced in California, maternity leave-taking increased more for black and Hispanic mothers compared to white mothers, suggesting that racial/ethnic leave-taking gaps are reduced but not completely eliminated by paid FML (Rossin-Slater et al., 2013). One study found that there are no racial/ethnic differences in the take-up of paid FML offered by employers (Bartel et al., 2019).

On the other hand, qualitative studies found that after childbirth, lower-income mothers, who took paid leave in California and New Jersey, did not think that even progressive wage replacements rates were high enough to meet their family needs, particularly the greater expenses of caring for infants. In order to take leave at all or lengthen it, these new mothers supplemented their income through other sources such as savings, family members and public programs (Setty, Skinner, & Wilson-Simmons, 2018). Therefore, it is likely that paid FML, even with progressive wage replacement, may not fully eliminate racial/ethnic disparities in take-up and leave duration.

### **Assessment of workers' cost of leave under paid and unpaid FML policy**

In the next phase of our capabilities analysis, we create indicators to measure the cost of leave to workers. These indicators quantify the affordability considerations that many workers face when making decisions about being temporarily away from employment to address health issues. We estimate the changes in wage loss and prevention of economic hardship associated with six weeks of leave under a national paid FML policy compared to a national unpaid FML policy across race/ethnicities and household work and family status. This descriptive analysis estimates workers' affordability constraints under two national FML policy scenarios, but does not estimate the causal impacts of family and medical leave policy changes on leave take-up.

Our capability analysis addresses two overarching research questions. If the current unpaid FML policy was expanded at the national level to a paid FML policy based on the State of California's wage replacement approach:

- (1) What are the differences in estimated short-term wage losses (relative to family income) associated with paid FML compared to unpaid FML?
  - (a) Are there racial/ethnic differences in affordability constraints?
  - (b) Are there racial/ethnic differences in buffering resources associated with additional earners?
- (2) How much estimated short-term economic hardship is prevented by paid FML compared to unpaid FML?
  - (a) Are there racial/ethnic differences in paid FML policy's prevention of hardship?

## **Data and methods**

### ***Data and sample***

This analysis draws on the Annual Social and Economic Supplement (ASEC) of the Current Population Survey (CPS), a nationally representative household survey of the non-institutionalized population administered by the US Bureau of the Census and fielded in March each year. We pool four years of data from 2014 to 2017 to generate a large enough sample size to estimate racial/ethnic subgroups within the US working population.

The sample for our analysis includes all working adults aged 16 and older who work full year (i.e. worked 50 weeks or more in the previous calendar year) to ensure that workers in the sample are employed at any time during the year when leave may be needed ( $N = 246,655$ ). We do not restrict the sample to workers eligible for FMLA or CA paid leave. Thus, we are estimating population-level economic costs that workers would face if they choose to take leave. When person-level weights are applied, the sample is representative of the non-institutionalized US full-year working population. Racial/ethnic groups are mutually exclusive. Hispanics may be of any race.

### ***Measurement of unpaid and paid policies***

We estimate the economic cost of leave for our sample under two FML policies: unpaid, based on the FMLA, and paid, based on California's 2016 policy. The FMLA guarantees workers 12 weeks of leave, whereas six weeks is guaranteed by the 2016 California law. (There is another California law that allows for a longer paid leave for workers' temporary disability, which includes childbirth). For this analysis, we assume that the length of leave for each worker is six weeks. However, it is possible to double the estimates of wage loss to calculate wage loss for 12 weeks, or divide the estimates in half to calculate wage loss for three weeks.

The unpaid policy provides no wage replacement; each worker would lose all wage income for six weeks. To estimate the economic cost of leave for workers under the California paid FML policy, we assign a wage replacement amount based on the California policy's wage replacement rates, minimum benefit floor (\$50 per week), and maximum benefit ceiling (which was \$1,129 in 2016 and is based on the state's average weekly wage (SAWW)). Most workers receive 60% wage replacement, while lower-wage workers (who earn less than one third of the state average weekly wage) receive 70% wage replacement. A small percentage of workers receive a wage replacement rate of 23.3% of the SAWW if that amount is higher than 60% of their own wages.

To calculate wage replacement associated with paid FML, we apply California's weekly wage replacement schedule to all workers across states. There is wide state variation in average wages, for example, California's 2014 SAWW is \$1,130 compared to \$701 in Mississippi. To account for this variation, we vary the maximum wage benefit by state, using the Department of Labor's state-level average weekly wage estimates (U.S. Department of Labor, 2019).

### ***Measures of the economic cost of leave***

We use two measures of the economic cost of leave: lost wages relative to family income and movement into economic hardship. Due to data constraints, we cannot estimate the presence of other household earners who are not spouses/partners, access to employer-provided benefits, social network resources, assets or personal savings that could mitigate wage loss. For estimates of workers' and spouses' wages as a percent of family income, a small number of estimates over 100% were top-coded to 100%.

#### ***Ratio of lost wages to family income***

First, we calculate workers' lost wages as a percent of family income if the worker needed to take six weeks of leave. We begin by calculating workers' weekly wages by dividing total wage and salary by the number of weeks worked. For unpaid leave, workers' total weekly wages equals their lost wages. For paid leave, workers lose the difference between their total weekly wages and the amount of wage replacement they receive. We adjust wages and income for inflation (using 2016 constant dollars) so they are comparable across the four years in the pooled data set.

We then compare lost wages to a worker's total family income. Family income includes wage and all non-wage income from workers and family members including public transfers, child support, retirement, interest and dividends. We assume that if workers needed six weeks of leave, the wage losses would have to be absorbed in the short run. Therefore, to calculate a ratio of wage loss to family income, we compare what workers would lose during six weeks of leave to one quarter (three months) of family income.

#### ***Prevention of economic hardship***

The second economic cost measure captures the prevention of economic hardship. We define economic hardship as total family income below a common benchmark of low income: 200% of the U.S. federal poverty line (FPL) (U.S. Census Bureau, 2019). For the analysis of prevention of economic hardship, we exclude the portion of the full-year sample that had family income below the economic hardship threshold before any lost wages ( $N = 206,744$ ). To calculate economic hardship under unpaid leave, we subtract six weeks of wage loss from quarterly total family income. Then we compare quarterly family income net of wage loss with the quarterly benchmark for economic hardship (i.e. 200% of the federal poverty line divided by four). We calculate economic hardship using quarterly estimates (a three-month timeframe) because we assume that wage loss would have to be absorbed in the near term. We repeat this procedure to estimate workers' economic hardship under paid FML.

We assign workers to one of three economic hardship statuses: (1) do not suffer economic hardship, (2) economic hardship is not prevented by paid leave, and (3) economic



hardship is prevented by paid leave. Workers in the first group remained out of economic hardship after experiencing wage loss under both unpaid and paid FML. Workers for whom economic hardship is not prevented by paid leave experienced economic hardship after unpaid leave and after paid leave. Workers for whom economic hardship is prevented by paid leave experienced economic hardship after wage loss under unpaid FML, but were prevented from economic hardship by paid FML.

## Estimation approach

This study uses two estimation approaches. First, to address the right skewed wage distribution, we estimate a series of quantile regression models to estimate median wage loss relative to family income. The first model estimates median wage losses relative to family income for full-year workers under unpaid FML by race/ethnicity. The second model repeats the first model for paid FML. The next model (called the ‘gains from paid FML’) estimates the change in median wage losses relative to family income under unpaid compared to paid FML policy by race/ethnicity. This model shows the racial/ethnic variation in the benefits of paid leave (measured by the reduction in the wage loss to family income ratio) compared to unpaid leave policy. The last model (called the ‘adjusted gains from paid FML’) estimates how having a spouse/partner wage earner affects the gains from paid FML controlling for a standard set of variables that are key determinants of wages and known to vary by race/ethnicity. We include a dichotomous variable that measures a worker’s working partner status. Workers are categorized as being in a single-earner family (i.e. no spouse/partner or spouse/partner has no wage income) or a dual-earner family (i.e. working spouse/partner with wage income). Control variables include education, number of children, age, age squared (to measure the declining positive impact of work experience), usual hours of work, occupation, industry, and state of residence. Demographic controls for gender and foreign-born, as well as survey year dummies, are also included.

We conduct multinomial logit analyses to estimate the probability that paid leave would prevent short-term economic hardship (hereafter, referred to as economic hardship) associated with six weeks of leave (compared to unpaid leave). The dependent variable measures the economic hardship status groups. We set the ‘economic hardship is not prevented by paid leave’ group as the baseline comparison group and report relative risk ratios for the two comparison groups: ‘do not suffer economic hardship’ and ‘economic hardship is prevented by paid leave.’ We run an unadjusted model that includes race/ethnicity and an adjusted model that includes race/ethnicity, working partner status, and the same set of control variables used in the quantile regression models.

We perform all analyses using Stata 15.0 and report robust standard errors.

## Results

### *Economic situation of the US full-year workforce and variation by race/ethnicity*

Appendix A1 describes the characteristics of the total sample of full-year workers. Two-thirds of workers are white, 16% are Hispanic, 11% are black, 6% are Asian/Pacific Islander, while 1% are American Indian/Alaska Native and 1% are other/multiple race/ethnicities.

Men comprise a slightly larger percentage of the sample compared to female workers. Eighty-two percent of the sample are U.S. born, while 12% are foreign born.

Appendix A1 presents a racial/ethnic breakdown of full-year workers' economic outcomes. White and Asian/Pacific Islander workers have the highest annual wages and family incomes and have lower rates of economic hardship compared to all other racial/ethnic groups. Compared to white workers, a much higher proportion of Hispanic workers experience economic hardship followed by black and American Indian/Alaska Native workers. Notably, black workers' wages comprise a higher proportion of total family income, compared to workers of other race/ethnicities, which could put them at greater economic risk in the event they had to lose wages due to taking leave.

Compared to female workers, male workers have higher wages and family incomes and their wages comprise a higher percentage of family income. Full-year workers with higher educational attainment or who work in professional and management occupations have less economic hardship, have higher wages and family income, and contribute a larger share of family income through their wages. Thus, these groups will likely lose more family income under unpaid FML and will gain more back under paid FML.

Affordability of unpaid or paid FML can depend on other family members' contributions to family income. (As well as other income sources such as wealth and savings, but we lack these measures in the data set). Over half of the sample has no working spouse/partner with earnings. The wages of workers in single-earner families make up 67% of total family income and the wages of workers in dual-earner families make up 51% of total family income. Full-year workers in single-earner families are more likely to be at higher economic risk during a temporary absence from work because their wages make up a higher proportion of total family income.

Table 1 highlights racial/ethnic differences in the family composition of the sample and the contribution of wages to total family income from working spouses/partners in dual-earner families. Black workers have a higher contribution of wages to family income (Appendix A1). This is in part due to a lower proportion of full-year black workers that have spouses or partners (44%) compared to other race/ethnicities. However, black workers' spouses or partners are more likely to have wage income (77%) and when working they contribute roughly half of family income. A lower proportion of Hispanic workers' spouses/partners have wage income (67%). A high proportion of Asian/Pacific Islander workers' spouses/partners work (71%), but their wage contribution to family income is lower (45%). Thus, there will likely be racial/ethnic differences in the gains to paid FML depending on workers' work and family situations.

### ***Ratio of lost wages to family income***

Table 2 shows the loss to family income that workers face if they lose six weeks of wages over a three-month period due to unpaid FML, and the change in that income loss under paid FML policy. Model 1 estimates that in the short-run, the median full-year worker loses more than one quarter of family income in a three month period (27%) if temporarily absent from work for unpaid FML leave. In contrast, wage loss under paid FML based on the California wage replacement policy would cost the median worker 11% of quarterly family income. Moving from an unpaid to a paid FML policy would decrease the median worker's wage loss relative to family income by 16 percentage points.

**Table 1.** Work and family situations of full-year workers by race/ethnicity.

	1	2		3		
	% with a spouse/ partner (Total sample)	Spouse/partner work and earning status (Full-year workers with a spouse/partner)		% of family income from spouse/partner wage (Full-year workers with a spouse/ partner with earnings)		
		%	% non-working spouse/partner or spouse/partner with no earnings	% working spouse/ partner with earnings	Mean	SD
Hispanic	56	33	67	47	0.27	
White	68	24	76	46	0.25	
Black	44	23	77	49	0.24	
American Indian/ Alaska Native	57	25	75	50	0.33	
Asian/Pacific Islander	69	29	71	45	0.24	
Other/multiple race	51	22	78	50	0.29	
Total sample	63	26	74	47	0.25	
<i>N</i> (unweighted)	246, 547	164,694	164,694	123,744	123,744	

Black workers contribute a greater share of family income through their wages (see Appendix A1). Therefore, in the event of temporary absence from work for health reasons, the median black worker loses a greater percentage of family income through lost wages compared to the median white worker. Table 2 Model 1 highlights that black workers lose a greater proportion of their quarterly family income (4 percentage

**Table 2.** Quantile regressions estimates of wage loss relative to family income for full-year workers under unpaid v. paid FML policy by race/ethnicity.

	1	2	3	4
	Unpaid FML#	Paid FML#	Gain from paid FML#	Adjusted gain from paid FML##
<i>Median (%)</i>	.269	.111	.145	.145
<i>Race/ethnicity (White)</i>				
Hispanic	-0.006 (0.002)**	-0.010 (0.001)**	0.013 (0.001)**	0.002 (0.001)**
Black	0.040 (0.003)**	0.012 (0.001)**	0.035 (0.002)**	0.018 (0.001)**
American Indian/Alaska Native	0.011 (0.009)	0.002 (0.003)	0.013 (0.006)*	0.010 (0.002)**
Asian/Pacific Islander	-0.025 (0.002)**	-0.008 (0.001)**	-0.010 (0.001)**	-0.010 (0.001)**
Other/multiple race	-0.002 (0.007)	-0.004 (0.003)	0.005 (0.003)*	-0.002 (0.001)
<i>Working partner status (Dual earner)</i>				
Single earner				0.074 (0.001)**
<i>N</i> (unweighted)	246,547	246,547	246,547	246,287
<i>Pseudo R-squared</i>	0.0030	0.0021	0.0061	0.1177

\*  $p < 0.05$ ; \*\*  $p < 0.01$

# Quantile regression with no control variables.

## Quantile regression with controls for gender, education, number of children, age, age squared, usual hours worked, occupation, industry, nativity, year and state.

Notes: Robust standard errors in parentheses. See Appendix A2 for full results.

point gap) compared to white workers in the case of six weeks of unpaid leave. Model 2 shows that paid leave decreases the difference in black–white wage loss relative to family income to a 1 percentage point gap. Model 3 shows that there are higher gains in moving from unpaid FML to paid FML that accrue to black workers compared to white workers since they gained back more of their family income due to their higher wage contributions to family income.

Adjusting for the determinants of wages and working partner status reduces the unadjusted black–white gap in gains from paid leave from 3.5 percentage points estimated in Model 3 to 1.8 percentage points in Model 4. This suggests that racial/ethnic differences in work and family situations can account for a high proportion of the differences in the relative gains to family income when moving from an unpaid to a paid FML policy. In sum, during an income shock, black workers do not have as large of a cushion from other earners in the household to supplement lost wages, compared to white workers, which can affect the affordability of leave. A similar pattern emerges for Hispanic and American Indian/Alaska Native workers compared to white workers, but the effect size is smaller. Compared to white workers, however, Asian/Pacific Islander workers do not gain as much back from a paid FML policy due in part to a lower proportion of their own wage contributions to family income.

Single-earner families face the greatest risk of economic hardship due to wage loss since their wages comprise over two-thirds of family income. Model 4 shows that holding constant demographic and work characteristics, paid FML provides a buffer to the much higher family income losses for workers who do not have wage contributions from working spouses or partners. Workers in single-earner families would gain 7 percentage points more in wages relative to family income under paid leave compared to workers in dual-earner families because their wages comprise a higher proportion of family income. Workers who do not have access to spouse/partner wages benefit more from wage replacement.

We found that the interaction between race/ethnicity and working partner status was significant. To further investigate the impact of working partner status we ran the adjusted model in [Table 2](#) separately by race/ethnicity (see [Table 3](#)). For black workers, living in a single-earner family has a much larger effect on the gains from paid FML due to a lower proportion with spouses/partners and higher contributions to family income. For Hispanic workers without a second earner, paid FML makes a larger difference in restoring family income because a lower proportion of Hispanic workers have spouses or partners who contribute earnings to family income compared to whites ([Table 1](#)).

### ***Prevention of short-term economic hardship***

[Table 4](#) presents descriptive analysis and [Table 5](#) presents multivariate estimates of the extent to which paid FML can prevent short-term economic hardship compared to unpaid FML. Though paid FML does not address baseline economic hardship, it is important to note that there are racial/ethnic differences in workers' baseline wages and family incomes that will affect the proportion of workers that experience economic hardship if wages are lost (see [Appendix A1](#)). Per [Table 4](#) column 2, a greater proportion of Hispanic (26%), black (26%) and American Indian/Alaska Native (25%) full-year workers, who are not

**Table 3.** Quantile regressions estimates of wage loss relative to family income for full-year workers under unpaid v. paid FML policy run separately by race/ethnicity.

	1 Adjusted gain from paid FML white workers##	2 Adjusted gain from paid FML Hispanic workers##	3 Adjusted gain from paid FML black workers##	4 Adjusted gain from paid FML Asian/Pacific Islander workers##
<i>Median</i>	.154	.141	.176	.131
<i>Working partner status (Dual earner)</i>				
Single earner	0.066 (0.002)**	0.073 (0.001)**	0.094 (0.002)**	0.067 (0.003)**
<i>N (unweighted)</i>	43,209	153,770	26,437	17,023
<i>Pseudo R-squared</i>	0.0949	0.1256	0.1331	0.1144

\*  $p < 0.05$ ; \*\*  $p < 0.01$ .

## Quantile regression with controls for gender, education, number of children, age, age squared, usual hours worked, occupation, industry, nativity, year and state.

Notes: Robust standard errors in parentheses. Full regression results available upon request.

in economic hardship before any leave, experience economic hardship after unpaid leave, compared to white (15%) and Asian/Pacific Islander workers (13%).

Table 4 column 2 shows, for workers who experience economic hardship after unpaid leave, the proportion that would be prevented from economic hardship if their wage loss decreased due to paid FML. Within the group of Hispanic workers who experienced economic hardship under unpaid FML policy, 36% would not be prevented from economic hardship, while 64% would be prevented from economic hardship. A similar pattern holds for black and American Indian/Alaska Native workers. For white and Asian/Pacific Islander workers, a greater percentage would be prevented from economic hardship by paid leave (70% and 72%, respectively).

Table 5 presents the multinomial logit model results for prevention of economic hardship under paid FML and no experience of economic hardship under either policy. The comparison group is the group for which paid FML does not prevent economic hardship. Model 1 shows that compared to white workers, Hispanic and black workers would be less likely to be prevented from economic hardship under paid

**Table 4.** Descriptive analysis of Paid FML prevention of short-term economic hardship for full-year workers compared to unpaid FML.

	1		2	
	After unpaid (Full-year workers with family income above 200% of the FPL)		After paid (Full-year workers who enter economic hardship under unpaid leave)	
	% do not enter economic hardship	% enter economic hardship	% stay in economic hardship	% leave economic hardship
<i>Race/ethnicity</i>				
Hispanic	74	26	36	64
White	85	15	30	70
Black	74	26	34	66
American Indian/ Alaska Native	75	25	36	64
Asian/Pacific Islander	87	13	28	72
Other/multiple	79	21	34	66
Total sample	82	18	32	68
<i>N (unweighted)</i>	206,274	206,274	36,749	36,749

**Table 5.** Multinomial logit models predicting the likelihood that paid FML prevents movement into short-term economic hardship for full-year workers with family income above 200% of the FPL.

	1 RRR paid FML prevent hardship (compared to paid FML not prevent hardship)#	2 RRR paid FML prevent hardship (compared to paid FML not prevent hardship)##	3 RRR no hardship (compared to paid FML not prevent hardship)#	4 RRR no economic hardship (compared to paid FML not prevent)##
<i>Race/ethnicity</i>				
<i>(White)</i>				
Hispanic	0.743 (0.029)**	0.922 (0.046)	0.426 (0.014)**	0.754 (0.033)**
Black	0.826 (0.035)**	0.888 (0.041)**	0.443 (0.016)**	0.621 (0.025)**
American Indian/ Alaska Native	0.763 (0.106)	0.865 (0.124)	0.441 (0.050)**	0.645 (0.081)**
Asian/Pacific Islander	1.068 (0.069)	1.116 (0.084)	1.236 (0.068)**	1.311 (0.086)**
Other/multiple	0.826 (0.099)	0.901 (0.109)	0.601 (0.063)**	0.811 (0.090)
<i>Working partner status (Dual earner)</i>				
Single earner		0.967 (0.036)		0.287 (0.009)**
<i>N (unweighted)</i>	206,274	206,061	206,274	206,061
<i>Pseudo R-squared</i>	0.0126	0.0917	0.0126	0.0917

\*  $p < 0.05$ ; \*\*  $p < 0.01$ .

# Multinomial logit model with no control variables.

## Multinomial logit model with controls for gender, education, number of children, age, age square, usual hours worked, occupation, industry, nativity, year and state.

Notes: Coefficients are relative risk ratios. Robust standard errors in parentheses. See Appendix A3 for full results.

FML policy (25% and 17% lower odds respectively) if they experienced economic hardship under unpaid FML policy. In other words, it is more likely that paid FML wage replacement would not restore black and Hispanic wages enough to pull them out of short-term hardship due to the wage loss under unpaid FML. Model 2 shows that holding demographic, work and family characteristics constant, Hispanic and black workers compared to white workers are less likely (8% and 11% lower odds respectively) to be prevented from economic hardship under a paid FML policy if they experienced economic hardship under the unpaid FML policy. Adjusting estimates for factors associated with economic hardship, the Hispanic-white and black-white gap in the likelihood that paid FML policy prevents economic hardship is reduced, and remains statistically significant only for black workers. Only Asian/Pacific Islanders have a greater likelihood of poverty prevention (11% greater odds) under paid FML policy compared to white workers though the difference is not statistically significant. Workers who are in single-earner families have a decreased likelihood of poverty prevention under paid FML compared to workers in dual-earner families though the difference is not statistically significant.

A similar pattern emerges when predicting no economic hardship after wage loss compared to remaining in economic hardship after unpaid and paid FML. Model 3 shows that compared to white workers, black and Hispanic workers would be less likely to stay out of economic hardship. Asian/Pacific Islanders are more likely to stay out of economic hardship and the difference is statistically significant.

## Discussion

This study adds to recent literature by applying a capability framework to assess the potential economic costs of paid versus unpaid leave for all US full-year workers with a focus on racial/ethnic disparities. Additionally, we examine the potential buffering role of spouse/partners wages.

That paid FML reduces the economic cost of leave for the median worker is not surprising. A capability framework calls for an examination of conversion factors that can constrain leave choices and the identification of any group differences in the distribution of factors that could affect observed functioning (take-up of leave) to achieve valued functioning (reach full health potential). Our results show that the median worker's estimated wage loss is 27% of family income under six weeks of unpaid FML over a three-month period, which decreased by 16 percentage points to 11% under a hypothetical national paid FML policy based on California's program. This gain from paid FML is a significant proportion of family income that can help cover expenses during leave which could facilitate take-up. In terms of income security, we find that under unpaid FML, the loss of family income could push 18% of full-year workers into short-term economic hardship. Yet, paid FML can prevent potential economic hardship for over two-thirds of workers who entered economic hardship under unpaid FML. After paid FML, only 6% of full-year workers would be in economic hardship due to short-term income losses which significantly decreases economic constraints.

We also found that paid FML can significantly reduce, but not eliminate, economic constraints faced by black and Hispanic workers that could increase their capability to take up paid FML and potentially reduce racial/ethnic disparities in leave taking. Taking leave could become more affordable for black workers because they would gain a greater percentage of family income back compared to white workers if policy changed from unpaid to paid FML. Key drivers of the gains to black workers are their larger contributions to family income and the lower proportion that have a working spouse/partner. In contrast, since a greater proportion of black workers have incomes near the economic hardship threshold compared to white workers, taking leave may not be as attainable since there is a lower likelihood of paid FML preventing short-term economic hardship compared to white workers. Hispanic workers are estimated to have a similar pattern of affordability constraints associated with leave decisions compared to black workers, but have more buffering resources available from other earners' wages.

### Implications for racial/ethnic inequalities in the capability to take leave

The present analysis has shown that under the paid leave policy we considered, black and Hispanics workers would not benefit as much as whites in terms of prevention of economic hardship. Notably, minority groups have lower savings and wealth to absorb the economic shock of leave taking, which could compound affordability constraints faced by minority workers (Board of Governors of the Federal Reserve System, 2019). It is important to consider racial/ethnic differences in affordability constraints in the context of other racial/ethnic disparities that may further limit the real opportunities to take up unpaid or paid FML for blacks and Hispanics. First, under current national eligibility criteria defined by the FMLA, Hispanic workers are less likely to be eligible (Jorgensen & Appelbaum, 2014). Furthermore, blacks and Hispanics may be less aware of the specific provisions of the

FMLA. For instance, only 57% of Hispanic workers are aware of the FMLA compared to 85% of non-Hispanic workers (IMPAQ International and the Institute for Women's Policy Research, 2017a). These racial/ethnic differences matter because workers who are both eligible for and aware of the FMLA are potentially more likely to be able to take up leave.

A full picture of differential capability to take up leave to address family health and attain positive health outcomes should also include an assessment of need. Our estimates do not address that blacks and Hispanic workers may be more likely to need leave. Blacks have a higher prevalence of health conditions including unfavorable birth outcomes. For example, 13.8% of black babies are born prematurely compared to 9% of non-Hispanic white babies (Burris et al., 2019). Parents of premature infants are more likely to need family leave, and for longer periods (Greenfield & Klawetter, 2016). Hispanics have a younger age distribution and higher fertility rates than other groups (Mathews & Hamilton, 2019), which may increase their need for family leave. In sum, our analysis of affordability constraints and relevant research literature highlights a paradox where groups with higher need for FML may have more limited eligibility, less awareness, less buffering resources and be more likely to face economic hardship if they need to take leave.

To make taking FML more affordable across racial/ethnic groups, beyond progressive wage replacement, our findings suggest that if policymakers want to achieve valued functioning of FML, they could consider approaches that set a floor on how much downward mobility workers and their families experience that can limit take-up of leave. Some countries already target leave policies to families, rather than to individual workers. For example, France pays higher allowances to single parents than to couples and in Norway single mothers who qualify for parental leave also receive ten weeks of leave otherwise allocated to fathers (Koslowski, Blum, Dobrotić, Macht, & Moss, 2019).

## Future research

A recent report by the National Academy of Sciences, concluded that the impacts of paid FML policies should be further studied due to the potential benefits to health, employment and poverty alleviation (National Academies of Sciences, 2019). Future research should continue to document differential capabilities in workers' affordability constraints that can limit the benefits from paid FML in terms of both take-up and the duration of leave. There is a need for additional data collection in employment surveys that would allow for a full capability assessment including conversion factors such as assets, wealth and access to employer-provided leave and job protection, and valued functioning such as health outcomes.

An important focus for future studies should be intersectionality of race/ethnicity, class and gender in access to and affordability of unpaid and paid FML, differential take-up and health outcomes. Our findings suggest that working women face higher economic costs of leave than working men, although women are more likely to use leave, particularly for child birth. Research on the interactions between these characteristics and potentially different opportunity costs associated with the affordability of FML is a key next step for research.

Additionally, cost/benefit analyses of unpaid and paid FML policies should include worker and societal perspectives, including differential impacts by worker subgroups, to enhance published analyses that focus on the cost of policies to governments (IMPAQ International and the Institute for Women's Policy Research, 2017b). Finally, more recently



passed state paid leave policies, in Washington DC, Washington State, Massachusetts, Connecticut, and Oregon, have higher wage replacement rates for the lowest earning workers ranging from 80% to 100%. These policies could have an even greater effect on reducing economic hardship and racial/ethnic disparities. Researchers should use a capability approach to evaluate the effects of different state approaches on improving affordability and access to leave for diverse workers.

## Disclosure statement

No potential conflict of interest was reported by the authors.

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## Appendices

### Appendix A1. Economic situation of full-year working adults by demographic, family and work characteristics.

	% of sample %	Annual wage income (\$)		Family income (\$)		% of family income from worker wages		In economic hardship	
		Median	IQR	Median	IQR	Mean	SD	%	SE
<i>Race</i>									
Hispanic	16	30,000	28,110	59,241	63,590	59	0.35	31	0.00
White	65	44,273	46,674	88,643	88,765	59	0.32	11	0.00
Black	11	33,454	31,148	59,932	65,818	65	0.31	24	0.00
American Indian/Alaska Native	1	32,440	31,888	63,217	65,011	61	0.41	24	0.01
Asian/Pacific Islander	6	46,567	57,060	101,002	103,995	57	0.33	12	0.00
Other/multiple race	1	35,000	36,860	71,502	80,747	59	0.37	20	0.01
<i>Working partner status</i>									
Single earner (no working spouse/partner or no spouse/partner with earnings)	53	34,986	39,537	60,741	65,918	67	0.34	23	0.00
Dual earners (working spouse/partner with earnings)	47	45,619	45,192	104,209	89,820	51	0.28	8	0.00
<i>Gender</i>									
Male	54	45,554	50,580	82,123	84,779	64	0.32	15	0.00

(Continued)

**Appendix A1.** Continued.

	% of sample %	Annual wage income (\$)		Family income (\$)		% of family income from worker wages		In economic hardship	
		Median	IQR	Median	IQR	Mean	SD	%	SE
Female	46	34,419	34,754	77,236	84,091	55	0.33	17	0.00
<i>Education</i>									
Less than high school	7	21,416	20,835	45,411	49,369	57	0.37	44	0.00
High school diploma	26	30,413	27,438	63,026	62,944	58	0.33	22	0.00
Some college	18	32,947	32,440	70,994	72,049	58	0.33	18	0.00
Associates, bachelors, or graduate degree	48	54,569	53,222	103,562	99,802	61	0.31	7	0.00
<i>Number of children</i>									
0	54	36,400	40,464	71,771	77,616	61	0.32	13	0.00
1	19	41,184	42,962	87,172	85,706	57	0.31	15	0.00
2	17	46,560	50,276	100,000	94,405	57	0.32	18	0.00
3+	9	41,000	47,182	84,810	89,679	59	0.35	32	0.00
<i>Age</i>									
16–25	11	20,592	21,352	59,717	74,889	52	0.35	26	0.00
26–65	83	43,000	45,315	82,181	84,389	62	0.32	15	0.00
Over 65	6	33,977	52,645	87,778	93,107	46	0.30	7	0.00
<i>Work hours</i>									
Full-time	86	44,542	43,103	82,284	84,201	63	0.31	14	0.00
Part-time	14	13,385	15,884	63,348	83,308	37	0.33	30	0.00
<i>Occupation</i>									
Professional	22	55,757	49,518	104,010	95,367	62	0.30	6	0.00
Executive, administrative, managerial	18	60,826	62,000	111,564	107,061	62	0.31	6	0.00
Technical, sales, administrative support	23	32,440	30,442	74,919	76,644	56	0.32	16	0.00
Service	16	22,653	22,321	52,717	62,499	55	0.35	32	0.00
Blue collar	20	35,600	30,256	64,989	61,521	63	0.32	21	0.00
Farming, fishing	1	26,000	18,523	48,005	58,965	63	0.36	37	0.02
Armed forces	1	50,000	38,650	69,949	63,716	76	0.27	17	0.01
<i>Industry</i>									
Agriculture, forestry, fishing and hunting, and mining	19	41,951	44,656	77,271	77,156	63	0.32	16	0.00
Wholesale trade	3	46,332	45,000	85,780	87,357	64	0.29	12	0.01
Retail trade	11	27,799	30,110	66,516	73,742	55	0.33	21	0.00
Transportation and warehousing, and utilities	5	45,619	38,643	78,194	71,157	64	0.30	13	0.00
Information	2	54,665	58,715	99,499	97,694	63	0.30	8	0.01
Finance and insurance, and real estate and rental and leasing	7	50,002	52,985	100,002	102,466	60	0.31	8	0.00
Professional, scientific, and management, and administrative and, and waste management services	12	48,591	61,047	92,526	105,312	61	0.33	13	0.00
Educational services, and health care and social assistance	22	41,000	37,498	86,175	87,100	57	0.31	13	0.00
Arts, entertainment, and recreation, and accommodation and food services	8	21,259	23,126	53,036	67,522	56	0.36	32	0.00
Other services, except public administration	5	27,372	33,389	65,801	69,155	51	0.35	23	0.01
Public administration	5	55,757	44,273	97,973	81,450	66	0.28	6	0.00
Active duty military	1	50,000	38,650	69,949	63,716	76	0.27	17	0.01
<i>Nativity</i>									
U.S. born	82	40,550	42,216	82,368	84,270	59	0.32	13	0.00
Foreign born	18	34,000	40,493	70,000	81,618	60	0.33	26	0.00
<i>Year</i>									

(Continued)

**Appendix A1.** Continued.

	% of sample %	Annual wage income (\$)		Family income (\$)		% of family income from worker wages		In economic hardship	
		Median	IQR	Median	IQR	Mean	SD	%	SE
2014	24	39,125	42,214	78,409	82,800	59	0.20	17	0.00
2015	25	39,537	43,592	77,956	83,075	60	0.37	17	0.00
2016	25	40,493	42,639	81,009	85,716	60	0.35	15	0.00
2017	26	40,000	43,502	82,360	87,050	59	0.35	14	0.00

Notes: Unweighted  $N = 246,547$  for all analyses except nativity ( $N = 246,287$ ).

**Appendix A2.** Quantile regressions estimates of wage loss relative to family income for full-year workers under unpaid v. paid FML policy by race/ethnicity.

	1 Unpaid FML#	2 Paid FML#	3 Gain from paid FML#	4 Adjusted gain from paid FML##
<i>Median (%)</i>	.269	.111	.145	.145
<i>Race/ethnicity (White)</i>				
Hispanic	-0.006 (0.002)**	-0.010 (0.001)**	0.013 (0.001)**	0.002 (0.001)**
Black	0.040 (0.003)**	0.012 (0.001)**	0.035 (0.002)**	0.018 (0.001)**
American Indian/Alaska Native	0.011 (0.009)	0.002 (0.003)	0.013 (0.006)*	0.010 (0.002)**
Asian/Pacific Islander	-0.025 (0.002)**	-0.008 (0.001)**	-0.010 (0.001)**	-0.010 (0.001)**
Other/multiple race	-0.002 (0.007)	-0.004 (0.003)	0.005 (0.003)*	-0.002 (0.001)
<i>Working partner status (Dual earner)</i>				
Single earner				0.074 (0.001)**
<i>Gender (Male)</i>				
Female				-0.015 (0.000)**
<i>Education (Less than high school)</i>				
High school diploma				0.003 (0.002)
Some college				0.002 (0.002)
Associates, bachelors, or graduate degree				-0.002 (0.002)
<i>Number of children (No children)</i>				
1				-0.015 (0.000)**
2				-0.021 (0.000)**
3+				-0.021 (0.001)**
<i>Age</i>				
Age				0.006 (0.000)**
Age squared				-0.000 (0.000)**
<i>Usual hours worked</i>				
Usual hours worked				0.002 (0.000)**
<i>Occupation (Professional)</i>				
Executive, administrative, managerial				-0.008 (0.000)**

(Continued)

**Appendix A2.** Continued.

	1 Unpaid FML#	2 Paid FML#	3 Gain from paid FML#	4 Adjusted gain from paid FML##
Technical, sales, administrative support				-0.007 (0.001)**
Service				-0.010 (0.001)**
Blue collar				0.010 (0.001)**
Farming, fishing				0.019 (0.003)**
Armed forces				0.027 (0.002)**
<i>Industry (Agriculture, forestry, fishing and hunting, and mining)</i>				
Wholesale trade				0.004 (0.002)**
Retail trade				-0.009 (0.001)**
Transportation and warehousing, and utilities				0.003 (0.001)**
Information				-0.001 (0.001)
Finance and insurance, and real estate and rental and leasing				-0.002 (0.001)**
Professional, scientific, and management, and administrative and, and waste management services				-0.005 (0.001)**
Educational services, and health care and social assistance				0.000 (0.001)
Arts, entertainment, and recreation, and accommodation and food services				-0.003 (0.002)
Other services, except public administration				-0.013 (0.001)**
Public administration				0.014 (0.001)**
<i>Nativity (U.S. born)</i>				
Foreign born				0.003 (0.001)**
<i>Survey year (2014)</i>				
2015				0.001 (0.001)
2016				-0.001 (0.001)
2017				-0.003 (0.001)**
<i>N (unweighted)</i>	246,547	246,547	246,547	246,287
<i>Pseudo R-squared</i>	0.0030	0.0021	0.0061	0.1177

\* $p < 0.05$ ; \*\* $p < 0.01$ .

# Quantile regression with no control variables.

## Quantile regression with controls for gender, education, number of children, age, age squared, usual hours worked, occupation, industry, nativity, year and state

Notes: Robust standard errors in parentheses.

**Appendix A3.** Multinomial logit models predicting the likelihood that paid FML prevents movement into short-term economic hardship for full-year workers with family income above 200% of the FPL.

	1	2	3	4
	RRR paid FML prevent hardship (compared to paid FML not prevent hardship)#	RRR paid FML prevent hardship (compared to paid FML not prevent hardship)##	RRR no hardship (compared to paid FML not prevent hardship)#	RRR no economic hardship (compared to paid FML not prevent)##
<i>Race/ethnicity (White)</i>				
Hispanic	0.743 (0.029)**	0.922 (0.046)	0.426 (0.014)**	0.754 (0.033)**
Black	0.826 (0.035)**	0.888 (0.041)**	0.443 (0.016)**	0.621 (0.025)**
American Indian/Alaska Native	0.763 (0.106)	0.865 (0.124)	0.441 (0.050)**	0.645 (0.081)**
Asian/Pacific Islander	1.068 (0.069)	1.116 (0.084)	1.236 (0.068)**	1.311 (0.086)**
Other/multiple	0.826 (0.099)	0.901 (0.109)	0.601 (0.063)**	0.811 (0.090)
<i>Working partner status (Dual earner)</i>				
Single earner		0.967 (0.036)		0.287 (0.009)**
<i>Gender (Male)</i>				
Female		0.879 (0.031)**		0.807 (0.025)**
<i>Education (Less than high school)</i>				
High school diploma		1.023 (0.059)		1.086 (0.056)
Some college		1.058 (0.066)		1.245 (0.068)**
Associates, bachelors or graduate degree		1.327 (0.086)**		2.076 (0.119)**
<i>Number of children (No children)</i>				
1		0.864 (0.038)**		0.908 (0.035)*
2		0.846 (0.040)**		0.736 (0.031)**
3+		0.722 (0.038)**		0.429 (0.020)**
<i>Age</i>				
Age		0.995 (0.009)		0.914 (0.008)**
Age squared		1.000 (0.000)		1.001 (0.000)**
<i>Usual hours worked</i>				
Usual hours worked		1.006 (0.001)**		0.996 (0.001)**
<i>Occupation (Professional)</i>				
Executive, administrative, managerial		1.072 (0.070)		1.236 (0.071)**
Technical, sales, administrative support		0.853 (0.050)**		0.613 (0.031)**
Service		0.734 (0.045)**		0.499 (0.026)**
Blue collar		0.778 (0.049)**		0.435 (0.024)**
Farming, fishing		0.632 (0.130)*		0.309 (0.058)**
Armed forces		0.858		0.291

(Continued)



**Appendix A3.** Continued.

	1	2	3	4
	RRR paid FML prevent hardship (compared to paid FML not prevent hardship)#	RRR paid FML prevent hardship (compared to paid FML not prevent hardship)##	RRR no hardship (compared to paid FML not prevent hardship)#	RRR no economic hardship (compared to paid FML not prevent)##
		(0.150)		(0.046)**
<i>Industry (Agriculture, forestry, fishing and hunting, and mining)</i>				
Wholesale trade		0.944 (0.091)		0.923 (0.077)
Retail trade		0.810 (0.050)**		0.827 (0.045)**
Transportation and warehousing, and utilities		1.123 (0.077)		1.142 (0.069)*
Information		1.099 (0.136)		1.115 (0.120)
Finance and insurance, and real estate and rental and leasing		1.207 (0.092)*		1.095 (0.073)
Professional, scientific, and management, and administrative and, and waste management services		1.054 (0.067)		1.042 (0.058)
Educational services, and health care and social assistance		1.100 (0.066)		0.912 (0.048)
Arts, entertainment, and recreation, and accommodation and food services		0.947 (0.069)		0.789 (0.051)**
Other services, except public administration		0.973 (0.079)		0.916 (0.066)
Public administration		1.202 (0.105)*		1.152 (0.090)
<i>Nativity (U.S. born)</i>				
Foreign born		0.882 (0.042)**		0.776 (0.033)**
<i>Survey year (2014)</i>				
2015		0.856 (0.045)**		0.828 (0.039)**
2016		0.883 (0.047)*		0.904 (0.043)*
2017		0.924 (0.049)		0.938 (0.044)
<i>N (unweighted)</i>	206,274	206,061	206,274	206,061
<i>Pseudo R-squared</i>	0.0126	0.0917	0.0126	0.0917

\*  $p < 0.05$ ; \*\*  $p < 0.01$ .

# Multinomial logit model with no control variables.

## Multinomial logit model with controls for gender, education, number of children, age, age square, usual hours worked, occupation, industry, nativity, year and state.

Notes: Coefficients are relative risk ratios. Robust standard errors in parentheses.