

# Disability Onset among Working Parents

Earnings Drops,  
Compensating Income  
Sources, and Health  
Insurance Coverage

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**Low-Income Working Families**

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# DISABILITY ONSET AMONG WORKING PARENTS

As part of a larger project examining how families with children respond to large drops in family income, this paper focuses on income losses associated with the onset of a work-limiting disability. As defined in this study, self-reported work limitation (hereafter referred to interchangeably as “disability” or “limitation”) is a broad measure that could include both temporary and permanent health problems of variable severity. The effect of this disability on a worker’s earnings will likely depend on several factors, including the severity and duration of the disability, whether the job’s demands or work environment can be altered to accommodate the limitation, and whether the worker has access to paid leave to recover from a temporary illness. This paper first examines the prevalence and severity of earnings drops associated with the onset of a work-limiting disability, then focuses on the effects of any related earning decreases on the worker’s family, both in family income and health insurance.

The financial effect of a worker’s disability on his or her family depends on the size of the worker’s earnings drop and the presence of other income sources that could buffer such a drop. Several income sources could buffer reduced earnings. Some families are able to increase the hours other family members work or draw on assets to offset an earnings loss (Wu 2003). Some employers offer disability benefits, activated when disability first occurs, to replace a portion of lost earnings. According to data from the National Compensation Survey, 39 percent of workers in private industry in 2007 had access to short-term disability coverage through their employer, and 31 percent had access to long-term disability coverage. These benefits were more likely to be offered to employees with higher wages; about half of workers had access to short- and long-term disability benefits (U.S. Department of Labor 2007). Programs funded through employer taxes, such as unemployment insurance (UI) and workers compensation, may also be available, depending on whether the worker ceases working altogether and whether the disability occurred on the job. Workers at very small firms may

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not have access to unemployment benefits, however, because regulations exempt some small employers from participating in the UI system.<sup>1</sup> Some agricultural workers and domestic workers may also be outside the workers compensation system.<sup>2</sup>

For families with incomes below certain thresholds, state or federal means-tested benefits may also offset earnings losses from disability onset. These benefits include Temporary Assistance to Needy Families, food stamps, and Women, Infants, and Children (WIC)—a program that gives food vouchers to pregnant women and families with children under age 5 with low incomes.

Finally, if a worker's disability is expected to be long lasting, he or she can apply for Supplemental Security Income (SSI) and/or disability insurance through the Social Security program. To qualify for these programs, workers must pass a strict earnings test as well as a test of the severity of disability. Neither program provides short-term benefits, since by definition workers must show that their conditions are expected to last at least one year (Szymendera 2005).

If a family obtains health insurance coverage through one parent's employer, coverage could be affected if a disability causes that parent to stop working or move to part-time work. Some newly disabled workers may choose to remain in jobs or refrain from cutting work hours in order to maintain employer-sponsored insurance (ESI) coverage for themselves and their families. This can be thought of as a form of "job lock," a term used to describe the fact that workers who obtain health insurance through their employer may find it less attractive to change to an otherwise better job that does not offer health insurance. In this case, workers may also be "locked" into working a certain number of hours to continue to qualify for ESI when they may especially need access to health care services.

In this paper, we analyze a sample of working parents in the 1996 and 2001 panels of the Survey of Income and Program Participation (SIPP) who developed work-limiting disabilities while participating in the panel (up to four years for those in the 1996 panel and three years for those in the 2001 panel). We describe the characteristics of these parents, comparing those who do and do not experience a sizeable drop in earnings with a disability onset. We then examine whether employer and government benefits, as well as other family income sources, appear to increase when the disability appears. Finally, we analyze health insurance changes around the time the disability occurs. Because eligibility for ESI is often limited to full-time employees, we examine whether ESI policyholders are less likely to reduce work hours when they first develop a disability, as well as the rate at which ESI policyholders lose coverage.

Just under 8 percent of working parents who do not report a work limitation in the initial interview of the SIPP report at least one period with a work limitation during their time in the survey. Compared with other working parents, those who report a new work limitation are more likely to be older, nonwhite, and unmarried; they also have shorter job tenures, lower levels of education, and lower family incomes before the disability.

An estimated 61 percent of working parents saw their earnings fall in the four-month period that included the onset of the disability, relative to the four-month period before. About a quarter of all working parents developing disabilities experienced a 25 percent or greater reduction in family income from the previous four-month period. Though use of means-tested benefits is skewed toward those in the lowest income quintile (family income below \$10,242 in a wave in 2007 dollars, or \$30,726 annualized), receipt of non-means-tested benefits is equally common across the income spectrum. For parents with large declines

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in earnings as a share of family income, increases in income from both means-tested and non-means-tested sources make up for just 10 percent of their earnings loss, and another 5 percent of their earnings loss is made up by increases in spouse's income. This leaves a substantial gap between pre-onset and post-onset income. We find some evidence of job lock at the time of disability onset; ESI policyholders are less likely to cut back on their hours worked when a disability first occurs, controlling for other worker and job characteristics.

The next section reviews literature about the financial impact of disability and the impact of employer-sponsored health insurance on work decisions. The third section of the paper describes the data and methods. Section four describes the findings, and section five concludes with a discussion of the policy implications of the findings.

## Background

Two strands of literature provide background for our analysis. Literature examining the financial impacts of disability is sparse and tends to use one dataset: the Panel Study of Income Dynamics, or PSID. A second set of literature relates to our analysis of job lock at disability. This literature contains numerous studies on the presence of job lock in labor participation decisions, but it contains just one study examining whether holding health insurance as a benefit of employment affects the decision of hours worked at disability onset.

### Financial Impacts of Disability

Two studies examine the effect of disability on earnings and income, as well as the effects of resulting earnings drops on consumption (Meyer and Mok 2007; Stephens 2001). These studies differ from our analysis in three key ways: they do not focus on individuals who were working when the disability developed, as we do; they use annual data, whereas we use data that come from surveys of respondents three times over the course of a year; and they explore long-term effects of disability onset, while our analysis focuses on the immediate effects.

Stephens (2001) uses the PSID to examine earnings and income changes in the years following disability onset for a 25-year sample (1968–92) of married men. His findings indicate that, on average, other income sources compensate for a significant portion of the drop in earnings of the husband over time. Relative to five years prior, husbands who became disabled saw their earnings drop by 10 percent in the year of onset, but family income fell by only 7 percent during the same period. The pattern in subsequent years is for the decline in family income to remain at roughly the same proportion of the decline in husband's earnings. Five years after the disability first occurs, the husband's earnings are 22 percent lower, while family income is 16 percent lower.

Meyer and Mok (2007) use a longer panel of PSID data than Stephens (1968–2003) but limit their analysis to male household heads (i.e., main survey respondents) to examine the long-term impacts of disability on earnings and income. They find an average earnings drop of 11 percent in the year of disability onset relative to a benchmark five years earlier, which is comparable to that found by Stephens. Meyer and Mok show a much more gradual drop for those who are not severely disabled (8 percent) than for the severely disabled (20 percent), many of whose earnings fall to zero at onset. Relative to five years prior, annual hours of work fall by 230 hours in the year a disability occurs. Average earnings and hours worked begin to decline *before* the year the disability occurs. The authors offer two possible

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reasons for the pre-onset earnings dip: a health problem could have existed before the individual reported a work disability, or several years of poor job outcomes (unemployment and/or low-paying jobs) could increase the attractiveness of attempting to be declared disabled rather than continuing to work. The authors do not break out the sources of compensating income to show the relative importance of each, but they do show that drops in family income are cushioned by a combination of government transfers, intra-family earnings, and inter-family transfers.

### **Disability and Employer-Sponsored Health Insurance**

A substantial literature examines the role of employer-sponsored health insurance in labor supply decisions including labor force participation, retirement timing, and the decision to change jobs (see Gruber and Madrian 2002 for a review). This literature shows that health insurance is a factor in the labor supply decision of secondary earners as well as in decisions to change employers.

Despite this voluminous literature on job lock, however, to our knowledge just one study examines changes in hours worked following the onset of a disability. Bradley and colleagues (2005) examine the effects of holding health insurance through a woman's employer, compared with through her spouse's employer, on labor supply following breast cancer diagnosis in a small sample of married women. They find that women insured through a spouse's employer were twice as likely to stop working in the period following diagnosis as women insured through their own employer. Moreover, even conditional on continuing to work, married women diagnosed with breast cancer who were insured through their own employer reduced their weekly hours worked by an average of 7 percent in the six months after diagnosis, whereas women insured through their spouse who continued working after diagnosis reduced hours worked by 25 percent.

### **Data and Methods**

Our analysis sample is drawn from a pooled sample of respondents in the 1996 and 2001 panels of the Survey of Income and Program Participation, a longitudinal survey of the noninstitutionalized civilian population in the United States, sponsored by the Census Bureau. The initial sample sizes for these panels were 40,188 households (1996 panel) and 36,700 households (2001 panel). The SIPP is structured as a series of nonoverlapping panels, each of which contains several waves (12 waves in 1996 and 9 in 2001) of data on the same families. Each wave covers a reference period of four months. Because we focus on the effects of disability on a worker's family, we limit our sample to adults age 25 to 58 in the first wave of each panel who are living with a child under the age of 18. We also restrict our sample to workers—that is, individuals who report at least one paid job and positive earnings in at least one month—in the wave before a disability begins. For our comparison sample of working parents who do not develop disabilities, we only include those who were working in the first wave of the panel.

We define family income based on a family unit that includes the spouse or unmarried partner of the reference person, as well as all children in the household related to either the reference person or his or her spouse/partner. Families are constructed as of the first wave of the panel and do not change even if a new family member is added later. These choices are in keeping with complementary analyses on other shocks to working families, such as divorce, in which there was concern about endogenous family changes affecting the analyses (Acs and Nichols 2007; Acs, Loprest, and Nichols 2009). Placement of families into income quintiles is based on income at wave 1.



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Our key variable of interest, disability onset, is defined by a question that asks “Does [respondent] have a physical, mental, or other health condition that limits the kind or amount of work [respondent] can do?” This question is asked in each wave. Because we use the change in this variable as the measure of interest, by definition no disability onset can occur in the first wave of a panel. Though we cannot be sure that we have captured only disabilities that first occurred after the individual was surveyed by the SIPP, we limit our sample to the first onset in the panel to increase the chances that we are capturing a new, rather than a recurring, disability. Finally, to minimize the effects of measurement errors, we drop cases in which people report working but also report having no earnings in a wave and drop the top and bottom 1 percent of individuals according to changes in earnings between the wave before limitation and the wave of onset to avoid outliers. Our final sample contains 2,577 working parents with onset of a work-limiting disability and 29,656 working parents without onset.

We define job characteristics (firm size, industry, occupation) for each worker based on his or her main current job in each wave. For self-employed workers, these characteristics are based on the business the individual owned.

Our main financial outcomes of interest are changes in worker earnings and family income following disability onset, along with changes in compensating income sources. We consider all these variables at the wave level to match our main variable of interest, changes in disability status. An earnings drop is defined as a fall in earnings relative to earnings in the prior wave. In our main results, we consider the wave during which the working parent first reported a work limitation (“onset”) as the “post period” to capture immediate—and possibly temporary—earnings drops that might not continue if the worker recovers and returns to work. We also analyzed the wave after onset as an alternative post-onset wave (results not shown). We found qualitatively similar findings to the ones we present here. For example, the likelihood of experiencing a large drop in earnings relative to family income (21.1 percent) was close to that found using the period of onset as the comparison period (20.8 percent), and the share of people with any income by source was also similar to the results shown later in this paper for the wave of onset.

We characterize an earnings drop that is at least 25 percent of family income as financially substantial (“large earnings drop” defined as a dichotomous measure).<sup>3</sup> We also analyzed a cutoff based on an earnings drop of at least 50 percent of earnings; results were similar to our main results, though the group with 50 percent drops included many people whose earnings did not compose a significant portion of family income. We focus on results for the drop based on percentage of family income to show instances in which the family unit is likely to suffer financially. While our analysis focuses on the dynamics between the wave before onset and wave of onset, some limitations are more long-lasting than others. Sixty-six percent of the limitations in our sample last only one wave, and another 14.5 percent last just two waves (eight months or less).

We define health insurance status for a given respondent as of the wave before onset. We differentiate between insurance held through one’s own employer (ESI policyholder) and through one’s spouse (grouped with private insurance, not ESI policyholder). We designate a respondent as an ESI policyholder if he or she is covered by private insurance, indicates being the policyholder, and reports the source of health coverage as a present or former employer or union. Because health insurance is measured monthly, we assign health insurance at the wave level as the type of coverage the worker had for most months in the wave, with ties assigned to private coverage. The significance testing was performed using standard STATA-adjusted Wald tests, with survey commands and weights from the first wave of the survey.

## Results

In our sample of 32,233 working parents, 8 percent developed work-limiting disabilities during their time in the survey. Relative to working parents who do not report work limitations at any point during the survey, working parents who develop disabilities are more likely to be black, older, unmarried, and have less education (table 1). They are also more likely to have public insurance coverage or be uninsured and less likely to hold private insurance through their employer before onset. They have shorter tenure at their place of employment and are less likely to work in a large firm, making it less likely that they will have access to such employer benefits as paid sick leave.

TABLE 1. *Characteristics of Working Parents in Wave One by Disability Status (percent)*

	Working parents with disability onset	Working parents without disability
Race/ethnicity		
White non-Hispanic	68	73**
Black non-Hispanic	13	11**
Hispanic	13	12
Other	5	5
Age		
25–34	31	33
35–44	45	47*
45–54	23	19**
55–64	2	1**
Sex		
Female	52	48**
Marital status		
Unmarried	24	17**
Educational attainment		
Less than high school	17	9**
High school diploma	33	30**
Some college/associate's degree	33	32
Bachelor's degree or higher	17	30**
Citizenship		
U.S. citizen	92	93
Geographic location		
Northeast	16	19**
Midwest	23	25*
South	35	35
West	25	21**
Metropolitan Statistical Area	59	62**
Health insurance coverage		
Private (ESI policyholder)	47	58**
Private (not ESI policyholder)	25	27
Public	13	5**
Uninsured	16	11**

TABLE 1. (continued)

	Working parents with disability onset	Working parents without disability
Job tenure		
Less than 6 months	23	15**
6 months to 1 year	10	8**
More than 1 year	66	77**
Firm size		
Less than 25 employees	34	31**
25–99 employees	24	24
100+ employees	42	45**
Family income quintile		
Below 20th percentile	24	13**
20th–40th percentile	24	18**
40th–60th percentile	21	22
60th–80th percentile	18	23**
Above 80th percentile	13	24**
Employment status, wave one <sup>a</sup>		
Unemployed/not in labor force	8	0
Part time	34	29
Full time	57	71**
One working parent in family	41	29**
Two working parents in family	59	71**
Year 1996	57	48**
Year 2001	43	52**

Sources: Survey of Income and Program Participation, 1996 and 2001.

Note: Working parents who reported a disability in wave one (existing disability) are not included in the sample.

a. Parents with disability onset are considered working if they worked in the wave before onset of the disability, but they may be unemployed in wave one.

\*Difference between working parents with and without disability onset is significant at the  $p < 0.05$  level.

\*\*Difference between working parents with and without disability onset is significant at the  $p < 0.01$  level.

Those developing disabilities are also less like than those without disability onset to be able to absorb a drop in earnings along two important margins. First, they have lower family incomes: 24 percent of those with onset are in the bottom income quintile versus 13 percent of those without work limitations (these numbers are reversed in the top quintile, at 13 and 24 percent, respectively). Second, they are much less likely to have more than one working parent in the household (59 percent versus 71 percent) and therefore are less likely to have access to earnings from a spouse or partner that can buffer against earnings losses when a disability occurs. Working parents who develop limiting disabilities are also more likely to receive transfer income in wave 1 of the survey (before disability onset) than those who do not acquire work limitations (see appendix table).

### Characteristics of Working Parents with Large Earnings Drops at Onset

When working parents experience a new work limitation, the resulting impact for their families may be substantial if that parent's drop in earnings represents a large portion of the family's income. Only

21 percent of parents who developed a work disability experienced a large drop in earnings relative to the prior wave. In fact, the characteristics that are predictive of having a new work limitation and those predictive of having a large drop in earnings relative to family income conditional on a new work limitation overlap substantially (table 2). Blacks and Hispanics are more likely than non-Hispanic whites to experience large earnings drops. Workers with higher education levels who develop disabilities are less likely than those without high school degrees to have large family income drops, perhaps because workplaces of more educated workers tend to be less physically demanding and more accommodating of health limitations.

When family income is in the lowest quintile, an earnings drop is much more likely to result in a significant drop in family income. For example, 32 percent of those in the bottom quintile with onset have a large drop in family income, compared with 21 percent in the second quintile and 16 percent in the top quintile. When the worker who develops a disability worked part time before onset, the family is less likely to

TABLE 2. *Characteristics of Working Parents by Size of Decline in Earnings at Disability Onset (percent)*

	Earnings decline by less than 25% of family income (N = 2,042)	Earnings decline by 25% or more of family income (N = 535)
Race/ethnicity		
White non-Hispanic <sup>ref</sup>	82	18
Black non-Hispanic	71	29**
Hispanic	74	26**
Other	83	17
Age		
25–34 <sup>ref</sup>	77	23
35–44	79	21
45–54	84	16**
55–64	80	20
Sex		
Female <sup>ref</sup>	82	18
Male	77	23**
Marital status		
Unmarried <sup>ref</sup>	70	30
Married	82	18**
Educational attainment		
Less than high school <sup>ref</sup>	75	25
High school diploma	79	21
Some college/associate's degree	80	20*
Bachelor's degree or higher	84	16**
Citizenship		
U.S. citizen <sup>ref</sup>	81	19
Other citizenship	71	29**
Geographic location		
Northeast <sup>ref</sup>	78	22
Midwest	82	18
South	79	21
West	80	20
Metropolitan Statistical Area <sup>ref</sup>	80	20
Non-Metropolitan Statistical Area	80	20

TABLE 2. (continued)

	Earnings decline by less than 25% of family income (N = 2,042)	Earnings decline by 25% or more of family income (N = 535)
Health insurance coverage		
Private (ESI policyholder) <sup>ref</sup>	80	20
Private (not ESI policyholder)	90	10**
Public	70	30**
Uninsured	68	32**
Job tenure		
Less than 6 months <sup>ref</sup>	77	23
6 months to 1 year	75	25
More than 1 year	81	19*
Firm size		
Less than 25 employees <sup>ref</sup>	80	20
25–99 employees	76	24
100+ employees	81	19
Family income quintile		
Below 20th percentile <sup>ref</sup>	68	32
20th–40th percentile	79	21**
40th–60th percentile	86	14**
60th–80th percentile	86	14**
Above 80th percentile	84	16**
Employment status, wave before onset		
Part time <sup>ref</sup>	83	17
Full time	78	22**
Employment status, wave of onset		
Unemployed/not in labor force <sup>ref</sup>	33	67
Part time	85	15**
Full time	83	17**
One working parent in family <sup>ref</sup>	71	29
Two working parents in family	84	16**
Year 1996 <sup>ref</sup>	81	19*
Year 2001	77	23

Sources: Survey of Income and Program Participation, 1996 and 2001.

<sup>ref</sup>reference category

\*Difference between working parents with and without disability onset is significant at the  $p < 0.05$  level.

\*\*Difference between working parents with and without disability onset is significant at the  $p < 0.01$  level.

have a large earnings drop because part-time workers contribute, on average, a lesser share of family income than full-time workers do.

### Income Sources for Working Parents with Onset

To better understand what determines income declines when a work-limiting disability occurs, we look at the component sources of income by whether they dropped substantially when the disability occurred. The

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composition of family income differs in the wave before disability onset between families whose earnings drop and those that do not. Fewer workers in the “large earnings drop” category have spouse or partner earnings in the wave before onset than workers without a large drop (42 versus 64 percent, as shown in table 3). Because those with large drops are less likely to be married, single people are at a double disadvantage: they are more likely to experience health shocks than their married counterparts and more likely to have ensuing large earnings drops as a percentage of family income.

Families that experience a large earnings drop are more likely to have received benefits such as food stamps and WIC in the period before onset, consistent with the findings that these families are much more likely to be in the lowest quintile of family income in our sample.

The third and fourth columns of table 3 show receipt of benefits and income by source in the period of disability onset, allowing a comparison to pre-onset values. These columns reveal two key findings. First, there is a relationship between a worker stopping work altogether and the likelihood that he or she will experience a large earnings drop; income-replacement mechanisms do not counteract these large drops, at least in the very short term. Among workers whose earnings drop by 25 percent of family income or more, only 70 percent work for pay at all in the wave of onset, compared with 96 percent of those without large earnings drops. Second, while social safety net mechanisms help buffer some of the income loss from earnings declines, they only touch a small portion of people with disability onset. For example, the share of people receiving workers compensation payments rose from 1 to 8 percent, and the share receiving unemployment benefits rose from 4 to 10 percent after the disability occurred.

Table 4 shows the change in income composition by source between wave before onset and wave of onset, separately for those with and without large earnings drops. Among the three-quarters of parents who experience a work limitation but do not have a large earnings drop, own earnings *rise* by roughly 10 percent in the period of onset on average, while for workers with a large earnings drop, earnings fall by nearly 60 percent. For the group with large drops, spouse or partner income increases on average, but that increase averages only about 5 percent of the earnings loss from workers’ own earnings.<sup>4</sup>

Families with large drops are more likely to see an increase in several income categories to offset their earnings drop. Working parents see increases in SSI payments, workers compensation, and employer disability payments regardless of the size of their income drops (table 3). The increase in these sources as a percentage of pre-drop family income is larger for those with large drops. We had hypothesized that employer disability benefits would be more likely to buffer earnings drops for higher-income working parents because of the generally higher rates of fringe benefits for high-income workers; in our sample, this benefit was claimed at similar rates across the income spectrum (data not shown). Families with large drops in earnings were more likely to receive in-kind benefits (food stamps and WIC) before onset, and the share receiving these benefits in the period of onset grew relative to the prior wave, increasing from 18 to 25 percent for food stamps and from 12 to 15 percent for WIC.

Comparing the changes in rates of benefit receipt and benefit levels for families with large and smaller drops in family income at onset of disability (table 4), while the group with large drops in family income is more likely to receive income from various sources to offset the earnings loss of the newly disabled parent, these sources fall far short of filling the gap for these families. The average drop in the newly disabled parent’s earnings among those with large drops was over \$10,000, but the drop in family income after all compensating sources are considered was still over \$8,700. While two-thirds of the portion of earnings drop

TABLE 3. Percent of Working Parents with Any Income from Source in Wave before and Wave of Disability Onset by Size of Decline in Earnings

	Wave before Onset		Wave of Onset	
	Earnings decline by less than 25% of family income (N = 2,042)	Earnings decline by 25% or more of family income (N = 535)	Earnings decline by less than 25% of family income (N = 2,042)	Earnings decline by 25% or more of family income (N = 535)
Own earnings	100	100	96 <sup>#</sup>	70 <sup>*##</sup>
Other family earnings				
Spouse earnings	64	42 <sup>**</sup>	63	45 <sup>*##</sup>
Other family member earnings	31	20 <sup>**</sup>	33 <sup>#</sup>	23 <sup>**</sup>
Family property income <sup>a</sup>	57	43 <sup>**</sup>	60 <sup>#</sup>	41 <sup>**</sup>
Family transfer income <sup>b</sup>	9	10	10	18 <sup>*##</sup>
Family SSI payments	4	2 <sup>*</sup>	5 <sup>#</sup>	6 <sup>#</sup>
Family amount of AFDC/ADC	4	5	4	8 <sup>*##</sup>
Family other income <sup>c</sup>	32	31	37 <sup>#</sup>	48 <sup>*##</sup>
Family unemployment payments	5	4	5	10 <sup>*##</sup>
Family workers compensation payments	1	1	3 <sup>#</sup>	8 <sup>*##</sup>
Family employer disability payments	0	0	3 <sup>#</sup>	8 <sup>*##</sup>
Family other disability, retirement, or survivor payments	0	0	1	3 <sup>#</sup>
Family other benefits	11	8 <sup>*</sup>	11	12 <sup>#</sup>
Noncash/in-kind transfer income				
Family amount of WIC	8	12 <sup>**</sup>	8	15 <sup>*##</sup>
Family amount of Food Stamps	9	18 <sup>**</sup>	10	25 <sup>*##</sup>

Sources: Survey of Income and Program Participation, 1996 and 2001.

Notes: Income amounts are inflated to 2007 dollars using the Consumer Price Index value for the month at the end of a given wave. Income amounts are reported for a four-month wave. To obtain equivalent annualized measures, the amounts can be multiplied by three. The amounts are not adjusted for months of missing data.

a. Includes dividend income, interest income, and property/rental income.

b. Includes veterans compensation pension, general assistance or general relief, other welfare, food assistance, clothing assistance, and short-term cash assistance in addition to the subcategories listed.

c. Includes Social Security, veterans compensation or benefits, any casual earnings, foster child care payments, child support, GI Bill education benefits, income assistance from a charitable group, money from relatives and friends, lump-sum payments, rent, National Guard or Reserve pay, and other cash income in addition to the subcategories listed.

\*Difference between those with high and low earnings declines is significant at the  $p < 0.05$  level.

\*\*Difference between those with high and low earnings declines is significant at the  $p < 0.01$  level.

#Difference between wave before onset and wave of onset is significant at the  $p < 0.05$  level.

##Difference between wave before onset and wave of onset is significant at the  $p < 0.01$  level.

TABLE 4. Changes in Income Sources at Wave of Disability Onset by Size of Decline in Earnings

	Earnings Decline by Less than 25% of Family Income (N = 2,042)		Earnings Decline by 25% or More of Family Income (N = 535)	
	Share of own earnings change (%)	Mean income change (\$)	Share of own earnings change (%)	Mean income change (\$)
Own earnings	100.0	715	100.0	-10,362**
Other family earnings	35.2	252	5.7	588
Spouse earnings	22.2	159	4.8	494
Other family member earnings	13.0	93	0.9	94
Family property income <sup>a</sup>	-5.5	-39	0.0	3
Family transfer income	0.8	6	1.4	148**
Family SSI payments	3.6	26	0.6	59
Family amount of AFDC/ADC	-0.8	-6	0.4	41**
Other transfer income <sup>b</sup>	-2.0	-14	0.5	48.0
Family other income	35.7	255	8.8	910**
Family unemployment payments	-2.9	-21	1.9	193**
Family workers compensation payments	12.0	86	2.4	247**
Family employer disability payments	10.5	75	2.2	230**
Family other disability, retirement, or survivor payments	3.2	23	0.5	51
Family other benefits	8.5	61	1.6	168
All other income <sup>c</sup>	4.3	31	0.2	21.0
Noncash/in-kind income <sup>d</sup>				
Family amount of WIC	0.1	1	0.0	5
Family amount of Food Stamps	-0.1	-1	0.9	93**
<b>Net change in total family income</b>		<b>1,189</b>		<b>-8,713**</b>

Sources: Survey of Income and Program Participation, 1996 and 2001.

Notes: Income amounts are inflated to 2007 dollars using the Consumer Price Index value for the month at the end of a given wave. Income amounts are reported for a four-month wave. To obtain equivalent annualized measures, the amounts can be multiplied by three. The amounts are not adjusted for months of missing data.

a. Includes dividend income, interest income, and property/rental income.

b. Includes veterans compensation pension, general assistance or general relief, other welfare, food assistance, clothing assistance, and short-term cash assistance.

c. Includes Social Security, veterans compensation or benefits, any casual earnings, foster child care payments, child support, GI Bill education benefits, income assistance from a charitable group, money from relatives and friends, lump-sum payments, rent, National Guard or Reserve pay, and other cash income.

d. Not included in total family income.

\*Difference between those with high and low earnings declines is significant at the  $p < 0.05$  level.

\*\*Difference between those with high and low earnings declines is significant at the  $p < 0.01$  level.

that is offset comes from benefits that are not means tested, the increased benefits at the time of onset are small, and most families do not receive any of them.

Another question of policy interest is the initial socioeconomic status of parents who develop work-limiting disabilities. Table 5 shows how the sources of income in the period of disability onset vary according to a family's location along the income spectrum in wave 1. For families in the bottom two income



TABLE 5. Changes in Income Sources by Family Income in Wave One

	Bottom Two Quintiles (N = 1,280)		Top Three Quintiles (N = 1,297)	
	Share of own earnings change (%)	Mean income change (\$)	Share of own earnings change (%)	Mean income change (\$)
Own earnings	100.0	-1,180	100.0	-1,889
Other family earnings	28.4	335	16.4	309
Earnings of spouse of person with onset	14.5	171	14.8	280
Earnings of other family members of person with onset	13.9	164	1.5	29
Family property income <sup>a</sup>	4.8	57	-5.9	-111*
Family transfer income	4.2	49	1.2	22
Family SSI payments	2.6	31	1.7	33
Family amount of AFDC/ADC	0.3	4	0.2	3
Other transfer income <sup>b</sup>	1.2	14	-0.7	-14
Family other income	28.7	339	23.0	435
Family unemployment payments	2.7	32	0.8	15
Family workers compensation payments	9.9	117	6.4	120
Family employer disability payments	5.5	65	7.7	145*
Family other disability, retirement, or survivor payments	1.7	20	2.0	37
Family other benefits	8.3	98	3.7	69
All other income <sup>c</sup>	0.6	7	2.6	49
Noncash/in-kind income <sup>d</sup>				
Family amount of WIC	0.2	2	0.1	2
Family amount of Food Stamps	2.7	32	0.3	5*
<b>Net change in total family income</b>		<b>-400</b>		<b>-1,234</b>

Sources: Survey of Income and Program Participation, 1996 and 2001.

Notes: Income amounts are inflated to 2007 dollars using the Consumer Price Index value for the month at the end of a given wave. Income amounts are reported for a four-month wave. To obtain equivalent annualized measures, the amounts can be multiplied by three. The amounts are not adjusted for months of missing data.

a. Includes dividend income, interest income, and property/rental income.

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c. Includes Social Security, veterans compensation or benefits, any casual earnings, foster child care payments, child support, GI Bill education benefits, income assistance from a charitable group, money from relatives and friends, lump-sum payments, rent, National Guard or Reserve pay, and other cash income.

d. Not included in total family income.

\*Difference between those with high and low earnings declines is significant at the  $p < 0.05$  level.

\*\*Difference between those with high and low earnings declines is significant at the  $p < 0.01$  level.

quintiles of our sample (with annualized family income at wave 1 not exceeding \$51,054), increases from means-tested transfer income and non-means-tested sources close about 33 percent (4.2 percent plus 28.7 percent) of the average earnings loss. Increases in spousal earnings and earnings from other family members each make up another 14 percent of the gap (for a total of 28 percent), and property income accounts for another 5 percent. The remaining gap is 34 percent. For working parents in families with incomes in the highest three quintiles, in contrast, the portion of the gap that remains after these factors is 65 percent. The *dollar* amounts that income sources other than own earnings compensate for in either case are similar—about \$800 for lower-income families and \$650 for higher-income families; the drop in earnings is higher on average for higher-income families.

### Health Insurance and Hours Worked

Health insurance policies for workers and/or their families might be cancelled if workers reduce their hours worked below some threshold or cease working altogether. In addition, workers who need treatment for the illness or injury causing their work limitation may value health insurance more than an average worker. Thus, people who depend on their employer for health insurance coverage may be less likely to reduce work hours or quit their jobs than individuals with other sources of coverage. In bivariate analysis (table 6), we find that working parents with new disability onset who are ESI policyholders are less likely than uninsured or publicly insured working parents to cut back their weekly hours substantially. This finding is consistent with the presence of job lock—that is, a decision to hold hours worked above a threshold in order to maintain insurance coverage. Also consistent with the presence of job lock is the finding that ESI policyholders have the highest percentage of workers without a drop in hours worked at onset.

However, we also find that working parents with onset who are privately insured but not the policyholder reduced their hours worked following onset at a level similar to policyholders (2.99 versus 2.85 weekly reduction in hours worked). Workers who are not policyholders are more likely to be part-time workers, thereby having a smaller base of weekly hours from which to start (so three hours is a greater drop as a share of weekly hours in the pre-period).

These bivariate results merely suggest job lock, however, because policyholders may work at jobs that are more attractive on several margins, including providing access to ESI or involving less physically taxing

TABLE 6. *Change in Hours Worked per Week at Disability Onset*

Insurance status in wave before onset	N	Percentage of workers with any drop in hours	Weekly change in hours	Regression-adjusted weekly change in hours
Private (ESI policyholder) <sup>ref</sup>	1,258	29	-2.85	-2.66
Private (not ESI policyholder)	610	37	-2.99	-3.55**
Public insurance	271	49	-7.87**	-8.10**
Uninsured	438	46	-8.10**	-8.91**

Sources: Survey of Income and Program Participation, 1996 and 2001.

Notes: Hours are defined as the sum of hours worked at up to two jobs and two businesses. Responses are top-coded at 80 hours a week. Includes those whose hours drop to zero (not working) at disability onset. Regression-adjusted change controls for gender, age, race/ethnicity, U.S. citizenship, region of residence, income quintile, job tenure, self-employment, and firm size.

<sup>ref</sup>reference category

\*\*Difference in declines in hours worked a week is significant at the  $p < 0.01$  level.

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work, thereby making it easier for them to continue to work the same number of hours as they did before onset while recovering from their injury than workers in jobs without these characteristics. Although it is not possible for us to control for job characteristics very specifically, we calculate regression-adjusted means (column 4) that control for a number of observed job characteristics, as well as individual characteristics, that might affect changes in hours worked outside whether the worker held a health insurance policy through his or her employer. These variables included controls for job quality (industry, occupation, firm size). Controlling for these factors increases the relationship between reduction in average hours worked following onset and holding health insurance through one's employer. Indeed, we find a small but statistically significant larger drop in hours among the workers who were not policyholders compared with those who were policyholders (3.55 hours decline versus 2.66 hours).

## Discussion

Working parents with children have been the targets of several government transfer programs intended to support families in times of financial need. However, many families in need cannot qualify for means-tested programs despite substantial drops in earnings as a result of becoming disabled and are left to rely on supports that may or may not be provided by their employers, or to rely on the earnings of adults inside or outside the household to buffer their earnings drop. Especially when the onset of a disability results in a large earnings drop, these income sources do not offset the drop in family income. Over time, destabilizing events such as development of a disability have become increasingly associated with large drops in income, indicating that this problem is unlikely to improve on its own (Gosselin and Zimmerman 2008).

The financial burden of disability may be exacerbated by a lack of access to income supports, especially when working parents' earnings drop sharply as a percentage of family income. Characteristics associated with increased probability of having disability onset are similar to those associated with having a large earnings drop. Working parents who are employed by small firms or have less tenure, for example, appear more likely to experience a large earnings drop conditional on onset, suggesting a possible role for employer benefit reform. Large firms are more likely to offer their workers such benefits as health insurance, paid sick leave, and disability insurance than are small firms; in addition, access to these benefits may be conditional on having worked for an employer for a certain length of time. When a parent's earnings drop, income supports fall far short of making up the drop. Working parents who hold health insurance policies through their employers reduce their hours worked by less at disability onset, on average, than parents who are publicly insured or uninsured; this result is consistent with the existence of job lock.

This work has several limitations. First, we use a self-reported measure of disability; previous research has suggested that workers might be more likely to report a limitation when they have stopped working or have cut back on hours worked in order to justify their decision (e.g., Bound 1991; Stern 1989). Meyer and Mok's finding that earnings and hours worked declined before reported onset is consistent with this theory; if true, our focus on the change between period before and period of onset may understate the reduction in hours worked and earnings drop that are related to onset. Second, we do not have a measure of the severity of the disability in our data and therefore cannot be certain that the patterns we are seeing—for example, in changes in hours worked—are driven by the severity of the work limitation rather than by health insurance, as we suggest. Indeed, people reporting that their limitation is work-preventing fare worse than those who do not in terms of labor force participation. Relatedly, our results for the presence of job lock can only be considered suggestive because policyholders may work at jobs that are more attractive on several margins, including providing access to ESI or involving less physically taxing work; we can only control for job characteristics very broadly using industry and occupation controls. Third, we lack a good

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measure of whether people who develop a disability have *access* to the income supports we measure; we instead measure whether the person *received* the income support in question. For example, we do not know if a worker could have qualified to draw on employer disability or workers compensation payments but chose not to do so. Without knowing what share of working parents have access to but do not claim these benefits, our work shows only a reduced form analysis that combines access to, and take-up of, benefits. Finally, our measure of disability onset requires only one wave of reported limitation; our decision not to limit to those with two consecutive waves with reported work limitations may include some cases of reporting error, which would bias our results of the effect of disability toward zero.

Many families experience substantial income declines after a working parent develops a disability, and these declines may adversely affect the children. More research is necessary to determine the impact of disability onset for working parents with children, both in the short and longer runs. For example, policymakers would benefit from knowing which working parents had access to the benefits examined in our study but did not claim them. In addition, it would be useful to know how access to benefits affects the longer-run outcomes for working parents who develop work-limiting disabilities. Access to additional income supports at onset—either through employers or through government transfers—might help buffer earnings losses, especially among vulnerable families, for whom a one-time large earnings drop could be financially disastrous. But it is also important to assess whether families could benefit more from increased participation in existing programs.

TABLE A.1. Working Parents with Any Income from Source in Wave One by Disability Status

	Working Parents with Disability Onset ( <i>N</i> = 2,577)		Working Parents without Disability ( <i>N</i> = 29,656)	
	Share with income from source (%)	Conditional mean amount (\$)	Share with income from source (%)	Conditional mean amount (\$)
Total family earnings	98	19,497	100**	26,359
Own earnings	91	11,318	100**	15,116
Spouse earnings	57	12,231	69**	14,509
Family property income <sup>a</sup>	62	565	65**	851
Family transfer income <sup>b</sup>	13	2,374	4**	2,100
Family SSI payments	3	2,639	1**	2,211
Family amount of AFDC/ADC	6	1,865	2**	1,601
Family other income <sup>c</sup>	40	3,145	20**	3,112
Family unemployment payments	5	2,056	4**	2,381
Family workers compensation payments	2	5,320	0**	4,592
Family employer disability payments	1	3,645	0**	4,646
Family other disability, retirement, or survivor payments	0	4,058	0*	3,455
Family other benefits	9	3,146	6**	3,904
Noncash/in-kind transfer income				
Family amount of WIC	9	217	5**	217
Family amount of Food Stamps	12	1,113	4**	995
<b>Total family income</b>		<b>20,600</b>		<b>27,626</b>

Sources: Survey of Income and Program Participation, 1996 and 2001.

Notes: Income amounts are inflated to 2007 dollars using the Consumer Price Index value for the month at the end of a given wave. Income amounts are reported for a four-month wave. To obtain equivalent annualized measures, the amounts can be multiplied by three. The amounts are not adjusted for months of missing data.

a. Includes dividend income, interest income, and property/rental income.

b. Includes veterans compensation pension, general assistance or general relief, other welfare, food assistance, clothing assistance, and short-term cash assistance in addition to the subcategories listed.

c. Includes Social Security, veterans compensation or benefits, any casual earnings, foster child care payments, child support, GI Bill education benefits, income assistance from a charitable group, money from relatives and friends, lump-sum payments, rent, National Guard or Reserve pay, and other cash income in addition to the subcategories listed.

\*Difference between working parents with and without disability onset is significant at the  $p < 0.05$  level.

\*\*Difference between working parents with and without disability onset is significant at the  $p < 0.01$  level.



## NOTES

1. Workers in firms that employ eight or more workers for 20 or more weeks of the year are covered by unemployment insurance.
2. See U.S. Social Security Administration, Office of Policy, “Workers’ Compensation Program Description and Legislative History,” <http://www.ssa.gov/policy/docs/statcomps/supplement/2007/workerscomp.html>.
3. This differs from Acs and colleagues (2009), which focuses on drops of 50 percent of earnings.
4. This includes zero contributions for working parents without spouses or partners. Families with only one working parent are disproportionately represented in the group of those with large earnings drops (see table 2).





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