Post-displacement Health Insurance Coverage of Displaced Workers

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Abstract:

Workers who experience job displacement are especially vulnerable to uninsurance in a job-based health insurance system. Studies of the wage experience of these workers show persistent losses that continue well into the new job. The wage literature also highlights the role of spousal labor supply and the unemployment insurance system in protecting these workers. In this paper, I first test whether displaced workers are 'permanently scarred' by job loss in terms of their health insurance coverage. In so doing, I also investigate the effect of alternative sources of health insurance in protecting displaced workers against uninsurance once re-employed. I next investigate the extent to which spousal health insurance acts as a subsidy during the job search process.

Once re-employed, former displaced workers fare worse than other new workers who voluntarily left jobs in terms of finding own-employer health insurance on the new job, although all workers experience some gains in health insurance with time on the new job. The relative loss of health insurance for displaced workers after re-employment is correlated with demographic factors (such as sex and marital status) and job characteristics (such as hours worked). In terms of the job search process, I find evidence that workers with access to spousal health insurance have longer job search periods after displacement, but do not necessarily find better paying jobs.

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Introduction

The rapid deterioration of economic growth that occurred since 2001 has spurred policy interest in helping displaced workers.[2] Particular attention has been given to the loss of health insurance and other fringe benefits, relative to previous recessions. For example, Kletzer and Litan (2001) advance proposals designed to help dislocated workers regain lost wages and health insurance. However, little is know about the health insurance experiences of workers post displacement. The main policy concern addressed by this paper is the connection between job displacement and health insurance coverage, during unemployment and after subsequent re-employment. Understanding these dynamics is important not only because of recent and continuing layoffs, but also because job-based health insurance plays a vital role in protecting the health of the worker's families and in limiting the financial risks they face (Levy and Meltzer, 2004). This question is also relevant because of the budgetary strain that unemployed and uninsured individuals place on federal and state governments through their use of public insurance or charity care.[3] Understanding the process by which workers recover from job-loss is important for its own sake too. For example, recent debates in Congress on measures to assist unemployed workers considered health insurance assistance through COBRA subsidies (Kapur and Marquis, 2003), and expansions to programs such as Trade Adjustment Assistance Reform Act of 2002 (TAARA) continue to be considered. While

[2] http://www.bls.gov/news.release/empsit.nr0.htm, access date June 28th, 2003. For a table of mass layoffs from April 2001 to May 2003 by month, see http://www.bls.gov/news.release/mmls.t01.htm

[3] Cawley and Simon (2005), and Ku and Garrett (2000) show that rising unemployment rate causes more people to rely on public forms of health insurance.

the unemployment compensation system replaces a portion of lost earnings, no such system exists to replace fringe benefits lost while unemployed.

The object of this research is to study the effect of displacement on health insurance of the workers post displacement, and to see how much protection displaced workers receive from employer based health insurance from family members.[4] Specifically are displaced workers less likely to have health insurance on new jobs relative to non displaced workers? Does this difference reduce with time on the new job? What explains whether workers gain or lose health insurance when transitioning from the old job to the new job through involuntary displacement? Are workers with access to spousal health insurance during the intervening period between jobs able to engage in a longer, more productive search because of this 'subsidy' to unemployment?

Relevance of previous literature to current study:

Wage losses post displacement

The vast literature on the *post*-re-employment experience of displaced workers has likewise focused on wages. (See Farber, 2003 and 2005, for the most recent reviews of this literature.) For example, Carrington and Zaman (1994) consider the heterogeneity in the wage loss that happens after re-employment and finds that some of this can be explained by the type of industry transition the worker faces. Health insurance losses may be explained by similar job transitions, for example, workers losing jobs in the unionized

[4] In all these analyses, I study actual health insurance receipt, rather than offers from employers. While it would be interesting to look at the two effects separately, survey data available only contain information on whether workers are actually receiving health insurance. To some degree, this is a preferred outcome to study as it reflects changes in generosity of coverage (e.g. if employers increase worker premium copays, or switch to less generous plans, workers may respond by dropping coverage) as well as in employer's offer decisions.

manufacturing sector and gaining a new job in the retail sector are likely to suffer losses in health insurance. The wage literature has also looked at how long displaced workers are 'scarred' by displacement (Ruhm, 1991), finding that wages remain lower than for displaced workers even 2 years into the new job. Related papers also study the effect of various subsidies available to workers during unemployment. In general, subsidies to search do not always appear to enable more productive job matches (Addison and Blackburn, 2000). Davidson and Woodbury (2000) find that wage-loss insurance shortens the duration of search, but does not increase post employment earnings.

A few recent papers have looked at how unemployment is associated with health insurance at the macro and micro level, although most have not considered involuntary employment changes separately from all job separations. Gruber and Madrian (1997) and Kapur and Marquis (2003) find that employment separation in general is associated with a large drop in health insurance. Both papers find that while COBRA provides coverage that is cheaper than privately bought coverage for unemployed workers, it is still unaffordable for most workers. In Gruber and Madrian (1997), COBRA laws increase the probability that a worker has health insurance after unemployment by only 6.7 percent. Berger et al. (1999) find that COBRA eligibility increases the probability of health insurance among the unemployed by 9.5 percent, while eligibility for spousal health insurance raises it by over 30 percent. This suggests that spousal health insurance should serve as a subsidy to the job search process to a larger extent than COBRA.

In a related paper using Current Population Survey data, Simon (2001) compares the compensation package workers earn at their old and new jobs post displacement to see whether workers undertake a tradeoff between wages and health insurance. She finds

that rather than exhibiting a compensating wage tradeoff of the expected sign, those losing wages also tend to lose health insurance, even after controlling for an extensive set of job quality characteristics and person fixed effects. This suggests that wage loss and health insurance loss are difficult to disentangle empirically because they are both indicators of an ill-fated job search, and that further information about the quality of the new and old jobs is necessary to detect compensating wage differentials. That paper also provides some preliminary evidence that the loss of health insurance is non-randomly distributed across industries.

In this paper, I investigate post displacement health insurance experiences in a variety of ways. I first look at whether displaced workers are less likely to have health insurance on new jobs relative to their old jobs, and relative to non displaced workers who are also new to a job. I do this by initially comparing displaced workers' health insurance coverage when re-employed to other workers who have not been displaced, and to other workers who have not been displaced but are also new to their current job. I also look at how the passage of time influences the post displacement effects of health insurance losses. Next, I consider the change in health insurance coverage from the point of displacement to a number of months after re-employment just for displaced workers.

The transition period faced by displaced workers

The majority of displaced workers receive no advance notice of displacement (Schmidt 2004). The period between jobs is often a long one for displaced workers, with data from recent DWS supplements indicating that displaced workers who were re-employed by the time of the survey had been unemployed an average of 14 weeks during

the job search. Related literature looks at the factors that assist in search, and notes that spousal labor supply does not appear to be a large factor in insuring against unemployment, given the existence of the unemployment benefit system. Gruber and Cullen (2000) find that the existence of unemployment benefits may crowd out an increase in spousal labor supply that is predicted to happen during periods of unemployment (the added worker hypothesis). Recent work by Stephens (2002) has found that in the case of worker displacement, the added worker hypothesis does appear to be present, and that in the long run about 25 percent of the husband's lost earnings are replaced by wife's increased labor supply. However, spousal health insurance may be more important in this context since unemployment benefits replace a portion of lost wages, but not lost health insurance. The availability of health insurance from a spouse may also serve as a subsidy during periods of unemployment following job loss. It may allow workers to search longer than otherwise, and enable them to find a better paying job. I test this hypothesis using longitudinal data from the SIPP.

Method:

The SIPP longitudinal panels can be used to look at all the questions illustrated above. First, I compare descriptive statistics between new jobs held by displaced workers and all jobs held by non-displaced workers. Next, limiting the sample to formerly displaced and non displaced workers, who are both up to 36 months into a new job, I explore whether displaced workers experience a different pattern of employer provided health insurance and any health insurance than non displaced workers as they advance into new jobs. We investigate this question first by examining differences in means

graphically, and then a probit regression explaining insurance outcomes which controls for other differences between these two sets of workers (including limiting the control group also to workers who formerly left a job, but for voluntary reasons)

[1] $Pr(HI_i)=\Phi(\beta_1+\beta_2 D_i+ \beta_3 M_i + \beta_4 M_i*D_i +\beta_5 X_i + \varepsilon_i)$

where D indicates being a displaced worker, M indicates the number of months into the job.[5]

The next analysis uses data on formerly displaced workers only, and looks at what determines the health insurance status change going between old and new jobs. We conduct the analysis separately for those who had employed health insurance on their old job, and those who did not. We consider health insurance on the new job four months into the new job because of waiting periods that employers may impose on benefits.

[2]. $Pr(HI\_NEW_i)=\Phi(\beta_1+\beta_2 X_i+ \varepsilon_i)$

where HI_NEWi represents the probability that the worker i has health insurance on the new job, and the set of variables in X represents characteristics that are predicted to explain the outcome. The first version of this models considers whether the worker has employer health insurance on the new job or not, limiting the sample to those who received employer health insurance at the old job. The second version of this model considers the same dependent variable, but limits the sample to those who did not have employer health insurance at the old job.

The last analysis studies how access to spousal health insurance affects the length of the search, and the new job found. I use SIPP data to look at whether those who have access to spousal health insurance engage in longer job and/or more productive job

[5] To test for non linear effects, time is parameterized as number of months and its square.

searches. A displaced worker is considered to have access to spousal health insurance if she/he is covered by the spouse at any point during the search period. As good jobs tend to provide health insurance and higher wages, the availability of spousal health insurance could simply pick up the effect of extra cash resources from the spouse rather than health insurance specifically. To account for this, I control for the average wage earned by the spouse during the worker's unemployment period separately in the regression. In this specification, there is one observation per displaced workers who was married at the time of displacement and remained married during the period of unemployment.

[3] $Searchweeks_i=\beta_1+ \beta_2X_i +\beta_3SP\_HI_i +\varepsilon_i$

The dependent variable is the number of weeks of search a displaced worker engaged in following a job loss until finding another job, and SP_HI is an indicator for whether spousal health insurance was obtained at any point during the search. The X vector includes the following variables: whether the spouse provided health insurance during the search period, whether the worker had employer health insurance in his/her own name at the old job (as this should matter in whether the spousal health insurance represents an added benefit or not), the log of the average wage of the spouse during the unemployment period, race of the displaced worker, education, sex, hours worked at the lost job, its square, an indicator for working 20-34 hours at the lost job, firm size of the lost job, the worker's age, its square, the state unemployment rate at the time of job loss, last job industry and occupation, state, year and month dummies. This model is run as a Tobit (as there are many people who experience a spell of unemployment that is zero weeks in length), as well as using ordinary least squares. In unreported regressions, we also looked

at the wage of the new job as the outcome, controlling for the wage of the old job in some specifications, and using the log difference in wages in other specifications.

Data:

I use the 1996 and 2001 SIPP panels, which span the period 1996 to 2003. I start with a data set containing monthly observations on workers who are displaced and re-employed during the survey, and on a subset of the non displaced workers (those who never report being displaced from a job during the SIPP panel), who are also new to a job.[6] In both cases, I exclude workers in the agricultural sector. I keep only those aged 20-61 years. The sample consists of individuals who work 20 or more hours at the old and new jobs.[7] For computational ease, we keep a 10 percent sample of monthly observations from the control groups.

The SIPP panels interview approximately 46,000 households in 1996 and 37,000 households in 2001 every 4 months over a 4 year period in the 1996 panel and over a 2.5 year period in the 2001 panel. Respondents are asked reasons for job changes, and monthly information on job and demographic characteristics. A displaced worker is defined as one who lost a job due to the following: employer became bankrupt or sold the

[6] Note that we drop four states that are not separately identified in the SIPP for these years- Maine, North Dakota, South Dakota, Vermont and Wyoming.

[7] We do this so that we do not exclude any workers who may be offered health insurance. Author calculations using data from the 1993 Robert Wood Johnson Employer Survey indicate that of all employers offering health insurance in the private sector, roughly a third claim not to have an hours stipulation for the minimum hours required per week to receive health insurance. Among those with hours stipulations, 16 percent use 20 hours as the cutoff, 30 percent use 30 hours as the cutoff, and 28 percent use 40 hours as the cutoff. A report prepared with 1999 Current Population Survey data show that the offer rate of employer sponsored health insurance, conditional on the employer offering at all, is 63% for workers working 20-34 hrs, while it is 96% for workers working 35+ hours (http://www.communityvoices.org/Uploads/4c2xne45g5ezjq45414wni55_20020826102930.pdf Table 8). Those working 20 to 34 hours constitute only about 12% of our SIPP sample. However, as a robustness check, we changed the sample to those working 35 hours or more. Results are qualitatively the same. Note that we control for hours worked in all regressions.

business, there was slack work or business conditions, or the individual was laid off, and is not a contingent worker. As it is impossible to discern laid-off worker who were subsequently re-hired by the same firm from those who were not,[8] we repeat all analyses excluding laid-off workers as a robustness check and find that results do not change in any meaningful manner.

Preliminary Analysis

I first compare displaced workers who are new to a job to all non-displaced workers. Table 1 shows that those who were displaced are 12 percentage points less likely to have any health insurance and 15 percent less likely to have own employer health insurance on their new job than all other workers who were not displaced and are not necessarily new to a job. But part of these differences may be due to the fact that many employers have a waiting period before workers are given health insurance, thus it is important to see whether displaced workers who are new to a job appear different from other workers who are also new to a job. In order to conduct the comparisons in this manner, Figure 1 explores differences between displaced and non displaced groups of workers, all of whom are new to a job.

Table 1: Displaced workers at the new job vs all non displaced workers

	Displaced workers(all months on new job)		**All nondisplaced workers (10% sample)**	
Variable	**Mean**	**Std. Dev.**	**Mean**	**Std. Dev.**
Health insurance any coverage	0.770	(0.421)	0.890	(0.313)
Own employer health insurance	0.516	(0.500)	0.669	(0.471)
Works more than 35 hrs	0.857	(0.350)	0.884	(0.321)
Average hrs/week	40.90	(9.537)	41.12	(8.921)

[8] Personal communication with Census Bureau SIPP researchers, May 2005.

Age	37.58	(10.815)	39.12	(10.752)
African American	0.081	(0.274)	0.116	(0.320)
Hispanic	0.123	(0.328)	0.103	(0.304)
White	0.743	(0.437)	0.735	(0.441)
Asian	0.043	(0.203)	0.039	(0.193)
Race=other	0.010	(0.099)	0.007	(0.086)
Observations	15460		194135	

Figure 1

: Prevalence of Employer Health Insurance by Month on the Job

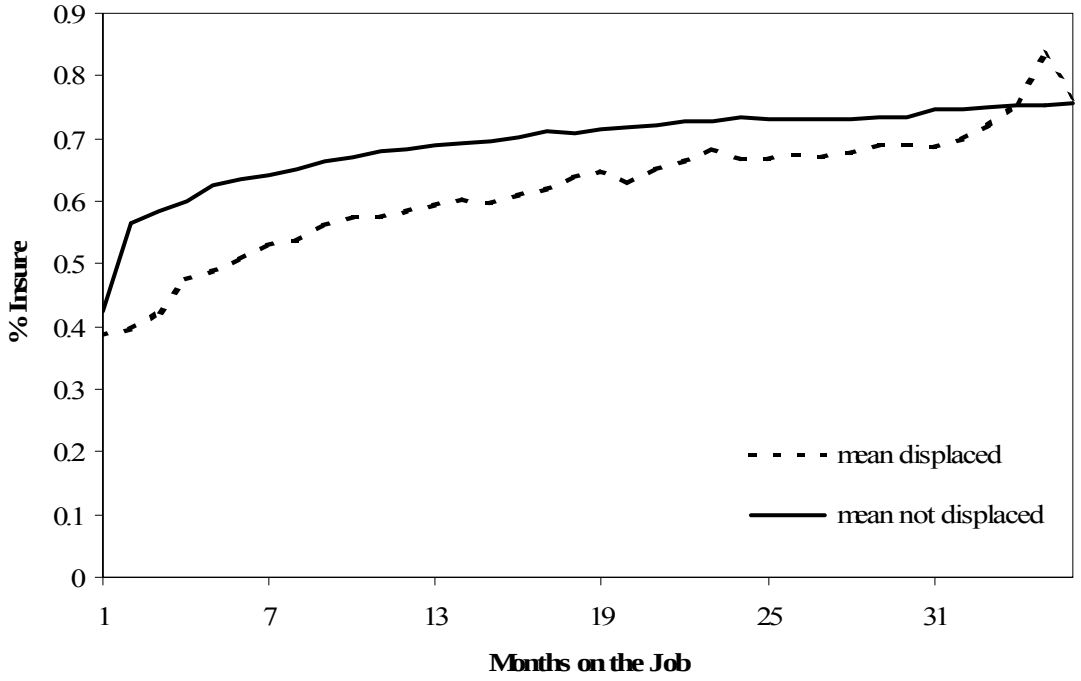

Figure 1 looks at how the number of months on the (same) job affects whether workers report having health insurance from their own employer when re-employed after displacement. We look at this trend for displaced and non displaced workers who have started new jobs. This Figure shows that the difference in health insurance is only a few percentage points during the 1st month, but grows on the next couple of months. This suggests that other workers may be simply transitioning out of waiting periods more so than formerly displaced workers. After the first few months on the job, the prevalence of

health insurance increases at a decreasing rate for displaced and non displaced workers as time on the new job accrues. This picture also shows that the gap narrows towards two years of employment. Note that the sample sizes become small (e.g. roughly 30 observations) when looking at displaced workers 36 months into a new job because of the relative brevity of the SIPP panels.

To examine these differences when we control for other determinants of health insurance, Table 2 shows estimates from regressions of the form Eqn [1]. Notably, we now restrict the control group to those who also worked before this job (thus the control group left those jobs for voluntary reasons) as this may represent a more appropriate comparison, than with people re-entering the labor market for different reasons or entering the labor market for the first time. In this Table, the interaction of months into the job and being a displaced worker shows how the trajectory of displaced workers differs from other new employees. This analysis controls for: sex, age, its square, marital status, interaction of marital status and sex, number of kids, race categories, education categories, industry, occupation, state unemployment, job specific experience at the old job in months, its square, hours worked at the new job, and its square, indicator for working 35+ hours at the new job, indicator for working 35+ hours at the old job, categorical firm size of the new job, state, month, and year fixed effects.

The results in Table 2 show that the displaced workers are less likely to have own employer health insurance by about 14 percentage points relative to similar workers who are new to a job, and left their old job voluntarily. The marginal effect on months at the job show that all workers experience some increase in coverage through their employer as their job progresses, and this increases at a decreasing rate. But there appears to be no

statistically significant differential trend in the health insurance time path for displaced vs non displaced workers. The gap in health insurance from anywhere is much smaller, about 6 percentage points, and reflects the fact that formerly displaced workers are more likely to rely on other sources of coverage including spousal coverage than nondisplaced workers. This gap too does not change over time, although time on the job increases health insurance coverage for everyone.

Table 2: Estimates of Eqn [1] marginal effects and standard errors

	Own employer health insurance		Any health insurance	
	Marginal effect	St error	Marginal effect	St error
Displaced Worker	**-0.136**	**(0.023)**	**-0.056**	**(0.014)**
Duration of Employment	**0.017**	**(0.002)**	**0.008**	**(0.001)**
Square of Above	**-0.000?**	**(0.000)**	0.000	(0.000)
Displaced*Duration	0.000	(0.004)	0.003	(0.002)
Square of Above	0.000	(0.000)	0.000	(0.000)
N	53,291		53,291	

Note: 1. Standard errors are clustered at the person level whenever a regression involves multiple observations from the same person.
2. When sample excludes those who are laid-off, results are essentially the same.

The next analysis conducted under this topic investigates how employer health insurance changes as displaced workers move from an old job to a new job. Overall, 43% of workers are insured by neither old nor new employer; 9% are insured only by the old employer, 36% are insured by both old and new employers, and 12% are insured only by the new employer. The analysis is based on 1104 workers for whom we can observe information on the old job, as well as four months into the new job. Table 3 shows results from two probit specifications run with this sample, as in Eqn [2]. The first specification is for those who had own employer health insurance at the point of displacement, and the outcome measures whether they have health insurance from their employer 4 months into their new job. The second specification uses the same outcome variable, but limits the

sample to those who did not have employer health insurance at the point of displacement. As we do not look at observations that may be second jobs held after displacement, we do not consider the extent to which workers regain lost health insurance by moving through multiple jobs after displacement, due to the short nature of the panel.

The two probits in Table 3 could be viewed as alternative ways of studying factors associated with fortunate health insurance transitions- either one regains lost health insurance, or gains new health insurance. But the results indicate that few variables exert a consistently positive or negative effect across the two specifications. For example, older age appears to be associated with better outcomes in the first probit, but with no statistically significant effect in the second probit. This is not entirely surprising as moving from a job with healthinsurance to one also with health insurance may occur for different reasons than a move from a job without health insurance to one with health insurance. However, working 35 hours or more on the new job appears to be an important determinant of positive outcomes in both probits.

Table 3: Eqn [2] Marginal Effects and Standard Errors, Probit, (1=Has health Insurance on New Job)

Variable	Among those With old job health ins	Among those Without old job health ins
N	461	561
Female	0.001	0.123**
	(0.065)	(0.059)
Age in yrs	0.030**	0
	(0.014)	(0.012)
Age squared	-0.000*	0
	(0)	(0)
Married	-0.100*	0.088*
	(0.053)	(0.052)
Married*female	-0.078	-0.187***
	(0.097)	(0.038)
Black	-0.342*	-0.041
	(0.197)	(0.088)
Hispanic	-0.138	-0.114*
	(0.139)	(0.066)

White	-0.072	-0.067
	(0.068)	(0.089)
No HS	0.031	-0.126**
	(0.074)	(0.054)
Just HS	-0.027	-0.015
	(0.05)	(0.064)
Some college	0.071*	0.056
	(0.043)	(0.068)
Current state unemployment rate	0.047	0.092**
	(0.037)	(0.038)
Tenure at old job	0.001	0.009**
	(0.003)	(0.004)
Its square	0	-0.000**
	(0)	(0)
Worked 35 or more hrs new job	0.385***	0.214***
	(0.114)	(0.028)
Worked 35 or more hrs old job	-0.078	0.03
	(0.057)	(0.048)
Has kids	-0.03	-0.01
	(0.044)	(0.04)
State fixed effects	Y	Y
Year fixed effects	Y	Y

The last analysis in this paper looks at the influence of spousal health insurance on the job search process of continuously married displaced workers. Coefficients and standard errors from key variables in Eqn 3 are presented below in Table 4.[9] The last variable measures access to spousal health insurance. The effect of this variable is statistically significant, and indicates that having spousal coverage adds between 2.4 **to** 2.9 weeks to the length of search in all three specifications, which differ in how spousal wages are entered. Because some of the spouses did not earn any wage during this time period, we first assigned small values (1) to them prior to taking the natural log (1st column). The effect of spousal wage is statistically insignificant. To account for the fact

[9] We estimated this model as a Tobit and as an OLS regression, and found that the coefficients from both were very similar, and thus report Tobit coefficients.

that being the sole breadwinner in the family during the search will affect the search length, we entered a separate indicator for that. Being a second worker appears to lengthen search a substantial amount- by over 8 weeks. In addition, it appears that increasing spousal wages beyond zero is associated with shorter search. This is present even when spousal wages are entered in linear terms (in thousands of real year 2000 dollars, in the last column). In unreported results, we found that there was no evidence that these workers engage in a more productive search (in terms of finding a higher paying job), even if the search period is longer, as a result of having spousal health insurance.

Table 4: Tobit Regression: Months of Search

	Coefficient (Std Err)	**Coefficient (Std Err)**	**Coefficient (Std Err)**
Log real spouse wage	-0.055	-1.174***	
	(0.042)	(0.201)	
Hours at last job	0.064	0.066	0.060
	(0.063)	(0.062)	(0.063)
Tenure at last job	-0.116***	-0.118***	-0.115***
	(0.018)	(0.018)	(0.018)
State ue rate at displacement	1.122***	1.077***	1.105***
	(0.229)	(0.227)	(0.229)
Had own employer hi at last job	-.163	-0.133	-0.180
	(0.320)	(0.318)	(0.319)
Spouse works during search		8.414***	0.374
		(0.1.478)	(0.347)
Spouse real wage in thousands yr 2000 dollars			-0.218**
			(0.085)
Spouse provides HI[10]	2.537***	2.931***	2.554***
	(0.343)	(0.349)	(0.343)
Observations	3017	3017	3017
R-squared	0.18	0.19	0.19

Robust standard errors in parentheses
* significant at 10%; ** significant at 5%; *** significant at 1%

[10] For the population of married workers, only 0.04% of those with dependent coverage receive it from a non spouse (i.e. parent), thus this is almost the exclusive source of dependent coverage for this population.

Conclusion

In this paper, I investigate the relationship between health insurance and job loss during the search period, and after subsequent re-employment. I first study the experience of displaced workers after they have found subsequent employment. After controlling for important observable characteristics, I find that workers who left an old job voluntarily are much more (about 14 percentage points) likely to have own employer health insurance than workers who were formerly displaced. However, formerly displaced workers are much more likely to have other sources of health insurance (notably spousal health insurance) than voluntary leavers, and the overall gap in health insurance is only about six percentage points. All workers experience gains in insurance with time on the new job, but there is no differential impact for formerly displaced workers. In the next set of analyses that focus on just displaced workers, I find that factors such as marital status and sex are associated with whether one loses or gains health insurance through the displacement process, as well as job characteristics such as hours worked. Last, I study the job search period, and find that among married workers, those with access to spousal health insurance engage in a job search that is more than 2 weeks longer than average, controlling for the wage provided by the spouse. However, these longer searches do not appear to result in higher paying jobs. These results shed light on an area that has not been investigated in prior work. Given the policy importance of insuring workers against fringe benefit losses as well as wage losses that result from job cuts, this paper brings up several interesting possibilities worthy of study in the future- such as the role of family based health insurance in protecting workers against uninsurance that may otherwise result from labor market misfortunes.

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