

Shocks to Income and Employment  
And Loss of Health Insurance

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August 31, 2006

An individual's health insurance status reflects the individual's preferences and the constraints the individual faces. This paper considers changes in constraints that arrive with job changes. With insurance tied to employment the dominant source of health insurance for the non-elderly in the United States, a job change can bring two types of shocks. It can change the price of health insurance faced by a worker as he or she moves between the employer market where the price of health insurance is lower and pooling is broader and the individual market where the price is higher and pooling narrower. It can also mean an income shock, depending on what happens when the job ends.

The paper has three parts. I first motivate attention to job changes by showing how much loss of coverage through employment contributes to the stock of adults without health insurance. Second, I consider all job endings and find that both displaced and non-displaced job endings have risk of health insurance loss. Within type of job endings, those who lose health insurance held in their own name experience larger negative income shocks than those who keep their health insurance when their job ends. Third, I estimate a model of health insurance loss among individuals whose jobs end for any reason. I find the probability of losing health insurance held in one's own name and becoming uninsured increases with the magnitude of negative income shocks at job change.

*Motivation: Why Focus on Job Endings*

Panel data on health insurance status has shown that new spells without health insurance are short but the stock of those uninsured at a point in time include a large fraction with longer spells. Among new spells, over half ended within four months. Among the uninsured at a point in time, more than half experience spells that last longer than 24 months (Swartz and McBride, 1990).

The health insurance dynamics literature suggests that in addition to dividing the population into the insured and uninsured, the population can be characterized as one of three groups, the insured, the formerly insured, and the never insured. Some uninsured may always have been uninsured. Others were insured, experienced a shock, and became uninsured.

What is the relative size of these groups? Looking at adults who were uninsured in the last month of the 1996 SIPP panel, 80.3 percent report they were previously insured (Figure 1.)<sup>1</sup> At most one-fifth of adults without health insurance in late 1999

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<sup>1</sup> The figure is based on data from the core SIPP interview and retrospective questions asked as part of a topical module included in the second interview. Individuals who reported no health insurance up to the second interview were asked if they ever had had health insurance, and if they, had, what kind they had had most recently and when they lost it. The "potentially always uninsured" group includes those who said they never had coverage in the topical module questions as well as those who joined the SIPP sample after the second interview but never reported a form of health insurance.

and early 2000 never had health insurance. For the others, they had health insurance and then something happened.

What happened will likely be different according to whether the coverage was public or private, held through employment or obtained outside employment, and held in one's own name or as a dependent on someone else's coverage. Among adults who were insured but now are not, four fifths lost private coverage (Figure 2.) Among those whose source of coverage is known, two-thirds had coverage in their own name.<sup>2</sup>

If those whose coverage source, dependent or own-name, is unknown follow the same distribution as those whose coverage source is known, then half of those who had coverage and lost it lost coverage in their own name.

This paper addresses loss of health insurance at the time of changing jobs. The risks for becoming uninsured from having had public coverage are surely different. (Short and Freedman (1998) address transitions from Medicaid to being uninsured for single women.) Health insurance tied to employment is the dominant source of health insurance for US adults. Thus understanding what labor market processes are at work in losing coverage will shed light on why a large share of adults without health insurance are without. Left unexplored, either in this paper or elsewhere, is loss of coverage as a dependent.

#### *Transitions Out of Employment-Based Coverage Not Considered Here*

Not all losses of coverage through employment held in one's own name happen because a job ends. There are other possibilities I do not consider in this paper. The employer could drop coverage. The worker's employment terms could change and make the worker no longer eligible for the employer's plan. The worker could respond to a change in co-premium by the employer by dropping coverage. The worker could respond to an income shock while on the job (fewer hours, change in other family member's income) by dropping health insurance. Transitions while still employed are outside the scope of this paper.

Not all employment change-related transitions out of employment-related health insurance add to the pool of uninsured persons who formerly had employment-related coverage. Some remain insured. Some workers are likely kept from becoming uninsured when they experience a shock to their own coverage by moving to dependent coverage, either immediately or in anticipation of a shock. Others may have preferences for health insurance that are so strong that they respond by being part of the minority that they pay the entire premium under COBRA continuation coverage or move directly from employer coverage to coverage directly purchased from an insurer. Some are observed to make the transition from coverage through an employer directly to Medicaid. All these transitions that involve retaining coverage are also outside the scope of this paper.

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<sup>2</sup> The coverage type – in the individual's own name or as a dependent – is not known for those who never reported health insurance coverage during the 48 months covered by the 1996 panel but did report having previously had coverage in response to the topical module questions.

Other transitions into not having health insurance may involve loss of employment-related coverage in one's own name but not be seen that way using the approach of this paper or be detectable given the absence of linkage of employer and source of insurance in SIPP. For example, an individual could have health insurance as part of a severance package. If the coverage ends after the four month post-employment window I consider, I would not detect it as a case of losing coverage at the same time as a job ending.

### *Data*

Data come from the 2001 panel of the Survey of Income and Program Participation (SIPP.) My focus is job endings where the individual held health insurance in his or her own name (or both in own name and as a dependent) through employment. When I refer to individuals becoming uninsured, I mean that an individual had health insurance in his or her own name through employment and became uninsured. My sample is 4,738 job endings. Multiple job endings over the 36 month are not unknown (a few report six job endings), but I restrict my sample to the first job ending observed.

The SIPP interview asks respondents about jobs they have held and whether they still hold the job. If the respondent says he or she no longer holds the job, the respondent is asked the date on which the job ended, as well as the main reason the job ended.

The SIPP survey instrument has the surveyor put the question to the respondent, "What is the main reason you stopped working for [employer name]?" The surveyor codes the response into one of fifteen categories.

I group these fifteen categories into nine categories. I aggregate four categories that suggest "displaced worker" (on layoff, employer bankrupt, employer sold business, slack work or business conditions) into a "lost job" category. This group accounts for the largest share of job ending. I also aggregate four other categories into what I call personal reasons for leaving a job: childcare problems, "other family/personal obligations," own illness and own injury.

For health insurance status, I look at the initial health insurance status reported during the episode and any change to that status from the initial point to five months after the individual reports a job change. If an individual reports having health insurance in his or her own name (or both in own name and as a dependent) and reports having no health insurance anytime up to five months after the job ended, I say that the worker had coverage in his or her own name and became uninsured.

### *Job Endings and Transitions to Uninsurance*

Job endings can be good news or bad news. They can be motivated by forward looking behavior or they can be responses to exogenous shocks. They can be good news for workers who move job-to-job to take a better job. A job-to-job move might also be a

response to expectations that the current job won't last much longer. The reason given to the SIPP interviewer may not be the whole story (and the complicated stories may help explain why "some other reason" is the second most common reason given.)

Figure 3 shows the reason given for why the job ended in job endings with health insurance loss. While losing a job accounts for the largest share, it is only one-third of all endings. The job lock literature has portrayed workers as fearful of losing health insurance when they change jobs. Figure 3 shows that health insurance loss does happen to workers other than those who lost their jobs.

Recalling that a majority of new spells are short, it could be the case that job endings that are bad news create inflow into long spells without health insurance while health insurance loss associated with good news is dominated by short spells among workers who might not be immediately eligible for coverage under the new employer's health plan. Table 1 addresses this possibility.

The relative magnitudes fit with the idea that health insurance loss at a job-to-job transition is more likely to result in a short spell without health. A smaller share of spells beginning with job-to-job transitions are longer spells than among those who lose jobs and those who say they were fired, the group with the largest share of spells that are longer spells.

Table 1 shows the overall pattern of job endings, health insurance status, and loss of coverage. In general these reflect broader patterns of forward looking labor market behavior. A small proportion of workers who leave their jobs to go to school have health insurance from the job that just ended, but few were uninsured in the jobs they left, thanks, presumably, to dependent coverage. Workers who say they left a job because they retired have high rates of coverage in their own name and experience the lowest rate of becoming uninsured when they leave their jobs. They also have the smallest share who begin longer spells without health insurance. Both going or returning to school and retirement are cases where forward looking agents have the ability to plan and act strategically (e.g., time their retirement so that they continue to have coverage.)

Moving from job to job, also a case when workers presumably time changes to be most favorable to them, is not risk free, as the one-in-five who become uninsured shows. But the fraction who lose coverage is lowest across reasons for job ending, except for retirement, and a larger share of the spells that result are short (again, largest except for retirement.)

Being willing to leave a job because work arrangements are unsatisfactory suggests weak attachment to the labor force. Thus it is not surprising that this group has the highest fraction who do not have health insurance before a job ends. This group also has the second highest fraction who lose coverage and become uninsured when a job ends. Together, these facts may say something about the attitude towards risk among those who walk from jobs.

Who appears least able to see that the end of their job is coming? Those who get fired. And so we see the rate of losing coverage and becoming uninsured is highest among those who are fired, who are also most likely to begin longer (five months or longer) spells without health insurance.

*Income shocks and health insurance change*

To characterize income shocks, I examine the income path before and after job endings. I take the dates on which jobs are reported to end and calculate the month in which the job ended. I then construct an eighteen month episode: the month the job ended, the five months before and the twelve months that follow. Attrition and the end of the panel mean that income following job endings can not be observed over the full period for all in the sample. (About one in four of those who experience a job ending attrit in the next four months.)

To understand the magnitude of income shocks, I calculate each worker's average monthly earnings and average family income over up to five months prior to the month the job ends. I then compute each month's earnings and income relative to the pre-job ending average.

While job endings bring both good news and bad news, bad news dominates. Negative income shocks are common among those whose jobs end. Shocks are larger for those who lose employment-based coverage in their own name than for those who keep it. Among those who have coverage through employment and keep it, the median change in family income is a 16.1 percent decline from the pre-change average family income to one month post-job end. Twelve months after the change, the median change is 15.4 percent lower than the pre-job end average. Among those who lose coverage, the median change is a loss of 32.5 percent in family income in the first month after the job ends and a 32.1 percent loss between the average over pre-job ending months and the twelfth month after the job ends.

Income losses are substantial for those who lose a job, both among those who keep and those who lose coverage (Figure 4.) Income losses are greater for those who lose coverage. Among those who stay insured, the median change is 24.1 percent lower income in the month after a job change compared to the pre-ending average and 26.0 percent lower twelve months later. Among those who become uninsured, the median change is 37.2 percent lower in the month after a change and 37.5 percent lower twelve months after the job change.

While there are wide differences in the income path of job losers who keep and lose health insurance, the income paths are much closer among those who say they left a job to take another (Figure 5.) Among those who say they have left a job to take another, the central tendency is slight growth for those who remain covered and ever so slight a drop for those who lose coverage. The median is less than half a percent lower in the first month for those who stay covered and 2.8 percent higher at twelve months. For those who say they left a job to take another job but become uninsured, the median

monthly income is 4.1 percent lower in the first month and 3.0 percent lower in the twelfth month.

### *Do Income and How the Job Ends Make a Difference?*

Table 2 reports the results of probit models estimated on the sample of workers with health insurance in their own name with insurance through their employment whose jobs end with becoming uninsured as the dependent variable.

Some variables that are associated with having health insurance do not have a discernable effect on the probability of becoming uninsured conditional on having coverage. The effect of age is no different for young workers than middle age workers. Only above age 50 is there a negative age gradient. Having a job end with a smaller employer (under 25 employees) has no different effect than leaving a larger employer.

How a job ends makes a difference, largely in the way that the descriptive statistics suggest. Retirement has the strongest negative effect on the likelihood of becoming uninsured. Those who are fired have the highest change of becoming uninsured. Other reasons that would be classified as "quits" do not have an effect statistically different from being laid off: those who say they did not like the hours, pay or working conditions, and those who say their childcare arrangements or illness lead them to quit. Except for retiring, leaving to take another job, or have a temporary job that ends, other reasons for job endings are as bad or worse as being laid off in terms of health insurance consequences.

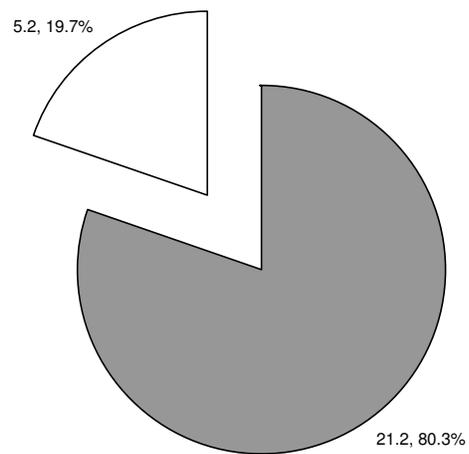
Income change can be measured in levels or as a percent or ratio. Larger shocks are associated with a higher probability of health insurance loss. In the model with nominal income, the quadratic term is insignificant, suggesting that there is no difference between measuring shocks in nominal or relative amounts.

### *Discussion*

In their study of displacement, Jacobson, LaLonde and Sullivan (1993) conclude displaced workers face long-term income losses that arise before separation and do not vary with workers' gender and age. Many workers who lose health insurance and become uninsured when their job ends are similar to displaced workers, even when the stated reason that they left their job is not displacement.

Figure 1.

**Transition Status of Point in Time Uninsured Adults (18-64)**  
Point = Last Month, 1996 SIPP Panel. Total = 26.4 million



■ Made transition from insured to uninsured

□ No transition observed; potentially always uninsured

Figure 2.

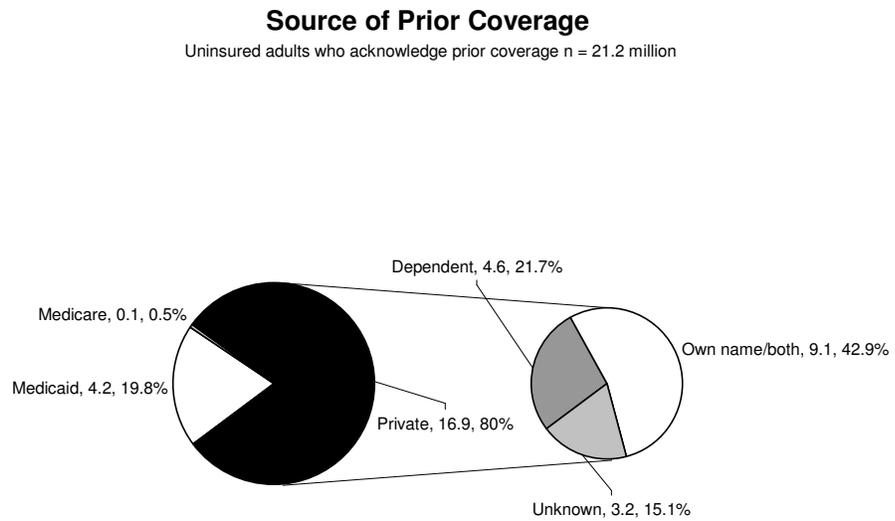


Figure 3.

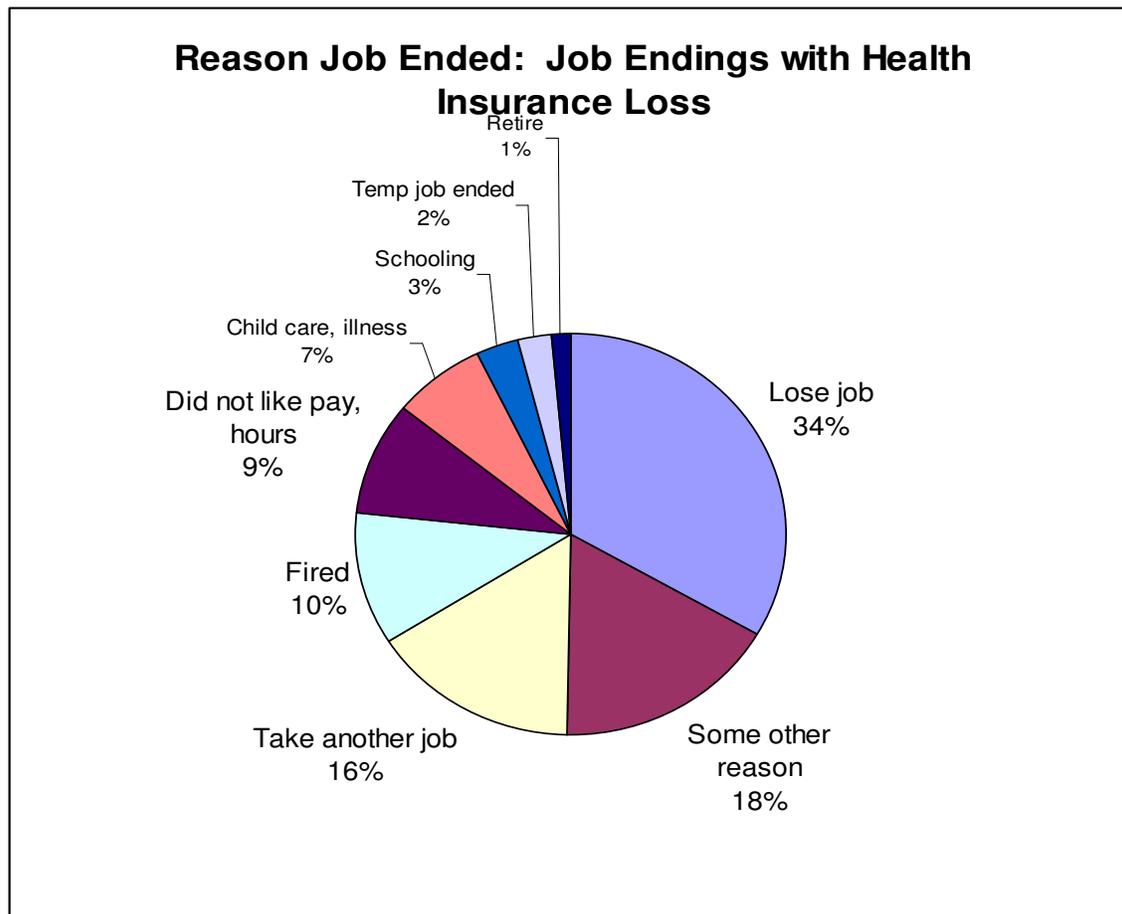


Figure 4.

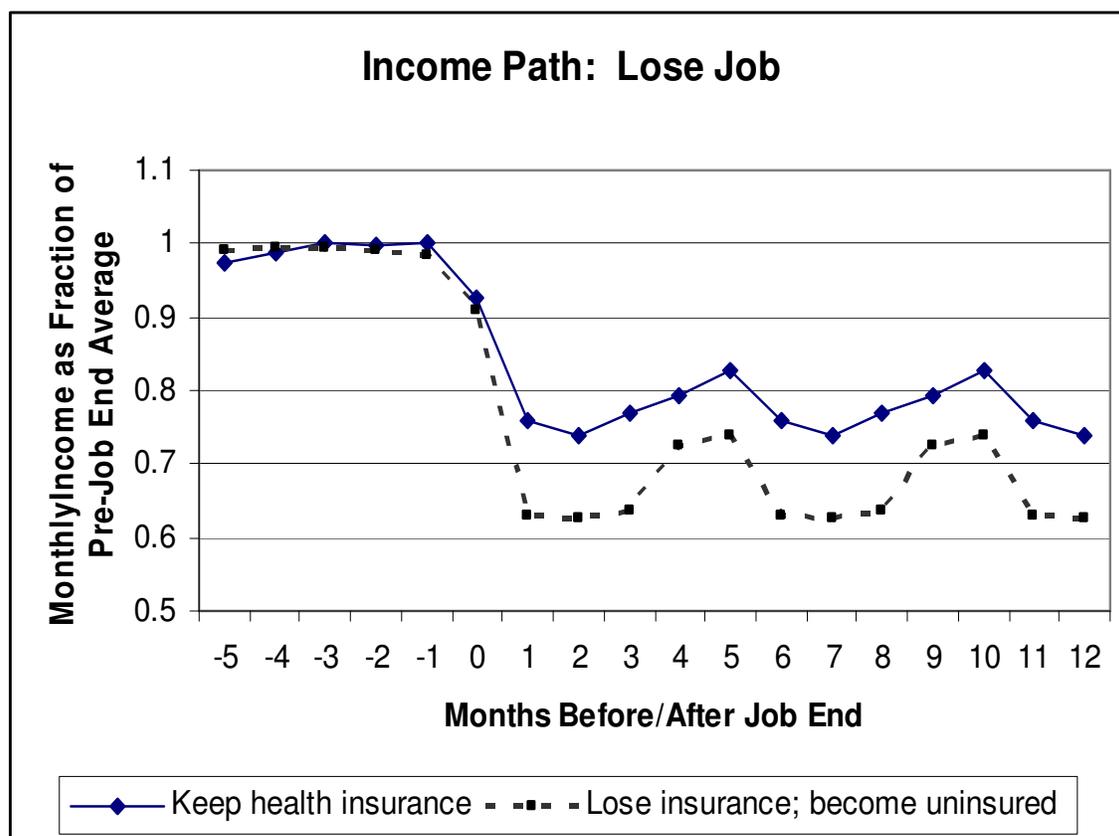


Figure 5.

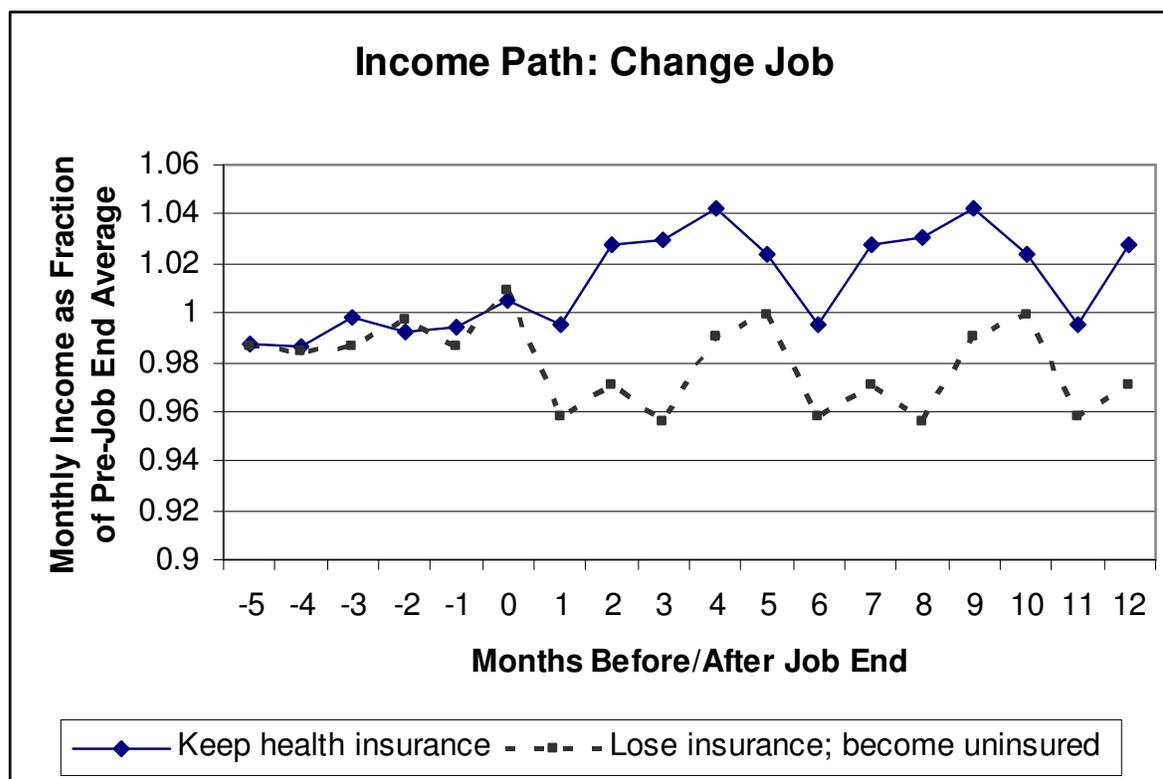


Table 1  
Job Endings, Health Insurance Status, and  
Transitions to Uninsurance

	% of all job endings	% uninsured, before job ends	% with ESI, own name	% with own ESI, become uninsured	% spells lasting 5+ months *
Lost job	20.2	26.0	44.6	34.7	68.2
For some other reason	18.8	27.4	30.8	27.3	61.0
Another job	16.8	24.8	42.6	20.7	55.4
Child care, illness	9.7	25.7	23.5	28.9	62.6
School	8.8	13.7	10.2	34.8	61.8
Did not like pay, hours	8.7	35.1	25.6	38.3	68.8
Temp job ended	7.1	28.0	16.3	19.2	61.8
Fired	5.3	32.8	36.9	49.1	80.3
Retire	4.6	2.7	70.5	4.3	52.9
Overall		25.2	33.7	27.7	65.4

- % of both complete and incomplete spells that last five or more months.

Table 2.