2014

Employment Research, Vol. 21, No. 4, October 2014

Citation
http://research.upjohn.org/empl_research/vol21/iss4/3

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For over 30 years, the Upjohn Institute has been involved in research and analysis of state and provincial workers’ compensation programs for workers disabled by their employment in Australia, Canada, and the United States. These programs mandate medical treatment to promote recovery and return to work, as well as wage-replacement benefits to enable workers to maintain themselves during the recovery, and are financed by employer contributions, either through private insurance or public funds.

A major focus of this policy work at the Upjohn Institute has been the adequacy of wage-replacement benefits for these workers. If benefits are too low, injured workers will struggle to recover and perhaps become a burden on society. If benefits are too high, employers will bear unnecessary expense and injured workers may be tempted to malinger.

A highlight for the Institute was the publication in 2004 of Adequacy of Earnings Replacement in Workers’ Compensation Programs (Hunt 2004), developed by the National Academy of Social Insurance, Study Panel on Benefit Adequacy of the Academy’s Workers’ Compensation Steering Committee. This monograph reviews the analytical options and endorses what they call “modern wage loss studies” as the preferred way to address the issue of benefit adequacy.

Previous Empirical Work

Reville et al. (2001) evaluate the benefit adequacy of workers’ compensation for permanent partial disability (PPD) claimants in New Mexico using this wage loss design. In addition, they compare replacement rates for PPD claimants in New Mexico to PPD claimants in California, Wisconsin, Washington, and Oregon. To calculate loss replacement rates, they examine the degree to which workers’ compensation benefits, which are tax-free in all states, offset the earnings differences between workers with partially disabling occupational injuries and similar workers without injuries during the 5 years after the injury.

During the first 5 years after the injury, the pretax loss replacement rate in New Mexico was 65 percent, nearly identical to the two-thirds statutory standard. But projections for the 10 years after the injury show the pretax loss replacement rate falling to 46 percent, as benefit payments were completed, and wage losses continued into the future. In fact, there seems to be a permanent loss of...
earnings among workers' compensation claimants that remains unexplained. Ten-year pretax replacement rates were estimated at 37 percent in California, 42 percent in Oregon, 41 percent in Washington, and 29 percent in Wisconsin. Thus, New Mexico had the highest replacement rates in any of the states. However, after adjusting for differences in industry composition among the states, it was apparent that New Mexico had a replacement rate that was in the middle.

This was the state of benefit adequacy research when the National Academy of Social Insurance and the Upjohn Institute for Employment Research published their book in 2004. The study panel concluded that “. . . for all categories involving substantial lost time from work or permanent disabilities, aggregate replacement rates are considerably below the two-thirds standard when considered over the 10-year period following the injury” (p. 132).

In addition, the study panel called for more wage loss studies from other jurisdictions, especially studies that included temporary disability claims and studies from states that used alternative methods for setting permanent partial disability benefits. The expectation was that additional studies would provide more guidance to policymakers seeking the most adequate, equitable, and efficient wage replacement policy. Unfortunately, no further studies were forthcoming for the next five years.

More Recent Studies

Tompa et al. (2010) have contributed a more recent Canadian perspective to this body of work. In a path-setting study for the Workplace Safety and Insurance Board in Ontario, they compare the benefit adequacy of three Canadian compensation regimes: 1) the permanent impairment regime in place in Ontario before the 1990 reforms (impairment); 2) the loss of earnings capacity regime installed in Ontario by the 1990 reforms (loss of earnings capacity); and 3) the “bifurcated” compensation regime (claimant gets the higher of the impairment or loss of earnings capacity benefit) in British Columbia before 2002 (bifurcated).

Tompa et al. (2010) also develop an additional measure of benefit adequacy, differentiating between the loss replacement rate used in the previous studies in the United States and what they call the “earnings replacement rate.” The loss replacement rate uses the gap between postinjury earnings of injured workers and comparison group earnings as the denominator, with workers’ compensation benefits paid as the numerator to calculate the rate. The earnings replacement rate adds the postinjury earnings of injured workers to the numerator, thereby taking into account the residual earning capacity of injured workers. The result is a significantly higher measured replacement rate, but also recognition of the fact that most injured workers will return to work and their earnings losses will be temporary.

Figure 1 compares the postinjury earnings plus workers’ compensation benefits paid to injured workers with the after-tax earnings of an uninjured comparison group in Canada. Benefit adequacy is expressed as the percentage of earnings that are replaced by the sum of workers’ compensation benefit payments plus earnings for the 10 years following the injury. The figure displays these estimates for a range of impairment levels, from the minor (1–5 percent impairment) to the very serious (more than 50 percent impairment). It is worth noting that all three of the Canadian workers’ compensation systems achieve at least 85 percent earnings replacement rates, with the British Columbia bifurcated system coming out on top (which is predictable, given that this scheme pays whichever of the other two benefits is higher).

These earnings replacement rates cannot be precisely compared with the earlier studies in the United States because of the differences in methodology. However, since Tompa et al. (2010) did report the aggregate loss replacement rates for these three workers’ compensation regimes, this facilitates rough comparisons with the U.S. studies cited earlier. For the Ontario pre-1990 impairment rating system, the aggregate after-tax loss replacement rate was 76 percent. For the post-1990 Ontario loss of earnings capacity rating system, the aggregate after-tax replacement rate was 80 percent. And for the British Columbia bifurcated system, the aggregate after-tax replacement rate was 95 percent.

Figure 1 Aggregate Earnings Replacement Rates

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<th>Loss of earnings capacity</th>
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<td>% earnings replacement</td>
<td>% earnings replacement</td>
<td>% earnings replacement</td>
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<tr>
<td>1–5%</td>
<td>6–10%</td>
<td>11–20%</td>
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SOURCE: Developed by the authors from Tompa et al. (2010).
It is also interesting to note that the loss replacement rates and earnings replacement rates both increase with the severity of impairment. Clearly, all three of these Canadian regimes were substantially more generous in replacing lost earnings for injured workers than any of the U.S. jurisdictions studied previously.

**Workers Compensation Research Institute Michigan Study**

The Workers Compensation Research Institute in Cambridge, Massachusetts, and the W.E. Upjohn Institute for Employment Research recently collaborated on a study of benefit adequacy of the workers’ compensation system in Michigan. Michigan does not use an independent assessment of the degree of impairment for injured workers. As a proxy for severity of injury, the number of weeks of wage loss compensation that are paid to the injured worker is used. It is logical that an injury that requires more weeks away from work is probably more serious, but there may be other things that influence the duration of disability payments, so this is not the equivalent of an estimate of residual disability that would be available from an impairment system (as in Ontario).

Figure 2 shows the proportional earnings losses by duration of weekly compensation payments compared to the after-tax baseline earnings of the comparison workers (set at 100 percent) in Michigan. It is apparent from the figure that the largest losses are sustained by claims with disability durations over 16 weeks (about 20 percent losses) and those receiving lump-sum settlements of contested claims (about 60 percent losses). The workers with less serious injuries show earnings losses of 3–10 percent of comparison group earnings. As in previous studies, these losses appear to persist for many years.

Figure 3 shows the time trend of average after-tax earnings replacement by disability duration for each calendar quarter around the injury. After-tax earnings replacement rates average 96 percent, and loss replacement rates average 76 percent for all claims. However, the permanent nature of the earnings reductions associated with disability claims also stands out for all groups as the trend lines fall below 100 percent and continue to decline gradually for 19 quarters (nearly 5 years). Projections out to 10 years based on the...
results in year 5 drop estimated after-tax earnings replacement rates to 89 percent for all claims and 67 percent for the PPD/LS group. One other notable feature of Figure 3 is that the lump-sum recipient group shows actual compensation above 100 percent of comparison group earnings in quarters 5–11 following the injury. This reflects the administrative delays associated with disputed workers’ compensation claims that generally have to wait 1–3 years before their claim is settled and payments received. Obviously this raises questions about income adequacy during the interim period.

While Michigan shows a good short-term wage replacement performance compared to other states, the workers’ compensation wage loss benefits in Michigan do not prevent the long-term earnings decline of injured workers relative to those with medical-only injuries. This remains one of the mysteries behind these studies.

**Conclusions**

It is disappointing that there have not been more of these empirical benefit adequacy studies in the 10 years since the National Academy of Social Insurance panel report. In the current political climate, perhaps it is not surprising, but given the gravity of the concerns expressed about the adequacy of benefits in workers’ compensation programs, it is unfortunate. Our methods are improving, but the data requirements and sensitivity of results to analytical assumptions remain as daunting barriers. It is still not possible to make acceptably accurate and meaningful comparisons among systems across different studies. Although we have a better understanding of some of the determinants of adequacy, they are overwhelmed by the impact of methodological assumptions underlying the research results.

But there is hope from a new approach. The Workers Compensation Research Institute has initiated a worker-interview-based series, “Predictors of Worker Outcomes,” in eight states, and plans to increase the number of states and repeat the survey in some states to provide benchmarks of system performance as more evidence accumulates. Despite the fact that the measure of wage loss is a subjective one, this effort has two major advantages over the data-intensive wage-replacement studies conducted to date. First, it pairs the question of postinjury earnings recovery with parallel concerns about the access to and satisfaction with medical care, the perceived recovery of health and function, and the return to work performance for a random sample of individual injured workers. Second, a more holistic and less data-intensive approach promises more useful comparisons between states and a more thorough understanding of the adequacy of workers’ compensation benefits.

**References**


H. Allan Hunt is a senior economist emeritus, and Marcus Dillender is an economist, both at the Upjohn Institute.

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How Long before Recertifying Medicaid and CHIP Children?

Income-based eligibility recertification is an essential component in virtually all means-tested social programs in the United States. It exists to ensure that the benefit is targeted at the neediest individuals or families. In many studies that examine the effect of means-tested programs on labor supply, an implicit assumption is that program eligibility is constantly monitored. However, many of these programs do not operate this way, and the time between two consecutive eligibility certifications, or the “recertification period,” can be as long as a year. Although this policy lever is recognized and its effect on program participation is explored in several studies of transfer programs (e.g., Currie and Grogger 2001; Kabbani and Wilde 2003; Prell 2008; and Ribar, Edelhoch, and Liu 2008), a formal theoretical and empirical investigation has not been carried out to address how program participants may respond to the incentives resulting from the lack of constant income monitoring.

In my research, I attempt to fill this gap by examining families’ behavioral responses to the continuous eligibility provision for children participating in Medicaid and the State Children’s Health Insurance Program (SCHIP, or simply CHIP). The analysis of income and labor supply responses is key in answering the important policy question of how often eligibility monitoring should be conducted.

Uninterrupted eligibility monitoring ensures that an income-tested program is effectively targeting the needy. However, if monitoring is costly and incomes of program participants change little over time, it may be sensible for the government to decrease the frequency of eligibility checks and offer a period of “continuous eligibility.” Granting continuous eligibility increases the value of a transfer program to its participants in two ways. First, less frequent monitoring reduces transaction costs associated with gathering eligibility materials and visiting caseworkers for program beneficiaries. Second, continuous eligibility provisions allow families to be less constrained in their labor supply decisions. That is, once households qualify for an income-tested program for a specified period, they will not be disqualified even if their incomes exceed the maximum income threshold, allowing them to work the desired amount while retaining their benefits. However, the provisions increase the possibility for less needy households to lower their incomes temporarily in order to qualify for the program, and then revert to their usual incomes while enjoying the benefits.

Because the families that behave strategically are not the intended beneficiaries of the program, setting the continuous eligibility period involves the trade-off between minimizing the number of such families and reducing the economic loss associated with monitoring. As mentioned above, the loss includes the administrative costs to the government, pecuniary and time costs of families participating in the program, and the deprivation of program benefits for some of the families most in need when the transaction costs of eligibility recertifications become insurmountable. Olson, Tang, and Newacheck (2005) show that children who experience interruptions in health insurance coverage are more likely to have unmet health care needs; therefore, imposing bureaucratic burden on otherwise eligible families may reduce targeting efficiency as well. Given these trade-offs, understanding the behavioral response to the lack of eligibility monitoring has important policy implications. The recertification period may be too long if we find evidence of families strategically and temporarily lowering their incomes in order to gain program eligibility. If no strategic behavior is found, however, it may be beneficial to lengthen the period of eligibility.

Income and Labor Supply Responses

I carry out an empirical investigation of the labor supply effect of the continuous eligibility provisions in the context of Medicaid/CHIP and provide a framework to compute the optimal eligibility recertification frequency. Along with creating the SCHIP program, the Balanced Budget Act of 1997 gives states the option to continuously insure children for up to 12 months in their public insurance programs regardless of changes in family income during that period. A third of the states implemented the continuous eligibility option in their public insurance program for children. These states present an opportunity to gauge the significance of the aforementioned strategic behavior, which then sheds light on the choice of the optimal continuous eligibility period.

Using the 2001 and 2004 panels of the Survey of Income and Program Participation, I follow an event-study framework and trace out families’ incomes as their children enrolled in Medicaid/CHIP. Figure 1 plots the movement of average family incomes over the 48 months around the beginning of a public insurance spell.

Neither of the panels shows a pronounced dip-and-rebound in income in the six months before and after the spell start. For the 2001 panel, the income trend leading up to the beginning of the public insurance spell is practically flat; the average income increases gradually during the spell especially after 12 months, but the period immediately
following the spell start shows no rebound. In the 2004 panel, the income process shows a persistent downward trend throughout the four-year window without a visible rebound.

Even though the strategic behavior predicted by the labor supply model is not salient in Figure 1, certain subgroups may be expected to exhibit stronger responses than others. Examining these subgroups separately may help to isolate the effects that are otherwise masked in the full sample. Among others, I select several subsamples in which families may adjust their labor supply more easily (two-parent families), be more likely to understand program rules (at least one parent is college educated), or face a stronger incentive to behave strategically (families with more children). The subsample analyses reveal income trends similar to those in the full sample and are not indicative of strategic behavior.

**Testing Model Predictions**

Because of the relatively small sample size, I cannot strictly rule out a small income rebound in several of my samples. Therefore, I calibrate the expected income rebound magnitude based on a standard economic model and compare it to the actual rebound magnitude. In all subsamples, the actual rebound magnitude is smaller than the model-predicted magnitude, and the model prediction is rejected with confidence.

Comparisons of income processes between counterfactual groups are also carried out to address the issues of unaccounted income trends over a Medicaid/CHIP spell, concentration of strategic behavior in only a subset of the families, as well as possible model misspecification in the calibration exercise. I compare the income processes between high- and low-income families and families in states that did and did not provide 12 months of continuous eligibility to simultaneously address all three of those issues. High-income families and those living in states providing 12-month continuous eligibility are expected to exhibit stronger strategic behavior than their counterparts, but the counterfactual analysis does not reveal the rebound magnitude to be statistically significant between the different groups. Again, the result provides no evidence indicative of the strategic behavior as predicted by a standard economic model.

**Optimal Length of the Continuous Eligibility Period**

With strategic behavior practically ruled out, I explore the following policy question: What is the right recertification frequency for families participating in Medicaid/CHIP? The two key factors in answering the question are 1) the volatility of the income process, and 2) the costs associated with recertification. Intuitively, if income does not change at all over time, then the government only needs to check income once to identify the needy population. But if there is a lot of movement across the public insurance eligibility cutoff, more frequent recertifications may be called for, which will remove families from the program when they no longer need the benefits. The need to monitor income must then be weighed against the cost of eligibility recertification, which should be conducted less frequently if the cost of the verification process is high for the government or for the program participants.

Using a simple economic framework, I compute the optimal
monitoring frequency under various assumptions regarding social welfare and recertification costs. The calculation suggests that 12 months may serve as a lower bound on the length of the optimal continuous eligibility period. That said, with technological advancement and improved data sharing among government agencies, recertification costs may decrease significantly in the future, in which case the continuous eligibility period can be shortened to improve targeting efficiency.

References


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