Factors Affecting The Use of Health-related, Paid-time-off Benefits

Wendy D. Lynch, Ph.D.
Harold H. Gardner, M.D.
Truman Brizee
Health as Human Capital Research Group

November 2004
Factors Affecting
The Use of Health-related, Paid-time-off Benefits

Introduction

Almost forty percent of all U.S. workers have benefits that pay full or partial salary during an illness or injury episode.¹ The purpose of such benefits is to protect employees and their families from significant financial loss during times of unforeseen medical disability. Because these are medical benefits, one would expect rates of paid-time-off claims for sickness, disability, workers compensation indemnity to reflect the health status of a working population. A workforce carrying a high illness burden, or a greater degree of medical needs (such as pregnancy care) should have higher use of health-related, paid time-off than workforces with fewer medical needs. In a purely medical context, illness absence would be determined solely on the basis of medical necessity—and not influenced by other factors.

In actuality, many factors besides medical illness and injury influence the use of health-related paid-time-off (PTO) benefits. This paper presents an overview of these factors, using published literature and some recent original work from the Health as Human Capital Research Group.

Background

PTO benefits evolved over more than 100 years, and accelerated during the period of wartime pressures that produced employer-sponsored health care insurance. During World War II, the country mandated a wage freeze at the same time that industries were asking workers to work long hours.² Millions of workers went on strike to protest working conditions. In an attempt to provide additional benefits—and still maintain the wage freeze—employers began offering health care coverage and other perks. In 1943, the National War Labor Board decided that paid vacation could be offered in lieu of increased salary because it was a “social benefit” needed to keep productivity high.³ ⁴ The Board argued that paid vacation would support higher productivity without the inflationary effects of direct salary increases.

By 1945, 90 percent of industries offered paid vacation.³ ⁴ In the same timeframe, many companies began considering sick leave and short-term disability coverage. Between 1942 and 1949, several states mandated sick-leave coverage. Although both employer-sponsored health care and employer-sponsored paid time-off were developed as temporary wartime measures, they became permanent components of benefits. Organized labor recognized the value of such benefits beyond salary and refused to let go of them in the post-war years. Today, 69 percent of unionized workers have short term disability (STD) coverage.¹

As policy makers consider benefits for the 21st century, it is helpful to understand their history and origin. Health-related benefits evolved primarily to circumvent nation-wide restrictions on wage increases—not because of sound evidence that employers were the ideal sponsors for such programs, or that these benefits had proven business value for both employees and industry. In this context, the following discussion examines the many factors that influence use of paid time-off benefits.
A framework for thinking about absence behavior

Momentum in human nature always pulls toward self-interest. Like a law of behavioral gravity, people slide naturally toward options they perceive as most beneficial. Scales tip in one direction or another as each person weighs the perceived rewards and consequences of a particular decision. If the certainty or size of a consequence changes, so will choices.

A generalization about self-interest may provoke objections by readers who insist that behaviors can result from motivations larger than oneself, including altruism or social conscience. Further, behaviorists will point out that humans routinely misjudge true risks (likelihood of dying in a plane crash) and benefits (likelihood of winning the lottery) and consequently make irrational decisions. Even so, this paper will present and discuss factors that do influence the general direction of behavior. Acknowledging that people are certainly capable of putting the interests of others ahead of their own, and that human judgment is often based on flawed or wishful thinking, the following discussion will address behavior using a basic model of self-interest. Namely, other things being equal, certain factors increase or decrease absence behavior—primarily because an individual’s perceived cost-benefit equation changes.

A model of costs and benefits, or risks versus rewards, applies simply to absence behavior in the following way. On any given day, a person will weigh all the benefits of missing work against all of the consequences of missing work (see figure below). In each instance, the aggregate of all benefits and consequences results in a net benefit (resulting in a day-off decision) or a net cost (resulting in a go-to-work decision) for being absent. For a specific individual, the actual decision process may not be as logical, nor as numeric, as this description implies. However, for a group of people, a circumstance that adds to the personal cost of a day off will result in a lower likelihood of absence. Circumstances that add to the personal benefit of a day off will result in a higher likelihood of absence.

The following discussion will review studies of absence behavior in the context of how factors influence the overall rate absence. Factors or circumstances that increase the personal cost of a day off will “pull” absence decisions to the left and decrease an overall group tendency to miss work. Factors that increase the personal benefit of time off will pull behavior, conversely, to the right and increase absence behaviors. Each absence decision results from an assessment, conscious or not, of the net costs and benefits of using an absence day. Because we are interested specifically in what affects absence rates, the discussion will focus on the absence decision (rather than the benefits and costs of being present) with presence as the assumed status quo.

Evidence will include studies of several types of paid time-off, including sick leave and short- and long-term disability episodes.
Understanding what influences health-related, paid time-off benefits

Although designated as “sick” time or “sick” leave, illness is only one factor influencing the likelihood of health-related absences. Sick leave may be used for reasons other than illness. Also, even when ill, people must assess whether their illness and other circumstances warrant being absent from work.

Numerous circumstances, characteristics, and policies influence the rate at which groups will use health-related paid-time-off benefits. This discussion classifies them into four types of factors:

1) Health Status
2) Workforce characteristics
3) Work environment
4) Benefit design and policy

Factor 1: Health Status

Poor health status is obviously associated with being absent from work. In general, experiencing the discomfort of illness makes absence a more attractive option. An analysis of acute illness episodes in men from the 1987 National Medical Expenditure Survey (NMES) compared absences for common acute illness by level of self-reported health.\(^5\) Controlling for other factors, results showed that workers who rated themselves in poor or fair health were absent more frequently than those who said that they were in good or excellent health.

More detailed analysis from the same data set found similar relationships between health status and absence for women.\(^6\) As might be expected, the number of self-reported chronic medical conditions also correlates with absence rates. Findings from a large British study indicate that, on a population level, medical absence episodes from work are correlated with the likelihood of subsequent death in the near term.\(^7\) Similarly, having more health risk factors—a predictor of future costs and morbidity—predicts more frequent absences as well.\(^8\) There is also some indication that workers who smoke and workers who are obese may be absent more frequently than their counterparts who do not have these risk factors.\(^6\)
Workers who rated themselves in poor or fair health were absent more frequently than those in good or excellent health.

Among people with the same illness, durations of illness absence vary dramatically.

However, while poor health increases the likelihood of medical absence, the strength of the relationship is surprisingly weak. Recent analysis of over 10,000 episodes of paid time-off indicated that only 5 percent of the variation in the likelihood of extended PTO could be explained by medical costs, a proxy for frequency and severity of illness. Not everyone who experiences a serious illness will have an extended absence from work. And among people with the same illness, durations of illness absence vary dramatically. For example, studies indicate that due to professional concerns and social pressures, physicians take less sick leave than other workers, even when both groups have similar health status. So, even though illness increases the likelihood of absence behavior (by increasing the benefit of absence), this factor does not operate independently from other issues.

Of note, health status is related to other important factors that may contribute to the likelihood of medical absence. Data from the NMES survey indicated that workers with poor or fair health status were older, had lower incomes, and were less likely to have sick-leave benefits or health insurance.

Factor 2: Workforce Characteristics

Older workers are slightly more likely to be absent than younger workers, but the relationship is not evident in all types of workers.

Women have higher rates of short-term disability than men, adjusted for age and gender.

Rates of health-related, paid time-off vary among different demographic groups. The likelihood of disability claims increases with age, although the types of claims change. For incidental medical absences, older workers are slightly more likely to be absent than younger workers, but the relationship is not evident in all types of workers. In general, absences increase with age, when other factors are controlled. One interesting observation is that young workers, sometimes referred to as Generations X and Y, are exhibiting higher rates of disability claims than expected, suggesting that other factors besides age-related illness are involved.

Women have higher rates of short-term disability than men. This difference remains after removing pregnancy related absences. While no definitive explanation is accepted, the difference has often been attributed in part to differences in social responsibilities outside of work. Responsibilities outside of work may shift the worker’s personal cost-benefit equation toward absence. Specifically, women with children under the age of six are more likely to be absent from work than women without young children. Men display no such effect, and several predictors of absenteeism differ across gender.
There is no consistent difference in rates of short-term disability or sick leave by marital status, after controlling for age and gender. There is some indication that people with higher levels of education have fewer sickness absences. However, this factor is difficult to separate from job type, work setting, and salary, and is not consistently observed across all studies.

Income level is often considered a demographic variable. However, in this discussion, income will be treated as a characteristic of the work environment. Although it is impossible to separate completely types of workers from types of jobs, this framework will treat job characteristics as aspects of work rather than aspects of the workforce.

**Factor 3: Work Environment**

Numerous studies have shown that high performers are absent less often, have fewer disability episodes, and are less likely to quit in the near term.

Both type of job and work culture influence rates of health-related PTO claims. Most dramatically, workers in non-exempt jobs (a classification that usually includes hourly pay and eligibility for overtime) average twice as many short-term disability claims as exempt workers. Similarly (and not unrelated), lower income workers average more absence days, and more cases of short-term disability than higher income workers. These differences remain after controlling for differences in health status (or medical costs), age, and gender.

Workers in white-collar jobs typically have lower rates of absenteeism. In general, factors that contribute to higher, more regular pay are also associated with lower absence rates. This may be due to the type of benefits offered or the nature of work performed, or both.

The nature of one’s responsibilities and tasks may influence rates of absenteeism. Workers reporting higher levels of job responsibility report lower absenteeism rates. Also, in one study, workers reporting high job strain (high demands with low control) had three times the rate of illness absences as workers in low-strain jobs.

### Correlation between Job Performance and Lost Time

<table>
<thead>
<tr>
<th>Correlation Between Performance And Amount of Time off</th>
<th>Correlation Between Performance and Frequency Of Absence</th>
</tr>
</thead>
<tbody>
<tr>
<td>-0.18</td>
<td>-0.13</td>
</tr>
</tbody>
</table>

*Income level is often considered a demographic variable. However, in this discussion, income will be treated as a characteristic of the work environment.*
Work performance is negatively correlated to rates of absenteeism and turnover. Better workers are absent less often. Although performance certainly reflects both individual effort and job fit, in this review, we consider performance an indicator of a successful or unsuccessful work environment for a worker. Numerous studies have shown that high performers are absent less often, have fewer disability episodes, and are less likely to quit in the near term. Recent analysis indicates that in the year prior to termination, workers can be expected to use PTO at twice the rate of the workers who will remain employed.

Workplaces have unique combinations of incentives and disincentives that influence how workers use health-related PTO benefits. Some researchers explain differences in terms of job commitment and job satisfaction. Others note differences according to beliefs about entitlement. Of interest, there is some indication that individuals who work for large companies seem more likely to take time off than individuals who work for smaller companies, a phenomenon that has been confirmed and identified as “shirking.” Shirking in large organizations results from being less likely to be noticed or monitored. Similarly, there are some indications that employees with a longer tenure at their jobs have lower rates of absenteeism. Theoretically, as a person accumulates human capital and increases wage, absence becomes more personally costly.

Characteristics of the work culture will influence how often and why individuals take paid time-off. In one model, the degree of trust between company and employees and salience of the work culture—i.e. how much the group culture influences individual behavior—combine to create specific motivations for absence behaviors. These factors, along with compensation and job commitment create patterns of group absence behavior. In a related study, researchers found that workers respond to absence patterns of others in their work setting. Looking at patterns across over 400 schools, this study found that schools with more absence-tolerant cultures had higher rates of absences. These differences could not be attributed to differences in health status among the teachers. When a person works in a team, his absence places a burden on the team. This burden becomes part of the absence-decision equation.
Factor 4: Benefits Design and Policy

Researchers have studied the effects of many types of policies, benefits designs and incentives on absence rates. In this overview, we will discuss three general types of approaches—rules, economic incentives other than pay during absence, and amount of pay during illness absences.

Rules

One of the simplest ways of influencing absence behavior has been to alter the method of qualifying for paid illness-absence. In one example, rules changed such that teachers needed to call their principal directly in order to qualify for paid sick leave, rather than simply calling another office administrator. This simple reporting change resulted in a significant decrease in absence. Similarly, a police force in Hawaii implemented a required medical certification to qualify for sick-leave pay. Again, researchers reported a significant decrease in absence rates. Rules that add a potential “cost” to being absent (in this case, the possibility of needing to deceive a superior), will tilt the scales away from being absent.

Policies regarding the separation of vacation days and sick leave from disability days also seem to affect the likelihood of short-term disability cases. Recent analysis indicates that, for exempt workers, if the worker must use vacation days before eligible for disability days, the likelihood of filing a disability claim is significantly reduced. In general, policies that enforce stricter rules or penalties for absence have a strong effect. A meta-analysis (a method of combining studies in an empirical way) of 35 absence studies concluded that the effect of such “control policies” are much stronger than the effects of demographics or work characteristics.

Economic incentives other than pay

Other studies have examined the effects of incentives or penalties not directly related to the amount of salary reimbursement during the current absence. For example, in one study, students with perfect attendance were entered into a lottery for a small cash prize. Eligibility for this very small incentive reduced absences significantly. Another study noted significant reductions in absence as a result of offering a $200 cash bonus for perfect attendance and stiffening policies for excessive absences. Similarly, some employers have noted reductions in absenteeism when employees were offered cash incentives for portions of unused sick leave.

A meta-analysis of 35 absence studies concluded that the effect of “control policies” are much stronger than the effects of demographics or work characteristics.
One study of multiple worksites found that companies offering profit-sharing or stock owner-
ship programs experienced less absenteeism than companies without such programs.29 These
performance-based incentives increase the personal cost of absence because there is greater loss
of opportunity when absent.

A series of British studies followed the long-term effects of linking the level of sick pay and
bonuses to absenteeism. Salary reimbursement levels were determined by a point system re-
flecting one’s frequency of absence the prior year. Employees with poorest attendance received
significantly less than full salary, those with moderate absence received full salary replacement,
and those with best attendance received sick pay equivalent to salary plus a bonus. Researchers
found that absence decreased as employees approached a point “threshold” for lower sick pay
the following year, and that the threshold between the bottom and middle levels was more of a
deterrent that the threshold between regular salary and bonus pay.30

### Amount of pay during illness absences

The amount of pay an employee receives during an illness absence has strong effects on the rate
of absence. At the most extreme, having no sick-leave pay reduces absences, but does not elimi-
nate them. Sixty-two percent of workers who do not have sick leave could be expected to have
an illness absence for an acute medical condition, compared to 82 percent of workers with some
sick leave, in the NMES survey.5 Studies of absence in the UK showed that when the national
sick-leave system was introduced in the late 1940s, the rates and durations of absence increased
significantly.31

Interestingly, giving zero pay temporarily (such as a waiting period) has inconsistent effects on
absences.32, 33, 37 While zero pay for the first few days may eliminate some illness absences, it
can increase others.32 One element of the initial sick leave policy introduced in the UK was a
five-day waiting period (after which, pay was applied retroactively). Researchers found a large
increase in the number of episodes longer than five days, leading to a net increase in total ab-
sences.11 Similar to a large company, a national system lends itself to excess utilization because
individual behavior is more difficult to monitor (and the perceived personal cost is lowered).

As the amount of pay during illness absence decreases, so does the expected overall use of short-
term-disability benefits. The relationship is curvilinear, with the steepest declines in expected
absences occurring between 70 and 100 percent of salary.37 The relationship exists for virtually
all age and gender groups, but only for non-exempt workers. Notably, the sensitivity of PTO ab-
sences to salary reimbursement applies to certain types of medical issues and not others. Rates
of absence for sprains and strains and affective disorders change with salary reimbursement
levels. However, rates of absence for fractures and pregnancy do not.37

One of the best demonstrations of the direct link between salary reimbursement and absence
rates is the natural experiment produced by changes in policy by the Swedish government.
Changes in reimbursement levels (provided by the government) in the late 1980s and early
1990s produced significant parallel changes in absence rates.34, 35, 36 As salary reimbursement
was lowered from 100 percent to 75 percent of salary, rates of absence decreased by three days
per person. Again, as the direct personal cost of absence increases, rates of absence decline.

---

**Studies of absence in the UK showed that when the national sick-leave system was introduced in the late 1940s, the rates and durations of absence increased significantly.**

**Rates of absence for sprains and strains and affective disorders change with salary reimbursement levels. However rates of absence for fractures and pregnancy do not.**
As salary reimbursement was lowered from 100 percent to 75 percent of salary, rates of absence decreased by three days per person.

Related Effects

Paid-time-off benefits also affect other costs. In the NMES survey, having sick leave increased the likelihood of medical care by 10 percent. In a study of overall costs for similar groups of workers, having disability coverage was associated with 29 percent higher health care costs and almost 40 percent higher total benefits costs. These relationships indicate that benefits utilization patterns do not operate independently, and must be considered comprehensively.

Summary

By understanding these factors, policymakers can leverage their benefit designs to maximize effective human capital practices.

Health-related absence behavior reflects a complex set of factors. Although related to health status, the likelihood and duration of paid absence will vary by the type of job, absence policy, economic incentives, and other circumstances in the work setting. Logically, circumstances that increase the personal cost of an absence reduce rates of paid time-off. Circumstances that lower the cost (or increase the perceived benefit) of absence will result in higher rates of paid time-off. By understanding how specific factors affect the cost-benefit equation for absence, policymakers can leverage their designs to maximize effective human capital practices.
References:

References (cont):


Health as Human Capital Research Group

Contributors:
Wendy D. Lynch, Ph.D.
Harold H. Gardner, M.D.
Truman Brizee

www.hhcfoundation.org
Visit our blog at http://hhcf.blogspot.com
Money Matters in Decisions about Disability
Blog Entry #2, September 27, 2005

Would it surprise you to learn that the closer my disability benefits will be to full salary during a short-term disability (STD), the more likely I am to file a STD claim? Using data from tens of thousands of disability claims across hundreds of paid-time-off policies, the HHC Research Team looked at how the level of salary reimbursement (for the first 180 days as calculated by the sick leave, STD and other paid-time-off policies) affected the rate of filing a disability claim.

Correcting for type of job and salary, results showed that for all groups except females age 50-65, rates of STD were related to the percent of pay the employees could anticipate receiving during their absence. These graphs represent the patterns for all types of disability cases combined. Interestingly, there was no such relationship for fractures or pregnancy/delivery. Disability claims for those events happened at the same rate regardless of salary reimbursement levels.

Question: Do people who are eligible for a higher percent of their pay during an absence from work have more severe injuries and illnesses? Probably not. But, those eligible to be paid more -- other things being equal -- will be more willing to apply for time off. Salary reimbursement during disability was intended as a protection against unanticipated loss of income. At what point does it create an incentive that encourages paid time-off rather than providing intended protection? What level of shared consequence (any amount below 100% reimbursement) is appropriate? What we see here is that higher reimbursement will result in more cases of STD. That is natural human behavior.

From the standpoint of the employer, it appears that -- in addition to the actual cost higher pay during disability -- higher payments for disability also increase overall costs due to:
1) the increased likelihood of absence and
2) the resulting decrease in efficiency and productivity.

Visit the Health as Human Capital Illustrated Research Summaries BLOG at http://hhcf.blogspot.com