PUNISHMENT: THE NEW APPROACH TO SETTING HEALTHCARE INSURANCE PREMIUMS TO REFLECT THE INDIVIDUAL'S LIFESTYLE BEHAVIORS?

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ABSTRACT

Employers faced with the increasing cost of health care benefits have investigated and implemented a number of cost control efforts. All such efforts are limited by applicable federal laws such as ADA, ERISA, HIPAA, and GINA. However, certain self-insured nonfederal governmental programs are exempt from aspects of HIPAA's requirement that all employees be charged the same premiums. As a result some states are implementing premium programs that, in effect, punish employees for unhealthy behaviors by charging them higher premiums or deductibles and co-payments. If such programs are successful, there may be efforts for similar exemptions for other self-insured private and public organizations. The question of punishment for poor health behavior, as it relates to 12 recognized health behaviors, will be investigated in the present paper.

INTRODUCTION

The increasing cost of providing healthcare insurance appears to have been first observed in the 1970s and 1980s [17]. Not only are these increasing cost observed today, but it is anticipated that these costs will continue into the foreseeable future [2]. In response to these increased costs, employers pursued two cost control strategies, direct and indirect.

Direct cost control focus on shifting some or all of the increased cost to the employee (e.g., increased premiums, higher deductibles, limited choices of health care provider, or, in the extreme, discontinuation of benefits) and are limited by the employee's ability or willingness to pay. As a result, employers began to pursue indirect cost control strategies (e.g., pricing premiums to recognize individual health risk or programs directed at improving employee health behavior, etc.), which focuses on reducing costs by controlling the intensity and frequency of medical benefit usage.

A differential premium based on the employee's individual risk factors is the most obvious indirect cost control strategy. Regulatory issues, however, limit this approach to organizations that self-insure. Self-insurance has the advantage of removing the organization's health benefit program from state jurisdiction and places it under federal regulation (ERISA, Employee Retirement Income Security Act).

ERISA allowed organizations to implement some form of individual pricing that charged employees higher premiums or deductibles for recognized unhealthy behaviors or risk factors that do not fall under regulations of the ADA (American with Disabilities Act, 1990). However, charging premiums based on the employee's was ended by HIPAA's (Health Insurance Portability and Accountability Act of 1996) nondiscrimination clause.

The nondiscrimination clause requires that all covered employees be charged the same premium regardless of health or pre-existing conditions. In 2007, employers received some relief from this prohibition when HIPAA rules were modified to allow financial incentives for wellness programs. These incentives or rewards can be as large as 20% of the cost of coverage for the employee [13]. Such rewards are scheduled to increase to 30-50 percent in the Patient Protection and Affordable Care Act [5].

Without the ability to charge differential premiums, the use of incentives or rewards to encourage participation in wellness programs has been the general approach use by private businesses and state governments [7] [11] [18]. While there is sufficient data to suggest that such incentives have a positive impact on participation in wellness programs and the reduction of health care costs, the impact is limited [2] [4] [9] [19] [23].

The limited impact of such incentive programs may be the result of the participation rate in wellness programs, which can vary from approximately 75% for intensive intervention programs (e.g., coaches, activity enrollment, etc.) to not more than 20% for less intensive programs [23]. Similar participation rates (intensive as compared to less intensive) are observed for visits to employer provided health clinics [6].

Recent actions by several states have focused considerable attention on the use of penalties (e.g., higher premiums, deductibles, and co-payments for those who smoke or exceed a specified body mass index) or as a method of coercing improved health behavior [12] [16]. These actions are allowed under a special rule that allows self-insured nonfederal governmental plans to opt-out of the nondiscrimination requirements of HIPPA [1] [3].

The shift from incentive to penalty may be the result, noted above, of the observed low participation rates for voluntary incentivized wellness programs. It is necessary to recognize, however, that the participation rate may be influenced by any number of factors. For instance such influence has been reported for race and ethnic background [24], outcome risk [22], and genetic testing [8]. However, none of these or similar studies provide an adequate explanation for the observed low participation rates.

One possible explanation for low participation rates is that potential participants in such programs do not agree with the unhealthy behaviors that serve as the focus of wellness programs. It is reasonable to expect that organizations will select those unhealthy behaviors that represent the highest healthcare cost or frequency of occurrence. However, low participation rates can be anticipated if potential participants believe that the health behaviors eligible for such incentives are a matter of private behavior. Consequently, while states that are introducing programs based on coerced participation may believe this approach will lead to higher participation; such efforts may be frustrated by the attitudes of its employees.

Punishment

The low participation for incentivized wellness programs suggest that employees are not sufficiently motivated to participate. However, is it realistic to assume that punishment will yield a better participation rate?

The literature provides mixed results as to the effectiveness of punishment, but it appears that punishment may be best utilized to suppress or eliminate a nonproductive behavior [10]. Ryan and Deci [20] suggest that an individual's level of internalization of a goal or punishment is influenced by the person's perception of locus of causality and, consequently, feelings of autonomy.

Punishment, because it is applied by another person or entity, leads, by definition, to perceptions of an external locus of causality and the lack of autonomy. As such, the value of the goals of the punishment cannot be internalized because the individual lacks the right to make a choice. With greater autonomy and higher levels of goal internalization, Ryan and Deci [20] report studies that show higher levels of maintenance of self-medication, better weight loss, improved glucose control, and better participation in addiction-treatment. In addition, they report that increased autonomy helps individuals identify self-endorsed goals that support internal need gratification [21].

Mulder [15] reports that by converting a desirable behavior to a moral obligation, punishment related to maintain the behavior will be an effective. This conversion to a moral obligation is enhanced when there is general knowledge and identity of the behavior:punishment relation. With such information, other members of the social unit will begin to express disapproval of the behavior, resulting in a specific norm of acceptable or unacceptable behavior.

The moral obligation approach suggested by Mulder [15] may have the greatest potential for changing unhealthy behavior. This can be observed by the success of anti-smoking campaigns that focus not only on the health consequences to the individual, but the effect smoking has those who are exposed to the person's smoking. As a result, the choice of not smoking appears to have become a social norm.

Mulder [15] suggests that for a behavior to become a social norm, the behavior:punishment relation must be well known and accepted among those in the social unit. It is reasonable to assume that most insurance plans provide adequate information to inform the population of the social unit of the behavior:punishment relation. But acceptance of the behavior:punishement relation depends on the attitudes of the members regarding the underlying behavior. The question of acceptance is the focus of the present paper and may provide useful information as to whether punishment has the potential to change unhealthy behaviors.

METHOD

Undergraduate and graduate business students enrolled in business classes at a southeastern state-supported university provided data for the present study by completing

a questionnaire that described 12 lifestyle behaviors (Appendix A). The lifestyle behaviors **(**1. Smoking; 2. Other Uses of Tobacco; 3. Drinking (liquor, wine, etc.); 4. Unsafe Sex; 5. Not Following Doctor's Orders; 6. Unhealthy Eating Habits; 7. Unsafe Driving; 8. Not Using Seat Belts; 9. Lack of Exercise; 10.Risky Recreational Behavior (e.g., skydiving, auto racing); 11. Not Maintaining a Healthy Weight; 12.Not Getting Annual a Physical Exam**)** are similar to factors for which health risk has been established by epidemiology [14].

The questionnaire contained a brief description of how premiums for group health are determined. The instructions then asked respondents to evaluate each of the 12 lifestyle behaviors on the basis of the rationality of charging differential rates based on the individual's health behavior. One question then asked respondents to evaluate the rationality of increasing the price of health insurance based on individual's unhealthy or risky behavior. This question is considered to provide a measure of the willingness of respondents to punish unhealthy behavior by increasing health insurance premiums based on the individual's unhealthy behavior.

Data were collected from 216 respondents, but eight provided incomplete information resulting in an analysis sample of 208 consisting of 83 undergraduates and 125 graduate students. Data were collected reflecting respondents' gender (104 males; 104 females), age ($\bar{x}_{age}$=25.2), marital status (married=45; single=163), management experience ($\bar{x}_{mgmt.\ exp.}$=1.4, and degree program (undergraduate=83; graduate=125). Three scales developed through factor analysis, discussed below, are used for analysis purposes and no overall effect of the personal information items on these factor scales was detected (MANOVA: Factor 1: F=1.126, *p*=.277; Factor 2: F=1.116, *p*=.293; Factor 3: F=.906, *p*=.693). The sample, as a result, is treated for analysis purposes as homogeneous.

RESULTS AND DISCUSSION

The means and standard deviations for the 12 lifestyle behaviors are shown in Table 1. Table 2 shows the results of factor analysis (principal components, varimax rotation), which identified three underlying dimensions (eigenvalues $\geq$ 1.0). One factor is defined by three lifestyle behaviors (bold) and the other two factors are each defined by two lifestyle behaviors. The remaining lifestyle behaviors exhibited cross-loadings ($\geq$.300) that prevent their inclusion in any one of the three factors. Lifestyle scales were named based on the lifestyle behaviors that compose each of the three factors (I. Risk; II. Prevention; and III. Tobacco Usage) and scale values were computed (average response for lifestyle behaviors included in the factor).

Table 1

Means and Standard Deviations Measuring the Rationality of Recognizing Individual Behavior in Setting Health Insurance Premiums for 12 Lifestyle Behaviors

Lifestyle Behavior	$\bar{x}$	*s.d*
Smoking	2.10	1.37
Other Uses of Tobacco	2.39	1.33
Drinking (Liquor, Wine, etc.)	3.25	1.41
Unsafe Sex	3.20	1.58
Not Following Doctor's Orders	3.62	1.51
Unhealthy Eating Habits	3.83	1.42
Unsafe Driving	3.64	1.58
Not Using Seat Belts	3.41	1.71
Lack of Exercise	3.79	1.50
Risky Recreational Behavior (skydiving, auto racing, etc.)	3.88	1.63
Not Maintaining Healthy Weight	3.50	1.30
Not Getting Annual Physical Exam	3.38	1.55

Table 2

Factor Analysis of the Rationality of Recognizing Individual Behavior in Setting Health Insurance Premiums for 12 Lifestyle Behaviors

	Factors		
Lifestyle Behavior	I	II	III
Smoking	.070	.066	**.945**
Other Uses of Tobacco	.121	.134	**.921**
Drinking (Liquor, Wine, etc.)	.452	.241	.558
Unsafe Sex	.656	.159	.423
Not Following Doctor's Orders	**.627**	.133	.253
Unhealthy Eating Habits	.436	.730	.089
Unsafe Driving	.789	.309	.131
Not Using Seat Belts	**.745**	.277	.090
Lack of Exercise	.480	.719	-.020
Risky Recreational Behavior (skydiving, auto racing, etc.)	**.772**	.236	-.039
Not Maintaining Healthy Weight	.144	**.846**	.185
Not Getting Annual Physical Exam	.145	**.678**	.144

The means, standard deviations, and reliabilities for the Risk, Prevention, and Tobacco Usage factors are shown in Table 3. Based simply on the question anchors, the means of the Risk and Prevention factors falls near midpoint of the range. On a preliminary basis, it can be suggest that respondents would not be receptive to the inclusion of these lifestyle behaviors in the rate setting process. However, respondents appear willing to include those lifestyle behaviors represented by the Tobacco Usage factor scale.

Table 3

Means, Standard Deviations, and Reliabilities for Three Factor Scales Representing the Rationality of Recognizing Individual Behavior in Setting Health Insurance Premiums

Factor Scale	$\bar{x}$	*s.d.*	Alpha
I. Risk	3.64	1.30	.724
II. Prevention	3.44	1.22	.620
III. Tobacco Usage	2.24	1.31	.932

The focus of the present paper is to investigate the extent to which punishment should be used to recognize unhealthy behavior in setting rates for health insurance. For analysis purpose the punish question was recoded to: 1=responses 1, 2; 2=responses 3, 4; and 3=responses 5, 6. The recoded punish question can be interpreted as 1=Strong Support; 2=Undecided, and 3=No Support for increasing healthcare insurance premiums for those individuals who exhibit unhealthy behaviors. As shown in Table 4, the largest group (N=108) supports increased premiums in response to the individual's unhealthy behavior; the smallest group (N=22) offers no support for this approach; and 78 respondents were undecided.

Analysis results, MANOVA, show a significant overall effect for the punish question with a significant effect on each factor (Risk: F=8.525, p=.000; Prevention: F=8.960, p=.000; Usage: F=1.3125, p=.000). Comparison based on the Punish variable, Table 4, show homogeneous subsets that are significantly different (Duncan, alpha=.05) for the each of three factor scales. Groupings for the Risk Factor are almost evenly split, but a large majority is reflected for the Prevention and Usage Factors.

Interpretation of these results, as noted above, must be made with some caution. This is especially true for the Risk and Prevention factors because the three mean values for each factor (Table 4) are within ±1 point of midpoint (3.5) of the response scale. Such caution may not be necessary for the Tobacco Usage factor because the mean values are closer to the Very Rational scale anchor.

Table 4

Homogeneous Subsets[*1] for Three Factors

Based on Support for Punish by Increasing Healthcare Insurance

to Recognize Lifestyle Behaviors

	Punish		
Factor Scale	Strong Support[*2]	Un-decided	No Support
I. Risk	3.31	3.89	4.33
II. Prevention	3.18	3.45	4.32
III. Tobacco Usage	1.93	2.35	3.39

[1]Duncan, alpha=.05

[*2]N=Strong Support (108); Undecided (78); No Support (22)

CONCLUSIONS

In response to increased cost associated with employee healthcare insurance, many organizations incentivized participation in wellness programs. Low participation rates in such programs [23] may cause some organizations to consider alternative approaches. Several states have recently initiated a punishment approach (increased premiums, co-payments, deductibles, etc.) in response to unhealthy employee behaviors.

As discussed above, the effectiveness of punishment is not a settled issue. The effectiveness of punishment may, however, depend on support for that approach as the unhealthy behavior is considered to be a violation some social norm. To investigate the possibility of developing a social norm critical of some unhealthy behaviors, respondents were asked to evaluate the rationality of charging higher premiums for those individuals who engaged in twelve unhealthy behaviors. To establish a depth of feelings regarding these unhealthy behaviors, respondents were asked their opinion of whether unhealthy behavior should be punished by increasing the healthcare insurance premiums. Based on the Punish data, respondents were placed into three groups, Strong Support, Undecided, and No Support

Three factor scales, Prevention, Risk, and Tobacco Usage, were developed from the evaluation of the twelve unhealthy behaviors. Analysis of these data (MANOVA) by the Punish grouping provides support for using higher healthcare premiums for those employees who use tobacco (Table 4). However, the results for the Risk and Prevention scales must be view as neutral because the mean values are so near the midpoint of the response scales.

Support for punishment in response to the use of tobacco may reflect the years of prevention education that appears to have resulted in a norm of non-usage. This suggests that if a punishment approach is to be successful for those behaviors described in the Risk and Prevention factors, employers should be willing to engage in a long-term educational effort directed at the consequences of the unhealthy behaviors.

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APPENDIX A

PRICING HEALTH INSURANCE

In general, if you are a member of a group health insurance plan, everyone in the group is charged the same price for the insurance. When members of the group engage in unhealthy or risky behavior that results in medical costs, all members of the group share in any increase in the cost of the insurance. One might ask why all members of the group must pay for the unhealthy or risky behaviors of a few members.

The following questions ask you whether **you think** it would be RATIONAL to consider an individual's unhealthy or risky behavior in pricing group health insurance for that person. In answering the following questions, **consider only the listed behavior, do not be concerned either about the intensity or "how much" of the behavior would be required to initiate an additional cost or how the behavior would be detected.**

	Very Rational					Very Irrational
SMOKING	1	2	3	4	5	6
OTHER USES OF TOBACCO	1	2	3	4	5	6
DRINKING (Liquor, Wine,etc.)	1	2	3	4	5	6
UNSAFE SEX	1	2	3	4	5	6
NOT FOLLOWING DOCTOR'S ORDERS	1	2	3	4	5	6
UNHEALTH EATING HABITS	1	2	3	4	5	6
UNSAFE DRIVING	1	2	3	4	5	6
NOT USING SEAT BELTS	1	2	3	4	5	6
LACK OF EXERCISE	1	2	3	4	5	6
RISKY RECREATIONAL BEHAVIOR (e.g., skydiving, auto racing)	1	2	3	4	5	6

NOT MAINTAINING A HEALTHY WEIGHT	1	2	3	4	5	6
NOT GETTING ANNUAL PHSYCIAL EXAM	1	2	3	4	5	6

Please evaluate the rationality of the following approach in dealing with the question of pricing healthcare insurance.

The price of the insurance should increase for employees who exhibit unhealthy or risky behavior.	1	2	3	4	5	6