The Complex Role of Age in Employer-mandated Health Insurance

submitted to
Health Affairs

by
Norma L. Nielson
Professor of Insurance, Oregon State University
Senior Policy Analyst
and
Chair of the Task Force on Policy and Technical Issues

April 27, 1994

The author wishes to thank the Robert Wood Johnson Foundation for the funding provided under its State Initiatives Grant, the staff of Oregon's Office of Health Policy, and the members of the Task Force on Policy and Technical Issues for their careful and thoughtful deliberations.

The Complex Role of Age
in Employer-mandated Health Insurance

Abstract

Decisions about how to use an individual's age are particularly important under the Oregon Health Plan's pending employer mandate. This article summarizes the relationships between age and other important variables that impact health policy decisions, including a review of the legality of using age as a rating factor, a review of the literature on specific relationships to age, and a discussion of the issue of age-banding as it relates to an employer mandate model for health reform. Also discussed is the implication of existing law and its lack of a requirement that employees purchase the health insurance their employer will be required to offer. The article concludes with a preliminary analysis of the cost implications of decisions about using age in health policy.

Introduction

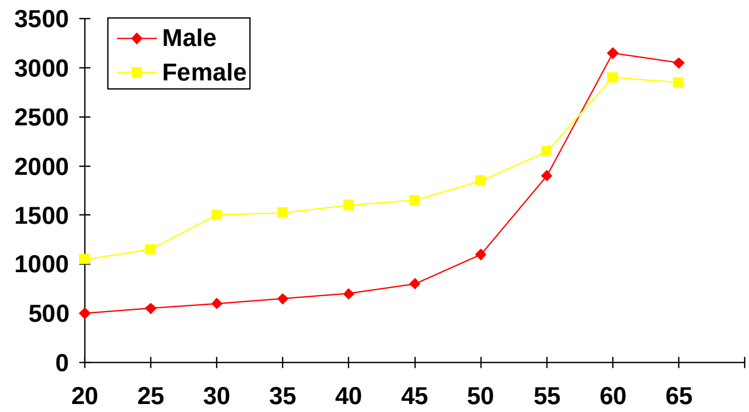
Oregon's Office of Health Policy estimates that an employment-based mandate slated to take effect in Oregon in 1997 and 1998 will affect 278,000 people (if needed ERISA changes occur).[1] Analysis indicates that this newly covered population will comprise 172,674 workers and approximately 105,000 of their dependents. The employees were broken into age and family size category as follows:

Table 1. Oregonians Expected to Obtain Health Benefits through the Employer Mandate

Age	*Workers*	*Dependents*
15-24	9,257	13,986
25-29	10,513	14,143
30-34	11,860	16,298
35-39	15,905	20,052
40-44	28,581	34,096
45-49	24,071	27,669
50-54	15,202	17,524
55-59	14,280	16,881
60-64	10,010	12,081

Since the utilization of health care services unquestionably varies with age, the relationship of that factor to public policy decisions about health care reform requires careful scrutiny. Figure 1 shows the relationship between age and health care utilization as depicted by Davidoff and Pyenson of Milliman and Robertson.

Figure 1: Age and Health



As one of five task forces that comprise Oregon's Universal Access Project[2], the Task Force on Policy and Technical Issues was charged with addressing issues of dual coverage, subsidization, adverse selection, and employer hardship for those expected to obtain coverage through the employer-mandate phase of the Oregon Health Plan. In attempting to meet that charge, the Task Force faced many questions about the role of age in pricing health benefits. This article reviews several of those age-relationships and the rationale used by the Task Force in formulating its policy recommendations regarding the reflection of the higher, age-related cost of older workers.

Legality

The first step in preparing a recommendation was to review and understand what uses of age are permitted under employment law. In 1990 Congress passed the *Older Workers Benefit Protection Act*. That *Act* defines "compensation" to encompass all employee benefits. The bill enacted into law the "equal benefit or equal cost" principle that requires an employer to provide older workers with benefits at least equal to those provided for younger ones, unless it can prove that the cost of providing an equal benefit is greater for an older worker than for a younger one. Section 4(f)(2) of the *Age Discrimination in Employment Act* states that "it shall not be unlawful for an employer [to have an] employee benefit plan where ... the actual amount of payments made or costs incurred on behalf of an older worker is no less than that made or incurred on behalf of a younger workers."[3]

All of this means that, unlike gender, employer-provided health benefits are permitted to differ on the basis of age. The employer must contribute at least as much for older workers' health benefits as it does for younger workers, but there is no requirement that the benefits be equal. This type of differentiation on the basis of age would be legal under the *Older Workers Benefit Protection Act* unless the premium to cover an older worker were less than the premium to cover a younger worker. Figure 1 clearly illustrates that such a situation does not occur in the case of medical coverage. Therefore, the Task Force faced no concerns as to the legality of using age as a factor in rating benefits under Oregon's employer mandate. Our recommendation could then be based on the financial implications of any conclusion and on our underlying Task Force Principles.

Distribution of Financial Responsibility

Early analysis allowed the Task Force to evaluate differences in the burden of premiums, and the cost of alleviating that burden. That analysis assumed a benefit package valued at $120 per person per month. To implement a family-based system of insurance benefits rather than a per capita system required further assumptions. We also needed to assume a specific premium structure, i.e., allocation of dependent costs across families. The example presented here assumes a modified composite rate[4] with $60 per month added for each dependent up to a maximum of two dependents.[5] The resulting sample rates are presented in Table 2.

Table 2. Sample Premium Rates				
Number of Under-65 Age Categories	*Ages*	*Employee Premium*	*Employee +1*	*Employee +2*
1	< 65	174	234	294
2	< 45	160	220	280
	45-64	263	323	383
3	< 25	139	199	259
	25-44	172	232	292
	45-64	268	328	388

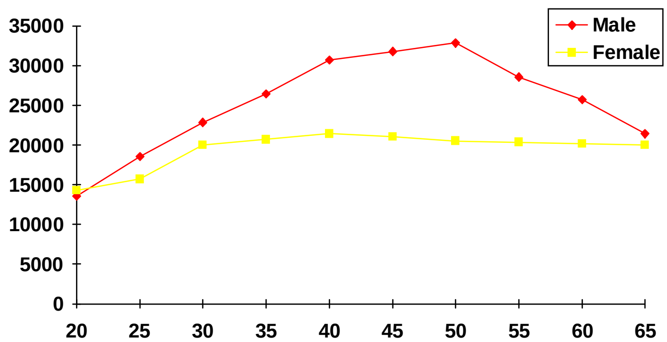
Impact on Individual Premium Contributions

Oregon law specifies that the employer's share of the health premium under the Oregon Health Plan will be at least 75% of the premium for employees and at least 50% for dependents. Because the law makes no mention of allowing or disallowing variation on the basis of age, the maximum nominal contribution faced by an individual to participate in the Oregon Health Plan could vary depending upon the number of age categories used. Eliminating age as a factor in pricing health benefits shifts more burden to younger workers and less to older workers. The use of age banding shifts responsibility among employers as well with those who hire older workers paying a larger share of the total cost of the health care system. Thus, the decision to allow or disallow age as a pricing variable affects the intergenerational distribution of program costs as well as interindustry equity implications.

Table 3. Responsibility for Payment of Monthly Premiums		
Number of Under-65 Age Categories	*Employee Portion*	*Employer Portion*
1	43.7%	56.3%
2	44.3%	55.7%
	36.2%	63.8%

In addition to redistributing costs by age and industry, policy decision about using age in pricing health benefits were examined against individual families' ability to pay. Figure 2 graphically illustrates the

Figure 2. Relationship Between Age and Income



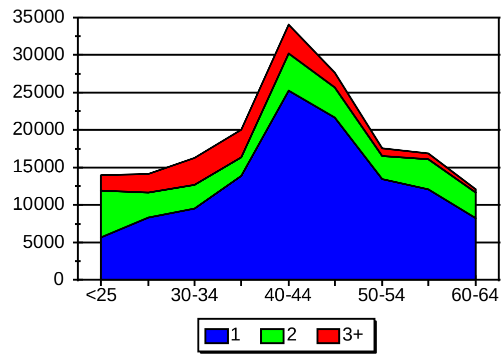
Using a scenario that assumes employers impose the maximum allowed employee contribution, the aggregate employee contributions toward that payment[6] for health insurance, absent subsidies, were estimated to be as follows:

Table 4. Estimated Maximum Employee Contributions by Income Level					
Income as a % of Federal Poverty Level	*Aggregate Contribution with One Age Band*		*Contribution with Two Age Bands*		
			Under age 45	Age 45-64	
100-150%	$36,170,352	29.2%	$18,767169	$12,024,998	28.8%
150-200%	30,219,976	24.4%	$14,934,944	$10,666,616	23.9%
200-250%	20,103,954	16.2%	$11,418,233	$9,944,780	20.0%
More than 250%	$37,380,821	30.2%	$17,007,386	$12,175,797	27.3%

As shown in Table 4, the total annual employee contribution by workers can vary substantially depending on choices made regarding the use of age bands. The aggregate contribution required appears to be $123,875,103 with a single age band. Of that, it is estimated that 68.8% or $86,494,282 would be contributions required of workers with incomes below 250% of the Federal Poverty Level. The aggregate contribution requested of workers using two age bands would be $102,911,731.[7] A slightly lower share is required of those families with income 100-150% and 150-200% of the Federal Poverty Level.

This difference in the incidence of cost relates to two factors. First, as shown in Figure 2, incomes are lower among younger workers. Second, as shown in Figure 3, a large proportion of uninsured workers are under age 45. The concentration of more people with lower incomes at lower ages means that the relationship between age and contribution affects the aggregate amount of premiums contributed by lower-income workers. The use of age banding appears to be less regressive that applying a single rate to all ages.

Figure 3: Distribution of Oregon's Uninsured by Age and Family Size



Age and Family Size

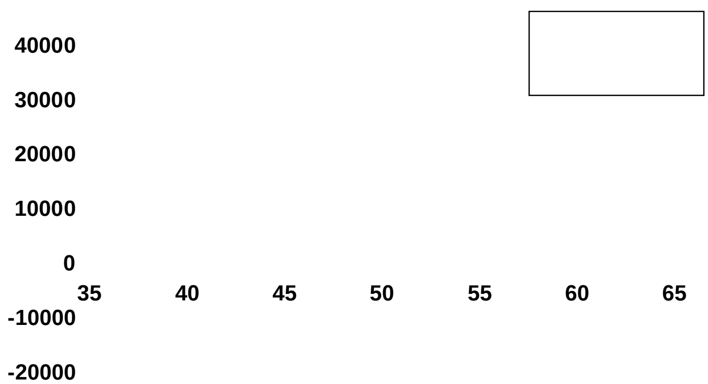
Figure 3 also illustrates how a family's health care costs vary with the size of that family. The younger families that would be paying lower premiums under an age-banded system are likely to be the same families paying more by virtue of their size. To establish a premium structure that imposes a large cost for family size without recognizing the advantage of youth would place an extraordinarily high -- and one-sided -- burden on young families. Premium increases under an age-banded system as citizens age could be timed so they typically occur when the financial burden of paying for the health coverage of children is lessening as they leave home to begin new households.

Effects on Employment Decisions

The effect of mandatory health insurance on jobs and job creation is a primary public policy concern. When any state mandates that its employers provide health insurance, employers who do not already provide health insurance will find the workers in that state more expensive than other states UNLESS the health insurance causes employees to be willing to accept lower cash compensation. Studies in labor economics tell us that workers are hired until the marginal revenue produced by adding a new worker equals the marginal cost of that worker. It follows then that the willingness of an employer to hire a particular worker depends upon three things:

- The salary commanded by the worker,
- Non-salary costs (like health insurance) of employing the worker, and
- The worker's contribution to the employing business (productivity).

Figure 4: Age and Productivity



This conclusions from labor theory hold, however, only when hiring occurs in a "free" market. It must be applied with some caution when other "real world" laws and regulations restrict the ability of an employer to hire or fire at will. An employer mandate will negatively affect employment when benefit costs increase UNLESS cash wages decrease. Policy debates should recognize *when* market wages are expected to adjust and by *how much*. In particular the ability of wages to adjust in some cases is prohibited by law. It is illegal for cash compensation to drop below the minimum wage. An examination of empirical evidence follows.

Econometric studies generally support the equality of a worker's productivity and compensation. However, those studies indicate that equality occurs over a worker's lifetime (present value) rather than adjusting annually. Hence, age again is proven to be a relevant variable. Studies of the relationship between productivity and age generally find that workers are paid less than they produce when young and more than they produce when they are older. This result supports an expectation that workers of different ages will react differently when faced with pressure to accept lower cash wages when the employer provides health insurance. Older workers will be more accepting of lower cash wages than will younger workers.

Effects on Tax Revenue

Regardless of the effect on job creation in a particular state, policy makers still should expect an effect on revenue. If job growth is thwarted, a state's tax collection will be less. On the other hand, if the effect on job creation is minimal, that may mean that cash wages adjust fully to reflect the value of health insurance. Because compensation in the form of health benefits is not generally subject to income taxation, the corresponding reduction in cash compensation also produces a direct drain on public revenue.

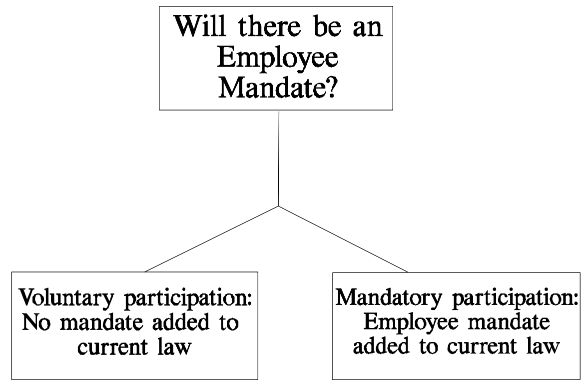
Age and Income

Another interesting concept arose during the debates of the Task Force. A strong correlation exists between age and income, especially for males. Even those who rejected the use of age as a rating factor to reflect utilization of health care were willing to consider allowing it as a proxy for a person's ability to pay.

Evaluation of Age-Banding with Oregon's Employer Mandate

Presently the Oregon Health Plan requires employers to offer health insurance by specific dates. However, the law does not require employees to accept the coverage. Age bands are a particularly important issue in the Oregon Health Plan as enacted and any other employer-mandate proposal that does not require that employees purchase the health insurance their employer will offer.

Figure 5: The Employee Mandate Question



Voluntary employee participation may differ significantly depending upon the financial burden of participation. The employee's out-of-pocket cost is the employee share of the premium (a maximum of 25% for employee coverage, 50% for dependent coverage) less any premium assistance provided by the State.[8] Under such a policy, the only mechanism to "sell" the insurance to employees is the value of that coverage. The value of the coverage -- the expected benefit in relation to out-of-pocket cost -- will determine each employee's willingness to purchase coverage. In a system of voluntary employee participation, economic incentives must be used to get workers to participate in offered health care. Of particular concern is that young people are expected to decline to participate if faced with costs that are higher than the value they personally receive from participating. Thus, a per-capita or per-family cost that does **not** reflect the perceived value of coverage to that individual will result in the individual declining the coverage.

The answer to the question "Will there be an Employee Mandate?" had a direct effect on the views of the Task Force on Policy and Technical Issues regarding whether age should affect contribution levels. Because of concern about under-enrollment, the Task Force on Policy and Technical Issues recommended that, absent an employee mandate, some age banding (probably no more than three price levels) be employed. This was viewed as possibly the only way to get prices for young workers low enough to achieve desired level of participation.

Evaluation of Age-Banding if Employee Participation were Mandatory

Key Oregon political figures have indicated that the framers of the Oregon Health Plan intended that workers would be required to accept the offered health coverage. Anticipating the possibility of such a statutory change, the Task Force also prepared a recommendation with respect to age-banding under such a revised system. That recommendation recognizes that the primary objective of universal coverage could be achieved by employee mandate. Given that, the advisability of age-banding could be viewed differently. To guide the decision-making process about this "new" issue, we referred back to principles adopted by the Task Force. Three of those principles were particularly relevant:

- ✓ A stable system of health care financing requires pooling of health risks and participation by all individuals regardless of health status,
- ✓ Program design should minimize the adverse effects of the plan on total employment in Oregon, and
- ✓ Any subsidies should be explicit and intentional rather than implicit or inadvertent.

Two questions emerged directly from these principles:

- ✓ Does a system of constant rates (without regard to age) incorporate a subsidy from younger citizens to older ones?
- ✓ Is the negative impact on employment decisions sufficient to support a recommendation that a system of constant rates (without regard to age) be adopted?

Members of the Task Force agreed unanimously that a system of constant rates does in fact represent a subsidy from the young to the old. We began to use analogies from the general taxation arena to clarify the distinction. Specifically, we referred to the approach where an individual's contribution is based in part on age as producing a financing scheme that resembles a "user fee." Omitting age in the determination of contribution (such as through a payroll tax or other financing scheme) provides for a general "tax" tied to income.

After extensive debate, the Task Force on Policy and Technical Issues concluded that the use of age banding would interfere with decisions in the labor market by making older workers more expensive and less attractive than younger ones. Ultimately we recommended that, if and only if an employee mandate accompanied the employer mandate, the price per individual employee for health insurance should omit the consideration of that employee's age.[9]

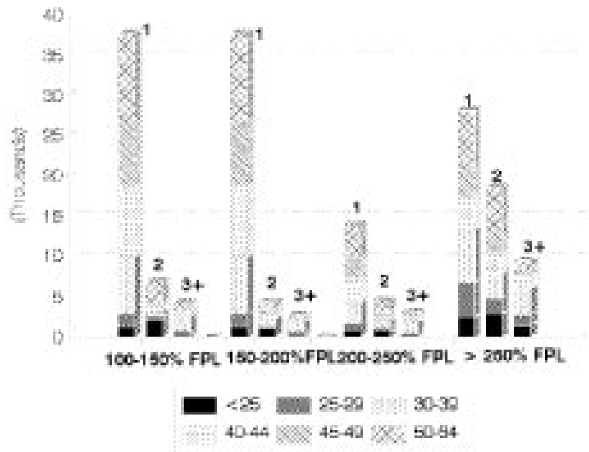
We concluded that the negative effects of such an intergenerational subsidy are overridden by the potential impact on employment decisions. Our recommendation might well have been different if we had been talking about workers earning an "average" wage; however, the evidence is strong that the employers and workers most likely affected by the mandate are those at minimum wage. Existing laws prevent these employees from reducing wages to compensate for the health benefits; we chose not to impose the burden of lower job creation more heavily on one generation than another. We recommended that, if an employee mandate is passed, the premiums charged to individual employees should **not** vary with that employee's age.

Cost Implications of Policy Options

The task force recognized that achieving the goal of universal access would require financial assistance for some persons. While the precise formula for such subsidies has not been determined, it is presumed they will be based upon the family's income in relation to the Federal Poverty Level. This section discusses the cost implications of one such subsidy scheme: requiring the individual to be responsible for the cost of health insurance up to 10 percent of income in excess of the Federal Poverty Level. This section explores the results of two simple characteristics: 1) the greater the premium being subsidized, the greater the direct cost to the State of providing that subsidy, and 2) the total amount needed for individual premium subsidies is inversely related to the contribution level of participants.

The dual relationships between 1) age and income and 2) age and uninsured status discussed earlier also carry important implications for the cost of a state subsidy. The premium structure explored earlier is extended to consider the public finance implications.

Figure 6: Distribution of Uninsured Workers by Age and Income



The age distribution of those requiring assistance in combination with the number of age bands to be used affects the need for public subsidy dollars. Data from the 1992 Oregon Population Study on the uninsured show a mixed distribution of by age and family size. Figure 6 shows the distribution of Oregon's uninsured population by age, family size, and income. Because the premium contribution being modeled varies with family size only up a family size of three, the income breakdowns used also were varied only up to a family size of three.

To obtain a rough estimate of the extent to which subsidy would be needed, the Task Force again examined revenue implications by assuming that families would need assistance from the State of Oregon to the extent their premium contributions exceed 10% of their income above the Federal Poverty Level (and none of the income below the FPL). Using the midpoints within each range -- e.g., 125% for the range between 100 and 150% of FPL -- produces the following estimates of the subsidy required to achieve that level of assistance.

Table 5. 1993 Federal Poverty Levels Used in Projecting Costs for Employee Subsidies

Family Size	*Federal Poverty Level*
1	$ 6,972 per year
2	$ 9,432 per year
3 (or more)	$11,892 per year

As shown in Table 6, the estimated total revenue required to support a subsidy of this type would be $31,365,367 annually with a single age band for premiums and $22,302,275 for a system of two age bands. Thus, a $10 million difference appears in the cost to the State of offering this employee subsidy depending upon whether age is considered in rating.

Table 6. Comparison of Subsidies under Different Premium Structures

Number of Under-65 Age Categories	*Employee Subsidies*
1	$31,358,198
2	$14,531,745
	$7,775,844

Readers are cautioned, however, that Table 6 presents only one side of the public finance picture. Depending on the availability and design of an employer subsidy, the reduced need to subsidize younger workers through the use of age bands may be offset by an increased need to subsidize employers who hire older workers.

Summary

Since age is unquestionably correlated with many factors important in developing sound public policy for the financing of health care -- income, health care costs, productivity, and income -- careful scrutiny is needed to determine the advisability of using age in pricing a reformed health care product. This article, in summarizing the literature on these relationships, reports that workers' earnings do roughly track productivity, but health care costs track neither earnings nor productivity. It follows that an age-based premium

- ✓ Correlates more closely with utilization of health care and expected value of insurance coverage to worker
- ✓ In conjunction with a mandatory insurance scheme interferes less with labor markets when employees are willing to accept lower cash wages for employer-provided insurance
  - – Younger workers will accept only a small reduction in wage in exchange for insurance

- Oldest workers will accept a very large reduction in wage for insurance

✓ In conjunction with a mandatory insurance scheme interferes more with labor markets where employees cannot accept lower wages if employer provides insurance, i.e., minimum wage

- If a worker's contribution to the firm (productivity) is at or near minimum wage, age-based pricing will lead to the employer being willing to hire only the lowest cost (youngest) worker

■ Will be positively correlated with any income-related premium/contribution system.

The specific recommendation about the advisability of an age-banded premium within an employer mandate differs depending on whether the employer mandate is accompanied by an employee mandate. We maintained universal access and stability of the overall system of health care financing as the primary concern.

In the absence of legislative change, the Oregon law includes no employee mandate. Economic factors will greatly affect workers' willingness to participate in offered health care. In that circumstance, age banding was viewed as perhaps the only way to get the prices for young workers low enough to achieve the desired level of participation.

If an employer mandate is accompanied by an employee mandate, that vehicle provides another mechanism to reach the desired levels of participation. In that scenario we were free to ask more philosophical questions about the issue of age in rating. We concluded that, in an environment where minimum wage laws prevent an employee from reducing compensation by the value of benefits provided, the premiums charged to individual employees should **not** vary with that employee's age.

REFERENCES

Davidoff, Drew S. and Bruce S. Pyenson. *Actuarial Issues in Play-or-pay*. (New York: Milliman and Robertson) 1992.

"Health Insurance Coverage in Oregon: Estimates for 1990 to 1992." Office of Health Policy, Health Division, State of Oregon. August 1993.

Kotlikoff, Laurence J. and Jagadeesh Gokhale. "Estimating a Firm's Age-Productivity Profile Using the Present Value of Workers' Earnings." *Quarterly Journal of Economics*. (November 1992), pp. 1215-1242.

Zedlewski, Sheila R., Gregory P. Acs, and Colin W. Winterbottom. "Play-or-Pay Employer Mandates: Potential Effects." *Health Affairs*. (Spring 1992), pp. 62-83.

ENDNOTES

1. The 1993 Legislature changed the implementation date of the employer mandate to the following timetable:

- March 1, 1997 for employers with 26 or more employees
- January 1, 1998 for employers with 25 or fewer employees

The 1993 law also contains a provision to repeal the employer mandate on January 1, 1996 unless necessary ERISA waivers are granted.

2. As funded by a State Initiatives Grant from the Robert Wood Johnson Foundation.

3. The Chair gratefully acknowledges the assistance of Task Force member Donald Burns of the Portland, Oregon, law firm of Miller, Nash, Wiener, Hager, and Carlson in compiling the information used to prepare this summary.

4. The Task Force recommended the use of a modified composite premium structure over a straight composite or traditional three-tier structure. That recommendation offers an opportunity for the policy debate to address explicitly the costs allocated to dependents. It was feared that a full actuarial charge for dependents would create too strong a disincentive for employers to hire workers who have dependents.

5. The $60 figure was used in our discussions and analysis in part because it represents the approximate actuarial of health benefits for children. Some perverse public policy can result from the exclusive use of per capita figures that are substantially higher than the actual cost of providing care to children.

6. An important distinction is drawn between "cost" and "payment." While the employer is required to pay for the coverage, standard labor economics theory supports the contention that the worker ultimately bears the full cost of that coverage.

7. It is unreasonable to believe that the total costs of providing health care to this population would actually be reduced this dramatically by changing the premium structure. The difference could reflect differences between the actual population and that assumed in preparing the actuarial estimates of premiums for our analysis. At least initially, this difference in aggregate contributions may be very real. Eventually, however, actual health care utilization by the population will force the aggregate premiums to be the same under any premium structure.

8. Any share of the employer's premium cost that the employee recognizes as a reduction in compensation also would be included in the individual's implicit cost-benefit analysis.

9. This recommendation is **not** intended to exclude the standard group insurance practice of using average age of a worker's employees to develop an appropriate rate for the group as a whole.