Chapter 9

# Health Care Subsidies in Construction: Does the Public Sector Subsidize Low Wage Contractors?[1]

C. Jeffrey Waddoups

## Introduction

Employer Based health insurance (EBHI) is the primary method for financing health care among the non-poor and non-elderly in the U.S.[1] Workers in the construction industry, however, are left without access to EBHI at exceptionally high rates compared to their counterparts in other industries. The restricted access to health insurance is primarily a result of institutional rules in health insurance markets and the organization of work in the industry. Whether insured or not, workers and their dependents still require health care, and without health insurance their medical bills are less likely to be paid. To clarify the relationship between EBHI and uncompensated health care, especially as it is connected to workers in the construction industry, the present study explores (1) market failures that result in a low incidence of EBHI among construction workers; (2) the role collective bargaining plays in resolving such market failures; and (3) the relationship between EBHI and uncompensated care costs at safety-net hospitals and clinics.

      To address the three issues, I use evidence on rates of EBHI and other health insurance programs in the March supplement of the Current Population Survey (CPS) combined with information on uncompensated care that is provided to employed guarantors by a major safety-net hospital

and its clinics in southern Nevada.[2] Southern Nevada is a good venue for a study of such employment issues in the construction sector, because a relatively high percentage of the region's total employment is in the industry.

## The Distribution of Uncompensated Health Care Costs

A preponderance of the evidence indicates that lack of health insurance imposes costs on the uninsured through poorer health status than they would otherwise experience (Hadley, 2002). The uninsured tend to delay care, are sicker when they receive treatment, and often obtain medical attention in hospital emergency rooms, which is a particularly inefficient method of delivering most health services. Inadequate access to health insurance may also impose costs associated with financial insecurity related to a lower probability of employment and insufficient asset protection (Stern, 1989).[3]

Besides costs imposed on the uninsured themselves, the community also bears costs resulting from the lack of EBHI. Poorer health outcomes among the uninsured impose negative externalities. For example, in the case of communicable diseases, others are put at greater risk when treatment is delayed or avoided.

Adverse health outcomes that affect households' economic well-being also impose external costs. Poor health status associated with lack of insurance has been related to lower incomes and rates of labor force participation, which increase the risk of impoverishment and reliance on publicly funded social welfare programs. In addition, when a patient receives uncompensated health care, the costs are shifted elsewhere. Such costs may be paid through higher local taxes to subsidize safety-net health care providers, and if the tax subsidies are not forthcoming, a decline in the quantity and quality of health care may be expected. Uncompensated care costs may also be reflected in higher prices for medical care to paying patients and higher insurance premiums.

To the extent that higher prices for health care are incorporated into insurance premiums, employers who offer health insurance face higher costs of doing business. Such costs are distributed among employers, workers, and consumers through a combination of lower profits, lower wages, and/or higher prices for goods and services. The incidence of the relative cost burden depends on the elasticities of supply and demand in the relevant labor and product markets.

**The Construction Industry: Market Failure
and a Low Incidence of EBHI**

A number of institutional and economic problems reduce the probability that workers in the construction industry can gain meaningful access to EBHI. Traditional EBHI programs are built on the assumption of relatively long-term employment relationships between workers and firms. In the construction industry, however, short-term employment relationships are often observed. Construction workers may work for several contractors over the course of any given year (Grob, 1994). Consequently, tenure of employment with a single employer may not last long enough to meet an EBHI program's eligibility requirements, which generally range from three to six months. Construction work is also highly sensitive to seasonal and cyclical factors, which increase the probability of unemployment spells and further decrease the probability of obtaining EBHI (Ghilarducci et al, 1995).

Rules governing eligibility for health insurance coverage also exclude pre-existing conditions. Suppose a construction worker successfully obtains EBHI with a contractor. If a serious health condition arises during the current employment spell, the insurance plan of the next contractor generally would not cover the condition because it would have become pre-existing with the change of employers.

Another problem in the market for insurance is the small size of construction firms (The Center to Protect Workers Rights, 1998, p. 3). Small firms in general find EBHI relatively expensive, because economies of scale in administration cannot be realized and the small group over which the risk is spread. Administration costs for small firms average about 40 percent of total costs, while administrative costs for larger firms (over 10,000 employees) average only 5.5 percent (Helms, Gauthier, and Campion, 1992). In addition, small groups and groups with higher levels of turnover increase the risk for insurers, which leads them to charge higher premiums (Henderson,1999). Consequently, small employers in general, and small construction contractors in particular, are less likely to provide EBHI.

*Collective Bargaining and the Resolution of Market Failures*

Problems in the insurance market that restrict access to EBHI in construction apply mostly to the non-union sector. In the union sector, the problem caused by short-term work is solved by contractual arrangements between the union and employer that specify benefits payments to be paid

into jointly managed health and welfare trusts. The trusts procure health insurance that covers workers in the same trades. Health insurance obtained in this manner is not employer specific, so that changing employers does not automatically result in a loss of health insurance or high COBRA payments. The size of the contractor is also no longer an issue because the risk pool includes workers employed by numerous small employers. Thus economies of scale in administration and lower underwriting charges based on a larger and more stable risk pool are realized. The problem with seasonal and cyclical work is addressed with the relatively modest amount of annual work hours required for eligibility.[4]

*The Role of Prevailing Wage Laws*

Along with collective bargaining in the construction industry, prevailing wage laws play a role in resolving market failure in the provision of EBHI. Union and non-union contractors who work on prevailing wage jobs—all federal government and many state and local government construction projects—must pay wages and benefits at a specified prevailing rate. For a non-union contractor that may not have a benefits program, any additional compensation may be paid as cash or by starting a benefits program. Fringe benefits, including EBHI, are tax advantaged over money wages, which makes them relatively more attractive than cash compensation to meet prevailing wage requirements. Prevailing wage laws also take compensation out of competition in the bidding process, thus protecting EBHI and other benefits offered in the union sector (Petersen, 2000).

In spite of the ability of collective bargaining and prevailing wage laws to resolve market failures, a minority of workers is covered under union contracts and only a small part of construction work is performed for prevailing wages. Hirsh and MacPherson (2002) estimate that approximately 20 percent of construction workers are covered under union contracts. A similar percentage of construction work was performed for prevailing wages (Petersen, 2000).

*Predictions*

A majority of construction work is performed without union coverage and outside prevailing wage laws, thus institutions that resolve market failures in the provision of EBHI do not generally operate in construction labor markets. Therefore, the following predictions appear plausible. (1) Of those reporting employment, workers in the construction industry (along with their dependents) are predicted to be among the least likely to have EBHI.

(2) Because collective bargaining resolves problems with market failures that reduce access to EBHI, unionized workers in the construction sector are more likely to hold EBHI than their non-union counterparts. (3) Because market failures are particularly acute in construction, union coverage is predicted to be a more important predictor of EBHI coverage for workers in construction than for workers in other industries. (4) Restricted access to EBHI in construction is predicted to cause workers in the industry (and their dependents) to receive a disproportionate share of uncompensated health care.

The four predictions are addressed in the following case study of health insurance and uncompensated care provided by a large safety net hospital and associated clinics in southern Nevada. The area, which encompasses most of the Las Vegas standard metropolitan statistical area (SMSA), employs a larger proportion of its workers in the construction industry than average in the U.S. Between 1997 and 1999 approximately 10.1 percent of region's total employment was in the industry, compared to 6.6 percent nationally.[5] Data from the March supplement of the CPS are used to establish the incidence of health insurance coverage by various characteristics, including industry of employment and other dimensions of employment status. Data drawn from administrative records of a local safety-net hospital and associated clinics are used to obtain estimates of uncompensated care costs by various types of care (inpatient, emergency room, and outpatient). The data also contain information on the industry of guarantors' employment.

## Incidence of EBHI: Estimates from the CPS

The CPS contains a number of questions pertaining to health insurance coverage. Although the sampling methodology used to gather CPS data guarantees representativeness at the state level, the number of observations available to estimate insurance coverage for a given state may be quite small. The State Health Access Data Assistance Center (2001) suggests that three years of CPS data at the state level should be aggregated to make the estimates more statistically reliable. Following the Center's suggestion, I use data in the March CPS from the years 1998-2000. The questions on health insurance coverage are retrospective and pertain to the previous year, thus all insurance and employment numbers in this study derived from the CPS pertain to the 1997-99 period.

Sub-samples of the CPS generally are not guaranteed to be representative of the population at the level of a single county or SMSA.

The results reported in Table 9.1 through 94, therefore, are calculated using data on the state of Nevada.[6]

The figures on EBHI coverage for the U.S., Nevada, and Clark County are virtually identical, as demonstrated in Table 9.1 (0.622, 0.629, and 0.614). Insurance coverage from all sources is substantially higher in

**Table 9.1  Proportion with health insurance (1997-99)**

|  | Location | | |
| --- | --- | --- | --- |
| Source of Coverage | United States | Nevada | Clark County* |
| Employment Based | 0.622 | 0.629 | 0.614 |
| Private (Including Employment Based) | 0.708 | 0.712 | 0.690 |
| Government (Medicare, Medicaid, Military) | 0.244 | 0.215 | 0.210 |
| Total Coverage | 0.842 | 0.818 | 0.805 |

Source: Current Population Survey (CPS), March Supplement (1998-2000).
*The CPS does not guarantee representative sampling below the state level.

the U.S., however, because of the relatively smaller proportion of Nevada's residents covered under government-sponsored programs such as Medicaid, Medicare, and military-related insurance. In particular, the Medicaid coverage rate in Nevada is quite low compared to the U.S. in general.[7]

*Ethnicity, Race, Gender, National Origin, and Age*

Focusing on workers in Nevada, health insurance coverage is especially sparse in the Hispanic population. Over 16 percentage points separate the white non-Hispanic and Hispanic populations. Respondents who report Hispanic ethnicity are less likely to be insured through both employment-based and government-sponsored programs. Non-citizens are also particularly likely to be uninsured. Although gender does not appear to be a predictor of insurance coverage, there is a clear trend toward increasing insurance coverage with age among adults.

*Income*

Respondents in families at or near the poverty level are less likely to be covered by health insurance. Members of households with incomes below the poverty cut-off are covered by EBHI at a rate of only 0.203 compared to a 0.795 rate for those with incomes over 300 percent of poverty.

Impoverished families are more likely to be covered under a government-sponsored program than their higher income counterparts, but such coverage leaves them with lower rates of coverage. Nearly 91 percent of families above 300 percent of poverty are covered compared to approximately 62 percent for those below the poverty line (see Table 9.2).

**Table 9.2 Proportion of Nevada's population with health insurance by demographic characteristics**

| Characteristics | Emp.-Based | Private Incl. Emp.-Based | Govt. | Total Cov. |
|---|---|---|---|---|
| White Non-Hispanic | 0.636 | 0.718 | 0.208 | 0.816 |
| Other Race | 0.602 | 0.641 | 0.214 | 0.792 |
| Hispanic | 0.544 | 0.578 | 0.124 | 0.653 |
| Foreign Born | 0.573 | 0.698 | 0.256 | 0.826 |
| Citizen | 0.637 | 0.724 | 0.226 | 0.833 |
| Non-citizen | 0.534 | 0.559 | 0.079 | 0.624 |
| Female | 0.634 | 0.715 | 0.214 | 0.826 |
| Male | 0.625 | 0.708 | 0.216 | 0.809 |
| Age less than 18 | 0.625 | 0.708 | 0.216 | 0.809 |
| Age 18 to 24 | 0.486 | 0.582 | 0.118 | 0.659 |
| Age 25 to 54 | 0.718 | 0.756 | 0.083 | 0.803 |
| Age 55 to 64 | 0.678 | 0.779 | 0.190 | 0.855 |
| Age over 65 | 0.298 | 0.608 | 0.958 | 0.997 |
| Family Income Below Poverty | 0.204 | 0.325 | 0.347 | 0.615 |
| 100 and 200 Percent of Poverty | 0.446 | 0.534 | 0.285 | 0.712 |
| 200 and 300 Percent of Poverty | 0.572 | 0.659 | 0.209 | 0.782 |
| Over 300 Percent of Poverty | 0.795 | 0.867 | 0.156 | 0.910 |

Source: Current Population Survey, March Supplement (1998-2000)

*Industry, Employer Size, and Work Status*

Results in Tables 9.3 support the discussion above on the problem with access to EBHI for construction workers. In fact the coverage rate is the lowest among all industries at 0.599. Although the EBHI coverage rate among workers in trade (0.617) is close to construction's rate, when total insurance coverage is accounted for the gap between construction and trade increases slightly from 0.686 to 0.736).[8] Workers in 'Government' and 'Hotel, Gaming, and Recreation' are the most likely to be covered by EBHI, with proportions of 0.873 and 0.804, respectively. Union density is high among workers in Las Vegas's Hotel Gaming and Recreation sector, which provides the industry's relatively unskilled workers with the economic power to bargain for health insurance. The union also sets a

**Table 9.3   Proportion of Nevada's population with health insurance by work status**

| Characteristics | Emp.-Based | Private Incl. Emp.-Based | Govt. | Total Cov. |
|---|---|---|---|---|
| Construction | 0.599 | 0.666 | 0.087 | 0.686 |
| Trade | 0.617 | 0.681 | 0.118 | 0.736 |
| Hotel, Gaming, Recreation | 0.804 | 0.816 | 0.090 | 0.852 |
| Comm, Trans. Pub. Ut., Manufac. | 0.787 | 0.821 | 0.103 | 0.836 |
| Services | 0.731 | 0.805 | 0.111 | 0.852 |
| Government | 0.873 | 0.887 | 0.191 | 0.927 |
| Agriculture, Mining | 0.625 | 0.672 | 0.040 | 0.712 |
| No Work | 0.386 | 0.583 | 0.532 | 0.842 |
| Small Employer | 0.536 | 0.659 | 0.128 | 0.716 |
| Medium Sized Employer | 0.731 | 0.765 | 0.093 | 0.783 |
| Large Employer | 0.807 | 0.835 | 0.106 | 0.878 |
| Part Time | 0.642 | 0.747 | 0.142 | 0.805 |
| Full Time | 0.760 | 0.795 | 0.073 | 0.820 |

Source: Current Population Survey, March Supplement (1998-2000)

compensation pattern that is generally met by non-union employers (Waddoups, 1999; Waddoups and Eade, 2002).

Another important determinant of EBHI is employer size. As Table 9.3 demonstrates, only about one-half of workers and their family members can rely on small employers for insurance coverage. The figure for large employers is over 80 percent. As mentioned previously, a disproportionate number of construction firms are small. In addition, part-timers are much

less likely to have access to EBHI; however, when government-sponsored programs are considered the figures converge (0.805 for part-time workers and 0.820 for full-time workers).

*Families and EBHI*

Health insurance coverage is often a family matter that not only affects workers, but their spouses and dependent children as well. To capture this effect, I defined a 'Construction Families' category. A construction family is defined as two or more individuals living together who are related by

**Table 9.4  Proportion of Nevada's population with health insurance coverage: working families,\* Hispanic and non-Hispanic ethnicity (1997-1999)**

| Characteristic | Emp.-Based | Private Incl. Emp.-Based | Govt. | Total Cov. |
|---|---|---|---|---|
| Construction Family | 0.586 | 0.643 | 0.094 | 0.681 |
| Other Working Family | 0.716 | 0.765 | 0.139 | 0.835 |
| Hispanic Construction Family | 0.426 | 0.443 | 0.063 | 0.506 |
| Non-Hispanic Construction Family | 0.677 | 0.756 | 0.112 | 0.779 |
| Other Hispanic Working Family | 0.641 | 0.659 | 0.082 | 0.698 |
| Other Non-Hispanic Working Family | 0.732 | 0.788 | 0.152 | 0.864 |

Source: Current Population Survey, March Supplement (1998-2000)
*Families are defined as a group of 2+ people residing together related by birth, marriage or adoption.

marriage, birth, or adoption, and where one or more of the adults in the family are employed in the construction industry.

For comparison, I also defined an 'Other Working Families' category using similar criteria, but with the caveat that in a family with two working adults, one of which worked in construction, the family is considered a construction family. The results in Table 9.4 show that construction families hold EBHI at the rate of 0.586, compared to a rate of 0.716 for other working families The difference in total coverage between the two groups remains almost identical, but the rates increase to 0.681 and 0.835.

A striking difference among construction families emerges when the category is broken down according to Hispanic ethnicity. Well under

one-half (0.426) of individuals in Hispanic construction families hold EBHI compare to a rate of 0.677 for non-Hispanic construction families. When other forms of health insurance are accounted for, a large gap in coverage remains (0.506 and 0.779). Although a similar pattern emerges between Hispanic families and non-Hispanic families working in other industries, the size of the gap is smaller with rates of 0.698 and 0.864.

## Union Coverage and EBHI

**Table 9.5 Probability of health insurance coverage by industry, union status, and insurance type**[a]

|  | Employment Based[b] | | | |
| Industry | Averages | Union | Nonunion | Difference Un-Nonun. |
| --- | --- | --- | --- | --- |
| Construction | 0.691 | 0.889 | 0.612 | 0.277 |
| Trade | 0.718 | 0.817 | 0.711 | 0.106 |
| Comm, Trans, Manuf., Util. | 0.902 | 0.939 | 0.888 | 0.051 |
| Services | 0.779 | 0.876 | 0.769 | 0.106 |
| Government | 0.940 | 0.965 | 0.916 | 0.049 |
|  | Government[c] | | | |
| Construction | 0.021 | 0.010 | 0.026 | -0.016 |
| Trade | 0.064 | 0.042 | 0.065 | -0.023 |
| Comm, Trans, Manuf., Util. | 0.028 | 0.023 | 0.030 | -0.006 |
| Services | 0.054 | 0.045 | 0.055 | -0.010 |
| Government | 0.061 | 0.046 | 0.074 | -0.028 |

Source: Current Population Survey, March Supplement (1998-2000)

Notes: [a] probabilities calculated from logistic regression models, where the independent variables are included controls for union coverage, employment size, managerial occupation, professional/technical occupation, part-time status, family income relative to the federally defined poverty cut-off, citizenship status, age, gender, race ethnicity, and national origin.

[b] Parameter estimate on union variable is statistically significant in all models.

[c] Parameter estimate on union variable is statistically significant in all models but Comm, Trans, Manuf., Util.

Numerous studies have documented the positive correlation between unions and fringe benefits (e.g., Freeman, 1981; Wiatrowski, 1994). The previous discussion, which described the difficulties non-union

construction contractors face in providing EBHI without trade unions to resolve market failures, suggests that union coverage in the construction sector is more likely to be an important factor in predicting the incidence of EBHI than union coverage in other industries.

To test the prediction, I used March CPS data from 1998-2000 as before. However, region-specific or state-specific data would not provide reliable estimates on the union effect because of the dearth in observations. Instead, observations drawn from the entire March CPS data for the years 1998-2000 are used.[9] The probability of EBHI coverage was modeled as a function of a number of variables according to a logistic functional form. The variables included union coverage, along with other factors that might affect the probability of EBHI.[10] The model was estimated separately for five major industry categories as listed in Table 9.5. Numbers in the table are predicted probabilities evaluated at the sample means of all the independent variables except 'union coverage', which was evaluated separately at zero (non-union) and one (union). In addition, I set the values of the two dummy variables 'manager' and 'professional/ technical worker' to zero, which provides a more accurate simulation of the probability of EBHI among production workers.

The results show a striking gap between the probability of EBHI among union and non-union workers in the construction industry compared to the gap in other industries. The findings in Table 9.5 leave little doubt that unions play a vital role in correcting the market failures that lead to a disproportionately small number of construction workers with EBHI coverage. In fact, the union effect on increasing the probability of EBHI coverage for non-managerial, non-professional/technical construction workers is more than 2.5 times larger than the effect in the next closest industry.

The analysis thus far has indicated that workers in the construction industry are less likely to have access to EBHI than workers in other industries, and that union coverage plays a stronger role in providing EBHI to workers in construction than in other industries. In light of the current distribution of EBHI across industries, one would expect that construction workers would receive a disproportionately large share of uncompensated health care. In the next section, I will use administrative data from a local safety-net hospital and its associated clinics to address such an expectation.

### Uncompensated Care and the Employed

There are three majors classifications of health care provided by the hospital and its complement of clinics: inpatient care, which occurs if a patient is admitted to the hospital; emergency room care, which is meant to provide care for particularly acute injuries and illnesses, and outpatient care, which consists of such functions as minor surgical procedures, pharmacy, radiology, primary care clinics, labs, among other types of care. The administrative data include patients who received uncompensated inpatient, emergency room, or outpatient care during fiscal years 1998-2000.

Particularly relevant for the present study is the proportion of the total costs that are attributable to guarantors who report employment. The

**Table 9.6 Expected uncompensated care costs relative to actual uncompensated care costs by industry: inpatient care (FYs 1998-2000)**

| Industry | Percent Employ. | Percent Uncomp. Care | Expected (Exp.) Cost ($) | Actual (Act.) Cost ($) | Diff. ($) | Percent Act.>Exp. |
|---|---|---|---|---|---|---|
| Construction | 10.1 | 19.1 | 1,882,371 | 3,553,790 | -1,671,418 | 88.8 |
| Wholesale, Retail Trade | 20.3 | 24.8 | 3,778,823 | 4,618,868 | -840,044 | 22.2 |
| Hotel, Gaming, Recr. | 17.1 | 17.7 | 3,181,991 | 3,286,167 | -104,176 | 3.3 |
| Comm, Transp., Manuf., Util. | 8.8 | 7.1 | 1,630,295 | 1,315,560 | 314,735 | -19.3 |
| Services (excluding Hotel) | 38.8 | 26.8 | 7,231,707 | 4,982,410 | 2,249,297 | -31.1 |
| Government | 3.5 | 2.7 | 645,820 | 498,820 | 147,000 | -22.8 |
| Agriculture, Mining | 1.4 | 1.9 | 267,430 | 362,823 | -95,393 | 35.7 |
| Total Acct. Balances | 45,289,315 | | 18,618,437 | 18,618,437 | | |
| Cost-to-Charge Ratio* | 0.411 | | | | | |
| Total Cost | 18,618,437 | | | | | |

Sources: Current Population Survey, March Supplement (1998-2000) and hospital administrative data.
*Industry specific cost figures are adjusted by the cost-to-charge ratio.

administrative data contain the guarantors' employers, which I allocated into broad industry categories largely consistent with the industry codes used in the CPS.[11] The industrial categories were 'Construction',

'Wholesale and Retail Trade', 'Hotel, Gaming, and Recreation' 'Communication, Transportation, Manufacturing, and Public Utilities', 'Services (excluding Hotel)', and 'Agriculture and Mining'. If a reported employer could not be classified, the observation was excluded, which occurred in less than two percent of the cases. The same industrial categories were constructed using March CPS data. Casual inspection of Table 9.6 reveals that employment in 'Construction' and 'Hotel, Gaming, and Recreation' in the region are notably high compared to most locations, whereas employment in the 'Communication, Transportation, Manufacturing, and Public Utilities' category is quite low.

## *The Distribution of Uncompensated Care by Industry*

**Table 9.7 Expected uncompensated care costs relative to actual uncompensated care costs by industry: emergency room care (FYs 1998-2000)**

| Industry | Percent Employ. | Percent Uncomp. Care | Expected (Exp.) Cost ($) | Actual (Act.) Cost ($) | Diff. ($) | Percent Act.>Exp. |
|---|---|---|---|---|---|---|
| Construction | 10.1 | 14.1 | 1,184,672 | 1,654,862 | -470,190 | 39.7 |
| Wholesale, Retail Trade | 20.3 | 29.2 | 2,378,205 | 3,419,596 | -1,041,392 | 43.8 |
| Hotel, Gaming, Recr. | 17.1 | 19.1 | 2,002,588 | 2,233,710 | -231,122 | 11.5 |
| Comm, Transp., Manuf., Util. | 8.8 | 6.7 | 1,026,027 | 786,972 | 239,055 | -23.3 |
| Services (excluding Hotel) | 38.8 | 26.5 | 4,551,279 | 3,105,073 | 1,446,206 | -31.8 |
| Government | 3.5 | 2.4 | 406,447 | 282,372 | 124,075 | -30.5 |
| Agriculture, Mining | 1.4 | 2.0 | 168,307 | 234,940 | -66,633 | 39.6 |
| Total Acct. Balances | 67,542,312 | | 11,717,524 | 11,717,524 | | |
| Proportion Employed | 0.422 | | | | | |
| Cost-to-Charge Ratio* | 0.411 | | | | | |
| Total Cost | 11,717,524 | | | | | |

Sources: Current Population Survey, March Supplement (1998-2000) and hospital administrative data.
*Industry specific cost figures are adjusted by the cost-to-charge ratio.

About one-third of uncompensated care goes to patients and/or guarantors who report employment.[12] A distribution of uncompensated care according to dollar costs by industry is compared to the distribution of employment by industry (as calculated using the March CPS data). If the uncompensated care is distributed among industries according to proportions of each industry's employment share, then approximately 10.1 percent of uncompensated care would be expected to go to workers in 'Construction' 20.3 percent to workers in 'Wholesale and Retail Trade', and so on. In contrast to the 10.1 percent employment share, the construction sector accounts for 19.1 percent of the uncompensated inpatient care, which represents a substantial rate of over-representation relative to other industries. In the case of inpatient care, the construction industry is a source of disproportionately high uncompensated care costs,

**Table 9.8 Expected uncompensated care costs relative to actual uncompensated care costs by industry: outpatient care (FYs 1998-2000)**

| Industry | Percent Employ. | Percent Uncomp. Care | Expected (Exp.) Cost. ($) | Actual (Act.) Cost ($) | Diff. ($) | Percent Act.>Exp. |
|---|---|---|---|---|---|---|
| Construction | 10.1 | 16.1 | 693,091 | 1,105,715 | -412,624 | 59.5 |
| Wholesale, Retail Trade | 20.3 | 21.0 | 1,391,366 | 1,440,377 | -49,011 | 3.5 |
| Hotel, Gaming, Recr. | 17.1 | 22.2 | 1,171,612 | 1,521,889 | -350,277 | 29.9 |
| Comm, Transp., Manuf., Util. | 8.8 | 6.1 | 600,276 | 419,250 | 181,026 | -30.2 |
| Services (excluding Hotel) | 38.8 | 29.6 | 2,662,721 | 2,025,980 | 636,741 | -23.9 |
| Government | 3.5 | 4.5 | 237,791 | 308,225 | -70,433 | 29.6 |
| Agriculture, Mining | 1.4 | 0.5 | 98,468 | 33,891 | 64,577 | -65.6 |
| Total Acct. Balances | 32,955,666 | | 6,855,326 | 6,855,326 | | |
| Proportion Employed | 0.506 | | | | | |
| Cost-to-Charge Ratio* | 0.411 | | | | | |
| Total Cost | 6,855,326 | | | | | |

Sources: Current Population Survey, March Supplement (1998-2000) and hospital administrative data.

*Industry specific cost figures are adjusted by the cost-to-charge ratio.

which are likely borne by the industry's workers, the hospitals, and the community. Over-representation in costs by 'Construction' is also evident in emergency room and outpatient care (see Tables 9.7 and 9.8). 'Wholesale and Retail Trades' and 'Hotel, Gaming, and Recreation' also show relative over-representation in uncompensated care costs.

At this point it is informative to assess the distribution of EBHI according to industry by reviewing Table 9.3 in order to make a connection between inter-industry differences in insurance coverage rates and the incidence of uncompensated care. Recall that Table 9.3 indicate that 'Construction and 'Wholesale and Retail Trade' are characterized by the lowest rates of both EBHI and total insurance coverage. Not coincidentally, Tables 9.6-9.8 also indicate that the two industries have the highest rates of uncompensated care relative to their employment shares.

**Table 9.9  Expected (Exp.) uncompensated care costs relative to actual (Act.): costs: inpatient, emergency room, and outpatient (FYs 1998-2000)**

| Industry | Percent Employ. | (Exp.) Cost ($) | (Act.) Cost ($) | Diff. ($) | Percent Act.>Exp. |
|---|---|---|---|---|---|
| Construction | 10.1 | 3,760,134 | 6,314,366 | -2,554,233 | 67.9 |
| Wholesale, Retail Trade | 20.3 | 7,548,394 | 9,478,841 | -1,930,447 | 25.6 |
| Hotel, Gaming, Recr. | 17.1 | 6,356,190 | 7,041,765 | -685,575 | 10.8 |
| Comm, Transp., Manuf., Util. | 8.8 | 3,256,598 | 2,521,782 | 734,816 | -22.6 |
| Services (excluding Hotel) | 38.8 | 14,445,707 | 10,113,463 | 4,332,244 | -30.0 |
| Government | 3.5 | 1,290,059 | 1,089,416 | 200,642 | -15.6 |
| Agriculture, Mining | 1.4 | 534,205 | 631,653 | -97,448 | 18.2 |
| Total Costs | | 37,191,287 | 37,191,287 | | |

Source: hospital administrative data and Current Population Survey, March Supplement, 1998-2000.
*Cost Figures are adjusted to reflect the cost-to-charge ratio.

In order to establish the dollar value of uncompensated care by industry, the account balances of employed guarantors are summed by industry. For comparison, the expected sums—given that uncompensated care was distributed proportionally across industries—are also reported. Finally, the percent by which *observed* sums exceed (or lag) *expected* sums

is calculated for each industry. These results are also located in Tables 9.6-9.8. For inpatients, observed uncompensated care costs out-stripped expected costs by 88.8 percent for 'Construction'. Compare 88.8 percent for 'Construction' to 22.2 percent for 'Wholesale and Retail Trade' and 3.3 percent for 'Hotel, Gaming, and Recreation'. Workers (and their dependents) connected with the construction sector are especially over-represented among inpatients. Over the three year period the observed costs of uncompensated care amounted to nearly $3.6 million, which is nearly $1.7 million more than would have been expected if 'Construction' had the same rate of uncompensated care as its share of employment. Although the same pattern is evident for 'Wholesale and Retail Trade' and 'Agriculture and Mining', the differences in observed and expected sums are much smaller (22.2 percent and 35.7 percent).

Uncompensated emergency room and outpatient care costs connected to the construction sector do not stand out as noticeably as inpatient costs when compared to costs associated with workers in 'Wholesale and Retail Trade' and 'Hotel, Gaming, and Recreation'. In fact, uncompensated care in the emergency room is disproportionately attributable to recipients connected with 'Wholesale and Retail Trade;' however, 'Wholesale and Retail Trade' and 'Construction' both exhibit high rates of over-representation relative to other industries. For uncompensated outpatient care, as with inpatient care, the construction industry outpaces the others relative to their employment shares. Table 9.9 contains the aggregated findings from which to arrive at the total magnitude by which observed and expected industry specific uncompensated care figures deviate from each other. Observed uncompensated care figures attributed to construction are 67.9 percent higher than expected figures. The corresponding percentages for 'Wholesale and Retail Trade' and 'Hotel, Gaming, and Recreation' are 25.6 and 10.8 percent. The other industries remain under-represented in uncompensated care. In total, over a three-year period with no adjustment for inflation, the extra-normal costs of uncompensated care attributable to the patients connected to construction amounted to approximately $2.6 million. The analogous figure for 'Wholesale and Retail Trade' was somewhat lower at $1.9 million. All uncompensated care costs attributable to employed construction workers over the period amounted to $6.3 million, and the total costs of uncompensated care to the employed and their dependents was over $37 million for the years 1998-2000.


**Conclusion**

The connection between the lack of EBHI and disproportionate uncompensated care costs is clear when insurance coverage rates and uncompensated care distributions by industry are examined together. In particular the low incidence of EBHI among workers in the construction industry appears to result in a disproportionately high incidence of uncompensated care. The analysis also suggests that higher levels of EBHI among workers in construction, as is observed in the unionized segment, would likely reduce over-representation of construction workers in the uncompensated care category.

It is clear that a large share of uncompensated care is attributable to the construction industry relative to its size. Economic logic dictates that such costs must be subsidized from some other source. There is little doubt that construction workers and their families suffer from more precarious financial positions (not to mention poorer health) than would be the case with greater access to EBHI. And in all likelihood, local taxes supporting the hospital are higher than they would be otherwise. Furthermore, to the extent that cross-subsidies from paying patients cover uncompensated care costs, prices of health care and therefore insurance prices are higher than they would be without the high levels of uncompensated care.

If private sector employers that do offer insurance must pay higher prices to obtain it, then they must reduce money wages, be satisfied with lower earnings, and/or charge higher prices for their products or services. Public sector employers face similar choices in face of higher health insurance prices, wages must fall, or taxes must be increased to cover the costs of more expensive health insurance. If the public is not willing to pay higher taxes, fewer and/or lower quality publicly provided goods and services are to be expected.

On the other hand, suppose that lower compensation costs (lower because they do not include EBHI) are passed onto the consumers of construction services, then perhaps some consumers may enjoy lower quality adjusted prices and rents than they would if compensation reflected access to health insurance for construction workers. In effect some consumers may be trading, say, lower housing prices for higher taxes, lower money wages, and higher prices of other goods. However, if owners of construction projects (i.e. developers) have some degree of market power, they may be able to retain most of the benefits from the low rates of compensation, which suggests that lower costs originating from lack of EBHI in compensation packages will not be fully reflected in housing prices or in the prices of other construction products and services.

The above examples of how uncompensated care costs may be shifted from one economic entity to another certainly does not exhaust all possibilities for how cost shifting may occur, but it does suggest a complex system of economic interactions in which some parties shift costs to others. It appears that in this web of economic interactions uninsured workers and their dependents are among the disadvantaged, while developers and construction contractors are likely to be among the beneficiaries. Uninsured workers bear costs associated with restricted access to health insurance, including poorer health and more precarious financial circumstances.

The safety-net hospitals and clinics also appear to suffer substantial financial risk from costs of providing uncompensated care. The political climate in many locations makes raising taxes to cover costs associated with uncompensated care quite difficult. At the same time changing health care markets have reduced hospitals' ability to cross-subsidize non-paying patients by raising prices for those who pay. Thus the safety-net hospital and its clinics may not be able to pass uncompensated care costs along to taxpayers or paying patients.

**Notes**

[1] Employer sponsored health insurance is defined broadly to encompass any group health insurance connected to employment, which includes insurance administered by joint union-management trusts.

[2] Guarantors are those responsible for payment. The patient may be either the guarantor or the guarantor's dependent.

[3] A report on asset development and protection issued by the Corporation for Enterprise Development (2002) suggests that health insurance is one of the key factors in protecting a household's assets.

[4] Petersen (2000) discusses in greater detail how construction trades unions solve market failure problems.

[5] The percentages are calculated from data in the March Supplement of the 1998-2000 CPS. Only those that reported employment were included in the sub-sample used to arrive at these numbers. Respondents in the sub-sample reported on the industry of their longest held job in the previous year.

[6] Clark County encompasses Las Vegas and all the major population centers in southern Nevada from Arizona on the east to California on the South. Because approximately two-thirds of the state's population resides in Clark County, similar figures are generally observed at the state and county levels. Results from Clark County are available up request from the author.

[7] Based on the author's analysis of March CPS data.

[8] The coverage rate for workers in the Agriculture/Mining sector is also quite low, however, the aggregation of agricultural workers and mining workers is somewhat suspect, given that mine workers are substantially more likely to hold insurance than agricultural workers. For purposes of uniformity, the aggregation scheme of the state has been adopted in this instance.

[9] Only respondents in the out-going rotation group (ORG) during March answer questions on union membership or coverage, thus other observations were excluded.

[10] I estimated another model with the dependent variable defined as the probability of government coverage as a function of the same vector of independent variables, the results of which are also displayed in Table 9.5.

[11] In some cases the industries were aggregated or disaggregated according to local employment patterns (i.e., 'Hotel, Gaming, and Recreation,' 'Agriculture and Mining,' 'Services (excluding hotel)').

[12] Based on the author's analysis of the hospital administrative data. Uncompensated care among the employed is attributable to 'self-pay' patients (i.e. patients without health insurance) whose bills were left unpaid. In some cases partial payments were made, and balances were adjusted downward by the hospital, but balances still remained. In others, partial payments were made and the remaining charges were forgiven. Such accounts did not, however, enter into the uncompensated care calculations. In no instances among these accounts were partial payments made through insurance that resulted in an unpaid balance. Such occurrences were recorded in the 'compensated care' accounts, but they accounted for only 2.3 percent of total charges to paying inpatients who reported employment during the 1998-2000 period.

## References

Corporation for Enterprise Development (2002), 'State Asset Development Report Card', http://sadrc.cfed.org/index.php, 17 October.

Freeman, R.B. (1981), 'The Effect of Unionism of Fringe Benefits', *Industrial and Labor Relations Review*, vol. 34, pp. 489-509.

Freeman, R.B. and J. Medoff. (1984), *What Do Unions Do?* Basic Books, New York, NY.

Ghilarducci, T. G. Mangum, J.S. Petersen, and P. Philips (1995), *Portable Pensions for Causal Labor Markets: Lessons from the Operating Engineers Central Pension Fund*, Quorum Books, Westport , CT.

Grob, H. (1994), 'Developments in Collective Bargaining in Construction in the 1980s and 1990s', in P. Voos (ed.) *Contemporary Collective Bargaining in the Private Sector*, Industrial Relations Research Association, Madison, WI, pp. 411-445.

Hadley, J. (2002), *Sicker and Poorer: The Consequences of Being Uninsured*, report prepared for the Kaiser Commission on Medicaid and the Uninsured, Urban Institute, Washington, D.C.

Helms, D.W., A.K. Gauthier, and D.M. Campion (1992), 'Mending the Flaws in the Small-Group Market*', Health Affairs*, vol. 11, pp. 7-27.

Henderson, J.W. (1999), *Health Economics and Policy*, Southwestern College Publishing, Cincinatti, OH.

Hirsch, B. and D. A. MacPherson (2002), 'Unionstats.com: Union Coverage and Membership Database', www.trinity.edu/bhirsch, 16 October.

Petersen, J. (2000), 'Health Care and Pension Benefits for Construction Workers: The Role of Prevailing Wage Laws', *Industrial Relations*, vol. 39, pp. 246-64.

State Health Access Data Assistance Center (2001), 'The Current Population Survey and State Health Insurance Estimates', *Issue Briefs,* March, Issue 1.

Stern. S. (1989), 'Measuring the Effect of Disability on Labor Force Participation', *Journal of Human Resources*, vol. 24, pp. 361-93.

The Center to Protect Workers' Rights (1998), *The Construction Chart Book: The U.S. Construction Industry and its Workers*, The Center to Protect Workers Rights, Washington, D.C.

Waddoups, C. J. (1999), 'Union Wage Effects in Nevada's Hotel and Casino Industries', *Industrial Relations*, vol. 38, pp. 577-83.

Waddoups, C. J. and V. H. Eade (2002), 'Hotels and Casinos: Collective Bargaining During a Decade of Expansion', In Clark, P.F., Delaney, J.T., and Frost, A.C. (eds.), *Collective Bargaining in the Private Sector,* Industrial Relations Research Association, Champaign, IL, pp. 137-77.