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I. STATE REPORT

Will Employer Mandates Really Work? Another Look At Hawaii

by Andrew W. Dick

Over the past several years, as the push for reform of our health care system has grown, a great deal of attention has been paid to the Hawaiian health care system as a potential model for national reform. In particular, the Hawaiian Prepaid Health Care Act of 1974 (Prepaid), mandating employer provision of health insurance benefits, has been used as evidence that similar mandates may in fact greatly enhance access to health care services in the rest of the country. Claims have been made that Prepaid greatly reduced the number of uninsured in Hawaii, is at least in part responsible for lower costs and better health outcomes in Hawaii, and did not result in wage reductions or employment contraction. Unfortunately, very little systematic effort has been made to assess the validity of these claims. Rather, they have been accepted in the current debate and repeatedly cited as evidence that employer mandates can significantly increase access to health care services with few negative consequences.

A recent paper by John Lewin and Peter Sybinsky and another by Deane Neubauer both assert that mandating employer provision of health insurance benefits can be an effective tool in achieving universal access.¹ Lewin and Sybinsky provide data that imply that Prepaid reduced the number of uninsured by about 66 percent. Their numbers indicate that the resulting overall state rate

of uninsured persons was reduced to approximately 3.9 percent from about 11.7 percent.² They also claim that Prepaid had few negative effects in Hawaii. If such successes can actually be achieved, they would represent a significant reduction in the number of uninsured Americans.

My analyses, however, have found otherwise? The consistent pattern that emerges from careful consideration of available data is that the Hawaiian mandate did relatively little in extending insurance to the uninsured. While Hawaii does have high rates of coverage compared with other states, this is due largely to the characteristics of Hawaii's population. Assuming that the experience in Hawaii is typical of other states, I also have found that similar mandates elsewhere would produce only a small reduction in the number of uninsured persons.

There are two notable explanations for Prepaid's poor performance. First, the law simply does not target a large portion of the uninsured. It contains important categorical exemptions, such as part-time workers and seasonal agricultural workers, that eliminate many employees from the mandate. In addition, it does not require coverage of employees' dependents. Thus, the law severely limits the uninsured population that falls within its scope. Second, many persons who categorically qualify for coverage under the law remain without insurance coverage, indicating that there may be a significant problem of noncompliance with the mandate. As a result, mandates such as Prepaid are poor tools for achieving universal access. Because of the law's small impact on insurance coverage, Hawaii's experience sheds little light on other vital issues surrounding employer mandates such as wage effects, employment effects, and cost containment.

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Data

One of the main reasons for the lack of focus on systematically evaluating Hawaii's employer mandate stems from the lack of data. The data requirements for an evaluation are substantial. Ideally, an analysis would include random samples of the Hawaiian population both before and after 1 January 1975, the date that Prepaid was implemented. Such data simply do not exist. As an alternative, I have analyzed aggregate insurance coverage data over the period of implementation and supplemented these analyses with survey data from the 1980s. My strategy is threefold: First, I estimate the change in insurance coverage rates attributable to Prepaid; second, I analyze the performance of the Hawaiian system after implementation of Prepaid relative to other states; and third, I estimate the impact similar mandates would have in other states, assuming that Hawaii's experience is typical.

Two large insurers in Hawaii, the Hawaii Medical Services Association (HMSA) and the Kaiser Foundation Health Plan, have captured about 75 percent of Hawaii's health insurance market since the late 1960s. Although it is not feasible to collect data on the number of policyholders from all health insurance companies in the early 1970s, data from Kaiser and the HMSA do allow investigation of the vast majority of the market. Both provided data covering the period 1970 through 1985, which contained information on the total numbers of subscribers and dependents for individual and group policies. These data make it possible to investigate changes in total coverage and in the composition of insurance coverage!

The survey data I use come from the Current Population Survey (CPS), a nationally representative survey that contains responses for about 160,000 persons each year and includes data covering many demographic and workplace characteristics. The CPS does not distinguish observations from Hawaii prior to 1977, nor does it include health insurance coverage information prior to 1980. Therefore, the CPS can only be used to assess the status of Hawaiians during the 1980s. This does, however, provide im-

portant information regarding the characteristics of insurance coverage in Hawaii after the implementation of Prepaid as well as the relative performance of the Hawaiian system compared with other states. It also provides an opportunity to estimate the effect similar laws would have in other states.

The CPS data contain enough information to control for population characteristics, allowing state-by-state comparisons of coverage rates for similar populations. I selected six states, in addition to Hawaii, for analysis—California, Florida, Massachusetts, Missouri, New York, and Texas—either because they have considered some form of employer mandate legislation or because they are large and together span a variety of population characteristics.

There are two important strengths of the CPS data for this analysis. First, they allow for comparisons across states. Second, they are the data from which many of the national estimates of the number of uninsured persons are made. As a result, my estimates of the number of Hawaiians without health insurance will be methodologically consistent with national and state-level estimates of the number of uninsured persons.

Impact On Number Of Uninsured

Analysis of aggregate insurance coverage data suggests that Prepaid had a small impact on the number of uninsured Hawaiians. Exhibit 1 shows the total number of persons insured by Kaiser and the HMSA as a percentage of Hawaii's total population from 1970 through 1985. The graph shows a steady rate of coverage by Kaiser and the HMSA prior to 1974 of about 63 percent of the population, an increase in coverage in both 1974 and 1975, and a steady rate of coverage following 1975 of about 66 percent of the population.

To determine Prepaid's impact on the number of uninsured persons, we need to consider several factors. First, the figures provided by Kaiser and the HMSA are useful only in estimating the percentage change in the number of privately insured persons. To determine the absolute change in these

Exhibit 1**Extent Of Kaiser And Hawaii Medical Services Association Private Insurance Coverage As A Percentage Of Total Population, 1970-1985****Percent of population**

80

60

40

20

1970	1972	1974	1976	1978	1980	1982	1984	1985
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Source: Data from Kaiser Foundation Health Plan; Hawaii Medical Services Association; and *The Slate of Hawaii Data Book* (Honolulu: State of Hawaii, Department of Planning and Economic Development, various years.)

numbers, I calibrated these data to levels revealed by the CPS in the 1980s. Second, the data must be adjusted for rates of insurance coverage by government programs. Third, other explanations for variations in insurance coverage must be considered, such as changes in unemployment rates. Having adjusted for these factors, I found that the reduction in the number of uninsured persons after implementation of Prepaid is 8 percent.⁵ Other factors for which I have not controlled could be causing this reduction. For example, an increase in labor union contracts or a change in the nature of those contracts over the period of implementation might have produced some of this reduction in the number of uninsured. To attribute the reduction to Prepaid, all else must be assumed to be constant.

My results suggest a slightly larger effect than that estimated by HMSA President Marvin Hall. An 8 percent reduction in the number of uninsured implies that roughly 8,000 additional persons received insurance coverage. Hall estimates that there was an increase of only about 5,000 insured workers after implementation of Prepaid.⁶

1987 Hawaii had a higher rate of insurance coverage than did several other states. While Hawaii's uninsured rate of 11.1 percent was slightly worse than Massachusetts's rate of 10.1 percent, it was better than the rates in California (18.8 percent), Florida (19.3 percent), Missouri (13.6 percent), New York (13.9 percent), and Texas (23 percent). This estimate of Hawaii's uninsured rate, however, is far greater than claims made by Lewin and Sybinsky (3.9 percent immediately after implementation and 5 percent in 1987).⁷

Hawaii's superior rate of insurance coverage may have been the result of the state's population characteristics. In particular, a large proportion of Hawaii's population is Asian, and Asians tend to have high rates of health insurance. A simple comparison of means across states may hide important differences that result from different population mixes. Therefore, using multivariate analysis, I estimate rates of insurance coverage in Hawaii taking into account individual characteristics such as age, gender, race, and place of work. I then simulate the rates of insurance coverage that would have existed in Hawaii if its population had the same characteristics as populations in other states? The results, depicted in Exhibit 2, indicate that if this were true, then Hawaii's statewide rate of insurance coverage would have been similar to the national average of

Hawaii's Performance Relative To Other States

Comparison of statewide rates of insurance coverage indicate that from 1985 until about 86 percent (about 14 percent with no

Exhibit 2
Simulated Percentages Of Persons Without Insurance Coverage In Hawaii,
Based On Data From Six Comparison States. 1985-1987

Population characteristics from	Percent in Hawaii without insurance coverage
California	13.19%
Florida	14.00
Massachusetts	12.34
Missouri	13.53
New York	13.50
Texas	15.00
Hawaii	11.14

Source: Author's tabulations from Current Population Surveys, 1986-1988.

coverage). Populations drawn from each of the six states result in lower rates of coverage than the rate found using Hawaii's population. The results suggest that almost all of Hawaii's superior performance can be accounted for by its population characteristics. These findings further call into question the usefulness of mandates such as Prepaid for achieving universal access to health care.

The Impact Similar Mandates Would Have In Other States

Assuming that the experience of Hawaii is representative of what would happen elsewhere, the CPS data provide an opportunity to assess the impact that mandates similar to Prepaid would have in other states. Again, I estimate rates of insurance coverage in Hawaii taking into account individual characteristics, but this time using data limited to those categorically eligible for coverage under the mandate. I then identify persons in the six other states who would be categorically eligible under Prepaid and, making use of the estimates from Hawaii, simulate rates of insurance coverage. By reconstructing the populations in these states, I estimate state-wide rates of insurance coverage under such laws (Exhibit 3, Scenario A).

To quantify the full-compliance potential reduction in the number of uninsured for mandates similar to Prepaid, and in an effort to determine the importance of the mandate

characteristics, I calculate several scenarios (Exhibit 3). Using CPS data from each of the six states, I calculate the full-compliance potential of laws similar to Prepaid by identifying those persons without insurance coverage who would be categorically eligible for coverage under the law (Scenario B). I assume that they all would receive health insurance coverage as a result of the mandate, and I calculate the changes in rates of insurance coverage that would result. I then determine the importance of the categorical exemptions by identifying employed individuals excluded from the mandate and again calculating the changes in rates of insurance coverage that would result (Scenario C). Next, I add dependent coverage to Prepaid but keep the categorical exemptions and repeat the calculations (Scenario D). Finally, I combine the elimination of categorical exemptions and the extension of coverage to employee dependents (Scenario E). Each of Scenarios B through E assumes accurate identification of those persons who are eligible for coverage, full compliance with the law, and no economic effects such as employment contraction or substitution of ineligible employees. As a result, the scenarios represent unrealistically optimistic estimates of reduction in the numbers of uninsured persons.

Scenario A shows that if the experience in Hawaii is representative of what would happen in these six other states, we could expect the average reduction in the number

Exhibit 3
Predicted Health Insurance Coverage In Hawaii, Based On Data From Six
Comparison States, 1985-1987

State	Scenario	Percent reduction in the uninsured	Predicted percent without insurance coverage
California	Current rates	-	18.82%
	Scenario A	13.84%	16.22
	Scenario B	28.44	13.47
	Scenario C	52.60	8.92
	Scenario D	47.09	9.96
	Scenario E	70.84	5.49
Florida	Current rates	-	19.34
	Scenario A	12.20	16.98
	Scenario B	27.09	14.10
	Scenario C	51.91	9.30
	Scenario D	46.31	10.38
	Scenario E	71.19	5.57
Massachusetts	Current rates ⁵	-	10.12
	Scenario A	1.55	9.96
	Scenario B	28.92	7.19
	Scenario C	54.25	4.63
	Scenario D	48.11	5.25
	Scenario E	68.46	3.19
Missouri	Current rates	-	13.59
	Scenario A	5.49	12.84
	Scenario B	25.17	10.17
	Scenario C	53.27	6.35
	Scenario D	48.70	6.97
	Scenario E	71.54	3.87
New York	Current rates	-	13.87
	Scenario A	7.93	12.77
	Scenario B	25.80	10.29
	Scenario C	47.87	7.23
	Scenario D	46.17	7.47
	Scenario E	68.15	4.42
Texas	Current rates	-	22.98
	Scenario A	9.48	20.80
	Scenario B	22.49	17.81
	Scenario C	46.52	12.29
	Scenario D	45.57	12.51
	Scenario E	75.57	5.61
Hawaii	Current rates	-	11.14
	Scenario A	0.00	11.14
	Scenario B	18.22	9.11
	Scenario C	42.28	6.43
	Scenario D	40.28	6.65
	Scenario E	70.45	3.29

Source: Author's tabulations from Current Population Surveys, 1986-1988.

Note: Scenario A: Hawaiian Prepaid Health Care Act (HPHCA) simulation. Scenario B: HPHCA-maximum. Scenario C: Drop exemptions-maximum. Scenario D: Add dependents and keep exemptions-maximum. Scenario E: Drop exemptions and add dependents-maximum.

of uninsured persons across states to be no more than 10 percent. Scenario B shows that the potential reduction in the number of uninsured persons resulting from mandates similar to Prepaid is 22-30 percent. Still modest, this represents two to three times the impact found in Scenario A and gives rise to concerns about compliance.¹⁰ Scenario C indicates that, by dropping categorical exemptions, mandates could reduce the number of uninsured by up to 54 percent. Scenario D indicates that, by mandating coverage for dependents of qualified employees, nearly half of the uninsured might receive coverage. The combined effects of Scenarios C and D (Scenario E) could result in up to a 76 percent reduction in the number of uninsured persons. Keep in mind, however, that the estimated impact of laws such as Prepaid (Scenario A) is far below their potential impact (Scenario B). The causes of this are likely to be exacerbated in Scenarios C through E. Scenarios C through E do show, however, that the characteristics of mandates are important.

What Can We Learn From Hawaii?

What can we learn about employer mandates from Hawaii's experience? Two points are clear. First, mandates must be more extensive than Prepaid if they are to be effective tools for achieving universal access to care. Because Prepaid contains important categorical exemptions and excludes employees' dependents, it cannot have a broad impact on the number of uninsured persons. Furthermore, because of the limitations of Hawaii's mandate and its modest impact on rates of insurance coverage, inferences regarding the effects of broad mandates on rates of insurance coverage, wages, employment, and health care costs simply cannot be drawn from the experience of Hawaii.

Second, Hawaii's experience causes significant concern regarding the enforcement of employer mandates, a problem that is magnified for broad mandates. Certainly, strict penalties and active enforcement are likely to result in higher rates of compliance than those found in Hawaii, but again, the

costs in terms of wages, employment, and economic growth remain a mystery.

If we learn nothing else from Hawaii, it is clear that limited mandates are unlikely to be effective tools for significantly reducing the number of uninsured Americans. Unfortunately, the experience of Hawaii sheds little light on other vital issues surrounding mandated employer provision of health insurance benefits.

NOTES

1. J.C. Lewin and P.A. Sybinsky, "Hawaii's Employer Mandate and Its Contribution to Universal Access," *Journal of the American Medical Association* (19 May 1993): 2536-2543; and D. Neubauer, "Hawaii: A Pioneer in Health System Reform," *Health Affairs* (Summer 1993): 31-39.
2. The stark differences in methodology used to create these estimates call into question any inferences drawn regarding the effect of Prepaid. Stefan A. Riesenfeld estimated that 11.7 percent of Hawaiians had no hospital coverage, and 17.2 percent had no physician coverage. To calculate his estimates, he used aggregate data and made questionable adjustments for known inaccuracies in the data. For details, see S.A. Riesenfeld, *Prepaid Health Care in Hawaii*, Report 2 (Honolulu: Legislative Reference Bureau, State of Hawaii, 1971). Hawaii's Department of Health estimated that 3.9 percent of Hawaiian families had no health insurance after implementation of Prepaid. They collected the data they used by conducting a survey in which the unit of study was the family. For details, see A. Nakamura et al., *Research and Statistics Report: Cost of Medical Care* (Honolulu: Department of Health, State of Hawaii, 1981).
3. A.W. Dick, "The Impact of Mandated Employer Provision of Health Insurance Benefits: Evidence from Hawaii" (Unpublished dissertation, Stanford University, 1993).
4. There are two potential drawbacks in analyzing the aggregate data from Kaiser and the HMSA. First, it is possible that the remaining commercial carriers substantially increased (decreased) their market share as a result of Prepaid's implementation. If so, analysis using only the HMSA and Kaiser data would underestimate (overestimate) the total insurance coverage change. While no reliable data are available regarding the number of individuals covered by these carriers, data on total revenues (premiums) are available. Analysis of market shares indicates that, if anything, the remaining commercial carriers decreased their market share. There is no evidence that these carriers would account for a hidden increase in insurance coverage.

The second drawback is that there may be a great deal of duplication in coverage. Thus the total

number of persons actually covered may be significantly inflated. Instances in which duplication can occur include multiple jobholders whose employers have not filed for exemptions; children covered as dependents on the plans of both working parents; and persons covered both by their employer and as a dependent by their spouse's employer. In analysis of the aggregate data from Kaiser and the HMSA, duplication will present a problem in drawing inferences on changes in the percentage of the total population covered only if the amount of duplication changes. If duplication were significantly reduced immediately after implementation of Prepaid, this incipient reduction in the total number of persons covered would conceal the real growth caused by the law. Kaiser and the HMSA aggressively pursued limitation of duplicate coverage both before and after implementation of Prepaid. There is no evidence to indicate that duplication fell significantly after Prepaid's implementation.

5. For details of estimation, see Dick, "The Impact of Mandated Employer Provision of Health Insurance Benefits." The corresponding total rates of insurance coverage are 88.7 percent and 89.6 percent before and after Prepaid, respectively. Although Prepaid became effective 1 January 1975, it was passed into law in mid-1974. Thus, as a result of the law, some employers may have begun providing coverage during 1974. Crediting all changes in both 1974 and 1975 to Prepaid. I find that at most Prepaid could account for about a 16 percent reduction in the number of uninsured persons, still a far cry from the 66 percent reduction implied by Lewin and Sybinsky.
6. Neubauer, "Hawaii: A Pioneer in Health System Reform." Lewin and Sybinsky cite work by J. Van Steenwjk that claims that 46,000 additional persons received health insurance coverage directly after passage of Prepaid. Van Steenwjk used aggregate data to estimate the number of persons with coverage before and after implementation of Prepaid. To do so, he made numerous questionable assumptions to correct for a variety of significant data problems. The 46,000 figure is the difference in the estimated levels. For details, see J. Van Steenwjk and R. Fink. *Evaluation of Impact of Hawaii's Mandatory Health Insurance Law: A Report on the Prepaid Health Care Act* (Washington: U.S. Department of Health, Education, and Welfare, 1978).
7. My estimates are obtained from the same data that often are used to create national and state-level estimates of the uninsured. The stark difference between my estimate and those of Lewin and Sybinsky could be explained by either sampling or nonsampling error. Sampling error in the CPS data probably would artificially inflate the rates of insurance coverage, strengthening my results. A potentially serious nonresponse bias could affect the Hawaii Department of Health (HDOH) survey if nonresponse is highly correlated with noncompliance. It is also possible that a nonsampling bias could contaminate the HDCH survey if persons are unwilling to inform the Hawaiian government that

they are breaking Hawaii law. Furthermore, the unit of analysis in the HDOH survey is the family, making comparisons with the CPS data (which is based on individuals) difficult. For example, a family with insurance coverage may include an uninsured spouse and uninsured children,

8. For details of estimation and simulation, see Dick, "The Impact of Mandated Employer Provision of Health Insurance Benefits."
9. Ibid.
10. I investigate this possibility in "The Impact of Mandated Employer Provision of Health Insurance Benefits," and I find that the pattern and extent of those without coverage are consistent with an economic theory of noncompliance. The number of eligible persons who are not covered is also consistent with figures from the enforcement branch in Hawaii.