Look on the Bright Side: Connecticut's Less "Miserable" Than Most

By Rexford E. Santerre and Arthur W. Wright

Last December, Professor Rex Santerre showed that, contrary to popular perceptions, America's "healthcare economic misery index" (HEMI) had actually *declined* from 1960 to 1979, then bumped up a bit before stabilizing (*New York Times*, Dec. 1, 2003). Applying a similar state-level index, in 2003 Connecticut was fourth least "miserable" among the 50 states and DC, while New England was least "miserable" among the regions. Statistical analysis of the index and its components explains much of this good showing. To our surprise, it has nothing to do with the Red Sox' World Series win.

Back in the days of "stagflation," economist Arthur Okun helped Jimmy Carter win the 1976 Presidential election by constructing an Economic Misery Index (EMI) consisting of the inflation rate plus the unemployment rate. Normally, those variables should move in opposite directions; when they both rise at once, as in the mid-1970s, people are miserable.

Santerre's *Health-Care Economic Misery Index*, or HEMI, with its acronymic suggestion of drawing blood, added together the medical inflation rate and the uninsured rate—that is, the percentage of people without health insurance. As with EMI, so with HEMI: when both variables are rising, woe is us. In the bad old days of the 1960s—before Medicaid and Medicare, both implemented in 1966—too many of the poor and the elderly lacked health insurance. The tame medical inflation back then—when medical prices broadly moved with the general price level—didn't offset the high uninsured rate.

HEMI and Its Components, 2003

State	Rank	HEMI	Uninsured	Cost Inflation
Delaware	1	11.7	10.1	1.6
Hawaii	2	12.2	9.9	2.3
Wisconsin	3	12.8	9.5	3.3
Connecticut	**4**	**13.0**	**10.4**	**2.6**
Massachusetts	5	13.6	9.6	4.0
Tennessee	6	13.9	11.8	2.1
Michigan	7	14.6	11.0	3.6
Kansas	8	14.6	10.9	3.7
Minnesota	9	14.8	8.2	6.6
New Hampshire	10	14.8	9.9	4.9
Iowa	11	14.9	9.5	5.4
Pennsylvania	12	15.3	10.7	4.6
Rhode Island	13	15.9	9.3	6.6
Missouri	14	16.6	10.9	5.7
Vermont	15	16.6	9.9	6.7
North Dakota	16	17.8	10.5	7.3
Ohio	17	17.9	11.7	6.2
Alabama	18	18.1	13.3	4.8
South Carolina	19	18.3	13.1	5.2
New Mexico	20	18.3	21.3	-3.0
Kentucky	21	18.6	13.3	5.3
Indiana	22	18.7	12.9	5.8
Washington	23	19.0	14.3	4.7
West Virginia	24	19.2	14.8	4.4
District of Columbia	25	19.5	13.3	6.2
Virginia	26	19.7	12.5	7.2
Illinois	27	19.8	14.0	5.8
Maine	28	20.0	10.7	9.3
South Dakota	29	20.2	11.0	9.2
Maryland	30	20.3	13.2	7.1
Arizona	31	20.7	17.3	3.4
North Carolina	32	21.2	16.1	5.1
New Jersey	33	21.3	13.7	7.6
Oregon	34	21.4	14.8	6.6
Nebraska	35	21.7	10.3	11.4
Colorado	36	21.7	16.3	5.4
Louisiana	37	21.9	19.4	2.5
Oklahoma	38	22.1	18.7	3.4
Georgia	39	22.2	16.4	5.8
New York	40	22.3	15.5	6.8
Utah	41	22.6	13.6	9.0
California	42	23.0	18.7	4.3
Arkansas	43	23.3	16.6	6.7
Florida	44	23.5	17.6	5.9
Alaska	45	24.1	17.8	6.3
Mississippi	46	24.6	17.0	7.6
Wyoming	47	24.7	16.5	8.2
Montana	48	25.3	16.1	9.2
Nevada	49	25.8	18.3	7.5
Idaho	50	29.9	17.5	12.4
Texas	51	29.9	24.6	5.3

Source: Rexford Santerre, using data from the Kaiser Family Foundation (kff.org).

Often, a broad national result masks variation across the states. While the uninsured rate is available by state, though, the Federal government does not calculate state-level Consumer Price Indexes (CPI), let alone the detailed component of the CPI for medical goods and services that Santerre used in his national HEMI. So he substituted the percentage change in "adjusted expenses per inpatient day" for hospitals in each state, from the American Hospital Association's annual surveys (available at the Kaiser Family Foundation's website, kff.org). While not perfect, this measure does cover about half of all health care outlays. Thus, the state-level HEMI in 2003 is defined as the sum of the average uninsured rate for 2001-2003, and the mean of 3-year moving averages of changes in adjusted costs per inpatient day over the period 1999-2002 (the latest data available are for 2002).

Les Miserables

By this measure (remember, lower is better), Connecticut's HEMI of 13.0% placed fourth, behind Delaware, Hawaii and Wisconsin (see the table). Massachusetts was right behind us, with New Hampshire 10th, Rhode Island 13th, Vermont 15th, and Maine (the only New England state below the national average) 28th.

As the map on the next page shows, New England had the lowest regional HEMI, with the East North Central region close behind. Leading the nation in health care misery (if not chilblains) was a Sunbelt region, West South Central (24.3%). Interestingly, Florida—despite all its retirees on Medicare or OntarioHIP and its supposed low cost of living—ranked highest (23.5%) among the South Atlantic states and 44th nationally. Tied for last place by a full 3.1 misery points were Texas and Idaho (29.9%).

Looking at the two components of HEMI separately, Connecticut's star quality dims a bit: 11th from the top for the uninsured rate, and 6th for the adjusted-cost-per-inpatient-day measure, in 2003. Our higher overall ranking stems from being not too bad in either category. For instance, Minnesota (with its public cooperative health insurance plan) had the nation's lowest uninsured rate, 8.2%, but overall the Gophers ranked only 9th because of an above-average cost increase (6.6%).

Texas had the highest uninsured rate in the nation (24.6%), by a full 3.3 misery points over the runner-up, New Mexico; in contrast, Texas' cost increase was a bit below the national average of 5.7%. Idaho, tied with Texas as most health-miserable, was worse than the national average on both counts. Together, the four states bordering on Mexico (adding Arizona and California to Texas and New Mexico) had an average uninsured rate of 20.5%, some 6.7 misery points above the national average.

Sorting Out the State HEMIs

How much of the state-to-state variation in the HEMI can we explain? Taking a deep breath and regressing our compound statistic against the "usual suspects," including regional dummy vari-

ables, produced surprisingly strong results that explained some 40-45 percent of the variation—not chopped liver for cross-section data. (Details of all regression calculations are available via e-mail request to rexford.santerre@uconn.edu.)

As predicted, children per capita and the percentage of people living below the official poverty line both were associated with greater health-care misery in 2003. In the opposite vein, the HMO "penetration rate" (percentage of population participating in Health Maintenance Organizations) had a significant, negative effect—contrary to the common perception that HMOs make their members miserable.

The regional dummy variables did not explain very much; evidently, our other variables pick up most of the regional variation. Not significant at all were the unemployment rate, employment per capita, the percentage of people over 65, and median household income.

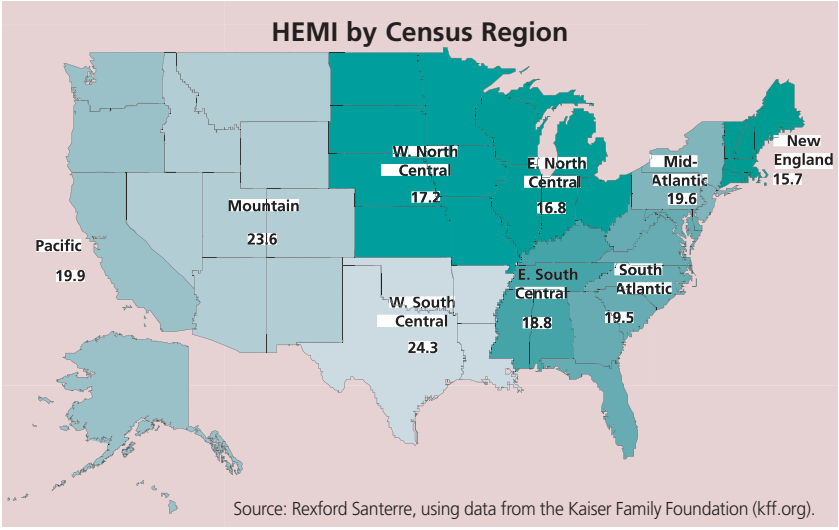
These results explain well why Connecticut attained such a high-ranking (low) HEMI for 2003. On average, we are an older state (fewer children per capita) with higher income (smaller share of the population living in poverty), and a higher HMO penetration rate, than most other states.

Explaining the Components of the State HEMIs

The HEMI is, of course, a composite variable, so we decided also to analyze each of its components separately. As predicted, the *cost-increase* variable moved inversely with the HMO penetration rate, consistent with the folklore that HMOs bargain effectively with hospitals (if they approve a stay at all). Conversely, we found cost inflation to be significantly higher, the greater the proportion of the population that was employed. Perhaps health insurance coverage through employers' group plans pushes up the cost of hospital services, controlling for HMO penetration. (See Heffley and Bhattacharya's piece on pages 4-5.) No other variables, including regional dummies, had significant effects on hospital cost increases. But the two significant variables alone suggest why Connecticut came in 6th from the top in the 2003 increase in the adjusted cost of an inpatient day.

In contrast, a number of variables proved robustly significant in explaining state-to-state variations in the *uninsured rate*. Our models accounted for upwards of 85% of the interstate variation, no matter how we specified them. Several specific variables, and particularly some effects *between* explanatory variables, proved interesting.

First, the 2002 percentage of people who were Hispanic was the strongest single explanatory variable, and positively so as predicted: a 1-point difference in that percentage translated into nearly a quarter-point higher uninsured rate; note that we were controlling for such variables as income and number of children. This confirms a well-known fact, attributable perhaps to the concentration of Hispanic employees in smaller firms, or to surveys picking up "undocumented" Hispanics who must accept employment without coverage. The high percentages of uninsureds in states along or near



the Mexican border, shown in the table, are consistent with this explanation.

Second, contrary to our initial expectation, HMO penetration did not significantly affect the uninsured rate—but only after we controlled for four factors that theory told us belonged in the regressions. A one-point increase in the share of African-Americans in the population went with a significant 0.06 point increase in the uninsured rate. An extra thousand dollars of median household income would produce a significant decline of about 0.2 percentage points in the uninsured rate. Further, a one-point increase in the share of population living in metropolitan areas yielded a significant 0.05 point decline. Finally, a one-point rise in the share of the population living below the poverty line was associated with a significant 0.40-point *decline* in the uninsured rate—most probably because of Medicaid.

Four of the eight regional dummy variables were strongly significant, and positive as predicted, given that New England was the reference region omitted from the regression. Thus, our main explanatory variables didn't account for all of the regional variation in the uninsured rate.

Once again, the regression results track well in Connecticut—in fact, the predicted value of the uninsured rate, using the estimated coefficients, is one of the six or seven closest to the actual among the 51 states.

Overall, these results suggest that things aren't as bad in the health sector as sometimes painted—provided one lives in New England or the eastern Midwest, with their higher incomes, rates of employment, HMO penetration rates, and metro concentrations, and with their smaller numbers of children. The flip side of these results is that there's still work to do nationally among the Hispanic and Black members of our society, and among the poverty-stricken—though even there Medicaid (for all its faults) appears to provide some safety-net benefits.

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