

---

---

# Does the VA Offer Good Health Care Value?

*William B. Weeks, Amy E. Wallace, Tanner A. Wallace, and Daniel J. Gottlieb*

**Objectives:** We sought to determine whether the VA provides health care at a low cost.

**Methods:** For fiscal years 2001–2007, we used data from the National Center for Health Statistics to calculate the VA's average per capita health care costs. We used data from the Medical Expenditure Panel Survey to calculate the average market value of health care received by patients who used the VA for health care. Finally, we examined several measures of health care quality provided by the VA and the private sector.

**Results:** Overall, VA health care costs 33 percent more than it would if purchased in the private sector (95 percent Confidence interval: 19 percent – 52 percent more); VA inpatient care costs were 56 percent higher (95 percent Confidence interval: 27 percent – 105 percent higher). The VA maintains a quality advantage in outpatient care, but its inpatient advantage has narrowed over recent years, and there is evidence that VA surgical care has worse outcomes than private sector surgical care.

**Conclusions:** The VA's health care costs are considerably higher than could be purchased in the private sector. The VA should consider outsourcing inpatient services to high performance private sector hospitals.

The US health care system is in crisis. The professional<sup>1</sup> and popular<sup>2</sup> media have advocated for adoption of a nationally run health care system. Proponents argue that one benefit of adopting a national health care plan is the avoidance of excessive administrative costs,<sup>3</sup> which consume 31 percent of health care expenditures in the United States, but only 16.7 percent in Canada.<sup>4</sup> The Veterans Health Administration (VA) has been heralded as a model for health

care that should curtail administrative spending while providing high quality care<sup>5</sup> in what Nobel prize-winning economist Paul Krugman described as a “lean and efficient”<sup>6</sup> manner.

Over the last decade, the VA has been recognized for a transformation in the quality of care it provides,<sup>7</sup> but whether the VA offers this quality at a low cost is unknown. To determine whether VA offers good value for its expenditures, we used VA budget,

---

**William B. Weeks, MD, MBA,** is with the White River Junction VA Medical Center, White River Junction, VT; the Department of Psychiatry, Dartmouth Medical School, Hanover, NH; the Department of Community and Family Medicine, Lebanon, NH; and the Dartmouth Institute for Health Policy and Clinical Practice, Lebanon, NH.

**Amy E. Wallace, MD, MPH,** is with the White River Junction VA Medical Center, White River Junction, VT, and the Department of Psychiatry, Dartmouth Medical School, Hanover, NH.

**Tanner A. Wallace** is with Washington and Lee University, Department of Economics, Lexington, VA.

**Daniel J. Gottlieb, MS,** is with the Dartmouth Institute for Health Policy and Clinical Practice, Lebanon, NH.

---

**Acknowledgements:** The authors wish to acknowledge Alan N. West, PhD, for his helpful comments on earlier versions of the manuscript and Richard E. Lee, MPH, for his comments and help obtaining VA performance measures. The views expressed in this article are those of the authors and do not necessarily represent those of the Veterans Health Administration or the US Government.

The authors have no conflicts of interest to report other than that two of the authors of this article (William B. Weeks and Amy E. Wallace) work for the Veterans Health Administration.

This work was approved by the Committee for the Protection of Human Subjects at Dartmouth Medical School (CPHS # 21506).

*J Health Care Finance* 2009;35(4):1–12  
© 2009 Aspen Publishers, Inc.

performance, and utilization data, and compared VA costs and performance to costs and performance available in the private sector.

## Methods

### VA Health Care Costs

We obtained data on VA inpatient and outpatient costs and utilization from the *Health, United States* series.<sup>8</sup> For each fiscal year, the VA's total health care expenditures are provided by the VA to the National Center for Health Statistics. Further, the VA provides how the total health care expenditures are distributed to inpatient hospital, outpatient care, nursing home care, and "all other" care which includes contract hospitals, among other services. Finally, the VA provides the number of individuals who received inpatient care or outpatient care for each fiscal year.

To calculate the VA's annual health care costs, we multiplied the total health care expenditures by the percent of that amount distributed to inpatient and outpatient care; because the Medical Expenditure Panel Survey (MEPS)—our source for calculating the market value of VA care—does not include nursing home care, we excluded VA nursing home care costs from our analysis. Further, we excluded "all other care" from our analysis. While a portion of "all other" costs—particularly contract hospitalizations—might reasonably be included in our estimate of inpatient and outpatient VA health care costs, the breakdown of those specific costs was not available. Because these contract hospitalization costs, as well as medical administration costs, construction costs, and miscellaneous operating expenses at VA headquarters are excluded from the VA's calculation of

inpatient and outpatient health care expenditures, our methodology provides a lower bound estimate of inpatient and outpatient VA costs of health care.

To calculate VA health care costs per capita, we divided the annual estimate of inpatient and outpatient VA costs by the sum of the number of individual patients who received outpatient care, as reported in the *Health, United States* series.<sup>9</sup> Notes to these data indicate that the inpatient and outpatient numbers are not additive because most inpatients are also treated as outpatients; therefore, we assumed that all inpatients were also treated as outpatients. Fiscal year data were converted to calendar year data by adding three quarters of the current fiscal year's values to one quarter of the following fiscal year's values.

### Veterans' Reports of Their Health Services Utilization

The MEPS Household Component surveys a sample of families and individuals across the United States who are drawn from a nationally representative subsample of households that participated in the prior year's National Health Interview Survey.<sup>10</sup> In each year, 2001 through 2006, MEPS surveys were administered to more than 32,000 individuals; during that time period, full-year response rates ranged from 58.3 percent to 66.3 percent.<sup>11</sup> MEPS incorporates several rounds of interviewing spanning two full calendar years, collecting information on individuals' use of medical services and the sources of payment for those services. Utilization data are collected for all types of non-nursing home services used during the calendar year, including medical provider visits, hospital outpatient visits, hospital emergency room

visits, hospital inpatient days, dental visits, home health care, vision aids, other medical equipment, and prescribed medications.

MEPS datasets include demographic characteristics, as well as the sources of funding for health care provided, one of which is the VA. Because MEPS over-imputed VA as a source of payment for prescribed medicines, to exclude those who used the VA solely for pharmacy services, we identified VA users as MEPS respondents who had at least \$300 in VA medical expenditures, and whose total VA medical expenditures were greater than their VA pharmacy expenditures. This process was conservative, and resulted in annual estimates of numbers of VA users that were similar to those reported in the *Health, United States* series.<sup>12</sup>

Utilization data collected from the MEPS survey are converted to expenditures data that represent payments made, not necessarily charges. Because event-level breakdowns have not been available for VA expenditures, they were imputed based on similar events that are paid for on a private sector fee-for-service basis.<sup>13</sup> In essence, this private sector fee-for-service equivalent estimates the market cost of care provided within the VA, had it been purchased in the private sector. Because Medicare payments frequently underpay for services, resulting in a “cost-shift” to private sector fee-for-service insurers,<sup>14</sup> MEPS generated cost estimates are likely to be considerably higher than if Medicare payments formed the basis for cost calculations.

To estimate the market cost of care that the VA provided to VA users, we obtained MEPS data using the Household Component MEPSnet/HC Query function.<sup>15</sup> For those who met our criteria, we derived the market costs of the health care paid for or provided

by the VA. For each year, we calculated 95 percent confidence intervals (CI) by adding and subtracting 1.96 times the standard error of the mean market costs of care provided by the VA to the overall mean estimate. To calculate means with 95 percent CIs across the time period examined, we performed a meta-analysis of the annual data that we collected.

#### ***Comparison of Health Care Quality Provided by VA to That Obtained in the Private Sector***

***Quality Measures of Outpatient and Inpatient Care.*** We used three estimates of health care quality to compare the quality of care provided by the VA to that provided by the private sector for 2005–2007. To determine VA performance, we used the VA’s performance measures ProClarity® cube and briefing book to determine national outpatient and inpatient quality measures for the VA. Following the format of an earlier study,<sup>16</sup> we tracked a number of aspects of health care quality between 2005–2006 that compared quality of care provided to veterans who use the VA to that provided to Medicare fee-for-service beneficiaries. To determine outpatient private sector performance, we used national averages calculated from Medicare fee-for-service part B data from the *Dartmouth Atlas of Health Care*.<sup>17</sup> To determine inpatient private sector performance, we used national averages from the Hospital-Compare databases from 2005–2007. A limitation of this methodology is that we compared data for VA patients of all ages to that for patients aged 65 and older who are enrolled in fee-for-service Medicare.

#### ***Comparisons of VA to Private Sector Risk-Adjusted Mortality Rates for Surgical***

**Services.** We searched the literature to find published articles that compared post-surgical risk-adjusted mortality rates in the VA to that in the private sector. We identified two published articles that provided 30-day mortality risk-adjusted odds ratios with 95 percent confidence intervals associated with obtaining male<sup>18</sup> general surgery and male and female hepatectomy<sup>19</sup> in the VA as opposed in the private sector. In addition, we found one article that provided in-hospital mortality risk-adjusted odds ratios following coronary artery bypass grafting surgery (CABS) obtained in the VA versus the private sector.<sup>20</sup> While three additional articles compared VA to private sector risk adjusted 30-day mortality rates for male<sup>21</sup> and female<sup>22</sup> vascular surgery and female general surgery,<sup>23</sup> findings were not statistically significant and risk-adjusted odds ratios associated with receiving care in the VA versus the private sector were neither provided in the article, nor available from the articles' authors. For the three articles that provided them, we used the risk-adjusted odds ratios, the number of patients in each of the comparison groups, and the mean private sector mortality rates to calculate the number of VA users who would have been expected to have died had they used the private sector instead of the VA. We then compared that number to the number of VA patients who died within 30 days after surgery in the VA to calculate the potential number of lives saved had surgical care been provided in the private sector as opposed to the VA.

## Results

Between fiscal years 2001 and 2007, VA medical care expenditures grew by 60 percent while the number of individuals who

used VA outpatient services increased by 28 percent (*see* Figure 1). Converting data from fiscal to calendar years attenuated growth somewhat, with total VA medical care expenditures growing by 48 percent, and the number of outpatients increasing by 20 percent across calendar years. Across calendar years, total inpatient costs remained relatively stable, while outpatient costs increased by 66 percent. On average, the number of patients seen as reported by the VA was within 3 percent of that estimated using MEPS data.

Across the years examined, the sum of inpatient and outpatient VA expenditures averaged \$4,636 per capita. However, the market value of that care averaged \$3,473 per capita (95 percent CI: \$3,057 – \$3,886). Inpatient plus outpatient VA medical care expenditures exceeded the market value of health care received by 33 percent, on average (95 percent CI: 19 percent – 52 percent). While the market value of inpatient care received in the VA was \$1,045 (95 percent CI: \$798 – \$1,291), the VA's mean inpatient expenditures per capita were \$1,634, or 56 percent higher (95 percent CI: 27 percent – 105 percent) than what could have been purchased in the private sector.

The VA has continued to outperform Medicare fee-for-service performance in one measure of mammography and two measures of outpatient diabetic management (*see* Figure 2). In addition, in 2005 and 2006, the VA uniformly performed better than hospitals contributing to Hospital Compare. However, inpatient quality performance gaps narrowed considerably over the time period examined.

All three articles that compared VA to private sector surgical outcomes and that provided risk-adjusted odds ratios for mortality

**Figure 1. Derivation of Total VA Medical Care Expenditures Per Capita, for Calendar Years 2001–2006 and Weighted Mean Across Years, as Well as Market Value of Total and Inpatient VA Care Received Per Capita and the Ratio of Total and Inpatient VA Expenditures to the Total and Inpatient Market Value of Care Received**

<b>Fiscal Years</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>
VA medical care expenditures (000s)	\$21,316	\$23,003	\$25,647	\$28,346	\$30,291	\$31,909	\$34,025
Inpatient costs (%)	34.7%	33.6%	32.2%	31.1%	24.3%	24.0%	24.0%
Outpatient costs (%)	45.7%	48.8%	49.5%	49.5%	53.4%	55.2%	53.5%
<b>Number of patients (000s)</b>	<b>4,072</b>	<b>4,456</b>	<b>4,715</b>	<b>4,894</b>	<b>5,077</b>	<b>5,180</b>	<b>5,221</b>
<b>Conversion to Calendar Years</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>Average</b>
VA medical care expenditures (000s)	\$22,581	\$24,986	\$27,671	\$29,805	\$31,505	\$33,496	\$28,341
Total inpatient costs (\$)	\$7,646	\$8,126	\$8,676	\$7,724	\$7,584	\$8,039	\$7,966
Total outpatient costs (\$)	\$10,854	\$12,328	\$13,697	\$15,639	\$17,254	\$18,056	\$14,638
Number of patients (000s)	4,360	4,650	4,849	5,031	5,154	5,211	4,876
Number of patients (000s), weighted national estimate from MEPS	4,028	4,685	4,803	5,447	5,881	5,284	5,021
Number of MEPS respondents from which national estimate was made	439	570	489	509	556	523	514
<b>VA medical care expenditures per capita</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>Weighted Mean</b>
Inpatient expenditures per capita	\$1,754	\$1,747	\$1,789	\$1,535	\$1,471	\$1,543	\$1,634
Outpatient expenditures per capita	\$2,490	\$2,651	\$2,825	\$3,108	\$3,348	\$3,465	\$3,002
Inpatient + outpatient expenditures	\$4,243	\$4,398	\$4,614	\$4,644	\$4,819	\$5,008	\$4,636
<b>Market value of VA care received per capita</b>							
Mean	\$3,019	\$3,594	\$4,190	\$3,123	\$3,502	\$4,813	\$3,473
Lower 95% CI	\$2,486	\$2,779	\$3,214	\$2,596	\$2,750	\$3,252	\$3,057
Upper 95% CI	\$3,552	\$4,410	\$5,165	\$3,649	\$4,253	\$6,374	\$3,886
<b>VA medical care expenditures divided by market value of care received</b>							
Mean	141%	122%	110%	149%	138%	104%	133%
Lower 95% CI	119%	100%	89%	127%	113%	79%	119%
Upper 95% CI	171%	158%	144%	179%	175%	154%	152%
<b>Market value of inpatient VA care received per capita</b>							
Mean	\$1,009	\$1,251	\$1,881	\$921	\$892	\$1,855	\$1,045
Lower 95% CI	\$561	\$532	\$989	\$546	\$383	\$397	\$798
Upper 95% CI	\$1,457	\$1,971	\$2,773	\$1,295	\$1,401	\$3,312	\$1,291

Continued

Figure 1. Continued ...

VA medical care expenditures per capita	2001	2002	2003	2004	2005	2006	Weighted Mean
<b>Net cost of VA Inpatient Care divided by market value of care received</b>							
Mean	174%	140%	95%	167%	165%	83%	156%
Lower 95% CI	120%	89%	65%	119%	105%	47%	127%
Upper 95% CI	312%	328%	181%	281%	384%	388%	205%

Figure 2. Comparisons of the Quality of VA and Non-VA Care

Source of Data	Jha, et al., NEJM 2003		VA ProClarity® Cube		Hospital Compare	
	VA	Medicare	VA fiscal year	Medicare calendar year	2005	2006
<i>Year</i>	2000	2000/01	2005	2006	2005	2006
<b>Preventive care</b>						
Mammography	90%	77%	85%	85%	64%*	
<b>Outpatient care</b>						
Diabetes						
Annual measurement of HgbA1c	94%	70%	na	96%	81%*	
Annual eye examination	67%	74%	na	85%	68%*	
<b>Inpatient care</b>						
<i>Acute myocardial infarction</i>						
Aspirin at admission	93%	84%	97%	97%	92%	93%
Aspirin at discharge	95%	84%	98%	98%	89%	90%
Beta-blocker at discharge	95%	78%	98%	99%	88%	90%
ACE inhibitor if ejection fraction < 40%	90%	71%	89%	90%	80%	83%
Smoking cessation counseling	62%	38%	96%	95%	81%	87%
<i>Congestive heart failure</i>						
Ejection fraction checked	94%	71%	99%	99%	81%	84%
ACE inhibitor if ejection fraction < 40%	93%	66%	88%	89%	81%	82%
Smoking cessation counseling			91%	93%	75%	83%
<i>Community acquired pneumonia</i>						
Inpatient oxygen assessment within 24 hours			98%	99%	99%	99%
Pneumococcal vaccination			94%	95%	59%	71%

\* Average for 2005–2006, from the Dartmouth Atlas of Health Care.

after surgery found that VA care was associated with substantially higher mortality risk (see Figure 3). For male general surgery, male and female hepatectomy, and male CABG, each year, on average, 996 VA patients died after receiving care within the VA system. Had care occurred in the private sector, as opposed to the VA, 762 deaths might have occurred, resulting in 224 (95 percent CI: 75–345) fewer deaths, a 23.5 percent reduction in mortality. Most of the lives saved would have occurred among males receiving general surgery at the VA; however, the greatest proportional mortality decrease was in CABG surgery.

## Discussion

Over a recent six-year period, we compared the VA costs of providing inpatient and outpatient care with the market value of inpatient and outpatient care that patients received from the VA. We found that VA costs were one third higher than market costs. Over the time period examined, had the VA purchased care in the market, instead of provided it, taxpayers might have saved \$56.1 billion (95 percent CI: \$32.3 – \$88.4 billion). Some of the higher costs of care provision that we found might be explained by the VA having substantially better performance on process measures, particularly on outpatient and preventive care measures. However, among the very few VA to private sector post-surgical mortality rate comparisons, we found that VA costs of providing care were 56 percent higher than had that care been purchase in the private sector, and purchasing care in the private sector might have resulted in saving 234 veterans' lives annually through a 23.5 percent reduction in post-surgical mortality.

There are several reasons why the VA might be expected to have higher costs than could be purchased in the private sector. First, the VA operates under a large and somewhat cumbersome administrative structure. While a transformational effort to decentralize and reduce bureaucracy during the late 1990s was largely seen as successful,<sup>24</sup> a large oversight bureaucracy in Washington, DC, large regional bureaucracies in 21 cities, and large facility bureaucracies in about 150 cities remain. Second, as a government entity, the VA is subject to constant oversight from many interested parties. Every VA Medical Center is required to pursue accreditation by the Joint Commissions as well as a number of other accrediting agencies. The VA is subject to oversight by Congressional committees as well as internal agencies (such as the Office of the Inspector General and the Office of the Medical Inspector); in addition, the VA is expected to be responsive to the needs of many constituencies, including affiliated medical and nursing schools, veterans' interest groups (such as the Veterans of Foreign Wars and the Paralyzed Veterans of America), and labor unions (such as the American Federation of Government Employees).

A third possibility is that the high costs that we found are required to ensure the high quality care that the VA provides. If this is the case, the marginal costs of achieving higher performance in process measures appears to be quite high, and do not apparently guarantee improved outcomes. Further, our findings would present a challenge to those who believe that “quality is free,”<sup>25</sup> at least in health care.

There are, however, at least three reasons why VA costs should be *lower* than those available in the private sector. First, the VA is not subject to taxation as are private sector

Figure 3. Comparison of Post-Surgical Mortality Rates in VA and the Private Sector

Years of study	Annual number of surgeries in VA	Risk-Adjusted Odds Ratio for Mortality After VA Care			Annual Number of Deaths		Potential Lives Saved Per Year			Potential Mortality Decrease if Care Were Provided in the Private Sector	
		Point estimate	Lower 95% CI	Upper 95% CI	in VA	had care occurred in private sector	Point estimate	Lower bound estimate	Upper bound estimate		
Male general surgery	2001–2004	31,366	1.23	1.08	1.41	822	637	185	50	253	22.5%
Male & female hepatectomy	2001–2004	79	1.62	0.61	4.32	5.4	2.1	3.3	-0.8	6	25.0%
Male CABG	1993–1996	6,422	1.83	1.53	2.19	169	123	46	26	86	27.2%
Total						996	762	234	75	345	23.5%

providers; for-profit organizations' corporate taxation and not-for-profit organizations' "payments in lieu of taxes" are real business costs that US health care providers experience, but the VA does not. Second, the VA compensates health care administrators and surgical specialists<sup>26</sup> at much lower rates than does the non-federal health care sector. Finally, the mechanism that MEPS uses to estimate the costs of VA care—using private sector fee-for-service equivalents—bundles administrative costs into those estimates; hypothetically, the 30 percent administrative costs that the private sector experiences would be found within the fee-for-service reimbursements.<sup>27</sup>

Our findings suggest that the VA might save substantial resources, and improve outcomes, by outsourcing surgical and other outpatient services. Further, our companion paper suggests that VA may be increasingly unable to supply specialty surgical care to veterans within the VA because of its inability to provide competitive salaries for surgical specialists.<sup>28</sup> Finally, while VA inpatient performance metrics suggest superior performance when compared to the Medicare, fee-for-service population, the relatively small degree to which the VA outperforms the private sector in inpatient care may not warrant a 50 percent cost premium.

Our study has several limitations. First, while we used the most recently publicly available data, the data that we used are already several years old. VA might have become more efficient or might have improved surgical mortality outcomes in the interim. On the other hand, as is clear from our analysis in this and our companion article, which appears in this journal, the private sector represents a moving target. Second, we used data provided by the VA to the

National Center for Health Statistics, and we limited costs to inpatient and outpatient care costs to be consistent with what is reported by MEPS survey respondents. Because of the way that the VA provides these data, our computation of VA per-capita costs is likely to generate a low estimate of true cost, for they include neither medical administrative costs, contracted hospital costs, construction costs, nor costs associated with running the VA's national headquarters.

Third, the value of care received by veterans, as reported by MEPS respondents, is likely to be higher than costs that might be incurred should the VA actually purchase services from the private sector: MEPS costs were estimated using private sector insurance fee-for-service rates; should the VA be able to obtain Medicare or Medicaid rates, the VA's costs of providing private sector services might be much lower than those estimated using our methodology. In concert with the above, it is likely that the cost savings associated with the VA's purchasing, as opposed to providing, care to its service population would be much greater than what we estimated. Fourth, although the MEPS survey methodology was designed to provide a nationally representative sample, it is possible that the veterans in the MEPS sample are not representative of the national veteran population. However, in other analyses, we found relatively consistent measures of utilization when comparing MEPS to the VA/Medicare dataset,<sup>29</sup> and a recent RAND report found that MEPS expenditure estimates "agree quite well" with estimates from other databases.<sup>30</sup>

Finally, we compared VA quality and costs to national averages, and outcomes to state or aggregated academic center averages. However, both academic centers<sup>31</sup> and the United

States as a whole<sup>32</sup> demonstrate dramatic differences in quality, costs, and outcomes. Therefore, comparison of the VA to high performance hospitals would undoubtedly result in the potential for more dramatic cost savings and improvements in outcomes.

Our analysis suggests that the health care that the VA provides is not as “lean and efficient”<sup>33</sup> as has been claimed. As we have previously proposed,<sup>34</sup> in order to improve outcomes and reduce costs, in certain instances

where it cannot guarantee the highest quality care at low cost, the VA should take on a new role as a health insurer, partnering with other federal health insurers to purchase—as opposed to provide—inpatient health care services. By coordinating care, instituting decision aids,<sup>35</sup> and steering patients to hospitals that have high quality and low costs, the VA could markedly reduce taxpayer costs, improve veterans’ access to care,<sup>36</sup> and improve outcomes from that care.<sup>37</sup>

---

## REFERENCES

1. Bodenheimer, T.S., Grumbach K., “Understanding Health Policy: A Clinical Approach, 3d Ed., Ch. 14; Health Care in Four Nations. Columbus, OH: McGraw-Hill; 2002; Himmelstein, D.U., Woolhandler, S., “National Health Insurance or Incremental Reform: Aim High, or at Our Feet?” *American Journal of Public Health*, 2003, 93(1):102–105; Himmelstein, D.U., Woolhandler, S., “Privatization in a Publicly Funded Health Care System: The US Experience,” *International Journal of Health Services*, 2008, 38(3): 407–419.
2. Cohn, J., *Sick: The Untold Story of America’s Health Care Crisis and the People Who Pay the Price*, New York, New York: HarperCollins Publishers, 2007; Krugman, P., “Ailing Health Care,” *The New York Times*, 2005 April 11, 2005; Moore, Michael, film “Sicko,” 2007.
3. Himmelstein, D.U., Woolhandler, S., Wolfe, S., “Administrative Waste in the US Health Care System in 2003: The Cost to the Nation, the States, and the District of Columbia, with State-Specific Estimates of Potential Savings, *International Journal of Health Services*, 2004, 34(1):79–86.
4. Woolhandler, S., Campbell, T., Himmelstein, D.U., “Health Care Administration in the United States and Canada: Micromanagement, Macro Costs,” *International Journal of Health Services*, 2004, 34(1): 65–78.
5. Himmelstein, D.U., Woolhandler, S., “Privatization in a Publicly Funded Health Care System: The US Experience,” *International Journal of Health Services*, 2008, 38(3): 407–419.
6. Krugman, P., “Ailing Health Care,” *The New York Times*, 2005 April 11, 2005.
7. Longman, P., *Best Care Anywhere: Why VA Health Care Is Better Than Yours*, Sausalito, CA: PoliPointPress, 2007; Oliver, A., “Public-Sector Health-Care Reforms That Work? A Case Study of the US Veterans Health Administration,” *Lancet*, 2008, 371(9619):1211–1213; Asch, S.M., McGlynn, E.A., M HM, Hayward, R.A., Shekelle, P., Rubenstein, L., Keeseey, J., Adams, J., Kerr, E.A., “Comparison of Quality of Care for Patients in the Veterans Health Administration and Patients in a National Sample,” *Annals of Internal Medicine*, 2004, 141(12): 938–945; Jha, A.K., Perlin, J.B., Kizer, K.W., Dudley, R.A., “Effect of the Transformation of the Veterans Affairs Health Care System on the Quality of Care,” *New England Journal of Medicine*, 2003, 348(22):2218–2227.
8. National Center for Health Statistics, *Health, United States*, 2006, with Chartbook on Trends in the Health of Americans, Table 142, p. 412, includes data from fiscal years 2001–2004, Hyattsville, MD, 2006; National Center for Health Statistics, *Health, United States*, 2008, with Chartbook, Table 147, p. 451 includes data from fiscal years 2005–2007, Hyattsville, MD, 2009.
9. *Id.*
10. Medical Expenditure Panel Survey—Household Component, In, 2008.

11. *Id.*
12. *Supra*, n.8
13. Machlin, S.R. and Dougherty, D.D., "Overview of Methodology for Imputing Missing Expenditure Data in the Medical Expenditure Panel Survey," Agency for Healthcare Research and Quality Working Paper 04003, October, 2004, In. Alexandria, VA: Agency for Healthcare Research and Quality; 2004.
14. Cross, M., "Confronting the Medicare Cost Shift," *Managed Care*, 2006, 15(12): 22–24, 27–28, 31; Mayes, R., Lee, J.S., "Medicare Payment Policy and the Controversy over Hospital Cost Shifting, Applied Health Economics and Health Policy, 2004, 3(3): 153–159.
15. Medical Expenditure Panel Survey—MEPSnet/HC Query, Agency for Health Research and Quality, 2008.
16. Jha, A.K., Perlin, J.B., Kizer, K.W., Dudley, R.A., "Effect of the Transformation of the Veterans Affairs Health Care System on the Quality of Care," *New England Journal of Medicine*, 2003, 348(22):2218–2227.
17. The Dartmouth Atlas of Healthcare, Hanover, NH, 2009.
18. Henderson, W.G., Khuri, S.F., Mosca, C., Fink, A.S., Hutter, M.M., Neumayer, L.A., "Comparison of Risk-Adjusted 30-Day Postoperative Mortality and Morbidity in Veterans Affairs Hospitals and Selected University Medical Centers: General Surgical Operations in Men," *Journal of the American College of Surgeons*, 2007, 204: 1103–1114.
19. Lancaster, R.T., Tanabe, K.K., Schiffner, T.L., Warshaw, A.L., Henderson, W.G., Khuri, S.F., Hutter, M.M., "Liver Resection in Veterans Affairs and Selected University Medical Centers: Results of the Patient Safety in Surgery Study," *Journal of the American College of Surgeons*, 2007, 204: 1242–1251.
20. Rosenthal, G.E., Vaughan Sarrazin, M., Hannan, E.L., "In-Hospital Mortality Following Coronary Artery Bypass Graft Surgery in Veterans Health Administration and Private Sector Hospitals, *Medical Care*, 2003, 41(4): 522–535.
21. Hutter, M.M., Lancaster, R.T., Henderson, W.G., Khuri, S.F., Mosca, C., Johnson, R.G., Abbott, W.M., Cambria, R.P., "Comparison of Risk-Adjusted 30-Day Postoperative Mortality and Morbidity in Department of Veterans Affairs Hospitals and Selected University Medical Centers: Vascular Surgical Operations in Men, *Journal of the American College of Surgeons*, 2007, 204:1115–1126.
22. Johnson, R.G., Wittgen, C.M., Hutter, M.M., Henderson, W.G., Mosca, C., Khuri, S.F., "Comparison of Risk-Adjusted 30-Day Postoperative Mortality and Morbidity in Department of Veterans Affairs Hospitals and Selected University Medical Centers: Vascular Surgical Operations in Women," *Journal of the American College of Surgeons*, 2007, 204: 1137–1146.
23. Fink, A.S., Hutter, M.M., Campbell, D.C., Henderson, W.G., Mosca, C., Khuri, S.F., "Comparison of Risk-Adjusted 30-Day Postoperative Mortality and Morbidity in Department of Veterans Affairs Hospitals and Selected University Medical Centers: General Surgical Operations in Women, *Journal of the American College of Surgeons*, 2007, 204: 1127–1136.
24. Oliver, A., "Public-Sector Health-Care Reforms That Work? A Case Study of the US Veterans Health Administration," *Lancet*, 2008, 371(9619):1211–1213; Jha, A.K., Perlin, J.B., Kizer, K.W., Dudley, R.A., "Effect of the Transformation of the Veterans Affairs Health Care System on the Quality of Care," *New England Journal of Medicine*, 2003, 348(22):2218–2227.
25. Crosby, P.B., *Quality Is Free: The Art of Making Quality Certain*. New York, New York: New American Library, a division of Penguin Putnam, Inc., 1980.
26. Weeks, W.B., Wallace, T.A., Wallace, A.E., "The impact of the Department of Veterans Affairs Health Care Personnel Enhancement Act of 2004 on VA Physicians' Salaries and Retention," companion article, *Journal of Health Care Finance*, 35:2, 2009..
27. *Supra*, n.4.
28. *Supra*, n.26.
29. West, A.N., Weeks, W.B., "Who Pays When VA Users Are Hospitalized in the Private Sector? Evidence from Three Data Sources, *Medical Care*, 2007, 45(10): 1003–1007.
30. Bigelow, J.H., Fonkych, K., Fung, C., Wang, J., "Analysis of Healthcare Interventions That

- Change Patient Trajectories, In: RAND, editor, RAND Corporation Monograph Series, Santa Monica, CA: The RAND Corporation; 2005.
31. Fisher, E.S., Wennberg, D.E., Stukel, T.A., Gottlieb, D.J., "Variations in the Longitudinal Efficiency of Academic Medical Centers," *Health Affairs*, 2004, Suppl Web Exclusives: VAR 19–32.
  32. *Supra*, n.17.
  33. Krugman, P., "Ailing Health Care," *The New York Times*, 2005 April 11, 2005
  34. Weeks, W.B., Bott, D.M., Bazos, D.A., Campbell, S.L., Lombardo, R., Racz, M.J., Hannan, E.L., Wright, S.M., Fisher, E.S., "Veterans Health Administration Patients' Use of the Private Sector for Coronary Revascularization in New York: Opportunities to Improve Outcomes by Directing Care to High-Performance Hospitals, *Medical Care*, 2006, 44(6):519–526;
  - Weeks, W.B., West, A.N., Wallace, A.E., Lee, R.E., Goodman, D.C., Dimick, J.B., Bagian, J.P., "Reducing Avoidable Deaths by Directing Veterans' Private Sector Surgical Care to High Performance Hospital, *American Journal of Public Health*, 2007, 97(12):1–7.
  35. Wennberg, J.E., Brownlee, S., Fisher, E.S., Skinner, J.S., Weinstein, J., "An Agenda for Change. Improving Quality and Curbing Health Care Spending: Opportunities for the Congress and the Obama Administration," The Dartmouth Institute for Health Policy and Clinical Practice. Lebanon, NH, 2009, accessed on March 5, 2009 at [http://tdi.dartmouth.edu/press\\_releases/Policy%20Paper%20E-vfnl.pdf](http://tdi.dartmouth.edu/press_releases/Policy%20Paper%20E-vfnl.pdf).
  36. West, A.N., Weeks, W.B., Wallace, A.E., "Rural Veterans and Access to High-Quality Care for High-Risk Surgeries, *Health Services Research*, 2008, 43(5 (Part 1)): 1737–1751.
  37. *Supra*, n.34.

---

---

# The Impact of the Department of Veterans Affairs Health Care Personnel Enhancement Act of 2004 on VA physicians' Salaries and Retention

*William B. Weeks, Tanner A. Wallace, and Amy E. Wallace*

**Objective:** To determine whether the Department of Veterans Affairs Health Care Personnel Enhancement Act (the Act), which was designed to achieve VA physician salary parity with American Academy of Medical Colleges (AAMC) Associate Professors and enacted in 2006, had achieved its goal.

**Methods:** Using VA human resources datasets and data from the AAMC, we calculated mean VA physician salaries, with 95 percent confidence intervals, for 15 different medical specialties. For each specialty, we compared VA salaries to the median, 25th, and 75th percentile of AAMC Associate Professors' incomes.

**Results:** The Act's passage resulted in a \$20,000 annual increase in VA physicians' salaries. VA primary care physicians, medical subspecialists, and psychiatrists had salaries that were comparable to their AAMC counterparts prior to and after enactment of the Act. However, VA surgical specialists', anesthesiologists', and radiologists' salaries lagged their AAMC counterparts both before and after the Act's enactment. Income increases were negatively correlated with full-time workforce changes.

**Conclusions:** VA does not appear to provide comparable salaries for physicians necessary for surgical care. In certain cases, VA should consider outsourcing surgical services.

Recognizing that pay disparities between the VA and the private sector may impair recruitment of qualified physicians to the VA,<sup>1</sup> the US Congress passed the Department of Veterans Affairs Health Care Personnel Enhancement Act of 2004 (the Act).<sup>2</sup> Enacted in January 2006, the new physician compensation plan consists of three components:

- **Base pay** (determined by the length of time the individual has worked at the VA);
- **Market pay** (determined by the VA to account for each doctor's relevant work experience, VA's needs for each particular medical specialty, the underlying market demand for each specialty, and other factors deemed relevant); and

---

**William B. Weeks, MD, MBA,** *The White River Junction VA Medical Center, White River Junction, VT; Departments of Psychiatry and, of Community and Family Medicine, Dartmouth Medical School, Hanover, NH; The Dartmouth Institute for Health Policy and Clinical Practice, Lebanon, NH.*

**Tanner A. Wallace,** *Washington and Lee University, Department of Economics, Lexington, VA.*

**Amy E. Wallace, MD, MPH,** *The White River Junction VA Medical Center, White River Junction, VT; The Department of Psychiatry, Dartmouth Medical School, Hanover, NH.*

**Acknowledgements:** *The authors wish to acknowledge the work of Scott Henry and Robert Baratta of the Veterans' Health Administration's Department*

---

*of Human Resources. Without their cooperation and hard work in developing the dataset that we used, we could not have completed the research reported herein.*

*The views expressed here are those of the authors and do not necessarily represent those of the Veterans Health Administration or the United States Government.*

*The authors have no conflicts of interest to report other than two of the authors (William Weeks and Amy Wallace) work for the Veterans Health Administration.*

*This work was found exempt from Human Subjects Review by the IRB at Dartmouth Medical School (CPHS # 21307).*

*J Health Care Finance* 2009;35(4):13–23  
© 2009 Aspen Publishers, Inc.

- **Performance pay** (reflecting outstanding performance ranging up to \$15,000 annually).

In addition, facility managers were allowed to offer physicians “retention allowances” as incentives to remain in the VA system.

In testimony supporting the Act, VA leadership stated that VA would benchmark VA physician’s “base pay, market pay, and performance pay [...] to the 50th percentile the Association of American Medical Colleges (AAMC) Associate Professor compensation.”<sup>3</sup> To achieve this goal, the Congressional Budget Office (CBO) estimated that the effect of the changes in base pay and market pay would result in an increase in the average salary for physicians of about \$14,500 in 2006 and that approximately 20 percent of VA’s employed physicians would receive performance pay of about \$5,000.<sup>4</sup> The CBO anticipated that some specialists, such as surgical subspecialists, would see significant increases in their annual pay, while other specialties would be less likely to receive a pay increase. The cost of implementing the base and market pay reforms was estimated to be \$671 million between 2006 and 2009, while that for implementing incentive pay was estimated to be \$43 million.

In this study, we sought to determine the impact of the Act on full-time physicians’ pay and retention across specialties, how funds that supported increased salaries were distributed across specialties, and whether and when implementation of the Act might achieve its AAMC Associate Professor Physician salary benchmarks.

## Methods

We obtained physician pay data from the Human Resources Office within VA

Central Office for all physicians who were employed by the VA at any point between fiscal year 2000 and the first half of fiscal year 2008. This data file included physician characteristics such as VA employment status (full or part time), physician specialty, and pay component breakdowns. Prior to fiscal year 2006, physician pay was composed of base pay (which was determined based on a government service scale) plus special pay, which consisted of payments for longevity, full-time VA employment, board certification, practicing in a geographic location where costs of living were high, being board certified in a scarce specialty, and having additional administrative responsibilities. In addition, retention pay could be granted to provide incentives for physicians to remain within the VA system. Beginning on January 1, 2006, physician pay was composed of base pay, market pay, performance pay, and retention pay, as described above.

A primary goal of the analysis was to compare VA physicians’ salaries to AAMC Associate Professors’ salaries. Therefore, we took several steps to ensure that the VA physicians were comparable to their AAMC counterparts. First, because AAMC salary data were limited to full-time physicians, we examined only full-time VA physicians. Second, we limited the analysis to 15 physician specialties for which both VA and AAMC had adequate numbers for comparison purposes:

- Family medicine (VA diplomate code 15);
- Psychiatry (51 or 52);
- Physical medicine and rehabilitation (PM&R) (13, 39, or 73);
- Neurology (50);
- Emergency medicine (5);

- General internal medicine (32 with no subspecialty designation);
- Medical specialist (32 with subspecialty designation);
- Pathology (14, 18, 20, or 72);
- Dermatology (30);
- Ophthalmology (6);
- Urology (12 or 44);
- General surgery (2 or 53);
- Diagnostic radiology (21 or 61);
- Anesthesiology (1); and
- Orthopedic surgery (7).

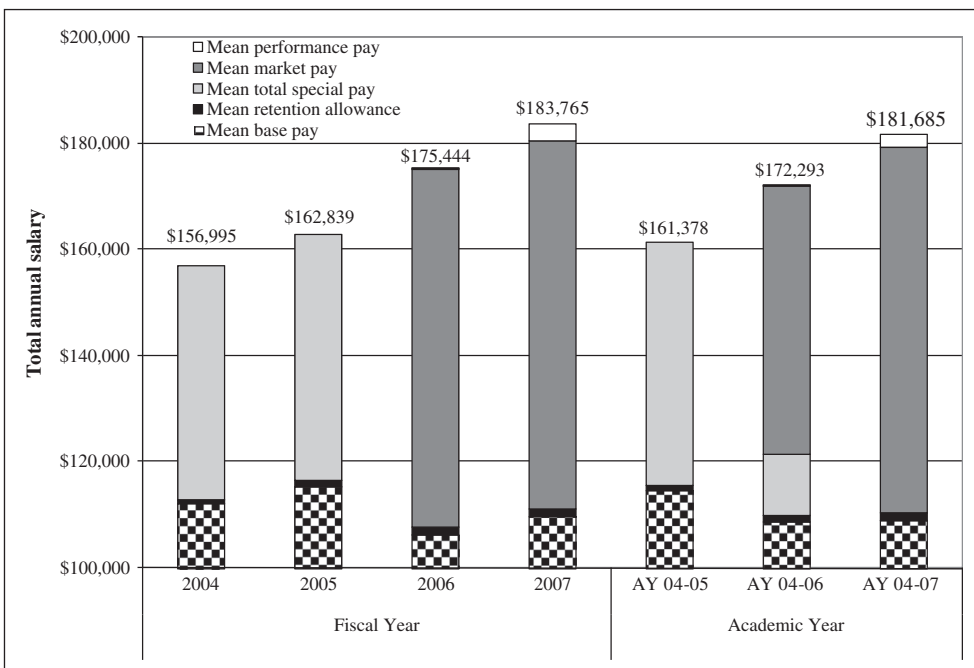
These 15 specialties represented 7,271 full-time VA physicians in fiscal year 2005, 7,650 in fiscal year 2006, and 8,217 in fiscal year 2007. Figure 1 shows comparisons of age, gender, race, number of years of VA

service, and annual total salary for the cohort of full-time VA physicians that we examined, and those we excluded from the analysis. Annual salaries were consistently about 3.5 percent higher for full-time VA physicians who were included in the study when compared to those excluded from the study. Overall, the cohort we examined represented 84 percent of all full-time VA physicians.

Second, because we could not disaggregate VA medical subspecialists, we compared salary information for VA medical subspecialists to that for AAMC’s medical subspecialists, which aggregates and averages salaries for the following subspecialties:

- Allergy/Immunology;
- Cardiology;

**Figure 1. Mean Annual Income of All Full-Time VA Physicians Examined, for Fiscal Years 2004 to 2007 (left) and for Academic Years 04–05 to 06–07 (right), Decomposed by Type of Pay**



- Critical/Intensive Care Medicine;
- Endocrinology;
- Gastroenterology;
- Geriatrics;
- Hematology/Oncology;
- Infectious Disease;
- Nephrology;
- Pulmonary Medicine;
- Rheumatology; and
- Other Medicine.

In addition, because VA's service population does not include children, we compared VA General Surgery, Neurology, and Psychiatry to their non-pediatric AAMC subspecialist counterparts.

Third, to make annual salaries comparable, we translated VA fiscal years (which run from October 1–September 30) to AAMC academic years (which run from July 1–June 30). Therefore, for instance, we converted VA fiscal year 2006 and 2007 data (which reflects salaries earned by VA physicians between October 1, 2005 and September 30, 2007) to AAMC academic year 2006–2007 data (which reflects salaries earned by AAMC Associate Professors between July 1, 2006 and June 30, 2007), by adding one quarter of VA physicians' fiscal year 2006's salary (which approximates the salary earned between July 1, 2006 and September 30, 2006) to three quarters of VA physicians' fiscal year 2007's salary (which approximates the salary earned between October 1, 2006 and June 30, 2007). Because neither dataset included information on benefits, we did not attempt to compare benefits across work settings. For the purposes of consistency, we report both fiscal and academic year results for VA physicians only in the first analysis; thereafter, we use academic year salary estimates.

We performed four analyses:

1. **Overall and specific changes in pay for VA physicians.** For all VA full time physicians practicing in one of the 15 specialties listed above in fiscal years 2005, 2006, or 2007, we compared annual salaries, disaggregated into pay categories, to determine whether the average pay increase between both academic and fiscal years 2005 and 2006 approximated the anticipated \$14,500 per year. Further, we determined whether the mean performance pay per physician approximated the anticipated \$1,000 (20 percent of physicians were expected to receive an average of \$5,000 per year).
2. **Comparison of VA physicians' mean annual salaries to the median annual salaries of Associate Professors in the same specialty and calculation of interval until achievement of equity.** We used publicly available specialty-specific data from the AAMC<sup>5</sup> to determine whether VA physicians' salaries had reached the median salary of Associate Professors in the same specialty. Where VA physicians' salaries remained below Associate Professors' median salary, we extrapolated recent salary growth rates of both VA and AAMC physicians to calculate the approximate number of years that it would take for VA physicians' mean salaries to attain AAMC Associate Professors' median salaries.
3. **Specialty-specific relationships between changes in pay and changes in the number of full-time VA physicians.** In addition, for each specialty, we

compared VA physicians' average annual pay increase in academic years 2006 and 2007, both in absolute dollars and as a compounded growth rate; we then correlated these changes with changes in specialty-specific, full-time VA workforce.

4. **The distribution of additional pay across specialties and the overall cost of the Act.** Finally, we examined the overall VA cost associated with the salary changes that we found and we determined how the new expenditures were distributed across specialties.

We used Student's t-tests to compare continuous variables and Pearson's correlations coefficients to determine the degree to which these variables were correlated. We performed all statistical analyses using SPSS version 16.0.

## Results

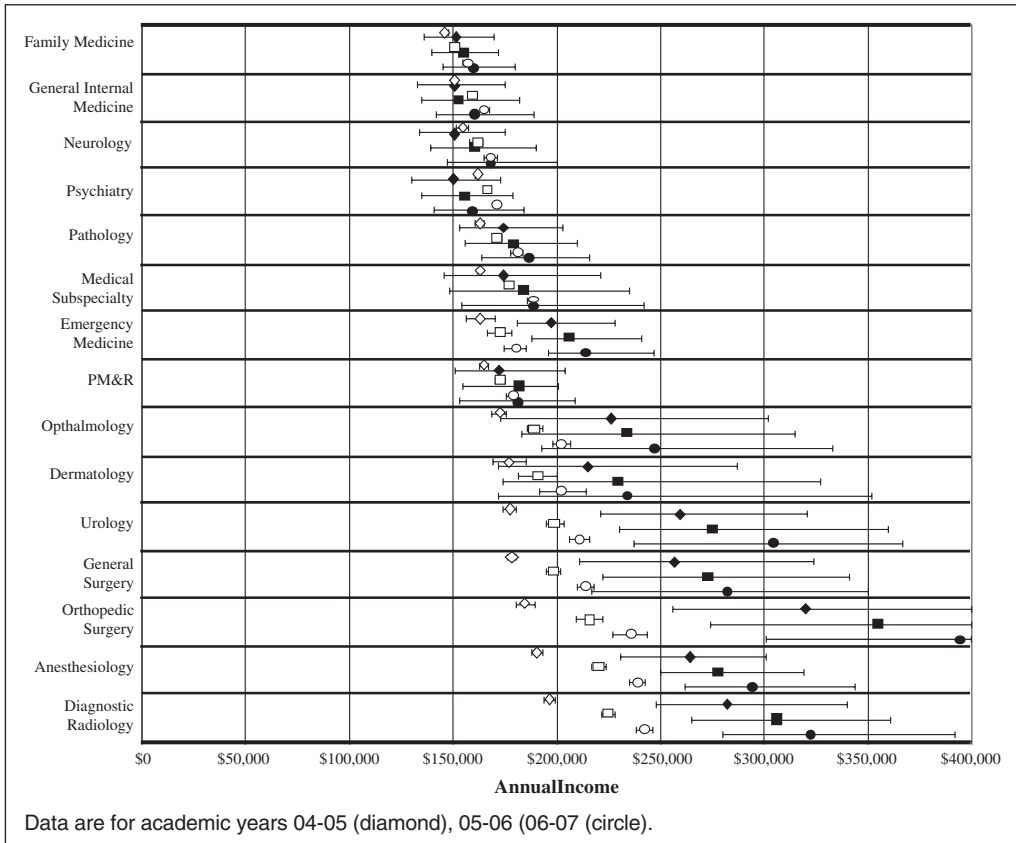
On average, across all specialties examined, full-time VA physician salaries increased by \$12,605, or 7.7 percent, between fiscal years 2005 and 2006, and by \$8,321, or 4.7 percent, between fiscal years 2006 and 2007 (*see* Figure 2). Between fiscal year 2005 and 2006, mean base pay decreased from \$115,427 to \$106,338, but mean retention allowance increased from \$1,079 to \$1,316, and mean total special pay of \$46,333 increased to a mean market pay of \$67,712. Performance pay averaged \$78 per full-time physician in fiscal year 2006, but increased to \$3,151 in fiscal year 2007. Between fiscal year 2006 and 2007, mean base pay increased by 3.1 percent to \$109,655 and market pay increased by 2.5 percent to \$69,441. We saw a similar

pattern when examining academic year salary estimates: full-time VA physicians' total annual salaries increased by 6.8 percent between academic years 04–05 and 05–06 and 5.4% between academic years 05–06 and 06–07.

For each academic year examined, and across all 15 specialties, the mean, full-time VA specialty-specific physician pay with 95 percent confidence intervals is contrasted with the 25th, 50th, and 75th percentile salaries of Associate Professors in the same specialty (*see* Figure 3). Over the three years examined, mean annual salaries for full-time VA family medicine physicians, pathologists, medical subspecialists, and psychiatrists approached the median salary of their AAMC Associate Professor counterparts. Mean annual salaries for VA general internists and psychiatrists exceeded the median annual salary of their AAMC counterparts. While VA physicians' mean annual salaries for the other specialties increased considerably over time, so did that of AAMC Associate Professors. Therefore, despite substantial increases in VA physicians' annual salaries, that for VA ophthalmologists and dermatologists remained at about the 25th percentile of AAMC Associate Professors, while that for VA urologists, general surgeons, orthopedic surgeons, anesthesiologists, and diagnostic radiologists remained substantially below the 25th percentiles of their AAMC counterparts.

The left side of Figure 4 shows the percentage change in annual salaries for full-time VA and AAMC physicians, by specialty, between academic years 04–05 and 05–06 and between 05–06 and 06–07. For most specialties, VA salary increases were substantially higher in the first period than in the second period, reflecting that the

**Figure 2. Mean Annual Income, with 95 Percent Confidence Intervals, and Median Annual Incomes, with 25th and 75th Percentiles of VA Physicians (Open Markers) and AAMC Associate Professors (Closed Markers), Respectively Data are for academic years 04–05 (diamond), 05–06 (square), and 06–07 (circle).**



majority of the salary increases came into effect during the first year of enactment of the Act. The right side of Figure 4 shows the estimated number of years until VA physicians' mean salaries become equivalent to AAMC Associate Professors' annual salaries, for each specialty, assuming continuation of the rates of salary growth in academic years 04–05 to 05–06 and 05–06 to 06–07. Should the absolutely and relatively higher salary growth that occurred among VA physicians

between academic years 04–05 and 05–06 persist, parity would generally occur earlier. For most procedure-based specialties, parity might occur in the distant future, or not at all. On the other hand, salary parity for psychiatrists and general internists has already been accomplished. When weighted by the number of physicians in each specialty, absolute and relative salary increases were negatively correlated with workforce growth ( $r = -0.11, p < 0.001$ ) (data not shown).

**Figure 3. Comparison of Characteristics of Full-Time VA Physicians Who Were and Were Not Included in the Study, by Fiscal Year**

	Fiscal Year 2005			Fiscal Year 2006			Fiscal Year 2007		
	Included	Excluded	p	Included	Excluded	p	Included	Excluded	p
N	7,271	1,349		7,650	1,416		8,217	1,778	
Age	49.5	51.4	<0.001	50.1	51.0	0.007	50.5	50.2	0.25
% male	70.4%	69.1%	0.35	70.0%	68.5%	0.27	68.9%	66.4%	0.04
% black	4.4%	6.8%	<0.001	4.8%	6.6%	0.012	5.0%	5.9%	0.12
Years of VA service	9.4	9.4	0.91	9.8	8.7	<0.001	9.8	7.6	<0.001
Mean salary	\$162,839	\$157,109	<0.001	\$175,444	\$168,430	<0.001	\$183,765	\$175,642	<0.001

Figure 5 delineates the number of full-time physicians in each specialty, the total pay for each specialty, the overall change in pay, and the amount of change attributable to full-time workforce and salary changes for academic years 04–05 and 06–07 for each specialty. Overall, full-time physicians in these examined specialties had incomes that were \$141,364,886 higher in academic year 06–07 than in 04–05. This amount represents 81.3 percent of the additional total outlays in academic year 06–07 that the Congressional Budget Office (CBO) estimated for full implementation of the Act, to both full- and part-time physicians and dentists.<sup>6</sup> Interestingly, because of reductions in full-time workforce, total pay for both general and subspecialty internal medicine decreased during the time period examined. Although family medicine, general internal medicine, neurology, psychiatry, pathology, and medical subspecialties were at or near pay parity with AAMC Associate Professors in the same specialties, over \$89 million of pay attributable to salary increases—or

63.2 percent of the total increase—went to these specialists. Nonetheless, a greater proportional increase in salaries accrued to surgical subspecialists, anesthesiologists, and radiologists.

### Discussion

We found that, as anticipated, enactment of the Veterans Affairs Health Care Personnel Enhancement Act of 2004 increased full-time VA physician salaries at different rates, depending on the specialty examined. Overall, between fiscal years 2005 and 2006, full-time VA physicians’ annual salaries increased by about \$2,000 less than anticipated by the CBO; however, by fiscal year 2007, performance pay for the full-time physicians examined was about three times what was anticipated by the CBO. We also found that the salary increases were successful in achieving pay equity between full-time VA and AAMC Associate Professors in only a few specialties. However, the salary gap between VA- and AAMC-employed

**Figure 4. (Left) Percentage Change in Income, for Full-Time VA Physicians and AAMC Associate Professors, by Specialty, for Academic years 04–05 to 05–06 and 05–06 to 06–07 (Right) Number of Years Until Mean VA Incomes Equal Median AAMC Incomes, by Specialty, Assuming Continued Rate of Income Raises in Academic Years 04–05 to 05–06 and 05–06 to 06–07**

	Percentage Change in Salary				Years to Reach Parity, Assuming Continued Rate of Income Growth in	
	AY 04–05 to AY 05–06		AY 05–06 to AY 06–07		04–05 to 05–06	05–06 to 06–07
	VA	AAMC	VA	AAMC		
Family Medicine	3.3%	0.7%	3.2%	3.9%	1.0	Never
General Internal Medicine	5.0%	2.0%	4.8%	4.6%	NA	NA
Neurology	4.4%	5.3%	4.3%	5.6%	Never	Never
Psychiatry	3.1%	2.6%	3.2%	3.2%	NA	NA
Pathology	5.2%	3.4%	5.6%	3.9%	2.0	2.1
Medical Subspecialty	8.3%	5.1%	6.3%	2.5%	0.2	0.1
Emergency Medicine	5.6%	4.1%	4.3%	4.4%	11.8	Never
PM&R	4.8%	5.8%	3.4%	-1.1%	Never	0.0
Ophthalmology	10.0%	3.1%	6.7%	5.6%	3.0	18.8
Dermatology	7.8%	6.9%	6.3%	0.4%	17.6	2.4
Urology	12.2%	6.2%	6.0%	10.1%	6.6	Never
General Surgery	11.2%	6.6%	7.8%	3.7%	6.7	7.2
Orthopedic Surgery	16.7%	10.6%	9.1%	11.3%	9.7	Never
Anesthesiology	15.7%	5.7%	8.5%	5.4%	2.3	7.2
Diagnostic Radiology	14.5%	7.8%	7.8%	5.6%	4.7	13.6

procedure-based physicians remained substantial, and will not likely be eliminated in the near future. We found absolute or relative reductions in income correlated with reductions, not increases, in the full-time VA physician workforce. Finally, we found that while the overall changes in pay approximated CBO estimates, the majority of the pay increases accrued to specialists whose mean salaries were already at or near AAMC Associate Professor target salaries.

Our analysis helps explain why the effect of the Act was felt to be “mixed to

disappointing” at the October 2007 Hearing of the House VA subcommittee on Health.<sup>7</sup>

It appears that salary increases were not high enough either to retain general internists and medical subspecialists or to close pay gaps among VA and AAMC surgical subspecialists, anesthesiologists, and radiologists. The VA’s investment of over \$141 million would need to be augmented by another \$104 million per year, an increase of 74 percent over current expenditures, to achieve parity across all the specialties we examined, without decreasing any current salaries.

Figure 5. The Number of Full-Time Physicians in Each Specialty, the Total Pay for Each Specialty, the Overall Change in Total Salaries, and the Amount of Change Attributable to Workforce and Salary Changes

	Academic Year 04–05		Academic Year 06–07		Change in Pay		
	Full-Time Physicians	Total Workforce Pay	Full-time Physicians	Total Workforce Pay	Overall	Attributable to Workforce Changes	Attributable to Salary Changes
Family Medicine	428	\$62,726,866	560	\$87,334,357	\$24,607,491	\$20,487,282	\$4,120,209
General Internal Medicine	2,085	\$315,512,840	1,807	\$300,975,801	-\$14,537,040	-\$46,214,295	\$31,677,255
Neurology	142	\$21,876,358	175	\$29,406,569	\$7,530,212	\$5,587,248	\$1,942,964
Psychiatry	1,122	\$180,853,547	1,260	\$216,237,313	\$35,383,766	\$23,768,943	\$11,614,823
Pathology	230	\$37,386,751	235	\$42,520,619	\$5,133,868	\$994,106	\$4,139,763
Medical Subspecialty	1,454	\$236,900,947	1,189	\$222,946,418	-\$13,954,530	-\$49,689,488	\$35,734,958
Emergency Medicine	41	\$6,622,249	82	\$14,806,582	\$8,184,333	\$7,515,803	\$668,530
PM&R	205	\$33,699,497	249	\$44,476,362	\$10,776,865	\$7,985,224	\$2,791,640
Ophthalmology	82	\$14,045,520	111	\$22,500,704	\$8,455,184	\$6,017,042	\$2,438,142
Dermatology	30	\$5,270,961	38	\$7,661,506	\$2,390,545	\$1,623,630	\$766,914
Urology	101	\$17,908,943	114	\$24,050,014	\$6,141,071	\$2,742,545	\$3,398,526
General Surgery	306	\$54,541,225	285	\$60,952,757	\$6,411,533	-\$4,437,788	\$10,849,321
Orthopedic Surgery	78	\$14,419,758	92	\$21,715,004	\$7,295,246	\$3,354,350	\$3,940,896
Anesthesiology	234	\$44,643,361	283	\$67,652,731	\$23,009,370	\$11,653,960	\$11,355,410
Diagnostic Radiology	342	\$67,172,382	378	\$91,709,354	\$24,536,972	\$8,789,066	\$15,747,906
<b>Total</b>	<b>6,877</b>	<b>\$1,113,581,205</b>	<b>6,859</b>	<b>\$1,254,946,090</b>	<b>\$141,364,886</b>	<b>\$177,629</b>	<b>\$141,187,256</b>

Our study has several limitations. First, we examined only full-time VA physicians; income changes may have differed among part-timers. However, the AAMC's lack of comparable data on part-time academicians required us to restrict our analysis to full-time physicians. In addition, full-time physicians undoubtedly form the backbone of the VA physician workforce. Indeed, cost savings via reduction in "fee-basis" work and increased efficiencies achieved through full-time employment of VA physicians were anticipated as a result of the Act's passage.<sup>8</sup> In addition, we examined only 15 specialties. The specialties that we examined had substantially higher average incomes than those we excluded. Therefore, our analysis might underestimate overall differences between VA physicians' and Associate Professors' incomes. Further, we were unable to disaggregate medical subspecialists into particular subspecialties. Although we used comparable data from the AAMC, to the extent that the distribution of medical subspecialties differs in the two settings, our results are inaccurate. Finally, we examined changes in VA physicians' incomes relatively soon after ratification of the Act; although VA physicians' incomes plateaued within a year of the Act, it is possible that in the longer run, remaining income gaps between VA and AAMC Associate Professors may narrow.

Despite these limitations, our analysis demonstrates that, while the Veterans Affairs Health Care Personnel Enhancement Act of 2004 was effective at increasing VA physicians' incomes, substantial income disparities between VA and academic physicians—particularly those in surgical subspecialties, anesthesiologists, and radiologists—exist; the rapid plateau of VA physicians' salary increases suggests that these disparities will persist for some time. Given the high and increasing income levels required to achieve pay parity for surgical specialists, anesthesiologists, and radiologists, it seems unlikely that VA will be able to attain income equity in these specialties. Therefore, as it considers the development of its workforce and the way it delivers care, in certain instances where it cannot guarantee the highest quality care at low cost, VA might consider "purchasing" surgical care while "making" primary and mental health care. Although VA would need to adopt a new insurance role to accomplish this, purchasing such care might reduce the need to maintain expensive technologies within the VA, reduce VA inefficiencies in providing such care,<sup>9</sup> allow for better coordination of costs with other insurers,<sup>10</sup> and improve patient outcomes by referring patients to high performance providers<sup>11</sup> (particularly those who live at a distance from VA care)<sup>12</sup> while reducing VA patients' exposure to undue mortality risks.<sup>13</sup>

---

## REFERENCES

1. Fink, A.S., "Veterans Administration Physician Compensation: Past, Present, Future," *Am J Surg*, 2006; 142(3):242–246; Roswell R., Statement of the Honorable Robert H Roswell, MD, Under Secretary for Health Department of Veterans Affairs before the Subcommittee on Health, Committee on Veterans' Affairs, US House of Representatives, October 21, 2003.
2. Public L. No. 108-445, Department of Veterans Affairs Health Care Personnel Enhancement Act of 2004, available at <http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=>

- 108\_cong\_public\_laws&docid=f:publ445.108.pdf, accessed October 15, 2008.
3. Roswell R., Statement of the Honorable Robert H Roswell, MD, Under Secretary for Health Department of Veterans Affairs before the Subcommittee on Health, Committee on Veterans' Affairs, US House of Representatives, October 21, 2003.
  4. Congressional Budget Office Cost Estimate, S. 2484, Department of Veterans Affairs Health Care Personnel Enhancement Act of 2004, available at <http://www.cbo.gov/ftpdocs/57xx/doc5768/s2484.pdf>, accessed October 15, 2008, Washington, DC, August 20, 2004.
  5. Desmarais W., Report on Medical School Faculty Salaries, 2004–2005, Washington, DC: Association of American Medical Colleges, Division of Medical School Services and Studies, 2006; Desmarais W., Report on Medical School Faculty Salaries, 2005–2006, Washington, DC: Association of American Medical Colleges, Division of Medical School Services and Studies, 2007; Geraci W., Report on Medical School Faculty Salaries, 2006–2007, Washington, DC: Association of American Medical Colleges, Division of Medical School Services and Studies, 2008.
  6. *Supra*, n.4.
  7. Spotswood S., "VA Physician Recruitment, Retention Still a Struggle," *US Medicine*, 2007 November, 2007:1, 31.
  8. *Supra*, n.4.
  9. Weeks W.B., West A.N., Wallace A.E., Fisher E.S., "Comparing the Characteristics of VA and Non-VA Inpatient Care Provided to VA Enrollees: A Case Study in New York," *Medical Care*, 2008, 46(8):863–871.
  10. West A.N., Weeks, W.B., Wright S.M., Wallace A.E., Fisher E.S., "When VA Patients Have Non-VA Hospitalizations, Who Pays for What Services, and What Are the Research Implications?" A New York Case Study, *Medical Care*, 2008, 46(8):872–877; West A.N., Weeks W.B., "Who pays When VA Users Are Hospitalized in the Private Sector? Evidence from Three Data Sources," *Medical Care*, 2007, 45(10):1003–1007.
  11. Weeks W.B., Bott D.M., Bazos D.A., Campbell S.L., Lombardo R., Racz M.J., Hannan E.L., Wright S.M., Fisher E.S., "Veterans Health Administration Patients' Use of the Private Sector for Coronary Revascularization in New York: Opportunities to Improve Outcomes by Directing Care to High-Performance Hospitals," *Medical Care*, 2006, 44(6): 519–526; Weeks W.B., Fisher E.S., Characteristics of VA Patients Who Use Low Quality Private Sector CABG Centers in New York," *Medical Care Research and Review*, 2007, 64(6):691–705; Weeks W.B., West A.N., Wallace A.E., Lee R.E., Goodman D.C., Dimick J.B., Bagian J.P., "Reducing Avoidable Deaths by Directing Veterans' Private Sector Surgical Care to High Performance Hospital," *American Journal of Public Health*, 2007, 97(12):1–7.
  12. West A.N., Weeks W.B., Wallace A.E., Rural Veterans and Access to High-Quality Care for High-Risk Surgeries," *Health Services Research*, 2008, 45(5 (Part 1)):1737–1751;
  13. Weeks W.B., Wallace A.E., Wallace T.A., Gottlieb D.J., "Does the VA Offer Good Health Care Value?" (companion article), *Journal of Health Care Finance*, 2009, 36:1.