Public-sector health-care reforms that work? A case study of the US Veterans Health Administration

Adam Oliver

The Veterans Health Administration (VHA) is the largest integrated health-care system in the USA,[1] and provides public-sector care for honourably discharged veterans of the US armed forces. The panel sets out eligibility criteria for the VHA. The system is financed mostly from general taxation and can be characterised as a veteran-specific national health service. Since the 1970s, the quality of service provided by the VHA had been regarded as poor by almost all relevant stakeholders. However, in the past few years, the academic and popular press have reported a turnaround in the VHA's performance.[2–4] This improvement can be attributed to a set of reforms that were gradually introduced from 1995. What could policy makers in other health-care systems learn from the VHA's story?

Only a few studies have compared the whole-system performance of the VHA with other sectors of US health care, but in one, Asch and colleagues[2] looked at 348 process-quality indicators across 26 conditions and a broad range of inpatient and outpatient services, to compare the performance of the VHA against a national sample of non-VHA patients over a 2-year period in the late 1990s. Table 1 compares the health care and service provided by the VHA and by non-VHA providers. Against these quality indicators, VHA patients received much better overall care, chronic care, and preventive care than did other patients. The quality of acute care did not differ significantly between the two samples, but in general, patients with the VHA had better screening, diagnostics, treatment, and follow-up than did other patients. The age of the patients in the two samples and the number of chronic conditions were similar, although the VHA patients had on average slightly fewer acute conditions.

Jha and colleagues[3] also used process measures to assess the change in the quality of the VHA's health care between 1994 and 2000. Additionally, they compared the quality of the VHA with that of fee-for-service Medicare—the publicly financed programme for Americans aged 65 years and older—between 1997 and 2000.[3] Table 2 shows both that VHA performance improved substantially on several criteria between 1994 and 2000, and that by 2000 the VHA performed better than Medicare on 12 of 13 quality indicators that were common to both programmes. All of the differences in measured indicators between VHA (1994–95) and VHA (2000) are significant at 0·1%; those between VHA (2000) and Medicare (2000–01) are significant at 1·0%.

Table 3 compares the VHA with other sectors of US health care over the most recent years for which these data are available, and shows that in 2004–05 the VHA outperformed the commercial health-sector provider, Medicare, and Medicaid (the publicly financed programme for indigent Americans) on 13 of the 15 indicators for which a comparison was possible.[5,6] Of course, the armed service veterans who are eligible to use the VHA are a specific group, and cannot be directly compared with other patients. That said, since VHA patients tend to be poorer, older, and sicker than those who use private facilities in the USA, its good performance against the commercial sector in table 3 is perhaps all the more impressive.

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London School of Economics and Political Science, London, UK (A Oliver PhD)

Correspondence to:
Dr Adam Oliver, London School of Economics and Political Science, Houghton Street, London WC2A 2AE, UK
a.j.oliver@lse.ac.uk

Panel: VHA eligibility

A dishonourable discharge from the armed services precludes eligibility for the VHA.

Veterans who enlisted before 1980 and those who request benefits for a service-related condition face no length-of-service criteria, whereas those who began their active duty after 1980 must generally have had at least 24 months of continuous active military service. For those who have served during wartime, the requirement is less than 24 months of continuous active service.

Eligible veterans who have service-related conditions that are rated as at least 50% disabling or that have rendered them unemployable are designated as the highest priority group. They have shorter enrolment times and are less likely to be charged copayments. Eight levels of priority have been specified. Veterans in the lowest priority group have no service-related conditions and have an above-median income for the geographic area in which they live. From 2003, no new veterans in the lowest priority group were enrolled, although those assigned before 2003 remain enrolled and eligible for VHA care.

	VHA patients	Non-VHA patients	Difference (95%CI)
Overall	294 (67%)	330 (51%)	16% (14 to 18)
Chronic obstructive pulmonary disease	17 (69%)	19 (59%)	10% (−2 to 23)
Coronary artery disease	31 (73%)	37 (70%)	3% (−3 to 16)
Depression	14 (80%)	14 (62%)	18% (−1 to 26)
Diabetes	13 (70%)	13 (57%)	13% (8 to 18)
Hyperlipidaemia	7 (64%)	7 (53%)	11% (1 to 21)
Hypertension	24 (78%)	24 (65%)	13% (8 to 20)
Osteoarthritis	3 (65%)	3 (57%)	8% (−1 to 18)
Chronic care	202 (72%)	222 (59%)	13% (10 to 17)
Preventive care	27 (64%)	32 (44%)	20% (12 to 28)
Acute care	60 (53%)	76 (55%)	−2% (−9 to 4)
Screening	15 (68%)	16 (46%)	22% (20 to 26)
Diagnosis	145 (73%)	139 (61%)	12% (8 to 16)
Treatment	103 (56%)	126 (41%)	15% (12 to 18)
Follow-up	37 (72%)	43 (58%)	14% (10 to 18)
VHA performance measures	26 (67%)	26 (43%)	24% (21 to 26)
Conditions covered by VHA performance	144 (70%)	152 (58%)	12% (10 to 15)
Conditions not covered by VHA performance	124 (55%)	152 (50%)	5% (0 to 10)

Data are number of indicators (mean percentage of patients for whom performance indicators were met in each category), unless otherwise specified. VHA=Veterans Health Association. Data have been adapted from those in reference 2, with permission.

Table 1: **Comparison of performance of VHA with other health-care providers**

	VHA (1994–95)	VHA (2000)	Medicare (2000–01)
Preventive care			
Mammography	64%	90%	77%
Influenza vaccination	28%	78%	71%
Pneumococcal vaccination	27%	81%	64%
Outpatient care			
For diabetes			
Annual measurement of glycosylated haemoglobin	51%	94%	70%
Annual eye examination	48%	67%	74%
Semiannual lipid screening	Not reported	89%	60%
Inpatient care			
For acute myocardial infarction			
Aspirin within 24 h	Not reported	93%	84%
Aspirin at discharge	89%	98%	84%
β blocker at discharge	70%	95%	78%
ACE inhibitor if ejection fraction <40%	Not reported	90%	71%
Smoking cessation	Not reported	62%	38%
For congestive heart failure			
Ejection fraction checked	Not reported	94%	71%
ACE inhibitor if ejection fraction <40%	Not reported	93%	66%

Data are percentage of eligible patients who experienced the quality indicator. Data have been adapted from reference 3, with permission. VHA=Veterans Health Administration. ACE=angiotensin-converting enzyme.

Table 2: **Comparison of performance of VHA with Medicare**

	VHA (2005)	Commercial (2004)	Medicare (2004)	Medicaid (2004)
Preventive care				
Mammography	86%	73%	74%	54%
Cervical cancer screening	92%	81%	Not reported	65%
Colorectal cancer screening	76%	49%	53%	Not reported
Influenza vaccination*	75%	Not reported	75%	68%
Pneumococcal vaccination	89%†	Not reported	Not reported	65%*
Outpatient care				
For diabetes				
Annual measurement of glycosylated haemoglobin	96%	87%	89%	76%
Poor control: glycosylated haemoglobin >9%‡	17%	31%	23%	49%
Semiannual lipid screening	95%	91%	94%	80%
LDL cholesterol <2·6 mmol/L	60%	40%	48%	31%
LDL cholesterol <3·36 mmol/L	82%	65%	71%	51%
Annual eye examination	79%	51%	67%	45%
Annual renal examination	66%	52%	59%	47%
For hypertension				
Blood pressure ≤140/90	77%	67%	65%	61%
For mental illness				
30-day follow-up after admission to hospital	70%	76%	61%	55%
Inpatient care				
For acute myocardial infarction				
β blocker at discharge	98	96	94	85%

Data are percentage of eligible patients who experienced the quality indicator. Data have been adapted from the Veterans' Affairs Office of Quality and Performance[5] and the Health Employer Data Information Set from the National Committee for Quality Assurance.[6] VHA=Veterans Health Administration. *For patients aged 65 years or older. †For all ages at risk. ‡Lower is better.

Table 3: **Comparison of performance of VHA with other health-care providers in 2004–05**

By the early 1990s, the VHA was under pressure to improve or to be replaced by a voucher system that would allow indigent veterans and those with service-related disabilities to access private-sector facilities. The principal catalyst for change and improvement was the appointment of Kenneth W Kizer as undersecretary for health—and therefore as the VHA's chief executive officer—in 1994. In 1995, Kizer outlined and initiated a blueprint for change in a policy document, titled Vision for Change.[7,8] Central to Kizer's reforms was a plan to replace four regions, 33 networks, and 159 independent medical centres with 22 (now 21) Veterans Integrated Service Networks (VISNs).[8] Each network was to be financed by a capitated budget (ie, based on the number of patients and past and projected workloads).[8] Each VISN was tasked with budgeting and planning health-care delivery for veterans over a particular geographic area, and with overseeing the development of primary care and the downsizing of hospital care. Before the reforms, the VHA was a hospital-based system, with outpatient services available only as follow-up to inpatient episodes. The VHA, which had traditionally been open only to indigent veterans and those who had service-related disabilities, was opened up to all veterans who met specific criteria (panel). A national centre for patient safety was established. The VHA also offered access to outpatient pharmaceuticals, the cost of which it kept down with a National Pharmacy Benefits Management Program (VAPBM),[9] and by use of its bargaining power with the pharmaceutical companies. The VHA's provision of pharmaceuticals to outpatients has been popular, even for its members who also have private insurance, or are eligible for Medicare coverage, or both.

The VHA's improvements in process quality have been driven by simple performance criteria (eg, those in table 2) for which VISN directors and hospital managers are held accountable. Incentives to improve performance against these criteria are both financial and non-financial. For example, senior managers are eligible to receive performance-related bonuses that typically amount to about 10% of their salaries. Details of the performance of each VISN and facility are also disseminated throughout the VHA, which encourages performance-enhancing efforts.[10] Moreover, the VHA grants greater decision making autonomy or managerial scrutiny on the basis of good relative performance.

In 1999, the VHA also mandated a national electronic health-record system to capture patient information. The system was the culmination of two decades of development, and has received positive assessments.[11,12] The system provides useful detail on, for example, medical charting, provider orders, and patient progress notes. Its annual upkeep cost is about US$90 for each patient.[10] The system is accessible and largely integrated across the whole health-care system, so physicians can view patient records in their offices and, in theory, via laptop computers at patients' bedsides. The system increased the availability of patient-charts at the point of clinical encounter from 60%

to 100% between 1995 and 2004.[13] At least one in five medical tests in the US are repeated because of lost patient records,[14] but lost records are no longer a problem in the VHA.[15] However, the role of the electronic health-record system ought not to be exaggerated, because much of the VHA's improvement in process quality happened before it was implemented nationally.

The VHA's 20-year investment in health-services research helped it to identify both the types of reforms needed and the ways in which they could be implemented. For example, VHA headquarters used evidence to choose indicators of process quality that could be recorded with some reliability and were linked with health outcomes. VHA-funded research had also helped to develop and implement the electronic health-record system; had assessed the possible effects of development of the primary-care sector; and had investigated ways to change the behaviour of physicians.

The VHA's annual budget remained fairly fixed at around US$20 billion between 1995 and 1999, but had jumped to about $30 billion by 2005. Thus, some might draw the conclusion that extra money was responsible for the improvement in the VHA's performance. However, the quality improvements summarised in tables 1 and 2 occurred before the VHA budget increased substantially. Moreover, the number of patients who visited the VHA each year rose from 2·5 million patients in 1995 to 5·3 million patients in 2005.[16] Although many of these new patients enrolled in the VHA simply to receive low-cost pharmaceuticals, and therefore have not made expensive demands on the system, VHA patients remain old, sick, and poor compared with the wider population. By downsizing some aspects of inpatient care, the VHA has been able to direct more resources towards its targeted areas, in which performance has improved. However, even in areas that it has not targeted, the VHA has performed as well as, for example, Medicare (table 1).

According to interviews with people who work with the VHA, access to VHA services has become a source of concern, and not just because many veterans, especially those who live in rural settings, live far away from VHA secondary care. The VHA retightened its eligibility criteria in 2003, mainly because patient numbers had doubled since its reforms, and barred entry to veterans who did not have a service-related problem and who had an above-median income for the geographic region in which they lived. Although the development of primary care was undoubtedly necessary, the VHA reform process has arguably shifted the emphasis to primary care, at the expense of the hospital sector. This shift has perhaps caused implicit restrictions on access to specialist care in the VHA that, in part, might have generated pressure to introduce explicit restrictions on eligibility. Moreover, the VHA's focus on development of primary care for an older, more chronically ill population over the past decade raises legitimate concerns about the VHA's 'war readiness' now and in the future.

Given these anecdotal concerns about restrictions on access and the impending fallout from Afghanistan and Iraq, the achievements of the VHA ought not to be exaggerated. However, on balance, the improvements in process quality over the past decade have been impressive. The VHA has achieved this transformation by factors which include strong leadership; its development from a hospital-based system to a broader health-care system; the establishment of regionally financed health-care planning bodies (VISNs); the introduction of performance management and associated financial and non-financial incentives for competition; the development of an electronic health record; and, preceding the reforms, two decades of funding for health-services research and technical-capacity development.

Conflict of interest statement

I declare that I have no conflict of interest.

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References

1 Evans L. Recognizing the 75th Anniversary of the establishment of the Veterans Administration. Washington DC, USA: House of Representatives, 2005.

2 Asch SM, McGlynn EA, Hogan M, et al Comparison of quality of care for patients in the Veterans Health Administration and patients in a national sample. *Ann Intern Med* 2004; **141:** 938–45.

3 Jha AK, Perlin JB, Kizer KW, Dudley RA. Effect of the transformation of the Veterans Affairs health care system on the quality of care. *N Engl J Med* 2003; **348:** 2218–27.

4 Krugman P. Health care confidential. *New York Times*; January 27, 2006: 23.

5 VA Office of Quality and Performance. VA's performance compared to non VA. Washington DC, USA: Veterans Health Administration, 2005.

6 NCQA. State of health care quality report. Washington DC, USA: National Committee for Quality Assurance, 2005.

7 Kizer KW. Vision for change: a plan to restructure the Veterans Health Administration. Washington DC, USA: Veterans Health Administration, 1995.

8 Oliver A. The Veterans Health Administration: an American success story? Milbank Q 2007; **85:** 5–35.

9 Sales MM, Cunningham FE, Glasman PS, Valentino MA, Good CB. Pharmacy benefits management in the Veterans Health Administration: 1995 to 2003. *Am J Manag Care* 2005; **11:** 104–22.

10 Perlin JB. Transformation of the US Veterans Health Administration. *Health Econ Policy Law* 2006; **1:** 99–105.

11 Brown SH, Lincoln MJ, Groen PJ, Kolodner RM. VistA: US Department of Veterans Affairs national-scale HIS. *Int J Med Inform* 2003; **69:** 135–56.

12 Evans DC, Nichol P, Perlin JB. Effect of the implementation of an enterprise-wide electronic health record on productivity in the Veterans Health Administration. *Health Econ Policy Law* 2006; **1:** 163–69.

13 Perlin JB, Kolodner RM, Roswell RH. The Veterans Health Administration: quality, value, accountability, and information as transforming strategies for patient-centered care. *Am J Manag Care* 2004; **10:** 828–36.

14 PITAC. Revolutionizing health care through information technology. Washington DC, USA: President's Information Technology Advisory Committee, 2004.

15 Perlin J. President' FY 2007 budget, Senate Veterans Affairs Committee. Washington DC, USA: Department of Veterans Affairs, 2006.

16 Perlin JB. Transformational strategies of the US Veterans Health Administration. London, UK: International Health Care Quality Exchange Conference, The Health Foundation, 2005.