

# LDI *Issue Brief*

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## **Comparing VA and Non-VA Health Care: the Case of Post-Stroke Rehabilitation**

Editor's Note: The Department of Veterans Affairs (VA) runs the largest integrated health system in the country, and provides care to nearly 4 million patients each year. It has been dogged by persistent doubts about its efficiency and quality of care, despite numerous quality improvement programs and an extensive reorganization in 1995. In fact, recent studies have found that health care in the VA compares favorably with non-VA systems, in areas such as preventive care and treatment for acute myocardial infarction. This Issue Brief summarizes a comparison in another area—inpatient rehabilitation for stroke—and highlights the difficulty and complexity of assessing quality across systems of care.

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### **A snapshot of the VA health care system**

VA operates 173 medical centers, 134 nursing homes and more than 600 community clinics that treated nearly 600,000 inpatients last year and provided for 36.4 million outpatient visits. No comparable health care system in the private sector exists; thus, comparisons with the private sector must take into account differences in coverage, policies, and populations treated.

- VA provides a broad spectrum of medical, surgical, and rehabilitative care to veterans, including nursing home care and prescription drugs. Because of the breadth of these benefits, the VA may preferentially attract patients with no other means of securing needed services.
  - Highest priority for VA care goes to veterans with service-connected disabilities, and to those who meet income eligibility criteria. Thus, the VA's treatment population tends to be poorer than the general population, and far less likely to have health insurance.
  - VA provides rehabilitation services to more than 2,500 veterans with stroke annually at an estimated cost of \$40 million. The separate VA and non-VA systems of care provide an opportunity to compare systems of rehabilitation and to examine how differences in the populations served affect resources used and patient outcomes.
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## Study explores reasons for longer stays in VA rehabilitation

Previous reports show that stroke patients in the VA have less severe disabilities at admission to rehabilitation, longer lengths of stay, and better functional status at discharge than stroke patients in non-VA facilities. Stineman and colleagues used a national database of information on inpatient rehabilitation to explore these differences and to address the following questions:

- Can longer lengths of stay in the VA be explained by different patient characteristics? A panel of VA rehabilitation physicians identified attributes of their patients that they believe tend to prolong length of stay, slow recovery, and impede community discharge. These attributes include ethnic minority status, single or divorced status, retirement due to disability, lower income, and substance abuse.
- Are higher levels of function in VA patients at discharge related to their less severe disabilities at admission?
- How does length of stay affect outcomes? Do longer lengths of stay represent inefficiency in VA care, or do they lead to higher levels of function at discharge?

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## Stroke rehabilitation patients treated in VA and non-VA sites differ substantially

Stineman and colleagues used the Uniform Data System for Medical Rehabilitation to compare VA discharges from 1994 and 1995 with non-VA discharges in 1995. They used two years data from the VA because of the smaller numbers of patient records in a single year. The study included 3,056 patients with stroke from 60 VA facilities and 52,382 patients from 467 non-VA sites.

- VA patients were more likely to be male, less disabled at admission and younger than non-VA patients. The VA served a higher proportion of patients who are single, separated or divorced, who are unemployed or retired because of disability, and who are not white.
- VA patients tended to have longer times between the onset of stroke and admission to rehabilitation, possibly signaling a problem in coordination between acute and rehabilitation services in the VA or greater pressures toward earlier discharge from acute care settings in the private sector. In the VA, 64% of stroke patients had longer than a 2-week interval between stroke and rehabilitation admission, compared to just under 25% in other sites.
- Stroke patients treated at the VA had average lengths of stay of 32.5 days, compared to 23.5 days for non-VA patients. VA patients had better functional outcomes, but were less likely to be discharged to the community than non-VA patients.

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## Adjusting for other factors, VA stroke patients often have better functional outcomes

Even after statistically accounting for differences in patient characteristics and health care processes, length of stay in VA rehabilitation services was much longer than in non-VA rehabilitation sites. After statistically removing the effects of patients' longer lengths of stay and higher initial function, overall functional outcomes were better in VA facilities.

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- Lengths of stay were longer in all functional categories; however, differences in length of stay were most marked for patients with the least severe disabilities. Patients in the most disabled category stayed 30% longer on average at the VA than those in non-VA facilities, and those in the least disabled category stayed 200% longer in VA than in non-VA facilities.
  - The VA's relative advantage in functional outcomes was concentrated in patients with moderately severe disabilities. This apparent success of the VA is especially important because caregiver burden decreases as functional status increases.
  - Stroke patients in the VA were far less likely to be discharged to the community than comparable individuals treated in non-VA sites. This difference was most pronounced for patients with less severe disabilities, who were three times as likely to be discharged to the community from non-VA sites as from VA sites.

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### **Different admission criteria, insurance-related pressures may contribute to different outcomes of rehabilitation across systems**

The investigators showed that the magnitude of the differences in length of stay and patient outcomes depends on the severity of the patients' initial disabilities. However, structural and process differences between the VA and non-VA health care systems represent another important explanation of differences.

- The higher proportions of less disabled patients in the VA suggests that some patients are entering VA rehabilitation for reasons other than functional deficits. VA physicians describe admitting veterans after mild stroke whose homelessness, psychiatric problems, substance abuse, or alcoholism became more of a management focus than their functional status.
- Insurance-related pressures and differences in admission criteria for rehabilitation units outside the VA may create incentives against admitting patients with limited functional goals. Relatively less third-party pressure in the VA may lead to fewer incentives to discharge patients quickly.
- Policies that govern the provision of stroke rehabilitation care undoubtedly contributed to differences. As a condition of payment for rehabilitation, Medicare requires that the patient receive 3 hours daily physical, occupational or speech therapy. Because the VA has no such requirement, length of stay in the VA might increase to compensate for less intense daily services.
- Admission to a VA hospital is generally bundled with 6 months of nursing home care. The VA may preferentially attract patients who would otherwise be unable to afford such placement. This benefit makes it difficult to conclude that the VA's lower rates of community discharge reflect lower-quality care.

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### **POLICY IMPLICATIONS**

These results highlight the challenges of evaluating the structures, processes, and outcomes of care across diverse settings. As the example of post-stroke rehabilitation suggests, different outcomes in VA and non-VA settings reflect both the quality of care as well as larger social and economic forces.

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## POLICY IMPLICATIONS

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- Admission to non-VA rehabilitation units depends on adequate health insurance, while priority for VA services is given to low-income veterans. Therefore, it is likely that stroke patients receiving treatment in the VA have fewer resources at home, or face greater barriers to discharge, than non-VA patients. They may need to achieve higher levels of functional independence and may need longer periods of rehabilitation. The connections among patient need, resources and clinical outcomes need further study.
- As the VA repositions itself to compete in the same markets as other health systems and as it faces pressures to reduce costs and maintain outcomes, it is essential to establish common metrics to evaluate effectiveness and to recognize the uniqueness of the VA treatment population.
- Future research on quality of care issues should consider the factors that lead veterans to seek care at VA or private sector facilities, as well as the racial, socioeconomic and geographic factors that affect care once veterans are enrolled in the system.

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This Issue Brief is based on the following article: M.G. Stineman, R.N. Ross, B.B. Hamilton, G. Maislin, B. Bates, C.V. Granger, D.A. Asch. Inpatient rehabilitation after stroke. A comparison of lengths of stay and outcomes in the Veterans Affairs and Non-Veterans Affairs Health Care System. *Medical Care*, February 2001, vol. 39, pp. 123-137.

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