



Highlights of [GAO-10-189](#), a report to the Ranking Member, Committee on Veterans' Affairs, House of Representatives

Why GAO Did This Study

The Department of Veterans Affairs (VA) operates one of the largest health care systems in the country. As of August 2009, VA's Veterans Health Administration (VHA) had 32 major ongoing construction projects with an estimated total cost of about \$6.1 billion and average cost per project of about \$191 million. Some of these projects were initiated as part of VA's Capital Asset Realignment for Enhanced Services (CARES) process, which was a comprehensive assessment of VHA's capital asset requirements.

In response to a congressional request, GAO (1) described how costs and schedules of current VHA major construction projects have changed, (2) determined the reasons for changes in costs and schedules, and (3) described the actions VA has taken to address cost increases and schedule delays. To do its work, GAO reviewed construction documents, visited three construction sites, and interviewed VA officials.

What GAO Recommends

To provide a better estimate of the cost and completion date of a construction project, GAO recommends that the VA Secretary, for all major projects, conduct a cost risk analysis, a schedule risk analysis when appropriate, and require the use of an integrated master schedule. VA concurred with our recommendations.

[View GAO-10-189 or key components.](#) For more information, contact Terrell G. Dorn at (202) 512-6923 or dorn@ga.gov.

VA CONSTRUCTION

VA Is Working to Improve Initial Project Cost Estimates, but Should Analyze Cost and Schedule Risks

What GAO Found

While about half of the 32 major ongoing construction projects are within their budget, 18 projects have experienced cost increases and 11 have experienced schedule delays since they were first submitted to Congress. Five projects have experienced a cost increase of over 100 percent. For example, the cost of a new medical center in Las Vegas rose from an initial estimate of \$286 million to over \$600 million, an increase of about 110 percent. Thirteen projects have experienced cost increases of between 1 and 100 percent. In addition, 11 projects have experienced schedule delays, 4 of which are more than 24 months.

There are several reasons for construction project cost increases and schedule delays, including VA preparing initial cost estimates that were not thorough, significant changes to project scope after the initial estimate was submitted, and unforeseen events such as an increase in the cost of construction materials. According to VA officials, VA prepared numerous estimates during the CARES process, and some of these estimates used rudimentary estimating techniques such as average cost-per-square-foot and were completed by VA staff that did not have cost estimating expertise. The scope of some projects changed after VA submitted an estimate to Congress, which increased the projects' costs. For example, the scope for the original design for a new medical center in Las Vegas did not fully account for the amount of medical services the center would need to provide. As a result, the original estimate of \$286 million rose to over \$600 million.

VA has taken steps to improve initial construction project cost estimates, but could better assess the risks to costs and schedules. VA plans to prepare more comprehensive estimates after approving projects and before submitting them to Congress. It is not clear how effective this new process will be, but it could improve VA's estimates. While VA contractors follow construction scheduling procedures that generally meet best practices, VA does not conduct cost or schedule risk analyses, which use statistical techniques to predict risks that can lead to cost increases and schedule delays. Thus, VA cannot quantify the largest risks to a project or mitigate those risks. For example, GAO conducted a schedule risk analysis for a medical center in Las Vegas and found that there is a 50 percent chance that the project won't be finished until more than 6 months after its estimated completion date. VA also does not require an integrated master schedule that includes VA and contractor efforts for all project phases, which can be critical to a project's success.

Range of Cost Changes in Ongoing Projects

