

## Surgical Complexity Initiative

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A basic aim of effective and efficient health care is ensuring the right match between the patient's condition and the setting for the patient's care. With that aim in mind, the U.S. Department of Veterans Affairs (VA) recently implemented the Surgical Complexity Initiative to further improve the safety and quality of care for Veterans. This is the first national effort to align the complexity of surgical procedures performed by a Veterans Health Administration (VHA) facility with that facility's demonstrated infrastructure (e.g., ICU critical care coverage, professionals trained in necessary specialties). The new initiative ensures that VHA surgical programs practice within the scope of their available resources, thereby avoiding potential complications often associated with "surgical mission creep."

The initiative was developed in response to patient incidents at a facility in 2007, in which the root cause was determined to include the performance of surgical procedures without the necessary supporting infrastructure. To address this issue, VHA's efforts centered around three basic steps. The first step was to develop two matrices, the Procedure Infrastructure Matrix and the Surgical Complexity Matrix. The Procedure Infrastructure Matrix designates the infrastructure requirements for a VHA facility with an inpatient surgical program as one of three levels: standard, intermediate, or complex. The Surgical Complexity Matrix uses the same designations to categorize surgical procedures based on Current Procedure Terminology (CPT) code.

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The second step was to delineate the structural framework for nationwide implementation and monitoring. VHA established a Veterans Integrated Service Network (VISN) Surgical Workgroup in each of the VA's 21 VISNs, which are VHA's regional networks, and created 16 Surgical Advisory Boards composed of more than 90 subject-matter experts from key disciplines (e.g., cardiothoracic surgery, neurosurgery, transplant surgery). The workgroups and the boards evaluated the Procedure Infrastructure Matrix and Surgical Complexity Matrix with regard to the standard of care and other measures. The members then implemented modifications as appropriate at each facility.

The third step was VA directive 2010-018 (*Facility Infrastructure Requirements to Perform Standard, Intermediate, or Complex Surgical Procedures*), which required each VHA medical facility with an inpatient surgical program to have an infrastructure-based surgical complexity designation. The designations are as follows:

- **Standard facilities** provide surgical procedures characterized as having minimal risk, such as breast biopsies, appendectomies, and hernia repair.

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- **Intermediate facilities** provide more advanced procedures, such as gastric resections, prostatectomies, hip replacements, and spine surgery.
- **Complex facilities** provide procedures such as cardiac surgery, neurosurgery, complex thoracic procedures, and complex general surgery procedures.

Each VHA facility bears the responsibility to ensure that scheduled, non-emergent surgical procedures do not exceed their infrastructure capabilities.<sup>1</sup>

During a 1-year analysis period, VHA inpatient surgical programs demonstrated an extremely low incident rate of surgical procedures performed beyond a facility's surgical complexity designation. During a 1-year period ending June 30, 2011, 375,499 surgical procedures were performed at the VHA's 114 inpatient surgical programs, with only 160 surgical procedures performed beyond the facility's surgical complexity designation (an incident rate of 0.04 percent). Notably, none of these 160 cases resulted in an adverse event. A VA Office of Inspector General study independently validated these findings by confirming that VA beneficiaries receiving complex surgical procedures had their procedures performed in facilities with appropriate resources. As anticipated, morbidity and mortality associated with surgical procedures was not found to be attributable to a lack of available patient resources. The establishment of surgical complexity designations also enhanced oversight monitoring of the surgical programs in relationship to surgical procedure complexity. It also built VHA's organizational structure to enable rapid-cycle investigation of any procedure

performed beyond facility surgical complexity designation.

A key reason for the initiative's success was an organizational structure that promoted communication, best practices, and collective review of policy by subject-matter experts. Another key factor was the VA electronic health care record, which was used to compare surgical volume and outcomes of surgical procedures performed in relationship to procedure and facility complexity designations.

In summary, the VA implemented a policy that protects veterans from foreseeable risks associated with surgical procedures performed without the necessary infrastructure. This new policy also removes variability through standardization, which is both easy to understand and effective in its implementation, for achieving the right match between the patient's condition and the setting for the patient's care. This is what everyone in health care aims for, and the VA's Surgical Complexity Matrix hit the mark.

To learn more about this initiative, visit: <http://www.patientcare.va.gov/20100518a1.asp>.

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**Note:**

1. The directive is not intended to interfere either with a surgeon's judgment in performing a surgical procedure beyond the surgical complexity designation of the facility, as based upon new findings at the time of a planned procedure, or in managing an emergency condition where the patient's best interest is served by care and treatment on-site rather than through transfer to a more complex facility.

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In this commentary, Under Secretary Petzel’s discussion of the VA’s Surgical Complexity Initiative highlights the success in ensuring that surgical care is delivered in the most appropriate site and touches on several issues and lessons central to the delivery of care that is effective, efficient, and continuously improving, including:

- An emphasis on “right site” care and strong, cross-system communication.
- An electronic health record system that enables cross-system monitoring and accountability.
- Full engagement of medical staff in the implementation of new measures through workgroup collaboration, thereby maintaining open lines of communication and ensuring that measures are appropriately modified for each individual facility.

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