

## EXECUTIVE SUMMARY:

TheraDoc® is a clinical decision support tool (DST) used for real-time surveillance, alerting, documentation and reporting that has been purchased and installed in 12 health care facilities in the Department of Veterans Affairs (VA). Previously, the Veterans Affairs Center for Innovation (VACI) adverse drug event (ADE) Trigger Pilot Study evaluated multiple clinical decision support tools, including TheraDoc®, to assess reduction and prevention of ADEs at VA facilities. During the pilot study, TheraDoc® was utilized for more than the ADE prevention and reduction targeted in the pilot study. VACI recommended further evaluation of TheraDoc® based on the observed uses for ADE prevention as well as medication and patient management. The evaluation was conducted by a joint panel of VA and TheraDoc® subject matter experts to assess and describe the use of TheraDoc® in select VA facilities as an initial step toward a comprehensive evaluation of effectiveness in VA and to aid in the decision of a national purchase.

Clinical data from TheraDoc® was reviewed for each of 11 VA facilities from the initial installation date through May 31, 2014. During this period, TheraDoc was accessed over 3 million times. The interactions were recorded for over 47 unique administrative and clinical modules (or panels) with much of the activity occurring in activities related to patient safety, ADE reduction, staff efficiency, and data tracking. The most commonly utilized clinical tools were in these five panels: Intervention Assistant, Alerts, Flag Panels, Rounds Assistant and Infection Control Assistant.

A brief description of the five panels follows:

- *TheraDoc Intervention Assistant* is TheraDoc's documentation tool which allows users to record and track clinical activities and interventions performed during patient care. The Intervention Assistant was used by clinical pharmacists to document 94,970 interventions in the final month of the study period.
- *TheraDoc Alerts* notify clinicians in real-time when specific clinical criteria has occurred. Three alert groups were used most often: Renal Function alerts, Therapeutic Antibiotic Monitoring alerts, and EZ alerts (site defined alerts based on local initiatives).
- *TheraDoc Flag tools* allow patients to be prioritized for follow-up or action. The flag tools were accessed 77,992 times during the review period.
- *TheraDoc Rounds Assistant* allows users to create a "rounding view" or profile for each patient containing relevant, user-selected criteria. During the final review month, Rounds Assistant was accessed 1407 times.
- *TheraDoc Infection Control Assistant (ICA)* allows users to survey, document, and report infections at a facility. TheraDoc tools such as flags and alerts work in conjunction with

the ICA to provide actionable information to assist with patient care decisions. The ICA was accessed 973,699 times during the review period. Problematic infection types frequently surveyed included Central Line Associated Bloodstream Infections (CLABSI), Catheter Associated Urinary Tract Infections (CAUTI), and C. difficile infections (CDI).

TheraDoc® was used in areas targeting infection prevention, appropriate medication selection, and reducing adverse events. In addition, tools used to aid in active patient surveillance illustrate flexibility of the tool at the facility level. It was evident that TheraDoc® is providing decision support and real-time data surveillance benefits to VA clinical users, especially clinical pharmacists and infection prevention teams in the VA. The review team recommends a comprehensive evaluation of TheraDoc® to assess effectiveness in reducing ADEs, optimizing medication selection, decreasing medication related costs, and saving time compared to traditional surveillance activities and other clinical decision support tools.