

## The United States Department of Veterans Affairs



- *Rapid integration*
- *High performance*
- *Scalability*

## The U.S. Department of Veterans Affairs Uses InterSystems Ensemble® to Integrate 130 Systems and Improve Patient Care

The United States Department of Veterans Affairs (VA) includes over 1,300 hospitals, clinics, and other facilities. It treats more than 5.4 million former military personnel annually. These patients receive what has become widely recognized as the finest care available in the United States, thanks in part to efficient health-care information technology. The VA continues to improve its level of care, and increase efficiency, through the creation of new services and composite applications using the InterSystems Ensemble rapid integration and development platform.

### **Healing with information**

No one chooses to get wounded in battle, or to experience other traumatic events during war. These situations are beyond a soldier's control. Regaining a sense of control can be healing, and the VA is giving wounded veterans more control over their own healthcare through use of its My HealtheVet website [www.myhealth.va.gov](http://www.myhealth.va.gov).

Launched in November 2003, My HealtheVet provides easy access to benefits information, personal health journals, vital signs tracking, and prescription refill services. The website currently has more than 540,000 registered users and, through February 2008, veterans have used the service to refill 5 million prescriptions. Encouraged by this success, the VA looked to take My HealtheVet to an even higher level of service. They wanted to create a truly integrated system, one that provides entirely new functionality from the combination of My HealtheVet and information in the VA's VistA electronic medical record (EMR) system which runs on InterSystems Caché high-performance database.

### **Closing the information gap with Ensemble**

The VA plan called for letting veterans tap into the VistA EMR, starting with medical history, lab results, and appointment scheduling, and bring that information into a new My HealtheVet personal health record. The plan

also called for secure messaging with physicians, through My HealtheVet, and enabling physicians to post those messages to the EMR as progress notes. This vision presented a challenge, as the functionality they wanted would require integration of the My HealtheVet application with more than 130 enterprise systems used at VA medical centers located throughout the country.

Development of the integration services began in July 2007 with two Ensemble developers and two Java developers assigned to the project. One year later these services were made available to the nation's veterans.

### **Integrated with Ensemble**

When a veteran is logged in to My HealtheVet and requests access to his or her electronic medical record, Ensemble communicates with the VA's master patient index (MPI) and correlates the My HealtheVet user account with an identity in the MPI.

With this identity established, Ensemble communicates with a .Net-based Web service to deliver select information from that user's EMR for inclusion in the My HealtheVet personal health record. The veteran can then use the personal health record to accurately track and graph health indicators over time, and produce a printed report of vital information to take to clinicians outside of the VA's electronic network.

My HealtheVet's new secure messaging feature, created with Ensemble, makes real-time queries into the EMR to correlate patients with the groups of physicians who treat them. Communications between a patient and any of his or her doctors can be electronically signed and posted to the EMR as a progress note.

### **High service levels for those who have served**

The integration team used many of Ensemble's advanced features to speed completion of the project, deliver the desired functionality, and ensure availability of the service. These features included:

- Ensemble's embedded Caché database for automatic persistence of solution objects and intermediate storage of health data
- Web services and Java support
- Data transformation services
- Extensive HL7 and XML support
- Graphical business process creation
- Graphical message tracing for simplified troubleshooting
- Alert filters
- Dashboards of system performance indicators

### **Ensemble cuts complexity, empowers patients**

My HealtheVet is a model for empowering patients to take an active role in their healthcare, and for improving care while lowering costs. The integrated personal health record provides feedback and encourages positive behavior. Secure messaging builds stronger relationships between physicians and patients and streamlines workflow. Availability of information through My HealtheVet is reducing demand on the VA's Release of Information offices, eliminating some trips to VA medical facilities for veterans who have difficulty traveling, and online scheduling is reducing the number of missed appointments and the number of calls to the appointment desk. Ensemble has reduced development complexity and solved the most difficult aspect of delivering these new features – having an easy to use, comprehensive, and reliable platform in the middle to make it all possible.

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