



Annual Conference
Interoperability Showcase
Orlando, Florida

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BPM+ for healthcare as functional software with automation

Supporting SEAMLESS CARE for Veterans

Use Case:

Healthcare today is encumbered by boundaries: system boundaries, organizational boundaries, geographical boundaries. As Veterans and other patients are seen by different providers using different systems in different organizations, there is no continuity. Clinical records are rarely shared due to lack of data interoperability and there is no common clinical workflow guiding care delivery across participants. BPM+ Health offers the capabilities to define clinical pathways and evidence-based guidelines that, when combined with data interoperability, can overcome the impediment of boundaries and provide care providers a coordinated shared clinical workflow.

The SEAMLESS CARE demonstration leverages use of BPM+ models to express clinical practice guidelines around chronic kidney disease (CKD) which are both human- and system-readable, and are directly consumed in the demonstration to align care-activities across two simulated healthcare entities and disparate care provider teams. It demonstrates how healthcare knowledge assets can be more readily consumed, changed, and adapted to changing clinical practice, and automated to improve care delivery consistency and quality.

Supports Interoperability Goals:

- Clinical practice guideline automation
- Enhancing care continuity and improved care coordination
- Improved ability to share clinical knowledge assets
- Semantic data and process-level interoperability

Solution:

To overcome system boundaries and have a shared workflow, clinical knowledge assets have been expressed as formal models using the open BPM+ industry standards. This makes those knowledge assets portable, de-coupling them from hard-wiring within applications. For this demonstration, VA CKD practice guidelines have been modeled, and loaded into a software platform where they are being directly executed by a workflow engine.

Within the demonstration suite, these workflows adapt system behavior to pull appropriate and relevant data, assess that data in the context of the simulated patient's need, and then modify the care plan and associated activities based upon the guidance from the modeled care pathway. For those clinical tasks that can be fully automated, the executable knowledge

artifacts (e.g., clinical decision support rules, analytics, quality measure, etc.) produce specific computed results (e.g., CKD severity) based on the BPM+ models.

This demo showcases the process of taking a model created as a sharable, vendor- and technology-agnostic platform independent model (PIM) through operationalization and ultimately creation of a technology artifact that can be directly executed, drawing upon the target environment's data and knowledge endpoints to integrate within the simulated EHR system. These steps are all based on open standards and are vendor neutral.

Project Phase:

The core standards are published and supported by commercial tooling. The integration of system components comprising this demonstration are prototype, with live pilot implementations expected in approximately 12 months.

Value:

The ability to separate knowledge assets from underlying systems allows the VA and other healthcare providers to rapidly adapt and adopt to changing clinical practices, and to carry workflows across sites of care. This will not only improve consistency across VA facilities, but allow for more seamless care delivery through the continuum of community providers as well, while fostering use of evidence-based care practices.

Future:

The future plan is to make clinical practice guideline modeling and automation a normal course of business for healthcare organizations. Health IT 2.0 overcomes boundaries and achieves data, knowledge and process fluidity by democratizing the data and knowledge from proprietary IT systems. BPM+ is a significant part of this future vision.

VA Wants Your Help:

How can industry help? VA is interested in advancing open, standards-based content development, consumption, and commercial tooling supporting this goal. We encourage interested organizations to evaluate BPM+ Health standards and <http://bpm-plus.org>, and to engage with the emerging community-of-practice around this approach.

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