

Virginia Information Technologies Agency



# OneMind Behavioral Health Electronic Health Records System

## Digital Government: Government to Citizen

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## **2017 Commonwealth of Virginia NASCIO Award Submission**

### **Project: OneMind Behavioral Health Electronic Health Records System**

#### **Category: Digital Government: Government to Citizen**

#### **Executive Summary:**

The OneMind Electronic Health Records (EHR) system is a suite of 22 integrated clinical applications. The synthesis of patient information across the system enables the sharing of clinical information on common clients across Virginia Department of Behavioral Health and Developmental Services (DBHDS) hospitals for improved coordinated client care and more effective treatment. Integration also occurs between OneMind and other hospital applications, such as those used for laboratories, pharmacy and food service.

OneMind eliminates the manual paper-based documentation processes previously used in the facilities, and OneMind data can be mined to develop comparative clinical information across the facilities in support of evidence-based best practices.

OneMind significantly reduces risk while greatly increasing operational efficiency, and most important of all, decidedly improves patient safety. OneMind also supports compliance with the Joint Commission requirements for hospital accreditation.

At project launch, there were no commercial off-the-shelf electronic health record systems (EHRs) available for behavioral health. EHRs were only available for acute care (typical hospital) or ambulatory (doctor's office) organizations. An unprecedented partnership between DBHDS executive leadership, facility clinicians, IT, and supplier Cerner made this possible on a large scale.

At the close of Phase 1 (6/30/16), OneMind use had resulted in standard documentation for over 200,000 physician orders, approximately 80,000 of which are medical orders, and in approximately 430,000 patient assessments. Each OneMind transaction was completed in a fraction of the time of its paper-based counterpart, affording clinicians more time to spend providing care directly to patients. OneMind has practically eliminated patient charting and medication order errors due to poor handwriting or lost records.

OneMind is the first EHR of its kind in the nation. The project's innovation in this space resulted in a model now being used in the product's core functionality available to all states.

**Exemplar (20%) Key Point: The project represents visionary and transformational use of information technology in state government.**

The Virginia Department of Behavioral Health, in conjunction with its vendor Cerner (formerly Siemens) based OneMind on the Soarian suite of products. Originally developed for acute care hospitals, the Soarian suite of products was redefined to suit the complex needs of behavioral health hospitals.

Through innovative thinking and design, OneMind was made suitable for use in behavioral health hospitals where patient needs, length of stays, and clinical documentation requirements are significantly different. The project's innovation in this space resulted in a model now being used in Soarian's core functionality available to all states.

The OneMind project is truly a standout effort, winning two prestigious state awards:

- 2016 Commonwealth of Virginia IT Project Management first place award, for the DBHDS OneMind Electronic Health Records System, Commonwealth IT Project Management Summit
- 2016 Governor's Technology Award for Government to Citizen Services, for the DBHDS OneMind Electronic Health Records System, Commonwealth of Virginia Innovative Technology Symposium (COVITS)

In order to standardize clinical operations across the mental health hospitals, and to gain consensus on system requirements, the OneMind team created an innovative governance structure, known within DBHDS as the OneMind Decision Team (OMDT). The OMDT consists of approximately 20 cross functional members ranging from C-level executives to hospital staff across all behavioral health hospital in the state. There are additional sub-committees for each of the various clinical disciplines.

The OMDT is responsible for deciding which system enhancements to pursue in OneMind, developing best practices for patient care across facilities, and driving OneMind adoption at the hospitals. The OMDT has been so successful that Cerner has asked the OneMind team to present at their national user convention on the topic of user adoption best practices, and the OMDT governance structure is serving as a model for other agencies within the commonwealth.

**Concept (20%) Key Point: The project successfully addresses an important dilemma in public service and/or encourages civic engagement.**

At the time the project started, there were no commercial off-the-shelf electronic health record systems (EHRs) available for behavioral health. EHRs were only available for acute care (typical hospital) or ambulatory (doctor's office)

organizations. In collaboration with Cerner, DBHDS configured the Soarian acute care EHR with integrated clinical services (labs, pharmacy, radiology, orders, assessments, etc.) customized to the unique needs of a behavioral health setting. This was a tremendous undertaking as key clinical processes and client care needs differ greatly from acute care to behavioral health, resulting in technical modifications to the design of clinical templates, forms, assessments, medical order sets, and non-medical order sets. An unprecedented partnership between DBHDS executive leadership, facility clinicians, IT, and our partners at Cerner made this possible on a large scale, thus making OneMind the first EHR of its kind in the nation.

Project Managers were responsible for ensuring scope functionality was fully met. A detailed Project Management Plan was followed, and PMs met with application teams each week to monitor progress and resolve barriers and risks.

Project costs were tracked monthly and at project phase ends. For each implementation, the team produced results within 1% or more under budget.

The Project Schedule was tracked via the MS Project Plan. Major milestones, linked/dependent tasks, and detailed tasks were tracked weekly. This enabled quick corrections and adjustments to meet all milestones. At project end (6/30/16), all major milestones had been met on schedule.

A governance team and configuration management plan ensured a high quality EHR for DBHDS. A centralized ticketing system provided consolidated management of break/fix tickets and enhancement requests.

Organizational change was identified in the initial stages of the project as a critical success factor. Initial work with the pilot facilities engaged hospital end users for input into the EHR functionality specifically for behavioral health needs. These representatives were actively involved in recommendations for functional changes and customizations to the Cerner EHR required for behavioral health.

All facilities implementing OneMind appointed at least two staff to serve as Accountable Executives, critical roles that serve as the OneMind liaison between Facility leadership, Project Management Office and IT Adoption Center to drive transformation of care. Team meetings are held weekly with this group of individuals and OneMind team leaders.

Enhancement requests required approval from a structured clinical decision team named the "OneMind Decision Team" (OMDT) before they were implemented. The OMDT ensures that the system is standardized across all DBHDS facilities.

A detailed project plan was developed for both implementation and full system upgrade. The detailed plans enabled close monitoring of schedule, risks and barriers to completion of any task or milestone, and identification of issues.

A weekly Change Control Meeting was to review the status and any downstream impacts of potential changes to the OneMind system.

The OneMind communication plan was created to promote awareness and adoption as well as to educate end users. The communication plan included three phases of communications; Strategic, Tactical, and Transformative. Pre-Implementation communications included efforts to Assess and Drive adoption. The Live phase included communications and training to ensure organizational readiness and effective performance during implementation. Post-live efforts included reinforcement, adoption metrics and surveys.

The OneMind team is a cohesive, collaborative team that takes ownership of the work required to make OneMind a success for the hospitals, patients, and Agency. The team makes continual improvements based on lessons learned and creative thinking, and they strive to make others successful for overall successful project outcomes.

State Oversight: The Virginia Information Technologies Agency's (VITA) Project Management Division (PMD) provides consultation, governance and oversight to agencies for commonwealth-level Information Technology (IT) projects and associated procurements from project initiation approval throughout the project lifecycle.

The PMD knowledge base also provides links to established policies, standards and guidelines for the management of IT projects and programs in the Commonwealth of Virginia. Additionally, the home page provides links to training, tools and templates to assist project sponsors, program managers, and project managers in project initiation, planning, execution, control and closeout. The documents and templates provided are aligned with "best practices" established by the Project Management Institute (PMI) and documented in the Project Management Body of Knowledge (PMBOK).

**Significance (20%) Key Point: The project is consequential, relevant and transformational for state government and/or constituents.**

The OneMind EHR Project beneficiaries include the patients served, their families, hospital and agency staff, commonwealth gubernatorial goals and the community at large.

The objectives identified by the DBHDS clinical staff were to:

- Improve quality of care, safety, and efficiency
- Reduce health disparities between patients in Mental Health hospitals and the general population
- Engage consumers, such as patients and family, in health care decisions
- Improve care coordination between facilities
- Improve population health outcomes
- Maintain the privacy and security of patient health information

The OneMind EHR Project also established business objectives by mapping against the Critical Issues identified in the Virginia Commonwealth's Strategic Plan.

- **Improve Service Delivery:** Improve overall patient care and efficiency
- **Interoperability of Systems:** Integrate clinical systems across the DBHDS enterprise
- **Improve Service Delivery:** Transform clinical processes by standardizing care to improve patient outcomes and overall health and recovery of hospital populations
- **Share Data and Reduced Redundancy:** Identify useful reports and queries with clinician input and provide them. Enable the sharing of clinical information on common clients across DBHDS facilities for more coordinated client care and treatment
- **Execution & Compliance with Mandates:** Execute the project in full compliance with the Commonwealth Project Management Methodology.
- **Continually update OneMind** to include functionality that assists facilities in meeting regulatory requirements (i.e., Joint Commission, CMS rules, etc.)
- **Incorporate Best Practices from Private Sector:** Maintain vendor-required system upgrades that support evidence-based best practices.

**Impact (40%) Key Point: The project leads to substantial and measurable change; it makes state government better.**

At the close of Phase 1 of the OneMind project (6/30/16), OneMind use had resulted in standard documentation for over 200,000 Physician Orders, approximately 80,000 of which are medical orders, and in approximately 430,000 patient assessments. Each OneMind transaction was completed in a fraction of the time of its paper-based counterpart, affording clinicians more time to spend providing care directly to patients. OneMind has practically eliminated patient charting and medication order errors due to poor handwriting or lost records.

It also helps prevent the potential administration of the wrong medications when patients are moved from one bed to another within the facility, since OneMind tracks patient movement and routes orders to the new locations.

Data mining across multiple patients and even multiple facilities can now be done with a few mouse clicks. Prior to OneMind, data collection was done through time-consuming manual review of patient charts. Report generation could take weeks' worth of work, taking valuable clinician time away from patient care. Now reporting can be done in a matter of minutes.

Hospital clinicians have reported significant improvements in care delivery and efficiency when using the OneMind EHR. OneMind successfully replaced paper-based systems unique to each hospital with an agency-wide EHR that integrates with lab, pharmacy, radiology, food service, and patient registration systems. To date, three DBHDS hospitals have standardized their clinical processes on evidence-based best practices via OneMind, and all hospitals are represented on the OMDT, giving them each a voice in how the system will meet the organization's clinical needs.

OneMind has successfully kept up to date with the latest system upgrades, including a major release of Cerner's product. Improvements from private sector EHR implementations have been incorporated into the planning and deployment processes.

The most recent OneMind Project Independent Validation and Verification (IV&V) was considered by VITA's Project Management Division to be the very best third party validation results in the history of the Commonwealth's IV&V program.

The OneMind team compiles end-user survey results for each 'live' hospital at the 30-day, 90-day and 6 month points. This enables the team to track user satisfaction, adoption of OneMind, and identify opportunities for additional facility support. For each of the 3 hospitals, results have been overwhelmingly positive at each survey point. Some quotes from recent satisfaction surveys are: "I feel medication pass is safer"—nurse at Southern Virginia Mental Health Institute, and "More checks and balances makes our patient care safer"—social worker at Southern Virginia Mental Health Institute.

It is difficult to underestimate how complex it is to implement a cutting edge EHR technology at hospitals that were previously using paper records and orders. The tremendous success that DBHDS has achieved across all dimensions of the OneMind implementation has been nothing short of miraculous. Patient safety, clinical efficiency, user adoption, project execution, and everything in between; each component of the OneMind implementation has far exceeded the agency's, the Commonwealth's, and the behavioral healthcare community's expectations. The partnership between DBHDS executive leadership, clinicians, IT, and Cerner made OneMind the first behavioral health customized EHR in the nation.