

Fiscal Year 2015-16 Information Technology Request

Human Services

Electronic Health Record and Pharmacy System Replacement

PROGRAM PLAN STATUS and OIT BEST PRACTICES

2015-030

Approved Program Plan? Yes No Date Approved:

The department says that it has coordinated with the Governor's Office of Information Technology (OIT) since the beginning of the project, which has been an integral part of the development of business requirements and the subsequent Request for Proposal (RFP). The department also notes that the vendor will be contracted to comply with OIT security, backup, and disaster recovery policies, as well as the federal Office of the National Coordinator for Health Information Technology and the Health Insurance Portability and Accountability Act security standards.

PRIORITY NUMBERS

Prioritized By	Priority	
DeptInst	1 of 6	
OSPB	4 of 10	Prioritized and recommended for funding.

PRIOR APPROPRIATION AND REQUEST INFORMATION

Fund Source	Prior Approp.	FY 2015-16	FY 2016-17	Future Requests	Total Cost
CCF	\$9,849,610	\$0	\$0	\$0	\$9,849,610
GF	\$0	\$4,863,145	\$0	\$0	\$4,863,145
Total	\$9,849,610	\$4,863,145	\$0	\$0	\$14,712,755

ITEMIZED COST INFORMATION

Cost Item	Prior Approp.	FY 2015-16	FY 2016-17	Future Requests	Total Cost
Land Acquisition	\$0	\$0	\$0	\$0	\$0
Professional Services	\$785,600	\$742,400	\$0	\$0	\$1,528,000
Construction	\$1,287,944	\$0	\$0	\$0	\$1,287,944
Equipment	\$42,691	\$42,691	\$0	\$0	\$85,382
Miscellaneous	\$0	\$0	\$0	\$0	\$0
Contingency	\$469,029	\$231,578	\$0	\$0	\$700,607
Software Acquisition	\$7,264,296	\$3,846,476	\$0	\$0	\$11,110,772
Total	\$9,849,560	\$4,863,145	\$0	\$0	\$14,712,705

PROJECT STATUS

This project was previously funded in FY 2014-15 for \$9.8 million. This request for Phase II funding will allow the department to complete the project.

PROJECT DESCRIPTION / SCOPE OF WORK

The Department of Human Services (DHS) is requesting state funds for Phase II of the implementation of an Electronic Health Record (EHR) at the state-operated, acute care, inpatient Mental Health Institutes at Pueblo and Fort Logan. Phase I of the project was previously funded in FY 2014-15.

The EHR system project will replace a number of separate health information and billing systems used by the institutes with a fully automated and comprehensive EHR system, with the goal of improving clinical decision making, reducing medical errors, and increasing efficiencies. The new EHR system will fully integrate with the necessary

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clinical, operations, and financial modules and systems used by the Mental Health Institutes.

Specifically, the project will replace the following existing information technology (IT) systems:

- a web-based dietary system;
- a locally hosted pharmacy system;
- a locally hosted lab system;
- a locally hosted admission/discharge/transfer system that also includes information about patient diagnoses, non-pharmacy billing, legal commitment records, scheduling, seclusion and restraint, and medication variances; and
- multiple Microsoft Access databases containing additional patient information.

The project includes the following components:

- a fully hosted, web-based EHR system that will replace the institutes' health information systems and paper-based patient charts;
- improvements to network infrastructure, including the development of a secure wireless network on both campuses; and
- EHR hardware including:
 - electronic tablets to be used by clinicians to allow real-time order entry, chart updating, and access to medical information while interacting with patients;
 - bar scanning and labeling equipment for pharmaceutical dispensing; and
 - vendor support, training, and software licenses.

The department will purchase a customizable, commercial off-the-shelf (COTS) EHR product, which includes installation, hosting, and process reengineering costs. The request assumes that the software vendor, not state FTE, will customize the product for the department's specific needs.

Phase I included \$9,849,610 of funding for contract professional services, construction, software acquisition, equipment, and contingency. Phase II is a continuation request for \$4,863,145 in funding for contract professional services, software acquisition, equipment, and contingency. An RFP for the EHR system was published in July 2014. As of November 2014, vendors had submitted responses to the RFP. Vendor selection is currently pending, and the EHR is set to be fully implemented by June 30, 2016.

Division of Youth Corrections FY 2014-15 supplemental request. DHS submitted a FY 2014-15 supplemental request (\$935,000 GF) for funding to incorporate DYC medication management needs into the overall EHR system, which was approved by the Joint Technology Committee on December 30, 2014 and the Joint Budget Committee on January 26, 2015.

EHR system integration opportunities. The department, in conjunction with the Governor's State Health Information Technology Officer, held discussions regarding the opportunity for systems integration with other DHS offices and state agencies. The conclusion was that the scope and needs of other departmental and agency EHR systems are too diverse to pursue an enterprise EHR solution. According to the department, state agencies are aligning their EHR efforts through coordination of departments and the two state health information exchanges (HIEs), the Colorado Regional Health Information Organization (CORHIO) and the Quality Health Network. These efforts include sharing: EHR business requirements, vendor evaluations, practice transformation, and staff training; and establishing secure HIE connections to other health providers.

PROJECT JUSTIFICATION

A May 2011 state audit of the psychiatric medication practices for adult civil patients at the institutes contained a recommendation that the institutes pursue the implementation of an EHR. According to the audit, such a system would address problems identified in medication prescribing and monitoring, improve clinic decision making, reduce medical errors, and increase efficiencies. The DHS reports that the rate of medication errors at both institutes is typically more than twice that reported by other psychiatric facilities, and notes that other facilities that have implemented EHR systems have experienced a significant reduction in medication errors.

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The department further notes that an EHR will assist in clinical efforts to address patients' mental illnesses, and will potentially reduce patient behaviors that drive assaults, require seclusion and restraint, and lengthen hospitalizations. Further, as patients move from the institutes into the community, the institutes will be able to share patient information with community mental health centers and other providers in order to facilitate the transition.

Project alternatives. As an alternative to the implementation of an EHR, DHS says the institutes could continue to operate the current information technology systems. According to the department, operation of the current systems would likely result in continued high rates of medication errors and would not positively impact the clinical management of patients. Further, not implementing the EHR will cause the department to be out of compliance with the 2011 recommendation of the Office of the State Auditor (OSA) to implement an EHR.

PROGRAM INFORMATION AND IMPLEMENTATION PLAN

The mental health institutes provide residential services to individuals of all ages with complex, serious, and persistent mental illness. The Mental Health Institute at Pueblo currently has 451 beds and the Mental Health Institute at Fort Logan has 94 beds. The majority of the patients are referred to the facilities by community mental health centers when patients are deemed too unstable for community services to be effective.

COST SAVINGS / IMPROVED PERFORMANCE OUTCOMES

According to DHS, the retirement of legacy systems by the new system will have cost savings of \$377,787 per year, which have already been factored into the department's funding request.

The department states that the new EHR will not lead to other cost savings, but will instead improve services for patients and enhance patient care and safety. It will do this by addressing problems identified in medication prescribing and monitoring, which will improve clinical decision making, reduce medical errors, and increase clinical efficiencies. These operational efficiencies are expected to decrease prescription errors, seclusion and restraint hours, staff and patient injuries, and the patients' length of stay.

SECURITY AND BACKUP / DISASTER RECOVERY

The EHR system will be vendor-hosted and cloud-based with the responsibility for full data security testing with the vendor. The issued RFP requires the new system to meet or exceed OIT security and backup standards.

BUSINESS PROCESS ANALYSIS

Following the OSA's May 2011 audit, the department developed business requirements spanning 19 areas of EHR functionality from: cost estimates and information received from a request for information that it published; viewing live demonstrations of various EHR, lab, and pharmacy systems; researching EHR systems online; interviewing other states that use EHR systems; and numerous meetings with stakeholders such as clinical and operations staff.

PROJECT SCHEDULE

	Start Date	Completion Date
Vendor Selection	August 2014	August 2014
Contract Negotiation	August 2014	October 2014
Software Implementation and Initial Customization and Training	October 2014	April 2016
Final Customization and Training	March 2016	June 2016
Completion		July 2016

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OPERATING BUDGET

DHS anticipates ongoing costs for required vendor enhancement, which will vary from year to year, based upon the the solution implemented and the need for complex enhancements. It estimates these costs at 20 percent of the cost to purchase and install the EHR software and the wireless network. In FY 2015-16, this cost is \$728,000, and has been included in professional services rather than a separate operating request.

STAFF QUESTIONS AND ISSUES

1. Please further explain your request to waive the six-month encumbrance deadline.

The six-month encumbrance waiver was requested in order to allow adequate time for any solicitations and procurements related to Phase II.

2. Please elaborate on what was specifically funded in FY 2014-15 under Phase I of the project, versus what will be funded in FY 2015-16 for Phase II. In the budget request submittal, it is noted that:

- Phase I included funding for contract professional services, building construction, software acquisition, equipment and contingency.
- Phase II includes funding for contract professional services, software acquisition, equipment, and contingency.

Can you be more specific as to what the two phases separately fund?

The Department expects the following milestones to be attained as outlined below.

Phase I:

- *Initial Project start up*
- *Review of the vendor's project plan timeline*
- *Assemble required staff for the Mental Health Institute staff in order to review the proposed work flows and organizational effort*
- *Detailed customization planning*
- *Project designing*
- *Commencement of building*

Phase II:

- *System building*
- *System testing*
- *Staff training*
- *System implementation*

Due to the fluid nature of the project, some phase I milestones may be achieved in Phase II requiring a shift of some funding from FY 2014-15 to FY 2015-16. The Department will monitor the milestones and submit a request to carry forward project funds into FY 2015-16, if necessary.

3. Please provide an update on vendor selection and contract approval, if it is available. The implementation plan states that the "specific plans for action, engagement, communication, and training that are driven by the EHR selection will be decided shortly after the vendor selection," which was due to be completed October 2014. Is this information available yet?

The Department has published an award letter naming Cerner as the vendor, and the protest period has passed with only one other vendor protesting. That protest was considered and denied by Procurement, and no appeal was filed. The Department has begun contract negotiations with Cerner and expects to sign a contract by the end of February 2015. The Department and Cerner will then develop in short order the specific plans for action, engagement,

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communication and training, as these will be largely driven by Cerner's experienced, strategic approach to implementation and hospital readiness.

4. Does the department have any more concrete FY15-16 operating budget impact figures? The budget submittal says that OBH and OIT staff will be jointly determining how ongoing system development support will function after project completion. Please provide operating budget numbers if available.

At this time, the Department does not have any more concrete FY 2015-16 operating budget impact figures. The Department submitted a funding request in November 2013, for operating funds that included \$1,091,930 for ongoing fees, system hosting and support and; \$1,436,872 for ongoing vendor costs for development and enhancement. The Department will continually assess how the system development support will function after completion during both phases.

5. Under the "Assumptions for Calculations" section, training costs are given as \$14,400, which is based upon 14 days at \$1,200/day. This number should therefore equal \$16,800. Please explain this discrepancy.

It appears this is a typographical error, and the correct number of training days is 12 instead of 14.