FY 2014-15 Supplemental IT Budget Request

Human Services
Electronic Health Record and Pharmacy System Replacement

Motion: Approve the supplemental request from the Department of Human Services (DHS) for the Electronic Health Record and Pharmacy System Replacement project ($935,000 CCF), to include Division of Youth Corrections requirements.

GENERAL INFORMATION

2015-030

1. **Which supplemental criterion does the request meet?** | Other |

   A recent OSA performance audit of the department's Division of Youth Corrections (DYC) medication management recommended that the department evaluate the benefits of implementing an electronic health record system (EHR). A cost effective option is to augment the DHS EHR project to accommodate DYC requirements.

2. **Which projects will be restricted to fund the supplemental request?**

3. **Has the request been approved by OSPB and CCHE?** | Yes |

PRIOR APPROPRIATION AND SUPPLEMENTAL REQUEST INFORMATION

The appropriation to be amended was authorized in the following bill: HB 14-1336

Fund Source	Prior Appropriations	Supplemental Request	Future Requests	Total Cost
GF	$0	$935,000	$0	$935,000
CCF	$9,849,610	$0	$0	$9,849,610
	$9,849,610	$935,000	$0	$10,784,610

REASON FOR SUPPLEMENTAL REQUEST

The department has determined that the current method of documentation and execution of several medication practices in the DYC through the Trails system is insufficient. Trails is a case management system that does not adequately serve as a medical record system, for reasons such as medication management and inadequate protection of youth privacy under HIPAA. A recent OSA performance audit of Trails recommended that the department replace it with an EHR system. A cost effective option is to augment the existing Office of Behavioral Health EHR project to accommodate DYC requirements. This would allow the DYC to better address problems associated with medication prescriptions and monitoring, improve clinical decision-making, reduce medical errors, increase efficiencies, and protect youth privacy under HIPAA.

SUMMARY OF PROJECT

Phase I of this project was previously funded in FY 2013-14. DHS submitted a FY 2014-15 continuation request for state funds for Phase II of the implementation of the EHR at the Mental Health Institutes at Pueblo and Fort Logan. This supplemental request is for funding to incorporate DYC medication management needs into the overall EHR system.

The EHR system project will replace a number of separate health information and billing systems used by the institutes, including the institutes' pharmacy system, with a fully automated and comprehensive EHR system, with

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the goal of improving clinical decision-making, reducing medical errors, and increasing efficiencies.

Specifically, the project will replace the following existing information technology 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 request 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;
- 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; and
    - 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 EHR product, which includes installation, hosting, and process reengineering costs. The request assumes 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, building construction, software acquisition, equipment, and contingency. Phase II is a continuation request that requires $4,863,145 of 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.

The DYC was not originally included in the scope of this project, but following recent legislative audit recommendations, the department is seeking to incorporate DYC medication management requirements. This would give the DYC a comprehensive solution that addresses a number of aspects of medication management, including: physician order entry; clinical decision support; assessments; care plans; discharge planning; full integration with lab, pharmacy, and dietary components; billing; financial analysis and reporting; regulatory compliance; behavior interventions; diagnostic and medical history and treatments; document storage and retrieval; scheduling; medication reconciliation; clinical notes; electronic Medication Administration Records (eMAR); and record-level audit capabilities. The department says this request will fully incorporate the DYC requirements into the existing project plan, allowing the project to stay on schedule. If the department does not receive funding for Phase II of the project, the supplemental funds will not be utilized.

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QUESTIONS / OUTSTANDING ISSUES

Are there any unique HIPAA requirements for juveniles that could potentially increase the scope of this project?

No, HIPAA requirements protect the medical and behavioral health records of youth served by the Office of Behavioral Health as well as the Department's Division of Youth Corrections whether they are in electronic or hard copy format.

Is there a plan in place to transfer data from TRAILS to the EHR? If so, please explain it.

There are no plans to transfer data, however for current clients with data in both systems, staff will manually transfer the basic medical and behavioral health information from Trails into the new proposed EHR. All new incoming clients' medical and behavioral health records will be housed in the new EHER

CC-IT-B: SUPPLEMENTAL CAPITAL CONSTRUCTION INFORMATION TECHNOLOGY REQUEST FOR FY 2014-15

Agency or Institution:	Human Services	State Controller Project No (If current)
Project Title:	DYC Electronic Health Record	Signature Department or Institution Approval: *Melissa Wavlit 12.4.14*
Project Year(s):	FY 2014-15	Signature CCHE Approval:
Agency or Institution Priority Number:	3	Signature OIT Approval: *David B. Xxx* 12/5/14
Name and Email of Preparer:	jeremiahx.johnson@state.co.us	Signature OSPB Approval:

Revision? Yes ___ No ___ If yes, last submission date ___	Total Project Costs	Total Prior-Year Appropriation(s) Before FY 2013-14	FY 2014-15 Appropriation [A]	Incremental Supplemental Request FY 2014-15 [B]	New Total FY 2014-15 Request [A+B]
A.					
(1) Land / Building Acquisition	$ -	$ -	$ -	$ -	$ -
B.					
(1) Consultants/Contractors	$ -	$ -	$ -	$ -	$ -
(2) Quality Assurance	$ -	$ -	$ -	$ -	$ -
(3) Independent Verification and Validation (IV&V)	$ -	$ -	$ -	$ -	$ -
(4) Training	$ -	$ -	$ -	$ -	$ -
(5) Leased Space (Temporary)	$ -	$ -	$ -	$ -	$ -
(6) Feasibility Study	$ -	$ -	$ -	$ -	$ -
(7a) Inflation for Professional Services	$ -	$ -	$ -	$ -	$ -
(7b) Inflation Percentage Applied		0.00%	0.00%	0.00%	0.00%
(8) Other Services/Costs	$ -	$ -	$ -	$ -	$ -
(9) *Total Professional Services*	$ -	$ -	$ -	$ -	$ -
C.					
(1) (a) New (GSF)	$ -	$ -	$ -	$ -	$ -
New $ ___ / GSF	$ -				
(b) Renovate GSF.	$ -	$ -	$ -		
(2) Renovate $ ___ / GSF	$ -				
(3) Site Work/Landscaping	$ -				
(4) Other; Specify	$ -	$ -	$ -	$ -	$ -
(5a) Inflation for Construction	$ -	$ -	$ -	$ -	$ -
(5b) Inflation Percentage Applied		0.00%	0.00%	0.00%	0.00%
(6) *Total Construction Costs*	$ -	$ -	$ -	$ -	$ -
D.					
(1) Software COTS	$ 400,000	$ -	$ -	$ 400,000	$ 400,000
(2) Software Built	$ -	$ -	$ -	$ -	$ -
(4a) Inflation on Software	$ -	$ -	$ -	$ -	$ -
(4b) Inflation Percentage Applied		0.00%	0.00%	0.00%	0.00%
(5) *Total Software*	$ 400,000	$ -	$ -	$ 400,000	$ 400,000
E.					
(1) Servers	$ -	$ -	$ -	$ -	$ -
(2) PCs, Laptops, Terminals, PDAs	$ -	$ -	$ -	$ -	$ -
(3) Printers, Scanners, Peripherals	$ -	$ -	$ -	$ -	$ -
(4) Network Equipment/Cabling	$ -	$ -	$ -	$ -	$ -
(5) Other Wireless Environment	$ 450,000	$ -	$ -	$ 450,000	$ 450,000
(6) Miscellaneous	$ -	$ -	$ -	$ -	$ -
(7) *Total Equipment and Miscellaneous Costs*	$ 450,000	$ -	$ -	$ 450,000	$ 450,000
Total Project Costs	$ 850,000	$ -	$ -	$ 850,000	$ 850,000
F.					
(1) 5% for New	$ -	$ -	$ -	$ -	
(2) 10% for Renovation	$ 85,000	$ -	$ -	$ 85,000	$ 85,000
(3) *Total Contingency*	$ 85,000	$ -	$ -	$ 85,000	$ 85,000
Total Budget Request (F+G) 3)	$ 935,000	$ -	$ -	$ 935,000	$ 935,000
G.					
CCF	$ 935,000	$ -	$ -	$ 935,000	$ 935,000
CF	$ -	$ -	$ -	$ -	$ -
RF	$ -	$ -	$ -	$ -	$ -
FF	$ -	$ -	$ -	$ -	$ -

check (should = H): $935,000 $0 $0 $935,000 $935,000

COLORADO
Department of Human Services

FY 2014-15 Capital Construction Supplemental | December 10, 2014

John W. Hickenlooper
Governor

Reggie Bicha

Executive Director

Signature   12.10.14

Date

Department of Human Resources Supplemental Priority: 01
DYC Electronic Health Record

Summary of Incremental Funding Change for FY 2014-15	Total Funds	Capital Construction Fund
FY 2014-15	$935,000	$935,000

Request Summary:
The Department requests $935,000 in Capital Construction Funds (CCF) in FY 2014-15 to expand the Electronic Health Records (EHR) system for the Office of Behavioral Health (OBH) to include Division of Youth Corrections requirements.

Problem:
The Department, in cooperation with the Governor's Office of Information Technology (OIT), is requesting additional funds to incorporate the Division of Youth Corrections in the replacement of the existing electronic health information and billing systems for its two State-operated, acute-care, inpatient psychiatric hospitals at Fort Logan and Pueblo with a comprehensive and integrated EHR system, inclusive of lab, pharmacy, and dietary sub-systems.

This project would replace a number of separate, loosely integrated systems, including some records in Trails, and result in the implementation of a modern, comprehensive, fully-automated, EHR system that is fully integrated with all necessary clinical operations and systems, and is compliant with meaningful-use requirements at the Mental Health Institutes. The Office of the State Auditor conducted a performance audit (OSA performance audit) of the Department's Division of Youth Corrections medication management recommended that the Department evaluate the benefits of implementing a single EHR, and a cost effective option is to add on to OBH's system. The Department has determined there is a need for an EHR as the current method of documentation and execution of several medication practices at DYC through Trails is insufficient. Trails is a case management system that is not intended to be utilized as an EHR, for example, because of HIPAA-related privacy issues.

This request will allow the Department to implement a comprehensive solution that includes:
- An EHR, including, but not limited to, all modules and functions required to meet the current and pending meaningful-use standards (e.g., physician order entry, robust clinical decision support, assessments, care plans, discharge planning, full integration with lab, pharmacy and dietary components, billing, financial analysis and reporting, regulatory compliance, behavior interventions, diagnostic and medical history and treatments, document storage and retrieval,

scheduling, medication reconciliation, clinical notes, electronic Medication Administration Record (eMAR), record-level audit capability, etc.);

- Point of care documentation for active treatment and implementation of an individualized care plan;

- A system for historical records retention – archive systems that will comply with records management best practice; and

A fully-hosted and web-based solution, wherein the EHR and the integrated systems reside securely off-site, without the need for OIT resources or support of application servers. Technical support is needed to operate a fully functional system over time.

Brief Background: A Capital Construction IT Request for an EHR for the Mental Health Institutes was submitted on September 1, 2013, and approved for $9,849,610 of funding in FY 2014-15. Phase I included funding for contract professional services, building construction, software acquisition, equipment and contingency. A Request for Proposal (RFP) for the Electronic Health Care System was published in July 2014. Subsequent to that request, the Division of Youth Corrections underwent an OSA performance audit of medication management, which produced a number of findings and recommendations including the need for an EHR system.

With the implementation of an EHR and replacement of the existing legacy system, DYC would be better able to address problems identified in medication prescribing and monitoring, as well as improve clinical decision-making, reducing medical errors, and increasing efficiencies. The rate of medical errors varies by facility in DYC, ranging from zero to ten documentation errors per month. An EHR system and a new pharmacy component would eliminate transcription errors, which are the leading cause of medication errors. Hospitals that have implemented EHR systems have had significant reductions in medication errors. For example, the University of Texas, Harris County Psychiatric Center eliminated nursing transcription errors and reduced all medication errors by 89 percent within three months after implementing an EHR. Additionally, a fully-integrated EHR will automatically tie patient treatments to outcomes, and will directly assist clinical efforts to address the patients' mental illnesses and aggression that can result in assaults, the need for seclusion and/or physical management.

In addition, as most of the State's community mental health centers and community providers implement EHRs, as well as the Institutes, a shared EHR will allow DYC to share vital information about patients who move between the behavioral health and juvenile justice systems. EHRs bring a patient's total health information together in one place and ensure that information is current and relevant, providing clinicians with past medication trials and treatment, including adverse drug reactions. While an EHR can never take the place of clinical judgment and experience, an EHR does actively provide options and explanations that improve the clinician's efficiency and compliance with accepted practice guidelines. An EHR system reduces the amount of time clinicians spend locating and documenting patient care and solve the problem of illegible handwritten notes and physician orders.

Proposed Solution and Anticipated Outcomes: As of November 2014, vendors have submitted responses to the RFP. Vendor selection is currently pending the outcome of competitive negotiations and the EHR is set to be fully implemented by June 30, 2016. Depending upon the vendor and products selected, the best approach towards implementation will vary (e.g., phased-in by modules or all-at-once; parallel with legacy systems or total cut-over after testing; replace existing functionality first or implement per a different order

driven by a default construction of the EHR, etc.). As the DYC was not part of the original requirements for the RFP scope of work, DYC requirements will need to be evaluated and folded into the overall project plan.

The EHR will address problems identified in medication prescribing and monitoring, as well as improve clinical decision-making, reduce medical errors, and increase clinical efficiencies.

The EHR system will be vendor-hosted and cloud-based, with the responsibility for data security (during transmission and at rest), backup, redundancy and disaster recovery residing with the vendor, per the guidelines established in State OIT policy, and enforced by contract with the Department.

The Capital Construction funding request approved for FY 2014-15 for the Office of Behavioral Health was submitted with the published RFI, which was accepted as a program plan due to their inclusiveness of the requirements (project scope, means for estimating costs, source and method of financing, compliance with policy, review and approval by OIT, benefits to the Department, concordance with OIT and Department automation goals and strategic objectives, validity of alternative chosen, etc.). The entire review process spanned several years and included reviews of multiple EHR and related systems, interviews with other States and other Colorado departments and agencies, system demonstrations, and detailed responses to the RFI from leading vendors.

The overarching EHR program plan is to implement a vendor-hosted, cloud-based, software-as-a-service, commercial-off-the-shelf (COTS), and wholly-integrated system. The EHR and its integrated components (lab, pharmacy, nutrition, dental, document management, health information exchange (HIE) integration, patient portal, medication administration, clinical decision support, care plan, etc.) will be independent of the OIT and DHS networks, except for the user traffic on the network as the EHR is accessed. Concurrent with the selection of an EHR vendor, the Department is upgrading the network infrastructure and installing a wireless network at the Institutes. This funding request will cover installing wireless networks at the ten DYC facilities in order to utilize the EHR. The EHR system will be wholly compliant with State OIT and the Federal Office of the National Coordinator for Health Information Technology (ONC) and the Health Insurance Portability and Accountability Act (HIPAA) security standards, as enforced by the Department's contract with the vendor. Performance review and oversight will be provided by OIT and the Department. Because EHR systems in the solicited price range are malleable by design (i.e., built to be modified by user technical staff in response to the need for frequent update to treatment processing, such as new assessments, care plan redesign, changes to pharmacy and lab operations, regulatory changes, shifts in performance measures, etc.), the Division will need two technical FTE to support the system. These staff are requested in a separate FY 2015-16 operating budget amendment. The EHR will share health records with previous and current providers via secure links through the State's two HIEs, and will ultimately contribute to the Department's overall analyses of health information via the Data Integration Initiative. The initial contract will be for five years, with successful implementation and performance establishing an expectation for continued service and enhancement.

The alternative to implementing a complete and wholly integrated Electronic Health Record (EHR) (which would include all clinical aspects of the medical record and robust pharmacy, lab and dietary sub-systems) is to continue utilizing Trails as the medical record system. Trails is a case management system not designed to adequately serve as a medical record system, therefore increasing the risk for inadequate performance in the area of medication management and inadequate protection of youth privacy under

HIPAA. In addition, the Department would not likely be able to sufficiently address the deficiencies identified as part of the OSA performance audit.

Assumptions for Calculations and Cash Fund Projection: As the vendor has not been selected yet, the Department is unable to pursue any specific estimates or cost breakdowns that would be required to add DYC to the existing EHR implementation plan. High level estimates are for $935,000. It is likely that there would be additional licensing costs and vendor development fees. The Department does not have the costs to create wireless environments within the State facilities as the buildings will have to be assessed to determine the actual cost. For this purpose, it is utilizing an average of $45,000 per site for 10 facilities for a total wireless cost of $450,000. Expenses of $400,000 are for DYC software requirements and licensing with a 10% contingency of $85,000 for unknown expenses.

Consequences if not Funded: Without an EHR, the Department will continue to struggle in monitoring the quality, quantity, and effectiveness of patient treatment, and will be out of compliance with OSA performance audit recommendations. Improvements in medication administration practices will be less attainable without a permanent, reliable solution to medication errors and clinical-coordination challenges without implementation of a modern, fully-integrated EHR to monitor and manage the clinical operations of the Institutes. Delays in completing the acquisition of an EHR system could result in higher costs in the future.

Supplemental, 1331 Supplemental, or Budget Amendment Criteria: This request meets supplemental criteria as a recent legislative performance audit recommends the Department evaluates the benefit of implementing an EHR. A cost effective solution is to be included in the newly funded Mental Health Institutes EHR.

Current Statutory Authority or Needed Statutory Change: Not applicable.

Additional Request Information	Yes	No	Additional Information
Is this request driven by a new statutory mandate?		X	
Will this request require a statutory change?		X	
Is this a one-time request?		X	
Will this request involve any IT components?	X		