

STATE OF CALIFORNIA
Budget Change Proposal - Cover Sheet
 DF-46 (REV 08/15)

Fiscal Year 2016-17	Business Unit 5225	Department California Correctional Health Care Services	Priority No.
Budget Request Name 5225-430-BCP-BR-2016-MR		Program 4650 - Medical Services - Adult 4670 - Dental and Mental Health Services Administration- Adult	Subprogram 4650012-MEDICAL ADMINISTRATION-ADULT 4650014-MEDICAL OTHER- ADULT

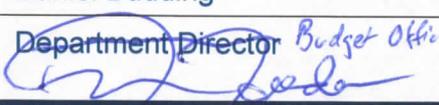
Budget Request Description
 Special Project Report – Electronic Health Record System

Budget Request Summary

California Correctional Health Care Services (CCHCS) requests \$35.8 million General Fund (GF) in Fiscal Year 2016-17, \$29.9 million in 2017-18, \$14.9 million in 2018-19, and \$5.8 million in 2019-20 and ongoing to complete the integration of a comprehensive Electronic Health Record System (EHRS) throughout the State's prison system. The position change request associated with the proposal is as follows: increase of 80.5 positions in 2016-17, which grows to 96 positions in 2017-18, which then reduces to a net position reduction of 57 positions beginning in 2018-19.

Requires Legislation <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Code Section(s) to be Added/Amended/Repealed	
Does this BCP contain information technology (IT) components? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <i>If yes, departmental Chief Information Officer must sign.</i>	Department CIO 	Date 5/11/16
For IT requests, specify the date a Special Project Report (SPR) or Feasibility Study Report (FSR) was approved by the Department of Technology, or previously by the Department of Finance. <input type="checkbox"/> FSR <input checked="" type="checkbox"/> SPR Project No. 5225-146 Date: 5/12/2016		

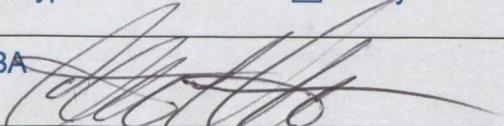
If proposal affects another department, does other department concur with proposal? Yes No
 Attach comments of affected department, signed and dated by the *department director or designee*.

Prepared By Daniel Budding	Date 3/18/2016	Reviewed By Doug Chatfield	Date 3/19/2016
Department Director <i>Budget Officer</i> 	Date 5/11/16	Agency Secretary Chulanda Mumbier	Date 5/11/16

Department of Finance Use Only

Additional Review: Capital Outlay ITCU FSCU OSAE CALSTARS Dept. of Technology

BCR Type: Policy Workload Budget per Government Code 13308.05

PPBA 	Date submitted to the Legislature 5/13/16
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A. Budget Request Summary

California Correctional Health Care Services (CCHCS) requests \$35.8 million General Fund (GF) in Fiscal Year 2016-17, \$29.9 million in 2017-18, \$14.9 million in 2018-19, and \$5.8 million in 2019-20 and ongoing to complete the integration of a comprehensive Electronic Health Record System (EHRS) throughout the State’s prison system. The position change request associated with the proposal is as follows: increase of 80.5 positions in 2016-17, which grows to 96 positions in 2017-18, which then reduces to a net position reduction of 57 positions beginning in 2018-19. The overall resource request is outlined in **Table 1 – Requested Resources**.

Table 1 – Requested Resources

Fiscal Year	Positions		Funding (\$1,000,000)			
	New	Savings	One-Time	On-Going	Savings	Total
2016-17	80.5		\$20.295	\$15.544		\$35.839
2017-18	96.0		\$8.271	\$21.624		\$29.895
2018-19	96.0	-153.0	\$11.202	\$13.524	-\$9.835	\$14.891
2019-20	96.0	-153.0	\$.980	\$19.584	-\$14.772	\$5.792
2020-21	96.0	-153.0	\$0	\$20.564	-\$14.772	\$5.792

B. Background/History

Due to the State’s past failure to provide medical care to prison inmates at minimum constitutionally acceptable levels, the United States District Court for the Northern District of California appointed a Receiver to assume executive management of the California prison health care system and to raise the level of care to constitutional standards. The mission of the newly-formed CCHCS became:

Reduce avoidable morbidity and mortality and protect public health by providing patient-inmates timely access to safe, effective and efficient medical care, and integrate the delivery of medical care with mental health, dental and disability programs.

To accomplish this mission, the court-appointed Receiver identified six strategic areas in which efforts were to be concentrated. These six areas became the basis for goals described in the Turnaround Plan of Action (TPA). The six strategic goals identified in the TPA are:

- 1) Ensure timely access to health care services;
- 2) Establish a prison medical program addressing the full continuum of health care services;
- 3) Recruit, train, and retain a professional quality medical workforce;
- 4) Implement a quality assurance and continuous improvement program;
- 5) Establish medical support infrastructure; and
- 6) Provide for necessary clinical, administrative and housing facilities.

On June 16, 2008, in an order signed by United States District Judge Thelton Henderson, the Federal Court found the TPA’s “six strategic goals to be necessary to bring California’s prison medical system up to constitutional standards.”

The EHRS addresses, either directly or indirectly, each of the TPA’s strategic goals, and helps other existing programs and processes achieve theirs. The EHRS will provide the critical data to ensure there is continuous improvement within the State’s health care programs as well as allowing for “proactive” improvements.

The importance of an EHRS is to have point-in-time data that will allow CCHCS to be proactive in addressing program deficiencies. The State has historically operated reactively as issues have arisen via lawsuits or disciplinary measures. Often these arose from circumstances caused by the lack of real time data or the ability to manage adherence to policies and procedures with point-in-time information.

Remaining vigilant and addressing deficiencies before sentinel events happen form the backbone of creating a sustainable health care organization. Sustainability will allow for the transition of CCHCS back to the State and alleviate the Federal Court's concerns about California's prison health care organization into the future.

This proposal is to establish a sufficient funding baseline starting in 2016-17 and provide the resources necessary to implement and maintain a comprehensive EHRS. The rationale for an EHRS and resources needed to establish it were described at length in the Feasibility Study Report (FSR) for this project, which was created in 2013 (*Attachment A*). The original FSR did not request funding as CCHCS intended to fund the project without having to put further strains on the State's budget. Unfortunately, due to the enormity, complexity, and evolving nature of the project, the FSR either underestimated or failed to account for resources that would be required to complete and sustain the EHRS. The EHRS now requires additional position and funding resources in order to complete and maintain the EHRS.

Project Background

In order to appreciate the importance of the revisions proposed in the Special Project Report (SPR), it is necessary to revisit the rationale for developing the EHRS and why it is such an important part of CCHCS's strategic plan. This is best done by exploring the description of the project as it appears in the FSR. The FSR lays out the business case for the EHRS and provides a brief description of what the proposed solution would include.

The FSR's business case begins by stating the necessity for the EHRS, including identifying the business problems presented by the project:

CCHCS does not currently have a sustainable, enterprise-wide EHRS solution across all health care settings to maximize the provision of efficient and safe health care services to its patient-inmates. The current systems and processes remain prone to avoidable risks and errors, as well as expenditure and service inefficiencies and waste. Key stakeholders across all domains of health care within CCHCS have identified the following Business Problems:

- *Risk of Compliance Violations and Litigation*
- *Inadequate Patient Safety and Clinical Transparency*
- *Inefficient Health Care Delivery*
- *Insufficient Continuity of Care Across Care Settings*
- *High Cost of Current Service Delivery Environment*

The FSR then addresses these business problems with an exploration of the advantages (Business Opportunities) of the EHRS. Within the Business Opportunities section the case is made that the EHRS will:

- Improve Access to Patient Information across Health Care Settings
- Increase the Efficiency of Health Care Delivery
- Improve Continuity of Care Across Settings
- Reduce Risk of Compliance Violations and Litigation
- Increase Cost Predictability, Receive Federal Funds and Reduce Long Term Costs

The complete business case and business problems, along with the proposed solution can be found in the attached FSR (Attachment A) .

Project Overview

An enterprise-wide EHRS which provides access to patient information is necessary to support clinicians' abilities to improve health care decisions and effectiveness. The EHRS contains clinical information, captures data, and documents information about each patient and his/her care from each medical practice area where this record resides. It also contains clinical results, referrals, and history. Moving from a paper-based system to an electronic system will allow providers to have a complete view of each patient's care and help remedy redundancies in scheduling, medications, and other overlapping areas of care.

In awarding the contract to bring the EHRS to fruition, CCHCS defined the scope of what was needed, including anticipated expenses. The contract described each of the steps that were necessary to complete the project as they were understood at the time and identified a series of deliverables and the order in which they needed to be completed. Some of these are shown in **Table 2 – Notable EHRS Deliverables Completed**.

Table 2 - Notable EHRS Deliverables Completed

DELIVERABLE TITLE	COMPLETION DATE
EHRS Project Management Plan (PMP)	December 2013
Strategic Adoption Session Report	December 2013
Interface Management Plan (IMP)	May 2014
Design Review	August 2014
Workflow Gap Analysis	August 2014
Learning Plan	August 2014
Gateway Design	December 2014
Design Decision Matrix (85% Completion Milestone)	September 2014
Configure EHRS	July 2015
Test Plan	September 2015
Customized Training Materials	September 2015
Pilot Cutover & Go-Live Plan	September 2015

CCHCS completed the EHRS FSR in 2013, and the original plan was to fund EHRS within existing resources. During the development of the FSR, CCHCS assumed that most of the maintenance work and network and server hosting would be covered by the contractor. Additionally, the resources that CCHCS required were estimated by the contractor based on previous experience at non-correctional facilities. Many of the estimates developed have not materialized as planned. As the project progressed, a variety of factors arose that delayed implementation. The significance of the delays to implementation is that they have extended the project. In addition, the implementation process (a roll-out to three pilot prisons and headquarters, Regional Offices, Central Health Records, and Central Fill Pharmacy) revealed a number of oversights, technological and operational challenges, and business contingencies that affected the project rollout, necessitated changes in project scope and schedule, or that revealed other causes to reassess the funding and personnel resources needed for completion.

With approval of this proposal, rollout of EHRS would resume in July 2016 and the final rollout is anticipated to be completed in August 2017. Each institution will move to maintenance and operation (M&O) shortly after the EHRS has been implemented. In preparation for M&O, and to have an appropriate funding baseline for the future, CCHCS is submitting this proposal to address the current baseline deficiencies that have evolved since the inception of the project.

Resource History
(Dollars in thousands)

Program Budget	PY - 4	PY - 3	PY - 2	PY - 1	PY
Authorized Expenditures	17,447	13,588	54,631	36,240	44,737
Authorized Positions	0	3.2	62.8	83.4	62.2

C. State Level Considerations

Implementation of a comprehensive EHRS throughout California’s prison system is consistent with the goals identified in the Receiver’s TPA in that it addresses, either directly or indirectly, each of the strategic goals, and helps other programs and processes already in place to achieve theirs.

Besides being consistent with the Receiver’s TPA, the EHRS is also supported by the Federal Court. On March 10, 2008, Judge Henderson signed a court order that states in part:

“The objective of the Receiver’s long term information technology program is to construct and support the CCHCS Information System based on the importance of “correct data at the point of care.” The core design is based on an Electronic Medical Record (EMR)¹ for each patient-inmate. The EMR will be paperless, medical information gathered in one location for physicians and clinicians to access, at various locations, and thereby enable them to make informed and safe medical decisions. All data obtained will be patient-centric to allow for an “Information at the Point of Care” system.²”

With implementation of the EHRS, CCHCS seeks to satisfy the court order, complete the TPA’s prison medical support infrastructure objective, and complete the 19 Information Technology (IT)-related projects that were established by the Receiver, approved by the federal judge, and ultimately by the Department of Finance (DOF) and the Legislature.

D. Justification

The EHRS project was initiated utilizing redirected resources within the CCHCS budget (mainly from existing project funding) to create a commercial off-the-shelf (COTS) health record solution. The prime vendor (Cerner) worked with staff to complete an FSR based on what was known at the time the contract was initiated. The vendor had been successful in hospital settings, but only had minimal experience implementing within a correctional system. Many of the original cost and position estimates were based on Cerner recommendations implementing in a typical health care environment.

Since the approval of the FSR in 2013, the scope of the EHRS project has been modified to address issues not foreseen during the FSR process and to address new project needs that have arisen since the start of the project. The resources identified in this request will ensure the EHRS is functional and will create a sufficient M&O baseline to sustain the EHRS in the future.

Throughout the entire implementation process, CCHCS remained accountable to the Federal Court regarding the progress of the EHRS through the filings of the Receiver’s Tri-Annual reports. CCHCS also provides monthly reports to the California Department of Technology (CDT), which has provided a dedicated resource to provide additional oversight.

In accordance with CDT project policy, an SPR was submitted to DOF and CDT for review and approval (*Attachment B*). The project has been subject to delays and the CCHCS project team has recognized the need for additional resources. An SPR is needed to update/adjust project documents to reflect what is actually happening with the project.

The resources being requested, and their respective fiscal impacts, can be divided into nine areas, as shown in **Table 3 – EHRS Budget Change**.

¹ At the time of the court order, EMR referred to Electronic Medical Record systems. Subsequently, as a result of the Affordable Care Act, EMRs are now referred to as Electronic Health Care Record Systems (EHRS).

² Findings of Fact and Conclusion of Law, *Plata v. Schwarzenegger*, United States District Court (No. C01-1351 TEH) (October 3, 2005)

Table 3 - EHR Budget Changes

BUDGET DESCRIPTION	FY 2016/17	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21 (ONGOING)
One-Time Temp Help Costs	\$7,213,440	\$5,215,776	\$1,120,832	\$0	\$0
IT & Program Staff	\$11,403,025	\$13,076,228	\$13,076,228	\$13,076,228	\$13,076,228
EDRS	\$8,855,895	\$6,253,776	\$2,619,440	\$814,512	\$814,512
EHR Equipment Refresh	\$0	\$0	\$2,609,662	\$2,609,662	\$2,609,662
Maintenance Changes	\$0	\$2,100,000	\$2,100,000	\$2,100,000	\$2,100,000
IT Infrastructure/ Network/Servers	\$1,746,000	\$1,746,000	\$1,746,000	\$1,746,000	\$1,746,000
Pharmacy Cutover	\$5,491,200	\$0	\$0	\$0	\$0
Organizational Change Management	\$504,000	\$504,000	\$504,000	\$0	\$0
Independent Validation and Verification	\$580,000	\$580,000	\$580,000	\$0	\$0
Miscellaneous (IPO/LMS/Travel)	\$45,066	\$419,429	\$369,830	\$218,030	\$218,030
Position Savings/Decommission			-\$9,834,587	-\$14,772,455	-\$14,772,455
TOTAL	\$35,838,626	\$29,895,209	\$14,891,405	\$5,791,977	\$5,791,977

One-Time Temporary Help Costs

The original estimate for configuring EHR was based on an estimate from Cerner. The resources provided for the configuration of this statewide system that includes both in-patient and out-patient information were not sufficient. Additionally, issues that arose during the pilot roll out require staff to focus on improving functionality of areas that were planned to be complete. This redirection of staff has delayed other planned EHR functionality. The requested resources will allow CCHCS to rollout the EHR to remaining institutions, and implement the remaining EHR functionality. When the EHR vendor contract was originally completed, the CCHCS scope of work needed for this remaining functionality had not been fully determined. As a result, the resources needed could not be included in the FSR. The requested funding will allow CCHCS to bring aboard temporary staff to complete these remaining EHR project activities and minimize the need for additional position authority.

Table 4 – Remaining Functionality provides the schedule for the integration of the remaining functionalities. Descriptions of these functionalities follow the table.

Table 4 – Remaining Functionality

Description	Time to Implement	Estimated Completion
2017 Code Upgrade	3 Months	May 2017
Code Uplift (Java) and Scheduling Enhancements	12 Months	May 2018
Cerner Resonance	6 Months	March 2017
Health Sentry	6 Months	March 2017
California Immunization Registry Bidirectional Interface	6 Months	March 2017
iBus Medical Device Interface Glucometers	12 Months	August 2018
PowerInsight Enterprise Data Warehouse (EDW)/Health EDW	12 Months	June 2017
HealthIntent/EDW	7 Months	March 2017
Warehouse	2 Months	August 2016
Content360 Historical Documents Upload	4 Months	October 2016

2017 Code Upgrade- Upgrades the code to the current vendor-supported baseline and prepares the system to support deployment of the remaining functionality in this list.

Code Uplift (Java) & Scheduling Enhancements- The 2017 Code Upgrade provides the technology necessary to deploy Java enhancements to the COTS software, along with patient scheduling enhancements supporting batch rescheduling of patient appointments. Both of these changes will better support delivery of health care in the correctional setting.

Cerner Resonance- This functionality allows the EHRS to share patient records with other Cerner clients. One major Cerner client is the Los Angeles (LA) County Jail. Since LA County Jail represents the largest feed into CDCR, transferring patient records electronically will save time in the reception center process.

Health Sentry- Cerner's Health Sentry provides reports to clinical staff in support of early outbreak detection and reporting. It provides a secure connection between healthcare centers and public health organizations through an open and flexible data network.

CAIR Bidirectional Interface- Cerner has released plans to update its COTS solution to support bidirectional interfaces for reporting immunization data. This will allow the EHRS to automate reporting of immunization data to the California Immunization Registry (CAIR).

iBus MDI Glucometers- This medical device interface (MDI) functionality will allow medical devices to connect to the EHRS to automate loading of patient data. As an example, patient blood glucose readings can be loaded into patient records from compatible glucometers.

Powerinsight EDW/Health EDW- This functionality will provide Enterprise Data Warehouse (EDW) capabilities to the EHRS, including incorporation of data from other CCHCS systems to a unified data warehouse.

HealthIntent/EDW- This functionality provides the technical infrastructure necessary for other Cerner solutions to interoperate, including Health EDW.

Lighthouse- This Cerner functionality supporting electronic submission requirements for quality of care in the United States. Lighthouse supports reporting aligned with National Hospital Inpatient Quality Measures (NHIQM) and Ambulatory Physician Quality Reporting (APQR) requirements.

Hiring permanent or limited-term state staff for a temporary need is not prudent; utilizing contract staff is appropriate. Trying to hire qualified limited-term staff can be challenging and often leaves gaps in the ability to get work done. Contract staff will allow the flexibility in hours to complete work and be dismissed when not needed.

Continuing IT & Program Staff

There were 50.4 positions originally identified for operational support of the EHRS, but as more was learned about the solution and having implemented at the pilot sites, it became clear that additional personnel were needed. An additional 96.0 positions (making a total of 146.4) tied to IT and the other program areas are required to provide operational support. Included in these 96.0 positions are 61.0 IT positions and 35.0 program support positions. These staffing requirements are described in (*Attachments C and D*).

19 IT positions to make and assist in making system configurations and updates, which will allow proper functionality of the system at all times. IT solutions become living organisms that need constant maintenance in order to keep the solution viable. The prime vendor's original recommendation for staff to support the solution was based on experience outside of correctional environments. Having never worked in a correctional environment, the prime vendor was unfamiliar with the nuances and intricacies of the system. This unfamiliarity contributed to an underestimation of the need for M&O staff resources.

36 IT positions to support the additional 16,800 devices required for EHRS, based on their current device to IT staff ratio of 457 to 1.35 program positions to work as the subject matter experts with Cerner and the IT positions to implement clinical change, update training, and provide system support from a clinical/program prospective. Program staff provide the subject matter expertise needed to ensure the system is meeting the clinical needs of the program areas. These program staff will work with IT staff to affect change within the system to meet program needs. Program needs evolve over

time and are driven by court mandates, policy updates or new processes. As the updates are completed, these staff will go through user acceptance training to ensure proper functionality within the system.

6.0 Systems Software Specialist IIs to support the Electronic Dental Record System (EDRS). The positions are needed to provide project support as team members and act as technical subject matter experts for analysis, design, implementation, testing, and training. Post go-live, they must be able to provide service support working with end-users statewide and with vendors to troubleshoot and triage system incidents. Both the EDRS implementation and the support moving forward will require complex technical and functional expertise along with knowledge of the dental system. As an example, the dental solution will be accessed from the EHRS and will be interfaced with the existing MiPACS dental imaging solution. The consequences, if this level of expertise is not met, will result in inadequate automated dental functions at go-live. For post go-live, problems that are not resolved sufficiently will lead to delays of dental activities.

Electronic Dental Record System

CDCR currently utilizes a combination of various databases and paper records for dental records, which require staff to scan static images into the database and maintain a hardcopy of all dental records. The EHRS cannot, in its current form, incorporate dental records because it does not have the ability to support two core dental documents that require frequent updates, the dental treatment plan and the periodontal chart. Additionally, EHRS, in its current form, does not meet the Dental Program's scheduling needs. Incorporating dental records and scheduling information into the EHRS as requested in this proposal will:

- Provide relevant dental clinical information on one screen, eliminating the need to pull up the inmate records on various screens from multiple databases or use paper records, which should reduce errors and patient interactions more effective.
- Allow clinicians to easily and effectively search a patient's record for clinical information via keyword.
- Provide system prompts or alerts to ensure complete and consistent clinical documentation.
- Provide clinical decision support (i.e., blood pressure rate could trigger the need to see a specialist).
- Support CDCR's Performance Improvement Plan Objective of having 90 percent or more of high risk patients with a written interdisciplinary care plan.
- Provide valuable management reporting on clinical quality measures and predictive data.

Please see Attachment E for more discussion on the Electronic Dental Record System component of EHRS.

EHRS Equipment Refresh

EHRS end-user devices must be refreshed due to the limited life span of such electronic equipment. The FSR underestimated the number of EHRS end-user equipment that would be needed to support the system. It also did not address the necessary refresh of these additional devices. CCHCS will utilize a four-year refresh cycle, resulting in one-quarter (25 percent) of the EHRS end-user devices being refreshed each year starting in 2018-19. Equipment refresh is critical to maintain any IT system and this funding will allow for equipment to be updated keeping the EHRS viable.

The FSR assumed \$2.2 million for one-time equipment purchase and did not include any funding estimates for refreshing the equipment. The actual need is \$10.4 million, and replacing these devices every four years results in an annual cost of \$2.6 million.

EHRS Maintenance Changes

The EHRS will require periodic maintenance changes to correct deficiencies, complete routine maintenance, and perform upgrades to the operational EHRS. The FSR did not include any funding estimates of maintenance changes to the EHRS. CCHCS requests \$2.1 million annually beginning in 2017-18 for contracted services in support of these EHRS maintenance changes. The budgeted funds will be used to procure specialized contract services to perform or support EHRS maintenance changes.

EHRS maintenance encompasses many specific types of activities performed to ensure the EHRS continues to support user needs. Maintenance changes include activities to support the COTS EHRS

software, interfaces to external systems, and portable devices used coincident with delivery of health care services.

- Interface changes are made to maintain operational interfaces with external systems. It is estimated that most interface changes will be externally driven, comprised of changes necessary due to changes to commercial standards (e.g., HL7), or changes made to external systems. Because these changes are externally driven, CCHCS will not always be able to plan ahead for them. Consequently, an annual budget for maintenance changes is necessary to perform reactive maintenance changes to EHR interfaces.
- Device Changes are necessary to adapt the EHR to changes made by device manufacturers, as well as changes to support new devices. In response to hardware and software changes made by device manufacturers, CCHCS will be required to perform EHR maintenance changes. As market-driven changes occur in health care devices, CCHCS may elect to introduce new or changed devices or adapt to removal of devices in the marketplace. The annual maintenance change budget is necessary to procure specialized consultant services to support these market-driven changes in health care devices.
- Software Changes include a variety of changes necessary to ensure the EHR continues to support user needs. Some of these changes are made in response to identified deficiencies (i.e., break-fix), while other changes will be made to adapt to new or changing user needs. Additional software maintenance changes include those made to improve performance or reduce ongoing costs. The annual maintenance changes budget supports acquisition of specialized consultant services to analyze, support, or make changes to the EHR software.

CCHCS IT Infrastructure/Network/Servers

CCHCS estimates \$1.7 million annually for hosting and network fees for the EHR, including EHR servers not hosted by the EHR vendor. The cost includes charges for additional coverage and outside vendor fees that resulted from the expansion of the project and increased data needs that were not anticipated in the original FSR.

Pharmacy Cutover

The pharmacy authentication/validation is a one-time need in order to move all prescriptions from the existing pharmacy program into the EHR. The cutover includes prescription entry and validation in the EHR. The State Board of Pharmacy requires all prescriptions be approved by a licensed pharmacist, so all prescriptions need to be entered into the EHR and then validated by a licensed pharmacist. There are roughly 400,000 monthly prescriptions that will need to transition to the new system. This work is critical to maintaining prescriptions at the institutions and will be done two weeks before an institution goes live with the EHR.

As the need for the pharmacy cutover was being recognized in the FSR, it was thought that the bulk of the work would be done by clerical staff and no funding was provided for licensed staff to validate the data entry. In practice, the technical requirements of the cutover proved to be too advanced for the classifications assigned to the cutover, and professional staff were brought in to continue the project. It is anticipated that the pharmacy cutover will be completed in 2016-17, so additional full-time permanent employees are not required; however, a contingency of professional staff is needed to complete the project, so registry staff will be used. The \$5.5 million dollars requested for 2016-17 is to cover the cost of 32 registry staff each at \$82.50/hour for 2,080 hours/year.

Organizational Change Management

Organizational Change Management (OCM) is a framework for managing the effect of new business processes, changes in organizational structure or cultural changes within an enterprise. OCM addresses the people side of change management that is necessary for the successful implementation of an EHR project.

A systematic approach to OCM is beneficial when change requires people throughout an organization to learn new behaviors and skills. By formally setting expectations, employing tools to improve communication, and proactively seeking ways to reduce misinformation, stakeholders are more likely to buy into a change initially and remain committed to the change throughout any discomfort associated with it. The need for OCM was identified in the FSR. Two contractors at \$121/hour are assigned to OCM, which equates to an annual cost of \$504,000 through the end of the project. This request is for

an extension of funding for these contractors that was made necessary by delays in the project implementation.

The OCM consultant(s) to the EHRS project will provide all of the following services:

- Responsibility for day-to-day management and implementation of change management strategy at the direction of the Director of Transformation or designee;
- Assist Communications Team in developing and preparing Electronic Correctional Health Care Organization (ECHOS) presentations;
- Develop and prepare Director Quarterly briefings;
- Assist Communications Team in developing Town Hall meeting materials;
- Assist Communications Team in developing and preparing and conducting online discussion forums;
- Participate in planning and development of solution demonstration sessions for steering committees, institutional Chief Executive Officers, and executive staff;
- Maintain and track OCM risks and issues;
- Assist in development and communication of mock clinic transformation activities; and
- Support Transformation and Go-Live activities as directed by the Director of Transformation & Go-Live, or designee.

Independent Validation and Verification

IV&V is the system's engineering discipline that helps the organization build quality into the planning, integration, testing, and roll-out during the implementation life cycle. IV&V consultants will work with the Project Oversight Consultant and CCHCS' Governance and Oversight Selection staff to ensure risks and issues relating to the technical and management aspects of the EHRS project are assessed and reported properly. The need for IV&V was recognized in the FSR. Two contractors, each being paid approximately \$140/hour, are assigned IV&V which equates to an annual cost of \$580,000 through the end of the project. This request is for an extension of funding for these contractors that was made necessary by delays in the project implementation.

With prior approval from the EHRS Project Director, or designee, the Consultants shall perform the following tasks and deliverables:

1. IV&V Management Plan and Reporting

- Develop a Management Plan describing the activities, personnel, schedule, standards, and methodology for conducting IV&V reviews.
- Develop formal presentations and templates to provide IV&V status and monthly reports.

2. Quarterly Report

- Consultant shall prepare and present a quarterly report documenting project status including, but not limited to, costs, schedules, risks, issues, process deficiencies, and lessons learned.
- The Quarterly Report must include an assessment of risks that may prevent project success or negatively impact the project schedule. The following must be addressed in each report: Project Sponsorship; Management Assessment; Project Management; Risk Management; Configuration Management; Communications Management; Requirements Management; Design Management; and Contract Management.

3. Final IV&V Report

- At contract completion, the consultant will submit a Final Report to the EHRS Project Director detailing all project activities, accomplishments, budget summary, lessons learned, and suggestions/recommendations for developing and/or improving ongoing maintenance and support.
- The Final Report shall summarize all IV&V activities, tasks, results, anomalies, and dispositions including quarterly reporting.

Miscellaneous Budget Changes

Independent Project Oversight (IPO)

The IPO Consultant will be provided by CDT and will provide the following services:

- Monitor the progress of the project to ensure project objectives are met and the project is being adequately managed;
- Provide information on project issues, risks and status to the project manager, program manager, project director, oversight agencies, and Governance Board;
- Meet the requirements of CDT's information technology project oversight framework; and
- Submits independent project oversight report on a monthly basis.

This oversight is being provided by the CDT. The service is \$153,600 per year and will continue through the end of the project.

Learning Management System (LMS) (Annual License Seat Fees):

The LMS is the vehicle for distributing EHRS eLearning content as well as other departmental eLearning. An LMS is a web-based software application used in the administration, delivery, tracking, scheduling, and reporting of training. An LMS tracks the learner's progress and course completions; allows for scoring of assessments, including specified pass points; has the ability to monitor and customize the course registration process for both eLearning and Instructor-led Training (ILT) classes; keeps a historical record of training completions; provides a course catalog customizable by classification or job role (i.e., end user only sees training pertinent to their class/job); can specify user security and roles; and has many more valuable tools. All CCHCS training, including ILT classroom and eLearning, will eventually be scheduled and tracked in the LMS.

Funding required to maintain the LMS contract is approximately \$300,000 per year and will continue after the conclusion of the project.

Travel:

Employee travel is required to support the design, build, and/or implementation of the EHRS project. Additional travel between the institutions and/or headquarters may be required to attain or build upon skills that would be necessary to receive the level of training to support the EHRS.

Funding requested for travel is approximately \$47,000 per year based on number of trips required for the different stages of the project and will diminish with the conclusion of the project.

Position Savings/Decommission

With the implementation of the EHRS, the legacy eUHR system can be decommissioned, and the \$3.7 million annual contract associated with it eliminated. Decommissioning will occur in 2019-20. Additionally, 153 positions, mostly tied to dictation and transcription services and medical records, will be abolished. Abolishing these positions will result in a savings of \$10.0 million; however, this savings will not be realized until 2018-19 as these personnel are needed to transfer the written files into the EHRS.

There are also savings tied to the implementation of the EDRS. Beginning in 2019-20, it is estimated that there will be a reduction in costs of \$1.05 million related to decommissioning of the Dental Scheduling and Tracking System.

E. Outcomes and Accountability

The EHRS will be a key component to patient care within the institutions. With approval of this request, the resources will allow for the implementation and completion of the EHRS. The Receiver submits an EHRS update as part of his Tri-Annual report and there are monthly reports done for CDT. These external reports will track the EHRS to completion.

F. Analysis of All Feasible Alternatives

- 1. Approve 96.0 positions and \$35.8 million GF beginning in 2016-17 to complete and support the EHRS.**

Pros

- a. Provides adequate staffing and funding to complete and maintain the EHRS.
- b. Aligns with the Receiver's TPA.
- c. Provides appropriate data support to ensure maintenance of a constitutionally required level of health care necessary for prison health care to return permanently to State control.
- d. Completes the medical and mental health portion of the EHRS and eliminates the need for a paper based medical/mental health record system.

Cons

- a. Additional GF expenditures.

- 2. Approve \$24.4 million funding for the completion and maintenance of the EHRS beginning in 2016-17.**

Pros

- a. Addresses the funding needed to complete the EHRS.
- b. Creates an appropriate maintenance and operations budget.
- c. Reduces GF impact.

Cons

- a. Does not address critical staffing needs.
- b. Creates an appropriate funding base, but not the position support to do the work.

- 3. Approve \$28.2 million GF and 61.0 IT positions beginning in 2016-17 to address the completion of the implementation phase of the EHRS.**

Pros

- a. Provides adequate staffing for the IT program.
- b. Addresses the funding needed to complete the EHRS.
- c. Reduces GF impact.

Cons

1. Does not address critical program position support needs.
2. Does not allow for program staff to update and maintain program specific information within EHRS.

- 4. Approve \$24.8 million GF and 35.0 program positions beginning in 2016-17 to address the completion of the implementation phase of the EHRS.**

Pros

- a. Provides adequate staffing for the program staff.
- b. Addresses the funding needed to complete the EHRS.
- c. Reduces GF impact.

Cons

- a. Does not address critical IT program position support needs.
- b. Does not allow for IT program staff to update and maintain the EHRS.

Budget Change Proposal - Cover Sheet

DF-46 (REV 08/15)

G. Implementation Plan

Implementation of the EHRS has already begun. The EHRS project continues activities to roll out the EHRS to all institutions ending in August 2017, implementing the remaining EHRS functionality in September 2018, decommission legacy systems and close out the formal project in 2019-20 and move to M&O in 2020-21.

H. Supplemental Information

Attachment A – FSR

- Business Case and Business Problems from original FSR

Attachment B – SPR

- The SPR provides detailed information about all aspects of the EHRS and the additional resources requested in this Finance Letter

Attachment C – Position Summary Chart

- Lists all of the positions affected by this SPR.

Attachment D – Position Justifications

- Provides justifications for the requested positions arranged by area.

Attachment E – Electronic Dental Record System Justification

- Describes the need to incorporate EDRS with the EHRS.

Attachment F – Electronic Dental Record System Justification

- Describes the need to incorporate EDRS with the EHRS.

I. Recommendation

Alternative #1 – Approve 96.0 positions and \$35.8 million GF beginning in 2016-17 to complete and support the EHRS.

BCP Fiscal Detail Sheet

BCP Title: Electronic Health Care Records System

DP Name: 5225-430-BCP-DP-2016-MR

Budget Request Summary

	FY16					
	CY	BY	BY+1	BY+2	BY+3	BY+4
Positions - Permanent	0.0	80.5	96.0	-57.0	-57.0	-57.0
Total Positions	0.0	80.5	96.0	-57.0	-57.0	-57.0
Salaries and Wages						
Earnings - Permanent	0	6,721	7,867	1,908	1,908	1,908
Earnings - Temporary Help	0	7,213	5,132	1,020	0	0
Total Salaries and Wages	\$0	\$13,934	\$12,999	\$2,928	\$1,908	\$1,908
Total Staff Benefits	0	2,955	3,486	-280	-280	-280
Total Personal Services	\$0	\$16,889	\$16,485	\$2,648	\$1,628	\$1,628
Operating Expenses and Equipment						
5301 - General Expense	0	123	149	100	100	100
5302 - Printing	0	90	109	106	106	106
5304 - Communications	0	174	211	211	211	211
5306 - Postage	0	43	52	52	52	52
5308 - Insurance	0	6	7	7	7	7
5320 - Travel: In-State	0	224	271	230	230	230
5322 - Training	0	42	51	33	33	33
5324 - Facilities Operation	0	414	414	414	414	414
5326 - Utilities	0	16	19	19	19	19
5340 - Consulting and Professional Services - Interdepartmental	0	22	27	27	27	27
5340 - Consulting and Professional Services - External	0	15,541	10,018	8,962	883	883
5346 - Information Technology	0	1,746	1,746	1,746	1,746	1,746
5368 - Non-Capital Asset Purchases - Equipment	0	497	322	322	322	322
539X - Other	0	12	14	14	14	14
Total Operating Expenses and Equipment	\$0	\$18,950	\$13,410	\$12,243	\$4,164	\$4,164
Total Budget Request	\$0	\$35,839	\$29,895	\$14,891	\$5,792	\$5,792

Fund Summary

Fund Source - State Operations						
0001 - General Fund	0	35,839	29,895	14,891	5,792	5,792
Total State Operations Expenditures	\$0	\$35,839	\$29,895	\$14,891	\$5,792	\$5,792
Total All Funds	\$0	\$35,839	\$29,895	\$14,891	\$5,792	\$5,792

Program Summary

Program Funding

4670 - Dental and Mental Health Services Administration-Adult	0	9,897	7,281	3,646	792	792
4650012 - Medical Administration-Adult	0	25,942	22,614	17,941	11,696	11,696
4650014 - Medical Other-Adult	0	0	0	-6,696	-6,696	-6,696
Total All Programs	\$0	\$35,839	\$29,895	\$14,891	\$5,792	\$5,792

Personal Services Details

Positions	Salary Information								
	Min	Mid	Max	CY	BY	BY+1	BY+2	BY+3	BY+4
1177 - Medical Transcriber (Eff. 07-01-2018)				0.0	0.0	0.0	-47.0	-47.0	-47.0
1178 - Sr Medical Transcriber (Eff. 07-01-2018)				0.0	0.0	0.0	-2.0	-2.0	-2.0
1312 - Staff Info Sys Analyst (Spec) (Eff. 07-01-2016)				0.0	20.5	36.0	36.0	36.0	36.0
1337 - Sr Info Sys Analyst (Spec) (Eff. 07-01-2016)				0.0	4.0	4.0	4.0	4.0	4.0
1367 - Sys Software Spec III (Tech) (Eff. 07-01-2016)				0.0	1.0	1.0	1.0	1.0	1.0
1373 - Sys Software Spec II (Tech) (Eff. 07-01-2016)				0.0	15.0	15.0	15.0	15.0	15.0
1379 - Office Asst (Typing) (Eff. 07-01-2018)				0.0	0.0	0.0	-52.0	-52.0	-52.0
1470 - Assoc Info Sys Analyst (Spec) (Eff. 07-01-2016)				0.0	2.0	2.0	2.0	2.0	2.0
1583 - Sr Programmer Analyst (Spec) (Eff. 07-01-2016)				0.0	3.0	3.0	3.0	3.0	3.0
1869 - Hlth Recd Techn I (Eff. 07-01-2018)				0.0	0.0	0.0	-52.0	-52.0	-52.0
2947 - Instal Designer (Tech) (Eff. 07-01-2016)				0.0	3.0	3.0	3.0	3.0	3.0
2948 - Sr Instal Designer (Tech) (Eff. 07-01-2016)				0.0	1.0	1.0	1.0	1.0	1.0
4800 - Staff Svcs Mgr I (Eff. 07-01-2016)				0.0	2.0	2.0	2.0	2.0	2.0
5393 - Assoc Govtl Program Analyst (Eff. 07-01-2016)				0.0	6.0	6.0	6.0	6.0	6.0
7979 - Pharmacy Techn (Eff. 07-01-2016)				0.0	4.0	4.0	4.0	4.0	4.0
7982 - Pharmacist I (Eff. 07-01-2016)				0.0	8.0	8.0	8.0	8.0	8.0
8327 - Nursing Consultant - Program Review (Eff. 07-01-2016)				0.0	5.0	5.0	5.0	5.0	5.0
8338 - Hlth Program Spec I (Eff. 07-01-2016)				0.0	2.0	2.0	2.0	2.0	2.0
9287 - Sr Psychologist - CF (Spec) (Eff. 07-01-2016)				0.0	1.0	1.0	1.0	1.0	1.0
9348 - Sr Clinical Lab Technologist - CF (Eff. 07-01-2016)				0.0	1.0	1.0	1.0	1.0	1.0
9350 - Sr Radiologic Technologist - CF (Spec) (Eff. 07-01-2016)				0.0	1.0	1.0	1.0	1.0	1.0

9759 - Sr Psychiatrist (Spec) (Safety) (Eff. 07-01-2016)	0.0	1.0	1.0	1.0	1.0	1.0
TH00 - Temporary Help (Eff. 07-01-2016)	0.0	0.0	0.0	0.0	0.0	0.0
Total Positions	0.0	80.5	96.0	-57.0	-57.0	-57.0

Salaries and Wages	CY	BY	BY+1	BY+2	BY+3	BY+4
1177 - Medical Transcriber (Eff. 07-01-2018)	0	0	0	-1,830	-1,830	-1,830
1178 - Sr Medical Transcriber (Eff. 07-01-2018)	0	0	0	-87	-87	-87
1312 - Staff Info Sys Analyst (Spec) (Eff. 07-01-2016)	0	1,502	2,648	2,648	2,648	2,648
1337 - Sr Info Sys Analyst (Spec) (Eff. 07-01-2016)	0	323	323	323	323	323
1367 - Sys Software Spec III (Tech) (Eff. 07-01-2016)	0	89	89	89	89	89
1373 - Sys Software Spec II (Tech) (Eff. 07-01-2016)	0	1,211	1,211	1,211	1,211	1,211
1379 - Office Asst (Typing) (Eff. 07-01-2018)	0	0	0	-1,707	-1,707	-1,707
1470 - Assoc Info Sys Analyst (Spec) (Eff. 07-01-2016)	0	134	134	134	134	134
1583 - Sr Programmer Analyst (Spec) (Eff. 07-01-2016)	0	243	243	243	243	243
1869 - Hlth Recd Techn I (Eff. 07-01-2018)	0	0	0	-2,335	-2,335	-2,335
2947 - Instal Designer (Tech) (Eff. 07-01-2016)	0	205	205	205	205	205
2948 - Sr Instal Designer (Tech) (Eff. 07-01-2016)	0	75	75	75	75	75
4800 - Staff Svcs Mgr I (Eff. 07-01-2016)	0	143	143	143	143	143
5393 - Assoc Govtl Program Analyst (Eff. 07-01-2016)	0	372	372	372	372	372
7979 - Pharmacy Techn (Eff. 07-01-2016)	0	169	169	169	169	169
7982 - Pharmacist I (Eff. 07-01-2016)	0	961	961	961	961	961
8327 - Nursing Consultant - Program Review (Eff. 07-01-2016)	0	637	637	637	637	637
8338 - Hlth Program Spec I (Eff. 07-01-2016)	0	137	137	137	137	137
9287 - Sr Psychologist - CF (Spec) (Eff. 07-01-2016)	0	113	113	113	113	113
9348 - Sr Clinical Lab Technologist - CF (Eff. 07-01-2016)	0	65	65	65	65	65
9350 - Sr Radiologic Technologist - CF (Spec) (Eff. 07-01-2016)	0	67	67	67	67	67

9759 - Sr Psychiatrist (Spec) (Safety) (Eff. 07-01-2016)	0	275	275	275	275	275
TH00 - Temporary Help (Eff. 07-01-2016)	0	7,213	5,132	1,020	0	0
Total Salaries and Wages	\$0	\$13,934	\$12,999	\$2,928	\$1,908	\$1,908
Staff Benefits						
5150450 - Medicare Taxation	0	97	114	27	27	27
5150500 - OASDI	0	384	455	85	85	85
5150600 - Retirement - General	0	1,257	1,471	359	359	359
5150800 - Workers' Compensation	0	166	192	-13	-13	-13
5150900 - Staff Benefits - Other	0	1,051	1,254	-738	-738	-738
Total Staff Benefits	\$0	\$2,955	\$3,486	\$-280	\$-280	\$-280
Total Personal Services	\$0	\$16,889	\$16,485	\$2,648	\$1,628	\$1,628

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In its Feasibility Study Report (FSR) for the project submitted in July 2013, California Correctional Health Care Services (CCHCS) presented the Business Case for creating an Electronic Health Record System (EHRS). The FSR also provides the Business Program Background as well as Business Problems and Opportunities. These serve as the justification for the EHRS.

Also included in Attachment I is the FSR's description of the Proposed Solution.

These excerpts are from the original FSR as it was approved in July 2013. They have been reprinted here to provide historical context and the justification for the EHRS. Please note that some terminology and organizational names have changed since the FSR's approval.

3 BUSINESS CASE

As a result of the State of California's ongoing failure to provide medical care to prison inmates at minimum constitutionally acceptable levels, the United States District Court for the Northern District of California appointed a Receiver to assume the executive management of the California prison medical system and to raise the level of care up to minimum constitutional standards. On February 14, 2006, the court granted the Receiver, among other powers, the authority to exercise all powers vested by law to the Secretary of the California Department of Corrections and Rehabilitation (CDCR) as they relate to the administration, control, management, operation, and financing of the California prison medical system. The court's actions stem from the case of *Plata v. Brown*, a class action lawsuit brought on behalf of the CDCR's adult inmates. Noted in the court order is an uncontested fact that at the time of the court order, "on average, an inmate in one of California's prisons needlessly dies every six to seven days due to constitutional deficiencies in the CDCR's medical delivery system"[1]. The court issued several additional orders to address the deficiencies. Despite the improvements a few of these orders remain outstanding and the quality of prison medical care is still a concern to the court and the Receiver.

In response to the court orders, the Receiver created the Turnaround Plan of Action (TPA) which was approved by the court and is a formal agreement and serves as the Department's strategic plan that, when completed, will provide one of the mechanisms to transfer health care back to the State of California. The TPA calls for the timely access to care, a full continuum of health care services, recruitment and retention of quality professional medical workforce, quality management, necessary clinical housing facilities and medical support infrastructure. In support of creating a prison medical support infrastructure, the Receiver established the 19 projects and these projects were subsequently approved by the Department of Finance and the Legislature.

In addition on March 10, 2008, United States District Court Judge Thelton E. Henderson signed a court order that states in part:

"The objective of the Receiver's long term information technology program is to construct and support the CCHCS Information System based on the importance of "correct data at the point of care." The core design is based on an Electronic Medical Record for each patient-inmate. The EMR will be paperless, medical information gathered in one location for physicians and clinicians to access, at various locations, and thereby enable them to make informed and safe medical

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decisions. All data obtained will be patient-centric to allow for an "Information at the Point of Care" system.¹

At the time of the court order, EMR referred to Electronic Medical Record systems. Subsequently, as a result of the Affordable Care Act, EMR's are now referred to as EHRS. This FSR seeks to satisfy the court order, complete the TPA's prison medical support infrastructure objective, and complete the 19 projects that were established by the Receiver, approved by the federal judge, and ultimately Department of Finance and the Legislature.

The Receiver reports on the 19 projects in the Quarterly Joint Legislative Budget Committee Report. As of June 30, 2013, we have successfully deployed 14 of the 19 projects. Two of the five outstanding projects are SOMS and the Federated Data Center. This FSR will complete the remaining three projects.

This FSR makes the case for an enterprise-wide EHRS which provides access to patient-inmate information necessary to support the clinicians' abilities to improve health care decisions and effectiveness. An EHRS is the integration of two or more systems providing data into a patient's clinical health record. The EHRS contains clinical information, captures data, and documents information about the patient and their care from each practice area where this record resides. It also contains clinical results, referrals, and consultations from other providers of care for a comprehensive view of a patient's health care and history.

The primary compelling benefits of this system to CCHCS are listed below:

- 1) Improve access to health care information which remains one of the worst compliance categories in the OIG inspections. The EHRS will:
 - Improve medication administration records. Current records are not updated in real-time, often incomplete, missing, or misfiled;
 - Implement guided prompts which will assist clinicians in documentation of history, services, complaints and standardization of clinically significant data such as diagnosis; and,
 - Improve documentation in the areas of health care screenings, urgent services, specialty services, diagnostic services and inmate transfers.
- 2) Return medical care back to the state: The court orders require implementation of a health records system;
- 3) Sustain a minimum constitutional level of care for all California inmates;
- 4) Improve communication between health care staff, reduce opportunity for medical errors and improve the efficiency of health care service delivery. One area of concern of the Prison Law Office and court experts is timeliness of Health Records Center transcription of provider dictated notes - records are difficult and time consuming to access;
- 5) Reduce risk of future costly litigation. For example, when Los Angeles County Jail implemented an EHRS solution, they effectively reduced their litigations to zero on health care related issues.

The primary compelling benefits of this system to the State are:

¹ Findings of Fact and Conclusion of Law, *Plata v. Schwarzenegger*, United States District Court (No. C01-1351 TEH) (October 3, 2005)

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1. The ability to draw down federal funds available through the EHR Incentive Program. This program provides incentive payments to eligible entities as they adopt, implement, upgrade or demonstrate meaningful use of certified EHR technology;
2. The capability to allow future integration with the Health Information Exchange (HIE) which will provide the capability to electronically move clinical information among disparate health care information systems;
3. CCHCS released a Request for Proposal (RFP) through the competitive bid process with the contract award made to a single supplier for EHRS Services. The contract was let with language that allows other State entities, where appropriate and when in alignment with state law, statutes, rules, regulations and policy, to enter into separate contract(s) to use the services in the CCHCS EHRS Service contract.

3.1 BUSINESS PROGRAM BACKGROUND

As stated previously, because of the State of California's ongoing failure to provide medical care to prison inmates at minimum constitutionally acceptable levels, the United States District Court for the Northern District of California appointed a Receiver to assume the executive management of the California prison medical system and to raise the level of care up to constitutional standards. The Receiver was tasked with improving health care conditions for more than 160,000 patient-inmates in 33 adult institutions throughout California and defined his mission as follows:

Reduce avoidable morbidity and mortality and protect public health by providing patient-inmates timely access to safe, effective and efficient medical care, and integrate the delivery of medical care with mental health, dental and disability programs.

To accomplish this mission, the Receiver identified six strategic areas in which efforts were to be concentrated. These six areas became the basis for goals described in the TPA. On June 16, 2008, in an order signed by Judge Henderson, the federal court found the TPA's "six strategic goals to be necessary to bring California's prison medical system up to constitutional standards." The six strategic goals identified in the TPA are:

- 1) Ensure timely access to health care services;
- 2) Establish a prison medical program addressing the full continuum of health care services;
- 3) Recruit, train and retain a professional quality medical workforce;
- 4) Implement a quality assurance and continuous improvement program;
- 5) Establish medical support infrastructure; and
- 6) Provide for necessary clinical, administrative and housing facilities.

The EHRS fits the TPA perfectly in that it addresses, either directly or indirectly, each of the strategic goals, and helps other programs and processes already in place to achieve theirs.

With the TPA as a formal agreement, which serves as the Department's strategic plan, CCHCS has made progress in improving California's prison medical care. For instance, through the creation of primary care treatment teams, institutional health care programs now provide standardized screening, assessment and delivery processes that ensure CCHCS patient-inmates receive timely care. Combined efforts in physician and nurse hiring, the implementation of certification standards for all clinical staff, and the establishment of effective peer review and employee investigation and discipline units, have all improved medical staff standards.

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Important progress in the areas of utilization management and telemedicine has decreased costs.

[Section 3.1 of the FSR includes a discussion of the independent audits by the Office of the Inspector General (OIG). The first two paragraphs of this discussion, which include a lengthy description of the inspection cycle and the overall scores that resulted from the inspections, have been omitted here.]

Improvements in the OIG assessment scores have been achieved through a combination of new policies, process improvement, staffing changes and better information technology (IT) solutions. However, further improvements that rely on an integrated view of patients' records, integrated decision support and advanced reporting capabilities are difficult to achieve given the current systems. In other words, absent an integrated EHRS, further improvements are unlikely and the status quo may be difficult to sustain given its high cost and reliance on health care staff.

3.2 BUSINESS PROBLEMS AND OPPORTUNITIES

This section discusses the EHRS' business problems and the opportunities to be realized by the proposed solution described in Section 5.1.

3.2.1 Business Problems

CCHCS does not currently have a sustainable, enterprise-wide EHRS solution across all health care settings to maximize the provision of efficient and safe health care services to its patient-inmates. The current systems and processes remain prone to avoidable risks and errors, as well as expenditure and service inefficiencies and waste. Key stakeholders across all domains of health care within CCHCS have identified the following Business Problems:

- Risk of Compliance Violations and Litigation;
- Inadequate Patient Safety and Clinical Transparency;
- Inefficient Health Care Delivery;
- Insufficient Continuity of Care Across Care Settings; and,
- High Cost of Current Service Delivery Environment.

Business Problem Area 1: Risk of Compliance Violations and Litigation

- Data security is fragmented. Federal Health Information Portability and Accountability Act of 1996 (HIPAA) standards are difficult to comply with.
- Current health care messaging between caregivers is not secure under the current system and not compliant with HIPAA.
- Lack of documentation to show that a patient-inmate received medication.
- Manual processes and lack of real-time decision support through integration are error prone, increasing the risk of erroneous or sub-optimal clinical decisions.
- Reports cannot be easily produced. Ability to produce timely documentation for actions during audits is hampered as documents are often missing.
- Inability to respond/be proactive regarding legal challenges. For example, it is difficult to reliably determine how many patient-inmates in our population have a specific condition which may show a negative outcome trend.
- Difficulty to show improvements in medications management due to lack of accurate data.
- Health care "expectations" (e.g. abnormal diagnostic results, missed medications) are not reliably reported to a patient-inmate's care team in a timely manner, which has resulted in avoidable adverse events.

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- Current systems require auditing for data collection and reporting. Post-auditing is inefficient and costly. Activities such as OIG Audits, Death Review, Sentinel Event Review, Peer Review, Correspondence Control, Appeals and Court Monitoring Reporting all are unnecessarily laborious and error-prone.
- Current systems do not address all areas of non-compliance. As a result, the prison medical care system will continue to remain in Receivership and may not be able to access federal funds for EHR Incentive Programs.

Business Problem Area 2: Inadequate Patient Safety and Clinical Transparency

- Currently, when an inmate is released to the community, their medical records are not provisioned to permit electronic routing to their new health care provider(s). Those individuals with chronic/communicable conditions will need continued medical treatment. Conversely if and when a parolee is reincarcerated, previous medical attention/current prescriptions may not be known to staff causing duplicative tests and/or missed prescriptions.
- Paper systems do not enforce patient safety practices. The current systems lack effective decision support for safety, effectiveness and efficiency. Because there are separate, non-integrated systems for laboratory information, health records, diagnoses, appointments and pharmacy, CCHCS has inconsistent and conflicting information in many areas, such as allergies and active diagnoses.
- Traditional paper-based systems require more handling of documents, leading to the greater possibility of compromising patient confidentiality requirements as defined by HIPAA and State Law.
- Providers do not have complete and timely access to full records to inform decision-making (i.e. across the health record, pharmacy and lab solutions).
- Without an automated patient summary, providers must review many sections of the scanned paper-based electronic Unit Health Record (eUHR) in order to obtain the information that they need. Critical information may be overlooked because of the difficulty of this process.
- The current system lacks decision support and quality assurance (QA) capabilities. Suboptimal medication choices can be made because evidence-based prescribing is not supported. As a result, patient-inmates may experience inadequate response, avoidable adverse outcomes (e.g. allergic reaction, hospital admission) and/or polypharmacy².
- CCHCS does not have meaningful, usable business intelligence capabilities. The current health care information applications are minimally interfaced and are not integrated.
- Current population management practices rely on patient-inmate registries which are not integrated into the process of care. The registries often depend on inferring diagnoses from the medications prescribed and laboratory test results.
- Data and reporting that currently come from multiple disparate systems, is hard and time consuming to bring together, is often not real-time, and is not readily available for institution leadership's use.

Business Problem Area 3: Ineffective Health Care Delivery

- Patient care decision errors or delays occur due to lack of access to relevant patient-inmate information in a single location. When there is an inter- or intra-system transfer

² Polypharmacy is the use of multiple medications by a patient, generally older adults (those aged over 65 years). Source: Wikipedia

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of an inmate, not all pertinent information is making its way to the inmate's new housing.

- Documents in the eUHR are often illegible due to poor handwriting or image degradation as a result of rescanning the same documents multiple times.
- The current health care system relies too much on paper-based people operated processes, which reduces reliability and increases risk of avoidable mistakes. These processes vary between institutions resulting in inconsistencies of care and non-standardized practices.
- Professional practice standards in the community are increasingly emphasizing competence with electronic solutions. Future recruitment and retention of professional health care staff will be hindered by a lack of community standard professional practice electronic solutions.

Business Problem Area 4: Insufficient Continuity of Care Across Settings

- Providers do not have access to patient data outside of the facilities (e.g. for on-call physicians).
- CCHCS is unable to electronically share, send and receive patient data in industry standard formats when inmates enter or leave State prisons.
- Current solutions do not support HIEs. HIEs are different systems being implemented nationally that allows one health records system to look into key information maintained in another system.
- Current case management and care planning processes are not well supported. CCHCS needs a comprehensive system of support and documentation for registered nurse (RN) care management.
- Patient Health Education processes depend on pre-printed materials. CCHCS needs automated patient health education process and documentation
- provided in the patient's preferred language pursuant to Armstrong and Clark Remedial Plans.

Business Problem Area 5: High Cost of Current Service Delivery Environment

- Workers' compensation claims have occurred as a result of staff handling large, physical patient files.
- Tests are duplicated because of the lack of access to real-time results or information on pending results.
- Specialist recommendations are not necessarily making it into the eUHR in a timely fashion following an appointment. This results in patient-inmates not receiving timely follow-up care.
- Unpredictable costs related to the operation of the current solution portfolio are encountered.
- Skilled resources to implement and support the solution (either internal or contracted services) may not be available.
- Multiple applications in solution portfolio results in constant upgrades and differing release cycles with continued heavy reliance on contractors.
- High interface complexity necessitates a greater number of interfaces maintained by CCHCS.
- High costs associated with transporting and tracking files are incurred as inmates move between institutions.

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3.2.2 Business Opportunities

To address the business problems identified above, CCHCS has identified the following business opportunities:

- Improve Access to Patient Information across Health Care Settings.
- Increase the Efficiency of Health Care Delivery.
- Improve Continuity of Care Across Settings.
- Reduce Risk of Compliance Violations and Litigation.
- Increase Cost Predictability, Receive Federal Funds and Reduce Long Term Costs.

Opportunity Area 1: Improve Access to Patient Information Across Care Settings

- Operation of a single integrated health record with direct access to pharmacy, radiology and laboratory data is possible.
- CCHCS's ability to objectively prove patient-inmate access to care will provide the mechanism to return the organization back to the State of California's administration.
- Real-time decision support and QA capabilities to reduce error rate may be implemented.
- The tracking of drug interactions to improve patient-inmate safety is enabled.
- Information may be viewed across care episodes and clinical domains.
- In the future, as Health Information Technology for Economic and Clinical Health (HITECH) defines interoperability between disparate EHRs solution vendors, EHRs systems should integrate to allow providers to view their patient-inmate's key information from outside hospitalizations, outside emergency room care, jail health care, and the patient-inmate's health care in the community. This interoperability will allow better continuity of care as patient-inmates move to and from the community to the institutions and back to the community.

Opportunity Area 2: Increase the Efficiency of Health Care Delivery

- EHRs will provide the mechanism to annotate medication management, thus improving the OIG reports in this area.
- Clinical effectiveness is achieved through facilitated continuity of care for patient-inmates that move from institution to institution and in-and-out of correctional health care.
- The availability of reliable data to conduct clinical variance and outcome analysis is increased.
- More accurate forecasting of workload through increased data availability is enabled.
- Manual labor will be redirected to perform data analytics, and case management.
- Reliance on paper notes is reduced.
- Effort related to the creation of performance report is reduced while accuracy is increased through automated analytics and reporting capabilities.

Opportunity Area 3: Improve Continuity of Care Across Settings

- In the future, as HITECH defines interoperability between disparate EHRs solution vendors, EHRs systems should integrate to allow providers to view their patient-inmate's key information from outside hospitalizations, outside emergency room care, jail health care, and the patient-inmate's health care in the community. This interoperability will allow better continuity of care as patient-inmates move to and from the community to the institutions and back to the community.
- Implementing this solution allows sharing of data through HIEs. HIE will allow providers to view their patient-inmate's key information from outside hospitalizations, outside emergency room care, jail health care, and the patient-inmate's health care in the community. It will allow external health care providers caring for patient-inmates after

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parole or discharge to view key continuity information from the patient-inmate's care with CCHCS.

- EHRS standardizes processes and improves communication of health information to improve coordination of care across various health care settings, and reduce unnecessary utilization of specialty and diagnostic services.

Opportunity Area 4: Reduce Risk of Compliance Violations and Litigation

- Proactive monitoring of compliance with legal/regulatory requirements is enabled.
- Patient safety is increased and litigation risk is reduced through single data source for medication administration and drug interactions.
- Better analytics and reporting capabilities increase the capability to comply with court orders.
- Compliance of the solution with state and federal regulatory requirements (HIPAA, HITECH) is easier to achieve.

Opportunity Area 5: Increase Cost Predictability, Receive Federal Funds and Reduce Long Term Costs

- Duplicate procedures and reliance on manual processes are reduced.
 - Capability to predict and budget for costs related to the operation of the IT systems is increased.
 - Contract management complexity is reduced by having a Commercial-off-the-Shelf (COTS) vs. best of breed.
 - Maintenance and upgrade complexity is reduced by reducing the dependency of CCHCS on upgrades and release cycles of various vendors.
 - Interface complexity is reduced by reducing the number of interfaces to be maintained by CCHCS.
 - Effectiveness in auditing process, policy and procedure review committees, and case management are increased through consistent data available across all health care settings (resulting in reduced overtime).
 - Training efforts for new staff is reduced through one COTS system versus multiple best of breed solutions.
 - Providing an industry standard work environment makes it easier to recruit and retain health care professionals.
 - Improved health care opportunities are possible through the generation of business specific metrics.
 - The Centers for Medicare & Medicaid Services (CMS) EHR Incentive Programs provide financial incentives for the "meaningful use" of certified EHR technology to improve patient care. To receive an EHR incentive payment, providers have to show that they are "meaningfully using" their EHRS
-

California Correctional Health Care Services



CALIFORNIA CORRECTIONAL HEALTH CARE SERVICES

Special Project Report

for the

Electronic Health Record System (EHRS) Project

May 6, 2016

Version 1.1

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1.0 Executive Approval Transmittal

<p><i>Information Technology Project Request</i></p> <p>Special Project Report</p> <p>Executive Approval Transmittal</p>	
--	---

Agency/state entity Name			
California Correctional Health Care Services (CCHCS)			
Project Title (maximum of 75 characters)			Project Acronym
Electronic Health Care Record System (EHRS) Project			EHRS
FSR Project ID	FSR Approval Date	State entity Priority	Agency Priority
5225-146	September 25, 2013	One	

I am submitting the attached Special Project Report (SPR) in support of our request for the California Department of Technology's approval to continue development and/or implementation of this project.

I certify that the SPR was prepared in accordance with the State Administrative Manual Sections 4945-4945.2 and that the proposed project changes are consistent with our information management strategy as expressed in our current Agency Information Management Strategy (AIMS).

I have reviewed and agree with the information in the attached Special Project Report.

I also certify that the acquisition of the applicable information technology (IT) product(s) or service(s) required by my department that are subject to Government Code 11135 applying Section 508 of the Rehabilitation Act of 1973 as amended meets the requirements or qualifies for one or more exceptions (see following page).

APPROVAL SIGNATURES		
Chief Information Officer		Date Signed
Printed name:	Cheryl Larson	
Budget Officer		Date Signed
Printed name:	Duane Reeder	
State Entity Director		Date Signed
Printed name:	Yulanda Mynhier	

**Executive Approval Transmittal
 IT Accessibility Certification**

Yes or No

No	The Proposed Project Meets Government Code 11135 / Section 508 Requirements and no exceptions apply.
----	---

Exceptions Not Requiring Alternative Means of Access

Yes or No	Accessibility Exception Justification
No	The IT project meets the definition of a national security system.
No	The IT project will be located in spaces frequented only by service personnel for maintenance, repair, or occasional monitoring of equipment (i.e., "Back Office Exception.")
No	The IT acquisition is acquired by a contractor incidental to a contract.

Exceptions Requiring Alternative Means of Access for Persons with Disabilities

Yes or No	Accessibility Exception Justification
	<p>Meeting the accessibility requirements would constitute an "undue burden" (i.e., a significant difficulty or expense considering all agency resources). Explain:</p> <p>Describe the alternative means of access that will be provided that will allow individuals with disabilities to obtain the information or access the technology.</p>
	<p>No commercial solution is available to meet the requirements for the IT project that provides for accessibility. Explain:</p> <p>Describe the alternative means of access that will be provided that will allow individuals with disabilities to obtain the information or access the technology.</p>

Special Project Report
Executive Approval Transmittal
IT Accessibility Certification
(Continued)

Exceptions Requiring Alternative Means of Access for Persons with Disabilities

Yes or No	Accessibility Exception Justification
Yes	<p>No solution is available to meet the requirements for the IT project that does not require a fundamental alteration in the nature of the product or its components.</p> <p>Explain:</p> <p>California Correctional Health Care Services (CCHCS) is acquiring an existing Commercial-Off-The-Shelf (COTS) Electronic Health Record System (EHRS) software package, portions of which were developed by the vendor prior to passage of the Americans with Disabilities Act (ADA).</p> <p>Describe the alternative means of access that will be provided that will allow individuals with disabilities to obtain the information or access the technology.</p> <p>CCHCS will follow existing reasonable accommodations processes to address EHRS access for individuals with disabilities.</p>

2.0 Information Technology Project Summary Package

2.1 Section A: Executive Summary

1.	Submittal Date	April 2016				
		FSR	SPR	PSP Only	Other:	
2.	Type of Document		X			
	Project Number	5225-146				
					Estimated Project Dates	
3.	Project Title	EHRIS Project			Start	End
	Project Acronym	EHRIS			June 2013	June 2020
4.	Submitting Agency/state entity	CCHCS				
5.	Reporting Agency/state entity	CDCR				

6.	Project Objectives
	<p>The objective of the EHRIS Project is to procure, configure and implement a COTS software solution.</p> <p>Implement Industry Best Practice Processes and Workflows, thereby achieving results management (imaging, laboratory, pathology, etc.) that complies with statewide policy for review, authentication, notices, and patient communications.</p> <p>Increase efficiency of care by reducing redundant procedures, streamline processes and reducing medication waste.</p>

8.	Major Milestones	Est. Complete Date
	Contract Amendment for Design, Development, and Integration Vendor	Complete-June 2013
	Support Contract(s) Awarded	Complete-October 2013
	Project Planning Phase	Complete-January 2014
	Design Phase	Complete-December 2014
	Build/Configuration Phase	Complete-July 2015
	Test Phase	Complete-September 2015
	First Go-Live Institution	Complete-October 2015
	Regional Rollout	August 2017
	Implement Remaining EHRIS Functionality	December 2018
	Decommission Legacy Systems	January 2020
	Project Close-Out	December 2019
	Conduct PIER	June 2020



7. Proposed Solution

This project recommends procuring and implementing a COTS Electronic Health Record System (EHRIS) statewide. This proposed solution will implement an integrated "Five Rights" medication administration, integrated healthcare scheduling (interfaced with the Strategic Offender Management System [SOMS]), a comprehensive clinical document management system, automated "best practices" and standardized efficient workflows, and serve as an integrated source.

2.2 Section B: Project Contacts

Project #	5225-146
Doc. Type	SPR

Executive Contacts								
	First Name	Last Name	Area Code	Phone #	Ext.	Area Code	Fax #	E-mail
State Entity Director	Yulanda	Mynhier	916	691-6164				Yulanda.Mynhier@cdcr.ca.gov
Budget Officer	Duane	Reeder	916	691-6584				Duane.Reeder@cdcr.ca.gov
CIO	Cheryl	Larson	916	691-0406				Cheryl.Larson@cdcr.ca.gov
Project Sponsor	Steven	Tharratt, MD	916	691-9913				Steven.Tharratt@cdcr.ca.gov

Direct Contacts								
	First Name	Last Name	Area Code	Phone #	Ext.	Area Code	Fax #	E-mail
Doc. prepared by	Jeff	Lewis	916	691-4859				Jeff.Lewis@cdcr.ca.gov
Primary contact	Duane	Reeder	916	691-6584				Duane.Reeder@cdcr.ca.gov
Project Director	Tony	Lourick	916	691-0691				Tony.Lourick@cdcr.ca.gov

2.3 Section C: Project Relevance to State and/or Departmental Plans

1.	What is the date of your current Technology Recovery Plan (TRP)?	Date	4/15/15
2.	What is the date of your current Agency Information Management Strategy (AIMS)?	Date	N/A
3.	For the proposed project, provide the page reference in your current AIMS and/or strategic business plan.	Doc.	Federal Receiver's Turnaround Action Plan
		Page #	N/A

Project #	5225-146
Doc. Type	SPR

4.	Is the project reportable to control agencies?	Yes	No
		X	
	If YES, CHECK all that apply:		
	X	a) The project involves a budget action.	
	X	b) A new system development or acquisition that is specifically required by legislative mandate or is subject to special legislative review as specified in budget control language or other legislation.	
		c) The project involves the acquisition of microcomputer commodities and the agency does not have an approved Workgroup Computing Policy.	
	X	d) The estimated total development and acquisition cost exceeds the departmental cost threshold.	
	e) The project meets a condition previously imposed by Finance.		

2.4 Section D: Budget Information

Project #	5225-146
Doc. Type	SPR

Budget Augmentation Required?											
No											
Yes	X	If YES, indicate fiscal year(s) and associated amount:									
		FY	16/17	FY	17/18	FY	18/19	FY	19/20	FY	20/21
			\$35,838,626		\$29,895,209		\$14,891,405		\$5,791,977		\$5,791,977

PROJECT COSTS

1.	Fiscal Year	11/12	12/13	13/14	14/15	15/16	16/17	17/18	Sub-Total
2.	One-Time Cost	\$17,447,346	\$13,588,165	\$54,631,291	\$36,240,232	\$31,831,148	\$38,585,254	\$25,943,010	\$218,266,446
3.	Continuing Costs	\$0	\$0	\$0	\$0	\$12,905,423	\$15,543,694	\$21,622,828	\$50,071,945
4.	TOTAL PROJECT BUDGET	\$17,447,346	\$13,588,165	\$54,631,291	\$36,240,232	\$44,736,571	\$54,128,948	\$47,565,838	\$268,338,391

1.	Fiscal Year	Sub-Total	18/19	19/20	20/21	TOTAL
2.	One-Time Cost	\$218,266,446	\$11,202,473	\$979,202	\$0	\$230,448,121
3.	Continuing Costs	\$50,071,945	\$30,931,551	\$37,139,878	\$37,870,664	\$156,014,037
4.	TOTAL PROJECT BUDGET	\$268,338,391	\$42,134,024	\$38,119,080	\$37,870,664	\$386,462,158

PROJECT FINANCIAL BENEFITS

			18/19	19/20	20/21	Total
5.	Cost Savings/Avoidances	\$0	\$9,834,587	\$14,772,455	\$14,772,455	\$39,379,497
6.	Revenue Increase	\$0	\$0	\$0	\$0	\$0

2.5 Section E: Vendor Project Budget

Project #	5225-146
Doc. Type	SPR

Vendor Cost for SPR Development (if applicable)	N/A
Vendor Name	N/A

VENDOR PROJECT BUDGET

1	Fiscal Year	11/12	12/13	13/14	14/15	15/16	16/17	17/18	Sub-Total
2	Primary Vendor Budget	\$17,447,346	\$13,019,457	\$ 39,719,448	\$20,328,111	\$17,888,727	\$19,808,919	\$17,100,844	\$145,312,852
3	Project Oversight Budget		\$0	\$153,600	\$153,600	\$153,600	\$153,600	\$153,600	\$768,000
4	V&V Budget		\$0	\$580,000	\$191,600	\$422,136	\$580,000	\$580,000	\$2,353,736
5	Other Budget		\$0	\$3,297,099	\$2,080,714	\$17,017,784	\$9,006,617	\$5,210,597	\$36,612,811
6	TOTAL VENDOR BUDGET	\$17,447,346	\$13,019,457	\$43,750,147	\$22,754,025	\$35,482,247	\$29,549,136	\$23,045,041	\$185,047,399

1	Fiscal Year	Sub-Total	18/19	19/20	20/21	TOTAL
2	Primary Vendor Budget	\$145,312,852	\$13,466,508	\$11,661,580	\$11,661,580	\$182,102,520
3	Project Oversight Budget	\$768,000	\$153,600	\$0	\$0	\$921,600
4	V&V Budget	\$2,353,736	\$580,000	\$0	\$0	\$2,933,736
5	Other Budget	\$36,612,811	\$7,508,063	\$6,904,063	\$6,904,063	\$57,928,999
6	TOTAL VENDOR BUDGET	\$185,047,399	\$21,708,171	\$18,565,643	\$18,565,643	\$243,886,856

PRIMARY VENDOR HISTORY SPECIFIC TO THIS PROJECT

7	Primary Vendor	Cerner Corporation
8	Contract Start Date	6/29/2012
9	Contract End Date (projected)	6/30/2023
10	Amount	\$177,290,491

PRIMARY VENDOR CONTACTS

	Vendor	First Name	Last Name	Area Code	Phone #	Ext.	Area Code	Fax #	E-mail
11	Cerner Corporation	Maile	Bennett	916	691-2672				maile.bennett@cerner.com

2.6 Section F: Risk Assessment Information

Project #	5225-146
Doc. Type	SPR

RISK ASSESSMENT

	Yes	No
Has a Risk Management Plan been developed for this project?	X	

General Comment(s)
<p>The EHRS Project Team conducted a Risk Assessment that is summarized in Section 5 of this Special Project Report. The Project Team maintains a formal Risk Management Plan.</p> <p>The key project risks are summarized below:</p> <ul style="list-style-type: none"> • There exists a medium probability the new EHRS clinical workflows will not integrate seamlessly into all institutions or all disciplines. • There is a low probability of organizational resistance to adoption of the EHRS. • If the funding described in this SPR is not approved, there exists a high probability of not having enough staff to support the operational EHRS. • Integration of CCHCS and EHRS Vendor help desk functions will continue through rollout of the EHRS, which could negatively affect backlog of change requests and help desk tickets.

3.0 Proposed Project Change

3.1 Project Background/Summary

3.1.1 Business Program Background

Due to the State of California's past failure to provide a constitutional level of medical care to prison inmates, the United States District Court for the Northern District of California appointed a Receiver to assume the executive management of the California prison medical system and to raise the level of care up to constitutional standards. The Receiver was tasked with improving health care conditions in the adult institutions throughout California and defined his mission as follows:

Reduce avoidable morbidity and mortality and protect public health by providing patients timely access to safe, effective and efficient medical care, and integrate the delivery of medical care with mental health, dental and disability programs.

To accomplish this mission, the Receiver identified six strategic areas in which efforts were to be concentrated. These six areas became the basis for goals described in the Receiver's Turnaround Plan of Action (TPA). On June 16, 2008, in an order signed by Judge Henderson, the federal court found the TPA's "six strategic goals to be necessary to bring California's prison medical system up to constitutional standards." The six strategic goals identified in the TPA are:

- 1) Ensure timely access to health care services;
- 2) Establish a prison medical program addressing the full continuum of health care services;
- 3) Recruit, train and retain a professional quality medical workforce;
- 4) Implement a quality assurance and continuous improvement program;
- 5) Establish medical support infrastructure; and,
- 6) Provide for necessary clinical, administrative and housing facilities.

The EHRS fits the TPA well in that it addresses, either directly or indirectly, each of the strategic goals.

The Receiver filed a report on March 10, 2015, entitled Receiver's Special Report: Improvements in the Quality of California's Prison Medical Care System wherein he outlined the significant progress in improving the delivery of medical care in California's prisons and also the remaining significant gaps and failures that must still be addressed. The identified gaps are availability and usability of health information; scheduling and access to care; care management; and health care infrastructure at facilities. The Receiver reported that the EHRS will provide us with demonstrable and sustained benefits to patient safety, medication administration, quality and efficiency of care, and staff efficiencies and satisfaction. The EHRS, when properly implemented, will facilitate

improved practices of medication distribution and record-keeping. CCHCS and the Receiver anticipate a substantial increase in the performance of our medication management system among other improvements.

3.1.2 Project Background

At the time of the court's June 16, 2008 order, EMR referred to Electronic Medical Record systems. Subsequently, as a result of the Affordable Care Act, EMR's are now referred to as Electronic Health Care Record Systems (EHRS). The EHRS Project seeks to satisfy the court order, complete the TPA's prison medical support infrastructure objective, and complete the remaining projects established by the Receiver and approved by the federal judge.

The Receiver reports on the 19 projects in the Quarterly Joint Legislative Budget Committee Report. As of the date of this Special Project Report (SPR), CCHCS has successfully deployed 16 of the 19 projects. This EHRS Project will complete the remaining three projects identified in the TPA.

The Feasibility Study Report (FSR) makes the case for an enterprise-wide EHRS which provides access to patient information necessary to support the clinicians' abilities to improve health care decisions and effectiveness. An EHRS is the integration of two or more systems providing data into a patient's clinical health record. The EHRS contains clinical information, captures data, and documents information about the patient and their care from each practice area where this record resides. It also contains clinical results, referrals, and consultations from other providers of care for a comprehensive view of a patient's health care and history.

3.2 Project Status

The EHRS Project implemented the EHRS in all Pilot locations consisting of three institutions (California Institution for Women [CIW], Folsom State Prison [FSP], and Central California Women's Facility [CCWF]) and all CCHCS headquarters locations, Central Fill Pharmacy, Health Records Center, and regional offices. The following sections provide details on accomplishment of approved milestones and work in progress to complete the EHRS Project.

3.2.1 Major Milestones Completed

The EHRS Project formally launched with contract award to the EHRS Vendor on June 28, 2013, followed by completion of the EHRS FSR on August 30, 2013. The California Department of Technology approved the EHRS FSR in a letter dated September 25, 2013.

Initial EHRS Project activities focused on completion of contracts for PM, OCM, and IV&V services. Recruitment and selection of CCHCS staff for the EHRS Project was slower than planned resulting in slipped completion of EHRS Project Planning Phase milestones.

The EHR Vendor conducted its EHR Project Preparation activities between July 2013 and December 2013. Following its corporate project methods (MethodM), the EHR Vendor conducted sessions with CCHCS executives on strategic alignment, adoption, and OCM. Workshops were conducted with project stakeholders on project management, EHR solution overview, and EHR solution fundamentals. EHR Project Preparation activities concluded with Project Kickoff, which included a series of meetings and assessments to ready the project team for design/build/configure/test activities. Delays in recruitment and selection of CCHCS staff combined with EHR Vendor delays in completing the EHR Project Management Plan (PMP) and Project Work Plan (PWP) deliverables impacted completion of the EHR Planning Phase milestone.

EHR Design Phase activities focused on completion of detailed configuration notes, known as Data Collection Worksheets (DCWs), provided by the EHR Vendor. CCHCS formed various workgroups comprised of subject matter experts (SMEs) representing technical and program areas. During the Design Phase, CCHCS became aware of factors preventing timely completion of design activities. In response, CCHCS planned and conducted standardization summits in order to reach consensus among SMEs. A Pharmacy Summit was held in September 2013, and a cross-clinical Standardization Summit was held in January 2014. These summits produced specific actions and escalations necessary to complete EHR Design Phase activities. The overall complexity of the EHR resulted in a ten-month delay in completion of the Design Phase milestone.

The EHR Vendor methodology includes iteration between design, build, configure and test activities. CCHCS' lack of understanding of this unique methodology required significant unplanned rework to achieve the intended outcomes from the iterations, resulting in extension of the Build/Configuration Phase milestone. The Test Phase milestone was also extended to accommodate the required iteration method employed by the EHR Vendor. CCHCS added two Mock Clinic test events in order to fully exercise newly designed workflows in concert with use of the EHR.

Planning and execution of EHR Go-Live activities were executed as planned. The combined delay from prior Project events caused the delay in completion of the Go-Live Milestone.

Table 3-1 lists the estimated completion dates in the approved FSR and actual completion dates for EHR Project major milestones accomplished as of the date of this SPR. Table 3-2 lists the EHR Project deliverables completed in the same period.

Table 3-1 – Major Milestones Completed

MAJOR MILESTONE	FSR COMPLETION DATE	ACTUAL COMPLETION DATE	COMMENTS
Contract Award (PM, OCM, IV&V)	August 2013	October 2013	Milestone slip due to delays in FSR approval and staff assignment to the EHR Project
Project Planning Phase	October 2013	January 2014	Delayed EHR Vendor completion of Planning Phase

MAJOR MILESTONE	FSR COMPLETION DATE	ACTUAL COMPLETION DATE	COMMENTS
(Preparation)			deliverables and staff assignment delays contributed to slipped completion of this milestone
Design Phase	February 2014	December 2014	Time necessary for re-alignment of EHRS Vendor and CCHCS Project methodologies impacted completion of Design/Build/Configuration deliverables
Build/Configuration Phase	August 2014	July 2015	
Test Phase	October 2014	September 2015	Delayed completion of Design/Build/Configuration Phase and time necessary for resolution of defects identified in testing delayed milestone completion
First Go-Live	December 2014	October 2015	Delays in completion of prior milestones impacted the date of the First Go-Live milestone

Table 3-2 - EHRS Project Deliverables Completed

DELIVERABLE TITLE	COMPLETION DATE
EHRS Project Management Plan (PMP)	December 2013
Strategic Adoption Session Report	December 2013
Interface Management Plan (IMP)	May 2014
Design Review	August 2014
Workflow Gap Analysis	August 2014
Learning Plan	August 2014
Gateway Design	December 2014
Design Decision Matrix (85% Completion Milestone)	September 2014
Configure EHRS	July 2015
Test Plan	September 2015
Customized Training Materials	September 2015
Pilot Cutover & Go-Live Plan	September 2015

3.2.2 Work in Progress

The EHRS Project continues activities to complete the initial EHRS build, roll out of the EHRS to all institutions, and implement the remaining EHRS functionality.

Complete EHRS Initial Build

Work to complete the initial EHRS build continues. The first three items below are high-priority initiatives based on lessons learned from the Pilot. The remaining activities represent in-progress activities.

- Reengineer Pharmacy workflow and solution configuration.
 - For the EHRS Pilot, CCHCS procured data entry services from the EHRS Vendor and prescription verification was performed by CCHCS registry pharmacy staff. Based on lessons learned from the Pilot, CCHCS has revised the pharmacy cutover process.
 - For the remaining EHRS roll-outs, a percentage of active medication orders will be electronically loaded. Active medications will be electronically loaded into Cerner PharmNet by the EHRS Vendor running a report and importing the data fields from CCHCS's existing medication record system (Guardian). The CCHCS Central Fill registry pharmacists will then validate and verify the completeness and accuracy of the electronically entered orders. Because of the complexity, a number of orders will not be able to be electronically loaded. These will be back-loaded manually.
- Complete initial EHRS reports.
- Complete configuration of 724 Downtime Viewer and Downtime Procedures.
- Complete formal testing of functionality not ready for Integration Test milestone.
- Continue requirements traceability activities to complete the Requirements Traceability Matrix (RTM).
- Data Warehouse Migrations.
- Complete Documentation for Interfaces.
- Process improvement of Clinical Workflows.
- Configure Imprivata (Two-Factor Authentication).

EHRS Rollout

Early in the EHRS Project design phase, facilitated sessions were held with internal stakeholders to refine the rollout strategy defined in the approved FSR. The selected strategy, termed Viral Rollout, was briefed to and approved by the CCHCS Executive Steering Committee in June 2014. The key to this strategy is to assign clinical staff from institutions going live in the near future to institutions nearby already using the EHRS. The knowledge gained by clinical personnel visiting the institutions already using the EHRS will be carried back to their home institution to directly support their co-workers during and immediately after their go-live event.

The Viral Rollout Strategy consisted of two parts: Pilot; and, Post-Pilot Rollouts.

- Pilot – Included all institutions with female patients (FSP, CCWF, CIW) plus Headquarters and Regional Offices, Central Health Records, and Central Fill Pharmacy.
- Post-Pilot Rollouts - Consists of the following components.
 - Four rollouts after the Pilot.
 - In addition to the professional trainers, super-users, and other training resources, the rollouts will be enhanced by the lessons learned and experience of geographically proximate institutions that have just

completed “Go-Live”. Hence the term viral: “See one, do one, teach one” approach.

In the Viral Rollout strategy, each Rollout includes eight to nine institutions, with approximately two months separating each Rollout.

A key lesson learned from the EHRS Pilot involves the number of support staff necessary to support the go-live event at each institution and at CCHCS Headquarters. Compared to the EHRS Pilot, the higher number of institutions in each roll out would require significant numbers of support personnel. To address this issue and mitigate the risk of an unsuccessful rollout, the rollout schedule has been modified to stage institution go-live events in smaller and more frequent groupings than was planned in the Viral Rollout Strategy. The revised rollout strategy stages 14 go-live events. The revised Rollout Strategy continues the viral approach described above. Table 3-3 depicts the estimated timing for the remaining rollouts.

Table 3-3 - EHRS Rollouts

Rollout	Go-Live Month
1	July 2016
2	September 2016
3	October 2016
4	November 2016
5	December 2016
6	January 2017
7	February 2017
8	March 2017
9	April 2017
10	May 2017
11	June 2017
12	July 2017
13	August 2017
14	August 2017

Implement Remaining EHRS Functionality

The EHRS Pilot implemented all of the functionality necessary to support delivery of health care and ensure patient safety. The remaining EHRS functionality to be implemented requires sufficient production data in the system for the functionality to perform as intended. Consequently, implementation of these remaining solution components was planned to occur after the Pilot. Implementation of the remaining EHRS functionality is scheduled to occur in parallel with the continued rollout of the EHRS.

Table 3-4 provides a listing of the remaining COTS functionality to be implemented in the EHRS. The EHRS Project Work Plan (Appendix A) depicts the timeframes for completion of design, test, and deployment of this remaining EHRS functionality.

Table 3-4 - EHRS Remaining Functionality

Description	Time to Implement	Estimated Completion
2017 Code Upgrade	3 Months	May 2017
CPM Code Uplift (Java) & Scheduling Enhancements	12 Months	May 2018
Cerner Resonance	6 Months	March 2017
Health Sentry	6 Months	March 2017
CAIR Bidirectional Interface	6 Months	March 2017
iBus MDI Glucometers	12 Months	August 2018
PowerInsight EDW / HealthEDW	12 Months	June 2017
HealthIntent / EDW	7 Months	March 2017
Lighthouse	2 Months	August 2016
Electronic Dental Record System (EDRS)	17 Months	December 2018
Content360 Historical Documents Upload	4 Months	October 2016

The table below lists the forecast completion dates for remaining EHRS milestones.

Table 3-5 – EHRS Remaining Milestones

HIGH-LEVEL PLANNING ACTIVITY	FSR START DATE	FSR COMPLETION DATE	ACTUAL/ ESTIMATED START DATE	ESTIMATED COMPLETION DATE
Complete Initial Build	N/A	N/A	January 2016	August 2016
Regional Rollout	January 2015	December 2015	July 2016	August 2017
System Acceptance	N/A	January 2017	N/A	October 2017
Implement Remaining EHRS Functionality	N/A	N/A	July 2016	December 2018
Decommission Legacy Systems	January 2016	January 2017	July 2017	January 2020
Close Out Project	January 2017	June 2017	September 2019	December 2019
Conduct Post-Implementation Evaluation Report (PIER)	January 2017	June 2017	December 2019	June 2020

3.2.3 Expenditures to Date

EHRS Project expenditures through March 2016 are shown in Table 3-6.

Table 3-6 - EHRS Project Expenditures

	Last Approved Budget	Cumulative Actual Cost
One-Time IT Project Costs		
Staff (Salaries & Benefits)	\$ 26,189,305	\$ 21,032,126
Hardware Purchase	\$ 2,256,374	\$ 6,298,551
Software Purchase/License	\$ 14,197,472	\$ 17,307,294
Telecommunications		
Contract Services - Software Customization	\$ 34,242,701	\$ 17,216,369
Contract Services - Project Management	\$ 2,255,000	\$ 958,716
Contract Services - Project Oversight	\$ 521,378	\$ 414,860
Contract Services - IV&V Services	\$ 1,242,467	\$ 957,390
Contract Services - Other Contract Services	\$ 22,348,800	\$ 17,429,621
Data Center Services		
Agency Facilities		
Other	\$ 1,336,248	\$ 858,702
Total One-Time IT Project Costs	\$ 104,589,745	\$ 82,473,629
Continuing IT Project Costs		
Staff (Salaries & Benefits)	\$ 17,409,542	\$ 4,678,326
Hardware Lease/Maintenance	\$ 2,439,136	\$ 396,067
Software Maintenance/Licenses	\$ 38,306,443	\$ 14,862,753
Telecommunications	\$ 540,000	\$ 270,000
Contract Services	\$ 17,353,362	\$ 5,793,047
Data Center Services	\$ 1,250,000	\$ 575,000
Agency Facilities		
Other		
Total Continuing IT Project Costs	\$ 77,298,483	\$ 26,575,192
TOTAL	\$ 181,888,228	\$ 109,048,822

3.2.4 Benefits Achieved

Reporting of benefits achieved will be addressed in the PIER, allowing for complete implementation of the EHRS in all institutions and completion of all EHRS scope.

3.3 Reason for Proposed Change

This SPR is being submitted due to deviation from the approved scope, schedule, and budget. The following sections summarize the changes to project scope, schedule, and budget.

3.4 Proposed Project Changes

The following describes the changes reflected in this SPR, including the justification for the change.

3.4.1 Accessibility

CCHCS included accessibility requirements in its Request for Proposals (RFP) for the EHRS (refer to FSR Appendix C Technical Requirements 7.71, 7.72, & 13.06). The EHRS Vendor response during the solicitation process indicated it did not fully meet these accessibility requirements included in the RFP due to the fact that much of its COTS software was developed prior to passage of the Americans with Disabilities Act (ADA). CCHCS will follow existing reasonable accommodation processes to address EHRS access for individuals with disabilities.

Below is the EHRS vendor response regarding accessibility of the EHRS.

Cerner is committed to ensuring that its products and services can be used by all end users including user modalities defined in Subpart C (§1194.31). Cerner solution seek to strictly conform to applicable Section 508 standards and be accessible to users with disabilities with exception to fundamental alteration of a compromise to the safe operation of the solution. Cerner has long maintained design standards that incorporate the principles of Section 508. As we move forward with new applications and enhancements to applications, we take into account the requirements for the effective operation of our solutions by users with disabilities throughout the development life cycle. Our design standards actually pre-date the regulation and reflected in our many applications in use today. Cerner is committed to high usability for all end users. A few years ago, we refocused our Cerner Design Language (CDL) to explicitly incorporate accessibility guidelines – such as those found within the Section 508 standards. Each guideline is listed as an individual standard with reference to the federal website (www.section508.gov).

Cerner's software development and maintenance approach will result in incremental progress towards complete compliance with requirements such as those found in the Section 508 standards as the thousands of software modules are enhanced, tested and certified in future major releases. Cerner uses a prioritized, risk-based model to meet compliance of Cerner solutions to address compliance of high-impact requirements in an intelligent fashion.

3.4.2 Project Scope Changes

The following changes in Project scope have been incorporated into the Project. This SPR includes all adjustments necessary to implement and support these scope changes.

3.4.2.1 Electronic Dental Record System (EDRS)

The California Department of Corrections and Rehabilitation (CDCR) Inmate Dental Services Program (IDSP) placed a definition for optional services in the original Cerner Agreement for development of customized PowerChart screens to support a dental health record within the EHRS. Once the EHRS Project was underway, detailed

analysis of PowerChart's dental record offering revealed a significant lack of critical dental functionality including an automated Odontogram, ability to manage priority cases and dental x-ray integration, making this option infeasible for IDSP.

Consequently, the IDSP evaluated options for establishing dental health record capabilities and determined the optimum route was to integrate an existing COTS dental record system with the EHRS.

Building from the EHRS functional and technical requirements, the IDSP team developed a Business Requirements Document (BRD) for the EDRS. Cerner's analysis of available COTS dental record packages resulted in selection of Henry Schein's Dentrix Enterprise solution as the best fit for the business and technical needs of the IDSP.

The EDRS will provide IDSP with the ability to record and maintain accurate, reliable and readily accessible patient dental clinical documentation without the need for the current paper and physical patient file. By interfacing with other systems, the EDRS will provide enterprise-wide access to appointment scheduling, dental radiographic imaging, and patient health information as needed to support the IDSP mission and improve patient safety. The system will also provide accurate data for more effective program planning. The EDRS will provide scheduling and charting as well as serving as the system of record for Dental Records.

The EDRS requirements and scope of work will be added to the EHRS Vendor contract in a forthcoming amendment. EDRS activities are estimated to begin July 2016. CCHCS will leverage knowledgeable EHRS resources to complete the EDRS.

3.4.2.2 Decommission Legacy Systems

Integration of the EDRS with the EHRS, presented in the prior section, will result in decommissioning of the Dental Scheduling and Tracking System (DSTS). The approved FSR did not include decommissioning of the DSTS.

Section 5 of the approved FSR indicated the EHRS would integrate with the existing scanned paper-based electronic Unit Health Record (eUHR) system. CCHCS purchased Cerner's Content360 image document management solution, which is integrated into the EHRS. This decision was made to reduce operational costs and provide seamless access to historical patient information from within EHRS. The EHRS Project scope is modified to include upload of existing medical record information from eUHR into Content360.

Section 3.7.1 describes the approach and timeline for decommissioning CCHCS legacy systems.

3.4.2.3 Medication Management Analysis

CCHCS is engaging specialized consultant services to analyze the EHRS and the medication management processes related to implementation of the EHRS statewide, through application of the Lean Six Sigma methodology. Contractors will assist the organization towards standardizing critical medication management workflows in the EHRS environment, including but not limited to, supply-side chain processes, central fill

utilization, and institution medication ordering, dispensing, and administration processes.

This Lean Six Sigma efficiency analysis is estimated to be completed within six months.

3.4.2.4 Miscellaneous Project Scope Changes

The following minor scope changes have been incorporated into the EHRS Project.

- The approved FSR specified the EHRS would be installed in 33 institutions. Since approval of the FSR, CDCR has added two institutions, bringing the total to 35.
- In preparation for CCHCS technical staff to maintain the Cerner Discern Analytics solution, CCHCS purchased three in-person training sessions from Cerner. Three courses (Discern Explorer Basic, Discern Explorer Intermediate, and Discern Explorer Advanced) will be provided in sequence to CCHCS technical staff.
- Design of the EHRS two-factor authentication functionality requires one additional CCHCS technical analyst to work with the EHRS Vendor to complete design, deployment, and operational support of this functionality.
- Design of the EHRS mobile device management functionality requires one additional CCHCS technical analyst to work with the EHRS Vendor to complete design, deployment, and operational support of this functionality.

3.4.3 Project Schedule Changes

The schedule changes described in this section are the result of impacts described in Sections 3.2 and 3.3, and are presented chronologically in this section. Topical areas in this section listed more than once (e.g., pharmacy) represent schedule changes that occurred at separate times in the project timeline.

Schedule changes were made to accommodate delays in completion of the activities listed below. These changes, among others, resulted in a re-baseline of the EHRS project schedule in January 2015.

- Addition of two Project activities to reach consensus and standardization of design.
 - Pharmacy Summit – In September 2013, the EHRS Project leadership team hosted Cerner and CCHCS subject matter experts to discuss elements of the EHRS implementation for pharmacy in order to ensure a smooth transition from current pharmacy practices to integration of pharmacy into the integrated EHRS.
 - Standardization Summit – In January 2014, the EHRS Project leadership team hosted Cerner and CCHCS subject matter experts to address necessary standardization across clinical areas of responsibility in order to ensure a smooth EHRS implementation.

- Remediation of project management practices – Following CCHCS issuance of a Notice of Breach of Contract to the EHRS Vendor in March 2014 for failure to execute project management activities conforming to the approved contract. The EHRS Vendor submitted for approval and then executed its detailed plan for remediating its project management practices to become compliant with the State of California Project Management Methodologies (CA-PMM). Remediation activities were completed in May 2014.
- Design Phase – CCHCS worked with the EHRS Vendor to complete design deliverables necessary for the EHRS Vendor to complete the Design Phase milestone. Task iteration and rework resulted in late completion of tasks. Design Phase activities were completed in December 2014.
 - Revision to the detailed design specifications activity – Section 3.4 of the FSR stated the EHRS Vendor would develop detailed design specifications. This activity was not completed as designed. Rather, the EHRS Vendor conducted detailed design activities following its MethodM process. Detailed design for the EHRS included formal sessions between Cerner solution architects and CCHCS clinical and technical subject matter experts to complete Data Collection Worksheets (DCWs) and provide answers to formalized Design Decision Matrices (DDMs).
 - System Validation Sessions (SVS) – Subsequent to this project activity, which occurred in April 2014, CCHCS determined it did not achieve the results expected and instructed the EHRS Vendor to remediate the activity by rescheduling and repeating numerous SVS sessions. The remediated SVS was completed in September 2014.
- Test Phase – Addition of Mock Clinics.
 - During project execution, CCHCS became aware of differences between its own and Cerner's practices for integrated testing of the EHRS solution prior to deployment. CCHCS introduced two Mock Clinic sessions focused on integrated testing of clinical workflows following "day-in-the-life" scenarios of patient care. Mock Clinic #1 was held in February 2015, and Mock Clinic #2 was conducted in June 2015.

Schedule changes were necessary to incorporate the following additional project activities.

- Purchase of a Learning Management System (LMS) – The original approach was to utilize the learning system provided by the EHRS Vendor. Funds were removed from the EHRS Vendor contract associated with the LMS purchase and a competitive procurement was conducted and awarded to Halo in June 2014 for a web-based LMS in a Software-as-a-Service (SaaS) environment.
- Addition of design (February 2015 through May 2015) and build (April 2015 through June 2015) activities to incorporate Content360 into the EHRS.
- Separation of EHRS solution activities into functionality to be completed prior to Pilot go-live and remaining functionality to be implemented after Pilot.

- Revision to the EHRS Rollout schedule based on lessons learned from the Pilot.
 - Reengineer Pharmacy workflows and application to meet program needs and comply with regulations.
 - Complete downtime procedures and configure the 724 Downtime Viewer solution.
 - Complete critical reports prior to commencing EHRS Rollout.

3.4.4 Project Budget Changes

The scope and schedule changes described in Sections 3.4.2 and 3.4.3 result in the budget changes described here and summarized in the table below.

One-Time Resources

In FY 2016/17 through FY 2018/19 there is a funding need for temporary help to complete the EHRS Project as described in Section 3.2.2 (complete initial EHRS build, roll out the EHRS to remaining institutions, and implement the remaining EHRS functionality). When the EHRS Vendor contract was originally completed, the timing of the CCHCS scope of work needed for this remaining functionality had not been fully determined. The funding will allow completion of these remaining EHRS Project activities and minimize the need for additional position authority.

Continuing IT & Program Staff

There were 50.4 positions originally identified for operational support of the EHRS, but after learning more about the solution and having implemented at the Pilot sites, that need was underestimated. There is a need for an additional 96.0 positions (total 146.4) tied to IT and the other program areas. Section 4.3.2 describes EHRS continuing staffing.

EDRS

As described in Section 3.4.2.2, CCHCS and CDCR have decided to incorporate the EDRS into the EHRS to complete the entire health care record. The EDRS is a critical component that needs to be added and was not included in the original FSR due to timing constraints.

EHRS Equipment Refresh

The EHRS end-user devices must be refreshed due to the limited life span of such electronic equipment. The approved FSR did not address necessary refresh of EHRS end-user devices. CCHCS will utilize a four-year refresh cycle, resulting in one-quarter (25%) of the EHRS end-user devices being refreshed each year starting in FY 2018/19.

EHRS Maintenance Changes

The EHRS will require periodic maintenance changes to correct deficiencies, complete routine maintenance, and perform upgrades to the operational EHRS. The approved FSR did not address maintenance changes to the EHRS. CCHCS is planning for

contracted services annually beginning in FY 2017/18 in support of these EHR maintenance changes.

CCHCS IT Infrastructure/Network/Servers

CCHCS estimates hosting and network fees for the EHR, including EHR servers not hosted by the EHR Vendor. The approved FSR did not address these costs.

Pharmacy Cutover

The pharmacy cutover is a one-time need in order to move all prescriptions from the existing pharmacy program into the EHR. This includes prescription entry and validation in the EHR.

Miscellaneous Budget Changes

Miscellaneous costs include Independent Project Oversight (IPO), Learning Management System (LMS) Licenses, and Travel.

Table 3-7 - EHR Budget Changes

BUDGET DESCRIPTION	FY 2016/17	FY 2017/18	FY 2018/19	FY 2019/20	FY 2020/21 (CONTINUING)
EHR Temp Help Staff	\$7,213,440	\$5,215,776	\$1,120,832	\$0	\$0
EHR IT & Program Staff	\$10,573,036	\$12,254,579	\$12,254,579	\$12,254,579	\$12,254,579
EDRS (Staff and Contract)	\$9,685,884	\$7,075,425	\$3,441,089	\$1,636,161	\$1,636,161
EHR Equipment Refresh	\$0	\$0	\$2,609,662	\$2,609,662	\$2,609,662
Maintenance Changes	\$0	\$2,100,000	\$2,100,000	\$2,100,000	\$2,100,000
IT Infrastructure/Network/Servers	\$1,746,000	\$1,746,000	\$1,746,000	\$1,746,000	\$1,746,000
Pharmacy Authentication/Validation	\$5,491,200	\$0	\$0	\$0	\$0
Organizational Change Management	\$504,000	\$504,000	\$504,000	\$0	\$0
Independent Validation & Verification	\$580,000	\$580,000	\$580,000	\$0	\$0
Misc (IPOC/LMS/etc.)	\$45,066	\$419,429	\$369,830	\$218,030	\$218,030
Savings/Decommissioning	\$0	\$0	(\$9,834,587)	(\$14,772,455)	(\$14,772,455)
TOTAL	\$35,838,626	\$29,895,209	\$14,891,405	\$5,791,977	\$5,791,977

3.5 Impact of Proposed Change on Project

This SPR reflects a schedule and budget change. Following is a description of the change for each area.

3.5.1 Benefit

Estimated benefits have been modified to include savings from decommissioning of electronic Unit Health Record and Dental Scheduling and Tracking System. Timing of the benefits has been changed due to the schedule delay. The Economic Analysis Worksheets (EAWs) reflect the updated implementation schedule.

3.5.2 Budget

The revised budget based on the changes described in Section 3 is presented in Section 6.

3.5.3 Schedule

Based on the activities completed to-date and the revised projections described above, the projected date for project completion is reflected in Appendix A (Project Work Plan).

3.6 Feasible Alternatives Considered

There are no additional alternatives to be considered at this time.

3.7 Implementation Plan

The EHR is being implemented following Cerner's methodology, known as MethodM. This technical methodology follows five (5) phases.

- EHR Project Plan phase consists of the Client Executive Session and the Project Preparation. EHR Project Milestone 1 includes the creation and approval of the EHR Project Management Plan and several tasks and subtasks which relate to the initiation of the EHR Project and the planning for the EHR Project.
- EHR Project Design phase consists of the Project Kickoff, System Review and Design Review. This portion of the MethodM methodology relates to additional planning and the beginning of execution of the EHR Project.
- EHR Project Build phase consists of Design Review, System Validation and Trainer/Go-live Preparation. This consists of additional design review, system validation, training preparation, and go-live preparation, which is the controlling component of the EHR project.
- EHR Project Test phase consists of Trainer/Go-live Preparation, Maintenance Testing and Integration Testing. This consists of unit testing, system testing, integration testing, security testing, and user testing prior to go-live. These components tie to the controlling portion of the project.
- EHR Go-live phase consists of Integration Testing, Go-live and the Post Go-live Assessment. These components tie to the closure of the project.

The EHRS Project plans to implement the proposed changes described in this SPR per the activities identified in Appendix A - Project Work Plan (PWP). The PWP is further discussed in Section 4.5.6.

As described in Section 3.2.2, the major activities remaining on the Project are completion of the EHRS Initial Build, EHRS rollouts to the remaining institutions, and implementation of remaining EHRS functionality.

3.7.1 Decommission Legacy Systems

CCHCS completed a detailed analysis of systems to be decommissioned after completion of the EHRS Project.

Decommission Summary

- Number of applications to be decommissioned: 17
- Estimated duration is 30 months. This includes planning; components decommission, and close-out activities.
- ITSD resources requested in this SPR will complete the work.

Approach

The source code of custom built applications, including all configuration files, will be checked into a version control system. All historical data (except CADDIS Archive Reporting database) is to be stored in the Enterprise Data warehouse and accessed through the Quality Management reporting system. Historical medical records from eUHR will be stored in Content360.

Assumptions

The following assumptions were made when developing the resource estimates for the decommissioning plan.

- Contracts and licenses will be rightfully terminated with vendors after the full implementation of EHRS and the completion of the necessary decommission and archiving activities.
- Decommissioning activities/tasks will be carried out by knowledgeable existing CCHCS team members.
- The cost estimates in the spreadsheet were based on state staff salary. If consultants are required for the decommission process, additional costs will be incurred.
- The data retention requirement is life+30 years, pending confirmation from legal division.
- An agreement between the Program areas and the decommission team for the code freeze to the production environment for application to be decommissioned will be in place.
- Decommissioning some system components may require partial or phased decommissioning.

Constraints

Constraints that were considered when developing the resource estimates for the decommissioning plan include the following.

- Successful implementation of EHR.
- Resource availability.

4.0 Updated Project Management Plan

The EHRS Project Management Plan (PMP) is a key deliverable from the EHRS Vendor, is updated quarterly, and is stored in the EHRS Vendor document repository (MethodM). This section provides EHRS PMP details from the EHRS Vendor deliverable.

4.1 Project Manager Qualifications

A consultant Senior Project Manager (PM) provides day-to-day project management services for the EHRS Project. The Senior PM has thirty years of experience developing and supporting information technology (IT) systems development, including electrical engineering design of hardware and software systems, systems engineering, and project management. The Senior PM has a graduate certificate in Software Project Management, has practiced as a certified Project Management Professional for ten years, and has twenty years of experience providing project management services to State of California clients including CDCR, Employment Development Department, Department of Social Services, Office of Systems Integration, Franchise Tax Board, Department of Health Care Services, and Covered California.

4.2 Project Management Methodology

The CCHCS project management methodology is based on the State of California Project Management Methodology (CA-PMM), the Project Management Body of Knowledge (PMBOK®) from the Project Management Institute (PMI®), and the EHRS Vendor's MethodM methodology. Industry best practices and lessons learned from prior CCHCS projects are also included.

The EHRS Vendor utilizes its own internal processes for managing implementations of its Cerner Millennium EHRS. The EHRS Vendor contract requires compliance with the CA-PMM. CCHCS requires all EHRS contractors to conform to the project's methodologies and management product standards, as well as to produce specific project management-related products. The EHRS PMP provides full details of the project management methods employed on the EHRS Project. Cerner's MethodM methodology follows five (5) phases summarized below.

- EHRS Project Plan phase consists of the Client Executive Session and the Project Preparation. EHRS project milestone 1 includes the creation and approval of the EHRS Project Management Plan and several tasks and subtasks which relate to the initiation of the EHRS Project and the planning for the EHRS Project.
- EHRS Project Design phase consists of the Project Kickoff, System Review and Design Review. This portion of the MethodM methodology relates to additional planning and the beginning of execution of the EHRS Project.

- EHR Project Build phase consists of Design Review, System Validation and Trainer/Go-live Preparation. This consists of additional design review, system validation, training preparation, and go-live preparation, which is the controlling component of the EHR project.
- EHR Project Test phase consists of Trainer/Go-live Preparation, Maintenance Testing and Integration Testing. This consists of unit testing, system testing, integration testing, security testing and user testing prior to go-live. These components tie to the controlling portion of the project.
- EHR Go-live phase consists of Integration Testing, Go-live and the Post Go-live Assessment. These components tie to the closure of the project.

4.3 Project Organization

The EHR Project functional organization is shown in Figure 1. This reflects all of the positions planned for the Project through completion. The EAWs provide detail for the required state and contractor staff by fiscal year.

The EHR Project organization consists of the following vertical units reporting to the EHR Project Director.

- Administration Team (Contracts/Budget).
- Project Financial Team.
- Technical Team.
- Clinical Team.
- Solution Team.
- Project Management Office (PMO) Team.
- Go-Live Team.
- Learning & Adoption Team.
- Communications Team.

Electronic Health Record System Project Office

Revised: 2/18/2016

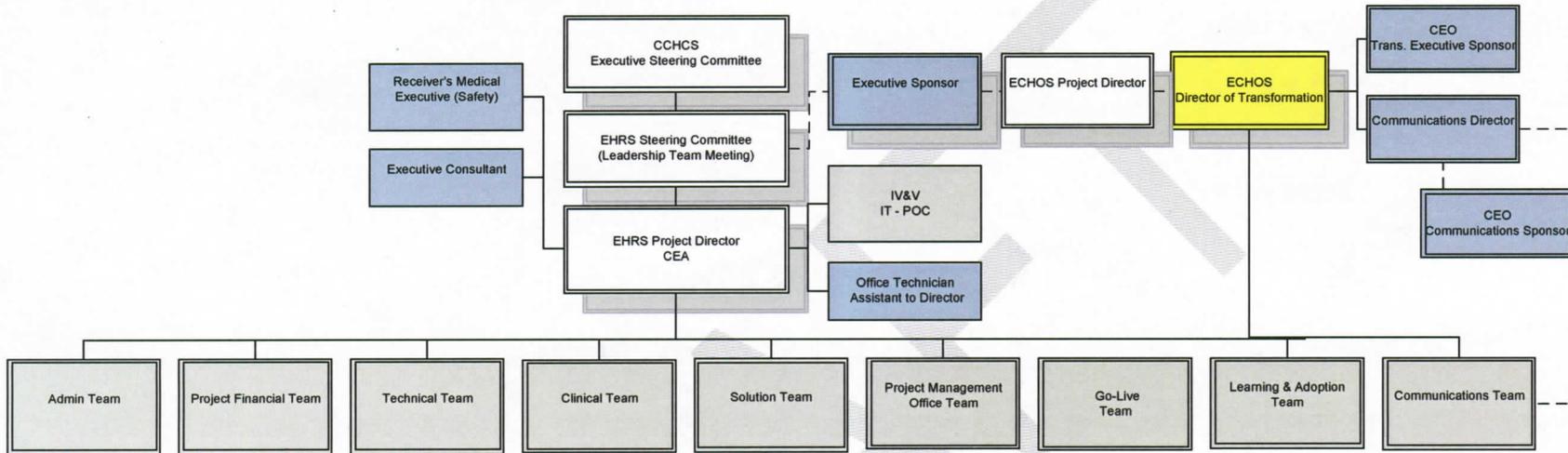


Figure 1 - EHR Project Office Functional Organization Chart

The following sections describe the entities that support or are part of the EHRS Project Office as depicted in Figure 1.

4.3.1 EHRS Project Director

The EHRS Project Director is responsible for overall budget, scope, schedule, and quality performance of the EHRS Project. The EHRS Project Director reports to the CCHCS Chief Deputy Receiver.

Under direction of the Executive Sponsors, the EHRS Project Director provides day-to-day project management direction, working with Cerner to resolve concerns, risks, and issues which could affect progress of the EHRS Project. The EHRS Project Director is responsible for achieving the objectives stated in the approved Project Charter and Feasibility Study Report (FSR). The EHRS Project Director ensures efficient and effective execution of the elements of the approved EHRS Project Management Plan.

The EHRS Project Director works with Cerner and the EHRS Project Leadership Team described below to approve changes, resolve issues and risks, and ultimately escalate concerns and decision recommendations to the Executive Sponsors.

4.3.2 Project Leadership Team (Senior Project Managers)

The Project Leadership Team (PLT) is comprised of Project Managers (PM) and leaders with specialized experience necessary to lead the teams identified in the EHRS Project Functional Organization Chart shown in Figure 1. Each PM is assigned responsibility from the EHRS Project Director for distinct areas of the EHRS Project. The PLT reports to the Project Director. Each PLT PM is fully responsible for management of scope, schedule, budget, communications, risks, issues, and quality of the output of their teams. The PLT interacts with their EHRS Vendor counterparts shown in the EHRS Project Functional Organization Chart. The combined CCHCS/Vendor PLT is responsible for Project integration management to ensure the EHRS meets program needs within the scope, budget, schedule, and quality factors approved in the EHRS FSR.

Each PLT PM provides day-to-day management and direction of the EHRS project, and is responsible for the following.

- Directing, managing, and monitoring the work being undertaken by the project staff according to the approved policies, methodologies, processes, and standards for the EHRS Project.
- Providing guidance and support to the Clinical Leadership Advisory Committee (CLAC) and Technical Advisory Committee (TAC).
- Collecting and organizing project status information.
- Providing a communication liaison to the Steering Committee, Project Director, Executive Steering Committee, and external stakeholders.
- Reporting status for scope, schedule, and cost.

- Actively monitoring and mitigating risks and issues.
- Proactively working to identify issues and follow-up to confirm the associated action plans are being executed in a way to address the impact to the project.
- Reviewing and responding to information being provided to the various stakeholders, including the legal office, IV&V, Project Oversight, and any external agencies.
- Coordinating with CCHCS resource managers to support execution of the project.
- Monitoring and verifying that all information related to the EHRS Project is consistent, correct, accurate, and timely.
- Monitoring project timeline completion and user involvement.
- Managing the requirements traceability process through the life of the project and confirming that requirements remain stable throughout the EHRS Project.

4.3.3 Administration Team

The Administration Team is led by the Administrative Manager, and is responsible for management and logistics supporting the following EHRS Project activities.

- Acquisitions and contracts.
- Human resources management.
- Office space planning.
- Travel planning.
- Events coordination and logistics.
- Staff arrivals and departure (building access badges, IT user IDs, technology requests).
- Office technician support for management.

4.3.4 Project Financials Team

The Project Financials Team is responsible for development, maintenance and reporting on the EHRS Project budget, including the following duties.

- Develop project financial reports for monthly reporting to the Chief Deputy Receiver.
- Maintenance of the Economic Analysis Worksheets (EAWs) in the Feasibility Study Report and Special Project Report.
- Prepare budget section in the monthly Project Status Reports submitted to the Department of Technology.
- Prepare budget section in the Joint Legislative Budget Committee report.

4.3.5 Technical Team

Led by the EHRS Technical Architect, the Technical Team is responsible for management of the following areas on the EHRS Project.

- Design, maintenance, and support of all EHRS Foreign System Interfaces (FSI).
- Coordination of EHRS FSI changes between foreign systems and the EHRS Vendor.
- Technical Requirements in the EHRS RTM.
- Coordinate with program on specifications, types, quantities, distribution, and asset management of EHRS portable devices.

4.3.6 Clinical Team

Led by the Chief Medical Technologist from Health Care Operations, the Clinical Leadership Advisory Committee (CLAC) is responsible for program participation in the EHRS Project and management of the following EHRS Project activities.

- Program staffing of EHRS program workgroups.
- Primary decision-making for the EHRS Project.
- Functional Requirements in the EHRS RTM.

4.3.7 Solution Team

Led by the Solution Lead, the Solution Team supports EHRS Vendor and program workgroups activities related to design, implementation and rollout of the EHRS solution. The Solution Team is also responsible for managing the following activities.

- Project management support to all EHRS program workgroups.
 - Management of scope, issues, risks, schedule, and resource assignments.
 - Assist program workgroup members with creation, analysis, execution, and reporting of EHRS change requests.
- Requirements Management.
- EHRS Testing.

4.3.8 Project Management Office (PMO) Team

Led by the PMO Senior Project Manager, the PMO Team is responsible for the following EHRS project management activities.

- Oversight of EHRS Vendor project management activities.
- Management and reporting of the integrated project schedule.
- Management and reporting.

- Preparation of reports to all EHRS stakeholders.
- Preparation of all external project reports.

4.3.9 Go-Live Team

Led by the EHRS Transformation Lead, the Go-Live Team is responsible for the following EHRS go-live activities.

- Go-Live Strategy development, execution, and reporting.
- Organizational change management.
- Go-Live Readiness execution and reporting.
- Go-Live Command Center preparation, execution, and closure.

4.3.10 Learning & Adoption Team

Led by the EHRS Transformation Lead, the Learning & Adoption Team is responsible for all EHRS learning activities. The EHRS Project utilizes an approach that includes mixed (blended) learning interventions, along with process changes, as they apply to each department. The primary delivery method will be instructor-led training. The instructor will facilitate the course, discuss logging on to the system, discuss policy and procedure changes, and be available to students as the instructor demonstrates tasks.

During or following instructor-led training, end users will have the opportunity to practice in the TRAIN domain. One-on-one training will be used where appropriate. This strategy will best utilize available resources and help the CCHCS team realize benefits from the implementation following go live.

Subject Matter Experts

Subject Matter Experts on the EHRS project will play a key role in curriculum development as a resource to verify content and workflows. SMEs will need to be made available during the Learning Task Analysis (LTA) (Curriculum Approvals) immediately following integration testing 1. Following the LTA, SME input may be required for clarification and will be required for approvals of both paper based and eLearning materials.

Trainers

CCHCS Trainers will deliver instructor led training to CCHCS Super Users and End Users. In order to prepare for training delivery, trainers will complete a train the trainer course. After EHRS training, trainers will be a resource in their department during go live and beyond. See the Trainer Development and Resource Analysis sections for additional information on trainer resources.

Super Users

CCHCS Super Users are end users' first line of support at go-live providing at-the-elbow support to their peers. Super Users also play a key role in the success of the instructor

led training. During end user training, super users provide back of classroom support to facilitate a successful class experience.

4.3.11 Communications Team

Led by the EHRS Transformation Lead, the Communications Team is responsible for the following EHRS activities.

- Planning, preparation, and dissemination of all EHRS communications.
- Planning, preparation, execution, and reporting on formal EHRS user surveys.

4.3.12 Continuing Staffing

Continuing operations support for the EHRS solution is provided by several organizations using a multi-tiered model. This section provides an overview of EHRS operations and describes continuing State personnel resource requirements.

EHRS Continuing Operations Overview

The initial go-live for the EHRS was October 27, 2015. As of this date, the EHRS entered into the Operations Phase where the product's availability and performance in executing the work for which it was designed is maintained. Upon EHRS go-live, many of the existing CCHCS legacy systems will remain active and need to be maintained by ITSD (for up to 30 months) until the EHRS has been fully deployed and the legacy systems can be decommissioned. In parallel with EHRS operations support of legacy systems, the EHRS Project will continue design, implementation and deployment of the remaining EHRS scope. Permanent full-time staff must be established to maintain, operate and support the EHRS product independent of the remaining EHRS Project activities described in Section 3 of this SPR.

EHRS Continuing Operations responsibilities are shared between the CCHCS ITSD, the Programs (Medical, Nursing, Mental Health, Dental, Pharmacy, Lab, Imaging, Health Information Management, Dietary) represented by Health Care Operations (HCO) and Health Care Policy and Administration Division (Admin). This section provides descriptions of Continuing Operations activities and estimates for the total number of State staff resources necessary to support the operational EHRS.

The definitions below are relevant to this section of the SPR.

- **EHRS** refers to the product or solution.
This includes the Cerner Millennium application and other products built (e.g., middleware built for Foreign System Interfaces) or purchased (e.g., AirWatch Software & Servers, Dragon Software, PowerMic Devices, Dolphin Mobile Devices, Zebra Mobile Printers) to interoperate with the EHRS.
- **EHRS Project** refers to the temporary (one-time) activities approved in the EHRS FSR and approved SPR(s).
This includes the budget, schedule, and resources necessary to ready the EHRS for statewide deployment, train end users, ready the organization to maintain/operate/support the EHRS, successfully deploy the EHRS, and decommission other systems (defined in the approved FSR).

- **EHRS Continuing Operations** refers to the activities necessary to support the operational EHRS. This includes the budget, resources, and processes necessary to perform the following types of maintenance on the operational EHRS: Corrective; Emergency; Preventive; Perfective; and, Adaptive. These maintenance activities will be performed by the EHRS Vendor and CCHCS resources to correct deficiencies, complete routine maintenance, and perform upgrades to the operational EHRS.

Continuing IT Staff & Program Staff

EHRS operations support responsibilities are shared between ITSD, the Programs, and Admin. This section provides estimates for the total number of staff resources needed to support EHRS Continuing Operations.

4.3.12.1 Continuing Program Staff

The Programs require new permanent positions to support the EHRS Project Organization in the on-going work specified in the Feasibility Study Report (FSR), in addition to working on the delta differentials between the existing and new work. The positions required specifically by each Program area, and the number of resources required for each, are shown in Table 4-1, below.

Table 4-1 – Continuing Program Positions

Area	Role	Classification	QTY
Program	Clinical Leadership Team	(2) Physician & Surgeon (1) Nurse Executive (1) CEA (1) HPM III (1) Receiver's Medical Executive (1) Nurse Consultant, Program Review	7 (Existing)
Sub-Total Program Positions (Existing)			7
Training	Training Coordinator	Instructional Designer	3 (New)
Training	LMS Support	Senior Instructional Designer	1 (New)
Training	LMS Support	Staff Services Manager I	2 (New)
Training	LMS Support	Associate Governmental Program Analyst (AGPA)	1 (New)
Acquisition Management Section (AMS)	Contract Analyst	Acquisitions Management Analyst (AGPA)	2 (New)
Pharmacy	Solution Analyst SME	Pharmacist I	8 (New)
Pharmacy	Solution Analyst SME	Pharmacy Technician	4 (New)
Laboratory	Solution Analyst SME	Senior Clinical Laboratory Technologist (CLT)	1 (New)
Radiology	Solution Analyst SME	Senior Radiologic Technologist	1 (New)
Nursing	Solution Analyst SME	Nurse Consultant, Program Review	4 (New)
Clinical Operations	Solution Analyst SME	Nurse Consultant, Program Review	1 (New)
Mental Health	Solution Analyst SME	Senior Psychiatrist Specialist	1 (New)
Mental Health	Solution Analyst SME	Senior Psychologist Specialist	1 (New)
Mental Health	Solution Analyst SME	Health Program Specialist I	2 (New)
Mental Health	Solution Analyst SME	Associate Governmental Program Analyst	3 (New)
Sub-Total Program Positions (New)			35
TOTAL Program Positions			42

4.3.12.2 Continuing IT Staff

Under the direction of the EHRS Product Director, the ITSD will provide IT staff to support the administration, training, hardware and software integration, interface connections and change management of the EHRS product. The operational EHRS will undergo changes necessary to maintain its operational status, as well as accommodate new features introduced by the EHRS Vendor into the COTS product. Management and coordination of these changes is the responsibility of ITSD, working in collaboration with Program subject matter experts and the EHRS Vendor. EHRS change management will occur via formal enterprise processes already in place within CCHCS.

ITSD has implemented many new interfaces and systems in support of the EHRS product. Many of these requirements for new software and hardware were not identified in the EHRS Project scope as "Customer Supported Platforms." These new platforms provide mission-critical functions such as the following.

- Health Care Services (HCS) - Enterprise Data Warehouse (EDW).
- Down Time Viewer (24/7 viewer).
- Imprivata I-Access.
- Proximity Card Readers for Authentication.
- AirWatch Mobile Device Manager (MDM) for Handheld Medical Devices.
- Microsoft Active Directory Forest-to-Forest Trust with the Cerner Data Centers.
- Dragon Dictation and Transcription System.
- Software and Hardware connectivity back to the EHRS hosting Data Centers.

ITSD will continue to develop, maintain, and enhance current platforms to support program needs while assuming additional functions related to the EHRS product. The additional functions related to the EHRS product are as follows.

- Integration, maintenance, and enhancement of the EHRS foreign software interfaces.
- Implementation and maintenance of the Imprivata I-Access Proximity Card system.
- Implementation and maintenance of the Health Care Services (HCS) Enterprise Data Warehouse (EDW).
- Integration, maintenance, and enhancement of systems and applications implemented to address gaps in functionality between the EHRS and systems/applications to be replaced.
- Initiation, planning, and execution of the Application Retirement and Data Archiving Project (ARDAP).
- Level 1 technical support of the Cerner AMS model.
- Device support for Cerner devices.
- Change management SMEs (IT Analysts) to support the Cerner AMS model.
- Installation, maintenance, and operations of Mobile Device Management to incorporate Cerner Handheld devices (AirWatch).

ITSD requires new permanent headquarters (HQ) positions in order to continue to develop, maintain, and enhance current platforms to support program needs, while

assuming the additional functions related to the EHRS product. The required HQ positions are described in Table 4-2.

Additional support personnel will be required at institutions to support EHRS end-user devices. ITSD requires 36 (one per institution and two for California Health Care Facility [CHCF]) new permanent positions for field IT support of over 16,000 new EHRS end-user devices.

Table 4-2 – Continuing IT Positions

Role	Classification	QTY
Associate Director, EHRS Product	Data Processing Manager IV	1 (Existing)
Operations Manager	Data Processing Manager III	1 (Existing)
Integration Architect	Senior Information Systems Analyst	2 (Existing)
Contract Manager	Senior Information Systems Analyst (Specialist)	1 (Existing)
Testing Coordinator	Data Processing Manager II	1 (Existing)
Change Manager	Data Processing Manager II	1 (Existing)
Technical Analyst	Senior Information Systems Analyst	1 (Existing)
Project Manager	Senior Information Systems Analyst	2 (Existing)
Solution Analyst	Associate Information Systems Analyst	5 (Existing)
Change Management SME	Staff Information Systems Analyst	2 (Existing)
Budget Analyst	Associate Governmental Program Analyst	1 (Existing)
Project Director Assistant	Administrative Assistant 1	1 (Existing)
Project Scheduler	Associate Information Systems Analyst	1 (Existing)
Business Analyst	Senior Information Systems Analyst (Specialist)	2 (Existing)
Report Writer	System Software Specialist II	2 (Existing)
Tester	System Software Specialist II	2 (Existing)
Database Administrator	System Software Specialist II	3 (Existing)
Application Architect	System Software Specialist III	1 (Existing)
Programmer	Senior Programmer Analyst (Specialist)	3 (Existing)
Technical Analyst	Associate Information Systems Analyst	10.4 (Existing)
Sub-Total IT Positions (Existing)		43.4
Business Analyst	Senior Information Systems Analyst (Specialist)	2 (New)
Report Writer	System Software Specialist (Technical) II	4 (New)
Tester	System Software Specialist (Technical) II	2 (New)
Programmer	Senior Programmer Analysts (Specialist)	3 (New)
Database Administrator	System Software Specialist (Technical) II	1 (New)
Application Integrator/Architect	System Software Specialist (Technical) III	1 (New)
Imprivata "I-Access" Administrator	System Software Specialist (Technical) II	1 (New)
Airwatch MDM Administrator	System Software Specialist (Technical) II	1 (New)
HQ Desktop Support	Senior Information Systems Analyst (Specialist)	2 (New)
LMS Administrator	Associate Information System Analyst	2 (New)
Dental Program Support	System Software Specialist (Technical) II	6 (New)
Field Device Support	Staff Information Systems Analyst	36 (New)
Sub-Total IT Positions (New)		61.0
TOTAL IT Positions		104.4

4.4 Project Priorities

The project priorities have not changed, but have been reformulated to conform to California Information Technology Policy Letter (ITPL) 10-05, and are depicted in Table 4-3.

Table 4-3 - EHR Project Priorities

Schedule	Scope	Resources	Quality
4	2	3	1

4.5 Project Plan

4.5.1 Project Scope

The scope of this effort is to acquire a COTS EHR solution to provide new functionality to fully meet the minimum constitutional level of health care for patients. The COTS solution will be configured to meet CCHCS requirements. As described in Section 3.4.2, the project scope has changed in response to program needs.

4.5.2 Project Assumptions

The major project assumptions include the following.

- Project procurements will not be delayed by the complex and lengthy state procurement and approval processes.
- All new hardware and software related to EHR must be in accordance with CCHCS' current technology infrastructure.
- The project is the number one priority within CCHCS and will receive all necessary support.
- End users will have participation and buy-in to ensure the solution's success.

4.5.3 Project Phasing

The overall project phasing has been updated to include the scope and schedule adjustments described in Table 4-4.

Table 4-4 - Project Phases, Milestones, & Deliverables

Phase	Estimated / Actual Duration	Milestone (Estimated / Actual Completion Date)	Outcomes / Deliverables
PLAN	3 months	1. Project Preparation (January 2014)	Project Planning and Management
			Strategic Assessment
			Conduct Client Executive Session Event

Phase	Estimated / Actual Duration	Milestone (Estimated / Actual Completion Date)	Outcomes / Deliverables
			Project Preparation and Planning Event
			Millennium Fundamentals Course
	1 month	2. Project Kickoff (October 2013)	Project Kickoff Analysts Prep Session
DESIGN	10 months	3. Design Review (December 2014)	Conduct System Review Phase
			Conduct Design Review Phase
			Learning and Adoption Workshop
BUILD	12 months	4. Configure and Test (July 2015)	System Validation
			Unit, System and Regression Testing
TEST	12 months	5. First Go-Live Preparation (September 2015)	Trainer and Go-Live Preparation
			Maintenance Training
			Integration Test 1
			Mock Clinics
			Integration Test 2
FIRST GO-LIVE	3 months	6. First Go-Live (October 2015)	Go-Live/Deployment
			7. First Go-Live Review (January 2016)
COMPLETE INITIAL BUILD	8 months	7a EHR Initial Build Complete (August 2016)	Initial System Complete
REGION ROLLOUT	12 months	8. Region Rollouts (August 2017)	Go-Live/Rollouts 1-14
		8-b, 10. Data Migration and Validation (March 2017) 10. System Acceptance (October 2017)	Data Migration and Validation
PRODUCTION SUPPORT	ongoing	9. Support, Operations and Upgrade Services	Production Support Plan

Phase	Estimated / Actual Duration	Milestone (Estimated / Actual Completion Date)	Outcomes / Deliverables
IMPLEMENT REMAINING EHRS FUNCTIONALITY	24 months	11. Implement Remaining Functionality (December 2018)	EDRS Design Cerner Millennium Design Updates Updated EHRS Training Materials
DECOMMISSION	30 months	12. Decommission Legacy Systems (January 2020)	Legacy Systems Decommissioned
CLOSE OUT	6 months	13. Project Close-Out (December 2019) 14. PIER (June 2020)	Archived Project Library PIER

4.5.4 Project Governance

EHRS Project Governance is defined in the EHRS PMP and is summarized here. Figure 2 depicts both the communications paths and escalation paths for the EHRS Project. EHRS Project decision escalation is managed through a designated governance structure. The foundation of EHRS Project Governance is to make decisions at the lowest-level possible in the Governance structure. This ensures timely decision-making, which is necessary for the EHRS Project to achieve its schedule objective. However, it is evident that many EHRS Project decisions could have significant impact to the greater CCHCS organization. Decisions made in the governance structure below the Executive Committee level are considered “Decision Recommendations” until confirmed by the Executive Committee. This EHRS Project Governance structure is intended to provide escalation of issues and decisions to the level necessary for appropriate visibility of impact to the CCHCS organization. When a decision recommendation cannot be made at the lowest level in the Governance structure, the decision recommendation item is escalated progressively upward through the Governance structure to achieve the necessary decision in context of its impact to the CCHCS organization. Decision recommendations made at the lower levels in the Governance structure are communicated to the Executive Steering Committee for confirmation.

The EHRS Project Governance structure acknowledges that routine communications occur from the Technical Advisory Committee (TAC) to the ITSD Director and from the Clinical Leadership Advisory Committee (CLAC) to the HCO Director. These routine communications paths are shown in Figure 2, including communications from the Clinical Operations Team (COT) and the Joint Clinical Executive Team (JCET).

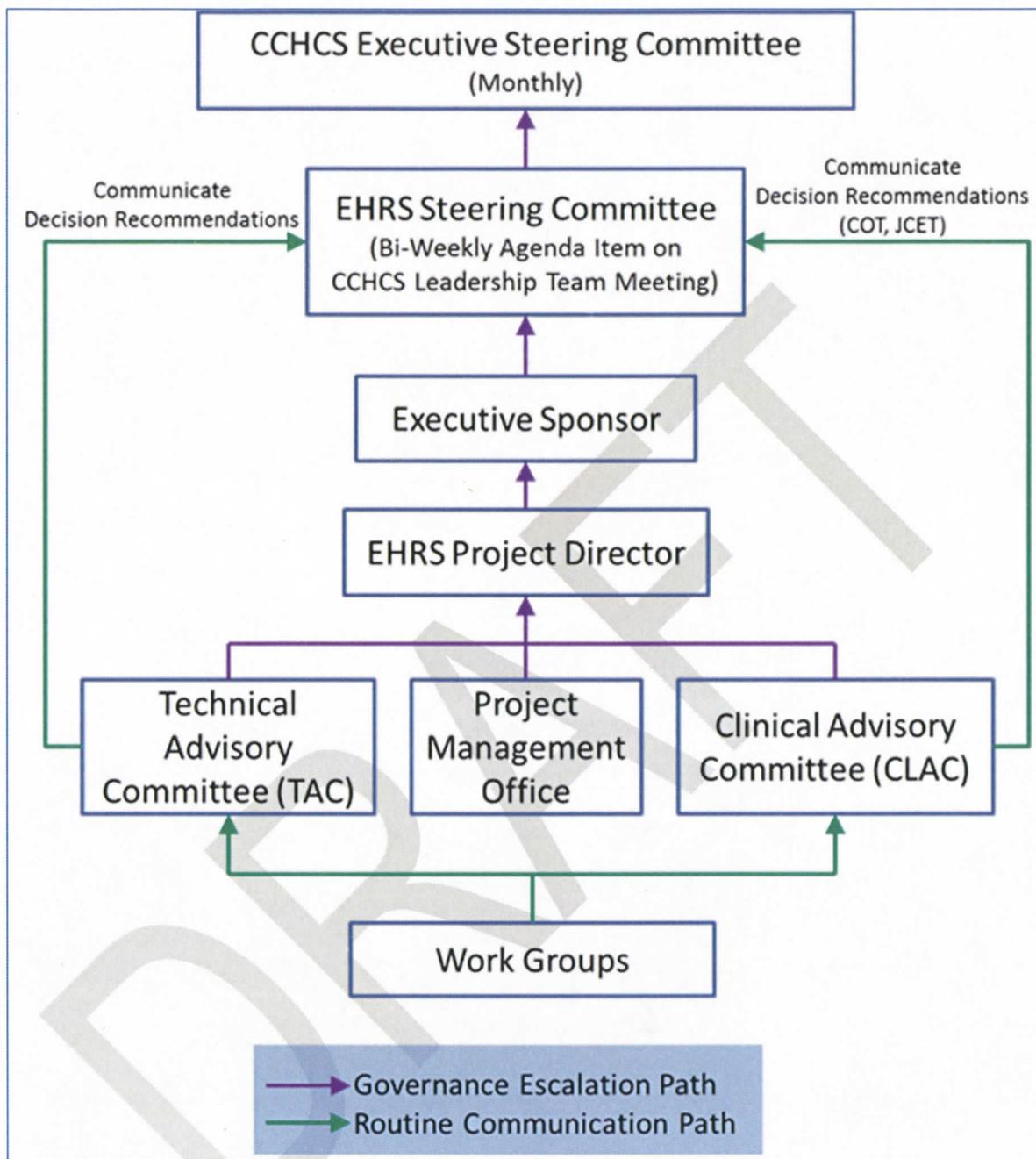


Figure 2 - EHR Project Governance Communication Flow

4.5.5 Project Roles and Responsibilities

A description of the teams that comprise the EHR Project and the roles they perform is provided in Section 4.3.

4.5.6 Project Schedule

The EHRS Project schedule depicting current and remaining Project activities is included in the SPR as Appendix A – Project Work Plan.

4.6 Project Monitoring & Oversight

The project approach to tracking and reporting on the status of project deliverables, project schedule, and project budget have not changed. The contract manager tracks completion and approval of vendor deliverables, and the PMO tracks the status of CCHCS-generated plans.

There are no changes to project oversight. The Project continues to use independent project oversight (IPO) from the Department of Technology and IV&V services provided by an independent contractor.

4.7 Project Quality

There are no changes to the project quality management processes.

4.8 Change Management

The change management processes have not changed, however the plan has been updated based on change management processes used by the EHRS vendor.

4.9 Authorization Required

No changes in authorization are required with this SPR.

5.0 Updated Risk Management Plan

The project risk management strategy has not changed, however the risk management section of the EHRS Project Management Plan has been updated with minor changes.

5.1 Risk Management Worksheet

Refer to Appendix B – EHRS Detailed Risk Report for risks identified for this project as of the date of this SPR.

5.2 Risk Tracking and Control

There are no changes to risk tracking and control processes.

6.0 Updated Economic Analysis Worksheets (EAW)

6.1 METHODOLOGY

The worksheets included in this section provide a comparative analysis of the costs associated with the proposed solution. The assumptions made while creating and managing the tables are listed below.

6.2 EXISTING SYSTEM COST ASSUMPTIONS

6.2.1 Information Technology

- Includes effort to complete remaining project components and stabilize the existing application portfolio.
- Total of 205.7 IT Staff are assumed in the baseline. This represents the current staffing levels. All IT Staffing Costs are based off the information provided in the EHRS Staffing Baseline Documentation, assumes that staffing levels will remain constant through the system development and implementation periods.

6.2.2 Program

- Total of 2,876.9 Program Staff are assumed in the baseline. This accounts for all the Program effort directly incurred as it relates to the current environment.

6.3 PROPOSED SOLUTION ASSUMPTIONS

6.3.1 One-Time IT Project Costs

The following assumptions apply to the Proposed Solution's one-time IT project costs:

- **General Assumptions**
 - The EHRS will be a COTS solution configured to meet the needs of CCHCS.
 - The EHRS will be remote hosted by the EHRS Vendor.
- **Staffing Assumptions**
 - A total of 578.1 PYs will be required to support the development and implementation of the system over ten years. This is the cumulative total, not an annual PY count.
- **Hardware and Software Purchase Assumptions**
 - Hardware costs are based on vendor provided and program recommendations.
- **Contract Services Assumptions**
 - OCM is assumed to require 7,200 hours per year for the first two years, then approximately 5,120 and 3,600 for the remaining two years at a rate of \$140 per hour, adjusted to match the revised project timeline.

- Contract Services for Project Management resources have been priced consistent with the executed agreement.
- **Data Center Services Assumptions**
 - EHRS will be remotely hosted and supported by the primary vendor.
 - Dragon Servers will be installed at the Federated Data Center (FDC) to support the Nuance Dragon Dictation and Transcription service.
- **Agency Facilities Costs**
 - There are no costs specific to the EHRS project.
- **Other Solution Assumptions**
 - Travel
 - Travel costs were based upon historical averages.
 - Overtime
 - No additional overtime has been assumed for this SPR.

6.3.2 Continuing IT Project Costs

The following Continuing Costs have been estimated.

- **Staffing Assumptions**
 - On-going IT staffing to support the EHRS will amount to 104.4 FTEs per year.
- **Hardware Purchase/Lease/Maintenance Assumptions**
 - Annual costs for hardware refresh are based upon 25% of the purchase price. Hardware refresh will not be procured through the primary vendor.
- **Software Purchase/Lease/Maintenance Assumptions**
 - Annual costs are based upon the executed agreement with the primary vendor.
- **Telecommunications Assumptions**
 - Telecommunications services costs have been included in the Data Center Services line.
- **Contract Services Assumptions**
 - Primary vendor-supplied on-going Application Management Service fees have been included.
 - Primary vendor-supplied on-going Remote Hosting service fees have been included.
 - Specialized consultant services for software and technical maintenance changes have been included.
- **Data Center Assumptions**
 - On-going support for Dragon servers at FDC will be provided by ITSD.

6.3.3 Continuing Existing IT and Program Costs

The following Continuing Existing IT and Program Costs have been estimated:

- **Continuing Existing IT Staff Costs**
 - Total Existing IT staff will remain constant starting in FY20/21.

- **Continuing Existing IT Other Costs**
 - This includes the continuing existing IT Other Costs of the 19 projects.
- **Continuing Existing Program Staff Costs**
 - Total Existing Program Staff Costs will remain constant starting in FY 18/19.
- **Continuing Existing Program Other Costs**
 - Existing program other costs include program operating costs associated with the 19 projects in the Turnaround Plan of Action (TPA).

6.3.4 Assumptions: Related Program Efficiencies

- All existing applications will be fully retired by the end of FY 19/20.

6.4 ECONOMIC ANALYSIS WORKSHEETS

The worksheets that follow itemize the costs of the Proposed Solution (Alternative 5) over the ten fiscal years for system development and first year of maintenance and operations.

6.4.1 Economic Analysis Worksheets (EAWs) from the approved Feasibility Study Report

6.4.1.1 Existing System Cost

SIMM 20C30C, Rev. 03/2011
Department: CCHCS
Project: EHRS

EXISTING SYSTEM/BASELINE COST WORKSHEET
All costs to be shown in whole (unrounded) dollars.

Date Prepared: 8/29/2013

	FY 2011/12		FY 2012/13		FY 2013/14		FY 2014/15		FY 2015/16		FY 2016/17		FY 2017/18		TOTAL	
	PYs	Amts	PYs	Amts												
Continuing Information																
Technology Costs																
Staff (salaries & benefits)	150.7	17,928,367	205.7	22,854,498	205.7	22,523,218	205.7	22,523,218	205.7	22,523,218	205.7	22,523,218	205.7	22,523,218	1385.0	153,398,956
Hardware Lease/Maintenance		36,439,686		24,441,031		11,194,307		8,701,365		8,701,365		8,701,365		8,701,365		106,880,483
Software Maintenance/Licenses		18,490,089		11,726,986		8,759,038		7,997,057		7,997,057		7,997,057		7,997,057		70,964,342
Contract Services		82,196,015		48,998,971		22,042,776		13,156,986		13,156,986		13,156,986		13,156,986		205,865,707
Data Center Services		683,101		639,614		639,614		639,614		639,614		639,614		639,614		4,520,785
Agency Facilities		233,361		277,344		254,065		254,065		254,065		254,065		254,065		1,781,028
Other		28,241,180		18,703,722		18,606,262		18,606,262		18,606,262		18,606,262		18,606,262		139,976,209
Total IT Costs	150.7	184,211,798	205.7	127,642,165	205.7	84,019,280	205.7	71,878,567	205.7	71,878,567	205.7	71,878,567	205.7	71,878,567	1385.0	683,387,509
Continuing Program Costs:																
Staff	2876.9	\$339,479,954	2876.9	\$339,479,954	2876.9	\$339,479,954	2876.9	\$339,479,954	2876.9	\$339,479,954	2876.9	\$339,479,954	2876.9	\$339,479,954	20138.3	2,376,359,677
Other		27,025,504		26,970,778		27,446,520		21,240,407		14,596,794		14,596,794		14,596,794		146,473,590
Total Program Costs	2876.9	366,505,458	2876.9	366,450,732	2876.9	366,926,473	2876.9	360,720,360	2876.9	354,076,747	2876.9	354,076,747	2876.9	354,076,747	20138.3	2,522,833,266
TOTAL EXISTING SYSTEM COS	3027.6	550,717,256	3082.6	494,092,897	3082.6	450,945,754	3082.6	432,598,927	3082.6	425,955,314	3082.6	425,955,314	3082.6	425,955,314	21523.3	3,206,220,776

6.4.1.2 Alternative 1

SIMM 20C30C, Rev. 08/2010

Enhanced CDR with Additional Integration and eMAR

Date Prepared: 08/30/2013

Department:
Project:

All Costs Should be shown in whole (unrounded) dollars.

	FY 2011/12		FY 2012/13		FY 2013/14		FY 2014/15		FY 2015/16		FY 2016/17		FY 2017/18		SUBTOTAL	
	PYs	Amts	PYs	Amts												
One-Time IT Project Costs																
IT Staff (Salaries & Benefits)	0.0	\$0	13.0	\$1,684,305	16.0	\$2,072,234	16.0	\$2,072,234	8.0	\$1,036,117	3.0	\$388,248	0.0	\$0	56.0	\$7,253,138
Program Staff (Salaries & Benefits)	0.0	\$0	5.1	\$1,168,583	14.4	\$3,299,542	14.4	\$3,299,542	1.0	\$230,374	0.0	\$0	0.0	\$0	34.9	\$7,998,041
Hardware Purchase		\$0		\$0		\$4,006,578		\$2,503,289		\$1,000,000		\$0		\$0		\$7,509,866
Software Purchase/License		\$0		\$1,000,000		\$2,500,000		\$1,000,000		\$0		\$0		\$0		\$4,500,000
Telecommunications		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0
Contract Services																
Project Management		\$0		\$43,680		\$523,636		\$523,636		\$0		\$0		\$0		\$1,090,952
SME		\$0		\$89,600		\$0		\$0		\$0		\$0		\$0		\$89,600
Software Customization		\$0		\$0		\$2,000,000		\$1,000,000		\$1,120,000		\$0		\$0		\$4,120,000
Integration		\$0		\$1,000,000		\$2,000,000		\$0		\$0		\$0		\$0		\$3,000,000
Data Center Services		\$0		\$0		\$263,312		\$264,992		\$86,982		\$0		\$0		\$615,286
Other Contract Services		\$0		\$0		\$1,532,647		\$0		\$0		\$0		\$0		\$1,532,647
Organizational Change Management		\$0		\$241,920		\$224,000		\$224,000		\$224,000		\$0		\$0		\$913,920
Training		\$0		\$100,000		\$800,000		\$800,000		\$400,000		\$0		\$0		\$2,100,000
CDR Solution Development		\$0		\$1,500,000		\$3,000,000		\$3,000,000		\$1,000,000		\$0		\$0		\$8,500,000
IV&V		\$0		\$50,000		\$125,000		\$50,000		\$0		\$0		\$0		\$225,000
IPOC		\$0		\$78,880		\$157,759		\$157,759		\$78,880		\$0		\$0		\$473,278
IT Contracted Services		\$0		\$1,750,000		\$3,500,000		\$3,500,000		\$312,500		\$0		\$0		\$9,062,500
TOTAL Contract Services		\$0		\$4,854,080		\$14,126,354		\$9,520,387		\$3,222,362		\$0		\$0		\$31,723,183
Data Center Services		\$0		\$0		\$413,039		\$405,056		\$56,117		\$0		\$0		\$874,212
Agency Facilities		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0
Other		\$0		\$120,600		\$264,600		\$264,600		\$43,200		\$10,800		\$0		\$703,800
Total One-time IT Costs	0.0	\$0	18.1	\$8,827,567	30.4	\$26,682,347	30.4	\$19,065,108	9.0	\$5,588,170	3.0	\$399,048	0.0	\$0	90.9	\$60,562,240
Continuing IT Project Costs																
Staff (Salaries & Benefits)	0.0	\$0	16.5	\$2,186,761	33.0	\$4,373,522	33.0	\$4,373,522	33.0	\$4,373,522	33.0	\$4,373,522	33.0	\$4,373,522	181.5	\$24,054,371
Program Staff (Salaries & Benefits)	0.0	\$0	0.0	\$0	13.0	\$1,615,075	24.5	\$2,984,315	29.0	\$3,495,420	29.0	\$3,495,420	29.0	\$3,495,420	124.5	\$15,085,650
Hardware Lease/Maintenance		\$0		\$12,595,786		\$2,380,060		\$3,169,930		\$3,342,815		\$3,407,601		\$2,810,793		\$27,706,985
Software Maintenance/Licenses		\$0		\$580,013		\$4,132,405		\$5,632,050		\$5,315,739		\$5,475,211		\$5,639,467		\$26,774,885
Telecommunications		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0
Contract Services		\$0		\$130,155		\$927,312		\$1,263,832		\$1,192,852		\$1,228,637		\$1,150,451		\$5,893,239
Data Center Services		\$0		\$0		\$2,965,938		\$4,876,305		\$6,128,772		\$3,413,777		\$3,196,537		\$20,581,328
Agency Facilities		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0
Other		\$0		\$62,355		\$101,326		\$70,149		\$0		\$0		\$0		\$233,830
Total Continuing IT Costs	0.0	\$0	16.5	\$15,555,969	46.0	\$16,495,637	57.5	\$22,370,103	62.0	\$23,849,119	62.0	\$21,394,169	62.0	\$20,666,191	306.0	\$120,330,288
Total Project Costs	0.0	\$0	34.6	\$24,382,636	76.4	\$43,177,984	87.9	\$41,435,211	71.0	\$29,437,289	65.0	\$21,793,217	62.0	\$20,666,191	396.9	\$180,892,528
Continuing Existing Costs																
Information Technology Staff	150.7	\$17,928,367	176.2	\$123,771,099	156.7	\$16,077,462	156.7	\$16,077,462	164.7	\$17,113,579	169.7	\$17,761,448	172.7	\$18,149,696	1147.4	\$226,879,113
Other IT Costs		\$166,283,432		\$22,347,581		\$18,484,695		\$27,721,379		\$17,513,552		\$17,515,879		\$17,542,357		\$287,408,876
Total Continuing Existing IT Costs	150.7	\$184,211,799	176.2	\$146,118,680	156.7	\$34,562,157	156.7	\$43,798,841	164.7	\$34,627,131	169.7	\$35,277,327	172.7	\$35,692,053	996.7	\$514,287,989
Program Staff	2876.9	\$339,479,954	2871.8	\$338,314,127	2849.5	\$334,568,092	2838.0	\$333,198,853	2846.9	\$335,756,915	2847.9	\$335,987,289	2847.9	\$335,987,289	19978.9	\$2,013,812,564
Other Program Costs		\$27,025,504		\$26,970,778		\$27,446,520		\$21,240,407		\$14,596,794		\$14,596,794		\$14,596,794		\$146,473,591
Total Continuing Existing Program Costs	2876.9	\$366,505,458	2871.8	\$365,284,905	2849.5	\$362,014,612	2838.0	\$354,439,260	2846.9	\$350,353,709	2847.9	\$350,584,083	2847.9	\$350,584,083	19978.9	\$2,499,766,109
Total Continuing Existing Costs	3027.6	\$550,717,257	3048.0	\$511,403,584	3006.2	\$396,576,769	2994.7	\$398,238,101	3011.6	\$384,980,840	3017.6	\$385,861,410	3020.6	\$386,276,136	21126.3	\$3,014,054,098
TOTAL ALTERNATIVE COSTS	3027.6	\$550,717,257	3082.6	\$535,786,221	3082.6	\$439,754,754	3082.6	\$439,673,311	3082.6	\$414,418,129	3082.6	\$407,654,627	3082.6	\$406,942,327	21523.2	\$3,194,946,626
INCREASED REVENUES		0		0		0		0		0		0		0		0

6.4.1.3 Alternative 2

SIMM 20C30C, Rev. 08/2010

Core EHRS with Guardian Med Management and eMAR

Date Prepared: 08/30/2013
Alt 2 Summary

Department: _____
Project: _____

All Costs Should be shown in whole (unrounded) dollars.

	FY 2011/12		FY 2012/13		FY 2013/14		FY 2014/15		FY 2015/16		FY 2016/17		FY 2017/18		SUBTOTAL	
	PYs	Amts	PYs	Amts												
One-Time IT Project Costs																
IT Staff (Salaries & Benefits)	0.0	\$0	1.0	\$124,086	24.3	\$2,539,195	33.8	\$3,124,655	39.2	\$3,672,625	0.0	\$0	0.0	\$0	98.2	\$9,460,562
Program Staff (Salaries & Benefits)	0.0	\$0	7.1	\$1,578,525	29.3	\$6,351,217	29.3	\$6,351,217	14.6	\$3,258,440	0.0	\$0	0.0	\$0	80.3	\$17,539,399
Hardware Purchase		\$0		\$0		\$3,105,001		\$543,165		\$0		\$1,247,340		\$0		\$4,895,506
Software Purchase/License		\$0		\$6,755,277		\$5,639,216		\$16,200		\$9,500		\$0		\$0		\$12,480,193
Telecommunications		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0
Contract Services																
Software Customization		\$0		\$2,458,199		\$14,192,839		\$10,868,869		\$5,816,936		\$0		\$0		\$33,336,843
Project Management		\$0		\$250,000		\$1,000,000		\$750,000		\$312,500		\$0		\$0		\$2,312,500
Organizational Change Management		\$0		\$0		\$784,000		\$784,000		\$784,000		\$0		\$0		\$2,352,000
Independent Project Oversight (IPOC)		\$0		\$16,819		\$134,549		\$134,549		\$117,730		\$0		\$0		\$403,647
Independent Validation and Verification		\$0		\$0		\$679,764		\$384,957		\$225,746		\$0		\$0		\$1,290,467
Training		\$0		\$0		\$800,000		\$800,000		\$300,000		\$0		\$0		\$1,900,000
Other EHRS Contract Services		\$0		\$0		\$7,435,000		\$5,750,000		\$3,250,000		\$375,000		\$0		\$16,810,000
eMAR contracted Services		\$0		\$0		\$508,300		\$508,300		\$312,500		\$0		\$0		\$1,329,100
TOTAL Contract Services		\$0		\$2,725,017		\$25,534,452		\$19,980,675		\$11,119,412		\$375,000		\$0		\$59,734,557
Data Center Services		\$0		\$1,087,000		\$239,802		\$241,332		\$0		\$0		\$0		\$1,568,134
Agency Facilities		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0
Other		\$0		\$106,200		\$540,218		\$574,310		\$351,540		\$0		\$0		\$1,572,268
Total One-time IT Costs	0.0	\$0	8.1	\$12,376,105	53.6	\$44,009,102	63.1	\$30,831,554	53.8	\$18,411,517	0.0	\$1,622,340	0.0	\$0	178.5	\$107,250,619
Continuing IT Project Costs																
Staff (Salaries & Benefits)	0.0	\$0	2.5	\$306,073	16.5	\$1,900,373	6.0	\$572,923	6.0	\$572,923	40.9	\$4,379,964	43.4	\$4,645,410	115.3	\$12,377,665
Program Staff (Salaries & Benefits)	0.0	\$0	0.0	\$0	4.0	\$396,588	10.0	\$991,470	13.0	\$1,268,911	13.0	\$1,268,911	13.0	\$1,268,911	53.0	\$5,254,791
Hardware Lease/Maintenance		\$0		\$0		\$62,858		\$0		\$0		\$17,748		\$1,479		\$82,085
Software Maintenance/Licenses		\$0		\$0		\$14,530,390		\$2,484,945		\$7,104,391		\$7,175,292		\$7,248,319		\$38,543,338
Contract Services		\$0		\$0		\$0		\$501,616		\$836,691		\$1,253,191		\$1,007,878		\$3,599,376
Data Center Services		\$0		\$93,476		\$1,423,586		\$2,474,258		\$3,841,875		\$3,621,201		\$3,626,684		\$15,081,081
Agency Facilities		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0
Other		\$0		\$0		\$0		\$0		\$0		\$0		\$0		\$0
Total Continuing IT Costs	0.0	\$0	2.5	\$399,549	20.5	\$18,313,794	16.0	\$7,025,213	19.0	\$13,644,792	53.9	\$17,736,307	56.4	\$17,818,681	168.3	\$74,938,336
Total Project Costs	0.0	\$0	10.6	\$12,775,654	74.1	\$62,322,897	79.1	\$37,856,767	72.8	\$32,056,309	53.9	\$19,358,647	56.4	\$17,818,681	346.8	\$182,188,955
Continuing Existing Costs																
Information Technology Staff	150.7	\$17,928,367	202.2	\$22,424,339	164.9	\$18,083,650	166.0	\$18,825,640	160.6	\$18,277,670	164.8	\$18,143,254	162.3	\$17,877,808	1171.4	\$131,560,727
Other IT Costs		\$166,283,432		\$22,125,380		\$18,332,253		\$17,490,170		\$6,749,905		\$6,085,911		\$6,174,845		\$243,241,895
Total Continuing Existing IT Costs	150.7	\$184,211,799	202.2	\$44,549,719	164.9	\$36,415,903	166.0	\$36,315,809	160.6	\$25,027,574	164.8	\$24,229,165	162.3	\$24,052,653	1171.4	\$374,802,623
Program Staff	2876.9	\$339,479,954	2869.8	\$337,904,184	2843.6	\$332,734,904	2837.6	\$332,140,022	2849.3	\$334,935,358	2863.9	\$338,193,798	2863.9	\$338,193,798	20005.1	\$2,353,582,020
Other Program Costs		\$27,025,504		\$26,970,778		\$27,446,520		\$21,240,407		\$14,596,794		\$14,596,794		\$14,596,794		\$146,473,591
Total Continuing Existing Program Costs	2876.9	\$366,505,458	2869.8	\$364,874,962	2843.6	\$360,181,424	2837.6	\$353,380,429	2849.3	\$349,532,152	2863.9	\$352,790,592	2863.9	\$352,790,592	20005.1	\$2,500,055,611
Total Continuing Existing Costs	3027.6	\$550,717,257	3072.0	\$409,424,681	3008.5	\$396,597,327	3003.6	\$389,696,239	3009.9	\$374,559,727	3028.7	\$377,019,757	3026.2	\$376,843,245	21176.5	\$2,874,858,233
TOTAL ALTERNATIVE COSTS	3027.6	\$550,717,257	3082.6	\$422,200,335	3082.6	\$458,920,224	3082.7	\$427,553,005	3082.7	\$406,616,036	3082.6	\$396,378,404	3082.6	\$394,661,926	21523.3	\$3,057,047,188
INCREASED REVENUES		0		0		0		0		0		0		0		0

6.4.1.4 Proposed Alternative

SIMM 20C30C, Rev. 03/2011

PROPOSED ALTERNA PROPOSED ALTERNATIVE: Implement a full EHR Solution

Date Prepared: 8/29/2013

Department: CCHCS

All Costs Should be shown in whole (unrounded) dollars.

Project: EHR

	FY 2011/12		FY 2012/13		FY 2013/14		FY 2014/15		FY 2015/16		FY 2016/17		FY 2017/18		TOTAL	
	PYs	Amts	PYs	Amts												
One-Time IT Project Costs																
IT Staff (Salaries & Benefits)	0.0		1.0	124,086	24.3	\$2,730,960	33.8	\$3,723,895	39.2	\$4,267,597	0.0	0			98.2	10,846,539
Program Staff (Salaries & Benefits)	0.0		2.2	444,622	29.3	\$6,351,217	29.3	\$6,351,217	10.0	\$2,195,710	0.0	0			70.7	15,342,766
Hardware Purchase		\$2,256,374										0				2,256,374
Software Purchase/License		\$14,135,473				\$36,300		\$16,200		\$9,500		0				14,197,473
Telecommunications												0				0
Contract Services																0
Software Customization		\$15,820,028		\$9,929,878		\$6,577,295		\$1,515,500		\$400,000						34,242,701
Project Management						\$832,500		\$832,500		\$340,000		\$250,000				2,255,000
Organizational Change Management						\$1,008,000		\$1,008,000		\$716,800		\$504,000				3,236,800
Independent Project Oversight (IPOC)				\$67,275		\$134,549		\$134,549		\$117,730		\$67,275				521,378
IV&V Services						\$580,710		\$580,710		\$81,047						1,242,467
Trainers						\$800,000		\$800,000		\$300,000						1,900,000
Other Contract Services		\$1,087,000				\$7,500,000		\$5,000,000		\$3,250,000		\$375,000				17,212,000
TOTAL Contract Services		\$16,907,028		\$9,997,153		\$17,433,054		\$9,871,259		\$5,205,577		\$1,196,275		\$0		60,610,346
Data Center Services																0
Agency Facilities																0
Other						\$508,608		\$542,700		\$284,940						1,336,248
Total One-time IT Costs	0.0	33,298,875	3.2	10,565,861	53.5	27,060,139	63.0	20,505,271	49.2	11,963,325	0.0	1,196,275	0.0	0	168.9	104,589,745
Continuing IT Project Costs																
IT Staff (Salaries & Benefits)	0.0	\$0	0.0		0.0	\$0	6.0	\$572,923	6.0	\$572,923	40.9	\$4,379,964	43.4	\$4,645,410	96.3	10,171,220
Program Staff (Salaries & Benefits)	0.0	\$0	0.0		4.0	\$304,790	7.0	\$1,583,383	7.0	\$1,583,383	7.0	\$1,583,383	7.0	\$1,583,383	32.0	7,238,322
Hardware Lease/Maintenance		\$201,918						\$725,152		\$782,164		\$729,903		\$729,903		2,439,137
Software Maintenance/Licenses		\$13,173,170		\$4,824,942				\$4,679,732		\$5,108,567		\$5,260,015		\$5,260,015		38,306,442
Telecommunications						\$60,000		\$120,000		\$120,000		\$120,000		\$120,000		540,000
Contract Services				\$95,384		\$1,207,308		\$2,475,399		\$4,238,229		\$4,668,521		\$4,668,521		17,353,362
Data Center Services						\$50,000		\$300,000		\$300,000		\$300,000		\$300,000		1,250,000
Agency Facilities																0
Other																0
Total Continuing IT Costs	0.0	13,375,088	0.0	4,920,326	4.0	2,222,098	13.0	9,731,437	13.0	12,648,254	47.9	17,094,047	50.4	17,307,232	128.3	77,298,483
Total Project Costs	0.0	46,673,963	3.2	15,486,187	57.5	29,282,237	76.0	30,236,708	62.2	24,611,579	47.9	18,290,321	50.4	17,307,232	297.2	181,888,228
Continuing Existing Costs																
Information Technology Staff	150.7	17,928,367	204.7	22,730,412	181.4	19,792,258	166.0	18,226,400	160.6	17,682,698	164.8	18,143,254	162.3	17,877,808	1190.5	132,381,197
Other IT Costs		98,574,615		70,750,957		52,702,966		47,795,721		47,795,721		44,940,721		44,940,721		407,501,422
Total Continuing Existing IT Costs	150.7	116,502,982	204.7	93,481,369	181.4	72,495,224	166.0	66,022,121	160.6	65,478,419	164.8	63,083,975	162.3	62,818,529	1190.5	539,882,619
Program Staff	2876.9	339,479,954	2874.7	339,035,332	2843.7	332,223,947	2840.7	331,545,354	2859.9	335,700,861	2716.9	328,943,021	2716.9	328,943,021	19729.6	2,335,871,489
Other Program Costs		28,043,751		23,408,173		14,721,172		9,827,211		3,183,598		3,183,598		3,183,598		85,551,101
Total Continuing Existing Program Co	2876.9	367,523,705	2874.7	362,443,505	2843.7	346,945,119	2840.7	341,372,565	2859.9	338,884,459	2716.9	332,126,619	2716.9	332,126,619	19729.6	2,421,422,590
Total Continuing Existing Costs	3027.6	484,026,687	3079.4	455,924,873	3025.1	419,440,343	3006.6	407,394,686	3020.5	404,362,877	2881.7	395,210,594	2879.2	394,945,148	20920.1	2,961,305,209
TOTAL ALTERNATIVE COSTS	3027.6	530,700,650	3082.6	471,411,060	3082.6	448,722,580	3082.6	437,631,394	3082.6	428,974,456	2929.6	413,500,915	2929.6	412,252,380	21217.3	3,143,193,436
INCREASED REVENUES		0		0		0		0		0		0		0		0

For purposes of this FSR, CCHCS Program staff was calculated at 25% of assigned personnel.

6.4.1.5 Economic Analysis Summary

SIMM 20C30C, Rev. 03/2011
Department: CCHCS
Project: EHR

ECONOMIC ANALYSIS SUMMARY

Date Prepared: 8/29/2013

All costs to be shown in whole (unrounded) dollars.

	FY 2011/12		FY 2012/13		FY 2013/14		FY 2014/15		FY 2015/16		FY 2016/17		FY 2017/18		TOTAL	
	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts
EXISTING SYSTEM																
Total IT Costs	150.7	184,211,798	205.7	127,642,165	205.7	84,019,280	205.7	71,878,567	205.7	71,878,567	205.7	71,878,567	205.7	71,878,567	1385.0	683,387,509
Total Program Costs	2876.9	366,505,458	2876.9	366,450,732	2876.9	366,926,473	2876.9	360,720,360	2876.9	354,076,747	2876.9	354,076,747	2876.9	354,076,747	20138.3	2,522,833,266
Total Existing System Costs	3027.6	550,717,256	3082.6	494,092,897	3082.6	450,945,754	3082.6	432,598,927	3082.6	425,955,314	3082.6	425,955,314	3082.6	425,955,314	21523.3	3,206,220,776
PROPOSED ALTERNATIVE																
Implement a full EHR Solution																
Total Project Costs	0.0	46,673,963	3.2	15,486,187	57.5	29,282,237	76.0	30,236,708	62.2	24,611,579	47.9	18,290,321	50.4	17,307,232	297.2	181,888,228
Total Cont. Exist. Costs	3027.6	484,026,687	3079.4	455,924,873	3025.1	419,440,343	3006.6	407,394,686	3020.5	404,362,877	2881.7	395,210,594	2879.2	394,945,148	20920.1	2,961,305,209
Total Alternative Costs	3027.6	530,700,650	3082.6	471,411,060	3082.6	448,722,580	3082.6	437,631,394	3082.6	428,974,456	2929.6	413,500,915	2929.6	412,252,380	21217.3	3,143,193,436
COST SAVINGS/AVOIDANCES	0.0	20,016,606	0.0	22,681,837	0.0	2,223,174	0.0	(5,032,467)	0.0	(3,019,142)	153.0	12,454,398	153.0	13,702,934	306.0	63,027,339
Increased Revenues	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0	0
Net (Cost) or Benefit	0.0	20,016,606	0.0	22,681,837	0.0	2,223,174	0.0	(5,032,467)	0.0	(3,019,142)	153.0	12,454,398	153.0	13,702,934	306.0	63,027,339
Cum. Net (Cost) or Benefit	0.0	20,016,606	0.0	42,698,442	0.0	44,921,616	0.0	39,889,149	0.0	36,870,007	153.0	49,324,405	306.0	63,027,339		
ALTERNATIVE #1																
Enhanced CDR with Additional Integration and eMAR																
Total Project Costs	0.0	0	34.6	24,382,636	76.4	43,177,984	87.9	41,435,211	71.0	29,437,289	65.0	21,793,217	62.0	20,666,191	396.9	180,892,528
Total Cont. Exist. Costs	3027.6	550,717,256	3048.0	511,403,584	3006.2	396,576,769	2994.7	398,238,101	3011.6	384,980,840	3017.6	385,861,410	3020.6	386,276,136	21126.4	3,014,054,098
Total Alternative Costs	3027.6	550,717,256	3082.6	535,786,221	3082.6	439,754,754	3082.6	439,673,311	3082.6	414,418,129	3082.6	407,654,627	3082.6	406,942,327	21523.3	3,194,946,625
COST SAVINGS/AVOIDANCES	0.0	0	0.0	(41,693,324)	0.0	11,191,000	0.0	(7,074,384)	0.0	11,537,185	0.0	18,300,687	0.0	19,012,987	0.0	11,274,151
Increased Revenues	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0	0
Net (Cost) or Benefit	0.0	0	0.0	(41,693,324)	0.0	11,191,000	0.0	(7,074,384)	0.0	11,537,185	0.0	18,300,687	0.0	19,012,987	0.0	11,274,151
Cum. Net (Cost) or Benefit	0.0	0	0.0	(41,693,324)	0.0	(30,502,324)	0.1	(37,576,708)	0.1	(26,039,523)	0.1	(7,738,836)	0.1	11,274,151		
ALTERNATIVE #2																
Core EHR with Guardian Med Management and eMAR																
Total Project Costs	0.0	0	10.6	12,775,654	74.1	62,322,897	79.1	37,856,767	72.8	32,056,309	53.9	19,358,647	56.4	17,818,681	346.8	182,188,955
Total Cont. Exist. Costs	3027.6	550,717,256	3072.0	409,424,681	3008.5	396,597,327	3003.6	389,696,239	3009.9	374,559,727	3028.7	377,019,757	3026.2	376,843,245	21176.5	2,874,858,232
Total Alternative Costs	3027.6	550,717,256	3082.6	422,200,335	3082.6	458,920,224	3082.7	427,553,005	3082.7	406,616,036	3082.6	396,378,404	3082.6	394,661,926	21523.3	3,057,047,187
COST SAVINGS/AVOIDANCES	0.0	0	0.0	71,892,561	0.0	(7,974,470)	(0.0)	5,045,922	(0.0)	19,339,278	0.0	29,576,910	0.0	31,293,388	0.0	149,173,589
Increased Revenues	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0	0
Net (Cost) or Benefit	0.0	0	0.0	71,892,561	0.0	(7,974,470)	(0.0)	5,045,922	(0.0)	19,339,278	0.0	29,576,910	0.0	31,293,388	0.0	149,173,589
Cum. Net (Cost) or Benefit	0.0	0	0.0	71,892,561	0.1	63,918,091	0.0	68,964,013	(0.0)	88,303,291	(0.0)	117,880,201	0.0	149,173,589		

6.4.1.6 Project Funding

SIMM 20C30C, Rev. 03/2011

PROJECT FUNDING PLAN

Department: CCHCS

All Costs to be in whole (unrounded) dollars

Date Prepared: 8/29/2013

Project: EHRS

	FY 2011/12		FY 2012/13		FY 2013/14		FY 2014/15		FY 2015/16		FY 2016/17		FY 2017/18		TOTALS	
	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts
TOTAL PROJECT COSTS	0.0	46,673,963	3.2	15,486,187	57.5	29,282,237	76.0	30,236,708	62.2	24,611,579	47.9	18,290,321	50.4	17,307,232	297.2	181,888,228
RESOURCES TO BE REDIRECTED																
Staff	0.0	0	3.2	568,708	57.5	9,986,967	76.0	12,231,418	62.2	8,619,613	47.9	5,963,347	50.4	6,228,793	297.2	43,598,846
Funds:																
Existing System		46,673,963		14,917,479		19,295,270		12,972,823		12,972,824		12,326,974		11,078,439		130,237,773
Other Fund Sources		0		0		0		5,032,467		3,019,142		0		0		8,051,609
TOTAL REDIRECTED RESOURCES	0.0	46,673,963	3.2	15,486,187	57.5	29,282,237	76.0	30,236,708	62.2	24,611,579	47.9	18,290,321	50.4	17,307,232	297.2	181,888,228
ADDITIONAL PROJECT FUNDING NEEDED																
One-Time Project Costs	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Continuing Project Costs	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
TOTAL ADDITIONAL PROJECT FUNDS NEEDED BY FISCAL YEAR	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
TOTAL PROJECT FUNDING	0.0	46,673,963	3.2	15,486,187	57.5	29,282,237	76.0	30,236,708	62.2	24,611,579	47.9	18,290,321	50.4	17,307,232	297.2	181,888,228
Difference: Funding - Costs	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Total Estimated Cost Savings	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	153.0	11,808,550	153.0	11,808,550	306.0	23,617,100
FUNDING SOURCE*																
General Fund	100%	46673963.38	100%	15486187	100%	29282237	100%	30236708	100%	24611579	100%	18290321	100%	17307232	100%	181888228
Federal Fund	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0
Special Fund	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0
Reimbursement	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0
TOTAL FUNDING	100%	46673963.38	100%	15486187	100%	29282237	100%	30236708	100%	24611579	100%	18290321	100%	17307232	100%	181888228

*Type: If applicable, for each funding source, beginning on row 29, describe what type of funding is included, such as local assistance or grant funding, the date the funding is to become available, and the duration of the funding.
Other Fund Sources in Fiscal Year 2014/15 and 2015/16 come from the Department's budget.

6.4.2 EAWs for the Proposed Changes (this SPR)

6.4.2.1 Existing System Cost

SIMM 30C, Rev. 06/2014
Agency/state entity: CHCS
Project: EHRS

EXISTING SYSTEM/BASELINE COST WORKSHEET
All costs to be shown in whole (unrounded) dollars.

Date Prepared: 4/18/2016

	FY 2011/12		FY 2012/13		FY 2013/14		FY 2014/15		FY 2015/16		FY 2016/17		FY 2017/18		FY 2018/19		FY 2019/20		FY 2020/21		TOTAL			
	PYs	Amts	PYs	Amts																				
Continuing Information																								
Technology Costs																								
Staff (salaries & benefits)	150.7	17,928,367	205.7	22,854,498	205.7	22,523,218	205.7	22,523,218	205.7	22,523,218	205.7	22,523,218	205.7	22,523,218	205.7	22,523,218	205.7	22,523,218	205.7	22,523,218	2002.2	220,968,610		
Hardware Lease/Maintenance		36,439,686		24,441,031		11,194,307		8,701,365		8,701,365		8,701,365		8,701,365		8,701,365		8,701,365		8,701,365		132,984,577		
Software Maintenance/Licenses		18,490,089		11,726,986		8,759,038		7,997,057		7,997,057		7,997,057		7,997,057		7,997,057		7,997,057		7,997,057		94,955,513		
Contract Services		82,196,015		48,998,971		22,042,776		13,156,986		13,156,986		13,156,986		13,156,986		13,156,986		13,156,986		13,156,986		245,336,666		
Data Center Services		683,101		639,614		639,614		639,614		639,614		639,614		639,614		639,614		639,614		639,614		6,439,627		
Agency Facilities		233,361		277,344		254,065		254,065		254,065		254,065		254,065		254,065		254,065		254,065		2,543,222		
Other		28,241,180		18,703,722		18,606,262		18,606,262		18,606,262		18,606,262		18,606,262		18,606,262		18,606,262		18,606,262		195,794,994		
Total IT Costs	150.7	184,211,798	205.7	127,642,165	205.7	84,019,280	205.7	71,878,567	2002.2	899,023,209														
Continuing Program Costs:																								
Staff	2876.9	\$339,479,954	2876.9	\$339,479,954	2876.9	\$339,479,954	2876.9	\$339,479,954	2876.9	\$339,479,954	2876.9	\$339,479,954	2876.9	\$339,479,954	2876.9	\$339,479,954	2876.9	\$339,479,954	2876.9	\$339,479,954	2876.9	\$339,479,954	28769.0	3,394,799,538
Other		27,025,504		26,970,778		27,446,520		21,240,407		14,596,794		14,596,794		14,596,794		14,596,794		14,596,794		14,596,794		190,263,971		
Total Program Costs	2876.9	366,505,458	2876.9	366,450,732	2876.9	366,926,473	2876.9	360,720,360	2876.9	354,076,747	28769.0	3,585,063,509												
TOTAL EXISTING SYSTEM COSTS	3027.6	550,717,256	3082.6	494,092,897	3082.6	450,945,754	3082.6	432,598,927	3082.6	425,955,314	30771.2	4,484,086,718												

California Correctional Health Care Services
 EHR Project
 6.4.2.2 Proposed Alternative

SIMM 30C, Rev. 06/2014

PROPOSED ALTERNATIVE: PROPOSED ALTERNATIVE: Implement a full EHR Solution

Date Prepared: 4/18/2016

Agency/state entity: CCHCS
 Project: EHR

All Costs Should be shown in whole (unrounded) dollars.

	FY 2011/12		FY 2012/13		FY 2013/14		FY 2014/15		FY 2015/16		FY 2016/17		FY 2017/18		FY 2018/19		FY 2019/20		FY 2021		TOTAL		
	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts															
One-Time IT Project Costs																							
IT Staff (Salaries & Benefits)	0.0		1.0	142,706	27.8	\$3,234,960	44.6	\$4,988,018	38.9	\$4,840,520	108.1	\$13,045,136	80.3	\$9,773,440	52.9	\$5,962,890	6.7	\$979,202			\$0	360.2	\$42,966,872
Program Staff (Salaries & Benefits)	0.0		2.2	426,002	35.1	\$7,646,184	38.9	\$8,498,189	23.3	\$4,413,804	55.4	\$9,253,626	52.7	\$9,140,637	10.4	\$2,207,383		\$0			\$0	217.9	\$41,585,825
Hardware Purchase		\$12,144		\$20,116		\$6,928,526		\$625,715		\$2,593,251		\$0		\$0		\$0		\$0					\$10,179,752
Software Purchase/License		\$9,168,862		\$8,104,726		\$8,996,297		\$4,544,311		\$189,610		\$1,078,497		\$1,078,498		\$199,750		\$0					\$33,360,551
Telecommunications																							\$0
Contract Services																							
Software Customization		\$7,179,340		\$4,867,315		\$13,867,422		\$5,487,095		\$750,000		\$7,285,978		\$4,331,438		\$1,487,850		\$0					\$45,256,438
Project Management						\$1,522,240		\$0		\$238,140		\$281,397		\$281,397		\$0		\$0					\$2,323,174
Project Oversight				\$0		\$153,600		\$153,600		\$153,600		\$153,600		\$153,600		\$153,600		\$0					\$921,600
IV&V Services						\$580,000		\$191,600		\$422,136		\$580,000		\$580,000		\$580,000		\$0					\$2,933,736
Other Contract Services		\$1,087,000		\$27,300		\$11,639,768		\$11,663,704		\$17,031,380		\$6,807,020		\$504,000		\$511,000		\$0					\$49,271,172
TOTAL Contract Services		\$8,266,340		\$4,894,615		\$27,763,030		\$17,495,999		\$18,595,256		\$15,107,995		\$5,850,435		\$2,732,450		\$0					\$100,706,120
Data Center Services																							\$0
Agency Facilities																							\$0
Other						\$62,294		\$88,000		\$1,198,707		\$100,000		\$100,000		\$100,000		\$0				\$0	
Total One-time IT Costs	0.0	17,447,346	3.2	13,588,165	62.8	54,631,291	83.4	36,240,232	62.2	31,831,148	163.5	38,585,254	133.0	25,943,010	63.3	11,202,473	6.7	979,202	0.0	0	578.1	230,448,121	
Continuing IT Project Costs																							
IT Staff (Salaries & Benefits)	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0	30.0	\$2,281,050	38.0	\$4,750,761	55.0	\$7,092,991	99.4	\$11,828,263	104.4	\$12,559,049	326.8	\$38,512,114	
Program Staff (Salaries & Benefits)	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0	7.0	\$855,959	35.0	\$5,162,589	42.0	\$6,745,972	42.0	\$6,745,972	126.0	\$19,510,492	
Hardware Lease/Maintenance		\$0		\$0		\$0		\$0		\$21,840		\$83,060		\$30,799		\$2,609,662		\$2,609,662		\$2,609,662		\$7,964,684	
Software Maintenance/Licenses		\$0		\$0		\$0		\$0		\$8,836,319		\$6,289,556		\$6,761,881		\$6,800,881		\$6,745,717		\$6,745,717		\$42,180,071	
Telecommunications																							\$0
Contract Services				\$0		\$0		\$0		\$4,047,264		\$5,144,028		\$7,477,428		\$7,519,428		\$7,464,264		\$7,464,264		\$39,116,676	
Data Center Services										\$0		\$1,746,000		\$1,746,000		\$1,746,000		\$1,746,000		\$1,746,000		\$8,730,000	
Agency Facilities																							\$0
Other																							\$0
Total Continuing IT Costs	0.0	0	0.0	0	0.0	0	0.0	0	0.0	12,905,423	30.0	15,543,694	45.0	21,622,828	90.0	30,931,551	141.4	37,139,878	146.4	37,870,664	452.8	156,014,037	
Total Project Costs	0.0	17,447,346	3.2	13,588,165	62.8	54,631,291	83.4	36,240,232	62.2	44,736,571	193.5	54,128,948	178.0	47,565,838	153.3	42,134,024	148.1	38,119,080	146.4	37,870,664	1030.9	386,462,158	
Continuing Existing Costs																							
Information Technology Staff	150.7	17,928,367	204.7	22,711,792	177.9	19,288,258	161.2	17,535,200	166.8	17,682,698	164.8	18,143,254	161.7	17,793,808	161.6	17,777,008	160.6	17,629,392	162.3	17,877,808	1,672.4	184,367,586	
Other IT Costs		112,896,645		85,928,437		53,323,951		43,797,972		44,977,678		48,193,569		49,353,660		49,353,660		45,465,792		45,465,792		578,757,156	
Total Continuing Existing IT Costs	150.7	130,825,012	204.7	108,640,229	177.9	72,612,209	161.2	61,333,172	166.8	62,660,376	164.8	66,336,823	161.7	67,147,468	161.6	67,130,668	160.6	63,095,184	162.3	63,343,600	1,672.4	763,124,742	
Program Staff	2876.9	339,479,954	2874.7	339,053,952	2841.9	331,833,770	2838.1	330,981,765	2853.6	335,066,150	2869.9	337,896,571	2869.9	337,896,571	2716.9	328,061,984	2716.9	328,061,984	2716.9	328,061,984	28,175.6	3,336,394,683	
Other Program Costs		33,738,328		30,912,529		16,323,361		8,792,493		2,982,498		3,431,598		3,520,044		3,520,044		3,520,044		3,520,044		110,260,983	
Total Continuing Existing Program Costs	2876.9	373,218,282	2874.7	369,966,481	2841.9	348,157,131	2838.1	339,774,258	2853.6	338,048,648	2869.9	341,328,169	2869.9	341,416,615	2716.9	331,582,028	2,716.9	331,582,028	2,716.9	331,582,028	28,175.6	3,446,655,666	
Total Continuing Existing Costs	3027.6	504,043,294	3079.4	478,606,710	3019.8	420,769,340	2999.2	401,107,430	3020.4	400,709,024	3034.7	407,664,992	3031.6	408,564,083	2878.5	398,712,696	2,877.5	394,677,212	2,879.2	394,925,628	29,848.0	4,209,780,408	
TOTAL ALTERNATIVE COSTS	3027.6	521,490,640	3082.6	492,194,875	3082.6	475,400,631	3082.6	437,347,662	3082.6	445,445,595	3228.2	461,793,940	3209.6	456,129,921	3031.8	440,846,720	3,025.7	432,796,292	3,025.6	432,796,292	30,879.0	4,596,242,566	
INCREASED REVENUES		0		0		0		0		0		0		0		0		0					0

6.4.2.3 Economic Analysis Summary

SIMM 30C, Rev. 06/2014
Agency/state entity: CCHCS
Project: EHRS

ECONOMIC ANALYSIS SUMMARY
All costs to be shown in whole (unrounded) dollars.

Date Prepared: 4/18/2016

	FY 2011/12		FY 2012/13		FY 2013/14		FY 2014/15		FY 2015/16		FY 2016/17		FY 2017/18		FY 2018/19		FY 19/20		FY 20/21		TOTAL			
	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts		
EXISTING SYSTEM																								
Total IT Costs	150.7	184,211,798	205.7	127,642,165	205.7	84,019,280	205.7	71,878,567	205.7	71,878,567	205.7	71,878,567	205.7	71,878,567	205.7	71,878,567	205.7	71,878,567	205.7	71,878,567	205.7	71,878,567	2002.2	899,023,209
Total Program Costs	2876.9	366,505,458	2876.9	366,450,732	2876.9	366,926,473	2876.9	360,720,360	2876.9	354,076,747	2876.9	354,076,747	2876.9	354,076,747	2876.9	354,076,747	2876.9	354,076,747	2876.9	354,076,747	2876.9	354,076,747	28769.0	3,585,063,509
Total Existing System Costs	3027.6	550,717,256	3082.6	494,092,897	3082.6	450,945,754	3082.6	432,598,927	3082.6	425,955,314	3082.6	425,955,314	3082.6	425,955,314	3082.6	425,955,314	3082.6	425,955,314	3082.6	425,955,314	3082.6	425,955,314	30771.2	4,484,086,718
PROPOSED ALTERNATIVE																								
	Implement a full EHRS Solution																							
Total Project Costs	0.0	17,447,346	3.2	13,588,165	62.8	54,631,291	83.4	36,240,232	62.2	44,736,571	193.5	54,128,948	178.0	47,565,838	153.3	42,134,024	148.1	38,119,080	146.4	37,870,664	1030.9	386,462,158		
Total Cont. Exist. Costs	3027.6	504,043,294	3079.4	478,606,710	3019.8	420,769,340	2999.2	401,107,430	3020.4	400,709,024	3034.7	407,664,992	3031.6	408,564,083	2878.5	398,712,696	2877.5	394,677,212	2879.2	394,925,628	29848.0	4,209,780,408		
Total Alternative Costs	3027.6	521,490,640	3082.6	492,194,875	3082.6	475,400,631	3082.6	437,347,662	3082.6	445,445,595	3228.2	461,793,940	3209.6	456,129,921	3031.8	440,846,720	3025.7	432,796,292	3025.6	432,796,292	30879.0	4,596,242,566		
COST SAVINGS/AVOIDANCES	0.0	29,226,617	0.0	1,898,022	0.0	(24,454,877)	0.0	(4,748,735)	0.0	(19,490,281)	(143.1)	(35,838,626)	(127.0)	(30,174,607)	50.8	(14,891,406)	57.0	(6,840,978)	57.0	(6,840,978)	(107.8)	(112,155,848)		
Increased Revenues	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Net (Cost) or Benefit	0.0	29,226,617	0.0	1,898,022	0.0	(24,454,877)	0.0	(4,748,735)	0.0	(19,490,281)	(143.1)	(35,838,626)	(127.0)	(30,174,607)	50.8	(14,891,406)	57.0	(6,840,978)	57.0	(6,840,978)	(107.8)	(112,155,848)		
Cum. Net (Cost) or Benefit	0.0	29,226,617	0.0	31,124,639	0.0	6,669,762	0.0	1,921,027	0.0	(17,569,254)	(143.1)	(53,407,880)	(270.1)	(83,582,487)	(219.3)	(98,473,893)	(162.3)	(105,314,871)	(105.3)	(112,155,848)	(213.1)	(224,311,697)		

California Correctional Health Care Services
 EHRS Project
 6.4.2.4 Project Funding

SIMM 30C, Rev. 06/2014
 Agency/state entity: CCHCS
 Project: EHRS

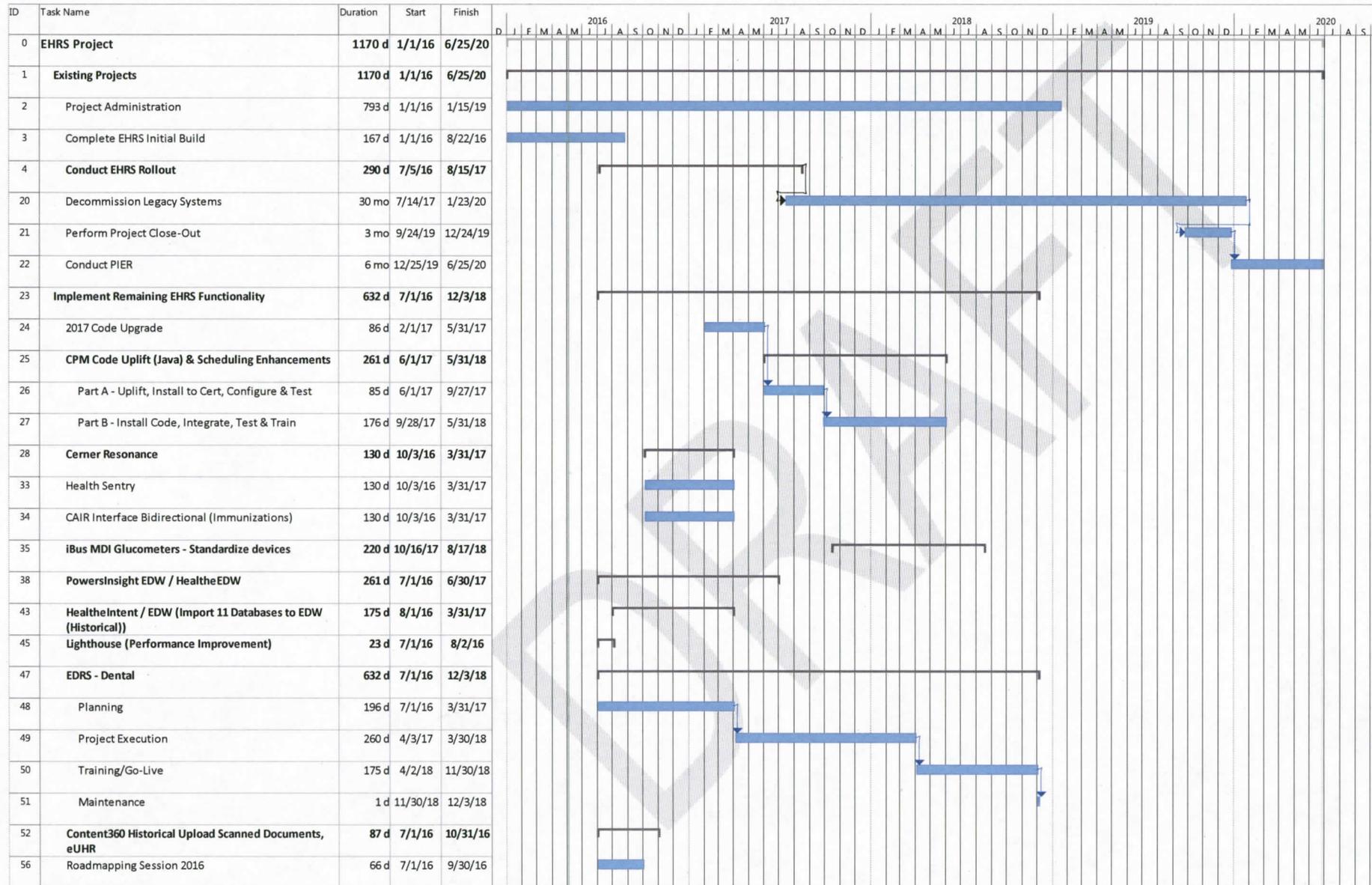
PROJECT FUNDING PLAN
 All Costs to be in whole (unrounded) dollars

Date Prepared: 4/ 18/ 2016

	FY 2011/12		FY 2012/13		FY 2013/14		FY 2014/15		FY 2015/16		FY 2016/17		FY 2017/18		FY 18/19		FY 19/20		FY 20/21		TOTALS	
	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts	PYs	Amts								
TOTAL PROJECT COSTS	0.0	17,447,346	3.2	13,588,165	62.8	54,631,291	83.4	36,240,232	62.2	44,736,571	193.5	54,128,948	178.0	47,565,838	153.3	42,134,024	148.1	38,119,080	146.4	37,870,664	1030.9	386,462,158
RESOURCES TO BE REDIRECTED																						
Staff	0.0	0	3.2	568,708	62.8	10,881,144	83.4	13,486,207	62.2	9,254,324	97.5	5,963,347	82.0	6,312,793	57.3	6,329,593	52.1	6,477,209	50.4	6,228,793	550.9	65,502,118
Funds:																						
Existing System		17,447,346		13,019,457		43,750,147		17,741,070		12,972,824		12,326,974		11,359,836		11,078,439		11,078,439		11,078,439		161,852,971
Other Fund Sources		0		0		0		5,012,955		22,509,423		0		0		0		0		0		27,522,378
TOTAL REDIRECTED RESOURCES	0.0	17,447,346	3.2	13,588,165	62.8	54,631,291	83.4	36,240,232	62.2	44,736,571	97.5	18,290,321	82.0	17,672,629	57.3	17,408,032	52.1	17,555,648	50.4	17,307,232	550.9	254,877,467
ADDITIONAL PROJECT FUNDING NEEDED																						
One-Time Project Costs	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	66.0	20,294,933	51.0	8,270,381	6.0	11,202,473	5.0	979,202	0.0	0	128.0	39,767,787
Continuing Project Costs	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	30.0	15,543,694	45.0	21,622,828	90.0	13,523,519	91.0	19,584,230	96.0	20,563,432	352.0	90,837,702
TOTAL ADDITIONAL PROJECT FUNDS NEEDED BY FISCAL YEAR	0.0	0	96.0	35,838,627	96.0	29,893,209	96.0	24,725,992	96.0	20,563,432	96.0	20,563,432	480.0	90,457,828								
TOTAL PROJECT FUNDING	0.0	17,447,346	3.2	13,588,165	62.8	54,631,291	83.4	36,240,232	62.2	44,736,571	193.5	54,128,948	178.0	47,565,838	153.3	42,134,024	148.1	38,119,080	146.4	37,870,664	1030.9	386,462,158
Difference: Funding - Costs	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0
Total Estimated Cost Savings	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	0	153.0	9,834,587	153.0	14,772,455	153.0	14,772,455	459.0	39,379,497
FUNDING SOURCE*																						
General Fund	100%	17,447,346	100%	13,588,165	100%	54,631,291	100%	36,240,232	100%	44,736,571	100%	54,128,948	100%	47,565,838	100%	42,134,024	100%	38,119,080	100%	37,870,664	100%	386,462,158
Federal Fund	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0
Special Fund	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0
Reimbursement	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0	0%	0
TOTAL FUNDING	100%	17,447,346	100%	13,588,165	100%	54,631,291	100%	36,240,232	100%	44,736,571	100%	54,128,948	100%	47,565,838	100%	42,134,024	100%	38,119,080	100%	37,870,664	100%	386,462,158

*Type: If applicable, for each funding source, beginning on row 29, describe what type of funding is included, such as local assistance or grant funding, the date the funding is to become available, and the duration of the funding.
 Other Fund Sources in Fiscal Year 2014/15 and 2015/16 come from the Department's budget.

Appendix A – EHRS Project Work Plan



Appendix B – EHR Project Detailed Risk Report

Risks associated with activities described in this SPR are listed below.

- There exists a low probability the new EHR clinical workflows will not integrate seamlessly into all institutions or all disciplines.
- There is a low probability of organizational resistance to adoption of the EHR.
- If the funding described in this SPR is not approved, there exists a high probability of not having enough staff to support the operational EHR.
- Integration of CCHCS and EHR Vendor help desk functions will continue through rollout of the EHR, which could negatively affect backlog of change request and help desk tickets.

**CALIFORNIA CORRECTIONAL HEALTH CARE SERVICES
ELECTRONIC HEALTH CARE RECORDS - SPECIAL PROJECT REPORT
POSITION SUMMARY**

		A	B	C	D	E
Program	Classification	Resource Need Identified in FSR	Resource Need Identified for SPR	B - A = Change in Positions (Reduction - / Adds +)	Existing Positions	New Positions
ITSD - Orig FSR Position*	Systems Software Specialist II (Technical)	7.5	0.0	-7.5		
	Systems Software Specialist III (Technical)	5.3	0.0	-5.3		
	Data Processing Manager III	1.5	0.0	-1.5		
	Senior Programmer Analyst (Specialist)	13.2	0.0	-13.2		
	Data Processing Manager II	0.2	0.0	-0.2		
	Senior Information Systems Analyst (Specialist)	2.5	0.0	-2.5		
	State Project Manager	1.5	0.0	-1.5		
	Staff Information Systems Analyst (Specialist)	7.5	0.0	-7.5		
	Associate Information Systems Analyst	4.0	0.0	-4.0		
	Systems Software Specialist III (Supervisor)	0.2	0.0	-0.2		
	Total FSR Position		43.4	0.0	-43.4	0.0
ITSD - Product Team	Data Processing Manager IV	0.0	1.0	1.0	1.0	
	Data Processing Manager III	0.0	1.0	1.0	1.0	
	Data Processing Manager II	0.0	1.0	1.0	1.0	
	Senior Information Systems Analyst	0.0	6.0	6.0	6.0	
	Senior Information Systems Analyst (Specialist)	0.0	3.0	3.0	3.0	
	Associate Information System Analyst	0.0	5.0	5.0	5.0	
	Staff Information Systems Analyst	0.0	2.0	2.0	2.0	
	Administrative Assistant I	0.0	1.0	1.0	1.0	
	Assistant Information Systems Analyst	0.0	1.0	1.0	1.0	
	Associate Governmental Program Analyst	0.0	1.0	1.0	1.0	
	System Software Specialist (Technical) III	0.0	1.0	1.0	1.0	
	System Software Specialist (Technical) II	0.0	7.0	7.0	7.0	
	Senior Programmer Analyst (Specialist)	0.0	3.0	3.0	3.0	
	Associate Information System Analyst	0.0	10.4	10.4	10.4	
ITSD - HQ Application	Senior Information Systems Analyst (Specialist)	0.0	4.0	4.0		4.0
	System Software Specialist (Technical) III	0.0	1.0	1.0		1.0
	System Software Specialist (Technical) II	0.0	9.0	9.0		9.0
	Senior Programmer Analyst (Specialist)	0.0	3.0	3.0		3.0
	Associate Information Systems Analysts	0.0	2.0	2.0		2.0
Total Product Team		0.0	62.4	62.4	43.4	19.0
ITSD - Field	Staff Information Systems Analyst (Device Support)	0.0	36.0	36.0		36.0
	Total -IT Field	0.0	36.0	36.0	0.0	36.0
ITSD - Dental	System Software Specialist (Technical) II (Dental Solutions SME)	0.0	6.0	6.0	0.0	6.0
	Total -IT Dental	0.0	6.0	6.0	0.0	6.0
TOTAL ITSD		43.4	104.4	61.0	43.4	61.0
PROGRAM:						
Clinical Operations	Clinical Business Analyst (Physician Requests)	1.0	0.0	-1.0	0.0	
	Change Control Management (Program Representatives)	1.0	0.0	-1.0	0.0	

**CALIFORNIA CORRECTIONAL HEALTH CARE SERVICES
ELECTRONIC HEALTH CARE REQUESTS - SPECIAL PROJECT REPORT
POSITION SUMMARY**

		A	B	C	D	E
Program	Classification	Resource Need Identified in FSR	Resource Need Identified for SPR	B - A = Change in Positions (Reduction - / Adds +)	Existing Positions	New Positions
	Rec Medical Exec	0.0	1.0	1.0	1.0	
	Physician and Surgeon	0.0	2.0	2.0	2.0	
	N CPR (Utilization Management)	0.0	1.0	1.0	0.0	1.0
	Total -Program Clinical Operations Position	2.0	4.0	2.0	3.0	1.0
Quality Management	Clinical Business Analyst (Informatics)	1.0	0.0	-1.0	0.0	
	HPMIII	0.0	1.0	1.0	1.0	
	Total -Program SPR Position	1.0	1.0	0.0	1.0	0.0
Pharmacy	Clinical Business Analyst (Pharmacy Requests)	1.0	0.0	-1.0	0.0	0.0
	CEA (Lab & Pharmacy SME)	0.0	1.0	1.0	1.0	0.0
	Pharmacist I	0.0	8.0	8.0	0.0	8.0
	Pharmacy Technician	0.0	4.0	4.0	0.0	4.0
	Total - Pharmacy	1.0	13.0	12.0	1.0	12.0
Laboratory	Senior Clinical Laboratory Technician	0.0	1.0	1.0		1.0
	Total - Lab	0.0	1.0	1.0	0.0	1.0
Radiology	Senior Radiology Technician	0.0	1.0	1.0		1.0
	Total - Radiology	0.0	1.0	1.0	0.0	1.0
Nursing	Clinical Business Analyst (Nursing Requests)	1.0	0.0	-1.0		0.0
	Nurse Exec	0.0	1.0	1.0	1.0	0.0
	Nurse Consultant, Program Review	0.0	5.0	5.0	1.0	4.0
	Total - Nursing	1.0	6.0	5.0	2.0	4.0
Mental Health	Clinical Business Analyst (Mental Health Requests)	1.0	0.0	-1.0		0.0
	Health Program Specialist I	0.0	2.0	2.0		2.0
	Associate Governmental Program Analyst	0.0	3.0	3.0		3.0
	Sr Pyschologist Spec	0.0	1.0	1.0		1.0
	Sr Psychiatrist Spec	0.0	1.0	1.0		1.0
	Total - Mental Health	1.0	7.0	6.0	0.0	7.0
Training	Ongoing Training Coordinator	1.0	0.0	-1.0		0.0
	Instructional Designer (Training Coordinator)	0.0	3.0	3.0		3.0
	Sr Instructional Designer	0.0	1.0	1.0		1.0
	Staff Services Manager I	0.0	2.0	2.0		2.0
	Associate Governmental Program Analyst	0.0	1.0	1.0		1.0
	Total - Training	1.0	7.0	6.0	0.0	7.0
Procurement Acquisition	Associate Governmental Program Analyst	0.0	2.0	2.0		2.0
	Total - Acquisition	0.0	2.0	2.0	0.0	2.0
	Total Program Position	7.0	42.0	35.0	7.0	35.0
	TOTAL	50.4	146.4	96.0	50.4	96.0

INFORMATION TECHNOLOGY

Application Support (19.0 positions)

Under the direction of the Chief Information Officer, the Information Technology Services Division (ITSD) will provide Information Technology (IT) staff to support the administration; hardware and software integration; interface connections; and change management of the Electronic Health Record System (EHRS) product. The operational EHRS will undergo changes necessary to maintain its operational status, as well as accommodate new features introduced by the EHRS Vendor. Management and coordination of these changes is the responsibility of ITSD, working in collaboration with Program subject matter experts and the EHRS Vendor. EHRS change management will occur via formal enterprise processes already in place within CCHCS. The specific responsibilities include:

- Integration, maintenance, and enhancement of the EHRS system.
- Integration, maintenance, and enhancement of the EHRS foreign system interfaces.
- Level 1 technical support of the Cerner AMS model.
- Initiation, planning, and execution of the Application Retirement and Data Archiving Project (ARDAP).
- Cerner device support.
- Change management SMEs (IT Analysts) to support the Cerner AMS model.

ITSD has implemented additional new systems in support of the EHRS product. These new systems provide mission-critical functions and enhance the security, availability, and performance of the EHRS product. ITSD will need additional resources to provide proper maintenance and enhancement to these systems, such as:

- Enterprise Data Warehouse (EDW).
- Down Time Viewer (24/7 viewer).
- Imprivata I-Access.
- Proximity Card Readers for Authentication.
- AirWatch Mobile Device Manager (MDM) for Handheld Medical Devices.
- Mobile Device Management to incorporate Cerner Handheld devices (AirWatch)
- Microsoft Active Directory Forest-to-Forest Trust with the Cerner Data Centers.
- Dragon Dictation and Transcription System.
- Software and Hardware connectivity back to the EHRS hosting Data Centers.
- Electronic Learning Management System.

ITSD requires 19.0 new permanent headquarters (HQ) positions in order to continue to develop, maintain, and enhance current application portfolio platforms to support program needs, while assuming the additional functions related to the EHRS product.

Field Support (36.0 positions)

In order to support the increase in devices at the institution level, IT is requesting 36.0 additional field support positions. EHRS has added over 16,800 devices to the

**ELECTRONIC HEALTH RECORD SYSTEM
POSITION JUSTIFICATIONS
FY 2016/17**

Attachment D

existing devices at the institutions and there is a need for support of these new devices at such times they fail to function properly. Cerner has added a layer to this support, since they will also have to help add devices to the network as well. Troubleshooting a device and making it functional is time consuming. In addition, IT staff often have to travel distances between device locations and IT work sites at the institution, increasing the amount of time needed to fix the device. For example, all printers are on the Cerner network and are for a specific location and employee.

The existing support staff for devices is 450:1 and based on that existing ratio the need would be roughly 38 positions. IT Field support, based on the support needs of the new devices, is requesting 36 positions.

Electronic Dental Record System (6.0 positions)

The EHRS and Electronic Dental Record System (EDRS) will replace the existing paper-based clinical documentation processes and the current automated Dental Scheduling and Tracking System (DSTS). The dental solution will be accessed from the Cerner solution and will be interfaced with the existing MiPACS imaging solution. This dental solution, Dentrissx, Enterprise, is a managed and hosted COTS solution subcontracted by Cerner. Both the dental solution implementation and the support moving forward will require complex technical and functional expertise along with knowledge of the dental system. Although no development is necessary, System Software Specialist IIs are needed to provide project support as team members and act as technical subject matter experts for analysis, design, implementation, testing and training. Post go-live, they must be able to provide service support working with end-users statewide and with vendors to troubleshoot and triage system incidents.

PROGRAM

Clinical Operations (1.0 position)

The implementation and continuing configuration of the EHRS bring updates of functionality and evaluations of the need for follow-on projects in order to respond to the on-going changes in regulations, best practices, and the definition of "standard of care." Clinical Operations personnel with medical expertise are required to provide executive leadership for the clinical team and to coordinate with project managers, executive staff, and other units. They are also needed to ensure that the EHRS remains consistent with prevailing medical protocols and practices, determine the clinical impact of changes to the EHRS, test and evaluate the system, make sure it is responsive to the physicians' needs, provide training, apply knowledge of health care programs and informatics in overseeing the integration of data, assist in developing quality management programs, and serve as subject matter experts where medical knowledge is required.

Training (7.0 positions)

Training personnel within the Staff Development Unit (SDU) are responsible for the development, revision, maintenance, delivery, and tracking of department-wide training. The SDU is working with the EHRS project team to plan and implement a comprehensive Learning and Adoption Plan (LAP) for the roll out of the EHRS. The goals of the LAP include:

**ELECTRONIC HEALTH RECORD SYSTEM
POSITION JUSTIFICATIONS
FY 2016/17**

Attachment D

1. Create a progressive, open, accessible, and supportive learning environment, while fostering a positive attitude.
2. Assess end-user computer skills and offer computer skills training as needed.
3. Develop training materials that support hands-on learning to include role-based exercises in the TRAIN domain (where EHRS related material is housed).
4. Develop the skills of CCHCS Trainers in order to ensure successful instructor led training and go-live support.
5. Train Super Users to enable them to mentor End Users, assist with training, as well as demonstrate proficiency in their area of expertise.
6. Ensure training is available for all End Users with access to their respective solution(s).
7. End Users will demonstrate proficiency to ensure go-live readiness.
8. Report training attendance and completion throughout the duration of training.
9. Design a process to report, prioritize, and resolve training questions and issues.

The vendor, Cerner, developed curricula for 24 Instructor-led Training (ILT) courses using SDU's standardized templates, and created nine eLearning modules. The SDU is responsible for future updates, revisions, and any new development related to the EHRS and TRAIN domain.

Justification for Positions:

The positions are necessary for the ongoing development, updates, revisions and maintenance of eLearning and the Learning Management System (LMS) related to the EHRS training. Without these positions, the SDU does not have sufficient staff to handle these tasks in addition to their already overburdened workload.

The SDU has been tasked with converting other CCHCS training to eLearning or into a blended approach. A blended learning approach leverages online learning as a means for transferring the fundamental knowledge and skills for a specific course (e.g., New Employee Orientation, Basic Supervision, etc.) along with facilitated scenario or role-play ILT. This optimizes the learning experience by increasing learner engagement, allowing learners to learn at their own pace, and helps the learner apply learning more effectively in their job.

Developmental time for converting content varies depending on the extent analysis required, level of interactivity, complexity of scope, and the availability of SMEs for questions and review. There are four levels of interactivity which determine developmental time for eLearning. The EHRS courses will be developed using Levels 2 and 3. Per industry eLearning standards, development time at these levels can range from 97-365 hours of development for each hour of training content. Using the low end of development time of 97 hours, the conversion process of 160 hours of ILT can take as much as 15,520 staff hours. However, this estimate can be much higher based on the variables described above, as well as the proficiency level of the designer. Using a mid-level development calculation of 231 hours for each hour of training, the developmental time increases to 35,960 hours. Since Cerner's ILT and eLearning courses contain some duplication of information between user roles, some of the screens used for one eLearning course may be reused in other

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course modules, or eliminated. This should reduce some of the development time; however, it is still apparent that current staffing levels do not have the capacity for meeting current workload demands, let alone successfully completing the EHRS conversion in a timely manner.

Additionally, in order to address ongoing training needs of EHRS, SDU is tasked with converting the EHRS ILT courses to eLearning modules, creating new training as needed, and updating or revising training modules as changes to the system and/or work processes occur. SDU's current staff resources are not sufficient to meet this need in addition to their regular workload and increasing requests for additional ILT and eLearning.

EHRS Course Maintenance

The eLearning courses will require periodic review, evaluation, and ongoing updates or revisions due to EHRS system modifications, work processes changes, or upon program SME requests.

Learning Management System

The LMS is the vehicle for distributing EHRS eLearning content as well as other departmental eLearning. An LMS is a web-based software application used in the administration, delivery, tracking, scheduling, and reporting of training. An LMS tracks the learner's progress and course completions; allows for scoring of assessments, including specified pass points; has the ability to monitor and customize the course registration process for both eLearning and ILT classes; keeps a historical record of training completions; provides a course catalog customizable by classification or job role (i.e., end user only sees training pertinent to their class/job); can specify specific user security and roles; and has many more valuable tools. All CCHCS training, including ILT classroom and eLearning, will eventually be scheduled and tracked in the LMS.

Administration of an LMS requires technical knowledge and skills and a comprehensive understanding of educational processes and computer programs. The success of an LMS is largely dependent on the knowledge and abilities of the LMS Administrator in configuring, troubleshooting, and maintaining the back end of the LMS.

Procurement Acquisition (2.0 positions)

Post-award contract activities such as contract administration functions are essential to ensure completion of the contract process. The State Contract Manual (SCM), Volume 3, maintained by the California Department of General Services, Procurement Division, sets out guidelines for State IT goods and services processes. SCM 3, Chapter 11 (Contract Administration) describes the administrative functions necessary to adequately oversee a contract's lifespan. Typical duties of a contract administrator include, but are not limited to, all of the following:

- Notifying the contractor when the contract is executed so work can begin.
- Work progress to ensure IT services are performed according to the quality, quantity, objectives, timeframes, and manner specified within the contract.
 - Small Business and Disabled Veteran Business Enterprise contractors and/or subcontractors to ensure attainment of approved contract participation goals.
 - Review progress reports, status reports, and timesheets as required.
- Approving the final product/IT services by submitting a written document accepting the deliverables.

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- Providing documentation to the acquisitions office for inclusion in the official contract file.
- Monitoring expenditures, ensuring funding availability when contract extends over multiple years.
- Verifying accuracy of invoices and approving invoices for payment.
- Requesting amendments/addendums/supplements/changes and/or contract renewals in a timely fashion.
- Verifying all work is completed and accepted by the department prior to the contract expiration date.
- Performing contract close out activities:
 - Completing Contractor Evaluation Report (STD. 4) for IT consulting services in accordance with department policies and procedures.
 - Notifying responsible parties when funds can be disencumbered.
- Reporting any contract disputes immediately.
- Keeping an accurate auditable paper trail of contract administration.
- Utilizing the Business Information System (BIS) to enter Goods Receipt transactions. (BIS requires Goods Receipt entry for both goods and services in order to process payment.)

Without the above duties assigned to specific individuals, CCHCS is vulnerable to contract delays that may prove costly. A contract with the magnitude of the EHRS project requires dedicated staff to properly monitor it through the life of the contract.

Additionally, payment issues arise over the term of an agreement which is unmonitored:

- If individuals receiving invoices are not trained in invoice processing:
 - Invoices are not moved through the payment system in a timely manner.
 - Invoices are not tracked; duplicate payments or non-payments occur.
- Excessive contractor hours, unauthorized personnel, unauthorized travel, etc., all contribute to payment disputes.

The State has a limited timeframe in which to make payment on undisputed invoices. If no one familiar with the contract is aware, or makes an effort to see that invoices are approved on a timely basis, payment penalties will accrue for which CCHCS is responsible.

Pharmacy (12.0 positions)

The implementation of the Cerner system is the driving factor for the need of these positions. As the conversion from the Guardian system to the Cerner system evolves, State staff will need to be on board to interface between the two systems to ensure functionality goes smoothly during the transition as well as work with the fully implemented Cerner system once all institutions are converted.

The nature of the work being performed will be evolutionary in nature in that initially it will be working with both the Guardian system and the Cerner system. Once implementation of the Cerner system is completed throughout all institutions, the focus will be on maintaining and supporting the Cerner system as it develops to ensure the system is operating at peak performance for all institutions; programming and running drug reports from the Cerner system; providing statistical data from the

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Cerner system; participating in design activities and user acceptance testing; and providing expert pharmacist consultation on data sources and limitations. These positions will also educate users on bar coding functionality, processes and tools; coordinate efforts across multiple pharmacy information systems; maintain technical build of medication file, protocols and order sets; support end-user training; and communicate with end users, analyst, and project management team members.

These positions will interface with internal customers such as executive management, Pharmacist Is and IIs, IT staff and project support staff at various levels. In addition, they will interface with customers such as institution Pharmacists in Charge [PICs], site information technology staff, external vendors and end users.

Laboratory (1.0 position)

A Senior Clinical Laboratory Technician (Sr. CLT) is needed to serve as an SME, working closely with the Cerner support team to maintain the laboratory functions of the EHRS. The Sr. CLT would participate in the planning, analysis, coordination, and direction activities related to the PathNet applications (general laboratory, microbiology) and serve as a liaison between ITSD staff and laboratory end users, Cerner technical staff, and contracted testing laboratories.

Radiology (1.0 position)

The implementation of EHRS requires the addition of a Senior Radiology Technician (SRT). The SRT will be the subject matter expert (SME) for Medical Imaging specialty and will work closely with Cerner support team to maintain the Medical Imaging functions of the EHRS. This position is essential for maintaining the performance and interface between EHRS and Fuji RIS/PACS system after EHRS is transitioned from Cerner to CCHCS. The incumbent will provide statewide support for Medical Imaging workflow as pertain to EHRS and work as a liaison between EHRS and Medical Imaging related issues. The SRT will be performing new duties and handling a new workload and it will require a person with expertise to assist and advise field staff, provide training to new and current employees, keep up with the operational maintenance of the EHRS system and address other issues.

Nursing (4.0 positions)

EHR implementation is a complex orchestration of information technology and business processes and maintenance and operations will require the same complex diligence. The nursing Maintenance and Operations strategy identifies staff that will be responsible for continually modifying EHRS Technology to help meet CCHCS' performance goals. Specifically, the staff will prepare and assist with:

- A. Major Release (every 2 years)
- B. Fixes (monthly)/Software updates
- C. Equipment upgrades/replacement
- D. Change Requests (court driven, process driven, etc.)
- E. Testing
- F. Staff Training
- G. Standardize nursing documentation

To carry out these duties, it is necessary for Nursing to add Nurse Consultants, Program Review (NCP) to serve as Clinical Strategists. Specifically, the NCPs

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will oversee the integration of data, information and knowledge to support decision-making; apply knowledge of nursing and informatics to assist in the ongoing modification of the EHR; act as the primary liaison between IT and nursing and is the translator of application functionality to the nursing branch; facilitate the development of nursing automation standards; and use informatics science to design or implement health information technology applications to resolve clinical or health care administrative problems.

Mental Health (7.0 positions)

Mental Health staff will serve as SMEs for EHR implementation, use, adoption, and reporting and will also provide direct support to the field for maintenance, operation, and on-going training and development for psychiatrists and related providers on the EHR process, both in-person and remotely. They will track and respond to Solution Center IT requests for system updates and reports of errors. They will work in a collegial and multidisciplinary manner during integrated meetings where system updates and errors are discussed, and provide resolutions to errors and resolve issues when required. Additionally, they will conduct on-site reviews for mental health quality assurance and quality improvement to ensure EHR adoption and use in accordance with established procedures. Selected staff will oversee compliance with existing federal and State regulations and laws, as well as the standardization of services in conformity with federal, State, and Departmental policies and procedures, State regulations, and community standards utilizing EHR data.

In addition to these duties, Mental Health staff will develop both adoption and training audits to ensure institutional readiness prior to Go-Live implementation; develop and update training materials related to EHR, both independently and in coordination with other mental health disciplines and EHR related contractors; and provide in-person training, while overseeing Super-user training at each institution.

Electronic Dental Record System Justification (EHRS Proposal 2016-17 MR, Attachment E)

Background: In December 2005, the Prison Law Office (PLO) served the Dental Program with its first class action lawsuit, *Carlos Perez v. James Tilton, et al*, contending that CDCR violated the Eighth Amendment of the United States Constitution by failing to treat serious dental needs of patients within the prison system in a timely manner, thereby causing severe and unnecessary pain and permanent damages to their oral health. To settle the lawsuit, the Dental Program filed a Stipulated Settlement Agreement along with statewide policies and procedures (P&Ps) and an implementation plan to address the deficiencies. These P&Ps met the minimum level of dental care necessary to fulfill the Dental Program's obligations under the Eighth Amendment.

The Interim Dental Tracking Database (IDTD) was implemented to satisfy the court order that required the Dental Program to implement an automated dental scheduling and tracking system by March 1, 2007. This Access based software application operated as a stand-alone system in each institution and did not permit sharing of information between institutions. By August 2012, the Perez lawsuit was dismissed; however, in July 2013 the IDTD was replaced with a custom-built, web-based application named the Dental Scheduling Tracking System (DSTS), which unlike the IDTD, allowed for sharing of patient appointment information between the institutions.

In October 2015, California Correctional Health Care Services (CCHCS) and California Department of Corrections and Rehabilitation (CDCR) began to deploy an Electronic Health Record System (EHRS) to three pilot institutions with deployments to additional institutions planned in 2016. The EHRS intends to contain clinical information, capture data, and document information about the patient and their care from each practice area where this record resides.

The EHRS, however, does not fully meet the Dental Program's clinical documentation needs because of two dental progressive entry documents: the dental treatment plan and the periodontal chart, which are filed into a physical folder. The current process is for dental staff to complete clinical documentation for each patient encounter on paper forms which are then transported to Health Information Management (HIM). HIM scans the paper documents as static images with no text recognition. Post-scanning, HIM archives the documents, with the exception of the dental treatment plan and periodontal chart. These must be updated on the original form and then scanned after each appointment because of inherent problems with document degradation associated with the print-scan-print process. This requires the Dental Program to house the original paper documents in a physical folder that must be delivered to the point of care for each dental appointment. The physical folder must be transported throughout the state as patients transfer. Additionally, the EHRS does not meet the Dental Program's scheduling needs. In order to manage and track dental treatment, the Dental Program must transcribe dental treatment plan procedures from the paper dental treatment plan into DSTS.

To support the statewide P&Ps and reports required by the Perez court order, 17 additional new forms, including 5 tracking logs, were developed. The current process is still form-intensive, with clinical documentation of a patient visit requiring completion of up to five dental forms. The forms typically completed at a dental encounter include: health history, dental treatment plan, dental progress note, dental treatment encounter form, and treatment consent or request for treatment forms. Statewide, there are on average approximately 2,000 encounters per day resulting in approximately 6,500 forms being used per day. Dentists have reported a decrease in time available for direct patient care in order to complete the manual paperwork noted above. Dentists and dental staff currently report spending approximately one to two additional hours per eight hour shift completing paperwork.

Electronic Dental Record System Justification (EHRS Proposal 2016-17 MR, Attachment E)

Because dental clinical documentation is in paper, much of the clinical information is not available for management reporting. In order to generate reports, clinical information must be transcribed from the paper documentation into other systems, specifically DSTS.

Justification: The EDRS Project allows the Dental Program the ability to record and maintain accurate, reliable and readily accessible patient dental clinical documentation without the need for the current physical patient file. The EDRS will provide statewide access to appointment scheduling, dental radiographic imaging, and patient health information to support the Dental Program's mission and improve patient safety. The system will also provide accurate data for more effective program planning.

The implementation of the EDRS is needed for a fully integrated EHRS, which will afford CCHCS and CDCR demonstrable and sustained benefits to patient safety, quality, and efficiency of care, as well as staff efficiencies. It will help facilitate policy adherence, as well as increase monitoring and reporting performance in a variety of arenas, including: scheduling and access to care, continuity of care, medication management, evidence-based health care practices, resource management, complete care model implementation, effective communication, patient education, and system management.

The CCHCS implementation of the EHRS without the EDRS fractures care and risks the Dental Program's ability to render quality care in an efficient and effective manner. For example, as the EHRS matures, procedures change, and software upgrades are implemented, functions previously supporting dental may be lost; and new processes implemented may negatively impact dental's workflow. Essentially, as a health care program, Dental remains fragmented from the other health care entities.

Without the EDRS the information needed to provide dental care is scattered throughout electronic and paper sources which must be collected or accessed for a dental encounter. Lack of dental records would require the treating dental staff to actually start a new dental record including the health history when treating a patient without the patient's current health information. The essential systems that would need to be utilized to gather the patient information includes:

- The Electronic Unit Health Record (eUHR) which contains the patient's scanned health records prior to EHRS implementation;
- The physical Dental record named the Dental Radiographs folder which contains the two progressive entry forms (i.e. dental treatment plan and periodontal chart) that must be managed separately due to the limitations of the EHRS and eUHR, i.e. print-scan-print issues;
- At the non-EHRS institutions, the Patient Health Information Portal (PHIP) which contains patient allergies, problem lists, and provides links to other web-based health care applications like Maxor, GuardianRx (which contains the patient's medications), and Medicor Imaging Picture Archiving and Communication Systems (MiPACS) (which contains the digital dental radiographic images);
- DSTS which contains the patient requests and appointments, dental treatment plan procedures, and some of the dental logs required for business tracking;
- The patient registry (a.k.a. QM registry,) which contains patient disease management characteristics; and,
- Strategic Offender Management System (SOMS), which contains the patient's demographic information and health screening information.

**Electronic Dental Record System Justification
(EHRS Proposal 2016-17 MR)**

Background: In December 2005, the Prison Law Office (PLO) served the Dental Program with its first class action lawsuit, *Carlos Perez v. James Tilton, et al*, contending that CDCR violated the Eighth Amendment of the United States Constitution by failing to treat serious dental needs of patients within the prison system in a timely manner, thereby causing severe and unnecessary pain and permanent damages to their oral health. To settle the lawsuit, the Dental Program filed a Stipulated Settlement Agreement along with statewide policies and procedures (P&Ps) and an implementation plan to address the deficiencies. These P&Ps met the minimum level of dental care necessary to fulfill the Dental Program's obligations under the Eighth Amendment.

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Electronic Dental Record System Justification (EHRS Proposal 2016-17 MR)

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**Electronic Dental Record System Justification
(EHRS Proposal 2016-17 MR)**

- The patient registry (a.k.a. QM registry,) which contains patient disease management characteristics; and,
- Strategic Offender Management System (SOMS), which contains the patient's demographic information and health screening information.

Providing dental care using so many disparate systems can result in errors and issues. Potential inaccuracies result from:

- Dental staff entering errors as they transcribe clinical information from the paper documents into the DSTS for treatment plan management and tracking;
- Extra effort required to log-on to each system and enter the patient identifiers. The eUHR, the PHIP, the DSTS, the patient registry and SOMS are all stand-alone systems requiring separate log-on. Errors can occur (e.g., pulling up the wrong patient) when so many systems must be accessed independently;
- Many of these clinical systems are evolving requiring dental staff continuously to be trained on and understand new systems; and,
- The number of systems and the CDCR-specific nature of the systems create a large learning curve for new staff, increasing the time required to become productive.

The Dental Program cannot continue with business as usual utilizing the EHRS or eUHR, for the following reasons:

- Patient safety issues inherent with a paper-based system in which documents may be lost or illegible.
 - The current process allows for up to 48 hours from the dental appointment to have the document scanned into either the eUHR or EHRS. Quality Assessment statistics from the eUHR indicate about 5% of scanned pages examined had some type of error. There is no validation of the information placed on the form, and therefore all standardization is achieved through staff training.
- The need for a physical folder that must be pulled and filed for each appointment and transported throughout the state.
 - The dental treatment plan and periodontal chart, which are core clinic documents needed to deliver and manage dental care, are updated multiple times after creation. Without the EDRS these forms would need to be printed, updated, and re-scanned during every dental encounter. Since this process results in dental forms that are unreadable after about three scan cycles, the work around is to make updates on the original forms which are then scanned into the EHRS or eUHR. This requires the Dental Program to house the original paper documents in a physical Dental Radiographs folder that must be delivered to the point of care for each dental appointment. This is workload intensive for HIM and the Dental Program and when retired by the EDRS may save up to \$390,000 per year in material and staffing costs.
- If clinical information is still contained in a physical folder and not available for use at the point of care for integrated treatment planning or to provide any type of clinical management reporting, the EHRS objectives of an integrated record of clinical information will not be met. Both the Administration and CCHCS support the necessity for the EDRS and its inclusion in the EHRS.

The Dental Program faces the following issues due to the unstructured nature of the data:

- No system to validate clinical data for management reporting;

**Electronic Dental Record System Justification
(EHRS Proposal 2016-17 MR)**

- Generating reports requested by stakeholders requires a significant amount of time. Depending on the report requested, staff must either manually enter data or gather data from a variety of systems. By consolidating clinical data and scheduling data into one application, the EDRS would improve the Dental Program's ability to generate reports; and,
- No operational reporting available to assess or improve dental operations such as:
 - Measuring disease management – currently there is no ability to determine whether some treatments have better outcomes;
 - Measuring amount of diagnosed treatment that is not completed;
 - Supply tracking – currently there is no ability to track the amount of dental treatment performed compared with the amount of dental supplies ordered; and,
 - Analysis of statewide clinical data and trends is very limited and time-consuming.

The interoperability between the EHRS and the EDRS will allow the appropriate information to be accessible to dental staff at each institution and at each clinic within an institution. In this way, patient-centric information can be used to manage wellness and assist with health care decisions. Use of an EDRS is, for practical purposes, the standard of care in the outside community. Introduction of a similar system to correctional practice will support the delivery of high quality dental care and interdisciplinary treatment planning.

A structured EDRS can provide benefits over the current paper based system or any type of disparate electronic forms application in the following areas:

- Provide the relevant dental clinical information on one screen removing the need to either: open multiple documents on multiple computer screens, or print clinical documents for use at the point of care;
- Allow clinicians to easily and effectively search a patient's record for clinical information via keyword, (e.g., tooth # or procedure code). This is particularly useful to gain history when diagnosing a condition;
- Provide system prompts or alerts to ensure complete and consistent clinical documentation. For example, when completing a dental examination the clinician could be prompted as to the results of an oral cancer screening;
- Provide clinical decision support. For example, the Dental Program could incorporate the University of the Pacific Protocols for the Dental Management of Medically Complex Patients in the EDRS. Therefore, when a blood pressure is recorded in the system the EDRS may prompt the provider when the blood pressure range recommends caution or referral to specialist;
- Support the Department's Performance Improvement Plan (PIP) Objective, as measured by the Dashboard, of having 90% or more of high risk patients with a written interdisciplinary care plan. The dental treatment plan would be considered the dental component to this measure and would not be available if still in paper; and,
- Provide valuable management reporting on clinical quality measures and predictive data.

Once implemented, the EDRS will:

- Represent a single point of record keeping for dental clinical documentation;
- Support dental appointment scheduling within the prison system, allowing the Dental Program to retire their existing scheduling and tracking system, the DSTS;
- Improve quality and continuity of care;
- Improve clinical decision support;

**Electronic Dental Record System Justification
(EHR Proposal 2016-17 MR)**

- Improve care coordination with other CDCR/CCHCS care providers;
- Discontinue the need for a dental physical chart (i.e., the Dental Radiographs folder); and,
- Help new staff quickly become productive.

Although the Dental Program resolved the Perez lawsuit in August 2012 and is not under current litigation, other health care disciplines are under the Plata and Coleman lawsuits. In 2007, there was a coordination agreement for the Receiver, in the Plata court case, to construct and support a paperless Electronic Medical Record solution that would, among other objectives, sustain dental systems. The EDRS project supports resolving this court order and provides value by improving monitoring and reporting of the Dental Program.

Additionally, in the Receiver's Turn-around Plan of Action, one of the objectives prior to turning purview for the full continuum of care back over to CDCR is a uniform, standardized health information system. The Dental Program's inclusion in this system is crucial to the end of the Receiver's oversight.

California Correctional Health Care Services
 Information Technology Services Division
 Electronic Health Record System (EHRS)

Senior Information Systems Analyst

ACTIVITY TASK	PROJECTED ONGOING WORKLOAD		
	HOURS TO COMPLETE TASK	NUMBER OF TASKS PER YEAR	NUMBER OF HOURS PER YEAR
<p><i>Specific Task</i></p> <p>Responsible for the acquisition, installation, configuration, implementation and maintenance of CCHCS HQ operations hardware and software technologies. Analyzes and troubleshoots complex IT connectivity issues; leads planning and implementation of desktop upgrades and migrations. Develops, implements, maintains and enforces IT security policies and standards. Administers user accounts, groups, mailboxes and distribution lists using Active Directory. Participates in disaster recovery planning and testing. Trains staff on standard operating procedures for current and new technologies. Develops and conducts customer technology training programs and provides support for software applications and hardware installation and maintenance, SharePoint, telephones, audio visual equipment, and other peripheral equipment.</p>	Various	Various	2200
<p>Conducts analysis of business and user needs to develop requirements documentation for implementation/revision of systems and applications. Gathers, analyzes, interprets, and consolidates business requirements; prepares comprehensive reports. Working with Headquarters Clinical Applications Support, consults in the design and implementation of programs and provides data analysis. Presents results in formats to facilitate white paper development and future program initiatives. Acts as a liaison to implement application enhancements; provides updates to management. Provides application assistance to maintain local database and enterprise applications while ensuring HIPAA compliance for all Health Information Management (HIM) systems. Identifies needs and develops appropriate IT-related training programs for field support program staff. Develops and implements standard reporting and other processes and procedures to be followed by all Healthcare IT. Develops, implements and maintains an issues tracking process to ensure the timely and effective identification/resolution of issues related to the implementation and use of enterprise applications</p>	Various	Various	1450

ATTACHMENT F

Serves as lead for local and headquarter IT initiatives. Participates in project meetings and serves as the onsite IT subject matter expert. Prepares technical specifications and purchase documentation. Participates in the development of IT proposals, Feasibility Study Reports, Special Project Reports, Post Implementation and Evaluation Reports and IT Procurement Plans. Provides project status reports, identifies risks and develops mitigation plans. Manages and implements technology based on project schedules, IT staff availability, and customer needs.		Various	1400
Collects and analyzes data to improve project delivery, customer communications and resource availability. Identifies and documents problems. Collaboratively develops solutions that improve customer service and facilitates the delivery of new technologies. Assists on supervisor with coordinating the activities of headquarters staff, Healthcare IT personnel and contractors. Acts as a technical lead. Owns and resolves complex problem resolution activities. In coordination with Headquarters staff, tests and applies security patches, hot fixes, and new software updates.	Various	Various	1000
Establishes and maintains cooperative customer relationships. Participates in creating and maintaining a working environment that encourages mutual cooperation between headquarters staff, customers and local IT staff, to include custody. Ensures that the integration of multiple services occurs with the least amount of customer impact and that problems are resolved quickly and effectively. Maintains contact with IT staff, headquarters, local management and external entities. Contacts users and vendors to discuss business/system requirements, and existing/new technologies.	Various	Various	700
Performs other related duties as needed.	Various	Various	350
TOTAL HOURS PROJECTED ANNUALLY			7100
TOTAL POSITIONS PROJECTED			4.00

California Correctional Health Care Services
 Information Technology Services Division
 Electronic Health Record System (EHRS)

Systems Software Specialist III

ACTIVITY TASK	PROJECTED ONGOING WORKLOAD		
	HOURS TO COMPLETE TASK	NUMBER OF TASKS PER YEAR	NUMBER OF HOURS PER YEAR
Specific Task			
Provides technical leadership in the planning, analysis, design, development, testing, training, support and maintenance of complex, mission-critical enterprise information systems. Leads a team or teams of state staff and consultants from cross-functional organizations through a software development life cycle (SDLC). Participates in the analysis of project concepts or service requests to understand the business need and identify potential alternatives. Works with business program areas to develop business requirements and translate them to solution requirements. Collaborates with vendors, contractors, business and IT subject matter experts (SMEs) to develop technical requirements, high-level solution design, business workflows, use cases, business rules definition, and conceptual data model. Organizes the team(s) to plan the scope, resource, budget, schedule, and project plan and presents the recommendation to management for approval. Analyzes business needs and system requirements to create feasibility study reports (FSRs). Leads effort to develop Request for Offer (RFO)/Request for Proposal (RFP) and selection criteria to evaluate contractors and consultants for the projects/programs. Works with project	Various	Various	550.00
Plans, prioritizes, designs, develops, tests, trains, supports and maintains complex information systems. Analyzes functional and non-functional requirements and creates detailed system design, logical data model, data dictionary, database design, data conversion plan, and interface design documents.	Various	Various	350.00
Coordinates the review process to get buy-in and signoff on the design documents from various governance boards and stakeholders. Works with IT functional groups to establish application environments in the data center to support development, unit test, integration test, system test, user acceptance test, training, production and disaster recovery. Installs, configures, customizes, tests and deploys the environments to be used as landing zones for hosting applications. Creates prototypes and provides demonstration to stakeholders; develops the post go-live system based on the design specification; performs unit, functional, integration, system and user acceptance testing. Debugs system problems, analyzes system behavior, determines root cause, and resolves defects and issues. Collaborates with other SMEs to develop training manuals; conducts training sessions for trainers as well as end users. Develops configuration management plan, release management plan, capacity planning, operations and maintenance manual, test plan, test design specification, test case specification, application support model, and other procedural documents. Leads effort to coordinate activities to support the deployment of the solution to all CCHCS locations.	Various	Various	325.00

California Correctional Health Care Services
 Information Technology Services Division
 Electronic Health Record System (EHRS)

Systems Software Specialist III

<p>Monitors system availability, performance, operations, and problem tickets; alerts and informs the appropriate personnel to take action promptly. Troubleshoots, resolves, and successfully tests all defects and issues. Monitors for firmware and software patches, hot fixes and security updates; coordinates with various stakeholders, following the CCHCS Change Management process to release fixes. Develops new (and enhances existing) scripts to automate routine administration tasks. Performs user accounts provisioning with appropriate roles and permissions; verifies system connections, message queues, and data import/export; opens tickets with vendor and follows through until problems are resolved. Analyzes system performance and identifies areas for improvement; provides options and technical recommendations. Develops to-be solution to optimize system performance, resource usage, and management overhead. Implements, tests, and documents new enhancements per CCHCS standards. Coordinates with vendors, business users, IT staff, following the CCHCS Change Management process to deploy the enhancements. Provides monitoring and support prior, during and after release. Establishes and documents policies, processes, procedures, and standards, ensuring compliance with departmental and statewide mandates and following industry best practices. Assigns work to team members including state staff and consultants and oversees the quality of their work products. Provides management with various reports indicating program usage and</p>	<p>Various</p>	<p>Various</p>	<p>300.00</p>
<p>Evaluates new technologies, develops analysis, and provides implementation. Acts as subject matter expert (SME) for enterprise initiatives, projects, and other units in the organization proposal to management for consideration. Analyzes system architecture and design to understand impact to the business programs, projects and other systems in the environment. Reverse-engineers systems to develop business and technical requirements, business rules definition, application architecture, data model, report design, and system requirements. Augments the technical work of other staff and consultants when required by assuming responsibility for completing or assisting with system development, and maintenance tasks. Develops and provides presentations to executives, senior management, and peer groups. Stays current with the latest developments in equipment and software trends and considers their application and benefit within CCHCS. Advises management of problem areas or areas in need of improvement or modification.</p>	<p>Various</p>	<p>Various</p>	<p>200.00</p>
<p>Other related duties as required, including travel as needed.</p>	<p>Various</p>	<p>Various</p>	<p>100.00</p>
<p>TOTAL HOURS PROJECTED ANNUALLY</p>			<p>1,825.00</p>
<p>TOTAL POSITIONS PROJECTED</p>			<p>1.03</p>

California Correctional Health Care Services
 Information Technology Services Division
 Electronic Health Record System (EHRS)

Systems Software Specialist II - Report Writer

ACTIVITY TASK	PROJECTED ONGOING WORKLOAD		
	HOURS TO COMPLETE TASK	NUMBER OF TASKS PER YEAR	NUMBER OF HOURS PER YEAR
<i>Specific Task</i>			
Participate in the Change Control Board (CCB) meetings, Project Status Meetings and other pertinent EDRS project meetings	2.00	160	320.00
Collaborate on the conceptual, logical, and physical design of Data Marts and Data Warehouses that will store EDRS data for the purposes of reporting, business intelligence, and analytics	4.00	50	200.00
Create basic queries and executes them in Microsoft SQL Server	2.00	100	200.00
Creates and runs ad hoc reports against various data bases and data sources	4.00	100	400.00
Develop reports facilitating auditing of transactions using the Oracle Fusion Middleware 11g product suite	32.00	8	256.00
Gather high level requirements, acceptance criteria, and constraints for each report	4.00	100	400.00
Identify the required data elements and Map required data elements to data tables	6.00	100	600.00
Using Cerner Command Language (CCL), write custom reports	24.00	80	1920.00
Create and execute unit test scripts	8.00	80	640.00
Complete pre and post data validation activities of converted data	2.00	100	200.00
Resolve and mitigate bugs, tasks, and issues that are identified during test cycles	6.00	100	600.00
Log, track and update System or Design Defects	0.50	100	50.00
Participate in User Acceptance Testing	1.00	100	100.00
Deploy solutions into various environments including production	1.00	100	100.00
Analyze report, script and stored procedure performance and identify areas for improvement	2.00	100	200.00
Develop Implementation, Deployment and Release Management, and M&O Documentation	32.00	4	128.00
Identify changes and perform analysis of new requests to determine impacts to processes and system requirements	2.00	40	80.00
Update reports based on changes	16.00	40	640.00
Investigate and helps resolve application problems	4.00	50	200.00
TOTAL HOURS PROJECTED ANNUALLY			7,234.00
TOTAL POSITIONS PROJECTED			4.07

California Correctional Health Care Services
Information Technology Services Division
Electronic Health Record System (EHRS)

Systems Software Specialist II - Tester

ACTIVITY TASK	PROJECTED ONGOING WORKLOAD		
	HOURS TO COMPLETE TASK	NUMBER OF TASKS PER YEAR	NUMBER OF HOURS PER YEAR
<i>Specific Task</i>			
Participate in the Change Control Board (CCB) meetings, Project Status Meetings and other pertinent EDRS project meetings	1.00	52	52.00
Coordinate Unit, System, Integration and other Testing Events with all project teams	0.50	52	26.00
Works with the functional team to develop system test scripts based on 100 defined workflows	2.50	200	500.00
Develops Testing script steps based on 430 defined business rules	2.50	860	2150.00
Develop Requirements Traceability Matrix	8.00	1	8.00
Prepare Test Data	1.00	50	50.00
Execute workflow testing scripts	1.00	200	200.00
Execute business rule testing scripts	1.00	860	860.00
Develop Test Summary Report	1.00	2	2.00
Log, track and update System or Design Defects	0.25	50	12.50
Participate in User Acceptance Testing	8.00	1	8.00
Determine regression test tests	8.00	1	8.00
Conduct regression testing after defect corrections	1.00	50	50.00
Analyze change requests to provide testing effort	0.50	100	50.00
Create and execute test scripts for each change	2.00	100	200.00
TOTAL HOURS PROJECTED ANNUALLY			4,176.50
TOTAL POSITIONS PROJECTED			2.35

California Correctional Health Care Services
 Information Technology Services Division
 Electronic Health Record System (EHRS)

Systems Software Specialist II

ACTIVITY TASK	PROJECTED ONGOING WORKLOAD		
	HOURS TO COMPLETE TASK	NUMBER OF TASKS PER YEAR	NUMBER OF HOURS PER YEAR
Specific Task			
Analyze functional and non-functional requirements for highly complex systems, and create detail system design, logical data model, data dictionary, database design, data conversion plan, and interface design documents for EDRS and assigned systems. Coordinate the review process to get buy-in and sign off on the design documents from various governance boards and stakeholders. Work with IT functional groups to establish application environments in the data center to support the development, unit test, integration test, system test, user acceptance test, training, production and disaster recovery; install, configure, customize, test and deploy the environments to be used as landing zone for hosting applications. Create application prototype and provide demonstration to stakeholders; develop the system based on the design specification; perform unit, functional, integration, system validation and user acceptance testing. Debug system problem, analyze system behavior, determine root cause and resolve defects and issues. Collaborate with Subject Matter Experts (SME)s to develop training manuals; conduct training sessions for trainers as well as end users. Develop configuration management plan, Change Management Plan, release management plan, capacity planning, operations and maintenance manual, test plan, test design specification, test case specification, application support model, and other procedural documents. Lead effort to coordinate activities to support the deployment of the solution to all CCHCS locations.	Various	Various	725.00
Monitor the system availability, performance, operations and more complex problem tickets; alert and inform the appropriate personnel to take action promptly; troubleshoot, resolve and successfully test all defects and issues; monitor for firmware and software patches, hot fixes and security updates; coordinate with various stakeholders and follow CCHCS Change Management process to release fixes; develop new and enhance existing scripts to automate routine administration tasks. Perform user accounts provisioning with appropriate roles and permission; verify system connections, message queues and data import/export; open tickets with vendor and follow through until problems are resolved. Analyze system performance and identify areas of improvements; provide options and technical recommendations to customers to validate functions; develop to-be solution to optimize the system performance, resource usage and management overhead; implement, test, and document new enhancements per CCHCS standard; coordinate with vendors, business users, IT staff and follow CCHCS Change Management process to deploy the enhancements; provide monitoring and support prior, during and after release. Write operational procedures, process, procedure and standards ensuring compliance with departmental and statewide mandates; follow industry best practices. As a team leader distribute work to team members including state staff and consultants and review work to ensure its accuracy and quality. Provide management with various reports indicating program usage and effectiveness.	Various	Various	525.00

California Correctional Health Care Services
 Information Technology Services Division
 Electronic Health Record System (EHRS)

Systems Software Specialist II

<p>Lead a team(s) or teams of state staff and consultants from cross-functional organizations through a Software Development Life Cycle (SDLC). Participate in the analysis of project concepts or service requests to understand the business need and identify potential alternatives. Work with business program areas to develop business requirements and translate them to solution requirements. Collaborate with vendors, contractors, business and IT SMEs to develop technical requirements, high-level solution design, business workflows, use cases, business rules definition, and conceptual data model. Organize the team(s) to plan the scope, resource, budget, schedule, project plan and present the recommendation to management for approval. Analyze business needs and system requirements in order to provide input into Feasibility Study Reports (FSR)s. Lead effort to develop Request For Offer/ Request For Proposal and selection criteria to evaluate contractors and consultants for the projects/programs. Work with Project Manager, business and IT stakeholders to analyze project requirements, funding needs and assist to develop Project Spend Plans. Act as a solution architect providing architectural direction for highly complex enterprise initiatives</p>	<p>Various</p>	<p>Various</p>	<p>300.00</p>
<p>Evaluate new complex technologies, develop analysis and provide implementation for the most complex initiatives. Act as SMEs for enterprise initiatives, projects and other units in the organization proposal to management for consideration. Analyze system architecture and design to understand impact to the business programs, projects and other systems in the environment. Reverse engineer systems to develop business and technical requirements, business rules definition, application architecture, data model, report design and system requirements. Develop and provide presentation to executives, senior management and peer groups.</p>	<p>Various</p>	<p>Various</p>	<p>150.00</p>
<p>Responsible for staying current with the latest developments in equipment and software trends and considering their application and benefit within CCHCS. Travel to assigned institutions due to operational needs. Perform other related duties as required.</p>	<p>Various</p>	<p>Various</p>	<p>100.00</p>
<p>TOTAL HOURS PROJECTED ANNUALLY</p>			<p>1,800.00</p>
<p>TOTAL POSITIONS PROJECTED</p>			<p>1.01</p>

California Correctional Health Care Services
 Information Technology Services Division
 Electronic Health Record System (EHRS)

Systems Software Specialist II - Imprivata "I-Access" Administrator

ACTIVITY TASK	PROJECTED ONGOING WORKLOAD		
	HOURS TO COMPLETE TASK	NUMBER OF TASKS PER YEAR	NUMBER OF HOURS PER YEAR
<i>Specific Task</i>			
Plans, analyzes, designs, develops and maintains complex enterprise systems essential to the mission of the overall organization and/or affect a large number of CCHCS business areas. Maintains the health of all aspects of Active Directory (AD) Domain Services (Sites & Services, Group Policy, etc.) and Imprivata (I-Access). Develops scripts and workflows for maintenance and administration of Imprivata I-Access. Administers domain controllers and Imprivata I-Access infrastructure servers. Develops/maintains required documentation for enterprise systems. Determines impact of system upgrades; coordinates service implementation in the CCHCS enterprise systems environment. Leads in the setting of enterprise system standards and conventions. Acts as a technical advisor/consultant to customers, IT staff, vendors and contractors. Provides expert guidance on information systems; provides the highest level of technical guidance to ITSD staff/management. Coordinates and ensures effective operation of complex multi-tier environments and performs configuration management changes to the Imprivata I-Access platform.	Various	Various	750.00
Manages complex software infrastructure projects and ensures critical functions are addressed and completed. Coordinates with technical/non-technical project managers to review development and maintenance components of software systems for project plans. Ensures procedures are in compliance with the State Administrative Manual and Department Operations Manual. Coordinates and schedules work projects within the CCHCS Enterprise Systems environment. Provides third-level support for ITSD staff and managers.	Various	Various	500.00

ATTACHMENT F

Develops, reviews, approves, and implements IT policies, standards and procedures. Develops and delivers presentations to IT staff and management, as needed. Reviews and approves hardware/software procurement and installation, upgrade/system change procedures, and disaster recovery plans and procedures. Provides third level support to IT field staff on very complex issues.	Various	Various	300.00
Acts as a liaison during troubleshooting incidents. Assists with infrastructure services. Provides expertise and assistance for production incidents. Identifies and resolves directory services system and/or configuration issues. Prepares reports when required.	Various	Various	200.00
Performs other related duties as required.	Various	Various	100.00
			0.00
			0.00
			0.00
			0.00
			0.00
			0.00
			0.00
			0.00
			0.00
			0.00
			0.00
TOTAL HOURS PROJECTED ANNUALLY			1,850.00
TOTAL POSITIONS PROJECTED			1.04

California Correctional Health Care Services
 Information Technology Services Division
 Electronic Health Record System (EHRS)

Systems Software Specialist II - Airwatch MDM Administrator

ACTIVITY TASK	PROJECTED ONGOING WORKLOAD		
	HOURS TO COMPLETE TASK	NUMBER OF TASKS PER YEAR	NUMBER OF HOURS PER YEAR
<i>Specific Task</i>			
Plans, analyzes, designs, develops and maintains the more complex enterprise systems that are essential to the mission of the overall organization and/or affect a large number of CCHCS business areas. Maintains the health of all aspects of the Airwatch Mobile Device Management (MDM) platform. Develop scripts and workflows for maintenance and administration of the Airwatch MDM platform. Develops and maintains all required documentation for enterprise systems. Determines the impact of system upgrades and coordinates service implementation in CCHCS Enterprise Systems environment. Leads in the setting of enterprise system standards and conventions. Acts as a technical advisor and consultant to customers, Information Technology (IT) staff, vendors and contractors. Provides expert guidance on information systems and provides the highest level of technical guidance and direction to ITSD staff and management. Coordinates and ensures effective operations of the most complex multi-tier environments and performs configuration management changes to the Airwatch MDM platform	Various	Various	750.00
Manages the more complex software infrastructure projects and ensures critical functions are addressed and completed. Coordinates with technical and non-technical project managers to review development and maintenance components of software systems for project plans. Ensures all procedures are in compliance with the State Administrative Manual and the Department Operations Manual. Coordinates and schedules work projects within the CCHCS Enterprise Systems environment. Provides 3 rd level support for ITSD staff and managers.	Various	Various	525.00
Develops, reviews, approves, and implements IT policies, standards and procedures. Develops and delivers presentations to IT staff and management, as needed. Reviews and approves hardware/software procurement and installation, upgrade/system change procedures, and disaster recovery plans and procedures. Provides third level support to IT field staff on very complex issues.	Various	Various	300.00
Acts as a liaison during troubleshooting incidents. Assists with infrastructure services. Provides expertise and assistance for production incidents. Identifies and resolves Airwatch MDM platform configuration issues. Prepares reports when required.	Various	Various	150.00
Perform other related duties as required.	Various	Various	100.00
TOTAL HOURS PROJECTED ANNUALLY			1,825.00
TOTAL POSITIONS PROJECTED			1.03

California Correctional Health Care Services
 Information Technology Services Division
 Electronic Health Record System (EHRS)

Senior Programmer Analyst

ACTIVITY TASK	PROJECTED ONGOING WORKLOAD		
	HOURS TO COMPLETE TASK	NUMBER OF TASKS PER YEAR	NUMBER OF HOURS PER YEAR
Specific Task			
Plan, prioritize, design, develop, test, train, support and maintain complex information systems. Analyze functional and non-functional requirements, and create detail system design, logical data model, data dictionary, database design, data conversion plan, and interface design documents. Coordinate the review process to get buy-in and sign off on the design documents from various governance boards and stakeholders. Work with various information technology (IT) functional groups to establish application environments in the data center to support the development, unit test, integration test, system test, user acceptance test, training, production and disaster recovery; install, configure, customize, test and deploy the environments to be used as landing zone for hosting applications. Create prototype and provide demonstration to stakeholders; develop the system based on the design specification; perform unit, functional, integration, system and user acceptance testing. Debug system problem, analyze system, business and IT stakeholders to analyze project requirements, funding needs and assist to develop Project Spend Plans. Act as a solution architect providing architectural direction for highly complex enterprise initiatives ensuring compliance with departmental and statewide mandates; follow industry best practices. As a team leader distribute work to team members including state staff and consultants and review work to ensure its accuracy and quality. Provide management with various reports indicating program usage and	Various	Various	2400.00

California Correctional Health Care Services
 Information Technology Services Division
 Electronic Health Record System (EHRS)

Senior Programmer Analyst

<p>Monitor the system availability, performance, operations and problem tickets; alert and inform the appropriate personnel to take action promptly; troubleshoot, resolve and successfully test all defects and issues; monitor for firmware and software patches, hot fixes, and security updates; coordinate with various stakeholders and follow CCHCS Change Management process to release fixes; develop new and enhance existing scripts to automate routine administration tasks. Perform user accounts provisioning with appropriate roles and permission; verify system connections, message queues and data import/export; open tickets with vendor and follow through till problems are resolved. Analyze system performance and identify areas of improvements; provide options and technical recommendations; develop to-be solution to optimize the system performance, resource usage and management overhead; implement, test, and document new enhancements per CCHCS standard; coordinate with vendors, business users, IT staff and follow CCHCS Change Management process to deploy the enhancements; provide monitoring and support prior, during and after release. Establish and document policies, process, procedure and standards ensuring compliance with departmental and statewide mandates; follow industry best practices. Assign work to team members including state staff and consultants and oversee the quality of their work products. Provide management with various reports indicating program usage and effectiveness.</p>	Various	Various	1350.00
<p>Provide technical leadership in the planning, analysis, design, development, testing, training, support and maintenance of complex, mission critical and enterprise information systems. Lead a team or teams of state staff and consultants from cross-functional organizations through a software development life cycle (SDLC). Participate in the analysis of project concepts or service requests to understand the business need and identify potential alternatives. Work with business program areas to develop business requirements and translate them to solution requirements. Collaborate with vendors, contractors, business and IT SMEs to develop technical requirements, high-level solution design, business workflows, use cases, business rules definition, and conceptual data model. Organize the team(s) to plan the scope, resource, budget, schedule, project plan and present the recommendation to management for approval. Analyze business needs and system requirements to create feasibility study report (FSR). Lead effort to develop request for offer (RFO)/ proposal (RFP) and selection</p>	Various	Various	800.00

California Correctional Health Care Services
 Information Technology Services Division
 Electronic Health Record System (EHRS)

Senior Programmer Analyst

Evaluate new technologies, develop analysis and provide implementation. Act as SMEs for enterprise initiatives, projects and other units in the organization proposal to management for consideration. Analyze system architecture and design to understand impact to the business programs, projects and other systems in the environment. Reverse engineer systems to develop business and technical requirements, business rules definition, application architecture, data model, report design and system requirements. Augment the technical work of other staff and consultants when required by assuming responsibility for completing or assisting with system development, and maintenance tasks. Develop and provide presentation to executives, senior management and peer groups.	Various	Various	550.00
Responsible for staying current with the latest developments in equipment and software trends and considering their application and benefit within CCHCS. Advise management of problem areas or areas in need of improvement or modification. Travel as needed. Perform other related duties as required.	Various	Various	275.00
TOTAL HOURS PROJECTED ANNUALLY			5,375.00
TOTAL POSITIONS PROJECTED			3.03

California Correctional Health Care Services
Information Technology Services Division
Electronic Health Record System (EHRS)

Associate Information Systems Analyst

ACTIVITY TASK	PROJECTED ONGOING WORKLOAD		
	HOURS TO COMPLETE TASK	NUMBER OF TASKS PER YEAR	NUMBER OF HOURS PER YEAR
Specific Task			
Provides written documentation/reports and oral presentations to senior leadership as necessary or requested	4.00	12	48.00
Participate in the Change Control Board (CCB) meetings, Project Status Meetings and other pertinent EDRS project meetings	2.00	52	104.00
Actively participates in clinical quality and process improvement initiatives to ensure integration within and across applications	4.00	12	48.00
Actively participates in Project Works Sessions where design decisions are made and planned for implementation	4.00	12	48.00
Assists in developing the preliminary system architecture plan	40.00	1	40.00
Prepare architectural topology diagrams and create design documentation	40.00	1	40.00
Develop procedures for system troubleshooting and training	40.00	1	40.00
Document and maintain interface control documents and any other documentation required for the purpose of successful maintenance and operation of application interfaces	40.00	6	240.00
Create and maintain build and deployment documents	40.00	1	40.00
Ensure all software upgrades conform with organizational security regulations	2.00	12	24.00
Coordinate outage windows to facilitate the rollout of software upgrades with minimal/no disturbance to operations	2.00	12	24.00
Schedule and manage configuration changes	2.00	4	8.00
Perform system configuration updates	4.00	4	16.00
Perform Application provisioning and Configure User Profiles	0.25	1,400	350.00
Perform system administration	2.00	260	520.00
Perform issue coordination with Cerner or Dentrix	1.00	52	52.00
Test and apply operating system and database patches	4.00	12	48.00
Perform, monitor, and manage local installations of the applications on local client-side devices as applicable	16.00	32	512.00
Assist with solution rebuild into production domain	8.00	12	96.00

ATTACHMENT F

Plan, coordinate, test, and implement installations/backup/upgrades/releases of systems, software, and patches	12.00	12	144.00
Manage configuration and release activities across multiple environments	4.00	12	48.00
Coordinate integration activities with other staff, and or vendors	4.00	6	24.00
Communicate and coordinate integration activities with end users, other staff, and vendors	2.00	52	104.00
Coordinate and schedule vendors to develop, test and validate interfaces to foreign systems	40.00	6	240.00
Coordinate Integration Testing with vendors	16.00	6	96.00
Monitor and cycle interfaces from CCHCS/CDCR local system to the CCHCS/CDCR System hosted at the Cerner Technology Center, as required to establish connections or start transactions sending	0.50	260	130.00
Attend scheduled Operations and Support change management meetings	2.00	52	104.00
Perform analysis and provide level of effort for changes in business requirements that directly impacts the system architecture and exchange of data	3.50	100	350.00
Perform monthly system health check	4.00	12	48.00
Troubleshoot common application problems	4.00	12	48.00
Troubleshoot problems with supported operating systems, software applications, and network connectivity	8.00	12	96.00
Monitor performance for SLA measurements	0.25	260	65.00
Research and respond to help desk tickets submitted by end users	1.00	260	260.00
TOTAL HOURS PROJECTED ANNUALLY			4,055.00
TOTAL POSITIONS PROJECTED			2.28

California Correctional Health Care Services
 Information Technology Services Division
 Electronic Health Record System (EHRS)

Staff Systems Information Analyst - Field (Based on Equipment Supported)

Institution/Site	Existing Equipment	Existing Staff (457:1)	Total All New Equipmt.	PY Need for New Equipmt. (457:1)
ASP	1567	4	373	0.8
CAC	593	3	189	0.4
CAL	1529	3	321	0.7
CCC	832	5	241	0.5
CCI	2157	3	407	0.9
CCWF	1739	3	444	1.0
CEN	1537	2	279	0.6
CHCF	4468	16	1579	3.5
CIM	2466	5	619	1.4
CIW	1866	4	491	1.1
CMC	2721	4	599	1.3
CMF	3030	6	659	1.4
COR	2296	7	606	1.3
CRC	1625	2	286	0.6
CTF	1714	6	370	0.8
CVSP	1177	2	295	0.6
DVI	1451	4	366	0.8
FOL	1549	5	297	0.6
HDSP	1323	5	385	0.8
ISP	1165	3	275	0.6
KVSP	2230	4	441	1.0
LAC	2252	3	462	1.0
MCSP	2154	3	487	1.1
NKSP	2245	3	462	1.0
PBSP	2462	5	420	0.9
PVSP	1390	3	331	0.7
RJD	2822	5	599	1.3
RS1	349	0	76	0.2
RS3	367	0	77	0.2
RS4	399	0	74	0.2
SAC	3535	4	689	1.5
SATF	2065	7	557	1.2
SCC	1035	4	272	0.6
SOL	1567	5	396	0.9
SQ	2975	4	604	1.3
SVSP	2268	6	546	1.2
VSP	1684	3	395	0.9
WSP	1789	3	502	1.1
Totals	70,393	154.0	16,471	36.0
Total Existing Staff		154.0		0.0
Total New Need				36.0

California Department of Corrections and Rehabilitation
 Division of Health Care Services
 Electronic Dental Record System (EDRS)

Systems Software Specialist II (System administrator)

ACTIVITY TASK	PROJECTED ONGOING WORKLOAD		
	HOURS TO COMPLETE TASK	NUMBER OF TASKS PER YEAR	NUMBER OF HOURS PER YEAR
<i>Specific Task</i>			
Provides written documentation/reports and oral presentations to senior leadership as necessary or requested	4.00	12	48.00
Participate in the Change Control Board (CCB) meetings, Project Status Meetings and other pertinent EDRS project meetings	2.00	52	104.00
Actively participates in clinical quality and process improvement initiatives to ensure integration within and across applications	4.00	12	48.00
Actively participates in Project Works Sessions where design decisions are made and planned for implementation	4.00	12	48.00
Assists in developing the preliminary system architecture plan	40.00	1	40.00
Prepare architectural topology diagrams and create design documentation	40.00	1	40.00
Develop procedures for system troubleshooting and training	40.00	1	40.00
Document and maintain interface control documents and any other documentation required for the purpose of successful maintenance and operation of application interfaces	40.00	6	240.00
Create and maintain build and deployment documents	40.00	1	40.00
Ensure all software upgrades conform with organizational security regulations	2.00	12	24.00
Coordinate outage windows to facilitate the rollout of software upgrades with minimal/no disturbance to operations	2.00	12	24.00
Schedule and manage configuration changes	2.00	4	8.00
Perform system configuration updates	4.00	4	16.00
Perform Application provisioning and Configure User Profiles	0.25	1,400	350.00
Perform system administration	2.00	260	520.00
Perform issue coordination with Cerner or Dentrix	1.00	52	52.00
Test and apply operating system and database patches	4.00	12	48.00
Perform, monitor, and manage local installations of the applications on local client-side devices as applicable	16.00	35	560.00
Assist with solution rebuild into production domain	8.00	12	96.00

ATTACHMENT F

Plan, coordinate, test, and implement installations/backup/upgrades/releases of systems, software, and patches	12.00	12	144.00
Manage configuration and release activities across multiple environments	4.00	12	48.00
Coordinate integration activities with other staff, and or vendors	4.00	6	24.00
Communicate and coordinate integration activities with end users, other staff, and vendors	2.00	52	104.00
Coordinate and schedule vendors to develop, test and validate interfaces to foreign systems	40.00	6	240.00
Coordinate Integration Testing with vendors	16.00	6	96.00
Monitor and cycle interfaces from CCHCS/CDCR local system to the CCHCS/CDCR System hosted at the Cerner Technology Center, as required to establish connections or start transactions sending	0.50	260	130.00
Attend scheduled Operations and Support change management meetings	2.00	52	104.00
Perform analysis and provide level of effort for changes in business requirements that directly impacts the system architecture and exchange of data	4.00	100	400.00
Perform monthly system health check	4.00	12	48.00
Troubleshoot common application problems	4.00	12	48.00
Troubleshoot problems with supported operating systems, software applications, and network connectivity	8.00	12	96.00
Monitor performance for SLA measurements	0.25	260	65.00
Research and respond to help desk tickets submitted by end users	1.00	260	260.00
TOTAL HOURS PROJECTED ANNUALLY			4,153.00
TOTAL POSITIONS PROJECTED			2.00

Note: Column C- task assumptions are derived either by:
 Number of tasks per year
 Assumes monthly operating system patches
 Assumes quarterly software upgrades
 Estimated 100 change requests based on EHRS metrics

California Department of Corrections and Rehabilitation
 Division of Health Care Services
 Electronic Dental Record System (EDRS)

Systems Software Specialist II (Business Analyst)

ACTIVITY TASK	PROJECTED ONGOING WORKLOAD		
	HOURS TO COMPLETE TASK	NUMBER OF TASKS PER YEAR	NUMBER OF HOURS PER YEAR
<i>Specific Task</i>			
Attends and records the actions during designated meetings, and analyses the records, summarizing the relevant issues and preparing meeting minutes or summaries.	2.00	96	192.00
Answers and responds to emails, inquiries and phone calls.	1.00	144	144.00
Provides written documentation/reports and oral presentations to senior leadership and clinical leaders as necessary or requested	8.00	12	96.00
Gather and document feedback regarding high priority issues.	8.00	12	96.00
Assisting in the development, monitoring, and management implementation work plans	24.00	3	72.00
Participate in the Change Control Board (CCB) meetings, Project Status Meetings and other pertinent EDRS project meetings	3.00	52	156.00
Works with Subject Matter Experts (SMEs) to define and document requirements for: Clinical Chart , Appointment Book, Ledger, Continuing Care Types, Fee Schedule, Procedure Codes, Multi-codes, Practice Definitions, Auto-chart Numbering, Clinic locations, Clinic locations, Consent Forms, Medical Alerts	16.00	13	208.00
Create and maintain Functional REquirements Specifications	40.00	1	40.00
Participate in Project Works Sessions where design decisions are made and planned for implementation	4.00	12	48.00
Identify changes and perform analysis of new requests to determine impacts to processes and system requirements	4.00	100	400.00
Update business process flows using Visio program based on changes	2.00	50	100.00
Write Impact Analysis and Change Request documents that involve obtaining new/revised business requirements and translating their impacts into technical solutions; Perform analysis and provide level of effort for change in business requirements that directly impacts the system	4.00	100	400.00

ATTACHMENT F

Provides data collection, and analytical support for baseline and post-Go-Live measurement activities	16.00	3	48.00
Investigates and helps resolve application problems	0.50	260	130.00
TOTAL HOURS PROJECTED ANNUALLY			2,130.00
TOTAL POSITIONS PROJECTED			1.02

Note: Column C- task assumptions are derived either by:
 Number of tasks, per month, per year
 Number of tasks per year
 Estimated 100 change requests based on EHRS metrics

California Department of Corrections and Rehabilitation
 Division of Health Care Services
 Electronic Dental Record System (EDRS)

Systems Software Specialist II (testers)

ACTIVITY TASK	PROJECTED ONGOING WORKLOAD		
	HOURS TO COMPLETE TASK	NUMBER OF TASKS PER YEAR	NUMBER OF HOURS PER YEAR
<i>Specific Task</i>			
Participate in the Change Control Board (CCB) meetings, Project Status Meetings and other pertinent EDRS project meetings	1.00	52	52.00
Coordinate Unit, System, Integration and other Testing Events with all project teams	0.50	52	26.00
Works with the functional team to develop system test scripts based on 100 defined workflows	3.00	200	600.00
Develops Testing script steps based on 430 defined business rules	3.00	860	2580.00
Develop Requirements Traceability Matrix	8.00	1	8.00
Prepare Test Data	1.00	50	50.00
Execute workflow testing scripts	1.00	200	200.00
Execute business rule testing scripts	1.00	860	860.00
Develop Test Summary Report	1.00	2	2.00
Log, track and update System or Design Defects	0.25	50	12.50
Participate in User Acceptance Testing	8.00	1	8.00
Determine regression test tests	8.00	1	8.00
Conduct regression testing after defect corrections	1.00	50	50.00
Analyze change requests to provide testing effort	0.50	100	50.00
Create and execute test scripts for each change	2.00	100	200.00
TOTAL HOURS PROJECTED ANNUALLY			4,706.50
TOTAL POSITIONS PROJECTED			2.26

Note: Column C- task assumptions are derived either by:
 avg 2 scripts per workflow
 avg 2 scripts per business rule
 Estimated 100 change requests based on EDRS metrics

California Department of Corrections and Rehabilitation
 Division of Health Care Services
 Electronic Dental Record System (EDRS)

Systems Software Specialist II (reports developer)

ACTIVITY TASK	PROJECTED ONGOING WORKLOAD		
	HOURS TO COMPLETE TASK	NUMBER OF TASKS PER YEAR	NUMBER OF HOURS PER YEAR
<i>Specific Task</i>			
Participate in the Change Control Board (CCB) meetings, Project Status Meetings and other pertinent EDRS project meetings	2.00	52	104.00
Collaborate on the conceptual, logical, and physical design of Data Marts and Data Warehouses that will store EDRS data for the purposes of reporting, business intelligence, and analytics	4.00	12	48.00
Create basic queries and executes them in Microsoft SQL Server	2.00	30	60.00
Creates and runs ad hoc reports against various data bases and data sources	4.00	24	96.00
Develop reports facilitating auditing of transactions using the Oracle Fusion Middleware 11g product suite	32.00	2	64.00
Gather high level requirements, acceptance criteria, and constraints for each report	4.00	30	120.00
Identify the required data elements and Map required data elements to data tables	6.00	30	180.00
Using Cerner Command Language (CCL), write custom reports	24.00	30	720.00
Create and execute unit test scripts	8.00	30	240.00
Complete pre and post data validation activities of converted data	2.00	30	60.00
Resolve and mitigate bugs, tasks, and issues that are identified during test cycles	6.00	30	180.00
Log, track and update System or Design Defects	0.50	30	15.00
Participate in User Acceptance Testing	1.00	30	30.00
Deploy solutions into various environments including production	1.00	30	30.00
Analyze report, script and stored procedure performance and identify areas for improvement	2.00	30	60.00
Develop Implementation, Deployment and Release Management, and M&O Documentation	32.00	1	32.00
Identify changes and perform analysis of new requests to determine impacts to processes and system requirements	2.00	10	20.00
Update reports based on changes	16.00	10	160.00
Investigate and helps resolve application problems	4.00	12	48.00
Monitor system availability, performance, operations and problem tickets	0.25	260	65.00
TOTAL HOURS PROJECTED ANNUALLY			2,332.00
TOTAL POSITIONS PROJECTED			1.12

California Correctional Health Care Services
 Clinical Operations
 Electronic Health Record System (EHRS)

Nurse Consultant - Program Review

ACTIVITY TASK	PROJECTED ONGOING WORKLOAD		
	HOURS TO COMPLETE TASK	NUMBER OF TASKS PER YEAR	NUMBER OF HOURS PER YEAR
<i>Specific Task</i>			
Applies knowledge of health care programs and informatics to assist in the ongoing modification of the EHRS. Oversees the integration of data, information and knowledge to support Medical Services health program decision making. Acts as the primary liaison between IT and the MSD and the translator of application functionality to the MSD. Facilitates the development of Medical Services health program automation standards. Uses informatics science to design or implement health information technology applications to resolve clinical or health care administrative problems. Assists in the integration of EHRS into the workflow of medical services programs. Manages process redesign including documentation of current and future state workflow processes and health care reports.	Various	Various	1350.00
Assists in developing 'quality management' programs for areas identified as needing improvement. Provides clinical consultation in resolving clinical issues as it relates to EHRS. Provides guidance in developing outcome studies, and establishing on-going institutional self-monitoring. Acts as a clinical subject matter expert in the development of policies, procedures, training programs and reports related to EHRS. Travel maybe required.	Various	Various	400.00
Other Related Duties as Required	Various	Various	100.00
TOTAL HOURS PROJECTED ANNUALLY			1,850.00
TOTAL POSITIONS PROJECTED			1.04

California Correctional Health Care Services
 Nursing
 Electronic Health Record System (EHRS)

Nurse Executive

ACTIVITY TASK	PROJECTED ONGOING WORKLOAD		
	HOURS TO COMPLETE TASK	NUMBER OF TASKS PER YEAR	NUMBER OF HOURS PER YEAR
<i>Specific Task</i>			
Develop and oversee the implementation of evidence-based information systems that enable the delivery of efficient, effective nursing care.	16.00	50	800.00
Define and implement the nursing strategy for aligning the people, processes, and technology to transform the practice of nursing through information technology.	8.00	50	400.00
Develop procedures and guidelines for the implementation and use of nursing applications.	8.00	50	400.00
Serve on EHRS committees, such as change control, and serve as a backup CLAC chair.	4.00	50	200.00
Miscellaneous duties	8.00	12	96.00
TOTAL HOURS PROJECTED ANNUALLY			1,896.00
TOTAL POSITIONS PROJECTED			1.07

California Correctional Health Care Services
Nursing
Electronic Health Record System (EHR)

Nurse Consultant, Program Review

ACTIVITY TASK	PROJECTED ONGOING WORKLOAD		
	HOURS TO COMPLETE TASK	NUMBER OF TASKS PER YEAR	NUMBER OF HOURS PER YEAR
<i>Specific Task</i>			
Oversee integration of data, information, and knowledge to support decision making. Apply knowledge of nursing and informatics to assist in the ongoing modification of the EHR.	16.00	150	2400.00
Act as the primary liaison between Information Technology and nursing, and is the translator of application functionality to the nursing branch.	10.00	150	1500.00
Facilitate the development of nursing automation standards.	12.00	150	1800.00
Use informatics science to design or implement health IT applications to resolve clinical or health care administrative problems.	8.00	150	1200.00
Miscellaneous duties as assigned.	24.00	12	288.00
TOTAL HOURS PROJECTED ANNUALLY			7,188.00
TOTAL POSITIONS PROJECTED			4.05

California Correctional Health Care Services
 Information Technology Services Division
 Electronic Health Record System (EHRS)

Health Program Specialist I, Program Review

ACTIVITY TASK	PROJECTED ONGOING WORKLOAD		
	HOURS TO COMPLETE TASK	NUMBER OF TASKS PER YEAR	NUMBER OF HOURS PER YEAR
Specific Task			
Compile, track, and validate the most complex statistical data from various institutions and provide reports based on the statistical data. Maintain and compile statistical records and profiles on innovative quality improvement activities for presentation to the MHP management. Collect, review, and validate statistical data on Statewide MHP performance measures and develop targets and work plans that lead to improvements in performance and/or outcomes.	40.00	48	1,920.00
Audit and provide oversight of user adherence to system and program guidelines. Utilize data to prompt improved performance and patient care, reducing costly mistakes and potential lawsuits.	20.00	48	960.00
Provide Train the Trainer training to field representatives. Engage in Training audits and assist in designing remedial training. Maintain up-to-date training materials, develop web-based training. Determine need for further trainings post Go-Live and supplement as needed. Proctor advanced mock clinics. Create, update and maintain system-wide, ongoing training for proper use of EHRS.	80.00	6	480.00
Triage and respond to Solution Center Tickets related to EHRS scheduling application issues. Maintenance and adaptation of current build. Submit and implement Change Requests.	4.00	48	192.00
Other duties as assigned	4.00	48	192.00
TOTAL HOURS PROJECTED ANNUALLY			3,744.00
TOTAL POSITIONS PROJECTED			2.11

California Correctional Health Care Services
Information Technology Services Division
Electronic Health Record System (EHRS)

Senior Psychologist Specialist, Program Review

ACTIVITY TASK	PROJECTED ONGOING WORKLOAD		
	HOURS TO COMPLETE TASK	NUMBER OF TASKS PER YEAR	NUMBER OF HOURS PER YEAR
Specific Task			
Triage and respond to Solution Center Tickets related to clinical issues and guide analysts and IT personnel on appropriate responses. Maintenance and adaptation of current build. Triage, monitor, and implement Change Requests.	15.00	48	720.00
Utilize clinical subject matter expertise in designing future system functionality, modifying and programming current build, and repairing issues uncovered. Integrate future court mandates and clinical best practices into EHRS workflows and advise other development staff.	6.00	48	288.00
Serve on Clinical Leadership Advisory Council, support HQ Mock Clinics, interface in a multidisciplinary environment, including advising the MH EHRS project and SMHP regarding CCM and other vital PIP issues. Serve as MH representative to integrated discussions, meetings and teleconferences.	6.00	48	288.00
Provide Train the Trainer training to field representatives, presenting application of solution for clinical duties. Engage in Training audits, and assist in designing remedial training. Maintain up-to-date training materials, develop web-based training. Determine need for further training post Go-Live and supplement as needed. Proctor advanced mock clinics. Create system-wide, ongoing training for proper use of EHRS.	6.00	48	288.00
Audit and provide oversight of user adherence to system and program guidelines. Utilize data to prompt improved performance and patient care, reducing costly mistakes and potential lawsuits.	6.00	48	288.00
Provides ongoing Superuser/TTT online forum support and individual support and subject matter clinical expertise to the field as need. Maintain ongoing weekly training seminars.	6.00	48	288.00
Other duties as assigned	2.00	48	96.00
TOTAL HOURS PROJECTED ANNUALLY			2,256.00
TOTAL POSITIONS PROJECTED			1.27

California Correctional Health Care Services
Information Technology Services Division
Electronic Health Record System (EHRS)

Associate Governmental Program Analyst, Program Review

ACTIVITY TASK	PROJECTED ONGOING WORKLOAD		
	HOURS TO COMPLETE TASK	NUMBER OF TASKS PER YEAR	NUMBER OF HOURS PER YEAR
<i>Specific Task</i>			
Compiles and tracks the more complex statistical data from various institutions and provides reports based on the statistical data. Maintains and compiles statistical records and profiles on innovative quality improvement activities for presentation to the MHP management. Collects and reviews statistical data on Statewide MHP performance measures and develops targets and work plans that lead to improvements in performance and/or outcomes.	30.00	48	1440.00
Work with clinical subject matter experts in designing future system functionality, modifying current build, and repairing issues uncovered.	24.00	48	1152.00
Provides ongoing User/Superuser/TTT online forum support, individual support and subject matter expertise to the field as needed. Maintain ongoing weekly training seminars.	20.00	48	960.00
Triage and respond to Solution Center Tickets related to EHRS scheduling issues. Maintenance and adaptation of current build. Triage, monitor and implement Change Requests.	16.00	48	768.00
Provide Train the Trainer training to field representatives. Engage in Training audits, and assist in designing remedial training. Maintain up-to-date training materials, develop web-based training. Determine need for further training post Go-Live and supplement as needed. Proctor advanced mock clinics. Create system-wide, ongoing training for proper use of EHRS.	80.00	6	480.00
Participate in EHRS workgroups, support HQ Mock Clinics, interface in a multidisciplinary environment.	6.00	48	288.00
Other duties as assigned.	6.00	48	288.00
TOTAL HOURS PROJECTED ANNUALLY			5,376.00
TOTAL POSITIONS PROJECTED			3.03

California Correctional Health Care Services
Information Technology Services Division
Electronic Health Record System (EHRS)

Senior Psychiatrist Specialist, Program Review

ACTIVITY TASK	PROJECTED ONGOING WORKLOAD		
	HOURS TO COMPLETE TASK	NUMBER OF TASKS PER YEAR	NUMBER OF HOURS PER YEAR
<i>Specific Task</i>			
Triage and respond to Solution Center Tickets related to clinical issues and guide analysts and IT personnel on appropriate responses. Maintenance and adaptation of current build. Triage, monitor, and implement Change Requests.	12.00	48	576.00
Utilize clinical subject matter expertise in designing future system functionality, modifying and programming current build, and repairing issues uncovered. Integrate future court mandates and clinical best practices into EHRS workflows and advise other development staff.	6.00	48	288.00
Serve on Clinical Leadership Advisory Council, support HQ Mock Clinics, interface in a multidisciplinary environment, including advising the MH EHRS project and SMHP regarding CCM and other vital PIP issues. Serve as MH representative to integrated discussions, meetings, and teleconferences.	6.00	48	288.00
Provide Train the Trainer training to field representatives, presenting application of solution for clinical duties. Engage in Training audits, and assist in designing remedial training. Maintain up-to-date training materials, develop web-based training. Determine need for further training post Go-Live and supplement as needed. Proctor advanced mock clinics. Create system-wide, ongoing training for proper use of EHRS.	6.00	48	288.00
Audit and provide oversight of user adherence to system and program guidelines. Utilize data to prompt improved performance and patient care, reducing costly mistakes and potential lawsuits.	6.00	48	288.00
Provides ongoing Superuser/TTT online forum support and individual support and subject matter clinical expertise to the field as needed. Maintain ongoing weekly training seminars.	6.00	48	288.00
Other duties as assigned.	2.00	48	96.00
TOTAL HOURS PROJECTED ANNUALLY			2,112.00
TOTAL POSITIONS PROJECTED			1.19

California Correctional Health Care Services
 Staff Development
 Electronic Health Record System (EHRS)

Instructional Designer

ACTIVITY TASK	PROJECTED ONGOING WORKLOAD		
	HOURS TO COMPLETE TASK	NUMBER OF TASKS PER YEAR	NUMBER OF HOURS PER YEAR
<i>Specific Task</i>			
Meet with SMEs to identify audience, user accessibility, user learning styles, core tasks, knowledge, skills and attitudes to be addressed in eLearning course.	2.00	3	6.00
Develop planning document/story board for review with Senior Instructional designer and SMEs.	40.00	10	400.00
Develop course in Adobe Captivate using course template.	360.00	10	3,600.00
Upload and test course	16.00	12	192.00
Meet with SMEs for course review.	2.00	12	24.00
Create meeting materials for SME review.	2.00	12	24.00
Document weekly progress on all projects for executive progress report.			-
Participate in planning meetings to discuss progress/project needs, share best practices (three participants)	6.00	52	312.00
Represent training unit at department meetings.	6.00	52	312.00
Participate in course review meetings to discuss changes.	6.00		-
Attend training as needed. Attend State training meetings.	6.00	12	72.00
Stay current on Adobe Captivate features, best practices, and other software used in the eLearning development process.	6.00	12	72.00
Stay current on new and emerging learning theories, eLearning technologies, and software.	6.00	12	72.00
Train lower level staff on adult learning theory, eLearning development, or design software.	12.00	12	144.00
Other duties as needed.	6.00	52	312.00
TOTAL HOURS PROJECTED ANNUALLY			5,542.00
TOTAL POSITIONS PROJECTED			3.12

California Correctional Health Care Services
 Staff Development
 Electronic Health Record System (EHRS)

Senior Instructional Designer

ACTIVITY TASK	PROJECTED ONGOING WORKLOAD		
	HOURS TO COMPLETE TASK	NUMBER OF TASKS PER YEAR	NUMBER OF HOURS PER YEAR
<i>Specific Task</i>			
Acts in lead role in training Instructional Designers (ID) and lower level staff in instructional design theory, methods, and best practices.	8.00	50	400.00
Oversees all aspects of eLearning development.	4.00	50	200.00
Performs quality assurance review of curricula, particularly eLearning courses.	2.00	50	100.00
Works collaboratively with Staff Services Manager I to help ensure quality in training materials, developing and implementing standards and unit policies and procedures, and in monitoring eLearning assignments and priorities.	4.00	50	200.00
Works collaboratively with Learning Management System (LMS) Administrator to ensure effective and efficient administration of learning content.	10.00	12	120.00
Serves as lead content subject matter expert (SME) when interacting with LMS contractor.	8.00	12	96.00
Meet with SMEs to identify audience, user accessibility, user learning styles, core tasks, knowledge, skills and attitudes to be addressed in eLearning course.	1.00	50	50.00
Develop planning document/story board for review with Senior Instructional designer and SMEs.	4.00	6	24.00
Develop course in Adobe Captivate using course template.	20.00	4	80.00
Upload and test course	2.00	12	24.00
Meet with SMEs for course review.	1.00	50	50.00
Create meeting materials for SME review.	4.00	12	48.00
Document weekly progress on all projects for executive progress report.	1.00	50	50.00
Participate in planning meetings to discuss progress/project needs, share best practices (three participants)	1.00	50	50.00
Represent training unit at department meetings.	1.00	50	50.00
Participate in course review meetings to discuss changes.	2.00	12	24.00

California Correctional Health Care Services
 Staff Development
 Electronic Health Record System (EHRS)

Staff Services Manager I

ACTIVITY TASK	PROJECTED ONGOING WORKLOAD		
	HOURS TO COMPLETE TASK	NUMBER OF TASKS PER YEAR	NUMBER OF HOURS PER YEAR
<i>Specific Task</i>			
Manages the identification, development, and delivery of cross-functional training.	32.00	50	1600.00
Cultivates a team environment and builds collaboratative relationships with team, peers, management, SMEs, an dother stakeholders.	8.00	50	400.00
Assigns and prioritizes assignments and ensures project deliverables are met timely.	4.00	50	200.00
Manage, plan, direct, and reivew the work of analytical or training officer (TO) and industrial designer (ID) staff in all aspects of tracking, analysis, planning, development, implementation, and evaluation of the statewide learning initiative.	16.00	50	800.00
Uses project management tools and techniquet to review, maintain, distribute, monitor, and track analyst/TO and ID development projects.	12.00	50	600.00
TOTAL HOURS PROJECTED ANNUALLY			3,600.00
TOTAL POSITIONS PROJECTED			2.03

California Correctional Health Care Services
 Staff Development
 Electronic Health Record System (EHRS)

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7 **Associate Governmental Program Analyst**

8

ACTIVITY TASK	PROJECTED ONGOING WORKLOAD		
	HOURS TO COMPLETE TASK	NUMBER OF TASKS PER YEAR	NUMBER OF HOURS PER YEAR
<i>Specific Task</i>			
Analyze, design, and develop instructional materials incorporating adult learning methods and measurement techniques.	16.00	50	800.00
Implement and evaluate curricula and training programs for instructional integrity to ensure curricula meets Departmental and training guidelines, standards, and specifications.	8.00	50	400.00
Develop tracking mechanisms and schema for curricula development.	4.00	12	48.00
Review development requests and analyze for potential inclusion in Staff Development Unit workload. Determine priority based on need for course or revision. Meet with requestor to clarify training need and importance. Provide analysis and recommendation to management.	4.00	50	200.00
Conduct initial analysis of learning content. Prepare draft outline and learning objectives. Provide recommendations on interactions and graphics.	4.00	50	200.00
Participate in Level 1 eLearning development.	4.00	12	48.00
Other duties as required	2.00	52	104.00
TOTAL HOURS PROJECTED ANNUALLY	1,800.00		
TOTAL POSITIONS PROJECTED	1.01		

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California Correctional Health Care Services
 Procurement and Acquisitions
 Electronic Health Record System (EHRS)

Associate Governmental Program Analyst

ACTIVITY TASK	PROJECTED ONGOING WORKLOAD		
	HOURS TO COMPLETE TASK	NUMBER OF TASKS PER YEAR	NUMBER OF HOURS PER YEAR
Specific Task			
Notify contractor about status of contract	4.00	1	4.00
Monitor contract activity for compliance with: work progress to ensure information technology (IT) services are performed according to the quality, quantity, objectives, timeframes, and manner specified within the contract; small business and disabled veteran business enterprise contractors and/or subcontractors to ensure attainment of approved contract participation goals.	32.00	50	1600.00
Review progress reports, status reports, and timesheets.	4.00	12	48.00
Approve final product/IT services by submitting a written document accepting the deliverables.	4.00	12	48.00
Provide documentation to the acquisitions office for inclusion in the official contract file.	4.00	12	48.00
Monitor expenditures, ensuring funding availability when contract expents over multiple years.	16.00	12	192.00
Verify accuracy of invoices and approve invoices for payment.	16.00	50	800.00
Request amendments/addenda/supplements/changes and/or contract renewals in a timely fashion.	8.00	12	96.00
Verify all work is completed and accepted by the Department prior to the contract expiration date.	16.00	12	192.00
Perform contract close out activities, including: complete Contractor Evaluation Report (STD. 4) for IT consulting services in accordance with department policies and procedures; and, notify responsible parties when funds can be disencumbered.	40.00	1	40.00
Report any contract disputes.	4.00	12	48.00
Keeping an accurate auditable paper trail of contract administration.	4.00	12	48.00
Enter goods receipt transactions into the Business Information System (BIS).	8.00	12	96.00
Other duties as required.	3.00	52	156.00
TOTAL HOURS PROJECTED ANNUALLY			3,416.00
TOTAL POSITIONS PROJECTED			1.92

California Correctional Health Care Services
Pharmacy
Electronic Health Record System (EHRS)

Pharmacist, Central Fill

ACTIVITY TASK	PROJECTED ONGOING WORKLOAD		
	HOURS TO COMPLETE TASK	NUMBER OF TASKS PER YEAR	NUMBER OF HOURS PER YEAR
<i>Specific Task</i>			
Cerner: Power Chart/PharmNET Day-to-Day Maintenance: Works to provide standard pharmacy database and formulary maintenance. This includes the updating and development of Powerplans, order sentences, formulary drug adds (unit dose, ivs, compounds, and complex orders), frequency changes, dispense categories, data code sets, order entry field formats, and NDC/Barcoding updates.	215.00	12	2580.00
Solution Development for Major Operational-Technical Issues and Hot Topics: Clinical team to identify and problem solve mission critical and "show stopper" issues regarding to pharmacy IT and operational issues. Topics may include: fixing of batch fills, system downtimes, and patient safety issues.	180.00	12	2160.00
Implementation and Go-Lives: Provide on-site support for implementation and go-lives. Provide database, informatics and workflow expertise to local and central staff. Issues are to be triaged to management as needed.	70.00	12	840.00
EHR Clinical Content/Quality Optimization: Oversees the clinical quality of content for Cerner. This includes maintaining and updating power plans and order sentences as respect to evidence based medicine. Quality of Multum Package updates are to also be validated. Additional design and development of Clinical Decision Support alerts, rules, and functionality to reduce risk and improve medication safety.	230.00	12	2760.00
Code Update/Package Testing Validation: Develop, implement and test Test scripts for new package updates and code updates. Research functionality changes and impact on end users. Dissemination of tip sheets and changes in workflow processes for end users.	55.00	12	660.00
Metric and Data Analytics: Provides development and mockups of metric and data analytics. Creates and manages dashboard for development and measures for success. Run reports for clinical, quality, IT, and management for data and results based decisions.	200.00	12	2,400.00

ATTACHMENT F

<p>New Functionality: Research, test, and assist in the implementation of new functionality for Cerner. This includes dose range checking, therapeutic substitution, clinical decision support rules, alerts, and software updates.</p>	80.00	12	960.00
<p>Local Pharmacy Support: Provides central support for all pharmacy related business needs. Triages day-to-day issues from local pharmacies. Works on escalated issues from Pharm Techs to solve Cerner issues. Provide a channel for escalating consolidated issues to management to address from an enterprise level.</p>	120.00	12	1,440.00
<p>Process Development, Training and Integration: Takes new functionality workflow changes and develops training guides, tip sheets, and communication to staffing local and central pharmacists.</p>	50.00	12	600.00
<p>Other duties as assigned as required by management: Assist in production, verification, central packaging and local visits as needed for additional operational support</p>	50.00	12	600.00
			15,000.00
<p>TOTAL POSITIONS PROJECTED</p>			8.45

California Correctional Health Care Services
Pharmacy
Electronic Health Record System (EHRS)

Pharmacy Technician

ACTIVITY TASK	PROJECTED ONGOING WORKLOAD		
	HOURS TO COMPLETE TASK	NUMBER OF TASKS PER YEAR	NUMBER OF HOURS PER YEAR
Specific Task			
PharmNET and Inventory Maintenance: Provides basic formulary maintenance and medication adds, formulary NDC stacking, inventory management, metric data gathering, updating product note updates, inventory shortages, Cerner/CASI/Maxor Software maintenance and break fixes.	165.00	12	1980.00
Local Pharmacy Support: Provides central support for all pharmacy related business needs. Triage day-to-day issues from local pharmacies and escalates issues to IT Pharmacists as needed. Responds to phone calls and e-mails in regard to basic Cerner issues. Provide a channel for escalating consolidated issues to management to address from an enterprise level.	120.00	12	1440.00
Implementation and Go-Lives: Provide on-site support for implementation and go-lives. Provide database, informatics and workflow expertise to local and central staff. Issues are to be triaged to management as needed.	30.00	12	360.00
Code Update/Package Testing Validation: Assist pharmacists in test scripts for new package updates and code updates. Notify IT pharmacist leads of potential risks and action plans.	30.00	12	360.00
Metric and Data Analytics: Provides daily extracts and day-to-day reports as needed by management for data-driven decision making. Assists IT Pharmacists in compiling of information.	130.00	12	1560.00
Process Development, Training and Integration: Assists in communication for process development, training and integration for central and local pharmacy staff.	100.00	12	1200.00
Other duties as assigned as required by management: Assist in production, verification, central packaging and local visits as needed for additional operational support	30.00	12	360.00
			7,260.00
TOTAL POSITIONS PROJECTED			4.09

Note: Column D- Number of staff, per month

California Correctional Health Care Services
 Information Technology Services Division
 Electronic Health Record System (EHRS)

Senior Clinical Laboratory Technician

ACTIVITY TASK	PROJECTED ONGOING WORKLOAD		
	HOURS TO COMPLETE TASK	NUMBER OF TASKS PER YEAR	NUMBER OF HOURS PER YEAR
<i>Specific Task</i>			
Assist in planning , analyzing, coordinating, and directing activities related to the EHRS vendor's PathNet applications (general laboratory, microbiology, etc.).	8.00	50.00	400.00
Act as liaison between the laboratory end users, the EHRS vendor's technical staff, contracted reference testing laboratory, and CDCR/CCHCS Information Technology staff in all laboratory Information System applications.	8.00	50.00	400.00
Collaborate with EHRS vendor, contracted reference testing laboratory, and laboratory end users to configure the EHRS system for CCHCS.	4.00	50.00	200.00
Develop and document internal processes and procedures utilized in conjunction with the software applications.	8.00	24.00	192.00
Serve as the primary support contact by coordinating questions and issues regarding these applications.	2.00	100.00	200.00
Log in service requests related to field laboratory operations.	0.50	200.00	100.00
Recommend any changes in laboratory procedures and workflow to fit organizational need.	1.00	50.00	50.00
Help oversee and/or conduct review of technical questions, software upgrades, validations, and changes with users.	4.00	26.00	104.00
Provide training as needed to users to ensure that correct and efficient usage of the PathNet program is used.	4.00	12.00	48.00
Perform other tasks as required.	1.00	50.00	50.00
TOTAL HOURS PROJECTED ANNUALLY			1,744.00
TOTAL POSITIONS PROJECTED			0.98